



wasafiri

SystemCraft

How to Tackle our Toughest Problems.

A Primer



Contents

01	Introducing Systemcraft	2
	Part 1: Key Concepts of Systemcraft	5
02	Systems, complexity, and why they matter	5
03	A mindset for system change	10
	Part 2: Systemcraft into practice	12
04	Get started	12
05	Understand the current state	13
06	What next? Five dimensions for action	15
	Organise for collaboration	16
	Set the direction	18
	Make it matter	20
	Change the incentives	22
	Harness collective intelligence	25
07	Conclusion: Change for good?	28
08	Postscript	29
09	Acknowledgements	29

*Despite our best efforts, some of humanity's most compelling issues are stubbornly resisting change. **What should we do next?***

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Wasafiri is an institute and consultancy helping leaders and organisation tackle our toughest problems.

01 Introducing Systemcraft

Why Systemcraft?

From climate change to violent extremism, from creating sustainable supply chains to ending homelessness, some issues are so large, difficult, and inter-related that they seem impossible to tackle. Such issues transcend organisational and national boundaries. No one can tackle them alone. It is hard to even know where or how to start.

Current approaches to tackling such issues often fail. This is because the focus is too often on the symptoms rather than on reshaping the underlying and dynamic forces that sustain the problem. We need a different approach. One that seeks transformational change, taps into the immense capacity of ordinary leaders, unlocks collective action, and adapts to a dynamic world.

Since 2010, Wasafiri has helped leading institutions, organisations and companies to tackle some of our most complex challenges. We have learned that impact at scale is possible. We have learned to be optimistic, even in the face of seemingly intractable problems, and we have learned how to work with big, complex and seemingly stuck issues.

Systemcraft is our applied framework to help leaders and organisations get started and keep

going when faced with complex problems. It is built on our practical experience. It draws on a broad body of research, action and theory from the worlds of complexity thinking, systems theory, adaptive management, leadership development, social movements, development theory and beyond. Systemcraft has been designed to make systems thinking something any leader can apply when they find themselves faced with a complex problem and asking, ‘**So what do I do next?**’

What makes a problem complex?

Why, despite our best efforts, do we seem unable to solve some of our most compelling problems?¹ Every day we encounter problems that seem stuck, or spot opportunities that feel hard to realise. These sorts of issues have four characteristics, and it is these characteristics that make them ‘complex’.

- **No single owner.** Therefore no one person, team or institution, however powerful, well-intentioned, wealthy or clever can make change alone.
- **No single root cause.** Therefore there are no ‘silver bullet solutions’; no one thing that, if changed, would solve everything.
- **Constant change.** These problems evolve as you work on them, so they need approaches and solutions that are adaptive.

- **The system is working.** Finally, complex problems are produced by systems that are functioning – and are producing some benefits to some people, somewhere. For this reason, systems resist change.

Problems with these four characteristics are complex and will resist linear approaches to change. Many of the most popular change frameworks focus on some version of the steps: analyse – predict – plan – intervene. But such a logic is inadequate in the face of problems that need collective responses, encompass competing interests, are constantly changing, and are where we need to tackle multiple root causes. Instead, we need a change approach that can cope with complexity and target underlying systemic causes. Such an approach is time consuming, messy, hard to control and even harder to predict. But it can work.

Creating system-level change

Tackling complex problems requires changing the system that creates the problem. Issues such as climate change or obesity, the proliferation of fake news or recurrent violent conflict, are all outcomes of a system of relationships, incentives, policies, mindsets, behaviours, beliefs and desires. Change requires us to work on this underlying system. For example, if we want to tackle obesity in the UK, then we will need to work on things as diverse as access to public spaces, cost and availability of food, school dinner provision and so on. This is the work of system change. Our framework, Systemcraft, helps us to do just that.

Systems are dynamic. This means that system change is not about achieving a static state, where everything is fixed and solved; for this is impossible. Instead, like a garden, human systems need constant tending to promote sustainable, just and peaceful outcomes. Their sheer complexity and scale make this hard. It requires investing in our collective capacity to drive change together, and our adaptive capacity to respond as events happen, the context shifts, and history unfolds. Healthy systems are not inherently harmonious, nor are they static. Rather, like any healthy ecosystem, they are constantly adjusting to achieve a dynamic equilibrium so that no one species overwhelms all others, collapsing the system as a whole. Where our collective and adaptive capacity is inadequate, systems risk

trending towards serving ever-more powerful minority interests; favouring current needs at the cost of future needs; and ultimately escalating inequality, conflict and environmental degradation to the point of catastrophic collapse. The Sustainable Development Goals are humanity's shopping list of issues where we are falling short.

Systemcraft works by enhancing collective and adaptive capacity. This requires helping stakeholders to recognise each other's existence; to improve awareness of differing perspectives and needs; to network together and collaboratively reshape the system the needs share; to notice and respond to shifting dynamics; to adjust and maintain a balance that meets the majority of stakeholders' needs. The Systemcraft framework aims to identify practical actions through which to invest in collective and adaptive capacity, eventually unlocking transformative change.

Using this primer

We have written this primer as a practical introduction to creating system-level change. Part one is an introduction to key concepts in complexity and systems thinking. Part two offers a practical framework to identify actions through which to drive change.

Systemcraft is for leaders and the practitioners who help them. If you are a leader in a company, a government, or an NGO and you seek to have an impact at a scale that goes beyond the boundaries of your team or your organisation, then this approach is for you. If you are a practitioner looking for an applied strategic framework to enable leaders to navigate complex issues and times, then this primer will help.

Thank you for exploring Systemcraft. If you are interested to learn more, there are additional resources and case studies on our website. You can also reach out to our consultancy practice if you want to discuss specific help.





CASE STUDY

Systemcraft in Action: What can we do today to inspire millions of African 'agri-food entrepreneurs of tomorrow?'

A dynamic cadre of young entrepreneurs is poised to create and scale companies that can catalyse inclusive growth in Africa's agri-food sector. But what might it take to better support these entrepreneurs and innovators, and inspire millions more? This was the ambitious question asked by two companies, Yara and Econet, seeking to contribute to Africa's agricultural transformation. Systemcraft was used as a framework to better understand the landscape of agripreneurs in order to identify catalytic interventions to strengthen a supporting ecosystem. This foundational work sparked the continent-wide movement now known as Generation Africa.

www.genafrica.org

Part 1: Key Concepts of Systemcraft

02 Systems, complexity, and why they matter

Complex problems demand systemic change

Despite our best efforts, some problems remain stuck. This is not because our change models are wrong. It is because the majority of them have not been created to deal with problems that are complex in nature. Nor have they been built to create system-level change.

Not all problems are complex and not everything requires system-level change. Therefore, before you embark on Systemcraft it is important to understand whether and how your issue is complex, and what it means to make system-level change.

What are systems?

Talk of systems seems to be everywhere. Donella Meadows, a pioneer in systems thinking, offers perhaps the definitive definition:

“A system isn’t just any old collection of things. A system is an interconnected set of elements that coherently organise in a way that achieves something”².

The key here is the interconnections rather than just the things themselves. Many change efforts focus on changing ‘things’. Want a new culture in your organisation? Change the CEO. Want to transform education in Kenya? Build more schools. But get a new CEO and surround her with the same incentives, markets, and organisational forces, and more than likely nothing will change (or won’t stay changed for very long). Build more schools, but where are the teachers? What and how are they teaching, and why are there so few girls in the classrooms? Taking a systems change approach means looking at the beliefs, values, capabilities, resources, incentives, policies and so on that drive the current state – the connections between the parts - and then changing these.

Complex and simple systems

Everything from your bike to your family is a system. But clearly these represent very different types of system. A bike is a ‘simple system’. There are a distinct number of parts and the ways the parts connect to each other is possible to see. These sorts of systems have linear cause and effect and are predictable (even if that takes a lot of clever maths).

By comparison, a family system is a ‘Complex Adaptive System’. A family is made up of many parts that are pretty much impossible to clearly count. Do you include all my aunts and uncles? What about stepchildren or my son’s girlfriend who lives with us? The boundary between who is in and who is outside a ‘family’ is not inherent

and observable. It is a matter of definition that may be interpreted differently and change over time. The connections between the parts are even harder to see, count or predict, even with super-clever maths. For example, what are my aunt's feelings about my son? How often do the stepchildren visit? And so on, and so on. Change in complex adaptive systems is not a matter of engineering, of predicting and controlling of individual parts. Rather, it is an issue of evolution; of trial and error and adaptation. Throughout this primer, when we say 'system' we are referring to Complex Adaptive Systems.

Working at different scales

Systems manifest themselves at different 'levels'³ (or scales); and change requires shifts across all levels. Climate change is produced at the level of the individual through, for example, our food and travel choices; the level of organisations in the investment priorities of businesses; and the level of government and intergovernmental bodies through policy decisions. Thinking about 'levels' has three key implications:

Sustained change will only be achieved when shifts happen at multiple levels.

Climate change cannot be addressed only by restructuring the relationships between governments, such as through treaties. Nor can it be addressed purely at the level of individual choices, no matter how many plastic bags you avoid. It needs multiple types of

intervention at different levels. An intervention at one level may put pressure for change on other levels but will not simply aggregate up or down to other levels. An intergovernmental treaty will not cascade down to the use of reusable shopping bags. Nor will a single small town's commitment to a low carbon market on its own scale up to national-level shifts.

If you can't intervene at one level, then change the level. When you are stuck and can't work out what to do next, it may be because you are trying to work at a level where you can't, right now, gain traction. By looking for opportunities at a different level, you may be able to find a next action. For example, advocating for a national transition to electric cars may be impossible without small-scale proof of concept, or perhaps there will be no progress until car-culture values the hum of an electric motor over the roar of a V8 engine.

Recognising these different levels, has practical implications for anyone seeking system change. Your context may give you access at a particular level however, it is important to recognise both the bigger and the more local aspects. For example, work to promote start-ups in Africa's agri-food sector requires us to work with individual African entrepreneurs, to help them navigate challenges such as access to capital, whilst also working with governments to help them create enabling policy environments for start-ups. It doesn't matter what level you start with, but it does matter how you understand and connect with other levels.

Why complexity matters to systems change

There are a number of models and frameworks to help us understand complexity. Perhaps the best known is The Cynefin Framework⁴, which helpfully distinguishes between complicated and complex problems. Complicated problems may be very hard to solve (like getting a rocket to the moon), but ultimately the problem (gravity) remains static as you work on it; so a linear analyse- predict – plan – implement approach will work. Expertise is the primary currency for navigating the complicated.

Complex problems, by contrast, are constantly changing (think of raising a child), so you have to keep learning and adapting as you go, working with the emerging and changing state. Adaptation is the primary currency for the complex. We can identify complex problems by the four distinct characteristics mentioned in the introduction.

1. No single owner: No one leader or institution owns the issue, and so no single person or institution, no matter how powerful or well-resourced, can make change happen on their own. It just can't be done. For example, homelessness in any given city is a product of the housing and job market, and is influenced by drug and addiction issues, the availability of social services, immigration rules, and so on. Homelessness can only be tackled through collective action by local and national government, by civil society and the private sector; it simply cannot be

‘solved’ without collective action. The same goes for the diversity within your organisation. No matter how wonderful your CEO or HR Director, they cannot, alone, make your organisation more able to recruit, retain and promote a more diverse workforce. It will need action that goes beyond the boundaries of a single office, team, department and, indeed, your organisation.

2. No single root cause: We love the idea of the stroke of genius, the eureka moment out of which change emerges. But complex problems aren’t created by one thing, or one bit of policy, or one decision made in a particular moment. Rather, they are the product of multiple overlapping moments and choices and actions and policies. The spread of the coronavirus pandemic was rooted in choices about healthcare funding, pandemic planning, who restricted travel when, election cycles, climate change, cultural practices, government approaches that range from democratic to authoritarian, and so on. And when there is **no single root cause** there can be no single solution, no silver bullet. Rather, complex problems will need multiple and overlapping interventions targeting different parts of any given system.

3. The problem is dynamic: Complex problems have a property that system-thinkers call ‘emergence’. The problem is constantly adapting and changing, including in response to interventions designed to solve it. For example, when the police in a city work hard to restrict the local drug trade, then risks go

up for dealers (and supply may go down), so prices go up, the trade becomes more attractive for new entrants and so the trade goes on. Similarly, in an attempt to reduce the smuggling of weapons to extremist groups, Kenyan authorities banned boats from sailing at night from the coastal town of Lamu. The best fishing is at night, and the negative impact on the local economy has made more disenfranchised young men sympathetic towards extremist ideologies. Complex problems keep adapting and changing. Our efforts to change them must be equally adaptive and dynamic.

4. Complex problems are produced by systems that are working, at least for some people, somewhere, some of the time. Climate change is driven, in part, by air travel, which has allowed Kenya to develop a lucrative flower industry; but the same system also leads to radical changes in weather patterns which are disrupting food production in Kenya. Obesity in the USA is, in part, driven by cheap high-calorie food, which is affordable, easy to cook and readily available. It provides a benefit, as well as cost, to those that eat it. It is well recognised that systems resist change, and this resistance will be found in all the places and ways that the current state is working. Systems emerge dynamically and system-thinkers concede that the ‘purpose’ of a system is what it does, not what we wish it would do. When we look at systems as ‘broken’ we become blind to the power within them. So, we must search out for whom and in what ways the current state is useful⁵, and

usually then we will have found the power in the system. For it is often those with the most to lose who are most in control of maintaining the current state. In systems change there will always be loss for some people somewhere. People may be willing to take on those losses – say paying extra for flights in return for tackling climate change – other times less so.

When these four characteristics are at play (no single owner, no single root cause, dynamism and a working system) then you are faced with a complex problem. Such a problem will not give in to unilateral heroics or a single brilliant idea. Nor will it achieve a once and for all solved state. And perhaps most significantly of all, trying to create change will not be universally welcomed. For these reasons, normal linear approaches to change will not work. It is time to try something different. And that something different is going to require you to work on the system-level conditions that create and perpetuate the problem.



CASE STUDY

Systemcraft in Action: How can we transform the UK's energy grid to achieve Net Zero emissions by 2050?

The National Grid is one of the world's largest investor-owned energy companies, committed to the ambitious target of Net Zero carbon emissions by 2050. Meeting this challenge is fundamental to the UK's transition to a low-carbon economy, and will require overcoming complex constraints including the transition to a clean, affordable and low carbon heat network and building a vast network of renewable energy producers. Nothing short of an organisation-wide evolution will be necessary to shift the way decisions are made, investments structured and technology is used. The National Grid's Sustainability Team used Systemcraft to map and make sense of the complexity of the issues, and to identify potential levers of systemic institutional change that would be key to their Net Zero strategy.



CASE STUDY

Systemcraft in Action: How best to strengthen community resilience to violent extremism in East Africa?

What prevents an unemployed Tanzanian man from joining an extremist organisation? What reduces the likelihood that a poor mother from Kenya's coast might offer her child to a recruiter in exchange for financial support? What compels a young woman in Eastern Uganda to marry into a ring of militants? How best to prevent the rise of violent extremism (VE) in East Africa? Hard questions such as these have increasingly vexed policy makers, security actors, political leaders and community representatives in recent years. Since 2015, Systemcraft has inspired community-based research that is ensuring the wider institutional response is working with rather than against the communities who live with the threat of violent extremism every day.

03 A mindset for system change

We built Systemcraft out of our own and others' practical experience⁶. And so Systemcraft is primarily a set of practical tools. However, working with complexity and pursuing system-level change requires us to *think* as well as do, differently. Leading for system-level change requires a mindset, without which you will find the tools of Systemcraft will quickly become blunt and hard to wield.

Core ideas

Work collectively: System change requires leaders ready to work and share the credit with others. Systems emerge from the interplay of diverse economic, socio-cultural, political, and environmental dynamics and so, no one person or institution, however brilliant, can create change alone. Collective action is the only form of action that will work. This liberates our organisations, and us as individuals, from needing to 'go it alone', but it challenges us to work with others and not just the others with whom we find it easy to work. Leading system change requires a willingness to compromise, share control, resources and ultimately the credit. For example, the emergence of mobile money⁷ in Kenya has had a transformative effect on the finances of poor people. It emerged out of a partnership between a

private company, a bank, a government donor and a number of NGOs. This partnership was able to unlock innovation that neither the mobile phone company, the bank, the NGO, nor the international donor could have done alone. This work takes patience and persistence and a willingness to compromise. Collective action rarely gives anyone exactly what they want, nor does it create lone heroes who get all the credit; but it does create change.

Experiment: System change presents an apparent paradox in that we need to both think big and long-term, and yet act in the here and now. The Royal Society of the Arts (RSA) capture this paradox rather neatly in their call to:

“Think like a system and act like an entrepreneur”⁸.

What often sets entrepreneurs apart from planners is their openness to wider context, a willingness to try live 'in the market', and the speed with which they adapt to feedback from their market. Not all of these are always great attributes – but when we seek to create change in complex social systems, we need to be willing to take action when we know enough, and then have the humility to change as we learn more.

Learn and adapt as you go: Learning from action is rarely as easy as it sounds. It requires leaders willing to let go of ideas they were attached to, ready to be surprised by

how events turn out, prepared to see much heralded interventions 'fail'. It requires leaders ready to start small and experimental, rather than launch grand projects and sweeping reforms. It requires the curiosity and patience to prototype, and then the commitment to take things to scale. Long-term planning, 'logical frameworks', evaluation matrices, theories of change, return on investment analytics and impact reporting and measurement all have a role to play in such learning. As long as they are constructed as tools for learning and adaptive management, rather than 'performance management'⁹.

Seek windows of opportunity: Change is happening all the time – sometimes slowly, sometimes at speed. Windows of opportunity open and close. There could be an election cycle, a new product or policy, or even a pandemic. Timing matters. An intervention at one point in time may gain little traction, but at another be a powerful accelerant. For example, Greta Thunberg did not initiate the school protests. The first one had happened during the Paris COP in 2015 almost three years earlier¹⁰. However, the same action had a very different impact. Working on the most intractable of human problems requires scanning for windows of opportunity, experimenting, and doing the slow persistent work to get ready for when those windows open. In 2003, the African Union set goals and crafted a transformative approach to improving the agricultural sector. Only when the global food crisis struck in 2008 did the political will emerge to really drive progress. Work on

systems requires accepting that the tempo of change is rarely 'steady away'; rather, there may be long periods of hard work where little seems to shift, and periods of rapid change. Systems are not static. What is possible is changing all the time. The work of leaders is to notice and sometimes create those windows, and then harness them to change the broader conditions.



Recognise and seek to rebalance power:

Where there is inequality of outcome, there will always be an inequality of power. Hence, any meaningful attempt at systemic change has to be willing to name and navigate the distribution of power. This work can be difficult and uncomfortable. A full understanding of power is an aspiration beyond the capacities of this document. However, the mindset for Systemcraft does require, as a minimum, a willingness to recognise one's own power, to identify power dynamics and to work to rebalance power.

- **Recognise our own power:** At the heart of Systemcraft is a confidence in the power of individuals and institutions, wherever they may sit with whatever assets, to create impact at scale by working collectively. The conviction and creativity of change leaders is the most important element to ignite change.
- **Identify invisible and overt power dynamics:** Examining who is served by the status quo can reveal where power sits. This includes recognising multiple types of power. Examples include:
 - 1) 'innocent' self-interest, where collective 'bads' can result from the aggregation of rational, reasonable actions – known as the tragedy of the commons;
 - 2) structural inequities, power dynamics that operate through invisible, often unspoken and underappreciated

hierarchies, including those attached to race, nationality, gender, faith and access to opportunity;

3) institutional power, such as the market share of businesses and the geopolitical power of countries; 4) informal power, like that held by the parents in a family or the local Imam; and 5) power abuses, where some actors exercise power in overt ways, expanding control through manipulation and coercion.

- **Rebalance power:** Systemcraft is designed to elevate marginalised actors in pursuit of fairer creation and management of public goods. Sometimes this may require mobilising collective attention and pressure in tension with more powerful interests. Other times, diverse actors can find common interest in reshaping a system so that all players are better off.

It matters who wields and how power is wielded in pursuit of change. Systemcraft requires a mindset which recognises the importance of power, a willingness to engage with one's own, and how you use it. And, if you yourself or your organisations are one of the more powerful, an openness to be challenged to relinquish some of that power.

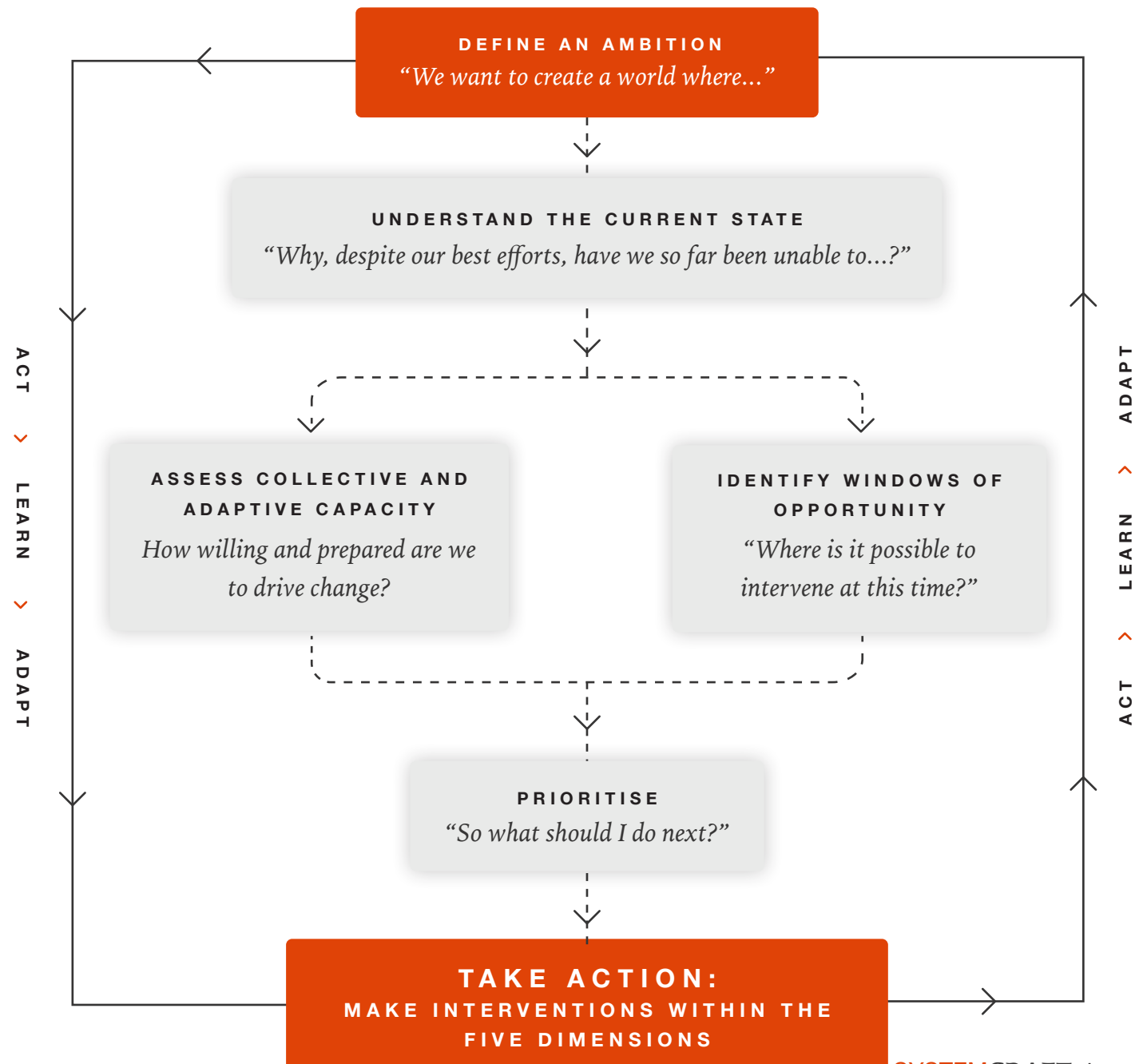
Part 2: Systemcraft into practice

04 Get started

Whilst grounded in theory, Systemcraft is a framework for identifying actions that drive change. It can be expanded or contracted to suit the time and resources you have. Use it for comprehensive strategy development and intervention delivery, or to quickly help groups think in an unfamiliar way about familiar problems.

Systemcraft creates change by building greater collective and adaptive capacity within a system. System-level work is, by nature, ongoing and involves working with a dynamic context. Despite this dynamism, we need to start acting somewhere. Systemcraft invites you to initiate a cycle of action and iteration, and to draw others into this as you build momentum for change. Think of these as the repeating steps of a dance, rather than linear steps from start to finish¹¹.

What should I do next? Systemcraft Action Cycle



05 Understand the current state

Complex problems rarely present in intuitive ways. Therefore, if we leap to action then we often start working on the wrong things, in the wrong ways. At best this is ineffective, and at worst it exacerbates the very problems we are trying to tackle. For example, in an attempt to solve the problem of access to primary health care in the UK, doctors were made to extend their opening hours to include weekends and evenings. But, without more doctors or funding, this led to a reduction of availability at the times most patients wanted to access their doctor – as appointment times were redistributed rather than increased. If we want to create lasting and real change in the face of complex problems, then we need to deeply understand these problems, and not just work on the most obvious symptoms or the quickest wins.

Any problem exists within a landscape of actors, drivers and trends – some overt, some hidden. There are many ways to unpack and present this landscape, from the IPCC's vast and definitive Assessment Reports on climate change, to a quick mapping exercise on a flipchart. Nonetheless, any approach should seek input from multiple and different stakeholders, draw in the most rigorous data available, and produce representations that are collectively owned and regularly updated, rather than considered static 'final' objects.

The following is a structure we often use at Wasafiri. It is simple to use, can be adapted to work at different scales, and doesn't require specialist software or training (unlike some mapping approaches). It is designed to 'unpack the complexity' around the issue you seek to work on. As such, it makes the system around the issue more visible and enables you to identify often counter intuitive places to intervene. This structure can be integrated into different data visualisation approaches.

“Why, despite our best efforts, have we so far been unable to...?”

Ask these questions to diverse stakeholders, in either collective, digital or individual settings.

Draw together the best available data to test core assumptions.

Produce and share a working representation of the current landscape.

The questions:

Actors: Who influences this issue? Who else?

Drivers: What are the underlying root causes for this issue? What else?

Emergence: In what ways is this issue changing? What forces are at play?

Purpose: In what ways is the current state working and for whom?



CASE STUDY

Systemcraft in Action: How can we eliminate extreme poverty in Kenya?

First on the list of Sustainable Development Goals is eliminating extreme poverty by 2030. This challenge has been adopted by Kenya in its Vision 2030, and as part of its national agenda of tackling chronic food insecurity. As ambitious as this goal may be, the evidence is encouraging; high-quality, well designed and sequenced support can enable the poorest families to escape the deepest forms of poverty. Yet serious obstacles remain around coordination, access, resourcing and scale. Since 2018, Systemcraft has been used to rally and align core partners around the shared ambition of mobilising a national effort to graduate poor people at scale.

How to build collective and adaptive capacity?

06 What next? Five dimensions for action

Systemcraft offers five dimensions for action. These are the things we can work on when we seek to create system level change; and answer the perennial question, 'What should I do next?'

These five dimensions do not have an order to them. The order you choose will depend on your issue, your context, your windows of opportunity. They do not have a 'done' state. They are conditions that will need returning to, where capacity will need enhancing, with ongoing investment. It may not be possible, or a priority, to work on all of the dimensions. You need to work out where you can start and what will be most significant in your context and timeframe.

Building from your understanding of the current state, use the dimensions to assess the current collective and adaptive capacity for change, and seek windows of opportunity to invest in it. This is how to answer, 'So what should I do next?'

The remainder of this section unpacks each dimension, offers questions for assessing current capacity, and shares examples of potential action.

Change Incentives

Create mutually reinforcing interventions that change structural and informal incentives, and influence behaviours.

Organise for collaboration

Change is collective. Build coalitions and enhance the formal and informal architecture to enable different actors to coordinate efforts.

Make it matter

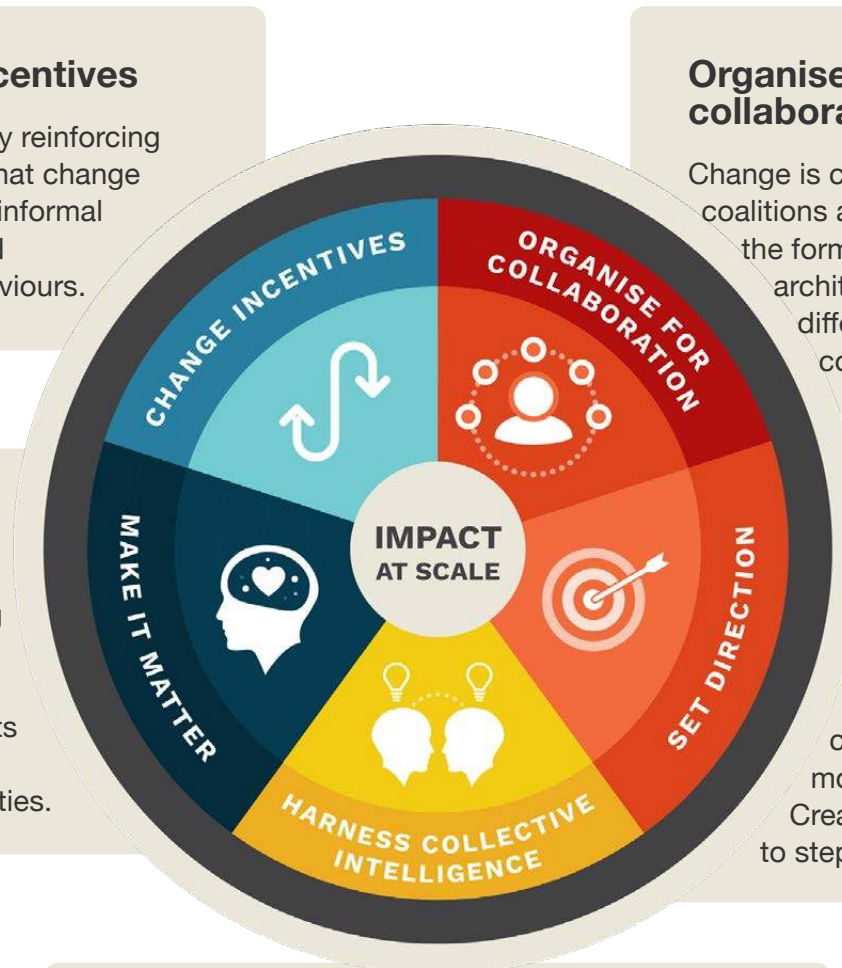
Forge an inclusive movement championing the transformation; ensure relentless storytelling that connects with people's concerns and lived realities.

Set the direction

Set ambitions, align goals, create milestones, mobilise resources. Create enough clarity to step forward.

Harness collective intelligence

Enable learning about how the system is functioning and changing. Ensure information flows through the whole system and reduce asymmetries of knowledge and information.





Organise for collaboration

Change is collective. Build coalitions; ensure diversity of stakeholders; enhance the formal and informal structures to help different actors work together and align their efforts.

Core ideas

Diversity of participation: Change is collective. Effective collaborations need to bring together more than the ‘usual players’. Issues that feel stuck, where many things have been tried before, often already have some form of ‘partnership’ or ‘coalition’ infrastructure. So, if things remain stuck then broaden and change who is working together. Seek out marginalised groups. Build unconventional partnerships that connect public, private and civil society actors. In our work with the UK’s National Health Service, the development of effective collaborations between primary, secondary and social care elements of the system have been fundamental to change.

Involve ‘enough’ – not ‘all’ stakeholders: All systems exist because they are working for some people, somewhere, at least some of the time; for this reason, systems resist change. You will never get everyone to engage – it is

often those who are most powerful for whom the status quo is working the best, who will (though not always) resist change. Identify where there is energy for change and start there. Work with those who do want to create change.

Create a relentless invitation to join in:

Whilst a small committed band can get change started, impact at scale is going to need a critical mass. And so the ‘founding coalition’ needs to be ready and open to others joining in. Even the others who may previously have been resistant and obstructive. At some point the opportunities will shift and you will need all the energy and resources you can get.

Enable coordination: Our best intentions for collaboration often fail for want of effective coordination. If disparate stakeholders are actually going to work together, they will need to organise themselves and create structures to agree how they will make decisions, who is accountable for what, what resources each will bring, when and how activity will be reviewed, and so on. This coordination will often involve bridging between different agendas and even world views. Effective coordination enables us all to step out of our echo chambers, spark new ideas, and sustain the long-term effort that change requires.

Informal networks are powerful:

Much change happens through informal collaborations. A child may be more influenced by what she hears in the school yard than in the classroom, an employee by what

they hear from a peer rather than ‘official communication.’ Seek out the existing ways people come together, listen to and tap into these.

Expand the mandate for change: As organisations and individuals we all have limits to what we each perceive as being ‘legitimate’ to change or able to influence. Because complex problems have no single owner we have to work together. For example, a large supermarket chain wishing to play their part in tackling obesity should seek to partner with an NGO working on diets and nutrition. Or even better, join with multiple supermarkets, NGOs, food growers, producers and government policy makers to really create impact at scale. This is not just about partnership to deliver change; it is about partnerships that create a mandate for change.

Get practical What could I do next?

Quick reference
suggestions for leaders
and practitioners



Diagnosis: What is currently happening to **organise for collaboration**?

- To what extent do stakeholders understand who else is part of this issue?
- Is there active engagement from a core coalition around this issue?
- Are there adequate structures to enable disparate actors to connect and work together?
- Is there a broad and open invitation for others to join in, and is this adequate?
- Is there a broadly held mandate for change that is seen as legitimate and meeting the needs of multiple stakeholders?

Example activities to organise for collaboration

- Participatory stakeholder mapping.
- One-off event(s) to initiate connection between diverse stakeholders.
- Incubate mid- to long-term coalitions of actors.
- Formalise structures that ‘wire’ collaborations together and institutionalise (rather than personalise) connection.
- Seek out and engage with informal settings where actors already come together.
- Expand stakeholder representation (consider both formal power holders and marginalised groups and voices).

Set the direction

Set ambitions, align goals, create milestones, mobilise resources. Create enough clarity to step forward.

Core ideas

Set your North Star: Human systems, and the problems they create, are not neatly bounded. Climate, food, water, poverty, biodiversity, gender inequality, conflict – these and other challenges inextricably intertwine and yet, if we try to hold them all in mind, we enter a state of paralysis. Our stubborn systems will only change if we are focused. Change efforts must draw people together around a North Star ambition. The scale of this ambition will depend upon your mandate. It should inspire people to reimagine their future, whilst feeling just about realistic enough to galvanise time and resources.

Big ambitions need concrete next steps: There is a paradox in system change work. We need to be able to hold on to big, long-term and often intimidating ambitions, such as ending poverty, whilst taking action in the here and now. Many well-intentioned collaborations drift apart, not for lack of ambition, but for lack of specific time-bound goals which match the time, resources and collaborators available. Initially these goals may look modest, perhaps initiating an inter-

organisational conversation about diversity, or a one-off event targeting mental health. As things accelerate, look for goals bold enough to grab attention and substantive resources: a glitzy prize to celebrate the best young agricultural entrepreneurs in Africa; setting a national deadline for achieving net zero carbon emissions; or reducing a city's water consumption to 50 litres per person. Effective goals build the momentum for change and enhance collaboration - they turn the abstraction of an ambition into concrete action. The key, though, is not to confuse the goals along the way with the bigger, long-term ambition.

Start where you are: Changing systems is not an engineering problem. There is no 'right' place to start; you can only start where you are, with what you have. Consider what might be most effective right now, given the state of the system or organisation in front of you, and the collective resources you have.

Develop a plan so you can change it: Generating lasting change at scale means working in a dynamic environment. In these environments, long-term rigid plans soon become outdated and overtaken by events. When, however, there is a need to get multiple and disparate actors to work together, there does need to be a plan. So what we need is 'just enough of a plan'. We need clarity about our shared ambition – and then some 'what next milestones' that are time-bound, shared, specific, and resourced. Imagine sailing around the world. You know where you are

starting from, you know your end destination, but you don't plan the detail of the journey. Perhaps you pick the next port to head to, and once there review how the crew is feeling, the state of the boat, forecasts for prevailing winds, and so on – and then you set your next milestone. The big ambition remains the same but the route emerges as you encounter a dynamic environment.

Collective commitment needs to recognise self-interest: System change efforts require collaborations that go beyond organisational boundaries. Consequently, the commitment to maintain action has to be enticed and motivated rather than demanded, as there are rarely structures to 'enforce' participation. Public announcements can create reputational incentives to deliver, but if these commitments start to sit in tension with an organisation's self-interest, then do not expect them to last. Shrewd goal-setting leverages the immediate self-interests of essential stakeholders in order to create momentum towards a longer-term public good. For example, a coalition of leading chocolate producers recently requested that the EU raised human rights standards in cocoa supply chains¹². This aims to give more ethical companies a competitive advantage as they attempt to reduce poverty within their sourcing.

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and practitioners



Diagnosis: What is currently happening to **set the direction**?

- Is there a mutually-held long-term ambition for change that offers a North Star towards which stakeholders are aligning their actions?
- Are there joint 'next step' goals and relevant targets, with clarity amongst a core group about who will do what and when?
- How will core stakeholders benefit if the short- and long-term goals are successful? Are these returns strong enough to sustain their engagement?
- Are there dedicated resources (financial, time, etc.) for tackling this issue?

Example activities to set the direction

- Codify initial commitments, set specific targets. If needed, focus on short-term and 'good enough for now' next steps.
- Build on initial actions to create longer-term goals and more ambitious plans.
- Create galvanising, specific goals that rally and inspire support.
- Align goals to individual institutional agendas as well as wider expectations, such as the Sustainable Development Goals.
- Provide a platform for leaders to make shared public statements and ensure early reputational benefits and enhanced commitment.
- Seek additional/longer-term resourcing.
- Develop appropriate ways to measure and track progress; build a theory of change.



Make it matter

Forge an inclusive movement championing the transformation; ensure relentless storytelling that connects with people's concerns and lived realities.

Core ideas

Build a movement: Collective action is driven by collective ambition. It is not enough for a small group to trumpet their vision, rather there needs to be a genuinely co-created and shared ambition that transcends the legacies of individual leaders and institutions. For systemwide change to happen, this ambition must reach a tipping point where key influencers and decision-makers prioritise this agenda over the myriad competing issues, and critical mass of supporters align behind the opportunity of change.

Imagine a positive future: Change happens when we want something better than we have. Focusing on what is currently 'wrong' will help deepen our understanding of the current state and galvanise a demand for action. But to sustain the work there also needs to be a picture of a better future, something to move towards. Generation Africa, the leading partnership promoting youth agripreneurship, started its system change work by creating a campaign to transform the negative image of farming. Africa's agricultural economy struggles with an image problem as young people head to cities,

viewing farming as the dirty, drudging work of their grandmother. Yet their innovation and drive are crucial to transforming rural economies and food supply chains. As part of a broad systems change effort, Generation Africa is making agripreneurship aspirational¹³.

Connect with what's important for people:

For an ambition to translate into change in the here and now, it has to matter to the people who are going to need to do the changing. There needs to be a story of change that connects with people's emotional and practical concerns, agendas and values, if long-term ambition is to convert into here and now action. For example, when the new Principal of Mansfield College in Oxford UK set out a vision for a student body whose educational background is representative of the population at large (i.e. 90% from state schools), she framed it in terms of achieving greater academic excellence, and provided the data to back it up¹⁴. In this way she spoke to what 'matters' in a world of Oxford colleges, namely academic excellence.

Powerful storytellers: Who tells the story is a fundamental part of the power of that story. When Greta Thunberg talks of climate breakdown, part of her credibility and power comes from her status as a young person who will have to live with the legacy of the climate change created by older generations. A new way of doing things will often require new forms and voices of leadership. The Black Lives Matter movement specifically sets out to centre the experiences and leadership of black women, queer and trans people, disabled

and other marginalised groups¹⁵. Centring these marginalised voices and experience is fundamental to the work of eradicating white supremacy.

Inspire devolved storytelling: System change cannot be driven or controlled from a 'centre'; it needs distributed action. For this reason it also needs distributed story telling; a cacophony of storytellers out in the world sharing an ambition for change. It can be alluring, particularly for formal leaders, to try and keep control of the popular narrative, to centralise the message. However, change in the face of complex challenges needs distributed action. This requires lots of people ready to own and tell the 'story of change' in their own ways. And for this to happen, it has to matter to them.

Shift mindsets: Complex problems, be they homelessness, racism, or violent extremism, are products of a network of social, political, economic and environmental relationships that become entrenched. These relationships become almost invisible; absorbed as just 'the way things are'. Ultimately, transformative change requires changing our own mindsets about what is possible, and the way things can be.

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Quick reference
suggestions for leaders
and practitioners



Diagnosis: What is currently happening to **make it matter**?

- Does the ambition matter enough to the broad coalition who will need to act for change?
- Is there a clear, galvanizing and positive story communicated widely about this issue?
- How well would wider stakeholders recognise (even if they don't agree with) the change that is sought?
- Have traditionally marginalised voices been engaged with and amplified in creating and telling the story?
- Is there support from both established, popular and new forms of leadership?

Example activities to make it matter

- Engage with formal and informal leadership to co-create a shared 'story'. This could be a 'temporary' vision for a simple next step.
- Develop multi-way dialogue, not just broadcast style communication methods; tailor for marginalised/excluded populations.
- Engage individuals who can powerfully represent the issues; seek diversity of champions.
- Inspire relentless, devolved storytelling.
- Create a media campaign through new and traditional channels/

Change the incentives

Create mutually reinforcing interventions that change formal and informal incentives and influence behaviours.

Core ideas

Every system is working: Complex problems are driven by coherent decision making. It is essential to understand what desired outcomes the current state produces and for whom¹⁶. For example, overfishing in Lake Victoria is driven not by a failure to understand the problem, but a need (and desire) to generate incomes. Until fishing communities have other ways to feed themselves and generate an income, fishing will continue apace. Too often change efforts fail because they don't recognise or target the incentives that actually inform people's choices and behaviours. So, if you want to create change, then seek out the dynamics that drive the current state and work to shift these.

There are many and different types of dynamics: The choices we make are driven by both structural and informal dynamics. Money, power, culture, history, habit, beliefs, values, what our friends and neighbours do, what feels 'normal', are just some of the dynamics that



inform our choices. There can be a tendency to over focus on structural incentives – such as tax codes and subsidies. Whilst these are important, they do not stand alone. It is vital to also attend to informal dynamics. For example, our work with Generation Africa¹⁷ has sought to align structural incentives – such as access to capital, and informal dynamics such as social status to help young professionals see food production as a viable and desirable career. Creating system-level change requires we dig deep enough to understand the structural and informal, intended and unintended dynamics that inform decision making.

New choices need to be practical and possible: Changes in 'choice architecture' can change what is easy to do. For example, making pension savings or organ donation opt-out rather than opt-in has massively increased the uptake of both. Note that no-one has less choice. It is just that the default has changed. Particularly when working with informal incentives, you need to do more than make an argument for change, you need to make it the preferable option; easy to do.

Technology can unlock sweeping changes to the default choices people make. Mobile payments have transformed the finances of the unbanked in Kenya. Electric cars may

unlock the transport sector's transition to zero climate emissions. Whilst much tech innovation is market-led, it is also possible for it to be issue-led. Policy makers can provide financial incentives, or more explicitly initiatives such as the X-prize inspire and reward breakthroughs that address specific human challenges.

Target feedback loops: Feedback drives systems. If we want to change the system we have to change the feedback loops. There are two main types of feedback loops. A balancing loop keeps things in check. For example, supply and demand of consumer products keep each other in balance through pricing signals. By contrast, a reinforcing feedback loop generates more and more of something. For example, increased global temperatures lead to permafrost melting and the release of carbon, and further increased temperatures. Interventions that go to scale will seek to create feedback loops that either bring balance where it is needed or reinforce more of what is desired. For example, increased literacy amongst girls leads indirectly to a reduction in family size, which leads directly to better educational outcomes for girls. Seek to target the feedback loops, either by disrupting those that cause problematic outcomes or reinforcing those that accelerate the desired change.

Intervene at different points and through different mechanisms: Change at scale requires multiple interventions in different parts of the system. Different types of intervention, at different points in a system, exert different amounts of leverage. Donella Meadows¹⁸ offers 12 'typologies' of intervention with varying effectiveness. Changing constraints such as subsidies, taxes and standards are often the most obvious and also the least effective, while shifting mindsets can be the hardest and the most effective intervention. Look at the different types of intervention you and others are creating and ensure there is diversity. So if you are working on structural incentives, then how can you also act on mindsets or the beliefs that drive current behaviour?



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Quick reference
suggestions for leaders
and practitioners



Diagnosis: What is currently happening to **change the incentives**?

- How well understood are the formal and informal incentives that drive current behaviour?
- What interventions currently exist to shift the drivers of this issue, and can you amplify any of these?
- What default choices are currently at work and how well are these understood?
- What feedback loops drive the current conditions and how effectively do current interventions reinforce or disrupt these?

Example activities to change the incentives

- Develop an incentives analysis to show the benefits that the current state delivers – look at formal and informal dynamics.
- Identify key policy levers (e.g. tax code, recruitment criteria, bonus structures etc) and make visible if and how these fail to align with/or support the desired change.
- Identify and change the choice architecture that informs current behaviour.
- Campaign for policy-level change at levels beyond your control.
- Identify, develop, invest in technology to make new choices ‘easy’.
- Develop alternative incentives to experiment with at levels you can influence.
- Seek ways to shift social narratives.



Harness collective intelligence

Bring together diverse views to build a shared understanding of the current state; enable ongoing learning about how the system is functioning and changing; address asymmetries of information, knowledge and participation.

The core ideas

Learn as we go: Systems are dynamic; learning must be too. As we work with systems we must be constantly learning about both the efficacy of our interventions and the changing state of the wider system. Standard, linear approaches to change can imply the nature of the problem, and the system it sits within, stay the same over time. Complex problems don't behave like this. And so we have to 'learn as we go'. Learning needs to be about both what we are doing and how the wider system is changing. Much change will be driven by contexts and activities that have nothing to do with our own efforts.

Learning should serve change-makers: Systemic change requires lots of different actors to work on the system from lots of different vantage points. The better actors

understand their system the better they will be able to influence it. And so learning needs to serve collective interests. Often learning efforts are designed to serve those who pay for them. An international donor's evaluation will inform that institution's future grants; a company's data collection will inform its growth and competitiveness. Instead, learning needs to serve those who live and work with the problem. For example, Wasafiri undertook work in Kenya to understand the dynamics driving violent extremism in informal settlements and how to engage vulnerable young people and build their resilience to recruitment / radicalisation into terrorist groups. We supported local vulnerable youth to identify key research questions, conduct ethnographic research and engage as both participants and recipients of learning. This approach enabled them to deepen their knowledge of local drivers of conflict and, in turn, to take greater agency in building their own resilience to recruitment into terrorist groups.

Harness a diversity of perspectives: There is a well-known adage about several blind people standing around an elephant. A woman feels the trunk and declares it's a hose. A man feels the leg and concludes it's a tree. A child at the tail insists it's a broom. It is only by combining their perspectives and creating a 'collective intelligence' that the group can identify the elephant. A complex problem is similar. No single actor has the power to see or know the whole problem, and there are major risks in mistaking an 'elephant leg' for a 'tree'. Harnessing diverse perspectives is not about

forming one, central, static, expert view of the system. Rather it is a process of building a greater shared understanding, including as the elephant grows and moves. For then we all become better able to work on the system.

Asymmetries of information: Knowledge is power, and information holds systems together. Understanding how information flows – who from and who to, who is enabled to be a producer and who a consumer of what knowledge – will reveal much about current power dynamics. Predominantly, those with better access to information will hold more power. Systems with weak collective intelligence will have populations marginalised as both producers and consumers of information and knowledge. Their views will not be well heard, and information not shared with them in a meaningful and accessible way. Often the powerful may hoard and protect information (data) intentionally or unintentionally.

Prototype and learn: Human centred designers know that it is only when their objects and processes encounter real people that they will learn if they work. The same is true in systems change work. Like designers, system change leaders can adopt a prototyping approach to help test ideas in action. Prototyping is about getting started, getting going and learning as you go. It is about creating the 'minimum viable product' to be able to learn from, and then iterating quickly until you are ready to go to scale.

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Quick reference
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and practitioners



Diagnosis: What is currently happening to **harness collective intelligence**?

- Is there adequate diversity of views to generate a comprehensive understanding of the issue and how it is differently understood and experienced?
- How regular and reliable are the mechanisms used to learn about how the issue is changing?
- How well do existing learning mechanisms reach, include and serve those that need to act for change? How inclusive are current information and learning flows?
- Do learning mechanisms seek the views and experiences of all significant groups?

Example activities to harness collective intelligence

- Identify those who currently are excluded from producing or consuming information.
- Seek out the perspectives and voices that may be missing; ensure accessible structures are used.
- Build a shared understanding (map) of the system; develop ways for stakeholders to update this map as you all learn more.
- Create regular, robust and inclusive learning cycles.
- Establish a Theory of Change with indicators and reporting cycles that test and iterate your assumptions about how change will occur.
- Expand how the product of existing learning efforts are shared and with whom, reduce asymmetries.
- Seek broader perspectives from those who exert influence.

A photograph of a savanna landscape at sunset. The sky is a deep orange, and the foreground is filled with green grass. A large, dark silhouette of an acacia tree stands on the left. In the middle ground, three elephants are visible, walking from left to right. The background shows rolling hills and more trees, all silhouetted against the bright orange sky.

CASE STUDY

Systemcraft in Action: Seeking the impossible? Balancing food security and sustainable incomes with protecting Africa's most fragile environments

Africa's growing population needs productive agriculture to provide jobs, food and nutrition, especially for its poorest. Yet failing to protect the continent's landscapes and natural capital risks catastrophic ecological collapse. Systemcraft helped the World Wildlife Fund navigate this delicate balance for two of Africa's most important ecosystems; the plains of Southern Kenya and Northern Tanzania, and the Zambezi Conservation Area stretching across five countries. For each, Systemcraft informed analysis of the landscape and value chains; mapping of drivers, trends and scenarios underpinning their respective food, livelihood and ecological systems; and convening the region's stakeholders to develop a long-term impact and investment plan.

[VIEW REPORT](#)

07 Conclusion: Change for good?

If you are working on a complex problem we hope to have convinced you that Systemcraft is an effective framework for delivering change. But does it deliver change that is good? What if we apply Systemcraft to help an oil company reduce community conflict whilst they develop a new oil field? What if work to increase food yields drives a dependency on commercial seeds, fertiliser and pest control? Every complex issue is riddled with contested views of whether the change underway is good or not. And every intervention will have positive and negative impacts.

Complex issues, by their nature, transcend the normal boundaries of leaders, teams, organisations, states and even time¹⁹. Because of this, existing mechanisms of governance are often inadequate. Checks and balances are missing and reinforcing feedback loops can concentrate power and benefits in the hands of a few. For example, consumers want cheap food, so companies pay farmers as little as possible, locking them in poverty. Growing urban populations use even more water until rationing is required. In every case, the complexity of the situation is allowing the system to get out of balance. Stakeholders only have a partial view of what causes pain points. The people who are benefitting most from the current state, are also likely have most control over the system and will

inevitably steer it with their biases. In aggregate, we can all end up living within systems that are increasingly unequal, more susceptible to conflict, and less able to fulfil our collective interests when managing public ‘goods’, such as the climate, disease control, biodiversity, or the news. And so, we all have a stake in tackling our shared complex challenges.

Systemcraft forges more intentional and inclusive governance mechanisms. It enables stakeholders to establish a more complete view of how the system is working and their interdependencies. It ensures relationships exist to work through conflicting interests, rather than entrench them. And it creates structures that drive improvements or respond rapidly when the system gets out of control. This is collective and adaptive capacity.

Ultimately, we believe that when stakeholders are better wired together, they are more likely to sustain the systems in which they operate, ensure everyone’s needs are more justly served, and resolve differences peacefully. We believe that sustainability, justice and peace are self-evident ‘goods’ that provide an ethical foundation for our work. Humanity’s path to progress will continue to be bumpy and potholed, but we hope Systemcraft provides you a framework for delivering change that is, ultimately, good.

“Travellers, there is no path. We make the path as we walk together.”

08 Postscript

Systemcraft is the summary of our learning so far. As such it is evolving. This edition was produced in 2020 and updates the language of the 2018 edition. We have also adapted the core dimensions to reflect our own learning. Specifically, we have come to recognise the value of ‘making it matter’ and of building and communicating a future-focused ambition, something that wasn’t emphasised in the 2018 edition.

Beyond this primer, we have practical resources on our website including a workbook which offers more of a step-by-step guide. All of our resources are published under creative commons and so are freely available to those who would like to use them for non-commercial purposes. For those who would like specific support please reach out to our consultancy practice.

We continue to seek partners who want to have an impact at scale on some of our toughest shared challenges. We will continue to learn about how change happens, and to update Systemcraft as we learn. We would love you to share your stories and learning with us so that together we can learn as we go.

Reach out to us on email at enquiry@wasafirihub.com or via social media @wasafiriconsult.

09 Acknowledgements

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Endnotes

- 1 This excellent question is from David Stroh (2015) Systems Thinking for Social Change.
- 2 Thinking in Systems, Donella Meadows 2008, P:11
- 3 Systems thinkers call these scales 'fractals', and what is significant is that the patterns at every fractal repeat each other.
- 4 Snowden & Boone (2007) <https://hbr.org/2007/11/a-leaders-framework-for-decision-making>
- 5 Note the current state may be both working and not working for any given individual or group – for example overfishing gives an individual a better harvest and a better income today but at a cost for next year.
- 6 See references and further reading section for key examples
- 7 http://www.proudlymadeinafrica.org/images/uploads/docs/M-Pesa_CaseStudy_June14_synopsis.pdf
- 8 <https://www.thersa.org/discover/publications-and-articles/rsa-blogs/2017/07/from-design-thinking-to-system-change>
- 9 See the work of Mercus Jenal and Toby Lowe for further discussion on performance management within international development and Public Sector management
<https://www.jenal.org/why-outcome-based-performance-management-doesnt-work/>
- 10 <https://www.climatestrike.net/#about>
- 11 Wasafiri has developed substantive tools to support each of these steps
- 12 <https://www.voicenetwork.eu/wp-content/uploads/2019/12/Joint-position-paper-on-the-EUs-policy-and-regulatory-approach-to-cocoa.pdf>
- 13 Generation Africa and the Go Gettaz Prize <https://genafrika.org/gogettaz-agri-preneurship-male-and-female-winners/>
- 14 <https://www.tes.com/news/oxford-principal-admissions-should-be-90-state-pupils>
- 15 <https://blacklivesmatter.com/herstory/>
- 16 Systems thinkers refers to this as a systems purpose. This is not necessarily a desired purpose – but rather the outcomes that the current state is structured to achieve (be that desired or not).
- 17 See here for more on our work with Generation Africa <https://www.wasafirihub.com/africas-generation/>
- 18 A summary Meadows hierarchy of system leverage points can be found here <http://donellameadows.org/archives/leverage-points-places-to-intervene-in-a-system/>
- 19 For example, climate change includes a tension between the needs of current and future generations.



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