IRC

IN SEARCH OF DEEPER LEVERAGE POINTS

Going beyond the technical to transform systems and lives

Acknowledgements

Find out more:
www.systemsleadershipessay.com

IN SEARCH OF DEEPER LEVERAGE POINTS

GOING BEYOND THE TECHNICAL TO TRANSFORM SYSTEMS AND LIVES

Contents

About this working paper

Our mission is to inform, influence and inspire decision makers to place lasting water, sanitation and hygiene services at the core of their commitments, policy and investment strategies. We believe that these services underwrite a global society where everyone lives with health and well-being, dignity, justice and the opportunity to fulfil their potential.

Yet if we're to achieve this, in the face of an ever-more complex world – we need to shift our focus.

This exploratory working paper sets out our latest learning about systems change. It explores new ways we can evolve as an organisation – and as a sector – to become a stronger force for change. It asks us to go beyond surface fixes and find deeper leverage points that can trigger transformative change.

How did we get here?

In our 57 years of existence, we've constantly adapted to a changing world. We began in 1968 as a pre-internet reference centre for water and sanitation and gradually transformed into a research outfit. By 2006, we were a mission-driven change organisation. As a 'think-and-do' tank we set up offices in focus countries and partner districts and made long-term commitments there. Now, we're decentralising further, becoming a networked organisation that works collaboratively to drive transformative change.

As we've evolved, we've increasingly used systems thinking to achieve our mission. This began with early work on sustainability, then life-cycle costing and since 2015, an explicit focus on systems strengthening.

In our 2018 working paper '**Understanding the WASH[1] system and its building blocks**' we set out our approach to strengthening systems. We called it our 'systems strengthening praxis' – a way of continually adapting theory through practice, while using theory to inform our strategy and practice. This approach used 'building blocks' to navigate, measure and understand systems. They were useful, but we knew they were a simplification of the complex systems with which we work.
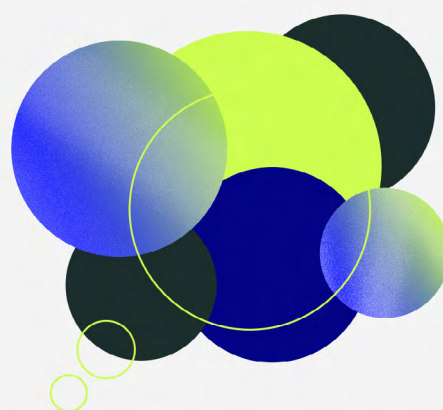
The more that experience has shaped our thinking, the more we've begun to see the system in new ways. And we've realised that moving our focus from the technical to the political is the only way we'll achieve justice for all. We need to inspire decision makers to place lasting water, sanitation and hygiene services at the core of their strategies. To see water, sanitation and hygiene as central to better public services and at the heart of health, education, energy, economy, climate and justice. To do that, we must look to the systemic issues beyond the building blocks, beyond familiar boundaries, ways of working and comfort zones.

That's why our **All Systems Connect symposium in 2023** aimed to create new more interconnected ways of working "**Because the multidimensional challenges we face can't be solved by the fragmented and siloed thinking of the past**." We brought together leaders from those wide-ranging sectors – in particular health, climate and economy – to explore ideas, challenges and solutions. We discussed hundreds of cases, pinpointed blind spots in our thinking and gained a clearer view of how problems and solutions overlap, intersect and affect one another.

There was a resounding consensus that we need to connect more and urgently. We developed an action plan, for new alliances, more diverse systems leadership and greater courage to challenge discrimination and political barriers. We agreed to identify and address development constraints that prevent progress towards the Sustainable Development Goals. Not just for water and sanitation, but for all the rights needed for a dignified life.

Although it's still early days, new and more connected ways of thinking and working have emerged. We have new partnerships with Ministries of Health and National Development and are training others on how to advocate for better climate finance. We're part of a systems leadership movement that's **galvanising action among heads of state**. We've invested in health, climate, social justice and finance experts to help us to influence decision makers to put water, sanitation and hygiene at the core of their policies, investments and actions.

---

1 WASH: Water, sanitation and hygiene. Grouping these together can create a useful boundary, however we are increasingly seeing that the boundary creates a silo which can limit the perspective on what water, sanitation and hygiene are – e.g. overlooking solid waste, water resources and their multiple uses, or even largescale urban utilities.

From systems thinking to systems transformation

Our purpose is to transform the lives of people – for the better, for all of us. We're committed to the persistent daily work that it takes to bring about change, but we know that incremental change is not enough when lives are at stake. Both gradual continuous improvement and large scale, dramatic changes are necessary.

For example, systems strengthening for a public utility might involve improving monitoring and data management. This will immediately help the utility to track its effectiveness, identify needs and gaps and improve planning. But good data, presented clearly to the right investor, could also unlock game-changing finance that doubles coverage and dramatically improves service levels for an entire country. It could happen. But we won't know until it does.

Large scale, *transformative changes* in complex systems can be achieved by systems strengthening, but often they're the result of either a shock – like a natural disaster or a pandemic – or of emergence. Emergence refers to new patterns or behaviours that arise when there are changes in relationships or interactions within the system or its surrounding context. In the utility example, emergence could be a shift in the economy where more households have disposable income, leading to a surge in demand for new water connections and utility services.

The difference between incremental steps and the beginnings of transformative change can be almost impossible to see while they're happening. Many trends start to emerge but then disappear. But if we can identify them early, we can amplify positive trends while discouraging or mitigating unhelpful ones. This is the role of the modern leader, in complex times. Balancing systems strengthening, while looking out for opportunities for larger transformation keeps us focused on whether our efforts are truly transforming the lives of people – for the better, for all of us.

A socio-technical system adapts in response to its surroundings

Most systems surrounding public services include **social and technical** elements that interact and adapt in response to one another. Take transport systems and traffic jams – something that most of us experience. Both road infrastructure (technical) and the decisions of road users (social) come together to create a jam. Both are connected and affect one another – often in unpredictable ways. People may avoid a bumpy road, causing a jam on the alternative route. To avoid this, you could fix the road or encourage drivers to use it anyway.

There are often fuzzy boundaries between a socio-technical system and the context surrounding it. Let's look at roads again. The system itself is affected by external factors, such as a storm that causes the flooding of a highway or a high-profile conference being planned in the centre of the city. These not only affect the system, but also create opportunities for change. The conference might bring financial resources and political will to fix that bumpy road. The flood may cause pressure from the public and the media to take action to avoid future incidents. Both might have been hard to achieve without those events driving action.

All of us dedicated to improving systems – systems leaders – need to look beyond usual boundaries to consider what dynamics we can put to use to stimulate change. These can be social, technical, political, or otherwise. A systems leader might suggest that instead of building roads to solve the traffic problem – a technical solution, the city could promote the use of public transport and discourage driving in the city – a social or behavioural solution.

Redrawing boundaries in response to our learning

Boundaries help us to focus, plan, adapt and act. But to stay relevant, we must pause now and then to ask ourselves, do the boundaries still serve our cause? Do they still reflect the forces at play?

As IRC, we've worked within a defined boundary around the water, sanitation and hygiene system. Within this, we've drawn smaller boundaries around building blocks. Strengthening the building blocks of water and sanitation systems - and the interactions between them – is key to achieving a world where everyone lives with health, well-being, dignity, justice and the opportunity to fulfil their potential. But it's not enough.

Although we've always drawn the system boundary with a 'dotted line' (Huston and Moriarty, 2018), we've learned over the years that these boundaries are even fuzzier than we thought. Water, sanitation and hygiene, like other public services, are provided by highly interconnected systems. Their outcomes depend on decisions and contextual factors beyond the system building blocks. Factors such as economic development, climate change, population dynamics and global instability all play a role and above all so do political priorities.

As systems thinkers of today – systems leaders – we must see and understand the wider dynamics at play. And we must have the courage to shift them.

BOX: Fuzzy boundaries in the health system

The same interconnectedness can be observed in the health sector. The healthcare system does not stand alone. It is affected by a country's budget, economic situation, trade position and levels of foreign debt. It is affected by the population's attitudes toward healthcare – do people go to the doctor at the first sign of a stomach ache, or are they likely to wait until it's urgent? The quality of care provided is affected by the market dynamics and supply chains for medicines and the quality of training for medical professionals. The system can be impacted by shocks such as natural disasters, economic recession and political decisions. We can strengthen the healthcare system, but achieving transformative change will depend on shifts in these wider systems and contexts.

Using leverage points to tip the balance

Changing systems is a lot about finding the right **leverage points** – places or moments where a shift can trigger a cascade of bigger changes. This is as much about where to intervene in the system as it is about when and with whom. Building the courage to both find and act on these leverage points precisely when they emerge can be an ''aha'' moment for systems leaders.

Environmental scientist and systems-thinking guru Donella Meadows made the point that there is a spectrum of leverage points. These range from those that are easy to identify (but less impactful) to those that are hard to identify (and more impactful). She called these **shallow** and **deep leverage points**, acknowledging that both are important, but neither is sufficient on its own.

Shallow leverage points focus on specific **parameters** and measurable parts of the system, like changing tax rates or subsidy levels. They are technical; typical of policy initiatives such as increasing water tariffs so they reflect actual costs. They also include 'capacity building' and other interventions that are important but have a gradual impact. They're important but mechanical; their effects are often predictable and can be modelled with a logical framework (though not with full certainty).

For greater leverage, interventions need to go a level deeper to target the **dynamics and feedback loops** within a system. A systems leader needs to observe and understand the current behaviour of the system well enough to shift it. Take for example, a small water utility's customer help desk. When customers can express their needs, the utility can respond better, building trust and encouraging them to keep using the help desk. This gradually leads to an improvement in services. Feedback loops can be positive or negative, big or small. Changing them is a deeper leverage point because a single intervention can have knock-on effects that continue, or even grow.

The next deeper level focuses on **relationships, power dynamics and social structures** that shape decisions. Tools like political economy analysis or power mapping can help you find leverage points here. The **Heads of State Initiatives** work at this level. Inspired by movements such as Prime Minister Modi's Clean India campaign, it se-
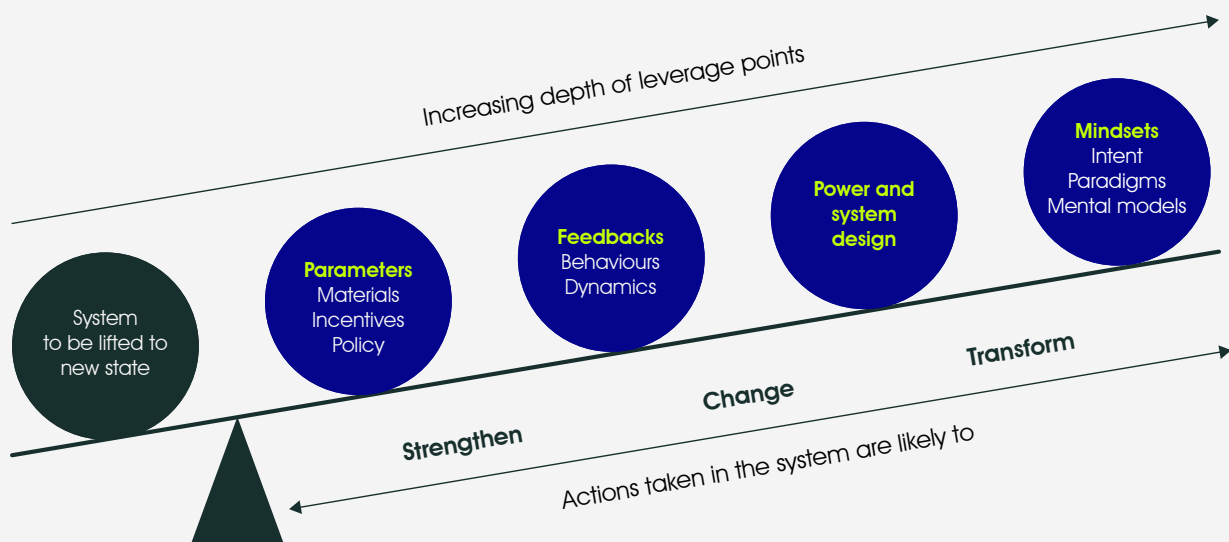

Figure 1: Figure showing four different types of leverage points.

cures commitment and action from those with the power to trigger a ripple effect of change – the head of state. Another way to work at this level is to change who makes decisions – for example, bringing women, marginalised communities, or young people into formal decision-making processes will have serious impact on the decisions that shape the future.

The deepest leverage point and the most difficult to tackle, is **mindsets and beliefs.** These uphold current paradigms. In IRC, when we talk about the power of vision, we mean changing **mental models** that define what we consider 'common sense' about the world we want. Mental models are the deeply held beliefs, assumptions and perspectives that we use to make sense of everything. They influence how we interpret information, prioritise actions and respond to challenges. They dictate our decisions, even when we aren't aware of it. Calling justice and well-being for all 'common sense' is one way to start shifting beliefs. World views don't change quickly, but they do evolve over time. And when our shared mental models change, a cascade of other changes take place.

For much of the 1970s and 1980s, water and sanitation in low-income countries was seen as a string of one-off well drilling and toilet building projects. They're now treated as embedded public services that are the responsibility of the national government. When we need a much larger systems change, like universal well-being and dignity through public services, we need to seek out deeper and more difficult to access leverage points.

The importance of timing

One of the most critical factors influencing whether a disruptive idea or technology will succeed, is timing **(Geels, 2002**).

It's not a new or innovative idea that drinking water is a public service that should be managed and guaranteed by the government. But in 2010, something changed. There was a noticeable inflection point – a moment of visible and irreversible systems change. Systems leaders watch the world shift, wait for the right moment and then strike. Catarina de Albuquerque and her team did just that in 2010. As the then Special Rapporteur on the human right to safe drinking water and sanitation, she saw support for the cause building among member states. She chose this moment to push for inclusion of water and sanitation in the UN's human rights laws and in the Sustainable Development Goals. Governments could no longer treat them as optional and her action had long-term influence at all levels, from heads of state through to grassroots activism.
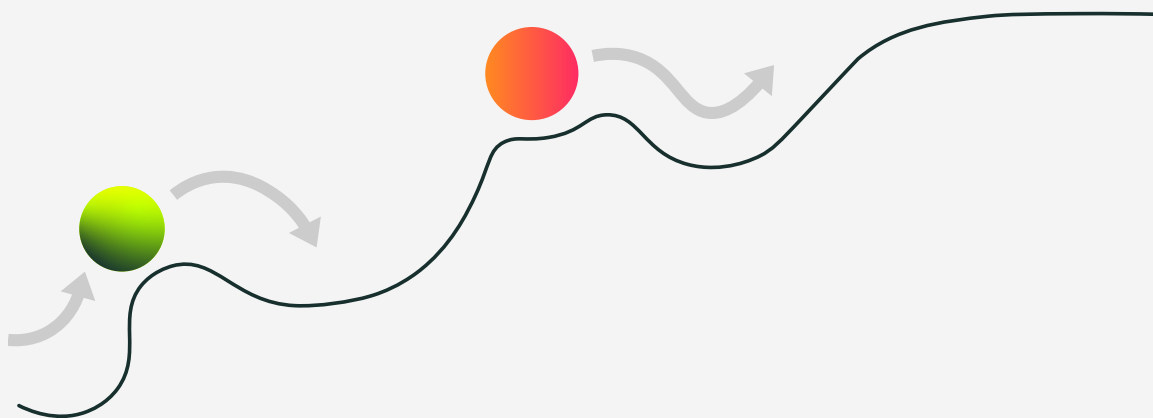

Figure 2: Systems change takes continuous effort, but there are key moments that create breakthrough, irreversible change (i.e. the ball will not roll backward, even if we stop pushing).

Changing systems through strategic levers

It is this understanding of complex systems, how they interact and how they change, that drives the way we now do our work and adapt to change. It is why we regularly perform global trends analysis, to identify new ways we can rise to meet the moment. It is why we monitor and reflect on our successes and challenges and continuously work outside outdated boundaries. It is why our mission is to inform, influence and inspire decision-makers to place lasting water, sanitation and hygiene services at the core of their commitments, policy and investment strategies.

Political leaders like to dream big and share visions that go far beyond a single sector. 'A Clean and Modern India' was Prime Minister Modi's bold vision that triggered the mobilisation of over **€ 5.4 billion** that went to the development of water and sanitation services from 2014 to 2026. Lee Kuan Yew, then Prime Minister of Singapore had a vision of a clean and green Singapore – at a time when Singapore had a GDP less than Ghana does currently. "After independence I searched for some dramatic way to distinguish ourselves from other third-world countries. I settled for a clean and green Singapore." **If we want leaders to dream big to revolutionise water and sanitation services, we must push on the deeper leverage points, meet them in their ambition and offer a broader path toward transformation.**

Our six strategic levers

So, how do we do this? We've developed a theory – based on practice – that sets out six ways we can activate the levers for systems change, beyond technical systems strengthening. These levers can be applied both to our work within water and sanitation systems and beyond and are part of our systems leadership approach.

Lever 1: Centre human well-being and dignity

While we've always focused on the realisation of SDG6 as our goal, there's a reason we care about water, sanitation and hygiene. We want to ensure that all people live healthy, dignified lives.

This mindset pushes us to prioritise equity, inclusion and human rights in every decision and to be vocal and proactive about addressing injustice. It compels us to confront issues that are bigger than our individual projects and programmes – because it's the right thing to do. Our recent **essay on systems leadership** found that the most successful leaders keep a focus on their end goal of human safety and well-being through crisis.

Figure 3: Six levers for achieving transformative systems change

Lever 2: Transcend boundaries

To go further, faster, we need to see beyond familiar boundaries and ingrained habits. This means listening to new voices, establishing new partnerships and alliances and uncovering interconnections and mutual opportunities. It also means changing our language so we can connect water, sanitation and hygiene to the broader systems that shape our lives.

Collaboration often starts small, at shallow leverage points. This could include attending events or simply discussing issues and topics that are outside of our usual focus. Over time, this can deepen trust and experience, change our own understanding and reveal deeper leverage points for change.

Lever 3: Build long-term resilience

Resilience is the capacity of systems – whether communities, ecosystems, or institutions – to withstand shocks, adapt to changing conditions and emerge stronger. It's critical for ensuring long-term water security, community health, climate adaptation, disaster preparedness and economic stability.

This lever broadens our view further, connecting water and sanitation with issues like soil health, agricultural resilience and sustainable ecosystem services. A resilience mindset compels us to think long-term about how leverage points like resource flows, feedback loops and shifting power dynamics might have knock-on effects that we can't see immediately. This can help us navigate the uncertainties of a changing world, while building systems that don't just recover, but thrive.
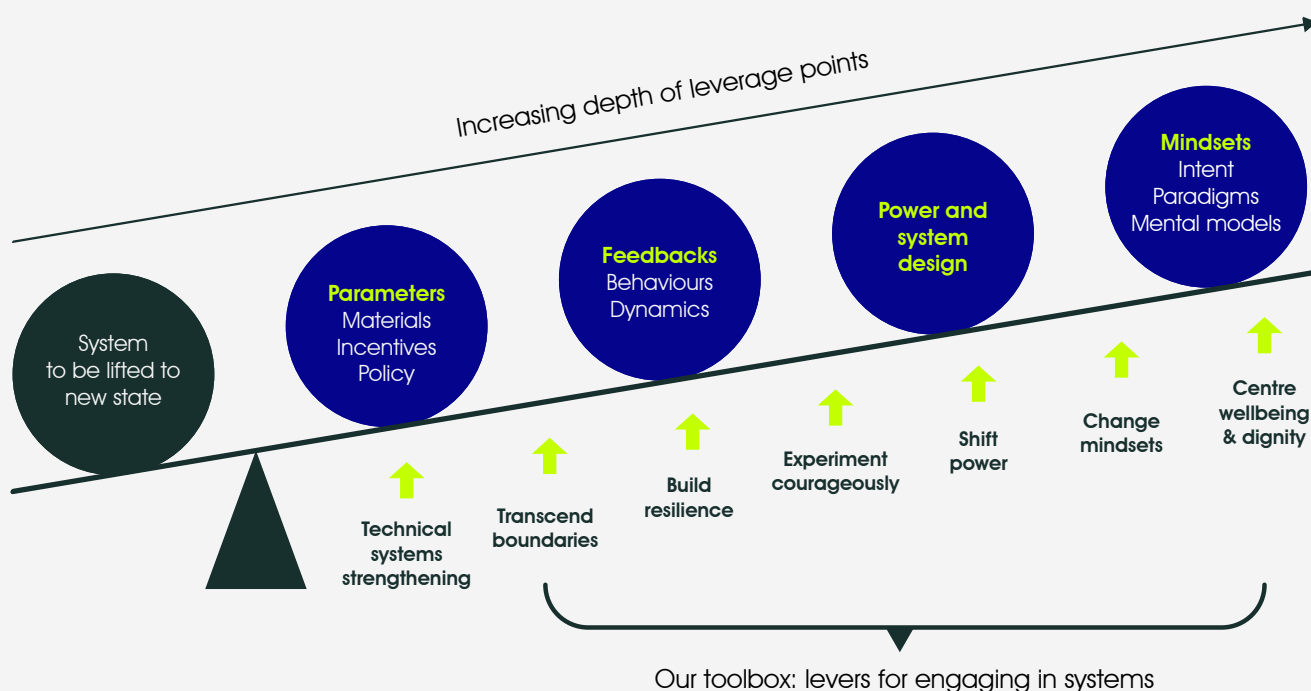

Figure 4: An illustration of how these six levers help us find and work at deeper leverage points.

Lever 4: Experiment courageously

Action research has been central to our work for more than 20 years. We design initiatives as adaptive experiments not rigid plans, allowing us to seize opportunities when leverage points emerge. Knowing our strategy won't be perfect from the start frees us to test, fail and adjust with honesty and courage.

Courageous experimentation means we step outside our comfort zones, question entrenched ways of thinking and venture into areas where we may not feel like experts. If we only discuss what we already know, we stagnate. A curious mindset cultivates innovation, creativity and credibility. It requires humility and a willingness to learn from others and adapt.

Lever 5: Shift power

Power shapes systems profoundly. To change them, we must first map and understand power, including our own. With a clearer view of power, we can more effectively find and work with leverage points such as norms, policies and feedback loops, to dismantle barriers and uphold human rights.

This lever pushes us to interrogate how discrimination and marginalisation based on gender, race, class and other identities influences who gets what. It compels us to confront and engage with, those who hold power because they hold the keys to change. When combined with Lever 2, forging new alliances, this creates a powerful force for change.

Lever 6: Change mindsets

People who work to change social norms and deeply held beliefs are crucial for systems change. Sometimes termed **'norm entrepreneurs'**, they are thought and opinion leaders who challenge the status quo and promote new ideas, values, behaviours and ways of viewing the world.[2] They work at the mental models leverage point that sits all the way to the right on the scale in Figures 1 and 4.

Being a norm entrepreneur can take many forms. Sometimes, all it takes is awareness, self-education and crucially, the courage to talk about your unique perspective during everyday discussions. Other times, it involves using tools like storytelling, advocacy, awareness-raising and coalition-building to inspire others and create widespread cultural or systemic change. Our **2018 paper on systems thinking** was a deliberate attempt to change the norm from a focus on infrastructure to this new mental model.

---

[2] Norm entrepreneurs are not necessarily business entrepreneurs in the traditional sense – though they could be.

Conclusion and call to action

These levers get into the ''how'' of our systems change approach. Levers are tools and force multipliers that help us create greater impact by implementing activities with a strategic intention to bring about transformative change.

The challenges we face in delivering sustainable water, sanitation and hygiene services cannot be solved in isolation. Expanding our boundaries is no longer an option – it's a strategic necessity.

Systems leadership, the leadership of our times, calls on us to challenge traditional problem-solving models that assume linear solutions. Instead we must view systems as integrated and human. It requires the humility to recognise uncertainty, the courage to experiment and the wisdom to adapt. It demands that we cultivate the skills and behaviours to navigate complexity – not only within ourselves, but also within our teams and beyond. We're well positioned to lead this charge. And now is the moment for us to act – not cautiously, but decisively. If we rise to this challenge, we won't just fix systems – we will transform the lives of people, for the better, for all of us.

Our levers for systems change

Centre well-being and dignity
- Human rights approach
- Systems leadership
- Decent living
- Integrated resources management

Shift power
- Participatory governance
- High-level political engagement
- Economic and social justice
- Subsidiarity and empowerment

Transcend boundaries
- Agriculture and food systems
- Urban utilities and planning
- Health

Change mindsets
- Education
- Learning alliances
- Radical vision and ambition
- Scenarios and futures thinking

Experiment courageously
- Partnerships and coalitions
- Research and innovation
- Alternative metrics of success
- Land use planning

Build resilience
- Community support
- Master planning

Figure 5: Mapping our engagements: how our different portfolios of work and methods are used to create leverage for change.