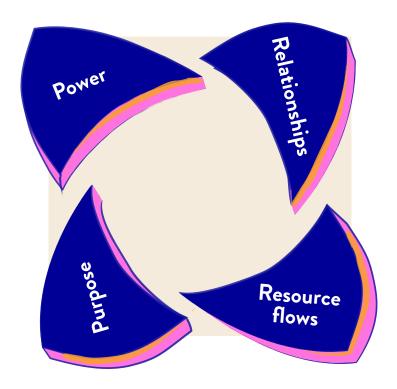
# The Patterns of Possibility:

How to Recast Relationships to Create Healthier Systems and Better Outcomes



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# Introduction

In *Building Better Systems*,<sup>1</sup> we introduced four keys to unlock system innovation: purpose and power, relationships and resource flows.

These four keys make up a set. Systems are often hard to change because power, relationships, and resource flows are locked together in a reinforcing pattern to serve the system's current purpose. Systems start to change fundamentally when this pattern is disrupted and opened up so that a new configuration can emerge, serving a new purpose.

In this article series we delve deeper into these four keys and provide practical advice on how they can be put to use. This article is about relationships.

Systems are defined by the patterns of interactions between their parts: their relationships. Those interactions generate the outcomes of the system as a whole. Transforming the outcomes of a system requires remaking its relationships and then unlocking the other keys to system innovation: purpose, power and resources. This shift in relationships allows all those in the system to learn faster, to be more creative. System innovators redesign the relationships in the system to allow dramatically enhanced learning across the system, and thereby generate far better outcomes.



# **Nothing Stands on its Own**

Nothing stands on its own in a system, everything is related.

A system is a collection of parts which come together repeatedly to achieve an outcome. In *Harnessing Complexity*, Michael Cohen and Robert Axelrod say a system creates "enduring patterns of interactions which shape the behaviour of many players into a coherent whole." The system thinker John Holland defined a system as: "A configuration of interacting, interdependent parts, connected through a web of processes and interrelationships which form a whole that is greater than the sum of the parts."

Each part on its own has limited significance; it's when they are brought together that they form a system and so become more powerful. On its own, a container, a crane, a ship or a lorry can achieve very little. Put together in the right way, they can make a system - containerisation - which changed the world in the second half of the 20th century. The container on its own is a stand-alone product. Containerisation is a system and that system is made by the relationships between its parts.

System innovators **create new patterns** in the relationships which define a system: almost twenty years ago the Australian system for helping unemployed people find jobs went from being highly bureaucratic and centralised, to become a decentralised system in which providers were rewarded by results; many of us used to buy our holidays indirectly through travel agents who booked packages, but now we book directly with providers using the internet; lkea created a new system for people to furnish their homes by persuading consumers to become participants and producers, building their own furniture. Big changes in any industry usually involve a shift in the ways the parts are related to allow people and organisations across the system to learn how to rise to a new level of performance and generate better outcomes.

Shifts like these are sometimes brought about thanks to digital technologies, which make new relationships possible by removing the need for traditional coordinating institutions. The **M-Pesa** mobile payments system in Kenya, for example, allows for direct, peer-to-peer money transfers without going through a banking system. It achieves this by turning shops and kiosks into the local delivery point of a payments system, forgoing the need for banks to handle payments. An indirect, centralised and quite bureaucratic banking system has been outmoded by a direct and decentralised technology platform.

However, technology is only one factor in these shifts. The relationships which define a system are just as often reorganised by a new social philosophy and values, which shift both power and purpose. The cooperative philosophy of **Buurtzorg**, the inspirational Dutch care collective, allows self-organising teams considerable autonomy to decide where to invest their time, according to their clients' needs.<sup>6</sup>



New patterns of relationships among workers allow them to form new relationships with clients by dispensing with the need for a managerial hierarchy to direct them. The Green Transition, for example, will require systems to be remade to be circular and regenerative rather than linear and wasteful.<sup>7</sup>

System innovators bring about profound shifts in the patterns of relationships which define a system.

This raises three critical questions:

- Where and when do opportunities to create these new patterns emerge?
- How do innovators act on these opportunities?
- Why does a shift in the relational architecture create better outcomes?

We first look at *what* system innovators do to shift the relationships in a system and then we look at *how* they do that. The best way to start is to take an example: how **the city of Curitiba in Brazil**, well known as a leader in civic innovation, created a new approach to low cost housing.



## **Order out of Chaos**

Curitiba's challenge, like many fast-growing cities in the developing world, is to encourage order to emerge from the ever-present threat of an unhealthy chaos.<sup>8</sup> Each year, thousands of people arrive from the countryside looking for a better life. Often they have little education, no way to earn a living, nor a place to live.



In the early 2000s, many were finding their way to squatter encampments like Cujaru on the city's then edge. The city got a loan from the Inter-American Development Bank to replace the shacks with houses equipped with proper water, sewerage and energy supplies. The bank stipulated that the council had to work with a registered builder and pretty soon standardised housing units were making the area look like an army barracks. The council called a halt and went back to the bank with an alternative proposal based on a very different set of roles and relationships.

The contractor's houses cost \$10,000 per unit. The council argued that if people built their own houses, employing their own labour – often family and friends – a unit would cost \$3,000. If something went wrong, the householder would fix it themselves; if the council was the landlord, it would have to employ a housing maintenance department to do repairs. Instead of uniform blocks, Cujaru's houses would have a variety of architectural styles. Out of that diversity a sense of belonging would develop; the community would become richer and stronger.

In the first four months of the revised scheme, 10,000 homes were self-built and Cujaru is now a thriving community of more than 120,000 homeowners.

The council found a better way to develop Cujaru by reorganising the roles and relationships in the system.

The initial solution was to create a closed system with very few players: the bank, council and builders. Curitiba **shifted the boundaries** around and within the system by allowing householders and families to play a much wider range of roles: as designers, builders, investors, decorators. Local builders and suppliers got involved. As the number and range of actors expanded, so the number of solutions multiplied. System innovators shifting the boundaries of a system, who is in and who is out, to bring together a new mix of players: new relationships become possible.<sup>9</sup>



Out of that, a new relational architecture emerged. The favelas were close and informal but insecure and unhealthy. The top-down, hierarchical solution would have created a bleak landscape of barrack blocks. Curitiba turned Cujaru into a platform on which a community of homeowners could develop. The relationships with and between the residents were engaged, lateral and reciprocal.



Relational patterns give a system its character, whether it is hierarchical or mutual, centralised or decentralised, linear or circular, built around community or a market, a platform or a value chain, open or closed. We work with six basic relational patterns-hierarchy, market, network, platform, community and circularity. These basic patterns can come in many different varieties and they can be endlessly mixed and recombined. Most systems are a combination of more than one pattern. (See the accompanying box on page 9 and 10.) System innovators design and create these new architectures and shift a system from one to another to bring about better outcomes. Curitiba shifted from a communal but chaotic system to the hierarchical approach mandated by the bank, and then eventually onto a platform for a community to develop.

For such a shift to count as genuine change – rather than merely a reorganisation of the furniture – three other factors must come into play: first, the changes must **shift power and purpose**; second, that must enable **enhanced learning** across the system; and third, that in turn generate **better outcomes**.

By remaking relationships, system innovators unlock the other keys to system innovation: **power and purpose**.

In Cujaru, the shift in relationships gave much greater power to householders to design and build their own homes. That allowed people to be much more engaged in the purpose of the development.

A shift in relationships can embody a shift in purpose when the way a system is organised is motivated by different values. That is the kind of change Shared Lives Plus and other relational welfare programmes have pioneered by foregrounding the importance of relationships to well-being, rather than the delivery of services to meet specific needs. We all know that as relationships deepen so it becomes possible to make bigger, more meaningful commitments to achieve more.

Power shifts and relational shifts go hand in hand. The case for change in systems often comes from those who feel disempowered, while resistance to change often



comes from incumbents, at worst cartels of those with power, who are threatened by change. That is what proponents of more personalised, student-centric learning are doing by designing education around the development of 'learner agency' and the exercise of student voice. The **Escuela Nueva** education programme, which started in Colombia, for example, works by giving students much more responsibility to direct their own learning, within a framework set by a teacher. The system becomes more productive and creative by giving students greater power to act on their learning.



A shift in relationships, power and purpose should have an explosive impact on the system's capacity for learning, both how to use resources more effectively but also how to develop a larger sense of what is possible. Outcomes are produced by the way the entire system works; improving outcomes depends on learning across the entire system. The outcomes of a system cannot be delivered like a parcel through the post. Outcomes are created by the

system as a whole and improved by shared learning across that system. A healthy system is one in which there is a virtuous cycle of improving outcomes generated by continuous learning. A transformed system brings about a step change in the kinds of outcomes possible through collective learning. Systems which are capable of rapid, sustained learning tend to have high levels of trust, limited inequalities in power, and shared purpose among diverse players.

The vital question in a system's transition is not whether networks and communities are inherently better than hierarchies and markets. The question is: which relational architecture will generate the greatest shared learning in the name of the shared purpose?

That is how much better **outcomes** are created. In Cujaru, a negative spiral of unhealthy insecurity was turned into a positive spiral of co-investment and development. System innovators excel at turning negative, dysfunctional and destructive relational dynamics into positive, generative and developmental ones. In the process, they open up unforeseen possibilities for creating value. <sup>13</sup> In Cujaru, for example, the approach opened up possibilities for further growth in the community, in both quantitative and qualitative terms, that had not previously been evident.



# How to shift a system

Systems innovators do five things to fundamentally shift the relationships in a system. They:



OPEN UP THE BOUNDARIES of the system, to allow in different players.



CHANGE THE RELATIONAL ARCHITECTURE so that people, organisations and resources work together in new configurations.



TURN VICIOUS NEGATIVE CYCLES INTO VIRTUOUS POSITIVE ONES in order to create better outcomes.



REMAKE THE PURPOSE, POWER AND RESOURCES OF THE SYSTEM through a change in the relational architecture.



ENHANCE LEARNING ACROSS THE SYSTEM for a collective breakthrough to better outcomes.

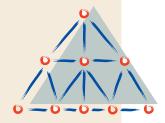


### **Relational Patterns**

We focus on six base relational patterns - hierarchy, market, network, platform, community and circularity - which come in many varieties. These base patterns can be endlessly mixed, which is why most systems are hybrids: a combination of more than one pattern.

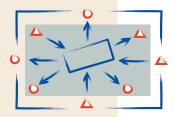
### Hierarchy

Hierarchies are organised through vertical relationships of deference to status and authority. Hierarchy, which originated with armies and churches, has survived for so long only by constantly adapting. In the public sector, new public management has made hierarchies more target-driven. Hierarchy can be deep and bureaucratic with many levels but it can also be relatively flat and light. Digital technology is now providing new opportunities to create flatter hierarchies, with fewer levels, as is happening within many tech businesses.



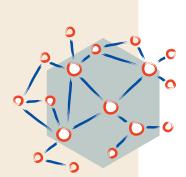
### **Market**

Markets organise relationships between buyers and sellers through transactions in which goods and services are exchanged, usually for money. Markets are central, economic and social institutions and they too can take many forms and play many roles. Markets for trading carbon might play a critical role in combating climate change. Markets come in many varieties: from free markets to markets managed by the state; from competitive markets driven by profit to social markets driven by social outcomes.



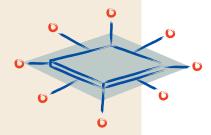
#### Network

Hierarchies are vertical; networks are lateral. Hierarchies run on the hard power of instructions; networks work through the softer power of influence. Networks thrive on trust and flows of information. Networks allow people to be organised without needing much by way of a formal organisation. That gives networks a capacity to scale. Networks have deep roots as an organisational form: Venice was built on trading networks; social networks were vital to guilds. Networks have taken on a new life since the early 1990s through the rise of the internet, which was originally designed to work as a decentralised network of nodes that could withstand a nuclear attack. Social networks are vital to the way all the other relational architectures work: markets, hierarchies and communities all depend on a substrate of social networks.



#### **Platform**

The public sector still plays a critical role in providing many of the infrastructures and platforms for our lives: welfare systems, pensions, education and health. But in the last two decades, a new generation of digital platforms has risen to power. These platforms, like Amazon and Airbnb, are a mixture of a marketplace and a network, linking together many distributed consumers and suppliers. A private digital platform is a managed digital space in which participants pay the platform owner rent for conducting their business there. One important question is whether these private tech platforms will be outmoded by new competitors, broken up by regulators, or whether their ownership can be reimagined to become platform cooperatives and commons.

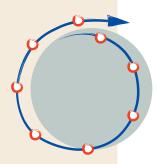


### Community

Community-based systems are created by mutual and reciprocal relationships, bonds formed around shared identities, histories, interests and values. While a community can form around a market and markets can operate within communities, the core bonds of community form through sharing and extended reciprocity rather than transactions and exchange. Communities are not organised around calculations of individual self-interest; they depend on a pooling of risks and rewards. Communities can be more and less hierarchical. A community can be: local and global, based on shared interests, issues, brands, and identity. Wikipedia and Linux are examples of latter-day digital platformscome-communities.

### **Chains and Circles**

Industrial era systems, production lines and value chains were linear: they took in raw materials, made them into products and then disposed of them as waste when they were no longer wanted. Systems in the near future will be circular by design: the waste from one process becomes fuel for another. In regenerative systems, the byproducts and waste of a system help to grow and renew the sources of the system. Circular and regenerative systems will come in many varieties. Already one sees circular systems in towns, such as Preston and Amsterdam, 14 and even entire countries, such as Finland and Moldova, 15 as well as in sectors such as fashion. 16



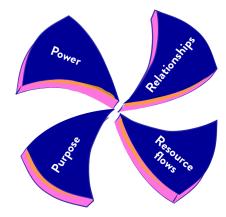


A useful exercise for system innovators is to work out how many of these patterns are present within the system they are concerned with, and how they would introduce a new element or combination. Modern, developed world health systems include elements of hierarchies (for example, professional hierarchies in medicine); markets (for example, in buying and selling pharmaceuticals); and communities (for preventative, long-term health care). Many combinations are possible. Modern digital health systems rely on platforms and networks as well, for example, to do remote consultation by phone. A community-based health system such as **Costa Rica's** rests on a completely different architecture from a health system organised around hospitals.<sup>17</sup>

System shifting entrepreneurs create new relational patterns. A system shifting venture does not just provide a new component for an existing system. It contains a vision of a future system based on a new relational pattern. As Meng Zhao puts it in his study of potentially system shifting ventures in Southeast Asia: if a system is an interconnected set of elements, then system innovation is not about simply changing one of the elements but the whole structure which relates

them.<sup>18</sup>

Zhao has uncovered several system shifting architectures which social innovators are developing as alternatives to traditional delivery chains, run by either the private or public sector. One was what he calls community-based circular economies, in which communities recycle clothes, food and waste from within the locality to make new products. A good example was a firm selling local biogas generators that could be communally owned and run. A second was digital platforms that cut out traditional middle men who stand



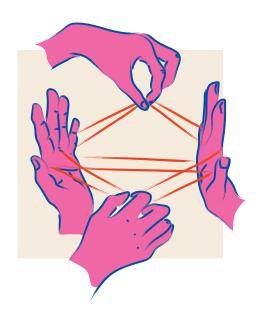
between urban consumers and rural producers. Those platforms, for selling sustainable tourism in Thailand, for example, enabled local producers to establish a more direct relationship with consumers. New 'last mile solutions' involved companies, such as Kurosar Solar in Cambodia, developing close links with communities to build up the skills needed to install and maintain solar panels, creating a new market. Across these different initiatives, Zhao reports that peer-to-peer solutions, community-based development and mobilisation of local communities to demand better solutions were key factors in driving system change. And, of course, in all systems, the hidden, tacit, informal social networks of relationships which keep the system going are often as important as the formal structures.



# The Where, When and Who of System Change

That's what system innovators do when they create new systems. The next question is: how and where do they do it? Here we focus on three aspects:

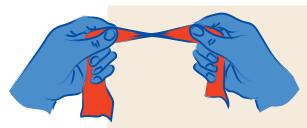
- · where new relationships form;
- · when they form;
- · and who enables new relationships to develop.



### Where: Find Productive Points of Stress

System innovators find points of productive tension where there are real opportunities to turn frustration into innovation; where negative, destructive and dysfunctional dynamics can become positive, productive and generative dynamics. They work on both sides of this equation, the challenge and the opportunity.

Productive stress points have three critical features:



- · The stress is felt by multiple actors.
- · There are real opportunities for positive change.
- That change requires new kinds of collaboration which means new relational architectures.

To understand how negative, stressful dynamics can become positive ones, take an example from **financial services**. <sup>19</sup>



Mainstream banks are not well set up to help people with irregular incomes. As a result of the bad experiences these people have with banks, they do not trust them. That means they are underbanked and that increases their risk of financial distress because their options for managing their money are limited. That makes it more attractive for them to deal with unscrupulous providers, such as payday lenders, which only exacerbate financial insecurity, and in turn makes them even more unattractive as customers for banks. This is an example of people trapped in a system with a deteriorating dynamic.

Yet as innovative financial service providers such as Wagestream, Trezeo and Dinghy have shown, if financial services companies can develop new products and services for those with irregular incomes who might be in financial distress, that leads to more people being banked. As a result, they are better able to manage their money, less insecure, and they become better customers at the same time. Distrust and distress is reduced on all sides.

To find points of stress which can become productive:

- Look for stresses where the frustration is felt by several players, for example, clients
  and workers, politicians and funders. Fraying relationships within a system, with
  managers and politicians demanding more output, workers feeling they are already
  at their limit, and service users feeling hard done by, are a sign that a system needs
  fundamental redesign. This creates a potential point of shared interest, from inside
  and outside the system, around which new solutions can emerge.
- Look for potential solutions which have made this stress point their creative niche. Signs of apparent chaos emerging at the edges of a system the disproportionate cost to public services of families leading troubled lives, for example are another sign that systems might be inadequate for the conditions they work in. These spaces might also be most open to new approaches because the system's failure is clear. Another approach is to look for 'positive deviants' at points of stress. For example, a food programme serving malnourished families in Vietnam started not by understanding the causes of hunger, but instead exploring how a handful of families managed to gather enough to eat nevertheless. Their tactics gave the programme designers an insight into what potential solutions there were.
- Establish spaces for collaboration where those involved can understand that the
  stresses they share are linked and the basis for a potential solution. Invite people
  to explore how to reconcile and heal conflicted relationships. This is where negative
  cycles of distress and insecurity can become virtuous cycles of giving and receiving,
  praise and commitment, growth and learning.



New systems emerge where new relationships can form: relationships between consumers and producers, suppliers and investors, regulators and commentators. These spaces are not high-tech accelerators nor R&D labs which focus on producing bits of technology. To create a new system you need to develop several related ingredients: we call that a **minimum viable system**. System innovators need spaces where they can develop their ventures and ideas alongside complementary innovators whose innovations they will need for the success of their own approach. These are places where all the players involved in creating a new system mix: entrepreneurs and innovators with investors and patrons, commentators who shape tastes and give a field its coherence, consumers willing to try out new approaches, and competitors who are also collaborators. This allows interdependent, collective learning across the multiple players in the potential system. For that to be possible, they need to attract a diverse range of people from all levels of the system.

A minimum viable system can only be shown to work in practice. The Chicago World Fair of 1894 provided the setting for the emergence of a stable, minimum viable system for electrical power, combining innovations from Westinghouse, Edison and Tesla, with investment from JP Morgan, among others. <sup>20</sup> Containerisation emerged as a viable system when the shipping company Matson, based in Hawaii, set up a reliable system to ship freight between Hawaii, Oakland and Los Angeles. <sup>21</sup>

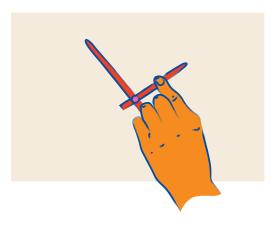
### In sum:

- Find points of productive tension, where there are real opportunities to turn
  frustration into innovation; where negative, destructive and dysfunctional dynamics
  can become positive, productive and generative dynamics. One way to think of this
  is to find "social acupuncture" points where relatively small interventions can have a
  big impact across an interconnected system.<sup>22</sup>
- Establish spaces for collaboration where those involved can understand that the stresses they share can be the basis for a potential solution.
- Create a practical space for the new relationships to form which can provide the skeleton of the new minimum viable system.



### When: Be Ready to Act When Systems are in Flux

Timing counts in all relationships. System innovators have to be adept at acting when the opportunities to form new relationships are most promising. But that requires patience and preparation so that you are ready when the opportunity presents itself. And it pays to be aware of the wider context in which you are working so that you can position yourself to be in the right place at the right time. System change rarely comes about as a result of a blind date.



New systems emerge when system innovators position themselves to harness much larger forces

of social and economic change. Containerisation took off as globalisation led to massive increases in international trade. Ford's system of mass manufacturing was part of a wave of industrial development which also involved electricity and mass consumerism.<sup>23</sup> You are more likely to achieve big change by understanding how your venture can draw on the wider changes building up in society.

Opportunities for lasting system change often come in moments of flux and breakdown, when it becomes possible to use that flux to break through to a different kind of system. An extreme example is the way that **Pakistan innovated a new social safety net** as the Covid pandemic took hold in 2020.

As the Covid-19 crisis enveloped Pakistan in April 2020, the government imposed a lockdown which meant that the many millions of people earning subsistence incomes in the cash-in-hand economy were not able to feed their families. The government implemented an emergency economic package which earmarked money to make \$75 payments to most of the 24m people paid cash daily for informal work. The challenge was how to get the money fast to the people who needed it most, who by definition did not interact much with formal institutions, and many of whom were functionally illiterate.

The woman charged with this job was Dr Sania Nishtar, head of the anti-poverty agency Ehsaas, located at the heart of government. <sup>24</sup> She had two things working in her favour. Almost everyone in Pakistan had access to a basic mobile phone and everyone had a unique citizen identification number. Dr Nishtar got government departments and mobile phone service providers, who had never previously collaborated, working together for the first time to create a free SMS number to which people could text their unique citizen identification code to claim the \$75 payment. Within days, millions of messages were flooding in, each with a unique ID number, which had to be sifted by a quickly assembled data analytics platform. Getting the cash to only the people who were eligible required setting up local distribution centres and enlisting shopkeepers



to act as cash dispensers. Ehsaas had to send out messages in batches of 300,000 to 500,000 to just the right people, alerting them to pick up their cash, to make sure the local infrastructure was not overwhelmed.

Within eight weeks Ehsaas managed to make \$75 available to more than 8.8m people to support nearly 52m dependents by assembling an improvised, public and private, national and local, digital and face-to-face system, which relied on both small shopkeepers and mobile telephone companies, artificial intelligence and an army of community volunteers. It was a new system built on a web of relationships which Dr Nishtar and her team had knitted together.

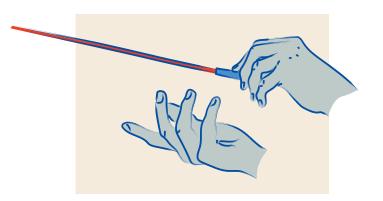
The Ehsaas story exemplifies three aspects of timing that system innovators need to make work for them:

- Be ready for the opportunity when it arrives. Preparation that builds relationships comes into its own in a time of flux. Dr Nishtar had made a previous unsuccessful effort to get an alternative system off the ground a year earlier. The plans created in that ill-fated effort were dusted off in the crisis. Many of the basic ingredients were already available; they just needed to be connected in a new way.
- Crisis is only one reason why a system might be in flux. It may be a change of political leadership, an economic shock or the emergence of a movement in civil society that provides the impetus for change. Whatever the cause of the flux, make the most of times when boundaries that hold back innovation break down: boundaries that demarcate disciplines, government departments, the public and the private. Encourage regulators to lift the normal rules and norms which hold back risk taking and collaboration. Learn rapidly in real time with your partners. System innovators need to know how to act boldly in pivotal moments.
- Be ready to follow through. Innovation can often turn out to be little more than a
  holiday romance: diverting but irrelevant. Lasting relationships have to be sustained
  by people making good on their commitments to one another. That was the challenge
  facing Dr Nishtar as the crisis receded and a measure of normality returned.
  Be ready to capitalise on the moment to turn a new relationship into a lasting one.



### Who: Invite the Future System to Meet

The critical role in this process is played by convenors who bring together the many players involved in system change. The power to convene system change takes a rare combination of conviction and pragmatism: a commitment to a cause combined with a recognition that solutions only emerge collaboratively through shared learning. Good convenors are able to grow creative communities joined in a shared cause to explore what is possible and to make change together.



Convenors go under several guises. Some call this role system stewardship; others refer to them as system orchestrators. A system convenor is anyone who takes responsibility for remaking the relationships and interactions which comprise the system and which enables shared learning.

System convenors are not project managers, facilitators, visionary charismatic leaders, brokers, counsellors or mentors, although they may well deploy these skills. System convenors:

- Create an invitational narrative which attracts people to come together to explore possibilities for system change.
- Help people to see the opportunity from different perspectives, which requires empathy and imagination.
- Encourage people to move across and flex boundaries of organisations, disciplines and professions to promote learning through unusual exchanges.
- Develop a shared narrative of the new alternative system which also gives each of those involved a new narrative about their own role.
- Work on power, both hard and soft, informal and formal, to shift the mindsets of those in power and to build up the influence of those with little power.

System convenors help make connections across the system. But they do not work alone. In a system, everything is related and so every player in the system needs to see interconnections in order to achieve bigger change. **Insider-outsiders** are influential people inside a system who can see why it needs to learn from new ideas emerging outside it and who find ways for these ideas to be taken up within an established



system. System shifting entrepreneurs can see that the success of their venture rests on how they connect with consumers, investors, policy makers and activists to create an emerging market, such as renewable energy. Commissioners, regulators and investors help provide the authorising environments in which new relationships can form and new solutions emerge.

To support a new system, the people and organisations involved need to come to see themselves as an ecosystem, if not a movement, to bring about change in markets, social practices and public policies.

Reflecting on how she pulled together a national micro-payments system in a couple of weeks, Dr Sania Nishtar put the opportunity this way: "It is just the tip of the iceberg of what is possible if you are willing to push the envelope, if you are willing to be a bit daring, if you have the imagination to map out how the individual pieces of an ecosystem can gel in a systemic way... when you can knit together standalone solutions then the sky's the limit."<sup>26</sup>



# Conclusion: Patterns of Possibility

Many of our biggest challenges are the result of complex, interlocking patterns of dysfunction, which are continuously recreated and reinforced through the rational choices of consumers, companies, workers, policy makers and investors. These systemic patterns are seemingly impossible to break despite the costs associated with them being widely acknowledged.<sup>27</sup> The challenge and the opportunity for system innovators is to untangle, disrupt, shift and remake these patterns.

How, with limited resources, can you remake the patterns for an entire system to create an alternative system which generates better outcomes? That means doing more than arresting or ameliorating the negative dynamics of the current system and it means going beyond improving it. It requires transformation, through systems collectively learning and creating new ways of working around a new sense of purpose.

This requires bringing together a diverse group of people who will be involved in creating the new system, at the right moment and in the right place. Their task is not to design a new system on a blank sheet, nor to try to fix the problems in the current system. Instead, they need to take advantage of conditions of flux and disruption, to identify and take advantage of the forces from which a new system will emerge, based on a different pattern of relationships.

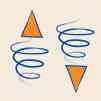
Many of our biggest challenges are the result of complex, interlocking patterns of dysfunction, which are continuously recreated and reinforced through the rational choices of consumers, companies, workers, policy makers and investors. These systemic patterns are seemingly impossible to break despite the costs associated with them being widely acknowledged.<sup>27</sup> The challenge and the opportunity for system innovators is to untangle, disrupt, shift and remake these patterns.



 Redraw the boundaries around and within the system to allow different players to interact in different ways.



 Provide a sketch of a new relational architecture so that people, organisations and resources work together in new configurations of hierarchies, markets, platforms, networks and communities.



 Turn vicious negative dynamics into virtuous positive ones; so opening up new and unforeseen possibilities for creating additional value.



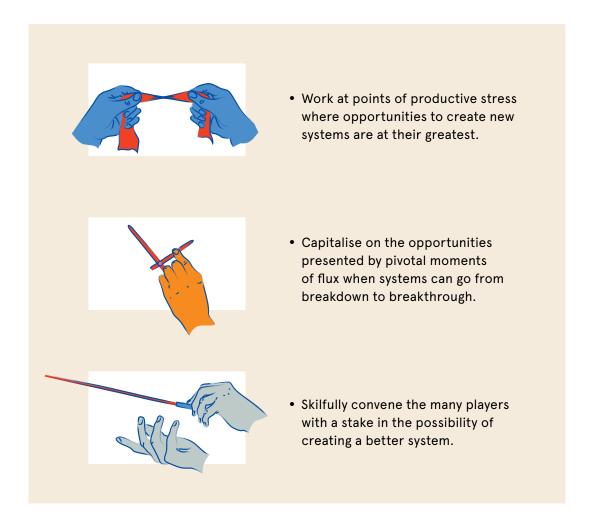
• Challenge the purpose and power of the system.



• Enhance learning to enable a collective breakthrough to better outcomes.



### To achieve this, system innovators:



New systems are formed when many different, often seemingly unconnected actions beat to the same drum as producers, investors, consumers, regulators, old industries and new entrants start to make complementary changes which build up momentum. System change propagates when interconnected behaviours change in concert and collective change acquires a rhythm of its own. System innovators help to establish the rhythm of collective change. It is a fertile time, reimagining and remaking the relationships at the heart of our systems, finding the new patterns of possibility.



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  - A slightly different approach was taken in the La Barnechea district of Santiago, Chile, where the architect Alejandro Aranvena built the skeleton of basic houses and then left the new residents to finish them off.
  - https://arquitecturaviva.com/works/colonia-lo-barnechea-7
- One useful approach to shifting the boundaries of a system to generate change is the Container, Difference, Exchange model developed by Glenda Eoyang which suggests that systems change when the "container" within which they operate changes, more diverse players enter the system, and the exchanges between them take on a new quality. For more on the CDE model visit The Human Systems Dynamics Institute: https://www.hsdinstitute.org/resources/cde-model.html
- 10 See: https://sharedlivesplus.org.uk/
- See the case study of Escuela Nueva in: Leadbeater, C. (2012). Innovation in Education: Lessons from Pioneers Around the World. Bloomsbury Qatar Publishing. And see: https://escuelanueva.org/en/



- The role of learning the health of systems and how they change is a central theme of Toby Lowe's work on Human Learning Systems. See, for example: Lowe, T. & Plimmer, D. (2019). Exploring the new world: practical insights for funding, commissioning and managing in complexity. Collaborate and Northumbria University. http://wordpress.collaboratei.com/wp-content/uploads/1.-Exploring-the-New-World-Report-MAIN-FINAL.pdf
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- <sup>13</sup> These dynamics are known in systems thinking literature as Causal Loop Dynamics. For a good explanation of Causal Loop Dynamics see: Williams, B. & Hummelbrunner, R. (2010). *Systems Concepts in Action: A Practitioner's Toolkit*. Stanford Business Books.
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- See, for example: https://www.sitra.fi/en/publications/how-to-create-a-national-circular-economy-road-map/ And: https://www.climate-kic.org/news/moldova-climate-change-sida-undp/
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- This example is drawn from the Omidyar Group's Systems Practice Workbook, developed with Kumu, available for download here: https://docs.kumu.io/content/Workbook-012617.pdf
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- For more on Dr Nishtar and her approach, see: https://www.systeminnovation.org/festival2020-creating-social-safety-nets-for-the-21st-century And for more information about Ehsaas, see: https://www.pass.gov.pk/
- Many people have written about the role of system convenors, stewards and orchestrators. Our account here draws heavily on the work of Etienne and Beverly Wenger-Trayner in: Wenger-Trayner, B. & Wenger-Trayner, E. (2021). Systems Convening: A Crucial Form of Leadership for the 21st Century. Social Learning Lab. Available for download here: https://wenger-trayner.com/systems-convening/
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### **About the System Innovation Initiative**

This initiative of the ROCKWOOL Foundation's Intervention Unit connects knowledge and practice on system innovation to leaders, innovators and entrepreneurs who want to have more systemic impact and meet big, shared, societal challenges in new ways. The initiative works with system innovation experts and practitioners internationally and in Denmark to turn systems theory into system change in action.

### **About the authors**

Charles Leadbeater is a leading author and international advisor to governments, industries and cities on innovation for social impact and system change. He is senior advisor to the ROCKWOOL Foundation, co-leading their System Innovation initiative with Jennie Winhall, who is a system innovation expert and the Foundation's Director of Social Innovation.

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