Chapter 9
The *LEADS in a Caring Environment* Framework: Systems Transformation

Those who anciently wished to exemplify illustrious virtue to the whole world first ordered their own states. Wishing to order well their states, they first regulated their families. Wishing to regulate their families, they first cultivated their own characters. Wishing to cultivate their characters, they first rectified their hearts. Wishing to rectify their hearts, they first made their thoughts sincere. Wishing to make their thoughts sincere, they first extended their knowledge to the utmost. This extending of their knowledge to the utmost lay in the investigation of things.

—Confucius

This quote from the Book of Changes [1] shows the complexity of change is nothing new. Confucius was not thinking of health care, but nevertheless shows us the interconnectedness among systems transformation (large scale change), smaller scale change (unit and organization) and personal change.

All of the LEADS capabilities—Lead self, Engage others, Achieve results, and Develop coalitions—are therefore part of transforming systems. Successful systems transformation changes all the small systems nested inside larger systems; a change in one reverberates through all. Many of the lessons we'll talk about in this chapter apply as well to units as to organizational or system change.

We describe what's happening as transformation, because we believe health systems are going through "a marked change in form, nature, or appearance: a metamorphosis to something new and better." It's not restructuring or reform. It's big change and the result may look very little like the health system of today.

Learning Moment
Reflect on your current role and responsibilities as a leader.

- How many different change projects are you supposed to be stewarding?
- What are some of the difficulties inherent in those change projects?
- How much time do you have in your day to devote deliberate energy to those projects? Is it sufficient? Why or why not?

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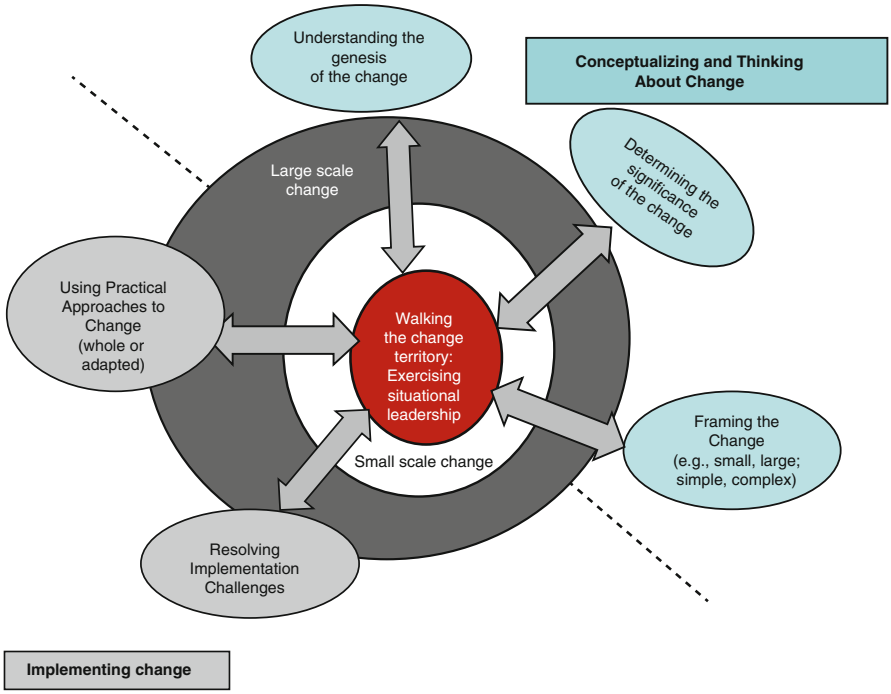

Fig. 9.1 The change map

When you put the two words together—systems and transformation—there are many implications for us as leaders of change. One is that seeing a new vision does not realize it. Even though there has been a societal consensus around the promise of patient-centred care, leaders must still bring it about by supporting changes to everything from how providers and the system work to the culture they work in. If you see a compelling vision but don't work with others on the changes needed to realize it, you may find yourself in an uncomfortable place: there's an old saying, "the general who is too far out in front of the army begins to look like the enemy."

To succeed in large-scale change, leaders must move beyond their own abilities to develop a system-wide, collective capacity to lead, and from individual to shared wisdom. Your role as a leader is to provide the strategy needed to draw collective leadership together to back large-scale interventions and changes.

Finally, to understand systems transformation, you must understand change never stops. The health system is a journey and the answer to "Are we there yet?" is always no. As a leader, change (for the better) must be your purpose. Let's take a few moments to explore the metaphor of change as a journey. The idea of a journey suggests that there is a territory for the leader to explore. Let's call this the "territory of change": the places you as a leader need to visit as you participate in large-scale change.

One of us recently worked with a team on a study of large-scale change as it relates to the Canadian context [2]. Our study endeavoured to bring some conceptual clarity to the territory of change by creating a change map (Fig. 9.1) that reflects the dynamic, interdependent nature of the change process, in a manner consistent with the principles of a complex adaptive system [3].

Large scale change associated with systems transformation can be complex, random, and confusing. However, our review of the literature suggests a macro-pattern applies, which we show in the map. At the centre of the map is the decision maker (leader), who is the integrator for a change process. To transform systems, you are encouraged to develop your mastery of change from your individual perspective, your organizational or citizen role, and from a system perspective (society and healthcare).

Figure 9.1 suggests leaders traverse two main landscapes. The first is Conceptualizing and Preparing for Change (three blue circles on top right). It is the "intention, understanding and mental preparation" stage of the change journey. Many leaders don't have time for this element of the journey. For example, one of the project's key informants stated, "In [my organization] there is a tendency to 'do it' without doing the background work re culture, readiness, strategies to implement. [We]…don't do the background stuff well."

There are three dimensions to conceptualizing and preparing for change: genesis, or understanding the reason for the change, significance, or the importance of the change from a personal, organizational, or systems point of view, and framing, or the fit between the view you bring to the experience of change and the views of the other groups that are part of it. All three must be part of planning for change. Conscious deliberation on each of these factors should assist you to reduce some of the challenges of large-system change and minimize the inevitable unanticipated consequences.

The second landscape, Implementing Change, has two dimensions: challenges and opportunities, and practical applications (two circles on bottom left). Here you assess the implementation challenges you are facing, then choose approaches to enact the change. Travel through this landscape shows you the wide selection of evidence, approaches, tools and instruments that you can use to inform and shape your decisions.

Systems Transformation Capabilities

Essentially, the four capabilities of the Systems Transformation domain are ways the leader, at the centre of the change map, can think and act strategically to address the challenge of large-scale change. The four capabilities are:

- Demonstrate systems and critical thinking
- Encourage and support innovation
- Orient themselves strategically toward the future
- Champion and orchestrate change

The capabilities are a combination of mindsets, tools, ways of thinking, and ways of acting that focus you on large-scale change. As you go through them, reflect on how they relate to the other LEADS capabilities, how they are consistent with LEADS principles, and the contribution they make to your leadership repertoire.

These four capabilities work together to create the energy for change in large complex systems, as well as with the other capabilities of the remaining four domains of the LEADS framework.

Demonstrate Systems/Critical Thinking

To lead large-scale change, you are encouraged to think analytically and conceptually, challenging the status quo, to identify issues, resolve them and design and implement new processes. Our Change Map identified five domains of focus to apply systems and critical thinking. Thinking conceptually about all five aspects involves recognizing that human endeavours such as health have both organic and mechanistic systems properties. When faced with simple change—that is, simple re-ordering of a limited set of variables, you can use mechanical systems thinking. It will let you focus on the physical tasks that comprise a service—delivery, resource allocation, the logistics of information flow and communication, and organizing steps into a linear process that is efficient and effective.

In complex change, adaptive leadership, based on organic systems thinking may work better. Ronald Heifitz describes adaptive leadership as the leadership needed to address changes created by forces that require significant (and often painful) shifts in people's habits, status, role, identity, way of thinking, etc. [4]. An organic systems approach acknowledges human intentions are variable and change depends on the understanding and willingness of people to embrace it. In organic systems leaders adjust and continually redefine individual tasks through interaction with others. Therefore the future is not predictable, except as it emerges through co-creation. In this sense, organic systems are complex adaptive systems [5, 6] that demand adaptive leadership.

One of the challenges for adaptive leaders in large scale change is maintaining a balance between a mechanistic approach, best when the problem is technical and simple[1] or a complex adaptive approach for a complex situation. That balance may be a function of your need for control [7]. In a simple environment (few variables) control over the environment is reasonably easy to maintain; in a complex one

[1] When faced with simple change—i.e., change that can be accomplished through linking a bounded set of finite variables, and for which risk is acceptable and results predictable, mechanical systems thinking is applicable. When applied to health care mechanical systems thinking allows leaders to take structural approaches to change. The change can focus primarily on the physical tasks that comprise a service delivery, resource allocation, the logistics of information flow and communication, and organizing steps into a linear process that is efficient and effective. People issues—such as need for training, potential resistance, and lack of commitment—still apply; but the practices outlined in the Engage Others domain of LEADS are applicable in that context.

(innumerable variables), virtually impossible. A leader who requires too much control limits the potential for giving others a say in the future; yet one who exercises too little control allows total anarchy and confusion to rein. Organic systems models, when used by leaders (and which we will introduce in this chapter) attempt to achieve a balance between giving people some freedom to create the future, yet not so much liberty as to generate a confusing space for change in which people's efforts are diffused and chaotic.

Another challenge for adaptive leaders is that big change may not be incremental. It can be sudden and dramatic. Geology tells us that over time, forces build up along fault lines in the earth's plates until there's an earthquake. The same happens with people: witness the French revolution; the fall of the Berlin wall; the collapse of the Soviet Union; the Arab Spring. The theory here says systems comprise a number of interacting individuals, organizations and interest groups with an identity defined by their values. The interaction among all of them makes predicting how the system will evolve uncertain. Such human interactions are complex and can exhibit rapid, unpredictable change with no apparent pattern. Behaviour can appear complex and random (another term, self-organization, is often associated with this phenomenon) [7].

If we as leaders are blind to the forces driving change, through complacency, lack of awareness, or because we're resisting them, we won't be prepared when they reach critical mass and rapid transformation hits [8]. We need to bear in mind we don't control change, we simply have some influence over it.

Critical thinking skills are necessary for knowing when to use systems thinking to challenge practice, focus on critical issues or create new ways to enhance service delivery. Here's a story about how systems and critical thinking shape conceptualizing and planning for change.

Linda was vice-president of Shared Services at a large Canadian health authority. Recently she was asked to steward the integration of the Emergency Ambulance Services Commission into her portfolio. The commission had been independent for fifty years but, following a difficult strike by paramedics the province wanted it to become part of the health authority.

Linda faced both logistical challenges (such as budget transfer, integrating office space and merging job descriptions) and people issues (such as protection of professional standards, union-management dynamics, individual and group resistance to change, and engagement). As the change was more likely to be delayed by people issues, she felt she should apply a systems lens to the challenge. She arranged a meeting with Jayne, the director of Organizational Development, who had an extensive background of using systems thinking in large-scale change. Linda told Jayne she could think through the logistical issues in the merger, but wondered about the systems issues associated with the change.

Jayne pondered, then said "I think we need to think of this from three perspectives. The first is what might be called a 'framing' perspective. How big is the change? Is it going to affect everyone in at the ambulance commission, or are you just integrating management responsibility? If it's the former, how much change will they face? Minor or major? The second perspective is the challenges and opportunities this change poses—what are they? And the third is, what kinds of models or tools might help us? So…how big is the change? Band-Aid, or transformation?"

Linda thought for a few moments. "I think it's transformational. We want the paramedics to see themselves as the first step in an integrated patient journey—making their work

part of a well thought-out process of treatment they share with other providers. New technology lets paramedics communicate directly with physicians in the emergency room before they get there, and once we get the system up and running, they'll also see patient records electronically in the ambulance itself. This means a much tighter relationship than has previously existed."

"What about challenges and opportunities?" Jayne asked. "For example, what about management? Are you keeping the existing structure—just reporting to you—or do you want to integrate it into the health authority's structure? What about HR, budgeting, information systems…how much are you going to integrate them?"

"From an opportunities perspective it will reinforce both organizations' visions of patient-centred care," Linda replied. "One of the prime drivers for this is to improve the patient experience and eliminate errors. It should also be an opportunity for financial sustainability. Rationalizing our logistical systems should help that. Also, we'll likely close some ambulance bays in lower-volume areas, which will eliminate some administrative costs, but upset some communities and groups, plus politicians and people from the commission worried about their jobs."

Jayne agreed. "We'll be dealing with a change in organizational and even community identity, a sense of loss, media coverage and managers waiting for the axe to fall." She mentioned she'd met the ambulance service's VP of human resources at a reception recently and he had wondered whether he would have a job in the new configuration.

"Another factor we have to think about is whether people are open to change, or suffering from 'change fatigue,'" she continued. "People are cynical about change and the scope of this one will stir rumours about why it's happening. Some may just hunker down and hope it goes away—and there are lots of proposals for change that never go anywhere, which doesn't help."

Jayne also foresaw cultural issues, because the ambulance service had a militaristic and hierarchical culture, very different from the Shared Services department's informal tone.

"So what do we do about all of these issues?" Linda said, sounding disconsolate. "They seem overwhelming. Where do we start? I know it's a long-term process, but we've got to get off on the right foot, or it'll be lasting a lot longer than either of our jobs," she added wryly.

Jayne thought for a moment: "We might be lucky there. The commission has a leadership meeting scheduled for late next month. What if we brought the two groups of leaders together and focused the meeting on initiating the change process?"

"But how?" Linda said. "There'll be 400 people in the room. How can we organize the meeting to address all the issues, get the support of at least the majority of managers for the change and get a handle on how to move forward?"

"That's where the third perspective comes in" said Jayne. "What kinds of models or tools will help us? There's a large-group system intervention called Open Space that is designed to bring people together to talk about and collaborate in a way that lets them explore divisive issues. There's no advance agenda; the idea is to develop a positive, forward-thinking, action-oriented perspective on large changes. I also know a facilitator who is extremely skilled in conducting them. It will cost, but it should give us an agenda that will get us off on the right foot."

"Let's do it," said Linda. "Can you bring him in later this week and in the meantime, we need to talk further about specific outcomes for the session. Also, there is one thing I know I will need to do: speak from the heart about the patient-centred vision and its advantages, so that people can see the opportunities in this. I want you to know that I am absolutely committed to this change," she added, bringing the meeting to a positive close.

This story highlights the value of the change map as a systems-thinking tool. Jayne used it to help her locate a focus of her critical thinking: analysing the

situation for challenges and opportunities, where the genesis of the challenge came from, its significance for patient-centredness and sustainability. She also focused on framing the change as having both mechanistic and organic systems properties, how big the change was, who was affected and how.

The story highlights a second aspect of systems/critical thinking: the larger the change, the greater the significance of the organic systems issues. Most of the logistical challenges could be solved given time; but what would put the merger at risk were people issues: mindsets, cultures, different perspectives depending on different roles.

The reality is leadership is dealing with people, who are driven by their own values and who are sometimes wilful and emotional. You'll need to explore how those factors play out in large scale change: reflected in stakeholder group mandates, social movements, community identities and informal organizational cultures and sub-cultures, prior to introducing change. As the story shows, the larger the scope of change, the greater number of variables you have to deal with. Predicting cause and effect between what one group is doing and whether another will follow is difficult to do. You'll have to juggle conflicting identities, unpredictable communications, structural, political and cultural variables. At some point, the complexity of interactions may leave you feeling overwhelmed.

Organic systems thinking was helpful to Linda in dealing with her complex situation because it gave shape and structure to the complexity. Jayne used it to critically explore the mental and emotional processes that different individuals and groups bring to the change process, such as mental models, personal intentions, professional sub-cultures, and organizational climate. Together they decided to explore a large group system intervention to bring some but not too much control to the process. You'll be more effective at creating change on a large scale if you learn to use organic systems thinking to understand the landscape of that change.

A third aspect of Linda's story worth noting is that the use of systems/critical thinking allowed the two women to anticipate the challenges and opportunities in a large system change. That's an important step for senior leaders, and it's equally important to follow up with a process that allows leaders throughout the system to share those opportunities and challenges. In this case, Jayne and Linda use Open Space, a system that operationalizes a basic truth of change: people support what they help create.

Large systems approaches such as Open Space create an environment of collaboration and dialogue on divisive issues in the community, allowing participants to assess the depth of the issues, while subtly distributing ownership of the challenges throughout the group participating in the activity.

Table 9.1 profiles Open Space and four other models that have potential to guide large system change [9].

Try one of these models the next time you're leading small or large-scale change (Note: it is advisable to hire a facilitator to organize and manage the process, so you can observe or participate as you wish). You'll need to use your systems and critical thinking skills to determine which of the models is best for your situation.

Table 9.1 Five models to engage large systems in systems/critical thinking [9]

Approach	Number of people potentially involved/ duration	Description and purpose
Open space	5–2,000 1 day to 6 months	Open Space enables people to engage in an activity which uses self-managed groups to create a dialogue around what is important to them. Leadership is shared, diversity is a resource to be used instead of a problem to be overcome, and individuals are empowered to have a say as it relates to the issues at the forefront of the change. Every issue of concern will be on table, discussed to the extent people wish, and a full record of the proceedings available. Priorities will have been recognized, related issues converged, and initial action steps identified
Dialogue and deliberation	5–5,000 1 month to many years	Dialogue and Deliberation (DD) uses a process to help people learn more about themselves or an issue (Exploration), resolve conflicts and improve relations among groups (Conflict Transformation), improve knowledge and influence policy (Decision Making), and empower people to solve complicated problems together (Collaborative Action). It is used to create clarity/provide a group with direction on an issue or situation; and to address contentious issues that attract only argument and debate
Integrated clarity	1–500 2 weeks to many months	Integrated Clarity (IC) is a process that helps an organization or community discover and articulate its needs critical to its sustainability in a way that benefits the whole system and the people in it. It does this by changing the way people communicate and creates conditions that engage people in a way that is more productive than what most are used to
Technology of participation	5–1,000 1–3 days	Technology of Participation (ToP) consists of methods that enable groups to (1) engage in thoughtful and productive conversations, (2) utilize critical thinking, (3) develop common ground for working together, and (4) build effective short and long range plans. ToPs focus on surfacing things that can unify a group rather than dealing with things that may divide it. The purpose is to elicit participation of a group, organization or community in creating thoughtful and critical discussion related to short and long term change
World cafe	12–1,000s (with no upper limit in theory)	The World Café is a conversational process that employs a simple methodology that can evoke and make visible the collective intelligence of any group, increasing people's capacity for effective action in pursuit of common aims. The integrated design principles evoke collective intelligence through dialogue. The purpose is foster the conditions for engaging people in dynamic strategic conversations that matter to them

Encourage and Support Innovation

As a precursor to large system change, and to act as a potential catalyst for that change, you are expected to encourage innovation. In the process you are also encouraged to enable and reward creative thinking as part of day-to-day practices. In health care, many models of innovative process, such as Lean and Six Sigma—emphasizing what is called continuous improvement—are found in the literature [2]. Use of these processes creates cultural receptivity for, and is a catalyst for large-scale change.

One of the challenges Linda and Jayne discovered during the Open Space session with union leaders and management teams from both the health authority and the ambulance commission was very different attitudes toward innovation and creativity between the two organizations.

It's part of the process that anyone can bring up topic for small-group discussions and someone submitted 'maintaining identity.' Many people flocked to the table to discuss this, almost all of them from the ambulance group. Jayne listened carefully. What she heard were managers who prided themselves on sticking with existing protocols for patient care; found their identity in their uniforms and badges; and took comfort in hierarchical power and rank structures. Indeed, she overheard one manager say, "No way I'm going to ask my guys to change how they do their work…I don't care how many incentives, programs, or directives they give out, my guys are going to stick with the tried and true." Another stated, "I've heard rumours that they are going to take away our uniforms. If they do that, the whole system will collapse…I mean, those uniforms are a source of our pride: they are our identity."

In a session on 'patient transition,' Linda heard one of the health authority managers suggest using the Lean approach for continuous improvement to address the handoff process between emergency services and the emergency ward. One of the ambulance managers snapped "What's that? A way to cut costs and staff?" When the other manager tried to explain, the ambulance manager replied that it sounded like a plan for continuous disruption. "We're already doing the best we can," he said. "Forget Lean."

Both sessions set off alarm bells for Jayne and Linda. Their health authority used Lean methods to improve patient-care pathways and eliminate waste. It had resulted in many successes—not system-wide, but in many departments.

Learning the ambulance managers weren't open to the concept of continuous improvement told Linda and Jayne they had a disconnect in cultures that would challenge them during the merger. They needed to come up with a plan to deal with it.

Continuous improvement processes use scientific methods to act on suggestions from workplace teams on how they could do their work better (using the Build Teams capability). Action is based on evidence of outcomes (using the Take Action to Implement Decisions and Assess and Evaluate capabilities). Improvement involves change; and change, on a small scale, is innovation. But it's also creative—drawing on peoples' ability to transcend established ideas, rules and patterns and create new ones. Creativity gives continuous improvement insights, discernments and inspirations that extend logical thinking into visionary thinking. Innovations can be *breakthrough* ideas that put scientific principles into practice in new ways. They can be new combinations of existing elements that make logical sense but when combined, create new possibilities. Or innovations can come from seeing how small adjustments to a process improve it. Sometimes a number of creative innovations, when combined, can create large-scale transformation (like cell phones and the internet).

Practical Ways to Encourage and Support Innovation

Lean, which originated in the auto industry, is mainly focused on quality and safety; its aim is to reduce waste by identifying and eliminating activities that do not add value to patient care. It's just one of many similar approaches health systems use to accomplish the same purpose, some of which we show in Table 9.2 [2]. This emphasis on quality improvement was stimulated by the work the Institute for Healthcare Improvement in the U.S. and by Ross Baker and Peter Norton in Canada. Studies show both nations' health systems had appalling rates of deaths caused by medical error [10, 11]. Since that time, continuous quality improvement has been driving change in health care.[2] Lean is one of the most popular methodologies for doing that, because it also addresses sustainability and cost-effectiveness [12–14].[3]

Quality-improvement literature provides considerable proof of Lean's effectiveness [15–17].[4] It requires behaviour changes by both management and employees, and often a change in the leadership culture as well, to incorporate the Encourages and Supports Innovation capability. Sustaining it draws on even more of your LEADS capabilities [18].

A pattern with Lean is that it's usually tried unit-by-unit in hospitals, but not for large-scale change [19]. The province of Saskatchewan in Canada is challenging this precept by trying to introduce Lean across its whole health system. At the same time, it has introduced a leadership initiative aimed at developing LEADS capabilities to complement the Lean initiatives. Dan Florizone, the province's former deputy minister of health, said the approach was a "game changer" with the potential to "turn the system on its head" [20, 21].

So far we have pointed out a number of models (see Table 9.2) which in themselves encourage the practice of innovation to improve services to patients. We have also stressed that to be successful, not just when you integrate the approach into the workflow, but in the long term, culture change is necessary. But if like Linda and Jayne, we have a culture that is resistant to change and innovation, the question arises: can the leader change it?

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[2] For example, the World Medical Association endorsed, in 2009, a statement saying that "Ethical guidelines for health care quality improvement matter to all physicians, as well as to institutions providing health care services for patients, those providing continuous quality improvement services to assist physicians and organizations, health care payers and regulators, patients, and every other stakeholder in the health care system. Taken from the WMA Declaration on Guidelines for Continuous Quality Improvement In Health Care, Adopted by the 49th World Medical Assembly, Hamburg, Germany, November 1997 and amended by the 60th WMA General Assembly, New Delhi, India, October 2009. Available from: http://www.wma.net/en/30publications/10policies/g10/.

[3] Articles on the use of Lean for quality improvement suggest it is used worldwide. Three articles show its use in the UK, Australia, and India. See Refs. [12–14] for these articles.

[4] A recent review of the literature revealed a number of articles that outline the power of Lean, its innovative power, and creating a culture of continuous improvement. See Refs. [15–17].

Table 9.2 Five models used for innovation and continuous improvement [2]

Approach	Purpose	Innovation approach
Lean	Lean is a core methodology for redesigning health systems. Lean aims to improve the value proposition to the patient, and on eliminating waste. Many health systems adapt Lean to a variety of contexts	Process redesign involving staff at the front line reviewing all processes and procedures in light of desired outcomes and streamlining them. Creates expectations for ongoing dialogue between management and front line staff to identify new ideas for continuous improvement
Six sigma	Six Sigma seeks to improve process by identifying and removing causes of defects and minimizing variability in clinical care practices	Six Sigma's methodology for innovation is to define a problem, collect data, and used statistical methods to determine sources of variation and opportunities to improve. Processes are then adjusted to remedy the problem, and data are collected and analyzed multiple times to check for improvement in error rates
PDSA cycle	This model tests incremental improvement in rapid cycles in a discrete component of a system, usually related to quality and safety	The PDSA cycle creates innovation through creating continuous cycles of incremental change. It is an action research methodology. The four steps are Plan the work; Do the work; Study whether the outcome was achieved and Act on change by adjusting effort as needed, then repeat
Donabedian's quality assurance model	Donabedian's three-part model (structure, process, and outcome) is used to assess safety and quality infrastructure. It can be adapted to assist in measuring whether elements are in place to assure quality and/or safety	Donabedian's model creates innovation in three ways. Structural innovation refers to redeploying resources, such as time and money, for working with quality improvement or to adjusting administrative practices for quality systems, such as documentation of routines and staff support. Process innovation is directed at quality improvement culture and cooperation within and between professions. Innovation in outcomes refers to establishing evaluative processes for achieving goals and developing competence related to quality improvement
Positive deviance	The concept of positive deviance is that no matter how seemingly intractable a problem, every community has individuals whose practices or behaviour let them find better solutions to problems than their neighbours	Positive deviance creates innovation through a disciplined process to discover unique and uncommon successes in one setting; examine the conditions for that success; and attempt to replicate these successes where possible in other settings

Organizational Culture and Innovation

Culture change is one of the challenges and opportunities destinations on the change map. For Linda and Jayne, it *was* both. Their health authority had embraced Lean and continuous improvement, but the ambulance service did not.

Organizational culture is the ingrained patterns of thinking and feeling that make up a group's shared mindset. Cultural identity can be shared by everyone in an organization, or it can be in sub-groups, such as just the ambulance service or just the administration. It is usually unconscious; it drives responses and behaviour without people being aware of it. There are clues to culture in the symbols an organization uses and its stories, who its heroes are and the day-to-day rituals it preserves. They're all grounded in value imperatives that were once important but may no longer be.

The health-care landscape is made up of many professional sub-cultures, which are often stronger than a prevailing organization-wide culture. Medicine, in particular, is accustomed to having the autonomy of its members recognized, and to putting allegiance to professional values ahead of organizational ones [22].[5] Doctors by tradition play a unique role in health organizations and therefore must be involved in changes to them. You are advised to recognize the need to have special strategies and tactics to engage physicians in change [23, 24].[6] Other professions have a similar sense of autonomy and professional accountability, and also influence the change process.

Culture, however, can be opened up to discussion and deliberately dealt with. There are instruments that can be used for this purpose [25].[7] Sometimes culture can be used to your advantage in bringing about change, or can resist it. For example, doctors often buy in to a quality agenda when they realize it is aimed at improving patient care (i.e., the quality agenda).

Chris Hodgkinson says culture is malleable until it becomes ideological—when customs, beliefs and traditions go beyond reason and become part of people's identity [26].[8] That appeared to be the issue when a former Canadian Minister of Health, Tony Clement, called for the Supreme Court to rule on the right of a safe

[5] For example, the Royal Australasian College of Medical Administrators makes the following statement: "The medical profession holds a rare position characterised by high respect and trust of the community which in turn is inextricably tied to significant professional and personal responsibility". Royal Australasian College of Medical Administrators (2012). Issues paper – performance appraisal and support for senior medical practitioners in Victorian public hospitals. Melbourne: Australia. Accessed on-line on August 20 2012 @ http://www.health.vic.gov.au/clinicalengagement/downloads/pasp/dla_phillips_fox_issues_paper.pdf.

[6] See three commissioned papers on physician engagement in Refs. [23] as well as article in Ref. [24].

[7] Nine such instruments were reviewed in a study conducted by Scott, et al. See Ref. [25].

[8] Christopher Hodgkinson has outlined what he calls a value typology—suggesting that humans possess values of differing strength and power to motivate one's actions. When values are so deeply ingrained that they become linked to a person's sense of personal identity, they become 'ideological'—and impervious to reason.

injection site to remain open in Vancouver, B.C. He did so despite the plethora of evidence showing its value and worth. However, to him, it was an existential issue; that is, one of ideological belief that providing safe injection sites for drug addicts was wrong.

Learning Moment: Assessing Your Organization's Culture of Innovation

An Australian study of private-sector businesses found the images used to portray the business can reveal whether theirs is an innovative culture. Innovative company cultures were represented by images of luxury, sleekness, speed, and quality. Weaker performing and less-innovative companies were represented by images of constraint, greyness, stolidity and introspection.

The study outlined attributes of innovative organizational culture:

- Lots of intellectual stimulation, sharing of ideas, articles, etc.
- Leadership is visible/vocal in its support of innovation.
- There is a democratic approach to innovation: it comes from anywhere.
- A history of smart risk-taking; people in the organization make a point of learning from, not punishing, failure.
- There is collaboration and networking across boundaries to solve problems.
- Innovative practices are measured and monitored for success.
- There is accountability for creating innovation.
- Innovation successes are regularly communicated.

Try rating your organization against those measures, from 1 (very little) to 7 (a great deal). Where is your organization strong? Where might it improve? What steps might you take to improve its innovative culture?

Leaders who employ continuous improvement methodologies are encouraging and supporting innovation. To achieve long-term benefits, you'll have to be conscious of aspects of culture that might impede or facilitate innovation and continuous improvement.

Orient Themselves Strategically Toward the Future

Leaders see the future faster, scanning the environment for ideas, best practices and emerging trends that will shape the system. They then weigh them against their organization's history and values. It's a bit like being the Roman god Janus [27], who could see the past and future at the same time. Janus is a great metaphor for leadership in systems transformation—except he didn't have to collaborate with a bunch of other Januses to make things happen (Fig. 9.2).

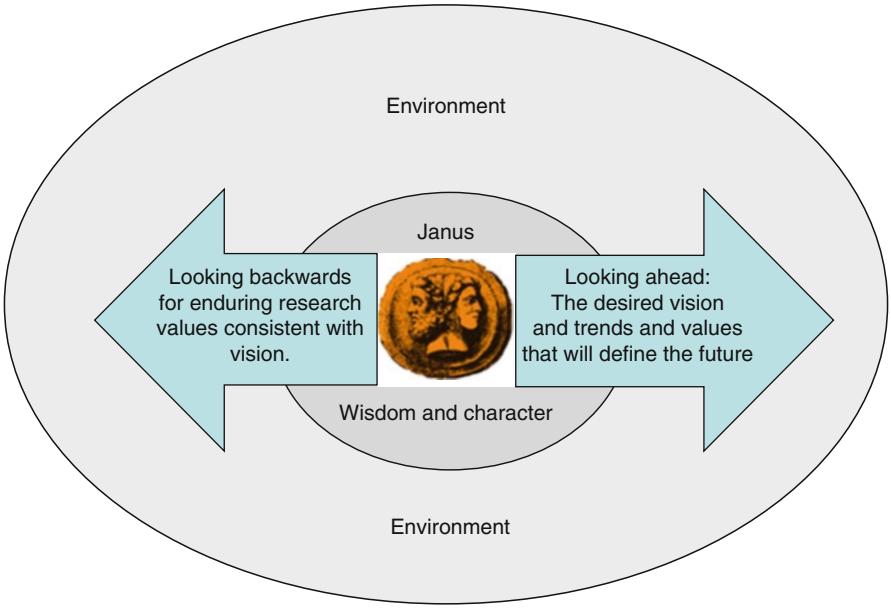

Fig. 9.2 The Janus approach

Like Janus, you too must find creative ways to reconcile competing trends and forces that will define the future with evidence and values from the past that must endure. It is your wisdom and character that will determine what strategies will move you and the system to its future vision [28, 29].[9]

Wise strategists constantly probe the environment to identify emerging trends and values, then use personal experience and their character to determine what patterns they should pay attention to and which are passing fads. Doing that lets them see the limitations of a purely scientific or research-based approach to leading change. By definition, research is knowledge of the past. When it appears to lead against the best interests of the public, wisdom allows you to assess other factors (such as values, ethics and innovation) that should help shape your decision. Leaders often have to act before they have all of the information, not recklessly, but counting on intuition, experience and conviction. Leaders cannot rely on certainty, nor can they eliminate risk. In particular, you will always face a risk in co-creation, because there are no guarantees when you work with others and no blueprint to plan the future. Being able to live with that uncertainty is one thing that separates those who become leaders from others.

[9] Nonaka and Takeuchi, in a recent article in the Harvard Business Review, define practical wisdom as "experiential knowledge that enables people to make ethically sound judgments [28]." Barbuto and Millard describe wisdom as "…an awareness of the limitations of self-views…wisdom comes from the openness to re-examine, re-define, and re-evaluate views and the creation of a lucid perspective, and adaptation to changing contexts [29]."

So how do you learn the leadership capability of orienting yourself to the future? First, enhance your own environmental awareness. Focus your mind on discerning what trends, events, or movements in the environment cannot be ignored. Use informal meetings, discussions and encounters to assess what others believe is important. Then use your wisdom to discern factors that can be used to achieve your vision.

Second, use the wide variety of tools and techniques available for scanning the environment and gathering intelligence. Some of the most popular are outlined below in Table 9.3 [9].

Table 9.3 Four approaches for orienting strategically to the future

Approach	Definition	How to use it
PEST	Political, environmental, sociological, technological analysis	1. Use the four categories of PEST to brainstorm changes happening around you. Tailor the questions to suit the needs of your organization or system 2. Brainstorm opportunities arising from each of these changes 3. Brainstorm threats or issues that could be caused by them 4. Take appropriate action
SOAR	Strengths, opportunities, aspirations, results	A facilitated process, with four steps: 1. **S**trengths: What trends, values, beliefs out there support our vision? 2. Opportunities: What opportunities—economically, politically, socially, technologically—can we take advantage of? 3. Aspirations: What is our preferred future, from the point of view of the people we serve? 4. Results: What are the measurable results that will tell people we have been successful?
Force field analysis (adapted)	Forces in the external and internal environment driving change, and impeding change in light of your preferred future	A process, employing focus groups, surveys, or part of a facilitated strategic planning exercise that gathers intelligence around the following questions: 1. What political forces are at play in the global, national and regional political arenas that will either drive change in support of our preferred future, or impede it? 2. What technological forces are at play, in the global, national, and regional arenas that will either drive change in support of our preferred future, or impede it? 3. What economic and social forces are at play, in the global, national, and regional arenas that will either drive change in support of our preferred future, or impede it? 4. What forces are at play inside our organization or system that will either drive change in support of our preferred future, or impede it?

(continued)

Table 9.3 (continued)

Approach	Definition	How to use it
Scenario planning	Scenario planning, also called scenario thinking or scenario analysis, is a strategic planning method use to make flexible long-term plans	Facilitated process for small or large groups Scenarios are stories that describe how the environment may evolve in the future. They depend on environmental scanning to provide information on which the scenarios are based. The scenarios can portray current conditions or refer to future states of the organizational environment. Scenario planning may involve systems thinking, specifically recognizing many factors may combine in complex ways to create some surprises. The method also allows the inclusion of factors that are difficult to formalize, such as novel insights about the future, deep shifts in values, unprecedented regulations or inventions

Third, develop your information and communication systems so you can engage and consult outside groups quickly and often. New technology lets us enter exchanges with stakeholders and the public in ways never dreamed of. Two examples come from the cities of Surrey (Canada) and Newcastle (Australia). They use internet technologies to gather knowledge from communities and individuals on creating the future cities of Surrey and Newcastle [30].

Fourth, consider two or three key principles of systems and critical thinking, and use them as you contemplate the future. Take the systems principle of interdependence, the idea everything is connected, with mutual, rather than linear, cause and effect. An example can be found in one of Canada's largest health authorities. A patient presented herself ten times to the emergency ward in a large city hospital in a year. Four times she went for a stay in the intensive care unit: a series of visits with a cost of $400,000. When an administrator (seeing her for the eleventh time) began to investigate the pattern of presentation, he found out it was due to her inability to purchase her medications ($30–$40 a month). Further investigation found that Social Services would not cover it. With some negotiation, (i.e., the health system paying for the medication) the visits stopped. A savings of almost $399,500 a year to the health system! Just as in this example, look for connections among social, economic and political events: how are they connected? How might they interact and what happens if they do?

Complex adaptive systems, which we mentioned earlier, is another facet of systems thinking that may help give you insight into the importance of events and trends. We described them earlier as systems made up of interacting organizations or groups defined by their values. Interaction among them is complex and predicting how it will evolve uncertain. They can exhibit rapid, unpredictable change with no apparent pattern. The 2008 housing crisis in the U.S. is an example. It spiralled out of control, leading to numerous company and bank collapses, but alert observers would have seen signs of instability were present. Similarly, complex adaptive systems can have positive effects, such as breakthroughs in innovation because of a confluence of ideas and technology.

Learning Moment

1. What social, political, economic, or technological trends do you see having a long-term impact on your country's ability to sustain universal health care into the future? Why?
2. If you were to stand in the future—in the vision of a patient-centred universal health care system—what fundamental intervention would you propose to move the system from where it is now to where it should be?
3. How difficult would it be for others to see the power of that intervention? How might you help them see it?

Champion and Orchestrate Change

To champion and orchestrate change connotes action. Your leadership will show in how actively you work to support and implement system change. To champion something is to advocate, support and fight for it. To orchestrate it is to shape and combine its parts to achieve a desired effect. Both verbs emphasize inclusiveness and connectedness, in tune with all the LEADS capabilities. However, we are not so naïve as to think that coercion and force are unnecessary. Indeed, one of the most important leadership abilities might be knowing clearly who your adversaries are, and a willingness to deal with them. However, your leadership should primarily be based on engaging people, on inspiring, on building partnerships: not force.

How do you apply your leadership to championing and orchestrating change? By being a leader in action, not inaction. By connecting. Through knowledge of large-scale practical approaches. By finding and following simple rules to guide change. We'll talk about those each in turn.

Leadership in Action

In the process of writing this book we had discussions with leaders from across Canada about the challenge of redesigning large health systems. There was a general consensus (and general frustration) that Canadian health leaders just can't get on with the changes the health system needs. One leader said "We all know what to do…why aren't we doing it?" There were lots of answers to that, including lack of time, lack of commitment and support from politicians, lack of ability to tackle large-scale change because it is complex and confusing, middle-management apathy, and a lack of information and data to back changes.

They all sound reasonable. However, you can always look for more information or wait for more support, or for someone else to take the lead. Yet almost all the leaders we interviewed agreed that if change was going to happen, they would have to do more than they are to bring it about. In some ways they were being unfair to

themselves. They are acting—on many fronts. Their frustration probably stemmed from three things. First, all kinds of action is undertaken in isolation, disconnected from anyone else's efforts. Second, many leaders who honed their skills in the relatively small boundaries of traditional organizations find their leadership practices are not suited to changing a large system. Finally, large-scale change takes time, which is why leaders struggle in political environments dictated by short election cycles. However, the people we spoke to agree on two things. Achieving large-scale change would take more working together, and they needed models and methods to engage the public and patients in it.

One tool we haven't discussed yet is leverage. In systems parlance, leverage is knowing when to intervene in a system to re-order patterns of thinking and action to create the change one is hoping for. Leverage also implies prescience, what the Greeks call *kairos*: the intuitive sense of knowing when to act.

A leader in the university sector on the west coast of Canada had been working on a small-scale project that was a version of a national initiative that had been pursued for over two years by a number of health leaders. The problem at the national level was insufficient funding and a meeting was scheduled the next day for a 'make it or break it' decision on the future of the initiative. He wrote a short proposal suggesting the cost of a national program could be reduced by leveraging the work he had done and using data and expertise developed in his province. His proposal arrived on the desk of the person convening the meeting just hours before it was to begin. It was accepted and his efforts leveraged a large-scale national initiative that benefitted Canadians well beyond his province.

Learning Moment
Reflect on your experience as a leader.

- Looking back, can you think of a time where an action on your part might have made a big difference in the outcome of a change?
- What factors made it the right moment to act?

Connectedness

It has been said that "Leadership is the ability to overcome the natural tendency to fragment." Connectedness—of leaders, within and across organizations, so they can work together to generate change—is another method that helps bring about effective large-scale change.[10] No matter what role you play in the health system, it's only by working with other leaders at multiple levels that you'll effect large-scale change. Clearly, that's not easy. CEOs struggle with getting concerted action in their own organizations, much less across a system. We need new ways of working together to get more coordinated action on large-scale change (previously we described this as distributed leadership).

[10]It should be pointed out that relationships and connectedness is a fundamental principle underpinning the LEADS framework, the NHS framework, and the Australia HWA framework, referenced in Chap. 3. It is also a major theme in almost all leadership works; after all, the leader-follower dynamic is a relationship.

Interestingly, the individuality and power implicit in the word leader—qualities that attract some people to leadership—are the very things that limit our ability to share leadership with others. But if you're too wrapped up in your own role, you're at risk of overlooking what others have to offer in creating system change (as we discussed in Chap. 8). Collaboration can achieve change where a lone leader is not successful [31].

Connectedness is what makes a system a system, both vertically (from micro- to macro-levels of the system) and horizontally—across departments, organizations, and jurisdictions (such as community agencies and institutions). Yet most health systems remain fragmented [32].[11]

Learning Moment[12]

One observation we heard in our interviews was that governments are reluctant to make bold policy changes because health care is a political minefield. But there are examples outside Canada of countries that have encouraged innovation and change. Sweden made significant policy changes in 2009 to move toward a more market-oriented, demand-driven health care system. While visiting Sweden, we heard about two new policies, one called "challenge" and the other a form of contracting out.

Under the new challenge policy, a large urban hospital was challenged by a Finnish company, which claimed it could deliver orthopaedic patient outcomes more effectively and efficiently than the in-house department. The department was given 6 months to respond with a compelling case for why the challenge should not be accepted. After a feverish Lean redesign, the department fended off the challenge.

Under the contracting out policy, boards have the right to designate certain services open to bids to improve the efficiency and effectiveness of their business and medical service plans. The management of a psychological treatment centre for youth in Stockholm was notified by its board that it was being opened to bids. One of the doctors on the staff partnered with a colleague, hired a lawyer and financial expert, and built their own bid to run the centre. They won the contract, and the doctor became CEO, bringing in the changes he and his colleague had proposed.

These and other market-driven changes were introduced to challenge the perceived complacency in the system. The jury is still out on whether they're having the desired impact on patient care; but they have catalyzed transformation.

[12] See Refs. [33–35].

[11] For example, a study done in Australia, in 2012, interviewed a diverse sample of Australian health managers. The findings showed that they viewed the health system as one of constant change, mostly non-adaptive and a system of parts controlled by bureaucrats and political interests [31].

1. What do you think are the pros and cons of such approaches? Would they create the large scale change that you think is necessary?
2. Are these approaches too bold, or are they the kind of measures leaders should be considering? What's the rationale for your answer?

One CEO told us, "I wasn't prepared for this." He was referring to the complexity of large-scale change. Depending on your vintage and where you've worked, that may be your experience, too. However, connectedness, like other aspects of leadership, can be achieved through coordinated leadership development initiatives based on a common language of leadership—such as LEADS, Health LEADS in Australia, or through the NHS framework. Any leadership development or succession planning program should facilitate systems awareness through interaction and dialogue among participants from a variety of roles. Grandy and Holton say leadership development programs that address social, cultural, political and economic context, while focusing on individual behaviour, skills, knowledge in real-life situations help build connected leadership [36].

Large Scale Approaches to Change

There are a number of models and approaches for carrying out large-scale change based on the principle of connectedness. Many embody LEADS capabilities. They bring a disciplined approach, embracing all partners, mobilizing knowledge and generating ownership in the change. They are designed to bring the wisdom of many to a change process. Five are profiled in Table 9.4 [2].

Large-scale change approaches are ways to champion and orchestrate change. Most address the "challenges and opportunities terrain" on the change map we profiled earlier. They allow issues such as culture and sub-cultures to be examined for their impact and can create shared meaning among participants on vision, purpose, and direction of change. They allow you to determine which groups and which individuals are resisting change simply from not understanding it as opposed to those whose values are at odds with the change. The right model can identify resources, help you align participants' efforts and help create momentum for a long-term process of change (the more organizations and groups that get involved, the harder it is to get going, or when already going, to stop). They provide arenas for gathering intelligence, developing a vision, and planning.

Finally, the decision to use a large-scale change model prompts us to recall a fundamental principle of systems thinking: there is no blame. If change is not happening at the scale we think it should, or inertia or resistance is holding it back we all tend to blame someone—politicians, the public, doctors. But we need to remember that while a system is made up of individuals, each of us is part of the behaviour blocking progress. We are all interconnected, and what is happening is no one's fault, or it's the fault of all of us. The point of large-scale change activities is to help us design the path forward together.

Table 9.4 Models and approaches to large scale change [2]

Change approach	Benefits	Description
Charters (e.g., Ottawa charter, design rules, proclamation for change)	Clear direction Principles of working together Momentum for change	The purpose of these approaches is to gain commitment and support for generating large-scale change by taking different groups affected by a change through disciplined processes aimed at expressing and gaining that commitment. Philosophically no single person or institution "owns" either the problem or the solution, rather it is owned collectively. Similarly the responsibility for the problem and the solutions is shared throughout the community. There is an interaction between the individual and the environment. The healthy behaviour of an individual is shaped by his or her environment, and whose behaviour in turn shapes a healthy environment
IHI framework for leadership for improvement and IHI framework for spread	Clear direction Implementation focus	Based on lessons from organizations, national initiatives, large-scale programs, fieldwork and interviews with health care clients and leaders from outside health care, IHI has developed a seven-factor framework for leading large-scale quality improvement. They are:
	Processes to expand small scale change to large-scale change	1. Establish and oversee specific systems-level aims at the highest governance level 2. Develop an executable strategy to achieve system-level aims and oversee their execution at the highest governance level 3. Channel leadership attention to system level improvement: personal leadership, leadership systems, and transparency. 4. Put patients and families on the improvement team 5. Make the chief financial officer a quality champion 6. Engage physicians 7. Build improvement capability IHI's Framework for Spread identifies six components for planning and implementing spread. It suggests general areas to be considered. It includes "checklists for spread" on leadership, knowledge management and transfer, communication, and measurement

(continued)

Table 9.4 (continued)

Change approach	Benefits	Description
NHS large-scale change	Conceptualization and planning focus and implementation focus Disciplined approach to organizing and planning change	NHS has an academy for large-scale change, created to give leaders grounded theory of large-scale change in order to be confident and effective in their leadership. It presents participants with a theory of large-scale change, and a seven-element model for it. The elements are: leadership for change; spread of innovation; improvement methodology; rigorous delivery; transparent measurement; systems drivers and engagement to mobilise. These seven elements revolve around, and are aimed at achieving the "shared purpose" of the change
Large scale action research (Community-based or participatory action research)	Ongoing disciplined analysis of success and failure Mobilizes knowledge Builds momentum and institutes ongoing action	Action research is a cyclical approach to change in which researchers and decision makers work together to initiate change. There are many versions of it but they all adapt and adjust the change process, based on lessons learned through a disciplined process of planning, initiating, implementing, and reflecting on changes. Action research enlists those who are most affected by a community issue – typically in collaboration or partnership with others who have research skills – to conduct research on and analyze that issue, with the goal of devising strategies to resolve it. Action researches adds to or replaces academic and other professional research with research done by community members, so that research results both come from and go directly back to the people who need them most and can make the best use of them

Simple Rules

Systems thinking gives rise to a phenomenon called simple rules, which are broad principles of change leaders can use in many different contexts. Simple rules operationalize the concept of concerted action implicit in the practice of distributed leadership [37].

Allan Best and colleagues, in an article called *Large-System Transformation in Health Care: A Realist Review*, describe studying transformation initiatives to inform change processes in Saskatchewan [38]. They identified five simple rules of

large-systems transformation they thought were likely to increase the success of the initiatives. To succeed, they said, system change should:

1. Blend designated leadership with distributed leadership
2. Establish feedback loops
3. Attend to history
4. Engage physicians
5. Include patients and families.

These rules, interpreted and applied with some flexibility by leaders to account for different contexts, will help leaders determine what to do.

Conclusions

The Systems Transformation domain of LEADS in a Caring Environment framework has four leadership capabilities:

- *Demonstrate systems and critical thinking*
- *Encourage and support innovation*
- *Orient themselves strategically toward the future*
- *Champion and orchestrate change*

Together these capabilities—and the approaches associated with them—can assist leaders together to achieve large scale, systemic change in health care. Yet it is clear that in Canada and other international jurisdictions, the cohesiveness required to sustain change over time remains elusive. Our systems remain fragmented despite the best actions of leaders. Is that because we adhere to the old models of leadership emphasizing control over our fiefdom? Is it because we implicitly like the independence and autonomy that such a system perpetuates? Or are we reluctant to learn about, and truly wrestle with the challenges of large scale change? Are we comfortable using models of change that actually devolve responsibility to managers, community leaders, and stakeholders, to shape how the system should work with us? Each of you is asked to consider these questions and one other: how much fragmentation in a system is in the best interests of the patients and citizens? One hope is that gaining agreement on a common language of leadership—e.g., LEADS in Canada, and LEADS Australia in that country—leaders will use that language to inspire and grow the concerted leadership needed to sustain health reform into the future, whatever that optimal level of fragmentation—and freedom of action—is.

Learning Moment
To use this questionnaire, find the right category for your level of leadership (e.g., front-line mid-management, etc.). Then assess how well you demonstrate the four Systems Transformation capabilities, where "1" is *I don't do this well at all*; "7" is *I do this exceptionally well*, and "N" is *not applicable in my current role*.

Which capability do you need to improve on? Why?

Systems transformation self-assessment

Front-line leader responsibilities								
Consistent with my organization's values, vision, desired results and purpose, I:								
1. Use critical/systems thinking to deal with people issues.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**N**
2. Support the innovation required for continuous quality improvement and use my creativity to influence practices aimed at improving service to patients and clients.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**N**
3. Personally model and encourage people I supervise to think about trends and enduring values of importance to the organization and system.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**N**
4. Clearly understand the rationale for change approaches being employed in my organization or the larger system and change my personal practices to be consistent with them.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**N**
Mid-manager leader responsibilities								
Consistent with the organization's values, vision, desired results and purpose, I:								
1. Use critical/systems thinking to address issues and practices to improve service to patients or citizens in my unit.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**N**
2. Create an environment of continuous improvement in my unit.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**N**
3. Encourage people on the unit to think about trends, issues and enduring values the broader organization is facing.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**N**
4. Clearly communicate a compelling rationale for change and employ small-system approaches to it.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**N**
Senior leader responsibilities								
Consistent with the organization's values, vision, desired results and purpose, I:								
1. Use critical/systems thinking to identify issues and practices that could improve service to patients or clients in my program or department.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**N**
2. Create an environment in my program or department where innovation, creativity and continuous improvement are valued.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**N**
3. Encourage people to think about trends, anticipate problems our department will face and create solutions in line with the values of our organization and system.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**N**
4. Employ small- and large-system approaches to implement changes required in our department or program.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**N**
Executive leader responsibilities								
Consistent with the organization's values, vision, desired results and purpose, I:								
1. Use critical/systems thinking to analyze system needs and identify issues and practices that could improve service to the patients or clients of my health organization and broader system.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**N**
2. Create an environment in my organization and the broader system where innovation, creativity and continuous quality improvement are valued as sources of tactical and strategic advantage.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**N**
3. Encourage people in my organization and partner agencies to identify future trends, anticipate issues, and create solutions in line with our own and system values.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**N**
4. Champion and orchestrate change by using models and approaches that engage the system.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**N**

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