Play and Games

for Transformational Innovation in the Ontario Healthcare System

By Marie-Hélène Fokias & An John Nguyen

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Abstract

With increasingly unsustainable healthcare expenditures and the emergence of more complex chronic conditions, the Ontario Health System is a highly bureaucratic structure that continues to evolve at an incremental rate. What's challenging however, is that expectations of society and patients are changing and increasing; and at the current pace of change, needs are not being reached quickly enough as a whole. Healthcare in Ontario is an industry attempting to address wicked problems in a complex system and to do so, requires a shift in thinking and drive towards innovation.

Innovation has been defined in many ways. Here, we consider it within a healthcare context. For the purpose of our research, healthcare innovation means the development of new or novel ways of delivering health services that improve the patient experience and impact the system at a large scale. Healthcare organizations have been promoting innovation as a means to solve problems; however, innovation has not been widely defined within this industry, and innovations have occurred in piecemeal ways toward incremental improvement of the existing system.

We speculate that radical transformation of the healthcare system will require a shift in paradigm to redefine how to meet the health needs of individuals and society. If healthcare organizations wish to be more fully included as active participants in large scale change, they must cultivate the appropriate capacities to integrate futures and design thinking into their practice. Games offer up the potential to encourage problem solving, creativity, and relationship building, all of which are inputs to drive transformational innovation.

In this research, we aim to explore our primary research question: **How might Ontario healthcare organizations use games to foster a culture of innovation?**

We develop insights by mapping the current healthcare system and examining its behaviour and functions, and by considering its relationship with innovation to date. Further, through a review of literature, we discover what elements contribute to transformational innovation and those that emerge from play and games. Lastly, we select and play two games on the paidic end of the game spectrum (unstructured and open-ended), and discuss their potential fit for the healthcare system. We landed on ideation card games; more specifically, futures-oriented games that would be of interest to a healthcare audience in imagining future trajectories, that offer simple game mechanics easy enough for a group of busy professionals to grasp and align with the theme of transformation.

We assert that, backed by a transformational leadership mindset, integrating play and games into their practice, Ontario healthcare organizations might better cultivate and grow their workforce's capacities to solve problems, be creative, and build relationships, thereby developing cognitive capacities to participate in transformational innovation.

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Dedication

To our partners in life, who supported our learning journey every step of the way, we couldn't have done this without you.

Also, to all the front-line healthcare workers who put all their energy into caring for others, and supporting our system.

Finally, to those who cry out for equitable and transformational change.

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Ontario's Healthcare System

The healthcare system in Ontario has reached a level of complexity that makes it hard to navigate and expensive to run. Its culture and structure are holding it in place, so that it cannot easily adapt as the needs of society change.

Many definitions of innovation can be found in literature and in a variety of industries. The World Health Organization describes health innovation as improvements made to the "efficiency, effectiveness, quality, sustainability, safety, and/or affordability of healthcare, which can be 'new or improved' health policies, practices, systems, products and technologies, services, and delivery methods that result in improved healthcare" (Kimble, L., & Massoud, R., 2017).

A participant of the Advisory Panel on Healthcare Innovation once stated, "I have witnessed countless cases of healthcare providers knowing what should be done but having no way to make it happen from their position" (Naylor, D., Girard, F., Mintz, J. M., Fraser, N., Jenkins, T., & Power, C., 2015). If we want to succeed in driving transformational innovations and to realize their benefits, the health system must foster a culture where innovation can flourish, where a variety of stakeholders like patients and clinicians feel empowered to contribute to the process in driving this change (Kelly, C. J., & Young, A. J. 2017).

This report represents the culmination of our training in strategic foresight, systems design, and innovation methods. We conducted research on the Ontario healthcare system, as we believe the time is right to push for transformational system change, to insert new ways of thinking into a traditional setting, and in doing so, join hands with those around us who would like to see our health system thrive.

Healthcare in Ontario is an industry attempting to address wicked problems in a complex system. The concept of "wicked problems" was formally described by Rittel and Webber's *Dilemmas in a General Theory of Planning* (Rittel, H.W.J., Webber, M.M. 1973). These are problems characterized as difficult or impossible to solve due to contradictory and changing requirements that are difficult to recognize, and to which there is no single solution. Furthermore, solving one area of the problem may give rise to other new problems. Our current healthcare system is one permeated by structures of formality and hierarchy that often present barriers to meeting the needs of patients in the way services are designed and delivered. Some of these structures are deeply rooted in tradition, history, and a way of working that is accepted as the norm. However, many of these dynamics are perpetuated today in the name of fiscal accountability, liability and patient risk, and a holding onto power between professional disciplines, as well as between institutions and users of healthcare services. The system itself is riddled with complexity in stakeholders, actors, decision-makers, as well as its multiple functions and purposes. To add to existing challenges, healthcare is directly impacted and affected by adjacent systems that play significant roles in the health and wellbeing of individuals and society.

To address the many and often competing priorities faced by healthcare organizations, the sector's attention has turned to standardization and use of evidence-based practice, quality improvement frameworks, a focus on data and measurement-based decision making, and consistent approaches to project management. It is being increasingly brought to bear that the healthcare system in

Ontario has embedded structures of inequality and bias, and often perpetuates inequities among communities in their access to appropriate care and positive outcomes. Voices of patients and caregivers continue to be suppressed by long standing power imbalances in the design and efficiency of health services. Attention is increasingly being turned to this problem, and healthcare organizations and agencies are attempting to make positive shifts from within the system by increasing efforts to include and partner with stakeholders. At odds are the variations in defining health between healthcare providers, and individuals and communities. While the healthcare system strives to improve itself, Ontario populations press for transformation of access to and delivery of health services. Change that is meaningful for all will require a shift in paradigm, and future-oriented conversations that include, but also reach beyond the confines of our healthcare system.

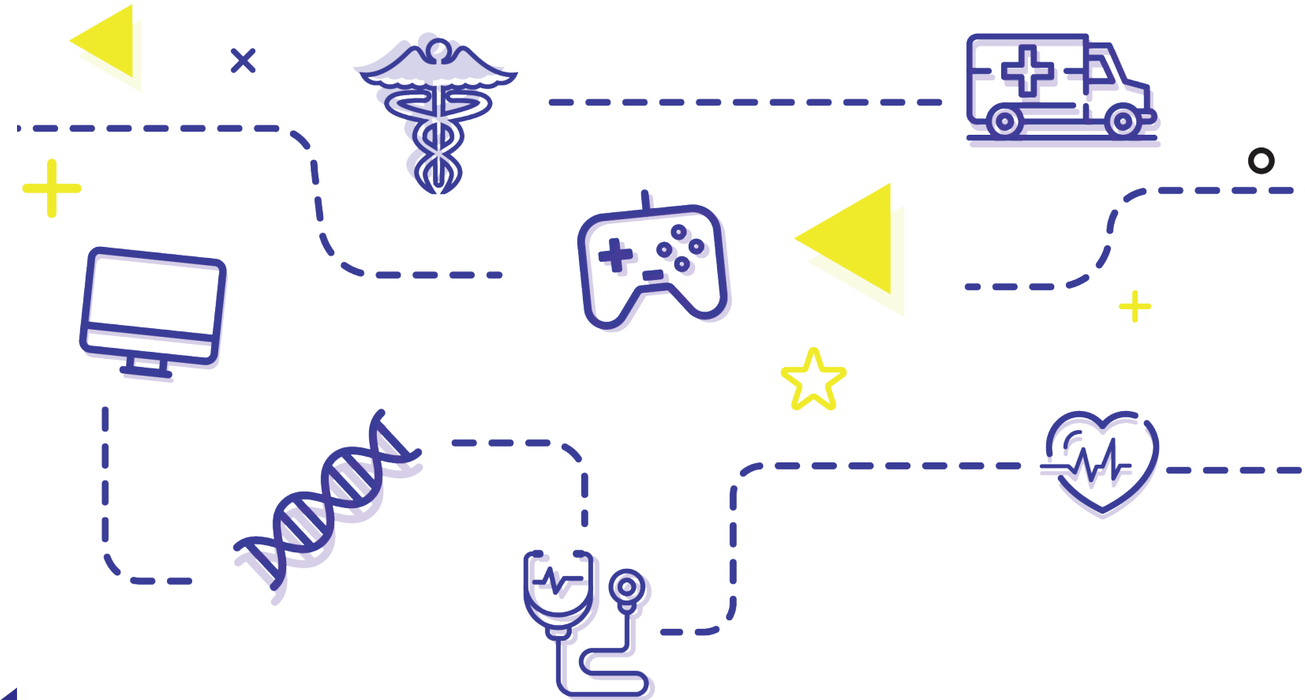
Innovation has been seen as important to improve the functioning and success of healthcare systems, however, the Ontario system lacks common ways to define and understand the various innovation types and methodologies needed to achieve transformational change. In addition to this, healthcare organizations lack the ability to embed innovation cultures into their ways of working, both by internal process, as well as consistently through external partnerships.

In the world of games, one can enter a "space where the rules of ordinary life are temporarily suspended... This agreement among the players to temporarily suspend reality creates a safe place where the players can engage in behaviour that might be risky, uncomfortable, or even rude in their normal lives."

(Dave Gray et al., 2010).

CHAPTER 1

Origins of the Healthcare System



The Ontario healthcare system, as we know it today, has its roots in Western European (French and British) medicine, its structures, beliefs, and practices. The first non-Indigenous settlers to Canada treated disease using herbs and plants from the natural environment, derived from First Nations healing knowledge. As numbers arriving from Europe grew, so too came physicians with colonial worldviews around medicine and disease management. Later, medical practice and credentialing standards would be established. The arrival of European Christians to Canada would come at great cost to Indigenous populations, through the transport of alcohol and disease, and through the lasting effects of cultural atrocities by the Canadian government and generational trauma, the effects of which are observable today.

Medical priorities in the 19th and early 20th century centered on increasing public health and reducing mortality rates by combatting illness such as tuberculosis and venereal disease. Great strides were made in the invention of new drugs, including antibiotics, as well as vaccination programs. Emphasis was placed on education and increasing knowledge on the cause of illness and effective treatments (Bernier, 2003). Leadership of these priorities resided with physicians, politicians, and later, nurses.

Throughout the latter half of the 20th century, with the rise of specialized medicine and specialist associations, the health system began to increase in complexity, and patients began seeing their medical providers at clinics, as opposed to in their home (Bernier, 2003). Hospitals faced a great degree of change in keeping up with the effects of the technological revolution, and their own expanding scope of diagnostic and therapeutic capabilities. Pressures to maintain financing of these advancements, meant hospitals relied on charitable donations and government assistance.

Tensions around making healthcare accessible to all, regardless of an individual's ability to pay for service, included physician positioning in the market economy, recognition of health outcomes of the poor, variable availability of medical professionals in communities, and constitutional and economic circumstances. Publicly funded healthcare in Ontario began in 1957 with the passing of Canada's Hospital Insurance and Diagnostic Services Act, and the creation of the Ontario Hospital Services Commission, soon after renamed the Ontario Hospital Insurance Plan (OHIP).

Rapid growth of the Ontario health system since the 1950s has resulted in today's vast healthcare ecosystem, and the assurance through both federal and provincial legislation, of access to service financed through taxes. Our system comes with considerable cost and responsibility at all political levels. Though there has been emphasis on individual ownership to maintain healthy lifestyle and practices, and to be a more active participant in one's own care, we can observe the growth of the hierarchical complexity that emerged from a class-based system.

Today's Ontario healthcare ecosystem

Today's Ontario healthcare system is complex and can be difficult to understand in whole. Most accountability for the functioning of the system resides with the Ontario Government, though some national priorities are governed under federal accountability. Two thirds of the Ontario system is funded publicly, and one third is funded privately through out-of-pocket payments or private insurance (Lavis, 2016). Multiple entities with responsibility for the system seem to exist, overlap, and at times conflict, from an outside perspective.

In Figure 1.1, we attempt to understand the existing system and the parts that compose it. We examine the system using an Entities, Relations, Attributes, and Flows (ERAF) map. This map serves to uncover the component parts of the health system (entities) and assigns descriptive traits (attributes) to each. The lines between elements speak about the transactions that occur between them, for example, dollars or information, and tell us about the association one element has to another (relations and flows). In our ERAF map of the Ontario Healthcare Ecosystem, each entity belongs to a category (or type):

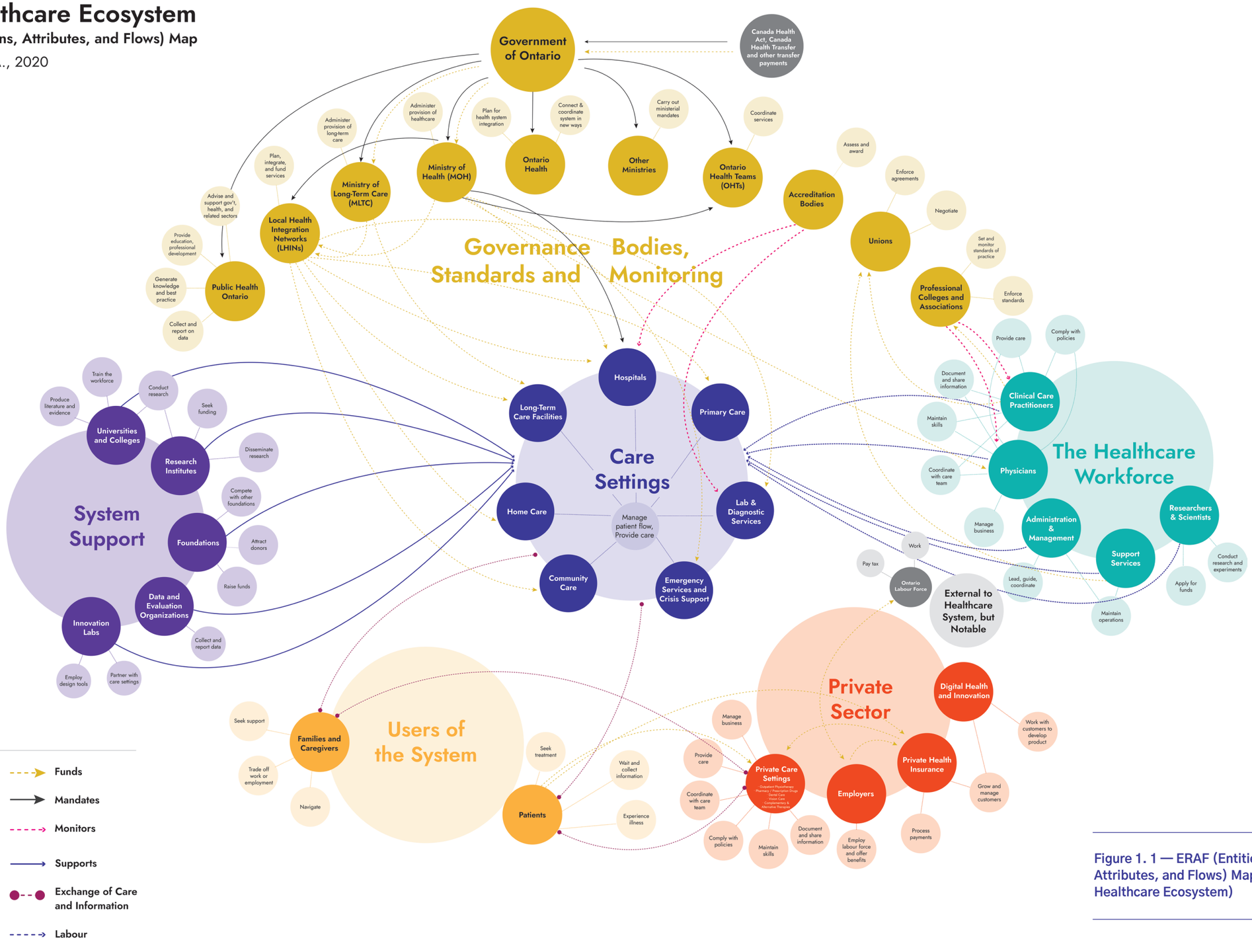
1. Governance, standards, and monitoring bodies
2. The healthcare workforce
3. Care settings
4. Users of the system
5. The private sector
6. System support entities.

Figure 1.1, Entities, Relations, Attributes, and Flows Map of the Ontario Healthcare Ecosystem, maps out the component parts of our healthcare system and their interrelationships. The system is vast and complex, with multiple authorities, and ultimately functions to sustain itself by way of supporting care settings. This is in contrast to the system's assertions of patient inclusion in service design, and patient-centeredness in service delivery and evaluation.

Ontario Healthcare Ecosystem

ERAF (Entities, Relations, Attributes, and Flows) Map

Fokias, MH., Nguyen, A., 2020



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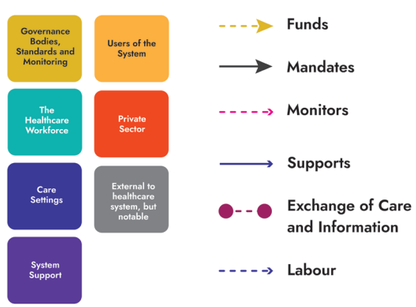


Figure 1. 1 — ERAF (Entities, Relations, Attributes, and Flows) Map of the Ontario Healthcare Ecosystem)

Change in the current system

It is important to note the recent and emerging ways the system is changing and reorganizing. This is observable in Figure 1. 1 with entities such as Ontario Health, the separation into two of the Ministries of Health and Long-Term Care, Ontario Health Teams, and the Local Health Integration Networks (LHINs). These entities are all experiencing their own change and transformations, some newly formed (e.g.: Ontario Health and Ontario Health Teams), others in the midst of redefining their scope and priority activities (e.g.: Ministry of Health and LHINs). In the midst of these changes, boundaries between entities around policy setting, the flow of funds, and the setting and monitoring of standards are all in movement as they are redefined. This moment in time in the redesign of the healthcare system adds to the lack of clarity around accountability, decision-making, and ultimate authority. From an inside perspective in the grouping of governance, standards, and monitoring bodies, times are uncertain and restructuring is a constant presence. From the outside, it appears that more cooks have been added to an already full kitchen, and it is difficult to see exactly who is in charge.

Care settings

Entities in the care settings grouping illustrate where care and interactions happen with those who use the system. Deliberately, we chose to separate care settings paid for through the collection of public tax dollars (centrally located on the map), from those paid out of pocket or by private insurance (within the private sector grouping). To the users of the system, it all makes up settings where they receive healthcare services; however, to a largely publicly funded system, there are observable differences in the range and span of control. The central position of the care settings group on the map also intends to show the in-the-middle situation of publicly funded entities. These offer and deliver services to users of the system. At the same time, they are mandated by and accountable to those governing and monitoring them, acting on the tools provided by the system support group, as good as the capabilities and resilience of its workforce, and needing to coordinate with the private sector. These entities appear to be what the whole system works to support and uphold. This may be to the advantage, or disadvantage of the users of the system.

The healthcare workforce

In an effort to recognize the complex stakeholder matrix of the system, we chose to present the entities related to its workforce as separate from the care settings where they work. These are the people making up and delivering the system, working both for the benefit of the users of the system and those governing it, and deeply impacted by their workplace practice and culture. This group, though present within care settings, is a recipient and a perpetuator of the system's culture and processes, and must respond to demands from a variety of directions. They are tapped to inform the design and delivery of the system while delivering care to users, and are themselves part of the user group by virtue of existing as people in society. The well-being of the healthcare workforce as well as its ability to collaborate with other entities directly influences system functioning, and the experiences of the system's users.

System support

The system support group contains a mix of entities that operate both independently and as part of care settings. These receive a mix of public and private funding, and work to inform on the system's performance, and elevate evidence to enable system decision-making. Some contribute to the functioning of the system, such as institutions that train professionals who end up working in care settings or for other groups such as governing bodies. Others, such as innovation labs, try to connect the system in different ways and develop new or improved products, tools, and processes.

Users of the system

Lastly, the users of the healthcare system – the patients, families, and caregivers, must be able to navigate the surrounding complexity in which they find themselves. They appear outnumbered by all the other entities surrounding them in the system, and we can observe information and accountabilities flow past them as opposed to through them. They seem to be giving more information than they are receiving, and though removed from the system complexities above, are still impacted by these. A distinct difference between these and other system entities is that they are not routinely part of the system, but pop in and out of it as their degree of need for health services varies. Their experience of the system is often isolated and exists in a given point in time.

This moment in time

A layer of complexity not illustrated in the map is the circumstance of the present day's COVID-19 global Pandemic to which the health system and its workforce has had to respond and adapt. The Pandemic itself continues to push the healthcare system to redefine how it prioritizes and delivers care. It begs urgent questions around which populations are experiencing the most negative consequences of the way the system is structured and operates, and require new approaches to service delivery, as a result of long-standing inequities perpetuated by the system itself.

The moment of change in which the system finds itself presents a host of opportunity and risk for the current system, and public interest is at its peak.

Disruptions in the Health System

Increasingly, private sector health and non-health related companies are moving into providing offerings to improve or promote health and wellness for their existing and potential new customers. This might both indicate that companies are attempting to fill gaps not efficiently addressed by the healthcare system, and that health-related offerings may serve as adjacent markets for industries outside of the healthcare system. New developments include technological advancements, personal health data tracking and management, self-assessment and screening, and offerings of new products and services that enhances the customer experiences – for both providers and patients.

The healthcare system's relationship to innovation

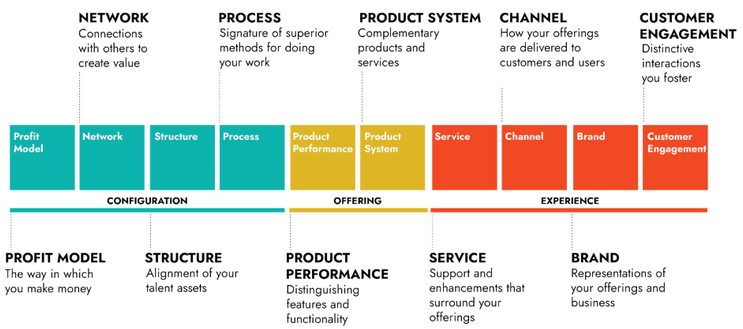
The "innovation" label is often used within the broader health system to categorize various solutions developed in response to challenges such as diagnostic testing, patient experience and government mandates. Not surprisingly, the term and its reputation has also been linked to many organizations' strategic initiatives and makes a regular appearance during annual planning. Unfortunately, its overuse has also led to its dilution and how it is understood within the backdrop of healthcare (Kimble, L. & Massoud, R, 2017). Without first understanding what innovation is within this context, time may be spent solving in the wrong areas with additional failures to scale at both the organization, and system levels (Collier, 2018).

The immense pressure to drive innovation paired with inadequate focus and lack of understanding makes it difficult to identify truly innovative solutions to address current challenges in the system such as service quality, increasing cost, access, patient satisfaction and the quality of work life for clinicians. Ultimately, many claimed "innovations" have missed the mark in their intended benefit.

Some examples of innovations in Ontario were highlighted in the Ontario Premier's Council's report, *A Healthy Ontario: Building a Sustainable Health Care System* (Devlin, R., 2019). The innovations listed in chapter 3 of the report can be found in Appendix B: Ontario Healthcare Innovations. While the listing reflects that innovation is happening in the province, and is seen as important, it demonstrates that innovation is happening within subsectors of healthcare and in isolation, rather than in coordinated and transformational ways.

Given the healthcare system's bureaucratic authority structures, many decisions are made and motivated by emotional, economic, and political forces, without challenging or questioning why we are "innovating" the way we are (Dixon-Woods, M., Amalberti, R., Goodman, S., Bergman, B., & Glasziou, P.,2011). We therefore observe the adoption of some less helpful innovations, while others are quickly forgotten or left unsupported after successful pilot and outcomes, causing subsequent innovation to stop.

Doblin (2013) attempted to categorize innovation by type in their 10 Types of Innovation, a framework to help identify new opportunities beyond products, and develop viable innovations. Under this framework, healthcare can be placed most predominantly in the Service Type. In this type of innovation, healthcare as a combination of services; the focus is primarily on the patient's journey and the innovation is the system's ability to continually enhance the utility, performance and value of this offering (Keeley, L., Walters, H., Pikkel, R., & Quinn, B.,2013). Using this as a baseline, the "ultimate goal of health innovation is to improve our ability to meet public and personal healthcare needs and demands by optimising the performance of the health system" (Kimble, L., & Massoud, R., 2017), which can be measured by the extent of change on a scale of incremental to radical. As this research journal suggests, innovation in healthcare should consider a focus on services rather than resources to transform high-quality patient experiences (Schulman, K. A., & Richman, B. D., 2019). The opportunity lies within service design and how we can best match the variety of health services to meet the needs of patient segments.

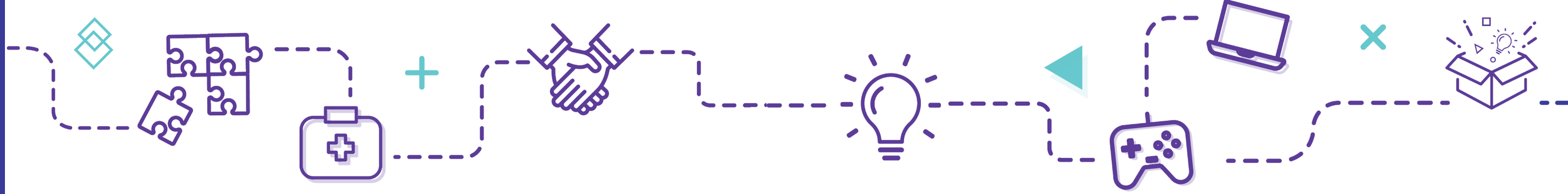


Source: Larry Keeley, Ryan Pikkel, Brian Quinn, and Helen Walters, *Ten Types of Innovation: The Discipline of Building Breakthroughs* (Hoboken, New Jersey: John Wiley & Sons, 2013).

Figure 2. 1 — Doblin's 10 Types of Innovation (Keeley, L., Walters, H., Pikkel, R., & Quinn, B.,2013)

"Some new practices enjoy rapid uptake and diffusion throughout health systems, even when they are of limited benefit or unproven efficacy, or represent risks to patients, while other innovations that could secure better outcomes for patients never make it to the bedside."

(Dixon-Woods, M., Amalberti, R., Goodman, S., Bergman, B., & Glasziou, P.,2011)



Disruptions in healthcare provide evidence of the systems inability to keep pace in a dynamic and changing environment. Challenges to scale innovations across sectors add to the healthcare system's list of wicked problems. "Innovation, and more precisely, the diffusion and implementation of new methods, new techniques and new processes and systems appears to be a difficult task" (Hertog, F. D., Groen, M., & Weehuizen, R., 2005). Innovation needs to be conducted by defining what it means and by scaling and replicating innovations to achieve change at the radical and transformational level.

There have been many instances where there is clear direct value and impact to a solution, but due to various reasons the innovation does not scale. "We have the best pilots and studies, but we don't seem to take it to the next step···innovation isn't just coming up with an idea, it's about making it sustainable" (Naylor, D., Girard, F., Mintz, J. M., Fraser, N., Jenkins, T., & Power, C., 2015). An example of this is can be observed in the early days of our health system. In the 1970's, a study showed that a specially-trained nurse practitioner collaborating with a family doctor could do seventy percent of the doctor's work, with no difference in patients' health outcomes or satisfaction. Although it was more cost effective from a systems perspective, the new method of primary care was not financially profitable to doctors because of restrictions on reimbursement for nurse-practitioner services (Naylor, D., Girard, F., Mintz, J. M., Fraser, N., Jenkins, T., & Power, C., 2015); this led to the slow adoption of this model in Ontario. Though the added scope to nurse practitioner practice was shown to be both beneficial to patients and system efficiency, the result was a slow uptake of the change.

Many challenges and limiting factors in the health system are foundational and include funding, hierarchal structure, rigidity of business models, and conflicting or competing priorities. As described by Dr. Trevor Jamieson at Women's College Hospital, working to promote and expand virtual care in Ontario, "There are lots of things that exist already and work well. It's the logistical and bureaucratic issues that keep it from getting into healthcare" (Jones, K., 2016).

Change can occur at various levels of the system, top-down, bottom-up, but a culture of innovation needs to be embraced for these ideas to scale. There needs to be a level of openness at both the individual organization level and system level to promote these ideas once evaluated and outcomes met. Often the nature of healthcare and the attributes of innovation conflict. On one hand, healthcare requires predictable outcomes before scaling, but "innovation is a hypothesis, whose truth cannot be established with certainty" (Jalonen, H., 2012).

Above, we observed what contributes to complexity and rigidity by examining our healthcare system in Figure 1. 1. We discussed the challenges of current innovation activities missing the mark due to a lack of understanding and concrete definition of what innovation means when applied in the Ontario healthcare system.

To answer our research question, **How might Ontario healthcare organizations use games to foster a culture of innovation?** We dive into the following chapters:

1. **Ontario's Healthcare System**
   This is where we talk about the complexity of our healthcare system, how it got to be this way, and how it plans to change.

2. **Burning Down the House: Transformational Innovation**
   Here, we describe the difference between incremental and radical innovation, and what characterizes each.

3. **To Play is Human: The Role of Play and Games**
   In this chapter, we explore play and its origins, and its importance in the way we function as human beings.

4. **Let's Play!**
   Here, we play! We choose two games and analyze what they might offer a healthcare organization.

5. **Rolling the Dice: Should our Healthcare System Play?**
   Finally, we wrap up by summarizing what we have learned, and what is still left to uncover.

We know there is a desire and a need for innovation. In the next chapter, we will describe to what extent and by what methods, such as human-centred design, this change can be supported.

CHAPTER 2

Burning Down the House: Transformational Innovation

This chapter presents the theories and concepts to hone in on transformational innovation and leadership and methods like design thinking with a focus on shifting from incremental to radical innovation in the healthcare system. Here, we review concepts brought forth by renowned leaders like Steve Denning, Roger Martin, Tim Brown and others that illustrate attributes of transformational innovation and how it might conflict with the current design and challenges of the healthcare system outlined in the previous chapter.

Innovation, but at what scale?

Innovation can be classified along two ends of a spectrum – incremental on one end and radical on the other. Incremental, or non-disruptive, innovation improves something that already exists and solves known issues (Innovation in Healthcare, 2014). According to Denning's Transformational Innovation (2005), a key piece of literature in our research, radical, or transformational innovation requires shifting from regular modes of operating, a secure comfort zone, to one that is unknown and potentially chaotic. This kind of innovating requires offering or doing something fundamentally different; a transformation at which most organizations are not equipped to excel. This process might be non-linear with outcomes

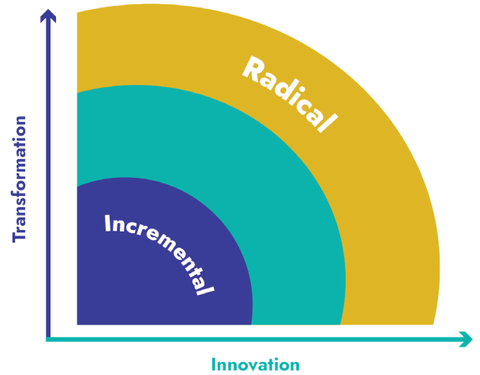


Figure 3. 1 — Incremental vs Radical Innovation

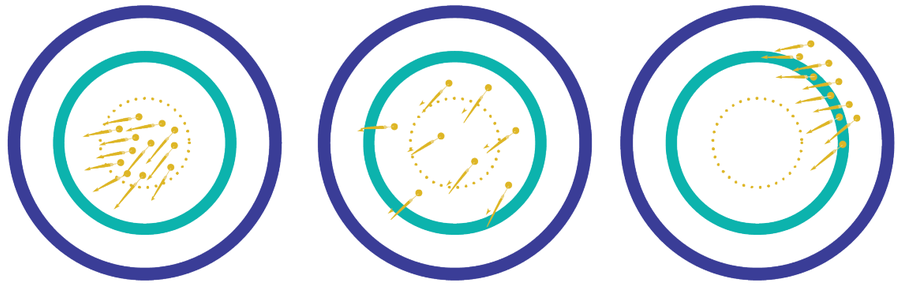


Figure 3. 2 — Reliability vs. Validity — Adapted from (Bhattacherjee, A., 2012)

unknown, atypical to the standard process of healthcare which might involve "going to war with all the elements inside an organization [and system] that benefit from the status quo" (Denning, S., 2005). This process might be messy and the ability to be comfortable and navigate ambiguity becomes an integral element and competency for the system. Humans naturally feel a degree of discomfort towards uncertainty and ambiguity, and healthcare is no different. "Changes can be challenging because they contradict humans' basic need for a stable environment" (Nilsen, P., Seing, I., Ericsson, C., Birken, S. A., & Schildmeijer, K., 2020).

Healthcare faces the challenge of addressing "wicked problems" that involve complex networks and interconnections of people and other systems. In order for service delivery to keep pace with the changing needs of society, the concept of health and healthcare should be considered in a societal context, going beyond the established healthcare system that was designed under a different set of circumstances. This shift in paradigm might feel large for the healthcare system to address in any intentional and productive way, however the system itself is holding fast to methods that are out of date in their ability to speak to the needs of society.

Roger Martin, a leader in business strategy and design thinking, describes the tension between reliability and validity, themselves at opposite ends of a spectrum. Typically, organizations gravitate towards reliability where reliable process produces a predictable outcome repeatedly (Martin, R. L., & Christensen, K. (Eds.)., 2013). In a risk-averse environment like healthcare, this is the most perfect value creation that institutions can provide. There is tension, however, in the ability to innovate and the need to drive innovation towards validity. Validity considers a wide variety of variables whereas reliability requires less. The significance of this tension is that transformational innovation represents stepping into unknown territory with many variables. Out of this practice emerge several attempts at considering and testing a variety of options, to uncover the most compelling and sustainable solution.

Methods such as design thinking foster validity, but this process needs to be promoted and upheld by leaders so that an organization may be receptive to the design of new products, services and processes. It becomes extremely evident to employees on whether leaders' value reliability or validity depending on the questions asked, the proof they seek, and how they treat and view failure (Martin, R. L., & Christensen, K. (Eds.)., 2013); therefore, the role of a leaders is extremely significant in driving and scaling innovations and to prevent an organization to revert to the corporate bias of reliability.

The role of the transformational leader in supporting an organizational culture of innovation has been discussed in literature as a key component in cultivating a collaborative and creative environment. Jung et al. in their 2003 article, *The Role of Transformational Leadership in Enhancing Organizational Innovation*, point to Bass and Avolio (1994) who describe this kind of leadership as being composed of four unique but interrelated behavioural components:

1. Inspirational motivation (articulating an appealing and/or evocative vision),
2. Intellectual stimulation (promoting creativity and innovation),
3. Idealized influence (charismatic role modeling), and,
4. Individualized consideration (coaching and mentoring).

Transformational leaders engage workers' personal value systems and highlight the importance of cooperation in performing collective tasks, providing the opportunity to learn from shared experience, and delegating to followers the authority to execute any necessary action for effective performance (Bass, 1985; Gardner & Avolio, 1998; Shamir, House, & Arthur, 1993). They also stimulate their followers to think about old problems in new ways and encourage them to challenge their own values, traditions, and beliefs (Hater & Bass, 1988).

These qualities can be at odds with the centralized authority and decision-making structures of the Ontario healthcare system, which reserve autonomy and control for those higher up in its hierarchical chain. The lack of space and freedom to generate and test new ideas contribute to a lack of workforce empowerment needed to be considered an innovative sector.

Additionally, healthcare organizations take on the values of those responsible – in our case, the Ontario government and its agencies, as discussed in Figure 1. 1. Attached to governmental and politically driven entities, the appetite for failure and risk taking is low. This results in the system's limited ability to innovate in transformational ways. When an organization's culture emphasizes reliable and efficient operations without making any mistakes or is not highly concerned with innovation, employees will be discouraged from taking initiative in their work even if they are given autonomy (Yukl, 2001).

Transformational innovations and organizational changes are needed in healthcare now. Expectations have been increasing more than ever for equitable access to health care, improved patient and caregiver experience, and increased patient and family involvement in care decision making (Naylor, D., Girard, F., Mintz, J. M., Fraser, N., Jenkins, T., & Power, C., 2015).

Despite the healthcare sector's efforts in adopting principles around centering services on the patient's needs and experience, there are still many opportunities to integrate this priority in healthcare design and delivery. Many users of the health system continue to feel as though they are part of an assembly line, moving slowly through a fragmented system having to repeat their story to multiple health professionals and administrative staff.

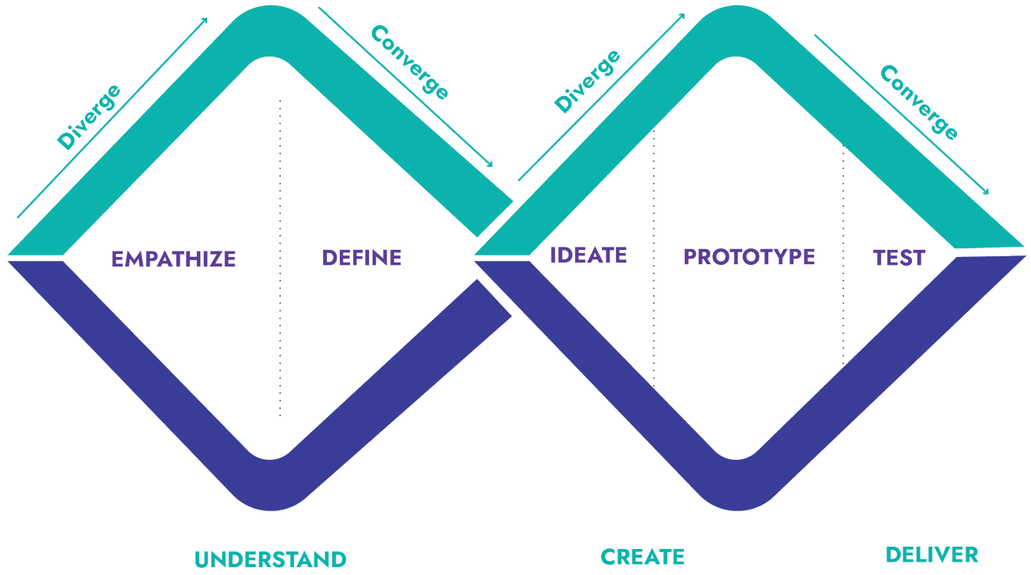


Figure 3. 3 — Design Thinking — Adapted from (Brown, Tim., 2008)

Design thinking

Value in healthcare starts with an understanding and segmentation of consumers, and definition of improved outcomes for each segment (Sulkers, P., 2020). In the same manner, solutions, processes, and blanket policies to complex problems in our health system should not be made without end users in mind whether they impact patients, healthcare providers, or both.

The approach to include and focus on users is known as "human-centered design". This methodology challenges us to find new approaches to problems in order to improve people's lives. It is grounded in principles of collaboration and co-creation with those who are expert users of services – in our case, patients as experts in their own health challenges, and front line and other members of the healthcare workforce who deliver service every day. Human-centred design has the potential to address the system's fragmentation, lack of service integration, and variety of stakeholder perspectives.

As part of human-centered design, many organizations and industries have adopted the innovation process of design thinking. This approach is empathy-driven and involves multi-disciplinary teams at its core. Great design, if implemented properly and strategically, makes significant impacts to business results and delivers a competitive advantage for companies by changing the way these organizations create value. Design thinking is a creative and human-centered approach to problem-solving (Brown, Tim., 2008). It is an iterative and non-linear process that starts from a place of understanding with the goal to develop more sustainable and effective solutions. It is highly imaginative, logical, and explores the possibilities of what could be. This process starts by empathizing with its users before any recommendations and solutions are implemented. In healthcare, this can be completed through meaningful stakeholder engagement.

There are variations to how the design thinking process is defined, but at its core, it includes problem finding, problem framing and finally problem solving (Basadur, 1982). Problem solving is only reached when a foundational understanding of the problem is met and assumptions are validated. Through this iterative process, ideas diverge and converge to help navigate the ambiguity and chaos. This framework challenges obvious answers to a problem by broadening discovery and ideation toward deep understanding before converging to frame the problem meant to be solved. Similarly, once the problem has been defined, divergence reveals a number of possible solutions through ideation before converging into an ultimate solution. Reaching the realm of possibilities in the problem and solution space happens through "divergent thinking". Unlike other models of quality improvement, outcomes of this process are not predicted or clear. Rather, we embark on a messy journey.

Building capacities to innovate transformatively

Design thinking alone will not solve all problems in or for the healthcare system, but it does offer a way to bridge gaps in the way we advance our health system and design it from an empathetic and human point of view. Design thinking embraces patient engagement, experience and a desire for a more personalized system. It also promotes building innovation around experiences and services and a disciplined framework to navigate the ambiguity for striving for something more radical.

Vijay Kumar (2012) describes the four core principles of successful innovation as follows.

- Principle 1: Build Innovations Around Experiences
- Principle 2: Think of Innovations as Systems
- Principle 3: Cultivate an Innovation Culture
- Principle 4: Adopt a Disciplined Innovation Process.

While innovation frameworks can be used both for incremental and transformational innovation goals, we must turn our minds to the needs we have outlined throughout this document for the healthcare system to consider radical change by undertaking transformational activities. For players in the healthcare system to be equipped to engage in this challenge, we must consider what cognitive capacities and capabilities healthcare organizations must encourage and develop as part of their toolset.

We considered the inputs to an innovation mindset that lend themselves to transformation, and compared these to the outputs of the experience offered through play and games. In the next chapter, we speculate there may be synergies upon which we might capitalize in the use of games within a system unused to incorporating unstructured and free flowing ideation into the way it functions.

CHAPTER 3

To Play is Human: The Role of Play and Games

Through literature review in this chapter, we attempt to better understand the concept of play and its benefits. We unpack the notion of play theory and play as a core function of human beings and how play may support transformational innovation in an extremely complex healthcare system as described above. Furthermore, we describe core competencies of problem–solving, creativity, and growing relationships and connection to others that are outputs to certain games that may aide in supporting transformational innovation.

Play is a core human function. Play is the way we become self-conscious; playing with fingers and toes, with cause and effect. Play is the first way we learn. Play is the way we place ourselves in society through playground games. Play is, without fail, the way we generate new knowledge."

— Westecott, E., 2016

"To some, play is an exclusively human pursuit, a highly structured activity or set of activities designed to ward off boredom; to others, play is an outlet for expression, a spontaneous and complex manifestation of human emotions."

— Jensen, G. H., 2013.

Functions of Play

Play takes on many different forms, occurs in different settings, and its role evolves throughout our lifetime. As children, we play bound neither by rules nor limits, engaging in free-flowing worlds or our choosing, alone or with others. During early school years, recess becomes a formal break from learning and allows us to freely choose leisure activities. Play during childhood is important because it uses and feeds the creative and problem-solving mind. It offers a safe environment for youngsters to be able to try something new, bring things together, and take them apart or simply move on to other activities.

As we grow older, play may become a less free flowing activity, replaced by more structured games such as in video games, sports, or board games. Regardless, moments when we engage in play or games follow similar needs - to engage alone or with friends, and to pull ourselves away from life's routines, if only for a moment. In this way, play separates us from work, and reality.

Although for most, engaging in play diminishes into adulthood, play helps us maintain our social well-being, enables us to connect with others, brings us joy, and is core to how we function and experience life. One of the first scholars that researched the notion of play - Johan Huizinga indicated that "... people have an impulse to play that cannot be explained by other factors or elements of human society or nature." (Huizinga, J., 2006). Though play is part of our nature, it ironically often gets suppressed and limited as we grow older. Emphasizing play as we age can bring about health and wellbeing, as certain forms of play release endorphins in the body, feel-good hormones that augment physical and mental health. Play enhances trust, security and interdependence; moderating conflict and facilitating communicating generating excitement; and relieving stress (Van Vleet, M., & Feeney, B. C., 2015).

As play takes on a variety of forms and can be highly ambiguous and complex - defining it is difficult. According to Van Vleet and Feeney (2015) who drew upon several authors, play consists of many characteristics and can be described as an activity that is:

- "enjoyable (Ablon, 2001; Casado-Kehoe, Vanderbleek, & Thanasiu, 2007; Csikszentmihalyi, 1975; Lauer & Lauer, 2002; Terr, 1999),
- intrinsically-motivated (Betcher, 1981; Csikszentmihalyi, 1975),
- spontaneous (Betcher, 1981),
- involves a focus on the process of the activity rather than end-goals related to the activity,
- requires a suspension of self-consciousness (Casado Kehoe et al., 2007), and,
- involves a non-serious approach" (Betcher, 1981; Terr, 1999)

These characteristics align closely with innovation methods like design thinking that focuses on the process rather than starting with the end result or solution. Play, like design thinking opens up the world to possibilities. In the article "The Value of Play as a Driver of Innovation", parallels are highlighted between play and innovation, where new ideas may not come from linear chains of thought; much like how transformational innovation might be non-linear and chaotic, we cannot predict the outcomes ahead of time. The separation from ordinary life and tasks opens up possibilities that we may not have the luxury in both time and space to think beyond, given the competing priorities we juggle day to day (The Value of Play As a Driver of Innovation, 2017). As play is a special time from the ordinary tasks, it might allow us to step out of our comfort zones, to be able to collaborate or compete, to discover and solve a common problem and form deep relationships.

Transformational innovation is about pushing boundaries and challenging and shifting paradigms in search of a greater truth, and there is potential for play to be used as a generative modality and in the scaffold of healthcare innovation. As described, play is core to the human experience and takes many forms with one of them being able to freely experiment.

"Because play is often about breaking rules and experimenting with new conventions, it turns out to be the seedbed for many innovations that ultimately develop into much sturdier and more significant forms" (Johnson, 2016).

To further support, define and understand play, French sociologist Roger Caillois added that play can be organized into two spectrums and continuums: Paidia on one end and Ludus the other. In the extreme of Paidia, it is unstructured, highly imaginative, freely improvising and carefree. The latter, Ludus, is rule bound and operates in a certain confine of game space (Bateman, C., 2006).

Caillois also organized games into four main typologies to add more clarity; these may fall anywhere on the Paidia–Ludus spectrum (Caillois, 1961).

- agon (competition),
- alea (chance),
- mimicry (simulation or role play), and,
- ilinx (vertigo)

Games, structured forms of play, clearly outline a confined space with set rules and players in addition to time and space. When we decide to take part in a game, we step into what is known as the "magic circle", a unique time and space where the normal rules of reality are temporarily suspended. Here, we become part of a separate world, where a third space is offered for players to operate under a set of rules depending on the game. New meanings are created between players and players are free to leave or join in, making it a unique place to compete, to collaborate or simply exist in a suspended reality. Players step into the magic circle by adopting a lusory attitude – the agreement to adhere to the rules of a particular game, allowing themselves to walk into the unknown.

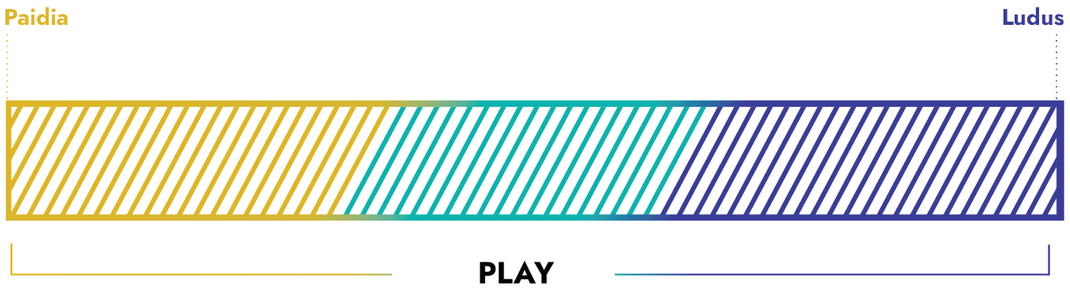


Figure 4. 1 — Paidia vs Ludus — Adapted from (Berge, G. S. H., & Rosseland, R. B., 2013)

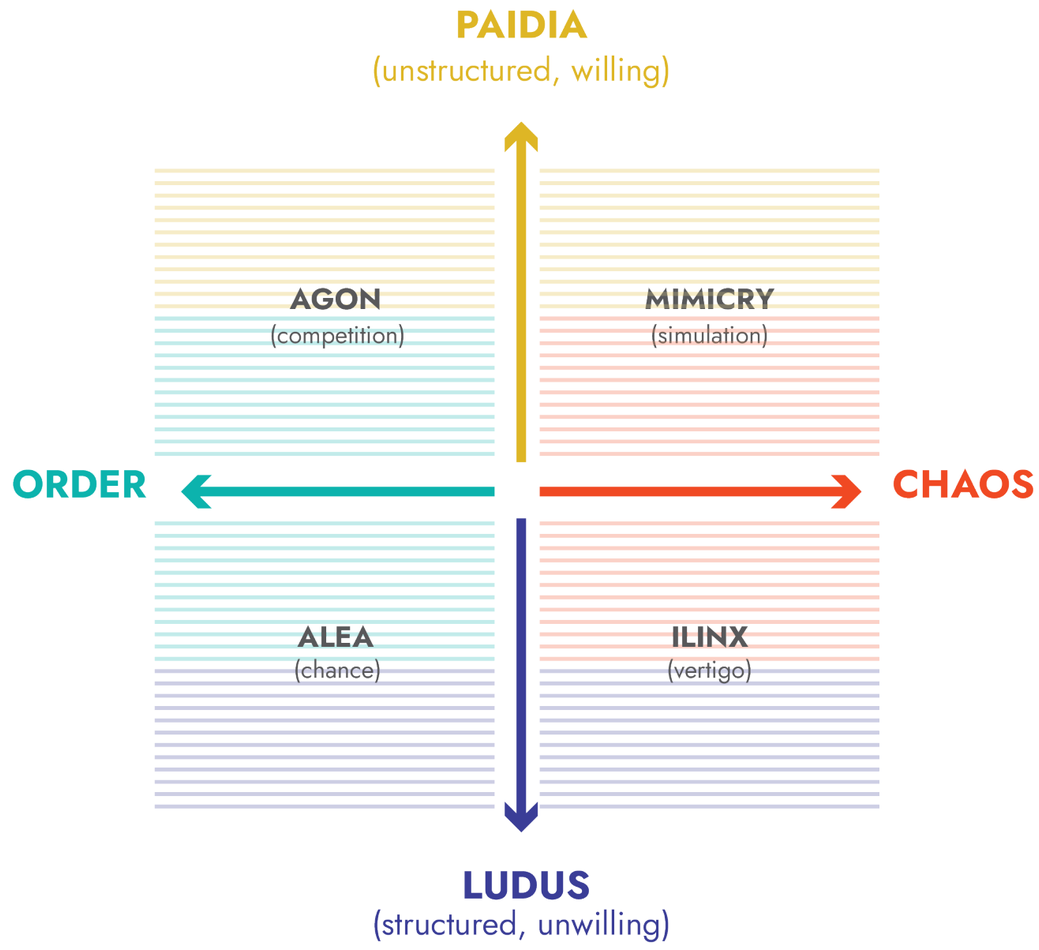


Figure 4. 2 — Game Matrix — Adapted from (Hoshi, K., & Waterworth, J., 2020)

“Playing a game is the voluntary effort to overcome unnecessary obstacles.”

— Bernard Suits

Serious games

Some organizations in healthcare have adopted the use of serious games. Unlike the traditional definition of games, serious games at the same time entertain as they promote behaviour change, going beyond the simple act of playing. Serious games have been popularized and formalized recognizing that there is value to their use to drive results in a corporate setting. They have been successful at combining principles of game design in creating enjoyable and immersive environments, and are grounded in theories of learning and development (Susi, T., Johannesson, M., & Backlund, P.,2007). These games have been deployed in a variety of healthcare contexts such as medication and chronic condition management, physical fitness and wellness, quality improvement initiatives, and training and education for healthcare professionals.

Although almost any activity can be treated as play with a playful state of mind (Sutton-Smith., 1997), we propose that there is an untapped opportunity to use games on the paidic end of the spectrum, to develop capacities the healthcare workforce needs to contribute to innovation that is transformational. This would be in addition to serious games already present in healthcare that have experienced some level of success and are intended to have measured outcomes. We look to derive the potential benefits offered by paidic ideation games that are open-ended to support innovation outcomes. We propose that these games may support in shifting mindsets and building the cognitive capabilities discussed in Figure 4. 1. It is by entering these game worlds that a safe space might be offered to level the playing field in a hierarchal system for administrators, healthcare professionals, and front-line clinicians to connect and collaborate in new and meaningful ways.

The paradox of play for healthcare

It is imperative that we recognize the paradox in that which we are proposing, which is to drive an expected outcome as a result of play. The essence of play is unproductive, contained, unreal, and optional (Caillois, 1961). There is a separation from reality and a clear distinction from work. It is important to acknowledge this tension, because play in its purest form will not be achieved under the constraints of the healthcare environment.

We all play differently and when mandated to do so, to drive a particular result; the level of intrinsic motivation changes. To be productive is against what play is – it is “unrelated to survival, production and profit” (Ellis., 1973). We play for its own sake and when we choose. Playing in a work environment by mandate shifts the dynamic because the choice no longer belongs to an individual and is no longer for the purpose of enjoyment. As researched by Bolton & Houlihan (2009), when employers engaged employees in fun activities, the fun was often managed, resulting in dissatisfaction among employees about being forced to have fun and play (Shiu, E. (Ed.)., 2014).

In addition, the permission to play has not been cultivated into the culture of the healthcare system. Play is largely viewed as unproductive and may be perceived as frivolous, over-indulgent, or irresponsible (Sutton-Smith, 2008). Given the seriousness of the subject matter of the healthcare system and its accountabilities to stakeholders, healthcare organizations are all work no play environments, the dominant culture driven by operational efficiencies, to reduce cost and increase quality where possible. Nonetheless, this industry is subject to high levels of cynicism, stress, and emotional exhaustion among its workforce, and has ultimately lead to burnout of clinicians affecting

both patient safety and the physical and mental wellbeing of the individual (Dragan, V., Miskonoodinkwe Smith, C., & Tepper, J., 2018). Evidence suggests that play might alleviate some of this burden and stress, but is generally not permitted or socially accepted at work due to its unproductive nature. Organizations that have introduced play in their culture have recognized that having fun at work may yield positive results by helping to develop cognitive, social, and emotional capacities conductive to a productive work environment (West, S. E., Hoff, E., & Carlsson, I., 2016). This can be understood as a by-product of play rather than its intention.

Whether paidic or ludic, play at its core is "an activity that is carried out for the purpose of amusement and fun, that is approached with an enthusiastic and in-the-moment attitude, and that is highly-interactive" (Van Vleet, M., & Feeney, B. C., 2015). When individuals engage in games an intrinsic level of motivation is present, and a "state of mind classified by enjoyment, loss of time perception and a suspension of self." (Csikszentmihalyi, M., Abuhamdeh, S., & Nakamura, J., 1990).

Despite the paradox of play in a professional setting, we believe human nature's inclination to play should not be disregarded in the workplace, and that it might be taken advantage of as a tool to retain our capacities in problem solving, generate creative ideas, and build positive relationships with others. We acknowledge the connection between these capacities as outputs of playing, and inputs to processes associated with transformational change and innovation.

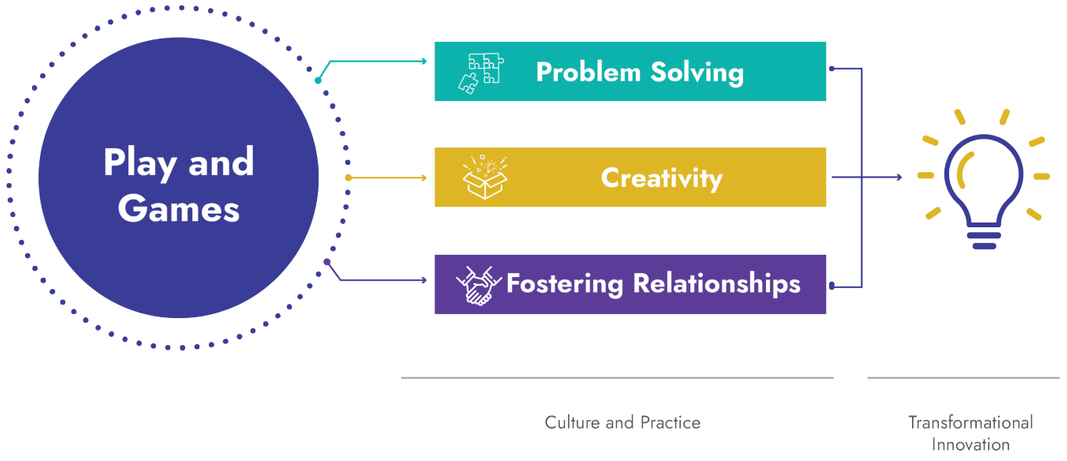


Figure 4. 3 — Outputs of Play, 3 Capacities

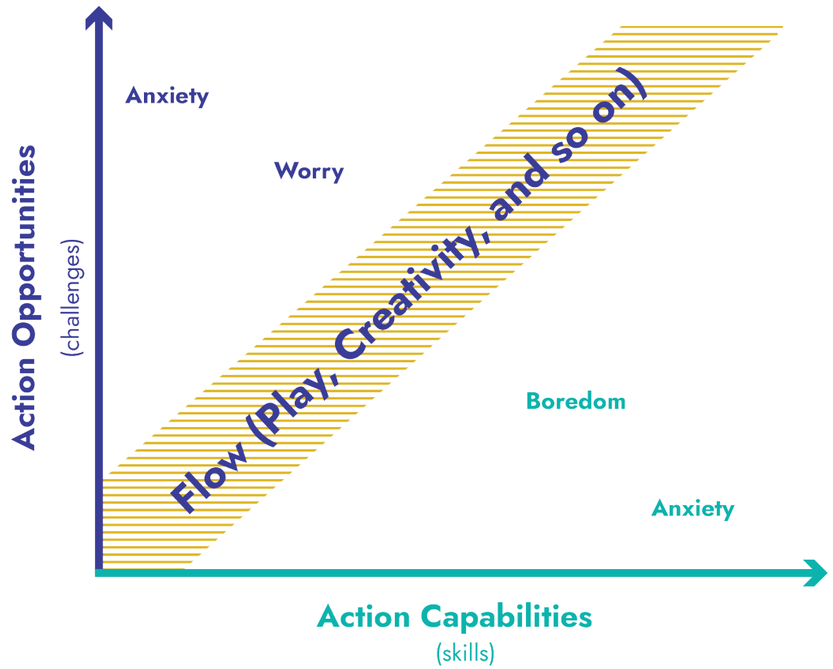


Figure 4. 4 — Theory of Flow — Adapted from (Csikszentmihalyi, M., Abuhamdeh, S., & Nakamura, J., 1990)

The capacity to solve problems

Problem solving already occurs at every level in the healthcare system. From the point of care, diagnoses, organizational strategies to deal with flu season, to adjusting service according to changing priorities in healthcare expenditures, healthcare clinicians, administrators and leaders are called upon daily to solve problems. They do so under tight resourcing constraints of time, budget, and people, concurrently as they address multiple priorities, adjust to new professional and reporting standards, and tackle long-standing as well as new problems.

We believe the use of games in such an environment might allow the healthcare workforce to develop new capacities to solve problems, based on the theory of flow. The term "flow" was coined by Mihály Csikszentmihalyi. It describes a state "in which an individual is so deeply immersed and challenged by an intrinsically motivating activity that they lose their sense of time and self-consciousness."(Csikszentmihalyi, M., Abuhamdeh, S., & Nakamura, J., 1990).

When individuals are in a state of flow they become completely absorbed in their activity, ignoring all surroundings, and focus solely on the process rather than the end result. When playing a game, for example, this enhanced focus allows the player

to enjoy and react to a particular challenge. When fully immersed in a game, we first learn it, master it and then try new things. We improvise and experiment by taking on new roles beyond what we are accustomed to, which in turn helps us to solve problems (Nussbaum, B., 2013).

Given the wide variety of priorities and challenges in healthcare, certain forms of play and games might be leveraged to achieve the experience of flow. This could enable further discovery and a level of focus to a particular problem space with a sense of greater control (Graafland, M., & Schijven, M., 2018). Games may present a scaffolded model that simplifies systemic complexity to enable a future player to imagine solutions to issues in healthcare. This may present opportunities for the theory of flow to emerge, allowing players to think and ideate in a simplified game space.

Games have been said to enhance the resourcefulness and flexibility of an individual to adjust to new conditions (Bateson, P., Bateson, P. P. G., & Martin, P., 2013). These enhanced problem solving abilities and level of intrinsic motivation and focus can support and help navigate the unknown and persist to drive transformational innovations in healthcare.

An important element of problem solving is the freedom to fail. Similar to the rapid prototyping phase of design thinking, innovation can arise from experimentation and freedom to fail, something inherent in most games (McKeown, S., & Safety, B. P., 2015). The ability to fail safely, learn within the confines of a game, and be motivated to try new and different things can be powerful in addressing wicked problems in healthcare. Historically, failing in healthcare has not been embraced as productive. There is a prevailing culture of blame and shame that prevents the celebration of failure as part of learning and growth.

Regardless, research indicates that the power of games can "even be applied to massive, complex, real-world problems by leveraging the power that games have to make us happy, to foster strategy and creative thinking, to make difficult activities rewarding, and to motivate us to strive towards 'epic wins'" (McKeown, S., & Safety, B. P., 2015). Divergent thinking is another method that fosters a problem solving mindset. For adults, this can be challenging, as throughout our lives, we are taught to find the one right answer to problems. Depending on the game, there are multiple ways to advance to new levels or even defeat an opponent. For example, to defeat an opponent in chess, the players are called to strategize and react in various ways to be able to ultimately win by achieving checkmate; each game and player behaves differently to be able to win the game. Through games, we try new and different methods that might be non-linear which enable us to progress.

Play is a gateway to possibilities (Johnson, 2016) and everyone can contribute to it. Games allow for anyone to be part of the "hero's journey" (Campbell's, J., 1987). Anyone can be called upon or "chosen" to endeavor on a quest to solve a particular mission. In a game, we have agency and can control our actions and decisions, the freedom to act and manipulate the world that is incredibly empowering (Dignan, A.,2011). It is a distortion of our reality and a more simplified world to explore endlessly. Games may offer new perspectives on problem solving. We need to strive for a new model of problem solving in our healthcare system rather than our continued incremental improvement and measurement mindset.

Being creative

Creativity like play is defined in various ways. Teresa Amabile defined creativity as generating an idea that is original, useful, and actionable (Stein, S., 2016). Creativity is not simply the production of new ideas, but the ability for these to be useful, and thus directly relates to innovation. Innovation can be regarded as the successful implementation of creative ideas within an organization (Amabile, 1996). To achieve innovation that is transformational, the ability to be creative and "think outside the box" becomes necessary.

Creativity can be seen as the starting point of innovation and play can ignite our imagination and creativity (Van Vleet, M., & Feeney, B. C.,2015). Creativity has been considered a critical success factor and competency needed to drive innovation in a dynamic environment like healthcare. It may offer a competitive advantage for organizations, but how do we all become more creative? Are some individuals more creative than others? Creativity is a highly sought after competency in a knowledge economy and we need to refine our tools and strategies to be able to explore and generate new ideas that lead to new insights and results (Gray, D., Brown, S., & Macanufo, J. (2010). Most researchers agree that all individuals possess creativity although some use this capacity more due to contextual factors that either suppresses creativity or deem it as a frivolous distraction in an organization (Baucus, M. S., Norton, W. I., Baucus, D. A., & Human, S. E., 2008). A highly bureaucratic structure like healthcare with strict rules, procedures and control does not have to work hard to stifle creativity among its workforce.

Our healthcare system, as shown early on in Figure 1. 1, is made up of a variety of institutions, most of whose work is based in values of formality and rigor, separating the notions of work and play. Not only do we observe this as part of healthcare's organizational culture, but we can also see it through literature and statistics on healthcare provider burnout as a result of the intensity of work. "Studies estimate that the majority (25-65%) of nurses experience burnout, but the prevalence and gradual onset of burnout can vary greatly among nursing fields" (McLeod, 2019). The work culture of the system makes it a limiting factor in identifying creative ideas, because providers are entrenched in day-to-day pressures.

Moreover, the need to seek permission to do something differently and to be able to deviate from established processes presents a barrier to encouraging and growing creative capacities. Multiple unnecessary steps to gain approvals, endorsement, and championship of initiatives, themselves hinder the ability for healthcare workers to exercise creativity. Rather than entertaining the potential of novel ideas, the system reverts to and upholds the standard policies, procedures, and accepted ways of working.

There is an appropriate time and place for healthcare to play and be creative. Healthcare environments can carry high risks where the assessment and intervention, and combination of areas of responsibility (some overlapping, others distinct) of clinicians can have harmful or even fatal consequences for patients. Not deviating or challenging the norm is understandable and expected in these contexts. Nevertheless, evidence suggests that organizations that allow employees to break rules might be more creative. Although breaking rules in healthcare can come at a cost, they might be broken in game-play, offering a safer environment for this activity (Baucus, M. S., Norton, W. I., Baucus, D. A., & Human, S. E., 2008).

There is a strong association between playfulness and creativity (Bateson, P., Bateson, P. P. G., & Martin, P., 2013). Games can help with mental liberation from the confines of day to day life. In many ways, creativity is linked to play. Many of the relationships between play and creativity were observed in the "Playshops: Workshop series exploring play," 2016. Like play, the outcome of creativity is unknown, even in ludic games where play is bounded by rules, we cannot predict its

outcome (Rauch, B., Westecott, E., Hartman, K., & Stein, S., 2016). Creativity is also linked to a positive state of mind (Lyubomirsky, King, & Diener, 2005) and playing games can enhance this since it is an activity undertaken for pleasure and enjoyment. Additionally, "two key aspects of creative thinking skills are the willingness to disagree with others, and the ability to persevere through difficulty" (Amabile, 1998). We can observe this in competitive games and the 'lusory attitude' by which players in a game accept difficult obstacles and less efficient means while striving towards their goal" (Rauch, B., Westecott, E., Hartman, K., & Stein, S., 2016). The approach in games is not so much about problems, rather, these are perceived as challenges to be met and solved and to advance to other new levels and scores with a level of positivity and risk taking.

Another similarity between playing games and creativity is in the concepts of work and play. The work and commitments of our day to day demands, distractions, or even boredom, are a hindrance to being creative. (Bateson, P., Bateson, P. P. G., & Martin, P., 2013). Games enable us to take our minds off the problems of the real world, to be immersed in a different or simpler reality and when we allow ourselves to be playful in these environments, creativity is stimulated. According to Csikszentmihalyi, we should create the time and space from the pursuit of predictable goals in order to engage in curiosity and look for surprises. Games lead to flexibility in our thinking, in turn allowing us to behave in new ways without fear of being judged by others to demonstrate and experiment with creativity (Bateson, P., Bateson, P. P. G., & Martin, P., 2013).

Fortunately for healthcare, creativity does not have to come from one individual or one part of the health system. Diverse perspectives can all contribute to novel and useful ideas. For healthcare, innovating is matter of how we bring these different insights together and invite others into the conversation, different professions and users of health services in design thinking processes. Building creative capacity, valuing its potential, and empowering individuals to be able to share in a psychologically safe environment might all be enabled through the use of games.

Growing relationships and connection to others

At the core of service innovation is the understanding and ability to drive exceptional customer experience. Through design thinking, we need to be able to empathize and understand as much of the problem space before proposing a solution and we need tools to facilitate this process. To do this effectively, we must be able to let go of our assumptions, bias, individual agenda and motivations and listen objectively and without judgment. Games can present powerful mechanisms for humans to be able to connect outside of the confines of work and hierarchical divides; they can level the playing field to have honest and open conversations about changes, priorities and issues.

In games, "the usual social hierarchies are temporarily suspended and participants are engaged to have the same experience of entertainment, diversion, and wonder" (The Value of Play As a Driver of Innovation., 2017). As Plato once stated, we learn more about a person in one hour of play than a whole year of conversation; games can help understand challenges from another person's perspective that we normally would overlook. They allow us to organize differently depending on the rules, to build connections in meaningful ways and enable a level of empathy we would never otherwise have. "Escaping your lawful calling — and your official rank and status in society — not only created a new kind of leisure, it also created new ideas, ideas that could not emerge in the more stratified gathering places of commerce or religion or domestic life" (The Value of Play As a Driver of Innovation., 2017).

We can learn different things about each other through collaborative versus competitive games, establishing a deeper connection with one another.

When humans share and connect with others on a deeper level "they often end up transforming society in more dramatic ways than people focused on more utilitarian concerns." (Johnson., 2016).

Games can be perceived as a form of crowdsourcing of new ideas and possibilities and build social connectivity among groups; a key factor deemed necessary for large-scale change (McKeown, S., & Safety, B. P.,2015). Through the playing of games, there is a level of nonjudgement among players that may lead to new levels of openness to new ideas and perspectives. The importance of an open climate to enable the emergence of team creativity has been recognized (Kohn, Paulus, and Choi., 2011). Healthcare includes a variety of interprofessional clinicians, and patients are increasingly expecting these individuals to collaborate on shared care that is patient-centered. There has been increasing interest in strengthening communications between clinicians and patients, as well as improving communication at the systems and inter-organizational level (Naylor, D., Girard, F., Mintz, J. M., Fraser, N., Jenkins, T., & Power, C., 2015). There is additionally an increased level of engagement and participation from games due the intrinsic motivation that correlates to organizational creativity (Amabile and Pillemer 2012).

As discussed, the Ontario healthcare system is not only complex, but includes a variety of stakeholders where individuals may not be heard or considered in decisions, impacting the formulation of strong relationships and trust. The level of expertise and knowledge within the system remains an untapped potential where games might play a role in drawing out these new possibilities and ideas. To assess the output of games in problem-solving, creativity, and building relationships, we ran two playshops to better understand the potential further, which is described in the next chapter.

Almost any games may engage one or more of the three capacities mentioned above. We chose to review games that were designed specifically for ideation and innovation that could be used to think through complex systems and wicked problems. These games tap into players' creative energy for the purpose of solving problems for hypothetical situations within the safety of their game world. The games that most called to us were futures and foresight related, paidic, and explicitly touched upon all three capacities. They offered a more simplified game world to address wicked problems through their mechanisms, challenged players' creativity through game elements, and lastly could be played among a group through collaboration and/or competition, in the process building stronger relationships within a shared magic circle. The two foresight games we ultimately chose correlated to our research question of how we might support innovation in the Ontario healthcare system through games and play. We felt these games had the potential to leverage players' knowledge and experience to scaffold their understanding of complex problems and encourage a transformational innovation mindset.

CHAPTER 4

Let's Play

There is little point in discussing the potential utility of games to enable a transformative innovation mindset in our healthcare system without attempting to play anything!

We were most interested in trialing games that would lend themselves to the top right quadrant of Figure 5. 1. These would lean toward paidia by being open-ended and unstructured or bound by rigid rules, and they would push us further toward chaos. Our hope was that games in this quadrant would enable players to think systemically, exercise their imaginative capacities, and open themselves up to limitless possibilities. We then assessed the potential fit of these games in the context of Ontario healthcare organizations, and our observations on how these games contribute to the three capacities described above in Figure 4. 3.

Given our objectives, the process of selection centered on ideation card games, typically used to generate discussion and exploration of new worlds and possibilities. These games lend themselves to strategic planning and visioning exercises, and can yield insights into what actions can be taken today to achieve a desired future. Additional requirements for selected games were their adaptability to be played virtually, and the need for multiple players.

We reminded ourselves of the nature of our healthcare system Figure 1. 1 and how it came to be. Of significance in our exploration, would be the appropriateness of a game's intention and approach in the healthcare context. At the same time pushing its boundaries as asserting its value within the system. We felt ideation card games would be of interest to a healthcare audience in imagining future trajectories, and would offer simple game mechanics easy enough for a group of busy professionals to grasp and get into.

In the end, we decided upon two games to trial with our professor of Innovation and professor of Games Design: The International Futures Forum's Three Horizons Kit for Healthcare (Phase One), and the Institute for the Future's Equitable Futures Card Game. We felt both games, focused on imagining futures and taking whole systems into account, could be juxtaposed to offer insights into their potential utility in a healthcare setting. These games are forms of ideation games and are powerful tools to imagine possibilities to build sustainable and innovative strategies towards desirable futures as they take into consideration

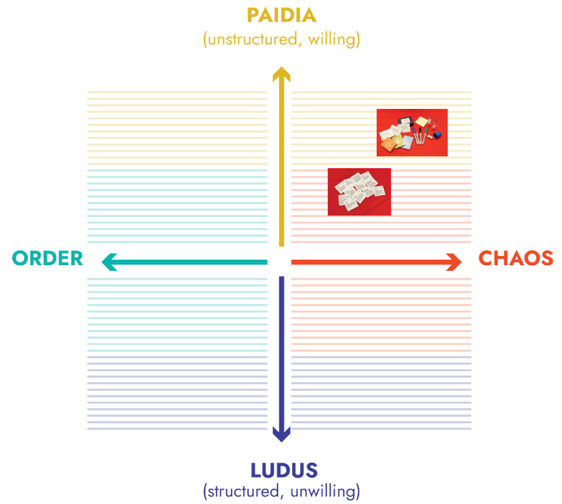


Figure 5. 1 — Game Matrix — Adapted from (Hoshi, K., & Waterworth, J., 2020)

Image 5. 1 — IFF 3 Horizons Kit for Healthcare

elements of larger society beyond the healthcare system. After these "playshops", we debriefed our experiences and observations. Given the current context of the COVID-19 Pandemic, both games were played virtually.

Game Time: International Futures Forum Three Horizons (Phase One)

The International Futures Forum (IFF) is a registered charity based in the United Kingdom, and has a "human development mission to enable people to thrive in powerful times." (International Futures Forum.). This game was developed to support strategic planning to adapt and deepen the analysis through the three horizons framework for thinking about longer term social change. It is typically used "to prompt discussion of transformative innovation in a variety of settings – eg energy policy, rural development, broadcasting, health services, financial services etc." (Three Horizons | International Futures Forum.).

According to the IFF, their Three Horizon's Kit contains everything required to facilitate a wide-ranging, strategic conversation about the present and the future using the Three Horizons framework. The kit is available with a box for Education, Healthcare, Community Development, and Higher Education. The kit is used in two phases. We focused on Phase One, which facilitates a conversation on trends, innovations, and current trajectories in our chosen context.

The IFF also explicitly relates the Three Horizon model with transformative innovation in that, when we take a longer view, we can take a transformative perspective and intentionally shift existing systems toward wholly new sustainable ways of operating in the changed environment. We therefore felt it would be a good fit for our purpose.

The kit for healthcare, is available to play in person, by purchasing a physical kit, and is also playable online, for a fee. We contacted the IFF, who graciously gave us permission to access and play using their online platform and healthcare card set. Table 5. 1 outlines a snapshot of the game. As games are more structured play, we outlined some of its formal elements of each game to support the comparisons between the two. Game elements are attributed to the The formal systems of games and game design atoms source (2014).

Game World: The separation of the magic circle and real world. This also relates to actions that are only possible in a game, but would have much different consequences outside the game boundaries. The is an in invitation to play, such as recognizable rituals or social offerings for playing.

Purpose/ Outcome: Here is the outline of objectives and motivation of the player and the expected result when completing the game.

Rules: Rule set specifies everything a player can and cannot do. Rules are the authority of the game world. They are code of honour that players adhere to when entering play.

International Futures Forum Three Horizons (Phase One) (Three Horizons | International Futures Forum.)	
Game World ▪ Different groups have open conversations about the same theme, and record these using the same framework. ▪ The space is inclusive and safe, where aspirations and concerns can be shared. ▪ There are no right or wrong answers – conclusions do not need to be reached. ▪ The note-taker documents the conversation and participants needn't worry about capturing ideas. ▪ Open conversation in Phase One moves to a strategic conversation in Phase Two. ▪ Illuminates the distinction between 'sustaining innovation' and 'transformative innovation'.	**Purpose/Outcome** ▪ The IFF Three Horizons Phase One card sets prompt a strategic conversation about the past, the present and the future of healthcare. ▪ A convenor guides the conversation and documents it using a Three Horizons chart, to represent change over time. » First Horizon (business as usual) » Third Horizon (fringe activities) » Second Horizon (wave of innovations) ▪ The results on the chart will reveal a Three Horizons landscape in order to generate a Three Horizons map. This information will be used in a second phase of strategic discussion with leadership on the most effective and impactful trajectories the organization might take.
Game Rules ▪ Participants (players) are invited by the convenor into the space and are made comfortable. ▪ Each player rolls the dice in turn, which selects the card suit in play. The cards fall into three suits: Changing World, Changing Policy, and Changing People, each containing an evidence-based statement. Each deck contains a blank card (a joker). ▪ The player selects a card and reads it aloud. This player starts a conversation about the issue on the card, beginning with what it means to them. The conversation flows to determine: Is this happening already, or might it happen in the future? Is this a good thing or a bad thing? Are others responding to it and might we need to take it into account? The convenor helps guide the discussion. If the player drew a joker, they may introduce anything they wish into the conversation, including commentary on how the session is going. ▪ A sand timer may be used to keep the conversation moving. ▪ The convenor documents the relevant elements that emerge from the conversation on the Three Horizons chart.	

Table 5. 1 — International Futures Forum Three Horizons (Phase One) Game Rules

Play Experience & Observations

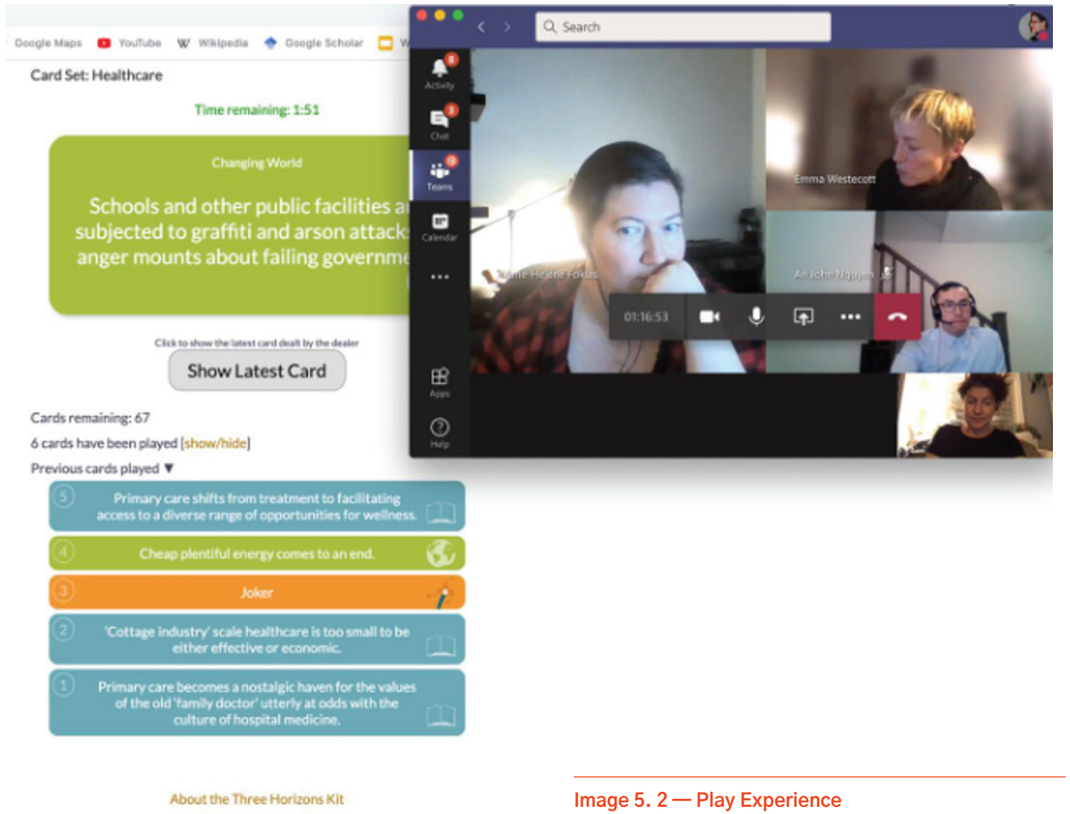


Image 5. 2 — Play Experience

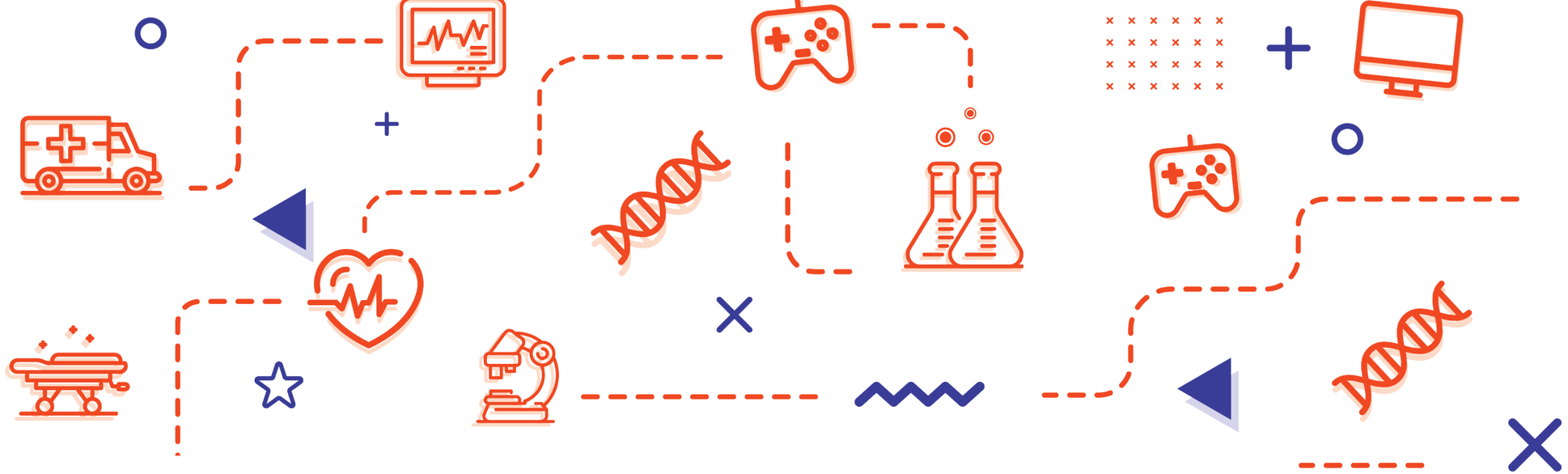
The IFF Three Horizons game for healthcare offered an engaging experience for the players that enabled rich discussions on the current and future landscape of healthcare. It took some time to get into the flow and rhythm of the game, but once players understood it, there was a high level of engagement and focus within the game and for participants, often a benefit of the game experience. The themes presented on the cards caused some initial confusion for players as it was not immediately clear from the various colours and icons how the cards were organized. However, after a short warming up, the cards offered a focal point that helped ground the group on particular challenges and variables related to healthcare.

Given that a lot has recently changed in the Ontario health system context, not simply due to the COVID-19 Pandemic, some themes displayed on the cards felt out of date, and less in touch with Ontario trends. Players reflected that the context might impact the utility of certain cards, and that these might need culling in advance by the convenor, or that some updates might be made to the deck itself by the IFF. A unique element in the game was the 'Joker Card,' where a player can introduce a statement, topic, or just about anything to discuss with the larger group. The Joker proved to be extremely engaging and its introduction stimulated the most discussion. The make-up of the players in this game setting offered rich discussions. Players came from diverse professional backgrounds with differing levels of interaction and knowledge in the healthcare system. This allowed for a wide breadth of discussion and variety of perspectives. Ideas and comments, while focused on healthcare, also considered other facets of larger society, which is highly beneficial to the discipline of foresight and systems.

The game falls into the realm of paidic games, as the discussions and choosing of the cards went at the pace that was driven by the players, and some guidance from the convenor. The cards were interpreted at the discretion of the players with no idea being right or wrong. The game stimulated organic discussions, but also to a degree allowed for individual commentary, more or less depending on individual comfort level and the card in play.

This game requires strong facilitation from the convenor, who is required to have an in depth understanding of Three Horizons framework in order to effectively document the discussion on each horizon. The role of the convenor is to enable and empower players. They are required to set the tone by opening the game, explain the framework in a digestible way, process the conversation and plot key points while ensuring the discussion stays on track, all the while keeping time. We found this role was beneficial to enable players to have discussion unencumbered by process, however, it might be a challenge in the current healthcare system context for a healthcare organization to have someone on hand internally to take on this role. Appropriate time would need to be devoted to prepare for the session, meaning the organization would need to be invested in its undertaking and understand its value.

Some challenges presented had to do with the game's design, based on who participates in its two phases. In the first phase, a larger group is prompted by the cards to discuss current practice, trending topics, and innovations. The second phase is generally composed of a smaller number, and sometimes with a different group altogether (a subset composed of leaders or people that have the power to make strategic decisions). This second group makes strategic decisions for the organization based on the data generated from the first phase. We feel that, in an Ontario healthcare context, there may be loss in translation of the landscape, or misplaced emphasis on one finding over another. This might reinforce current practice of centralized decision-making and perpetuate hierarchical divides and differing levels of empowerment. Additionally, during phase one, there may not be the opportunity or time enough to dive deeply in topics of importance to the group. The game does cover a breadth of topics and areas, but may not allow for the unpacking of complex topics. This is a key consideration where the convenor's skill levels are required to help move the players along or go into more detail as needed.



Potential Applications for the Ontario Healthcare Context

The desired outcome of phase one of the IFF's Three Horizons game is to develop sustainable strategies that will position the organization for success in the changing environment. This game may lend itself well to expand the thinking of leaders in an organization on its role in a broader system, and to increase the willingness to think of the future and pivot strategically. Facilitated discussions are not uncommon today for the healthcare audience, and, as such, would feel comfortable and familiar. The application of game elements such as the cards, timer, and game master introduces new aspects to this audience that may be engaging and well-received. The inclusion of diverse stakeholders enables the system to tap into the knowledge of participants like frontline staff, patients, and even those outside of the healthcare workforce. However, this does require intention and a conscious effort to attract the right stakeholders to participate in the game. There are limited opportunities to participate in open-ended and aspirational conversations in healthcare organizations beyond routine strategic planning cycles. This opportunity would likely be welcomed by its workforce by inviting participants to step into the magic circle of the IFF Three Horizons game.

As it relates to the three criteria of problem solving, igniting creativity and fostering relationships, we observe this game might offer the following:

Problem Solving

Recall that healthcare is a complex system challenged by wicked problems. Through the theory of flow, players are immersed with shared attention on a particular challenge. In this case, the cards allow players to hone in on a particular subject, leaving the reality of competing priorities and workplace pressures aside. The cards prompt the players to think about different factors that may not be considered given the inherent biases that we all carry.

Creativity

By including and creating a safe environment for players to discuss their own perspectives relating to the cards, possibilities open up for novel ideas that may not necessarily otherwise be raised. The cards stimulate other considerations within or external to the healthcare system that are boundless, as with the thinking that goes into innovating transformatively. Beyond the pre-set cards, the Joker cards stimulate and introduce new variables that can come from just about anyone in the game.

Fostering Relationships

The game enables each player to have an opportunity to speak and describe the card and listen to a variety of different perspectives to agree, disagree and add to the conversations. By entering the magic circle, players are able to step out of their comfort levels and remove any social hesitation to jump into the rhythm and flow of discussion, to collaborate on and challenge the cards with others. The establishment of a judgment-free environment allows for players to speak openly, though it should also be said, the game master plays an integral role to facilitate a safe space for all players.

Game Time: Equitable Futures Card Game

The second played experience was the Equitable Futures Card Game developed by the Institute for the Future (IFTF). The intention of the game is to re-imagine our world where wealth and economic inequalities continue to reach new heights today towards a more equitable future. The game is meant to spark people's imagination or bring together people who are not used to talking about equity as a group, and is grounded on social frictions of our society regarding challenges, values and potential tools. According to the IFTF, the organization develops methodologies and toolsets that yield coherent views of transformative possibilities across all sectors that together support a more sustainable future (Tessa Finlev, Kenneth Bailey, Hodari Davis, Ben Gansky, Emma Guttman-Slater, Alicia Olivarez, & Rachel Weidinger., 2018). The Equitable Futures game is not designed specifically for healthcare, but considers the broader societal ecosystem, within which health and healthcare are important. More details of the purpose, objectives, and rules of the games are outlined in Table 5. 2

Equitable Futures Card Game (Tessa Finlev, Kenneth Bailey, Hodari Davis, Ben Gansky, Emma Guttman-Slater, Alicia Olivarez, & Rachel Weidinger., 2018)

Game World

Players each take on personas, and illustrate a future concept for the world based on the scenario and parameters set by the cards.

The game space is collaborative in that everyone is working toward imagining a more equitable future. While there is a game winner, everyone is working toward the same ultimate goal.

The scene is one of imagining and telling a story within a given time. Play occurs through the lens of the assigned persona, so that the present self is left behind.

Purpose/Outcome

- The overall goal of the game is to surface the best new ideas for building a more equitable future. This process includes:
- Boundary-pushing, yet pragmatic stories describing a more equitable future
- Ideas for new services, products, and systems that build toward a more equitable society
- Commitment letters toward action

Game Rules

In groups of up to seven, players use the cards to create a scenario prompt to help frame the world they are going to imagine.

The scenario prompt includes one key challenge players are trying to overcome, one key value by which they wish society is guided, and one tool players have at their disposal. Each player takes on an assigned persona, which serves to inform the focus and context of that player's imagined possible future.

Once the group has its first scenario prompt, it spends ten minutes writing individual ideas for what this world might look like. What are new services, systems, places, products, or laws that might exist in 2030? Each player will read their idea to the group in turn.

The dealer then votes for the best idea, and the player with the winning idea becomes the dealer for the next round. The process continues until the group decides it has landed on the best possible future to develop further. The player whose ideas receive the most votes wins the game.

Finally, the winning idea is shared over social media and a commitment to action is documented and signed by the group.

Additionally, the IFTF outlines the following practical steps to guide play:

STEP 1
Print the card sheets (single sided), found on the following pages. Add any additional locally relevant cards for each category—Challenges, Values, Tools, and Personas—you'd like to explore in the game. Remember, your task is to develop new social fictions, not necessarily to agree on the most critical challenge or most critical value.

STEP 2
Cut out the cards, keeping each type in a separate pile. The dealer deals the Challenge cards, then the Value cards, and then the Tool cards to all the players.

STEP 3
Hand one Persona card to each player—either with intention or randomly—and have players place their card face up on the table.

STEP 4
Deal the rest of the cards to the players.

STEP 5
Go around the table having players put down a Challenge, then a Value, and then a Tool card, one at a time. You're collectively building a prompt that will read

"By 2030, we'll have built a more equitable world by overcoming _____ (challenge). Society will be organized around _____ (value), and _____(tool) will be a commonplace tool used to combat or control _____
(challenge, same as first challenge).

If you have more than three players, subsequent players can replace any card already on the table, with a same-category card they might prefer.

STEP 6
Once the prompt is complete and all players have had a chance to place a card, the dealer sets a timer for 10 minutes. Each person writes a description of a solution, a future world in which the challenge has been resolved, and the organizing value has become the predominant mode of design. Players will use their personas to influence the sort of possible solution they imagine. If your persona is an architect, for example, you'll want to think about the built environment. If your persona is a lawyer, you'll want to focus on new policies or laws. As a team you will create multiple possibilities to explore multiple priorities. Work in the realm of possibility but challenge yourselves to find something that isn't likely to happen without effort and new innovations, something that's pushing the boundaries of what seems like it might already be happening.

STEP 7
Each player reads their possibility aloud to the group.

STEP 8
The dealer selects the best idea.

STEP 9
Share your winning idea with us! Take a video of the creator describing their idea, a picture of an illustration, or quickly write up a description. @ iftf #EquitableFutures

STEP 10
The winner of the round becomes the dealer in the next hand.

STEP 11
At the end of game play, have each player fill out a commitment to action letter which is found after the cards.

Table 5. 2 — Equitable Futures Card Game Rules

Image 5. 3 — Play Experience

Play Experience & Observations

Similar to the IFF Three Horizons game, the Equitable Futures Card Game offered an engaging experience for the players. This was supported by the distribution of random personas and allowed players to engage in the game world as someone other than themselves. Players were encouraged to consider a particular perspective, which enhanced the level of imagination and playfulness among the group.

In some instances, and rounds, players commented and built upon the imagined future scenario of another player, organically initiating an interaction between personas within a shared magic circle. The context in which the players were answering for their 2030 world was clearly outlined and grounded in the social frictions of Challenge, Value, and Tool. It felt extremely powerful to listen to and build upon how each world was created and how the various personas contributed. In each round there was a level of reflection and introspection required to empathize with and to think about the implications of the particular world and its social frictions. Time was limited to ten minutes for personas to imagine their world, and offered some added pressure to respond quickly. As such, we observed that players that had greater opportunity to participate in playful activities and games in their real-world professional lives were quicker and more effective in thinking through and describing their world and solutions.

A winner would be chosen at the end of each round by the dealer, and the winner of the most rounds would ultimately win the game. We found this competitive element did not detract from the ultimate goal of developing a more equitable future. Instead, it seemed to motivate players to use and build upon one another's ideas, as well as develop creative solutions themselves. Players became immersed in the game, embodying their personas in their language and demeanor, challenging one another to win.

We observed that this game falls under the spectrum of paidia. Although the game is bound by a set of specific rules, the outcomes and discussions are more free-flowing and unstructured, allowing for players to interpret and design a world and solutions however way they choose. The rules were easy to understand and it did not take long to get into the flow of play. Some limitations we observed included the voting process to determine the winner, which is at the sole discretion of the judge for a particular round, and potentially subjective. Having some deliberation or objective criteria may help drive more depth in the worlds and discussion among the players and may help limit any bias. Nevertheless, the rotation of judges and players has the potential to give everyone an opportunity to judge and reflect, and adds a balancing element in the design of the game.

Potential Applications for the Ontario Healthcare Context

This game was not developed or intended specifically for a healthcare audience, however, the varying perspectives and strategic inputs toward a more equitable future can speak to some key goals of the healthcare system.

As with IFF's Three Horizons game, it is important to make a conscious effort to include diverse stakeholders as participants. The quality of the outcomes of each round is dependent on the diversity of the group. By way of taking on new personas, Equitable Futures gives players an opportunity to wear different hats regardless of their real-life professional function. Whether a player is in a leadership role, a front-line staff, or patient, everyone has the opportunity to act as an authority on their world through the eyes of their persona in the game.

To be useful in our context and adopted by healthcare organizations, one might adapt the game to include representation through personas of healthcare stakeholders and system players. The game not only offers in the moment discussions, but because each player is required to write the scenarios and solutions, it also offers insights that can be referenced at a later period that might helpful in informing other strategies or related work. It is helpful that Equitable Futures requires low levels of technical knowledge of academic or complex frameworks in order to enrich the quality of discovery. This also eases the burden of facilitation, which makes this game accessible and easily playable.

As it relates to the three criteria of problem solving, igniting creativity and fostering relationships, we observe this game might offer the following:

Problem Solving

This game offers a simplified world that covers society as a whole, not just healthcare, to address challenges with a goal to create a more equitable future. Inequity is a known phenomenon that permeates the structure of today's healthcare system in Ontario. Specific inequities have additionally been highlighted by the current Pandemic, visible by examining health data linked to socio-economic status, race and ethnicity, gender identity, and age. The time pressure of this game forces a player to think quickly and try new methods that may not have been typically

considered to solve the problem in the moment. The game also challenges players to provide solutions with a holistic approach in mind. Some combinations of cards making up the scenario prompts are more challenging than others, but depending on the persona of the player, there is agency and a call to action to be able to address a more equitable future, which may not be present in real life. This might empower players to develop solutions in a real context, where they might not otherwise be encouraged to do so by way of their level of authority and vulnerability.

Creativity

Because the game is not designed specifically for healthcare, the variability of inputs increases the players' abilities to come up with novel ideas. This moves participating players to consider the notion of validity, described in Chapter 2, in search of more transformational innovation. The challenges, values, and tools presented in the game relate to society at large thus increasing the inputs and appetite towards thinking beyond reliable processes and solutions only applicable to healthcare. Lastly, creative ideas are encouraged by other players, as they react positively to the most creative ideas.

Fostering Relationships

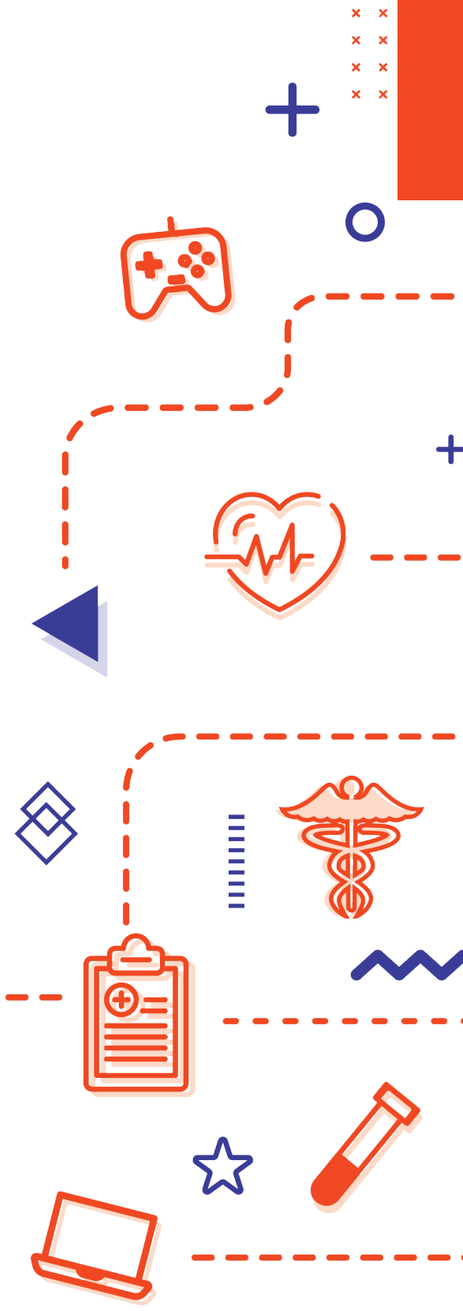
The ability for players to take on different roles and personas in the game context builds a level of empathy for others, which contributes to a judgement-free environment. The rotation of the dealer or judge is also a way to shift the power dynamics and hierarchy for players in leadership and non-leadership positions to select winning ideas based on their quality. In some instances, players are able to create a shared world, building upon and enhancing social connections. The competitive element of the game also fosters the deepening of relationships to others, which we feel would be both welcomed and effective in healthcare organizations. Typically, public healthcare organizations push for collaboration in the system rather than competition. However, the idea of competitive play has evolved through the years to be regarded in the larger frame and context of cooperation (Stein, S., 2016). "Even participating in a competitive game requires players to cooperate with one another and co-create the 'space of the game'" (Salen & Zimmerman, 2004). This game highlights the benefits of collaboration within a competitive context, and would speak to the current operation and function of our healthcare system.

Playshops Reflection

Though further research and testing in the field would be required to make a definitive assertion, we observed as a result of playing the two games in our playshops that there is potential in introducing ideation card games, more specifically foresight games to healthcare organizations, to grow capacities problem solving, creativity, and fostering relationships. These ideation and foresight games offer players the ability to consider healthcare challenges in new ways, and to reflect on future societal contexts that would impact the healthcare system. In-depth discussion between players offered a scaffolded model that enabled players to imagine potential solutions to complex challenges and considerations. Although both games are similar in that the objectives and outcomes are futures oriented, recall that games are more structured forms of play and we can observe differences in the make-up of each game. Most notably, the Equitable Futures Card Game was the easier of the two to learn and get into the rhythm of playing – an important consideration that makes this game as accessible to as many players as possible. IFF's Three Horizons game required more preparation and expert knowledge of the framework by the convenor, who seemed to be key to the game's effectiveness. Here, we do not advocate for one game over the other, but rather each game could be used differently and have different utility depending on the culture and dynamics of a particular healthcare organization.

Reflecting on Figure 1. 1, it is important to remind ourselves of the healthcare system's complexity, and the variety of its stakeholders. Power dynamics are centralized and hierarchy underpins the system; and because of this, in order for games to be effective, it is important that healthcare leaders create a culture that is open and welcoming to a variety of players within and outside the healthcare system to participate in a shared game space. Sometimes this may mean that a game is better facilitated by an unbiased game master, other times, leaders might invite frontline staff or patients to crowdsource new and novel ideas as part of a game that might contribute to solving some of healthcare's major challenges, which may lead to driving transformational innovation for the health system as a whole. Healthcare leaders are instrumental in shifting the culture of healthcare towards transformational innovation and inviting players into the magic circle, and transformational leadership, referenced earlier, contributes to this important cultural shift.

The significance of leadership cannot be understated. The healthcare system may always include hierarchy and authority structures, and as such will require visionary leaders if transformational innovation is to be supported and encouraged. As we learned previously, transformational leaders offer opportunities for the workforce to share experience, learn from one another, and make decisions. This way, they inspire trust and a motivation to work collectively toward a greater vision, rather than by the leader's personal values. Leadership is central to the cultivation and sustenance of innovation culture, and key to connecting healthcare organizations to strategic priorities for future viability and success.



CHAPTER 5

Rolling the Dice: Should Our Healthcare System Play?

The present moment is marked by a keen awareness that the Ontario healthcare system has been primarily meeting the needs of the most privileged members of society.

The system's origins led to structural power differentials that have perpetuated inequities of access and service quality to our province's most at-risk populations and communities. These factors are both recognized within as well as outside of the healthcare system, and healthcare organizations have the desire to make lasting positive change.

Despite this internal unrest, the healthcare system continues to perpetuate inequities and preserve its way of working and measuring success, and has to date supported innovation types that are incremental in their impact, that is to say, not transformational or at a system level.

If the healthcare system is to be transformed to be reflective and innovative, we speculate that it will need to actively work at fostering a culture of innovation among its workforce, supported by a transformational leadership mindset. This will allow healthcare organizations to think systemically and to be design-minded in their approach in order to participate in larger conversations and decision-making when it comes to their industry.

We believe that the use of play through the integration of paidic (unstructured, open-ended) games into healthcare organizations has the potential to develop capacities in problem solving, creativity, and relationship building, in the workforce. These skills emerge through ideation and foresight games and are also inputs required to conduct innovation that is transformational.

In the previous chapters we reviewed the current healthcare ecosystem in Ontario and how it came to be, what elements contribute to transformational innovation, and the origins and potential contribution of play and games. We observed the layers of complexity that prohibit our current system from changing at a fast pace or at a large scale. Although it continues to undergo rounds of restructuring and redefinition at its levels of governance in order to better address gaps in coordination, it continues to appear overly burdened by authority and policy structures, and therefore rigid and inflexible.

Lastly, we played! By selecting two foresight games towards the paidic end of the play spectrum, we took a leap of faith and stepped onto a path of open-ended discovery. We documented our rationale for game selection, as well as our played experience, and considered what elements might speak to and fit with the healthcare context. By stepping into each game's magic circle, we engaged in rich discussion and allowed our minds to roam into new territories and imagine new possible worlds. Our experience was joyful and convivial, as through the game mechanics we were encouraged to both take on new personas and use our own breadth of knowledge. We felt the potential these game types could offer healthcare organizations, in allowing space for participants to solve problems in a risk-free environment, exercise their creative muscles, and connect on a deeper level with others.

The scope of our work allowed us to recognize that, through the integration of play in healthcare, a bridge can begin to open towards transformational innovation. We noted a number of potential areas where we felt further exploration and unpacking would tell us more about the potential of play in the healthcare space. These include:

Play on the ludic end of the spectrum

What might ludic (more structured and rule-bound) games offer, and how might this offering differ from paidic games. What other cognitive capacities might this type of play foster, and how might these contribute to a mindset that encourages transformational innovation?

Playing with healthcare system stakeholders

Trialing different types of games among a wide variety of system stakeholders, both homogenous and mixed groups of healthcare workers, leaders, patients, families and caregivers, decision-makers, and researchers, would allow us to observe interactions and outcomes of play. What might we discover further about the potential fit of games in these settings, and what might this tell us about where the benefits of play could be reaped the most?

A deeper dive into healthcare system culture

Current decision-making authority remains with senior leaders and administrators, yet it is also confined and driven by policies set at higher governmental levels, often lacking consultations from frontline clinicians or patients with valuable lived experience, and who are disempowered to participate at the planning level within the given structures. As described earlier in Figure 1. 1, "the accountability relationships, mandates, roles, scope and limits of authority of the participants and the linkages between them are often not apparent to the industry" (Mantel, B., & Robertson, P., Et al., 2013)

An in-depth understanding of the dynamics of authority among system players might enable us to know more fully where there are problematic hierarchies, and how outcomes of play might explicitly close gaps in these areas. We might be able to find leverage points to the ways in which healthcare organizations could enable and encourage the use of games.

Where is it most appropriate and who is allowed to play?

Who might need convincing of the potential benefits that games might offer healthcare organizations, and what does this tell us about who is perceived to have the right to play, or permit it? Additionally, in what contexts is play most appropriate, or more acceptable?

Bringing others into the game

How might we bring those outside the healthcare system in, and to what degree are they outsiders? Are there differences between the public and private health sectors' appetite for play? Who else's perspectives might shed light on how the system might consider transformational innovation? This would allow us to think more systemically about health in society, and could potentially contribute to a shift in paradigms around healthcare and its aims.

Developing a game meant for the healthcare system

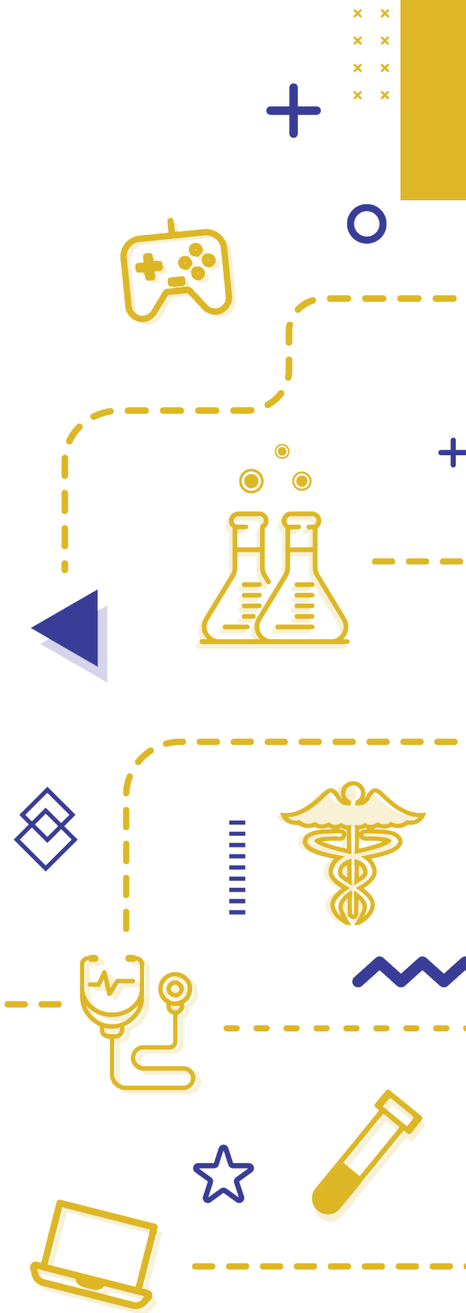
Lastly, we feel that developing a game for the Ontario healthcare sector that speaks to the needs and challenges faced by system stakeholders, could contribute to changing the landscape of the system, and the cultural practices that hold it in place. What principles might guide game development for this industry? What factors will allow for a comfortable fit, but also push the sector out of its comfort zone? How might we know that we are on a path to success?

As healthcare continues to become more complex, and demands from society and patients continue to increase, transformational innovation is needed now. Play and games may help build capabilities in key stakeholders, such as the healthcare workforce, needed to drive innovation forward. Although the way forward may be unknown and how we get there might be non-linear, games may act as invitations to step into a magic circle and collectively imagine new possibilities.

On a final note, we invite you to consider what health means to you, as well as what it means for society. It might help to imagine social, political, and economic systems that support well-being. The system of healthcare could be a significant player in supporting these systems and promote a healthy society. Though the Ontario healthcare system should continue to treat illness without question, perhaps this does not need to limit its potential. Our professor of Innovation struck a chord for us when she asked of the healthcare system, is being patient-centered not the answer? Is the answer rather, not having patients? Considering the complexity of healthcare and overlapping systems, are the problems too wicked, and not solvable, and is this scope too great for the healthcare workforce to contribute to? We believe the answer is no. We believe in the potential of our healthcare workforce and the power of partnership in facing challenges head-on.

As professionals working in the healthcare system for many years, might we take this opportunity to challenge our own assumptions, and think towards desired futures, systemic and human-centered ways? By allowing ourselves to tap into our natural inclinations to play, perhaps we could exercise our inherent qualities around problem solving, being creative, and relating to one another, so that we can imagine an emerging healthcare system that promotes equity and health for all.

We are game for this kind of change. Are you?



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Appendix A

ERAF Map Entity Descriptions

Appendix Table 1. 1: Care Settings

Entity	Description
Hospitals	All Ontario hospitals, including tertiary care (e.g.: mental health).
Primary Care	General physicians' offices, Family Health Teams, or primary care services provided to rural and remote locations.
Lab & Diagnostic Services	Laboratories and diagnostic imaging centres.
Emergency Services and Crisis Support	Emergency Medical Services, First Responders, crisis and support lines. This entity may include hospital emergency departments (though intended to be grouped under the Hospital entity).
Community Care	Includes Community Health Centres and other community health services.
Home Care	Services provided in-home.
Long-Term Care Facilities	Nursing homes, and supportive group homes.

Appendix Table 1. 2: Governance Bodies, Standards, and Monitoring

Entity	Description
Government of Ontario	The body with ultimate responsibility for the public health system that delegates authority and flows funds for the purpose of system administration. The ultimate policymaker for the province.
Ontario Health	A new entity, still forming, to be responsible for the integration and coordination of healthcare services.
Ministry of Long-Term Care (MLTC)	Sets and directs healthcare policy for the province, flowing funds to agencies.
Local Health Integration Networks (LHINs)	Responsible for local planning and integration. Flows funds to agencies. Mandates shifting as a result of the formation of Ontario Health and Ontario Health Teams.
Public Health Ontario	Provides advice and support to government and health sectors.
Other Ministries	Includes Ministries that contribute funding to health-related initiatives or whose activities have impact on the healthcare system, such as the Ministry of Children, Community and Social Services, the Ministry of Municipal Affairs and Housing, or the Ministry of Education.
Ontario Health Teams (OHTs)	New entities formed from local partnerships, meant to coordinate services to address needs at the local community levels.
Accreditation Bodies	Bodies that set standards and award accreditation to organizations, such as labs and hospitals, through accreditation processes.
Unions	Employee unions for clinical and non-clinical workers.
Professional Colleges and Associations	Regulatory bodies that set and enforce standards through auditing and disciplinary processes. This grouping includes the College of Physicians and Surgeons of Ontario.

Appendix Table 1. 3: The Healthcare Workforce

Entity	Description
Clinical Care Practitioners	Intended to be inclusive of all professions, both regulated and non-regulated, providing clinical and healthcare services to clients. Members of this entity may or may not belong to unions and professional colleges and associations.
Physicians	Distinct from Clinical Care Practitioners due to billing and payment differences. This entity acts as independent business owners, for the most part.
Administration & Management	Administrators and managers responsible for the operation and functioning of care settings.
Support Services	All services that support the operation and functioning of care settings. These include, among others, housekeeping and environmental services, facilities and maintenance, information technology and information management, administrative staff.
Researchers and Scientists	Those conducting research and scientific investigation, as part of health and research institutions.

Appendix Table 1. 4: Private Sector

Entity	Description
Private Care Settings	Includes all clinical care settings not funded publicly, or receiving limited public funding, such as physiotherapy, pharmacy and prescription drugs, dental and vision care, and complementary & alternative therapies such as acupuncture and naturopathic services.
Employers	The general entity of "Employers" is positioned to demonstrate an entity contributing funds to the parts of the system not funded publicly.
Private Health Insurance	Insurers providing health coverage packages to individuals and companies.
Digital Health and Innovation	Includes start ups and well established healthcare companies, providing competitive digital solutions to organizations, governance, and care settings.

Appendix Table 1. 5: Users of the System

Entity	Description
Patients	Those individuals requiring services for their health needs.
Families and Caregivers	Those providing care to individuals, or who are directly impacted by the level of an individual's health. Families and caregivers may be one and the same, or separate. The term "family" is used broadly to encompass those considered close to an individual and in their circle of trust.

Appendix Table 1. 6: System Support

Entity	Description
Universities and Colleges	Institutions that train the workforce, and offer knowledge through research and academic contribution. These entities additionally must keep pace with new and changing evidence and standards.
Research Institutes	These may be part of care settings, or separate entities.
Foundations	Typically, these entities are part of hospitals, and work to gain funds through philanthropic donations, or partnerships with private industries. There is often a sense of competition between these entities.
Data and Evaluation Organizations	These may be part of care settings, or separate entities. It is not always clear who mandates their activities, and their purposes may vary or be nuanced, given a particular context or area of focus. These entities may obtain a mix of public and private funding.
Innovation Labs	These may be part of care settings, or separate entities attached to the private sector or to research or education industries. Their scope and mandate appear to be context specific, rather than coordinated by authority structures.

Appendix B

Ontario healthcare Innovation

Listing taken from chapter 3 of the Ontario Premier's Council's report, A Healthy Ontario: Building a Sustainable Health Care System (Devlin, R., 2019).

Appendix Table 2. 1: List of Ontario Healthcare Innovations

Healthcare System Subsector	Ontario Healthcare Example / Description	Result
Pharmacy	**Ontario pharmacies to test for COVID-19:** Pharmacies may choose to provide testing for Ontarians who have no COVID-19 symptoms. Individuals, within provincial testing guidance, are able to visit select pharmacies by appointment only, and will be pre-screened and then tested at no charge.	TBD
Hospitals	**Patient Oriented Discharge Summary (PODS):** PODS were co-designed by patients and providers and piloted in eight Toronto-area hospital departments spanning adult, pediatric, rehabilitation, acute, and surgery.	PODS have been adopted in 25 hospitals across Ontario, reaching more than 80,000 patients annually, through the support of Health Quality Ontario and the Council of Academic Hospitals of Ontario's Adopting Research to Improve Care (ARTIC) program
Primary Care	**BASE eConsult: Connecting Primary Care Providers to Specialists Electronically,** was developed to address the challenge of long wait times for patients requiring non-urgent care and guidance from specialists.	To date, 43,000 cases have been processed, with the following results: In over 40% of eConsult cases, an in-person visit to the specialist was being contemplated but was deemed not to be required after the eConsult. This meant less unnecessary wait times for patients, and specialist resources were more available for the patients who needed them most.
Primary Care, Community Health Centres	**Windsor Family Health Team:** The Windsor Family Health Team expanded their service delivery through a Team Care Centre (TCC) model, in partnership with the City Centre Community Health Centre. This model serves the rostered patients of 100-125 solo primary care practitioners in the Windsor area, or approximately 200,000 people.	The success of this model is seen through 100 community physicians providing over 1,000 referrals since September 2018. Patient outcomes have improved, patient satisfaction rates have increased and unnecessary visits to health care providers have reduced.
Mental Health	**Ontario's Structured Psychotherapy Program:** Ontario is delivering a Structured Psychotherapy Program to treat depression and anxiety. It is based on a UK program that has demonstrated treating depression and anxiety in the community pays for itself by reducing health care costs, decreasing disability and social assistance payments and increasing tax revenue.	Care is consistently delivered across four specialty mental health hospital hubs and multiple community sites. The program has demonstrated decreased use of acute care services and positive client recovery rates.
Supportive Housing	**Pine Villa Reintegration Care Model:** Sunnybrook Health Sciences Centre, together with LOFT Community Services and SPRINT Seniors Care, collaborated to deliver an innovative, integrated care and accommodation model in Toronto. Pine Villa is a 69-bed transitional supportive housing site in a former retirement home, where clients are supported by personal support workers, Registered Practical Nurses, case managers, social workers and recreational therapists.	Together with their caregivers, they are better able to make informed, realistic decisions about their future care needs and living arrangements. There is an on-site nursing clinic that supports the surrounding community, and clients at Pine Villa receive clinical support from an interprofessional team with expertise from hospital, mental health and addictions, and community support services.
Physicians, Administrators	MyPractice Reports Health Quality Ontario created personalized reports for the primary care, long-term care, specialist and hospital sectors. Using existing administrative health databases, these confidential reports give physicians data about their practice, and share change ideas to help drive quality improvement.	Thousands of clinicians currently access this information.
Hospital	Humber River Hospital Command Centre The Humber River Hospital was North America's first fully digital hospital, demonstrating how integrated technology solutions can deliver better value to the health care system and improve patient experience. The Command Centre uses real-time data, advanced algorithms, predictive analytics and adherence to operating procedures to ensure timely, seamless treatment for patients. The centralized team staffing the Command Centre are able to quickly address patient care delays in an efficient and coordinated way.	Using technology and communication, the Command Centre has allowed Humber River Hospital to provide its patients with faster tests and decrease their length of stay in hospital, and to serve approximately 4,000 more patients each year.