

Opportunities in Digital Transformation

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How Role Play Advances Innovation/ Digital Transformation Adoption

Digital transformation in healthcare is inevitable, accelerated by the COVID-19 pandemic. Implementing digital healthcare innovations requires stakeholder collaboration but faces challenges due to differing agendas and perspectives. Role-play simulation games provide a safe learning environment to enhance stakeholder engagement skills. HALIGN, a methodology using a role-play simulation game, aligns stakeholders for healthcare innovation.

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key points

- Digital transformation in healthcare is inevitable due to technology advancements and increased demand for patient-centred care.
- Healthcare innovations require collaboration among diverse stakeholders, but stakeholder engagement can be challenging due to varying interests.
- Role-play simulation games provide a safe, experiential learning environment to enhance stakeholder engagement and address complex healthcare processes.
- HALIGN, a role-play simulation methodology, aligns complex health ecosystem stakeholders for successful healthcare innovation implementation, focusing on leadership, communication, negotiation, and change management.

Introduction

Digital transformation in healthcare is an unavoidable reality driven by the rapid evolution of technology and the ever-increasing demand for more efficient, accessible, and patient-centred healthcare (Parish 2015). The integration of digital tools, such as electronic health records, telemedicine, wearable devices, and data analytics, has already begun to revolutionise the sector and seen to contribute to addressing these challenges by improving access to care, reducing inefficiencies, and providing personalised treatment options (WHO Guideline 2019).

The COVID-19 pandemic served as a catalyst, accelerating the adoption of telehealth and digital health solutions to ensure continuity of care. As society's reliance on technology continues to grow, so does the healthcare sector's need to embrace this digital shift to enhance patient outcomes, reduce costs, improve patients' and professionals' experiences, achieve equity (Nundy et al. 2022), and stay competitive in an increasingly data-driven world. In essence, digital

transformation is no longer a matter of choice but an essential journey for healthcare providers to deliver better, more responsive, and more effective care (WHO 2021).

Introducing healthcare innovations into the healthcare system and modifying the usual care is a challenging task. If there is a permanent topic when discussing the challenges faced by executives and professionals in any industry, it is the ability to get things done and manage change within the organisation. In the healthcare sector, the situation is much more complex. Healthcare managers must confront multifaceted challenges as they oversee digital transformation initiatives in their institutions. These challenges encompass not only technical obstacles but also the intricacies of organisational change, having to address the complex adaptive shift in human expertise and capabilities, and the imperative of fostering innovation and ensuring efficient resource allocation. But there is another level of complexity, as impactful change in the healthcare sector relies on effective collaboration among different

stakeholders in the healthcare innovation ecosystem (Granstrand and Holgersson 2020).

Stakeholder Alignment for Innovation/ Digital Transformation Adoption

There is ample literature on managing change within organisations (Kotter 1995; Pendlebury et al. 1998; Heath and Heath 2010), but the scope is very limited when discussing multi-stakeholder changes in an industry as regulated as healthcare. It is also helpful to understand that in a health system, there is no single authority that can enforce changes. Rather, comprehensive planning is essential to optimise integration and ensure the future success of any healthcare innovation. The planning process of healthcare innovations typically follows a set of sequential phases (McKenzie et al. 2016), which should

engagement, healthcare innovations can better address the complex and interconnected challenges facing the healthcare ecosystem and boost innovation outcomes (Segarra-Oña et al. 2020).

However, putting this into practice is a complex endeavour. Engaging with stakeholders can be challenging. While it may appear that all healthcare ecosystem stakeholders share overarching goals, such as enhancing the health and well-being of citizens and patients, for example, by implementing a home care unit in a hospital with remote patient monitoring, each stakeholder possesses distinct agendas, potentially conflicting interests, unique challenges, and predefined boundaries that can differ from one another. These factors can limit their ability to align actions in a singular direction and successfully implement or adopt the proposed digital healthcare innovation.

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address not only the effectiveness of the innovation but also other factors that are essential for successful scale-up and integration, such as behavioural change of part of the different stakeholders.

Reforms in health systems fall into the complex space in the Cynefin framework (Snowden and Boone 2007). This means that reforms are parts of the unordered space, where no best practices and even good practices are available, and where the professionals and executives that lead the change have to work together to explore emerging practices since what worked well in a particular set of circumstances will fall short on others. Therefore, the involvement of stakeholders who have an interest, influence, or are affected by the innovation is crucial for achieving successful integration and better outcomes. The planning process of any transformation (digital or not) in the healthcare sector must include the perspectives, experiences, and opinions of these stakeholders (Franco-Trigo et al. 2020). By strengthening stakeholder

Role-Play Simulation Games: An Experiential Environment to Enhance Stakeholder Engagement

Successfully engaging and aligning with different stakeholders for the implementation and adoption of a healthcare innovation requires a set of skills and abilities that are not easy to teach and most often are acquired after multiple attempts at both successful or failed interactions with stakeholders in the real world. There is almost no option for real stakeholders to interact in a learning-by-doing safe environment and get to understand each other perspective. Here is where role-play simulation games can be the most useful tools for professionals and executives to learn, develop and practice. Management simulation games bring an experiential aspect to learning about complex systems. Simulation games offer novel opportunities for addressing complex and risky real-life processes in a safe training context (Lukosch et al. 2018). Research

indicates that simulation games can effectively enhance learning in areas such as complex problem-solving (Tennyson and Breuer 2002), decision-making (Tena-Chollet et al., 2017), and negotiation and collaboration skills (Fisher and Fisher-Yoshida 2017).

IESE Business School has used simulation games to teach executives and MBAs since the early 1970's. Over the years, we have explored different types of simulation games. The availability of simulation games and their growth is a confirmatory signal that there is value in their use in education and training. Most existing simulators focus on the simple cause-effect relationship that can be induced/deduced from the running of the simulation. In other cases, there are more choices for the participant, but there is still an underlying ordered structure that defines good practices in the participants' actions. They cover a wide variety of topics, but no one has the scope of the health ecosystem.

negotiation, change management, and leveraging networks. These modules serve as the foundational building blocks offering the context and insights needed to navigate the intricate landscape of stakeholder collaboration effectively.

The HALIGN simulation game covers the different profiles of the healthcare ecosystem stakeholders to address selected complex system situations. It merges elements of the traditional case method with principles drawn from the multi-stakeholder collaboration initiative as outlined by Fred Krawchuk in 2013. Krawchuk recognised that no single organisation possesses all the necessary knowledge, influence, connections, or resources to effectively tackle intricate issues involving multiple stakeholders. In an effort to facilitate multi-stakeholder collaborations, Krawchuk proposed a comprehensive 5P approach designed to address the challenges inherent in such initiatives while encompassing the key attributes that successful initiatives commonly exhibit.

By strengthening stakeholder engagement, healthcare innovations can better address the complex and interconnected challenges facing the healthcare ecosystem and boost innovation outcomes

HALIGN Methodology: Aligning Complex Health Ecosystem Stakeholders

HALIGN is a methodology based on a role-play simulation game developed over the last three years as a research-educational project with co-funding from EIT-Health (HALIGN: Making High-Value Care Solutions a Reality 2023). HALIGN is about aligning complex health ecosystem stakeholders to achieve a common goal, which is crucial in the implementation of healthcare innovations. The HALIGN methodology consists of a structured framework comprised of various training modules, each meticulously designed to equip participants with essential knowledge and practical tools necessary for fostering improved alignment among stakeholders, such as an overview of healthcare innovation ecosystems, leadership, communication,

The 5P approach consists of:

- 1. Purpose:** This denotes a specific issue, challenge, opportunity, or potential that unites all participants and serves as the driving force behind their gathering.
- 2. People:** Involves the active participation of a diverse mix of stakeholders, encompassing both governmental and non-governmental actors, including representatives from government, businesses, non-profit organisations, academia, and civil society.
- 3. Place:** Refers to the physical or virtual space where participants come together to engage in meaningful dialogue and collaborative efforts.

4. Process: Encompasses a collaborative approach involving shared inquiry, learning, problem-solving, and, when needed, decision-making, all conducted in innovative ways to address the concerns of stakeholders effectively.

5. Practice: Signifies the ongoing commitment of stakeholders to nurture and enhance the essential skills, mindsets, and values required for successful collaboration.

The HALIGN role-play methodology divides the participants into different teams, each one representing a different stakeholder group (People) that may or may

The HALIGN methodology, honed and validated in workshops featuring an array of professionals, including medical experts, healthcare administrators, startup innovators, and policymakers, has received significant recognition for its efficacy in enhancing their grasp of alignment challenges and methods to address them. Additionally, healthcare organisations have effectively employed this methodology to cultivate their managers' awareness of other stakeholders' perspectives and equip them with the ability to collaborate towards shared, acceptable solutions (WHO Regional Office Europe 2023).

HALIGN is about aligning complex health ecosystem stakeholders to achieve a common goal, crucial in the implementation of healthcare innovations

not match their real role in life. Each team discusses a common case related to a digital transformation initiative, such as the implementation of a home care unit in a hospital with remote patient monitoring (Purpose), from the point of view of the stakeholder they are role-playing, with objectives and red lines unknown to the other participants. The discussion can take place in-person or virtually in a specifically designed platform (Place), and teams are asked to try to reach a common agreement on how the home care unit is to be implemented (Process). The results of the game are not predefined and are determined by the actions proposed by the stakeholders, the conversations held among the teams, their negotiation abilities, their interpersonal skills and the degree of conviction each team is able to convey. In this context, HALIGN fosters an environment where participants work towards comprehending the perspectives of other stakeholders, enabling them to craft a solution that garners consensus and can be effectively implemented (Practice).

HALIGN to Support Healthcare Managers in Navigating Digital Transformation in Healthcare

In the context of digital transformation in healthcare, healthcare managers play a pivotal role in steering the industry through this inevitable change. They are responsible for orchestrating the adoption of digital technologies and ensuring that these innovations are seamlessly integrated into the healthcare ecosystem. Healthcare managers must assess the specific needs of their institutions, make informed decisions regarding technology investments, and establish a strategic roadmap for implementation. They also need to navigate regulatory and compliance challenges to safeguard patient data and ensure that digital systems adhere to industry standards. Additionally, healthcare managers must lead change management efforts within their organisations, as resistance to digital transformation can be a significant obstacle. This includes facilitating

training and education for healthcare staff to empower them with the necessary skills and knowledge to leverage digital tools effectively. Furthermore, they should promote a culture of innovation and continuous improvement to keep up with the ever-evolving landscape of digital healthcare.

The HALIGN methodology could be a resourceful tool to support healthcare managers at different stages of this challenging journey and facilitate a conducive

atmosphere where the different stakeholders actively seek to understand the viewpoints of their fellow stakeholders, enabling the development of solutions that garner consensus and can be smoothly put into practice.

Conflict of Interest

None.

references

- Fisher J, Fisher-Yoshida B (2017) Educating negotiators: Using theory, practice, case studies, and simulations in an integrated learning experience. *Negotiation and Conflict Management Research*. 10(4): 286–305.
- Franco-Trigo L, Granstrand O, Holgersson M (2020) Innovation ecosystems: A conceptual review and a new definition. *Technovation*. 90-91.
- HALIGN: making high-value care solutions a reality (2023) Munich: EIT Health. Available at <https://eithealth.eu/programmes/halign/>.
- Heath C, Heath D (2010) *Switch: How to Change Things When Change Is Hard*. New York: Broadway Books.
- Kotter J (1995) *Leading Change: Why Transformation Efforts Fail*. Harvard Business Review.
- Krawchuk F (2013) *Multi-Stakeholder Collaboration: How Government, Business, and Non-Governmental Leaders Transform Complex Challenges into New Possibilities*. Broomfield, Colorado.
- Lukosch H, Bekebrede G, Kurapati S et al. (2018) A Scientific Foundation of Simulation Games for the Analysis and Design of Complex Systems. *Simulation and Gaming*. 49(3):279-314.
- McKenzie JF, Neiger BL, Thackeray R (2016) *Planning, implementing & evaluating health promotion programs: a primer*. Pearson.
- Nundy S, Cooper L, Mate K et al. (2022) The Quintuple Aim for Health Care Improvement: A New Imperative to Advance Health Equity. *JAMA*. 327(6):521-522.
- Parish J (2015) The Patient Will See You Now: The Future of Medicine is in Your Hands. *Journal of Clinical Sleep Medicine*. 11(06):689-690.
- Pendlebury J, Grouard B, Meston F (1998) *The ten keys to successful change management*. Wiley.
- Segarra-Oña M, Peiró-Signes A, Verma R (2020) Fostering innovation through stakeholders' engagement in the healthcare industry: Tapping the right key. *Health Policy*. 124(8):895-901.
- Snowden D, Boone M (2007) *A Leader's Framework for Decision Making*. Harvard Business Review. November.
- Tena-Collet F, Tixier J, Dandrieu A et al.(2017) Training decision-makers: Existing strategies for natural and technological crisis management and specifications of an improved simulation-based tool. *Safety Science*. 97:144-153.
- Tennyson R, Breuer K (2002) Improving problem solving and creativity through the use of complex-dynamic simulations. *Computers in Human Behaviour*. 18:650-668.
- World Health Organization (2021) *Global strategy on digital health 2020-2025*. Geneva.
- World Health Organization (2019) *WHO Guideline: Recommendations on digital interventions for health system strengthening*. Geneva.
- WHO Regional Office Europe (2023) *High-value referrals: learning from challenges and opportunities of the COVID-19 pandemic*. Concept paper. Copenhagen.