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van Heel, Liesbeth; van Oel, Clarine J.; Chan, Paul W.; Burdorf, Alex

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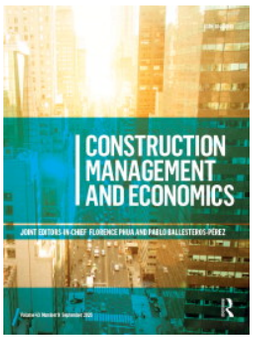

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Engaging heterogeneity in stakeholders and stakeholder relationships in a hospital planning and design project

Liesbeth van Heel[a,b,c], Clarine J. van Oel[c], Paul W. Chan[c] and Alex Burdorf[a]

[a]Department of Public Health, Erasmus University Medical Centre, Rotterdam, the Netherlands; [b]Directorate of Real Estate, Erasmus University Medical Centre, Rotterdam, the Netherlands; [c]Department of Management in the Built Environment, Delft University of Technology, Delft, the Netherlands

ABSTRACT

Hospital planning and design projects are known for their complexity, partly attributed to the many stakeholders involved. This study aims to understand how a Dutch hospital project, with transformative change goals for its future healthcare delivery, dealt with their stakeholder engagement in the project's planning and design phase. This study addresses heterogeneity in stakeholder relationships, an underexplored aspect within stakeholder engagement literature. A qualitative study was conducted on the stakeholder engagement during 10 years of hospital planning and design. We used an abductive approach by reviewing project documentation and transcripts of interviews with project stakeholders (n = 22) to reconstruct how the project leadership dealt with the challenges of heterogeneity in the project's specific context. This study explores dynamism and pluralism within the relationships with seven distinctive stakeholder groups from the hospital's multi-stakeholder setting, uncovering engagement strategies based on unique combinations of actor and process-specific characteristics. Wider transformative change goals added to the challenges faced in ownership and alignment of goals. Findings highlight the strategies and competencies the project's owner (and leadership) deployed, such as adapting the project organisation's structure, investing in an in-house community of practice with a dedicated stakeholder engagement role and fostering enduring collegial relations and commitment.

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Stakeholder relationships; hospital planning and design; transformative change; community of practice; stakeholder engagement strategies

Introduction

Hospital planning and design projects are known for their complexity. As this complexity is partly attributed to the many stakeholders involved, evaluating a large project's handling of stakeholders is a way to account for the application of the capital investment involved.

Stakeholders as a concept has long drawn the attention of organisational and management scholars. Early studies predominantly focus on their identification, stratification according to power, urgency, and legitimacy, and how they should be managed to be least troublesome or most valuable to a business innovation or the execution of a project (Mitchell et al. 1997, Newcombe 2003). Researchers have more recently stressed the dynamics of stakeholders over the different phases of the project lifecycle, marking out stakeholder management as a more dynamic activity than previously understood (Olander and Landin 2008, Aaltonen and Kujala 2010, Eskerod and Vaagaasar 2014, Park et al. 2017). Models to analyse stakeholders, e.g., in construction projects, offer different approaches to gain insights into the complexity of stakeholder management, and theories provide guidance for project managers on how to deal with and handle project stakeholders (Atkin and Skitmore 2008, Walker et al. 2008, Yang and Shen 2015, Mok and Shen 2016). The last two decades have seen attention shifting from more deterministic models to a more engaging approach towards stakeholder relationships, understanding these relationship layers and their reciprocal character.

Likewise, stakeholder engagement has featured in stakeholder theory and construction management research since this century (Greenwood 2007, Aaltonen et al. 2015). Engagement with stakeholders opens up

CONTACT Liesbeth van Heel m.vanheel@erasmusmc.nl Erasmus MC, Directie Vastgoed (Real Estate), kamer Ba-310, Postbus 2040, Rotterdam, 3000 CA, the Netherlands

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opportunities for creating shared values and collaboration in achieving project goals (Rowlinson and Cheung 2008, Strand and Freeman 2015), especially in coping with the uncertainties during the front end planning of projects, where stakeholder engagement is seen to require full attention as this is the phase where potential conflicts of stakeholder objectives come to light (Aaltonen and Kujala 2010, Williams et al. 2019). Additionally, the notion of ever-changing stakeholder interests in the context of temporary (project) organisations highlights stakeholder engagement as a relational rather than a transactional process (Kujala et al. 2022). However, in a relational process, the heterogeneity of stakeholders adds challenges to the way of their engagement, and – to our knowledge – it is still less clear how the dynamic and emergent nature of stakeholder relationships during a project lifecycle influences the engagement of this heterogeneity in practice. In this study we draw on a hospital planning and design (mega-)project in the Netherlands to illustrate the practice of project management in dealing with the heterogeneity of stakeholders and stakeholder relationships.

Hospital organisations are known for their complexity, particularly with the number and range of stakeholders involved in their operations (Pauget and Wald 2013). In this dynamic constellation, the planning and design of a new hospital involve stakeholder management in several dimensions. Previous research has noted different characteristics of stakeholder relational complexity, such as the number of relationships among stakeholders, the variety of relationships and the number of connections or patterns of relationships with stakeholders related to the centrality of the focus organisation (Aaltonen and Kujala 2016). It is this heterogeneity of stakeholders and characteristics influencing stakeholder relationships that scholars have identified as a significant oversight in construction management research (e.g., Eskerod andVaagaasar 2014, Kujala et al. 2022, Kier, 2023). In this case study, we study the phenomenon of dealing with stakeholder heterogeneity as a lived experience over a 10-year period to examine how the client organisation (the hospital and project "owner") engaged with the multi-stakeholder set-up and dynamics in stakeholder relationships during the project's front-end phase.

Our empirical case combines the front-end of a hospital planning and design project with an institutional transformative change ambition. This ambition was to adapt service delivery and processes alongside the newly built hospital, e.g., to become more patient-centred and enhance process delivery with innovative IT solutions (van Heel and van Oel, 2023). Planning and design of a new built environment is often seen as a catalyst for change of service delivery (Tucker et al. 2014, Kier et al. 2023), and, similarly, construction project studies could benefit from this awareness of grander societal transitions influencing projects (Chan 2020). Additionally, a transformative change ambition broadens the scope of the project's success. Two components of project success can be identified: (1) project management success, focusing on the project process and a successful accomplishment of cost, time and quality objectives, and (2) product success, which deals with the effects of the project's final product (Baccarini 1999). Both project success components must meet stakeholders' satisfaction where their interests link to these components (Baccarini 1999). Design quality can be seen as the tangible effect of the project, where a new facility is seen as the product that adds value by its fit for end-user needs (Turner and Xue 2018, Carthey 2019). A broader project scope, where intangible ambitions are added, such as becoming a "smart" or "microbial safe" hospital, in turn requires a broader project organisation (Westerveld 2003). Of the 20-year period from 1998 to 2018 between initiative and relocation, we focus on the first 10 years (i.e., 1998-2008) when the majority of the capacity, conceptual, and design decisions were made. This is the period in which stakeholder influence with intended or unintended changes that follow stakeholder engagement can be considered to be highest (Kujala et al. 2022). Looking at critical moments in this 10-year period, our research question was: *how was heterogeneity in stakeholders and in stakeholder relationships acknowledged and managed during the front-end (planning and design) phase of creating a new hospital?* We start by reflecting on existing literature on stakeholder engagement, the dimensions of heterogeneity and the concept of transformative change in the healthcare sector (often accompanying construction projects in healthcare). Based on this theoretical framing we delve into the activity and flow of the stakeholder engagement process found in this specific, longitudinal case study in the Dutch context to uncover emerging strategies and competencies that can be helpful in engaging project stakeholders (Langley et al. 2013).

Theoretical framing

Stakeholder engagement

Stakeholder engagement is often defined as an umbrella term encompassing a range of activities and interactions over the life of a project to secure

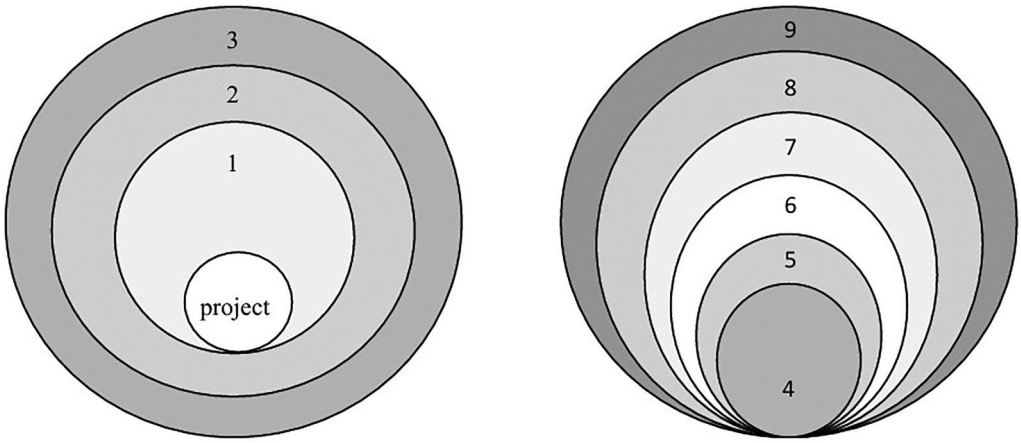
stakeholder involvement and commitment or to reduce their indifference or hostility (Prebanić and Vukomanović 2023). Kujala and colleagues reviewed 90 articles in leading academic journals on stakeholder engagement. They define stakeholder engagement as referring to the aims, activities, and impacts of stakeholder relations in a moral, strategic, and pragmatic manner (Kujala et al. 2022). Eskerod and Huemann define stakeholder engagement as the purposeful stakeholder-related practices to support value creation for a project (Eskerod and Huemann 2024). This can range from topical consultation or partnering over institutional borders to long-term intra-institutional collaboration (Bresnen et al. 2025). Kujala's approach to stakeholder engagement stresses the relational aspect of the engagement, stating that it concerns both the variety between and within stakeholders, including marginalised stakeholders, and the resulting heterogeneity of these relationships (Kujala et al. 2022). This dual approach to heterogeneity encountered in multi-stakeholder settings by Kujala and colleagues is central to our study.

Many of the studies mentioned in the introduction have offered insights on the added value of stakeholder engagement as an activity crucial for both the process and product components of project success. Others have focused more specifically on hospital projects and have drawn attention to the added value and impact of stakeholder engagement, especially in the front-end phase of projects (Olander and Landin 2005, Edkins et al. 2013, Samset and Volden 2016, Larsen et al. 2021, Tampio et al. 2023). The front-end phase of this case study is also described as the "pre-design" and "design" phases.

Key to stakeholder influence and decision-making in the "pre-design" phase is the context of the healthcare system in which capital investment planning for hospitals takes place. Depending on a country's healthcare system, regional or national authorities can have a decisive role in governing planning and design processes, setting the formal and informal legitimised structures and constellations as well as processes for engaging stakeholders and shaping the stakeholder landscape (Mahadkar et al. 2012, Edkins et al. 2013, Aaltonen and Kujala 2016, Samset and Volden 2016). This "institutional" context influences the type and content of collaboration or alliancing among and between stakeholders in the healthcare system taking place in complex organisational and inter-organisational settings (Söderlund and Sydow 2019). Mapping stakeholders in a stakeholder landscape is an often-used method to analyse and stratify their respective salience (power, legitimacy, and urgency), and the resulting landscape varies across countries and healthcare systems (Mitchell et al. 1997, Aaltonen and Kujala 2016). Another defining dimension in mapping the stakeholder landscape is the perspective the study takes, as illustrated in Figure 1. Tampio et al. (2022) take the perspective of a consortium of 29 municipalities as "client" in a case study of a hospital project in Finland. They defined stakeholders as being internal, intermediate, or external to the project, based on the actor's key characteristics, such as representing authorities, owners, project management, medical staff, etcetera. Another study distinguished 6 groups of stakeholders and end-users for hospital projects (Fronczek-Munter 2016). Although the position of the project organisation itself was unclear within this approach, Fronczek-Munter associates a central position with higher user involvement, while external placement recognises the additional role of society as owner and user of public hospitals in the Scandinavian context. Both studies recognise that the client organisation consists of heterogenous stakeholders, an element our study explores more in depth, as we take the perspective of the project management team set within the client organisation while "managing" this engagement.

Dimensions of heterogeneity

Heterogeneity is a term associated with both the variety in (groups of) stakeholders and their dynamic nature, causing complexity in stakeholder relationships (Kujala et al. 2022). Stakeholders can be institutions, interest groups or individuals with clearly defined or emergent roles in a project, with professional or non-professional backgrounds, and may vary in the period or duration of their involvement (Eskerod and Vaagaasar 2014, Lehtinen et al. 2023). Stakeholders can either be identified at the start of a project or emerge during its lifetime, and relationships with respective stakeholders must be built and maintained and even ended (Eskerod and Vaagaasar 2014, Eskerod and Huemann 2024). This dynamism and pluralism over a project's lifetime influences the complexity of managing stakeholder relationships (Lehtinen et al. 2023). Stakeholder collaboration in itself is seen as a multi-level process of active engagement among multiple stakeholders (Ali and Haapasalo 2023), and their heterogeneity calls for a better understanding of the different dimensions that characterise stakeholder relationships. Two key aspects of differences among stakeholders came up when we looked at the literature on stakeholder engagement: (1) characteristics related to the stakeholders themselves and (2)



Stakeholder map Finnish hospital project (based on Tampio, 2022)

Stakeholders & users in hospital projects (based on Fronczek-Munter, 2016)

Figure 1. Stakeholder mapping for healthcare planning and design projects.
1 = internal stakeholders, such as client project management team, main architect, main contractor, group of architects and engineering designers, building automation contractor.
2 = interface stakeholders, such as corporate office/admin executives, medical staff (physicians, nurses), non-medical staff (cleaning services, maintenance), management team of the consortium, university of applied science.
3 = external stakeholders, such as general public, state (and local) regulatory and licencing agencies, trade unions, patients, media, subcontractors.
4 = patients and relatives.
5 = medical staff.
6 = client organisation, managers, facilities managers, architects.
7 = support staff.
8 = external consultants, architects, engineers, designers, etc.
9 = society, government, media, potential patients.

characteristics related to the processes of their relationships. These two dimensions shape the challenges project management must deal with during their stakeholder engagement.

Actor-related characteristics

The first dimension of heterogeneity is actor-related and can be found in the possible interest a (group of) stakeholder(s) may have with regard to the project's decision-making structures. This is where the socio-political dimension often recognised in stakeholder engagement literature resides (Geraldi et al. 2011, Mamédio and Meyer 2020). The stakeholder's position in the stakeholder landscape shapes the perspective towards the project, as illustrated in Figure 1. Stakeholders in a healthcare setting may be categorised into groups with a similar nature or perspective, such as governmental bodies or co-creators (Bjugn and Casati 2012, Tampio et al. 2022). Based on their motives, values can be attributed to these stakeholder groups, such as power-interest or salience, as well as fitting engagement strategies (Bjugn and Casati 2012). The so-called interface stakeholders in this context can act as a link between the project and its environment (Tampio et al. 2022). Tampio and colleagues allocate substantial power to the interface stakeholders, such as physicians, nurses, administrative staff, and non-medical staff such as cleaning and maintenance, as they may combine a role in the project (as end-user or expert) with a role in the organisation's formal governance. Bjugn and Casati (2012) allocate the term "delegated power" to their minority representation role in the formal decision-making process and use the term "collaboration" for their decision-making power over specific parts (their area of expertise).

Context-related power and trust

Depending on the health system and associated "institutional" context, corporate governance, and indeed project governance, a stakeholder network reflects the distribution of power and stakeholder impacts in its decision-making roles (Aaltonen and Kujala 2016, Rowley 2017). Governmental bodies or banks may, by law, have decision-making powers beyond the control of the project management team (Olander and Landin 2005). And, related to this stakeholder power, the engagement process with this type of stakeholder may be more formal and transactional, with negotiation taking the place of collaboration. The balance of power between parties is determined by their willingness to use their power, even if it can damage a long-term collaborative relationship

(Koolwijk et al. 2021). Like power, trust is an important concept when studying stakeholder relationships. Eskerod and Vaagaasar (2014) define trust as a stakeholder's willingness to be vulnerable to future results. Different bases for trust in stakeholder relationships were distinguished, such as role-based trust and knowledge-based trust, while personal relationships were considered to have the ability to "thicken" trust (Eskerod and Vaagaasar 2014).

Brokering between positions

A case study in a Finnish hospital found that, from the perspective of the client's project management team, the position of "interface" stakeholders can be easily misunderstood as being thought of as "us" versus "them," while they are both or neither (Tampio et al. 2022). The importance of perceiving a collaborative relationship as either "us" or "them" lies in the positioning of end-users within this group of interface stakeholders. A good relationship and a successful collaboration with end-users are considered crucial in adding value to the project and bridging the boundary between the project and the organisation it transforms (Kier et al. 2023). Besides, the interface or linking position of the end-users as an important stakeholder group might be intentionally called upon in what is known as knowledge brokering. Especially in the academic setting of a University Medical Centre, the context of our hospital case study, bridging the gap between research results and the use of these results is a well-known phenomenon. This activity is typically defined as knowledge brokering (Ward et al. 2009, Meyer 2010). However, this concept can also be applied to brokering between the worlds of clinical work and building design or between that of end-users and project-based professionals (Waheed and Ogunlana 2019). Previous research has identified a Project Management Office (PMO) as an important knowledge broker in project-based organisations (Pemsel and Wiewiora 2013). Neal et al. associate knowledge brokering with boundary spanning, a quality that fosters relationship building (Neal et al. 2022).

Process-related characteristics

The second dimension of heterogeneity in stakeholder engagement is more process-related. Identifying and empathising, as well as building a relationship, interacting, and co-creating with project stakeholders, are seen as circular processes that must be carried out repeatedly (Eskerod and Huemann 2024). While co-creation is considered the main aim of stakeholder engagement, an "arms-length" approach has been suggested for the management of self-regarding stakeholders and a reciprocal approach for more collaborative stakeholders (Bridoux and Stoelhorst 2014). Research in the context of a Finnish hospital project suggests that, given the heterogeneity of all collaborators, project management teams best focus on aspects of cooperation, control, and coordination as a multi-level process (Ali and Haapasalo 2023). Researchers have stressed the added value of engagement with end-users in a hospital design project, which adds the focus on the heterogeneity of the hospital's internal stakeholders (Elf et al. 2012, Carthey 2019, Caixeta et al. 2019). Methods in the interaction with project stakeholders (including end-users) can range from informing (with written materials or during live meetings) and consulting (in dialogues or more formal feedback sessions) to co-creation (during working groups and workshops), ultimately resulting in co-design strategies (such as prototyping and simulations) (Caixeta et al. 2019, Eskerod and Huemann 2024). The intensity of the actual engagement process may vary in frequency and in duration over the project's lifetime for each individual stakeholder(group).

Locus of engagement

Another process-related source of heterogeneity is found in the locus or organisational level where the engagement takes place. For this locus of engagement, a distinction extensively used in management literature is that between strategic, tactical, and operational levels. Decision-making in the front-end of a hospital planning and design project, especially with a transformative change ambition, often has a very strategic character, as decisions may have a significant impact on the organisation's success (Khalifa 2021). A stakeholder can be a multi-levelled organisation, such as the municipality, simultaneously engaged at various levels (Sydow and Braun 2018). In our case study, we distinguish between a strategic level of engagement, indicating the involvement of the hospital's highest hierarchical level (i.e., the executive board), and a tactical level of engagement, indicating the involvement of the project's director or members of the project management team. In our case study, we did not elaborate on the operational level as a locus for stakeholder engagement.

Pluralistic roles

Influencing the relational setting, literature has also highlighted stakeholders can hold more than one role during their engagement, again adding to the heterogeneity and the dynamic nature of stakeholders to be dealt with by the project management team. Pluralistic roles can originate from the stakeholder being an organisation (or an organisational body with a governance role) or an individual representative of an organisation (Ali and Haapasalo 2023). And even when a stakeholder is an individual, their role can combine engagement that is more related to statutory or decision-making responsibilities with an emerging role as a future end-user. The pluralistic position of this type of stakeholder was recognised in Figure 1 as that of the "interface stakeholders," who can operate both internal and external to the project (Tampio et al. 2022). The dynamism the pluralistic roles may bring over the project's lifetime also relates to the distinction made by Kujala et al. (2022) between a more transactional or a more relational process of engagement. Engagement with multi-level stakeholder organisations or individual stakeholders with pluralistic roles may require the project management team to deal with both approaches sequentially and even simultaneously. In big public infrastructure projects in the Netherlands, the law now requires the appointment of a specific project stakeholder manager to explicitly take on the role of coordinating the tasks and the consistency within the project to provide a coherent message to the various project stakeholders (Eskerod & Huemann 2024).

Transformative change in the healthcare sector

Relocation to a new healthcare facility comes with service transformation and accompanying technical innovation. Indeed, the Dutch government invited hospitals in an early planning stage to innovate and transform their built environments and their services to advance into the 21st century. For instance, relocation to a hospital with 100% single-occupancy inpatient rooms has been considered as a service transformation, providing more privacy to patients in a microbial safer environment (Tucker et al. 2014, van Der Schoor et al. 2023, van Heel et al. 2024). Transformative change is associated with societal change at different levels, such as a focus on sustainability or person-centredness, including organisational and cultural change (Hamilton et al. 2008, Avelino and Rotmans 2011). Transformative change processes involve different timeframes and levels of organisation, leading to frameworks that have multiple phases, levels, and patterns. In hospital settings, the transition to 100% single-occupancy inpatient rooms not only influences nurses' workflows and collaboration but could also impact fall incidents and responses to in-hospital cardiac arrests (Hussain et al. 2023, Pruijsten et al. 2024a, Pruijsten et al. 2024b). Such a vulnerability to future results was previously associated with trust required from stakeholders and especially end-users in their relation to the project (Eskerod and Vaagaasar 2014). Avelino and Rotmans (2011) state that processes of transformative change require a non-linear and long-term approach and interdisciplinary and integrative perspectives. Translating systemic, societal changes into healthcare planning and design projects requires attention and visibility at a strategic level (Hamilton et al. 2008, Zimring et al. 2008, Elf et al. 2012). Dealing with the associated change dynamics requires process flexibility, as project and external stakeholders can be sources of change themselves (Lavikka et al. 2019). Transformative change goals add to the complexity of planning and design projects in a healthcare setting, with potentially divergent perspectives influencing decision-making and broadening the scope of a project's outcome (Westerveld 2003, Olsson and Hansen 2010).

Acknowledging transformative change as part of a hospital planning and design project once again foregrounds the importance of understanding the position of the project relative to the hospital. Indeed, here, the perspective of the permanent (organisation/institution) links with the perspective of the temporary (project). The literature on project management has extensively studied the phenomenon of interorganisational projects. Aligning multiple perspectives and interests to achieve a shared understanding of project goals and methods on how to reach those goals is seen to be extremely challenging (Kujala et al. 2021). The multi-level perspective, how relationships develop over time, and different ways of managing partnerships between organisations have been pointed out as important aspects to help us understand interorganisational projects. Stakeholder engagement is considered an important mechanism in the subsequent stages of a project to align project goals, including transformative change objectives, but also to gain stakeholder trust and commitment (Rowlinson and Cheung 2008).

The description of the context of our research, in the methods section, further explores the transformative change elements associated with this hospital project's front-end phase. The emphasis on transformative

change, along with the different types of stakeholders and processes involved, forms the basis of our study, revealing the strategies and skills that the project management team used. This research is important to bridge the gap between theory and practice on stakeholder engagement in pathways to achieve transformational change: transformative change was and continued to be a project goal in this longitudinal case study. These pathways of change and their impact on project scope and structure are analysed retrospectively (Langley et al. 2013).

Method

Context of the research

The hospital planning and design project we studied has many characteristics of a megaproject, given its duration (1998-2018), its size (more than 200,000 sqm gross floor area), and its capital investment (approx. 1 billion euros at completion) (Flyvbjerg 2014). We will further explain the main stakeholders in this project in the actor analysis section of our findings, as shown in Figure 2. The grey dot indicates the first author's central position as the project secretary. The supplementary material presents in more detail the seven numbered actor(s) and their role in the project's stakeholder landscape and phases.

The hospital project came with a clear transformative change ambition, invited by the national government to create the exemplary University Medical Centre (UMC) of the 21st century within the Netherlands. This invitation to hospital innovation was translated into "thinking differently" about the delivery of tertiary care, with multidisciplinary care teams and introducing 100% single-occupancy rooms to offer patients the best available safe and healing environment. For staff, this ambition would mean "working differently," making use of integrated planning and IT-supported processes to ensure the quality of care and the patient's care experience. And finally, for the built environment, the ambition was to "build differently" – dealing with the challenges of a redevelopment on an existing inner-city site that would need to always stay open and fully functional and designing a building that would be able to absorb alterations during its lifespan. Alignment of these strategic trajectories added to the complexity of the project in its early phases. In the 10 years of the pre-design and design phases, our research distinguishes three periods:

1. The pre-design phase, 1998-2000, when the project's Strategic Brief (SB; the business case) was developed. In this phase, the hospital's Executive Board (EB) led the project top-down. The EB established a Steering Committee and a Sounding Board to engage representatives from the clinical departments and non-clinical directorates and Formal Advisory Bodies. The transformative change was part of the project being developed.
2. The pre-design phase, 2001–2003, when a project management team (PMT) was established for the project as a separate, temporary organisation. The EB still had a strong lead in negotiations with the government. EB and PMT developed both the

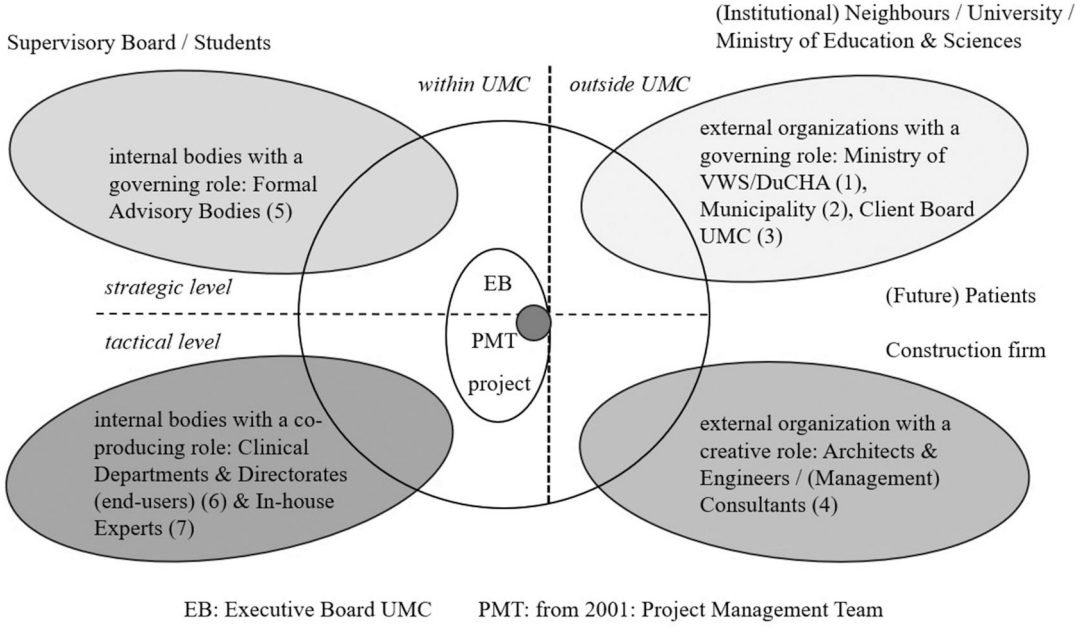


Figure 2. Stakeholder landscape of a Dutch University Medical Centre (UMC) planning and design project (1998–2008).

"working and building differently" themes as part of the project.

3. The design phase, 2004-2008, when the PMT was incorporated in the UMC's Real Estate directorate. This change was accompanied by the EB restructuring the Steering Committee: a collective approach was taken, with all clinical clusters affected by the planning and design project now represented in this decision-making forum. The project itself continued with a more traditional design and construction approach, with the transformative change goal of "working differently" being further developed outside the project. However, the impact of the "working differently" ambition was translated into generic programmes of requirement and design templates for layouts. This evolving practice introduced new challenges in alignment between permanent and temporary organisations.

The transformative change-related dynamics and the way the project was positioned and led by EB and PMT in these three distinctive phases are illustrated in Figure 4, as part of our findings.

Data sources

For this abductive, practice-based research, we used three different sources.

a. A first data source is 20 interviews with project stakeholders for an end-of-project evaluation in 2018, conducted by consultants (n = 5) and students (n = 15, as part of a teaching assignment led by the second author). The evaluation report formulates lessons learnt based on these 20 interviews and features a timeline for the project, highlighting major decisions. The audio files of the interviews and their transcripts were available to our team for secondary analysis. In 2020 and 2022, two additional interviews were conducted by the first author with a former EB member and an in-house expert to evaluate their roles in the project. These interviews were also transcribed. We obtained consent for secondary analysis of all transcribed interviews as part of a broader scientific research project. We obtained permission from the UMC's Institutional Review Board for this secondary analysis of interview transcripts. The 22 transcripts were close read with our research question and concepts from stakeholder engagement literature in mind, looking for references to the process of engagement and relational aspects associated with this engagement. Quotes from these interviews became part of the narrative and gave distinctive voices to various stakeholders. We did not utilise any software.

b. A second data source is the extensive digital archive of the hospital project, available to the first author. The project folder "Internal Organisation" alone consists of some 30,000 files with a size of some 40 Gb. The folder is organised in "library fashion," and "sub-folders" were used for the various stakeholders (e.g., the Municipality, with further subfolders for meetings at strategic and tactical levels, Client Board and Sounding Board), and the years in which the engagement took place. The PMT deemed advanced information management strategies crucial to track decision-making over the project's lifespan. Each document has a unique ascending archive number. Based on the year/month of major decisions from the project's timeline in the evaluation report mentioned above, minutes of meetings at these times were selected for the seven stakeholder groups and closely read to find direct information on stakeholder engagement as well as on feedback about interactions or engagement strategies to the project's Steering Committee or the EB. This information was also used to develop the narrative, with quotes from documents in the digital archive giving an impression of the width and depth of the material available. It is exceptional that minutes of meetings with a wide variety of internal and external stakeholders during the pre-design and design phases of a project can be accessed 15–20 years later to reconstruct the practice of their engagement. Minutes offer insights and substantiate the frequency of encounters, topics discussed, and decisions made. The project secretary penned many of these minutes. We retrieved and studied the process descriptions for the project. They contained information on project governance, workflows for decision-making, and contact information for key players at the time. The process descriptions were produced with internal stakeholders in mind and have been periodically updated since 2004.

c. A third data source is the first author, given her significant role in the project during the full period we study as the project secretary (PS) and secretary to the project's Steering Committee. Her involvement in the actual stakeholder engagement during this 10-year period is a unique feature of this study, offering insights from personal

reflection and recollection as well as providing access to relevant documents. At the time scientific research was not on the horizon, but she was part of the process, first positioned as deputy Executive Board Secretary and later embedded in the PMT and the management team of the Real Estate directorate (her central position is indicated by the grey dot in the centre of Figure 2). The absence of a formal research agenda at the time might be seen as a disadvantage, but we argue that accessing people and information fifteen years later has to be considered a major advantage in conducting this study. Indeed, the new hospital's implementation in 2018 provided ample time for the first author to cultivate a reflective mindset.

Data analysis

Drawn in 2000 as part of the SB used to gain government approval for the planning and design project, the original stakeholder map offers a starting point for analysing the relevant stakeholders, exploring their actor- and process-based heterogeneity, and discovering the emerging strategies and competencies utilised to build and maintain relationships during the first ten years of the project. We developed the findings during multiple (at least three or more) rounds of analysis. We interpreted and stratified the documented stakeholders from the pre-design and design phases to create the stakeholder landscape, as shown in Figure 2. A first step was to position the stakeholders relative to the UMC's project and PMT (internal versus external). A second step was to indicate their contribution to the project (governing role versus co-producing/creative role). The supplementary material develops the narrative for the seven main stakeholder groups, looking at their role in the project (why were they engaged), the length of their involvement (when where they engaged), the locus of their engagement (where did the interactions take place), and the process of their engagement (how). The tables in our findings and the narrative in the supplementary material showcase the results of the last round of analysis. Furthermore, we describe common patterns that correspond to the dimensions of heterogeneity present in the theories. Thus, this research has seen an iterative and interactive process, as illustrated in Figure 3, where discussions within the research team further developed the theories used and the ordering of the findings. Using an abductive approach in case study research encourages creativity and intuition to help develop theories and improve our understanding of how the observed events can be both general and specific (Dubois and Gadde 2002). The approach was considered appropriate for this qualitative case study. Preunderstanding evolved into a deeper understanding of the elements that contribute to the engagement of heterogeneity among stakeholders and their relationships in practice (Gummesson 2003).

Findings

We start by presenting the seven main actor(group)s and capturing their position in the stakeholder landscape and the associated type of engagement. Secondly, we present an overview of the actor related engagement characteristics found. Thirdly, we focus on the process related characteristics influencing the stakeholder relationships. Fourthly, we highlight the stakeholder engagement dynamics associated with the context of transformative change. And, finally, we address the

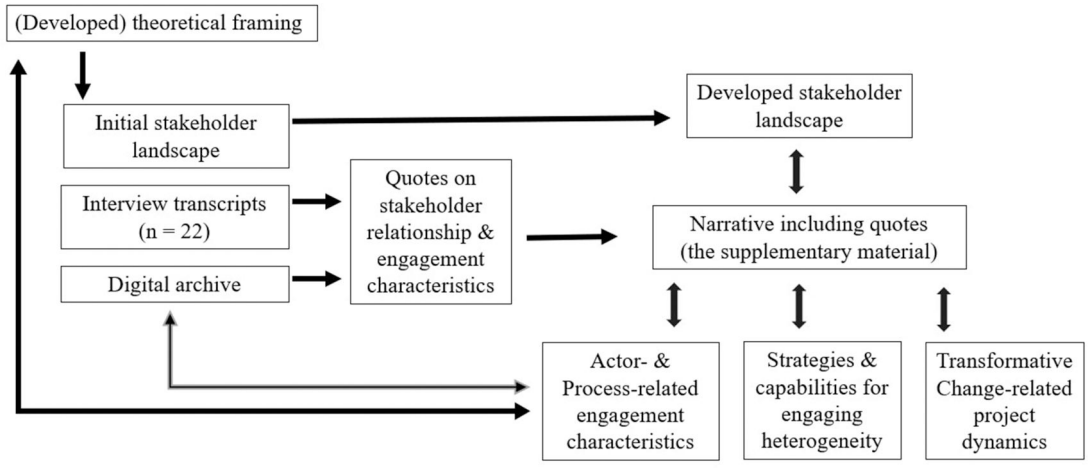


Figure 3. The abductive research process in this case study.

question of how the project management team, as part of the client organisation, engaged the challenge of heterogeneity.

Actor analysis

Figure 2 depicts the stakeholder landscape of the hospital planning and design project, which we developed based on the narrative. The Executive Board (EB) of the UMC is the project's client and senior responsible owner and thus has a central position for the project. From this position, stakeholders are characterised as either internal (within the UMC and formally under EB authority), found on the left-hand side of the dotted line, or external, found on the right-hand side. The numbers behind certain actors indicate they are being analysed in our case study; for clarity, these numbers have been used throughout figures, tables, and the narrative in the supplementary material. After the SB had been produced, a project organisation for the new UMC was formed in 2001; in this study, it was represented by its project management team (PMT). The project management team (PMT), particularly its project director (PD), received the mandate from the executive board (EB) to further develop and execute the planning and design project. In 2004, the PMT underwent further development to spearhead the design process, culminating in the final form of the restructured project organisation. Figure 4 illustrates the evolution of project leadership by the EB and PMT over the three phases.

External stakeholders

External stakeholders range from neighbouring organisations and individuals to potential future patients and institutions involved in planning capital investments for healthcare facilities, as well as their design and construction. Firstly, the University, which the UMC is related to, and the Ministry of Education and Science, which funds the University and partly funds the UMC for its educational role. Secondly, the Ministry of Health, Well-being, and Sports (VWS) and the Dutch Centre for Health Assets (DuCHA) (1) were responsible for controlling the level of capital investment until 2008, which affected the scope and quality of the nation's healthcare facilities. Thirdly, the Municipality (2), which had a stake in the choice of location of the new hospital and in all urban planning aspects (Masterplan, logistics, parking, etcetera). In 1998, the UMC had over 10,000 employees, making it one of the largest employers in the city, with a campus located on the edge of the town centre. And fourthly, the formal Client Board for all the Dutch UMCs (CBU) (3). In this study, stakeholders (1), (2), and (3) represent external institutions that have a governing role. Finally, the architectural, engineering, and management consulting companies (4) that contribute to planning and design are considered external stakeholders, together with the construction firm that was tendered in 2008-2009. This study does not include the construction firm, as its contract started in 2009. Stakeholder Group 4 represents external organisations with a creative (design-producing) role in the project.

Internal stakeholders

Internal stakeholders range from the UMC's Supervisory Board and students to the Formal Advisory Bodies (i.e., Works Council, Medical Staff Board, and Nursing Advice Board) (5) that are part of the UMC's governance and that must be consulted when decisions of a

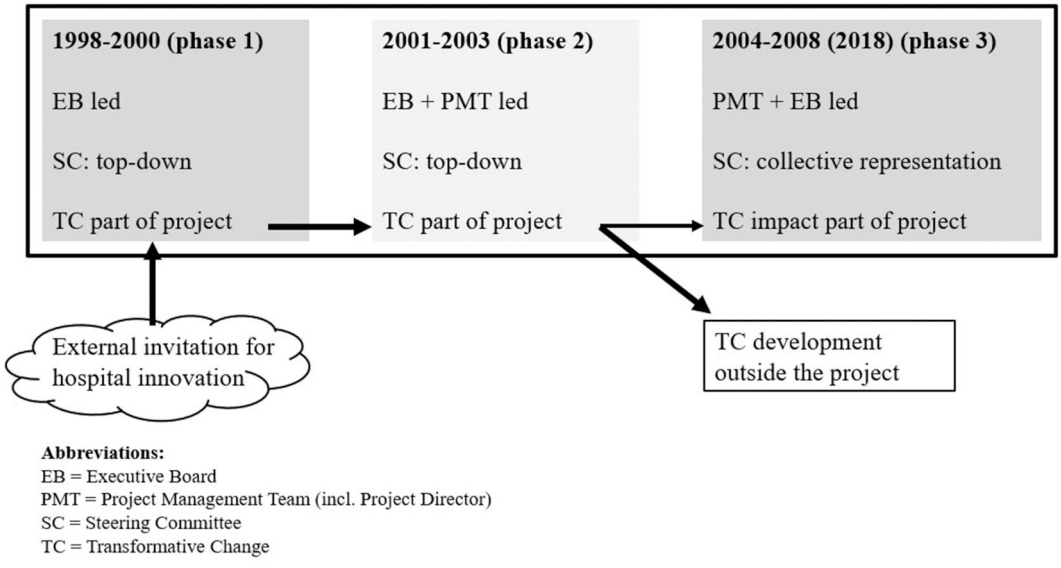


Figure 4. Transformative Change-related project dynamics characterizing three distinctive phases.

certain impact on the organisation are proposed. The individual clinical departments report directly to the EB, as do the directorates that are part of the Business Services (6). In the Dutch context, the UMC employs all physicians, thereby establishing a clear hierarchy. The chairs of the clinical departments are responsible for care, education, research, and departmental budgets. Managing directors provide support to a group of clinical departments in their operational management activities.

A final group of internal stakeholders is identified in the various in-house experts (7) engaged as co-producers of a "good new hospital building." These experts have a statutory role in safekeeping policies and regulations, e.g., concerning occupational health and safety (OHS) and infection prevention and control (IPC). The term "in-house experts" also includes building (services) maintenance, facility management, and cleaning. The EB itself often mandates these experts to uphold the policies they set on their specific subject. This implies in-house experts also have a role in quality-assuring design solutions. Stakeholder groups (6) and (7) can be seen as having co-producing roles in the project.

Project leadership dynamics

In this project we found a predominantly top-down approach, being strongly led by the EB and from 2001 onwards by the EB and a project director (PD) and wider PMT. However, in 2004 and related to dynamics in the positioning of the UMC's transformative change effort, the EB called upon clinical departments and directorates to take on a collective role as joint co-producers of a "good new hospital," which they had to combine with another stakeholder role, such as that of end-users engaged in decision-making processes for their own departments or services. The collective role of the clinical departments and directorates took the form of representation by department chairs and directors in the project's Steering Committee (SC), alongside the EB and the PMT. This SC was first established in 1998 and guided the project until the final relocation in 2018. Since 2004, representatives in the SC were assisted by so-called "user coordinators," roles at management level that were instrumental in connecting the PMT and design team with specific and knowledgeable end-users, as well as in collectively developing the new ways of working (generic work processes) to inform the design templates used.

Actor-related engagement characteristics

Table 1 summarises the actor-related characteristics such as role(s) in decision-making, motive(s), and power and trust found in the seven stakeholders from our stakeholder landscape (Figure 2).

External stakeholders with a governing role

The institutional context in the Netherlands dictated that governmental approval was needed for capital investments in healthcare facilities until 2008. The Ministry of VWS and DuCHA, its advisory body on such capital investment projects, feature as important decision-making stakeholders at a strategic level. Here the scope of the project (in sqm and euros) was negotiated, following an invitation from VWS to develop "the UMC of the 21st century" and to innovate services and apply medical process redesign. Yet, at the same time, the government had the power to delay decision-making. This power was first exercised in 2000 when the initial proposal for the new hospital, developed under an interim CEO, was not stalled, awaiting the appointment of a permanent Chief Executive Officer (CEO). Later, the hospital had to wait another two years for the submitted SB to be approved. The private opinion of the Minister of VWS on the preferred size of hospitals featured in this postponement, and only after a change in government did the necessary approval come through. These examples illustrate the formal relationship with these governmental bodies, with an uneven distribution of power and the influence of socio-political dynamics. Interaction took the form of negotiations rather than collaboration. Stakeholder engagement entailed an exchange of formal (draft) documents.

At the municipal level, socio-political dynamics exist as well. Early on, the SB and associated urban planning aspects were discussed between EB and City Council (with the responsible alderman or even the mayor) and facilitated by civil servants. However, both parties were well aware of a change of municipal focus following local elections in 2002, as illustrated in a quote from the minutes of a meeting at the tactical level (PD and director of Urban Development): "*Now the alderman is no longer participating in this meeting, the UMC is not represented at EB-level either. The UMC is somewhat uncertain about expectations of the new City Council. (*The director of Urban Development*) states that the new alderman has delegated responsibility for this development to the municipality's official services.*" This quote not only illustrates the multi-level characteristic of both organisations, with actors engaging at both strategic and tactical levels, but also shows that organisations

Table 1. Actor-related characteristics such as role(s), motive(s), power and trust found in stakeholders in a hospital planning and design project.

Stakeholder/Perspective	Role in decision-making	Motives	Power	Trust
Outside UMC				
(1) Ministry of VWS/DuCHA	(advising on) approval by national government on scope (sqm/€) and Strategic Brief (SB)	*Hospital innovation*; cap on costs through capacity; expertise on health facility planning & design	High: based on institutional context	Deterrence based
(2) Municipality	Approval by local government on location, all urban planning issues and regulatory matters	Facilitating economic "power house" in city centre; furthering healthy and sustainable building policies,	Medium: based on institutional context (multi-level playing field)	Relation based
(3) Client Board UMCs	Approval on SB and consultation on high-level policy documents based on governance code permanent organisation	*Interest of current and future patients*	Medium: based on governance permanent organisation	Relation based
(4) Architect, engineers & management consultants (a)	Co-creating the SB, campus masterplan studies and all design related activities	Creating a good new hospital building; economic and professional value of the project	Medium: based on project governance	Knowledge & relation based
Within UMC				
(5) Formal Advisory Bodies	Approval on high-level policy documents (such as SB, Technical Program of Requirements (tpor)); representation in Sounding Board	*Alignment with other organizational ambitions and values*; ambitions of professionals and staff	Medium: based on governance permanent organization	Relation based
(6) Clinical departments and directorates	Representation in decision-making & co-producing processes from a collective and individual perspective; representation in Sounding Board	*Creating a good new hospital (including developing new ways of working to inform programming and design)*; influence in shaping future workspaces	High: based on project governance	Knowledge & relation based
(7) In-house experts	Co-producing & quality-assuring processes	Adhering to all regulatory measures & (shared) safe, healthy and sustainable building qualities; creating a good new hospital building	High: based on governance permanent organization (regulatory matters) & project governance	Knowledge & relation based

Use of *italics* to indicate transformative change element(s).

apparently mirror their representation during stakeholder encounters. They reserved engagement at the strategic level for escalation purposes, as issues might arise in a relationship that is also transactional in nature. Indeed, with the UMC as one of the largest employers in the city and being seen as an economic powerhouse, the relationship with local government can be characterised as being a multi-level playing field with a variety of topics being encountered.

The roles of civil servants and project representatives in the Municipality-UMC stakeholder relationship can be described as pluralistic. While there are moments of "us" in collaboration to achieve an overall landscape design, specific interests from both organisations' ("them") are never far away, especially when decisions with financial implications must be made. The involvement of a senior project manager from the municipality, acting as secretary for the formal meetings at strategic and tactical levels, as well as the PS from the UMC throughout the study period, was helpful in navigating political dynamism, shared and specific interests, and joint and coordinated PR opportunities. Here a more reciprocal relationship emerged, based on similar roles and commitment to value creation for both organisations, and respecting the "us"- and "them"-concept, previously identified by Tampio et al. (2022).

Within the UMC's governance and the project's stakeholder landscape, the CBU is one of the statutory Advisory Bodies of the EB, despite its independent and external position. This formal role of the CBU implied that interactions with this stakeholder took place at a strategic level, with an EB member present whenever the PMT consulted the patient representatives on the conceptual development of the project. In the interaction with the CBU, we found that extra measures were taken to facilitate a collaborative relationship with this non-professional and often marginalised stakeholder. Documents were presented accompanied by a "patient paragraph," highlighting predefined aspects of interest to the CBU. Quoting a CBU member on this empowering feature from

minutes of a biannual meeting in 2004: "*The paragraph resonates its aim to make the (document) assessable for committee members and allows them a choice in their aspired level of immersion in the subject.*"

External stakeholders with a creative role

The relationship between the PMT and the architects, engineers, and other consultants being part of the planning and design team has, given the size and duration of the project, matured over the years. While the consultants developing the SB were involved for only two years at a strategic level, directly taking their brief from the EB, the architects and engineering consultants commissioned for the project in 2001 have stayed with the project for up to fifteen years. A constant core from the PMT collaborated with these co-creating partners at the tactical level. This also led to a collective understanding about the project's features and transformative change ambitions. In the evaluation interview in 2018, the lead architect reflected on the length and depth of the relationship with the PMT as their client: *"Continuity, which is something we take with us to other projects. And regardless of the question, whether your aim for that from a commercial interest or a content-related perspective. To have continuity: be it one and the same PS or another role that encompasses the commitment to a programme. And lengthy involvement: to create overlap in knowledge bearers. That is, given an investment of this size, something you would wish for other projects as well."*

Internal stakeholders

The phenomenon of pluralism in stakeholder roles was encountered while analysing the relationships between EB and PMT with individuals from clinical departments and directorates who also served on FABs. At the strategic level, from 2004 onwards, we observed the collective role of clinical departments and directorates in guiding the development of "a good new hospital," e.g., by being represented in the project's SC, while at the tactical level they also had a role as co-creating end-users. The EB member leading the project from 2000 to 2006 reflects on the engagement and emerging understanding between clinicians and managers involved in the project and the PMT because of frequent meetings and joint study tours: *"We had some fine discussions where more people started to understand each other much more. They started to look outside, eager to know how the rest of the world dealt with these issues. It also meant that the people from the PMT became visible for them, something that I had not seen before nor since in project organisations involved in redevelopment. That a project organisation stays anonymous for the clinical departments. And as we saw them often, clinical departments would get an understanding of what mattered for the PMT in developing the project and the other way round, what is crucial for patient care. This understanding of the concerns of the project organisation would be a non-starter in any other hospital."* This quote from a 2020 evaluation interview highlights the reciprocal understanding between internal stakeholders and PMT, emerging from an established and sustained relationship, built on frequent and intense engagement.

Process-related engagement characteristics

The stakeholder map (Figure 2) and the explanation in the section above already provided insight into the heterogeneity of stakeholders. Table 2 shows who led the engagement from the perspective of the UMC. We observed that some stakeholders were directly engaged at a strategic level by the EB, and others primarily interacted with the PMT at a tactical level. This applies for both stakeholders outside the UMC as within the UMC. Table 2 also gives an indication of the frequency of interactions. As one would expect, this intensity varies over stakeholders and project phase. It also varies in duration and sees relationships being built and maintained, but also disengagement processes, e.g., with the national government, once permission to develop the project had been obtained.

Leading and coordinating the engagement

Table 2 shows that the appointment of a PD and the PMT in 2001 is accompanied by a change in the locus of engagement: from all stakeholder engagement being orchestrated at a strategic level, it develops into engagement at a tactical level. The PD would represent the project with various internal and external stakeholders, while the EB continued to be in contact with stakeholders that were part of the UMC's governance (such as the Formal Advisory Bodies and the clinical departments and directorates). This introduced coordination issues related to misalignment of information, particularly as stakeholders could be multi-level entities as well. An example of this phenomenon is the Municipality, where meetings with the alderman took place at a strategic level, while meetings with (high-ranking) civil servants took place at a tactical level

Table 2. Process-related characteristics such as locus, intensity and type of engagement found in stakeholders in a hospital planning and design project.

Stakeholder/Perspective	Locus of engagement	Intensity of engagement	Type of engagement*
Outside UMC			
(1) Ministry of VWS/DuCHA	strategic level; after 2001 preparations on tactical level	Topical; more frequent in period 1999–2003 and less frequent after 2004	Negotiate; transactional; one-dimensional (project focus)
(2) Municipality	strategic level; after 2001 multi-level	Quarterly meetings till 2000; afterwards more topical (with varying frequencies)	Negotiate & co-create depending on topic (multi-dimensional); transactional (reciprocal) & relational (continuity)
(3) Client Board UMCs	strategic level	Twice yearly for the entire period; 2002–2004 more frequent as part of Expertise group Safety work	Consult & co-create; empowered; one-dimensional (patient focus)
(4) Architect, engineers & management consultants	strategic level; after 2001 mainly tactical level	Till 2001 weekly meetings and frequent report outs to Executive Board (EB); in period 2001-2003 in various working groups and more formalized in 2-weekly meetings; after 2004 also frequent in working groups designing with end-users	Co-create; transactional (tendered work) & relational (continuity); one-dimensional (project focus)
Within UMC			
(5) Formal Advisory Bodies	strategic level	Formal consultation on specific topics; more informal updates during periodic meetings with EB and in Sounding Board	Consult & inform; representatives with pluralistic roles; multi-dimensional (project & change focus)
(6) Clinical departments and directorates	strategic level; after 2001 multi-level	Formalized representation in Steering Committee (8 times/year) and Sounding Board (4 times/year) for the entire period; 2-weekly for user-coordinators from 2004 onwards; after 2001 topical in working groups	Consult & co-create; representatives with collective and end-user roles (pluralism); transactional (project & change focus) & relational (continuity)
(7) In-house experts	tactical level	Formalized in Expertise group Safety for period 2002-2004; more topical afterwards in quality assuring designs for the entire period	Consult & co-create; representatives with collective and individual expertise roles (pluralism); transactional (project & regulatory focus) & relational (continuity)

*The type of engagement is the summary derived from the stakeholder description in the supplementary material.

(from 2001 onwards). As is customary in governmental and municipal institutions, directors and civil servants are often present during meetings with those politically responsible. The UMC also used a "linking pin" between both levels with the attendance of the PS, assisting both the EB and the PD during stakeholder encounters at their respective levels. This emerged as a strategy to align and coordinate simultaneous engagement with stakeholders at distinct levels.

Types of engagement

In Table 2 we have also summarised the type of engagement encountered in the engagement process with the seven stakeholder(group)s, derived from the descriptions in the supplementary material. We found differences between stakeholders in their focus, ranging from a clear and one-dimensional patient focus for the CBU to a multi-dimensional focus with a multi-level stakeholder such as the Municipality. Municipality and UMC have multiple dealings, which creates room for a transactional approach, yet the relational aspect is never out of sight, and transactions can have a reciprocal nature.

The municipal healthy and sustainable building policy somewhat overlapped with ambitions within the UMC's Expertise Group Safety (EGS), a group of in-house experts specifically established for the project. Following a collaboration to develop design notices and to prioritise suggested design principles and solutions, the project's Technical Program of Requirements (TPoR) was established. This collaboration of the Municipality and EGS (between 2003 and 2005) was joined by a member of the Client Board UMCs (CBU) with a background in interior design, thus adding a professional and dedicated patient perspective to this co-creation effort. Drafts of design notices would be discussed by the PMT within a wider team of EGS and municipal experts, including the CBU member. This can be seen as a stakeholder engagement strategy where a tactical collaboration between internal and external stakeholders added value during the early planning phase. Additionally, it shows how often marginalised stakeholders, such as patients and non-medical staff, were engaged in co-creating qualitative standards for the project. The opportunity for direct patient engagement emerged in this collaborative effort and was acted upon, in line

with the patient focus that was at the heart of the UMC's transformative change ambitions.

Stakeholders and the transformative change setting

In Table 1 we have used italics to highlight elements associated with the transformative change setting at the core of this hospital planning and design project. With the invitation from the national government to develop the UMC of the 21st century and alongside a clear focus on patient-centredness from the CBU, we found that the FABs and the clinical departments and directorates were the key stakeholder groups in a setting where project ambitions encompass wider transformative change ambitions.

Dynamics in the project structure

In 2001, the PMT started out with the intention to incorporate the EB-established transformative change elements in the scope of the project, elaborating the "working differently" alongside the "building differently" following the "thinking differently" derived from the SB. The PMT recruited some dedicated in-house management consultants for this purpose. However, representatives of the clinical departments and the Medical Staff Board started to raise doubts in 2003 about these (organisational) change elements being part of the project's scope: how could a real estate department be in the lead for this strategic subject? The EB turned out to be receptive to this sentiment, and in 2004 the project and the SC were restructured, reaching their final structure. Quoting from the project's quarterly report-out to the UMC's Supervisory Board: *"In August the EB has decided on the adapted project structure and the description of tasks and responsibilities for both the "demand side" (laying with the future users) and the "supply side" (the real estate department with its team of consultants and designers) of the new hospital. (…) It has been formalised that the management consultants currently working on the "working differently" project and the logistics concepts for the new hospital within the Real Estate directorate will be transferred to the hospital's general team of management consultants (part of another directorate)."* Following this decision, the scope of the project was adapted to a more "regular" design and construction project. The PD who had been appointed in 2001 left the organisation, and the director of the Real Estate directorate took over as PD. Following this restructuring, the EB's responsibility for aligning project goals and transformative change goals became more prominent. The transformative change-related project dynamics have been illustrated in Figure 4.

Purposeful pluralism in stakeholder roles

The TPoR features as an example of a strategic policy document that had to be signed off by the FABs. This strategic policy document, like the SB in 2000, concerned the project's "building differently" elements and was seen to have a scope beyond the project itself (with its SC as the highest decision-making forum), and the UMC's governance had to be followed. This strategic character entailed that the EB needed formal approval from the Works Council (WC), the Medical Staff Board, and the Nursing Advice Board, as well as the CBU, to confirm the SC's guidance. Formal decision-making at a strategic level added weight to the building qualities that the PMT wanted to apply to the project, some of which originated from the SB's transformative change goals.

More in general, to build the kind of understanding mentioned by the EB member in the quote above, the FABs were invited to nominate representatives for the project's Sounding Board. This Sounding Board enabled engagement of employees with a role in the UMC's governance with the project and in a reciprocal manner to create well-informed ambassadors for the project within the FABs. This engagement strategy was found to be useful to align the project with other transformative change goals and projects of the UMC but was also useful for individuals taking on the role of "use-coordinator" for their medical department. One of these user-coordinators states in an evaluation interview in 2018: *"I was a member of the Works Council. This meant I was well informed about the project and the transformative change in work processes. The EB used to inform the WC about these things."* As this user-coordinator was not only a WC member but also participated in the project's Sounding Board, it is also an illustration of the pluralistic roles individuals in connection with the project can perform and the nodes in stakeholder relational networks connecting the permanent and temporary organisation, as identified by Eskerod and Vaagaasar (2014).

Perpetuating transformative change goals

The new EB lead for the project, appointed in 2007, was well aware of the transformative change elements incorporated in the project, informing the programming and design at the time. He asked the PMT to summarise the project's guiding principles (from the

SB, dating from 2000) and accompanying building qualities (from the TPoR, dating from 2005) in a new strategic policy document to be signed off by the SC and the FABs. This was his way of perpetuating the commitment of the permanent organisation to the definition of the good new hospital that the project was developing the built environment for. Thus, this forms a clear example of an engagement strategy used by the EB to deal with the interorganisational socio-political dimension, coming with a need for renewed alignment of project and organisational goals.

Engaging heterogeneity

Tables 1 and 2 provide insights into the characterisation of the seven stakeholder(group)s. While there might be similar actor- or process-based characteristics, the focus differs for all these groups and, consequently, the emerging, unique type of engagement by EB and PMT of each group. In the previous sections we already mentioned some of the engagement strategies that emerged to deal with the pluralism and dynamism associated with the seven groups over time. Moreover, we found that the EB was immediately aware of the importance of the engagement of internal stakeholders, e.g., by appointing the chair of the Medical Staff Board in the SC in 1998 and setting up the Sounding Board with representatives of the FABs but also with "independent" employees from various clinical departments and directorates. This inclusive approach to internal stakeholders underpins that stakeholder engagement was seen as being an integral part of the planning and design project; it acknowledged the need for well-informed employees, able to act as project ambassadors. It also marks the efforts taken to involve less powerful stakeholders, for instance, in the continued and empowered engagement of the CBU, a stakeholder at the heart of the hospital's transformative change goal of patient centredness.

Developing a community of practice

Figure 4 illustrated the shift in locus of engagement from being top-down, EB-led, to the engagement being jointly managed by EB and the PMT, from 2001 onwards, when a PD was appointed. The PD's brief was to develop the project based on the SB while this Brief itself was still being assessed by the national government. At the EB's request, the PS was seconded to the PD to develop the project and become part of the PMT. This move and the EB's further strategy to invest in an in-house PMT, building up knowledge and expertise within the hospital organisation to shape and guide the project, resonate with the value of continuity mentioned in the quotes from the lead architect and the EB member. It started an in-house community of practice. Obviously, help from external consultants, engineers, and designers was acquired, but this EB-strategy reflects the strategic importance attributed to the project. The quote from the lead architect recognised this as a unique situation, related to the size of the project and its duration, and an approach not regularly seen in their other hospital projects. In the Netherlands it is customary to depend on external project consultants and managers, referring directly to the EB (or corporate real estate director), a practice also seen in the first two years of this project.

Coordinating stakeholder engagement

Between 2001 and 2003 the formal negotiations with external stakeholders on the national level continued to be conducted under direct supervision of the EB, while interactions with the local external stakeholders were repositioned with the PD. The four-weekly SC meetings and the biweekly meetings between PD and EB lead for the project were seen to be important fora for the necessary coordination of stakeholder interactions. The PS being (until 2003) also part of the EB staff facilitated this coordination of stakeholder interactions as well. It acknowledged the value attributed by the EB to this role and associated competencies: providing continuity for the project entering a new phase, as well as establishing agency and stewardship within the PMT of the UMC's governance, decision-making processes and transformative change goals. This combination of positions added to the PMT's sensitivity to the project's socio-political environment and empowered the PS to act as a boundary spanner and knowledge broker. The PS's involvement in the development of the SB for the project as well as her awareness of the UMC's other strategic or transformative change goals was instrumental in transferring both content and process information to the PMT. Utilising the PS's network, background and experience with stakeholder engagement, the PS's responsibilities within the PMT incorporated dealing with established and emerging stakeholder engagement as a dedicated role. The consistent and wide distribution of minutes from meetings with stakeholders was developed to align information within the project and add to the intended transparency of decision-making.

Table 3 summarises the strategies and competencies that emerged between 1998 and 2008 to engage

Table 3. Emerging strategies and competencies from engaging heterogeneity.

(Project) stakeholder engagement management

Strategies

- For multi-level organisations: mirror representation to retain room for escalation purposes; combine support roles for encounters at strategic and tactical level
- For marginalized stakeholders: empower to be part of more informal fora or collaborative efforts, especially when representing a transformative change goal
- For politically governed stakeholders: establish strategic project values at strategic levels; reaffirm when appropriate
- For transformative change goals: co-create as a way to foster commitment (thought leadership) and alignment; utilize pluralistic stakeholder roles
- For transactional relationships: compensate negotiations or "wins" with social or PR gestures
- For internal stakeholders: promote immersive stakeholder engagement and PMT visibility to create better and reciprocal understanding of core values, and to "thicken" trust

Competencies

- Valuing and ultilizing in-house project team members, with knowledge of the organisation's governance
- Identifying and aligning project goals and wider organisational (change) goals
- Identifying and using opportunities for stakeholder collaboration, co-production and co-creation to add value to the project
- Building and maintaining a strong and visible bond between project "owner" and (mandated) project management
- Boundary spanning and knowledge brokering between strategic and tactical level, as well as between influential and marginalized stakeholders, as well as between creative and non-creative professionals
- Advocating and ensuring transparency in decision-making and information sharing

the pluralism and dynamism in stakeholders and the resulting heterogeneity in stakeholder relationships in this case study. These strategies and competencies refer, on the one hand, to engaging heterogeneity in certain settings and, on the other hand, to managing the alignment between project goals and wider transformative change goals. The in-house position of the PMT and the developed community of practice are a third factor of note.

Discussion

Our research question focuses this study on the engagement of heterogeneity in stakeholders and stakeholder relationships in the front-end phase of creating a new hospital. We retrieved stakeholder voices, interests, and interactions from evaluation interviews and digitally archived minutes of a Dutch UMC's planning and design project. These findings allowed us to build a picture of both actor- and process-related characteristics in stakeholders shaping their unique and dynamic relationships with the UMC's EB and PMT. At the time, the PMT lacked knowledge of all the currently available stakeholder engagement literature and struggled to overcome the challenges they faced. However, a thorough analysis of their efforts, strategies, and competences revealed emerging processes. These elements, presented in Table 3, reveal important insights to be considered by other project organisations and project managers establishing their governance or seeking to implement a dedicated stakeholder engagement role within their PMT to engage heterogeneity in stakeholders and stakeholder relationships. Additionally, transformative change-related project dynamics were uncovered at the level of collaboration between EB and PMT in leading the project, shaping its scope and structure, and adding to the coordination needed for stakeholder engagement, as presented in Figure 4.

This section discusses three key elements from our findings: (1) engagement strategies; (2) alignment of project and wider goals; and (3) the in-house position of the PMT, before relating them to our overarching research question on engaging heterogeneity. Finally, this section considers the study's strengths and limitations.

Engagement strategies

Stakeholder engagement literature often assumes that PMTs know beforehand who all the relevant stakeholders are, providing tools to analyse them and advice on strategies to adopt. For healthcare organisations, the identification and involvement of relevant stakeholders may depend on their novelty or maturity when dealing with front-end planning and design activities (Tzortzopoulos et al. 2006). The UMC's EB in our case study dealt with the UMC's novice character in an emerging mega-project by engaging experienced management consultants (well known to the key external stakeholders) while the Strategic Brief was developed between 1998 and 2000. Furthermore, upon the establishment of a PMT in 2001, the EB ensured the transfer of knowledge and stewardship of the project's grounding documents, organisational governance, and stakeholder engagement strategies for both internal and external stakeholders. This showed their awareness of the need for boundary spanning between the permanent and the temporary organisation, at the same time communicating a strong commitment to the transformative change goals encompassed in the project. This scenario resonates with a Finnish hospital project advocating lean design approaches to involve important in-house

stakeholders in facility design and thoroughly orient them to new work environments and work processes (Reijula et al. 2016).

External socio-political dynamics can necessitate the adaptation of engagement strategies, regardless of the maturity of the PMT. For instance, with the Municipality, we saw the engagement strategy being adapted when this multi-level stakeholder decided to halt the established engagement at the strategic level, following local elections and a resulting shift in the City Council's priorities. Understanding the phenomenon of mirroring engagement levels, the UMC also adapted engagement to the tactical level, reserving the strategic level for escalation purposes. This finding concurs with the suggestion that PMTs need to adapt their strategies over time and use a PDCA cycle to align stakeholder engagement activities and strategies within the dynamism associated with complex projects (Lehtinen et al. 2023).

Alongside the previously described reasons for adapting engagement strategies, we identified an additional cause related to the project's transformative change goals. In recognition of the patient-centred focus as a core element of the UMC's transformative change goals, the Client Board UMC was not only engaged but also empowered in its formal governing role. Relating to their special interests in a "patient paragraph" to accompany formal documents, was such an empowering practice. When the opportunity arose, this often marginalised stakeholder was invited to actively co-produce and prioritise the building qualities in the TPoR, directly collaborating with in-house experts and design team members. Within the Dutch context this was an innovative approach and turned out to be another practice that stressed commitment to valuable stakeholder input.

Alignment of project and wider goals

Previous research has highlighted the role of the CEO in delivering successful project implementation, given their unique position of authority to articulate the strategy, vision, and goals of the project (Zimring et al. 2008). But, as a change in a hospital's built environment is often accompanied by organisational change, project ownership cannot be reserved for the highest management level alone. Various authors have stressed the importance of early and enduring engagement with internal stakeholders (including end-users) as being essential to promote ownership for such change (Collinge 2016, Pomare et al. 2019).

Figure 4 illustrates that the UMC's EB was very hands-on in the pre-design phase of the project. In 2001, the EB reiterated its commitment to a successful project that extends beyond the built environment by investing in capacities and capabilities within an in-house PMT, aligning with the UMC's broader transformative change ambition. This approach facilitated the development of a community of practice focused on the project, allowing members to learn on the job and acquire essential knowledge throughout the project's lifespan, particularly regarding how to engage with diverse stakeholders and multifaceted relationships. The establishment of a dedicated stakeholder engagement role within the PMT predates the recommendation to that effect for big public infrastructure projects within the Netherlands (Eskerod & Huemann 2024).

It appears that this approach with an in-house PMT favours the first-hand understanding of the complexity of healthcare organisations over knowledge and skills in project management in construction projects (Bresnen et al. 2017). Or, rather, it recognises the added value of in-house PMTs with diverse backgrounds and competences. The UMC acquired specific knowledge on project management in the early phases of the construction project by bringing an experienced PD into its employ. Additionally, the selected design team provided considerable knowledge and experience in that field. Similarly, the EB showed continued ownership as it had the project's goals (and design principles) reaffirmed in 2007. The new EB lead for the project formally sought this renewed commitment from both internal stakeholders in co-producing roles and from the hospital's Formal Advisory Bodies, making sure "us" (EB and PMT) and "them" (internal stakeholders) remained aligned.

The project ownership as expressed in the EB's course of action seems crucial in the alignment of project goals and the UMC's transformative change goals. Based on the UMC of the 21st century's transformative change goals, we saw the implementation of 100% single-occupancy inpatient rooms, aiding patient-centredness as well as a microbial safer hospital environment, among the innovations planned and designed for. The phenomenon of understanding the often "hidden world" of client organisations in relation to the level and ownership of innovations was also studied in capital planning projects with the United Kingdom's National Health Service (Barlow and Köberle-Gaiser 2008). Our findings seem to concur with Barlow's study in stressing the necessity of clear client ownership to promote innovation. This phenomenon was reflected in the EB member's remark on the visibility of the PMT to the organisation and the immersive engagement EB and PMT promoted for

internal stakeholders. It made internal stakeholders more receptive to innovations. Similarly, attributing a collective responsibility for "a good new hospital" to representatives of the clinical departments and directorates underpinned the EB's awareness that ownership of the project and wider goals should be shared with internal stakeholders. Contrary to the setting found in other Northern European health systems, where regional authorities or consortia develop projects on behalf of hospitals, the Dutch context positions project ownership directly at the hospital and UMC level. A more detailed comparison of innovation levels in facility planning and design projects across health systems would require further research.

In-house position

A unique attribute of our case study seems to be the added value of the in-house position of the PMT. First, the in-house position marks the UMC EB's commitment to the project's result. The project outcome surpasses the project management abilities, ensuring the delivery of a building that is suitable for its intended use, both on schedule and within budget. Examples of this commitment and added value were found in the time invested in joint study trips, crucial for a better understanding between PMT and UMC employees, building relationships, and "thickening" trust. Second, the in-house position resulted in a rare proximity between PMT and UMC end-users during the project's front-end phase. Often, this proximity seems to be reserved for a later phase, when end-users must be prepared for relocation. Proximity between an in-house PMT and the client organisation has been advocated as a useful coordinating tool during the final project phase of a newly built hospital (Aubry et al. 2011, Barlow et al. 2016). Third, recruiting not only project management professionals to the project as UMC employees but also seconding the deputy EB Secretary to the newly formed PMT underpinned the strategic character of the project to the UMC and supported its visibility within the organisation. Fourth, the in-house position enhanced the PMT's awareness of and ability for inclusive and adaptive stakeholder engagement. Set in a community of practice, the PMT boosted project ambassadors within the UMC and fostered enduring, collegial relations with in-house experts in quality-assuring design principles and designs. This is especially important in a UMC setting where not all 10,000 employees can be engaged in a project that will, at relocation and given its transformative change elements and associated innovations, affect most of these employees.

We suggest more research should be done on the timing of establishing in-house PMT structures in hospitals embarking on facility design projects. As a community of practice, an in-house PMT can develop a knowledge base on project delivery in the construction field, as well as on the complexity of healthcare organisations (Bresnen et al. 2017).

Recommendations for engaging heterogeneity

Above, we discussed the three key elements our study about engaging heterogeneity in stakeholders and stakeholder relationships. The consideration of these elements, emerging from practice and related to previous research findings, leads to the following recommendations for engaging heterogeneity:

- Awareness of dynamic patterns in stakeholders and stakeholder relationships necessitating stakeholder engagement strategies to be adaptive over time, to continue to be appropriate and fitting for different stakeholders as well as for emerging and changing stakeholder relationships.
- Alignment of project and wider goals benefitting not only from clearly established ownership of project- and associated change pathways, but also requiring strong and dedicated coordination of stakeholder engagement efforts between permanent and temporary organisations.
- Early establishment and in-house positioning of the PMT with the potential of facilitating management of stakeholder engagement within the context of transformative change ambitions. The proximity between the project owner and PMT offers opportunities to foster the development of a community of practice and promote enduring collegial relations with internal stakeholders.

Strengths and limitations

A strength of our research is the external validation of our findings in the audit report from the consultancy firm evaluating the project organisation in 2019. The consultants concluded: *"The following elements contributed to a successful project: (1) there was a clear and decisive project organisation, a comprehensive project governance and decisive decision-making; (2) long-term commitment from key figures in the employment of the hospital for the duration of the project; (3) learning capacity within the project organisation; (4) the project organisation's ability to cope with several major changes; and (5) proactive issue management and possible risks for*

stakeholders outside the direct project scope." While this audit was conducted ten years after the period featured in our case study, it echoes elements from Table 3, underscoring strategies and competencies to provide continuity and to adapt to various sources of dynamism.

A limitation of our research is that it is based on a single case study, set in a particular institutional context. This setting has significant bearing on relationships within the stakeholder landscape and thus on the relations to be managed. Many of the studies we referred to, given their hospital setting, originate from Finland, where a collaboration between hospital practitioners and researchers has offered valuable insights from another institutional context. We recommend evaluating more case studies in different countries to enhance the generalisability of these and our own findings.

The first author was involved in the community of practice we have now reflected upon, which may have affected the study's objectivity. As discussed in the methods section, this previous position presents both advantages and disadvantages. Additionally, the last author was a member of the UMC's Works Council at the time of the front-end planning, experiencing the stakeholder engagement firsthand. His role was pluralistic, as he combined the governing role with that of the department chair and end-user of the newly built hospital. The second author was involved in conducting the 2018 evaluation interviews in a teaching capacity. This combination of experiences within the research team can be seen as mediating influences on this research having a mere ethnographic character. The involvement of these authors during the data collection period contributed to the discussions within the research team regarding this work, which is reflected in the abductive research process illustrated in Figure 3. We feel the contribution of this research to project research can also be merited as that of engaged scholars (and a reflective practitioner), studying a unique empirical setting within a specific project context, using interpretive research to analyse texts, communication and human interactions (Geraldi and Söderlund 2016).

Conclusion

In this study, we explored how heterogeneity was engaged in stakeholders and stakeholder relationships during the planning and design phases of a Dutch UMC with transformative change ambitions between 1998 and 2008. Reviewing the actor- and process-related engagement characteristics of seven distinctive stakeholder groups from this project's unique stakeholder landscape, we presented the various dynamics and often pluralistic roles, requiring adaptive strategies and capabilities from the project's leadership. The project's senior responsible owner, the UMC's EB, stressed the strategic value and their ownership of the project by investing in in-house capacity and capabilities in the project's front-end phase, establishing a community of practice tasked with the coordination of stakeholder engagement practices. This approach resulted in the early establishment of a PMT within the client organisation, which was strongly rooted in and continuously visible to the UMC itself. An approach that was deemed innovative, unique, and successful by internal and external stakeholders and confirmed as such by external auditors. Within this project's PMT, a dedicated role was defined to coordinate stakeholder engagement, with an eye for marginalised stakeholders. The practice in this project revealed emerging processes, summarised as strategies and competencies, creating, positioning, and fostering the adaptive and coordinating capabilities needed to engage dynamic patterns in stakeholders and stakeholder relationships. We saw ownership of the project and its transformative change ambitions well established and sustained in both EB and in-house PMT, reducing the "us" versus "them" dilemma identified in similar projects in other institutional contexts and healthcare systems. However, the transformative change element also unveiled a stakeholder relationship between EB and PMT in executing the project, with an additional need for coordination and alignment of impact pathways. External auditors valued the in-house position of the PMT as conducive to the team's ability to deal with changes over the lifetime of the project and with dynamics in a multi-stakeholder setting, resulting in a successfully executed megaproject. With the qualification of the external auditors, we feel that this case study bridges the gap between theory and practice in providing additional insights into what is already known about the dynamics and emergent nature of stakeholders and stakeholder relationships during a project lifecycle.

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ORCID

Liesbeth van Heel http://orcid.org/0000-0003-4799-3057
Clarine J. van Oel http://orcid.org/0000-0002-4959-2938
Paul W. Chan http://orcid.org/0000-0002-0609-4250
Alex Burdorf http://orcid.org/0000-0003-3129-2862

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