# Rethinking Construction

## Embedding Participatory Processes in Construction Practices


Aalborg University – Copenhagen
MSc Sustainable Cities
Bjørn Fuhr Høyer
Study no.: 20175644
June 2025

**Master's Thesis**

Aalborg University – Copenhagen
Department of Sustainability and Planning
MSc Sustainable Cities

June 2025

Bjørn Fuhr Høyer

**Title**

# Rethinking Construction
## – Embedding Participatory Processes in Construction Practices

**Supervisor**

Maj-Britt Quitzau

**Number of Pages**

84

*Front page image: Own photo.*

# *Abstract*

The construction industry is under growing pressure to support sustainable development, yet conventional construction processes are shaped by complex technical requirements, rigid linear workflow, short-term economic interests, limited stakeholder participation, and insufficient consideration of social aspects and user needs. This report explores how participatory processes can be integrated into construction practices and contribute to social sustainability in buildings through a case-study of Dreyers Kollegie in Copenhagen and Håndværkskollegiet in Roskilde. In both cases, the consultancy company Hele Landet facilitated comprehensive participatory processes to align project outcomes with needs of the users and the surrounding society. The theoretical framework consists of Actor-Network Theory and Susan Leigh Star's concepts of standardization and conventions. Through this analytical lens, the report examines how Hele Landet's participatory processes challenge conventional construction processes through roles, negotiations, and translation processes, and explores ways to address these challenges.

The findings show that interviewees recognize that participatory processes improve project outcomes and generate social value. However, integration of participatory processes faces challenges of standardized practices, economic efficiency, schedule pressure, technical focus, quantitative metrics, and conventions of construction phases. Consequently, social value is deprioritized, and participatory processes are sidelined. The report reveals that current construction processes lack formal mechanisms to ensure that participatory processes are prioritized throughout the construction process, which risks a social performance gap. As response, the report further identifies various strategies to meet these challenges and stabilize and institutionalize participatory processes, including embedding into metrics, well-designed facilitation, widespread communication of the value, structural backing through regulation, pilot projects, early establishing of participatory processes. These strategies enable reframed conventions and support embedding of participatory processes into construction processes. Thus, this report contributes to the call for further studies on socially responsive construction practices.

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# *Introduction*

The challenges emerging as a consequence of climate change, rising social inequalities, and economic instability highlight the necessity of sustainable approaches in urban development (European Commission, 2023a; UN, 2024). As sustainable development has become recognized as probably the most important objective of urban planning, various related sectors need to follow along (IPCC, 2023; Rydin, 2010; WHO, 2023). This includes the building and construction sector, which accounts for 37% of global energy-related carbon emissions (UNEP, 2023) and, by definition, plays a key role in building resilient and livable cities that integrate environmental responsibility, long-term economic stability, and social well-being. This is emphasized by the fact that people spend 90% of their time indoors (WHO, 2014), making buildings unconditionally fundamental in the ambition of social well-being and sustainable urban development (Kawamura and Brady, 2023).

## 1.1 Sustainable Development Require an Integrated Approach

Addressing the challenges of sustainable development separately has been widely criticized by planning scholars and institutions, arguing for an integrated and interdisciplinary approach facing multiple sustainability aspects simultaneously (Aylett, 2011; Caniglia et al., 2021; Innes and Booher, 2018; Lah, 2025; Newell, Dale, and Roseland, 2018; Randers et al., 2018; Rydin, 2010). Social well-being, environmental responsibility, and economic viability must be addressed together in urban planning and governance to receive long-term sustainability, efficient implementation, synergetic effects, and transformative change. Initiatives that focus on only one aspect often fail in the long run because sustainability challenges are complex and interwoven (Caniglia et al., 2021; Lah, 2025; Randers et al., 2018; Rydin, 2010). Often, unsustainable development includes a dominance of economic regards, whereas sustainable development integrates all three aspects (Rydin, 2010). As seen on figure 1, sustainable development can be perceived through the Russian Doll model with environmental aspects as the core that everything is founded upon, social aspects as the following layer, and economic aspects with its market processes on the outside (Rydin, 2010). This means that sustainable development involves economic activities that must exist not only within environmental boundaries but also within the constraints of society.

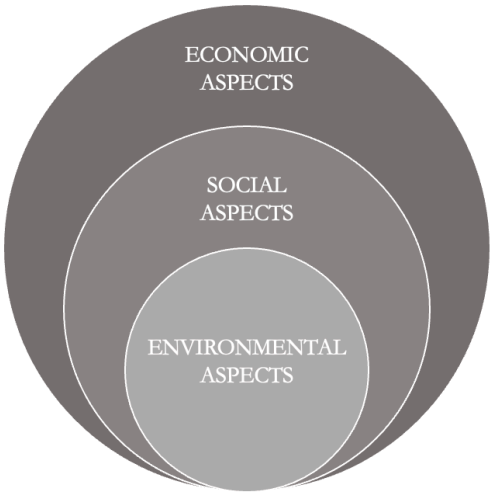



***Figure 1.*** *Russian Doll model of sustainable development based on Rydin (2010).*

### 1.1.1 The Doughnut Model Centering Social Aspects

One way to encompass the environmental, social, and economic aspects of urban development is with the increasingly widespread concept of Doughnut Economy. In this concept, Kate Raworth (2017) combines and connects the three aspects into one model, The Doughnut Model, presenting an alternative framework to traditional economic models and emphasizing the importance of including social well-being in all types of projects.

In Raworth's (2017) model, as seen on Figure 2, the ecological ceiling defined by the planetary boundaries forms the outer edge of the doughnut. The planetary boundaries indicate how much human impact the planet can endure before it becomes unbalanced and loses its resilience, leading to irreversible environmental changes (Stockholm Resilience Centre, 2023). Today, six of the nine boundaries have been transgressed and the planet is already out of balance, resulting in more extreme weather and the planet losing its ability to function as a habitat for humans and many other species (Richardson et al., 2023; Stockholm Resilience Center, 2023).

The inner edge of the doughnut is formed by the social basis which includes the minimum conditions for human well-being, such as housing, food, water, education, health, energy, community, and equity (Raworth, 2017), corresponding with the UN SDGs (United Nations, n.d.).

The space within the doughnut represents the safe and just space for humanity, where all sustainable development and economic activity must take place. Accompanying the model, principles that can lift the model from a theoretic framework to something that can actually be carried out in real life are

presented. These principles propose a need for new priorities and a radical shift in the way of thinking to avoid business as usual. Raworth (2017) advocates for shifting the focus from GDP and economic growth to meeting human needs and well-being within planetary boundaries, and emphasizes human values, equitable resource distribution, and systemic thinking in design and decision-making (Raworth, 2017; University of Leeds, 2023).

## 1.2 Environmental Challenges of Construction


***Figure 2***. *Illustration of the Doughnut Model (Raworth, n.d.).*

A large share of the pressure on the planetary boundaries comes from the built environment. In Europe, 50% of all extracted materials, 50% of total energy consumption, 33% of waste generation, and 33% of water consumption are related to buildings (Ecorys, 2023), and material consumption is growing globally and expected to rise fast (Kuittinen, 2023; OECD, 2019). In Denmark, the construction sector accounts for around 30% of the $CO_2$-emissions (CONCITO, n.d.) and the total use of the ecological resources and services is at a rate equivalent to what it would take four planets to regenerate in a year (Earth Overshoot Day, n.d., 2025) To reach the Paris Agreement, IPCC estimate a reduction of 80-90% of

building emissions is necessary (IPCC, 2018), and to meet the 17 UN SDGs, the construction industry also plays a significant role (CONCITO, 2020; United Nations, 2024). As built areas grow faster than population growth (Schiavina et al., 2022) and trends indicating a decreasing amount of people in households, which moreover has larger floor areas per person (Bierwirth and Thomas, 2019; UNDESA, 2019), urban areas are projected to expand to between two and six times their size by 2050 (Gao and O'Neill, 2020). Furthermore, currently, 16% of residences in Europe are unoccupied, while more than a third is under-occupied with excess space and unused rooms (Eurostat, 2018; FEANTSA, 2016), indicating inefficiencies in the design of the building or misalignments with intended use over time.

While it is possible to monitor progress towards planetary boundaries and to discuss potential methods and their effect, it can be argued that currently, based on the presented data, sustainable construction does not yet exist, aligning with the recent statement from the consumer ombudsman, declaring that there is no sustainable building in Denmark (Forbrugerombudsmanden, 2024; Kristensen, 2023). Every impact is pushing the planet in the wrong direction, and construction can only be considered sustainable once the global environmental conditions align with the planetary boundaries and ecological balance is restored. Moreover, sustainable building requires documentation of the climate and environmental impacts from cradle to grave through LCA, and the limit for these impacts depends on the proportion of Denmark's total carbon footprint allocated to the construction sector to remain within the Paris-agreement (Forbrugerombudsmanden, 2024; Kristensen, 2023).

Due to the lack of sustainable construction and the significant environmental impact of the sector, the possibility of a complete building stop has become a widespread topic in public debate. Various debaters often link this to the need for extending building lifespans through "smart square meters", promoting circular practices in construction, and challenging industry norms, habits and conventional management ap-proaches (Jensen, 2025; Lange-Danielsen, 2024; Modvig, 2024; Oien, 2025). CONCITO (2025) further states that Denmark is one of the most built-up countries in Europe and the land is a scarce resource, so it must be utilized more efficiently through more deliberate prioritization of building. Going further back, Næss (2001) already stated that the growth of the built environment obstructs achieving environment-tally and socially sustainable urban development. Debaters are also supported by Kuittinen (2023) arguing that because of the resource-heavy construction sector, a new approach for construction is necessary where building new is avoided to the extent possible, and Ecorys (2023) stating that meeting the climate objectives set by the *European Green Deal* (European Commission, 2020a), *Circular Economy Action Plan* (European Commission, 2023b), and *Renovation Wave* (European Commission, 2020b) requires a fundamental transformation of existing con-struction practices. Vind (2024) supports this, calling for systemic change and a cultural shift towards learning, innovation, and collaboration across sectors. Thus, when building new, there is a need to be more conscious and reflective of what is built, thinking it through more thoroughly.

Constructing buildings with circular principles such as longevity, durability, and reusability in mind will significantly reduce resource con-sumption as more functional design minimizes the need for costly and carbon-intensive renovations and retrofits (Ellen MacArthur Foundation, 2015; Kuittinen, 2023; Sanoff,

2000). However, building-related $CO_2$-emissions are currently calculated based on a projected building lifespan of only 50 years, which may unintentionally lower the quality and longevity of buildings (Bygningsreglementet, kap. 11, §297, stk. 2, 2022; Christiansborg, 2023). This short-term perspective on building design can lead to inefficient resource use and premature demolition, as seen in Denmark with the recent Ghetto Law which encourages municipalities to tear down buildings to solve social issues, resulting in overall poorly managing of the material resources and potential of the buildings, and subsequently municipalities looking towards multifaceted, social, and environment-friendly solutions instead (Montgomery, 2022; Regeringen, 2018; Høyer et al., 2024).

Reducing environmental impact in the long run requires that buildings are designed to endure over time – not only in terms of construction but also in functionality and architectural quality, prolonging the service life of the building, ensuring flexibility throughout its use, and facilitating reusability afterward (Kuittinen, 2023). Kuittinen (2023) adds that as there is still economic incentive to build new, rethinking the sector may not support the business models of companies that depend on constant growth in the construction sector, but a shift in the priorities and values of society, policy frameworks, and business models is needed to operate within the ecological limits.

## 1.3 Social Sustainability in Construction

As explained previously, the economic, environmental, and social challenges are inter-connected and addressing social well-being is an essential part of sustainable urban development, ensuring that cities and buildings are functional, adaptable, inclusive, and benefits individual and community well-being.

A concept with various definitions, social sustainability is characterized by the qualitative aspects of life, such as well-being, equity, health, empowerment, accessibility, participation, security, inclusion, sense of community, education, and overall quality of life (European Parliament, 2020; Davidson, 2010; UN Global Compact, n. d.). Social sustainability can also encompass creativity and innovation, as well as employment, segregation, and poverty (Europe-an Commission, n.d.).

In an urban context, social sustainability can be defined as the capacity of the urban area to facilitate long-term human life, interaction, and cultural progress (Yiftachel and Hedgecock, 1993) and development that does not harm society by unjust or exploitative measures (Rydin, 2010). Dempsey et al. (2011, p. 290) notes that social sustainability in urban contexts involves creating environments that people want to live in over time, that respond to the diverse needs of present and future residents and enhances quality of life. This perception is shared by Bacon et al. (2012) and Grum and Grum (2020) stating that social sustainability involves quality of life, supporting individual and community well-being through infrastructure that fosters social and cultural life and allows people to participate. Woodcraft (2015, p. 133) establishes a specific definition:

*"Social sustainability is a process for creating sustainable, successful places that promote well-being by understanding what people need from the places in which they live and work."*

In relation to this, in a recent Realdania report, Mahncke and Wiking (2025) emphasizes how the built environment has significant influence on people's lives and interactions, including overall quality of life. For instance, being satisfied with your home counts for about 20% of overall life quality, while specific yard environments, strong social cohesion in local areas, green spaces, and neighborhood satisfaction all correlate with higher quality of life (Mahncke and Wiking, 2025). Buildings will stand for many years, and how we build thus have large consequences. Prioritizing and incorporating an increased social focus in the built environment builds community and improves mental well-being (Mahncke and Wiking, 2025).

Adopting a social perspective in the built environment is not a new idea, but dates back several hundreds of years. Aristotle describes the purpose of the "polis" to be to organize in a way so that citizens can develop and flourish and live good lives (Poddighe, 2022). In 1849, John Ruskin also argued that architecture is not just a practical effort but a moral and artistic one where history and culture should be respected (Ruskin, 2010). He emphasized that architecture represents and shapes society's values as these are embedded in the design of a building (Ruskin, 2010).

Bjørn (2024) and Zuo et al. (2012) argues that in the construction sector today, the concentrated focus on economic return and environmental aspects results in social or human aspects often being overlooked or directly underprioritized, representing an essential gap in the sector, where buildings are not built with the human life or social sustainability as a priority. Næss (2001) and Kuitert et al. (2023) supports this, stating that economic factors are often prioritized, and assigning economic value to social and environmental factors may be particularly challenging. Cities are defined by the life and well-being of its inhabitants and the strong economic focus may slowly strangle the attraction of a city as economically focused decisions are deficient, lacking several important factors of a well-functioning city (Bjørn, 2024). Jensen et al. (2012) further argues, that if social sustainability measures are not included in a building project, it may negatively impact its energy performance.

Without widespread success, monetization of social factors has been attempted several times with complex models that operationalizes and quantifies social sustainability and attempts to define potential resulting economic value of social initiatives, however, important decisions often end up being based on traditional economic factors and subjective assessments of other factors (Jørgensen, 2013; Moltesen et al., 2018; Retolaza et al., 2019; Wieshammer et al. 2023). Though various tools and indicators have been developed to assess social sustainability, the assessment lacks a universally accepted definition, that encompasses the way life is lived in practice, and decision-makers often interpret and apply the concept in different ways aligned with their own economic objectives (Stender and Walter, 2018).

However, many construction projects do involve an ambition of high quality for users and creating positive change in the society sur-rounding the project, but visions often do not match with the actual outcome, as ambitions are lost in the construction process (Danske Arkitektvirksomheder and AART, 2024). Danske Arkitektvirksomheder and AART (2024) calls this divergence "*the social performance gap*", adding that social impact does not come only through changing the physical environment but through

dedicated work to establish shared visions among stakeholders, engage future users in the process, involve change ambassadors from the industry or local environment, and follow up on social goals throughout the project's lifecycle. This aligns with Rydin (2010) claiming that sustainable cities require governance structures that support experimentation, inclusion, and long-term thinking in construction and planning.

## 1.4 Challenges of Current Construction Processes

The path towards more conscious construction, with social sustainability, longevity, functionality, and well-being in mind comes with challenges. In this chapter, significant challenges of the traditional construction process are described.

### 1.4.1 Complex Planning with Rigid and Linear Standardized Processes

Construction processes encompass a wide array of complex information, several actors with different interests, unforeseen challenges due to weather, design errors, miscommunication, material delays and congestion on site, and this is attempted to be managed and included in schedules and project plans (Hajdasz, 2014; Mosegaard, Broch and Nissen, 2021). Moreover, the elements of a construction process

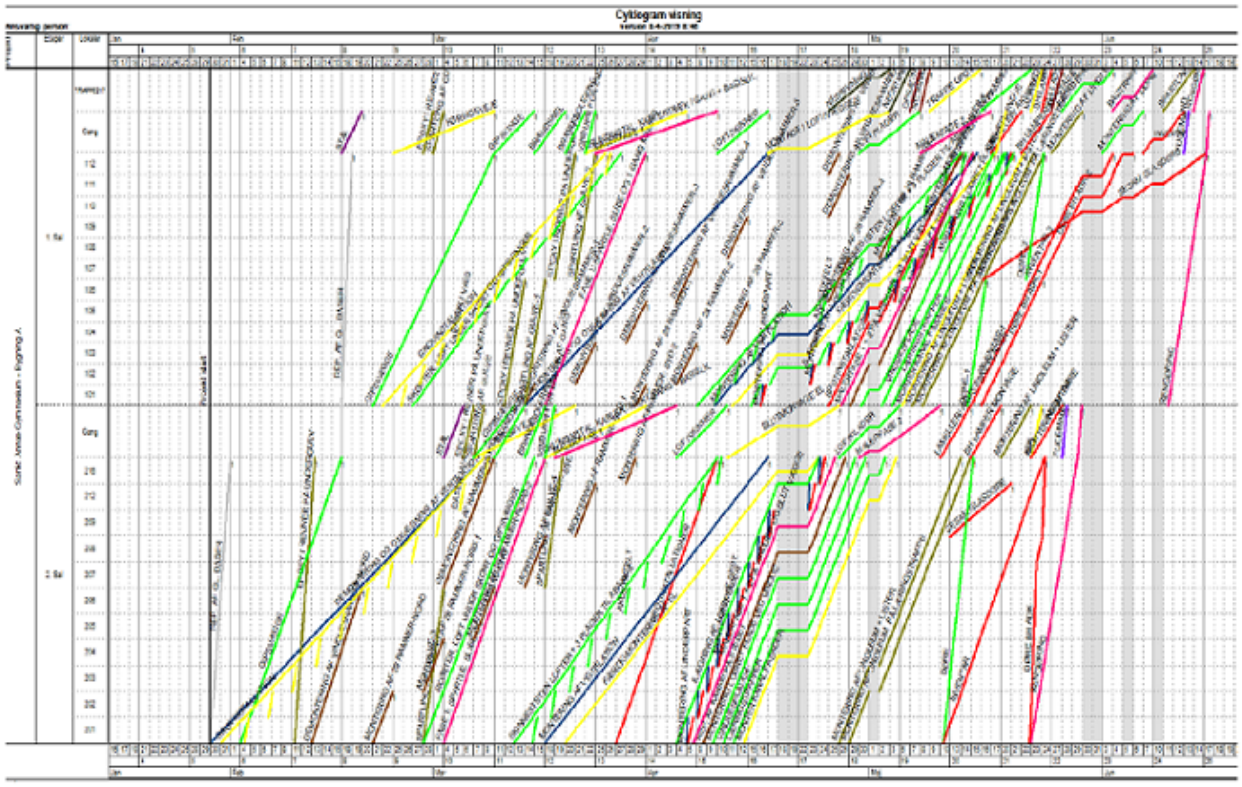


***Figure 3.*** *Cyclogram demonstrating different activities and its interdependencies during a construction process (Vaerdibyg, n.d.).*

are interdependent and changes or disturbances in one element of the process may affect the others and pose a risk of delay, productivity loss, increased cost, or modification of the subsequent phases (Hajdasz, 2014; Waly and Thabet, 2003). This complexity of the construction process raises the need for comprehensive management and planning tools and systems with well-defined processes and standardized procedures to ensure viability (Behzadan et al., 2008; Mosegaard, Broch and Nissen, 2021; Waly and Thabet, 2003), and the industry is continuously attempting to create more efficient processes to reduce time and cost and avoid errors (Andreasson, 2023; Dagens Byggeri, 2024). An example of a management tool is the cyclogram, as shown on figure 3, illustrating the complexity of who, what, where and when activities take place and the interdependence of the activities (Vaerdibyg, n.d.).

This rigidity and linearity of traditional processes thus leave little room for adaptation based on ongoing feedback or changing needs and may thereby hinder innovative and sustainable practices (Clausen, 2003; Kuitert et al. 2023). Furthermore, flexibility is necessary for handling unforeseen encounters, adapting to varying conditions during different stages, and even reducing construction time (Clausen, 2003; Hajdasz, 2014; Walker and Shen, 2002). Through effective communication, knowledge sharing, a team with a desire for flexibility and with structure that supports it, adaptable planning and monitoring can improve the project outcome and may even enhance the efficiency of a construction process (Baldwin and Bordoli, 2014; Paslawski, 2008; Walker and Shen, 2002).

### 1.4.2 Demand for Consideration and Pre-planning in Construction

As mentioned in previous chapters, CONCITO (2025), Ecorys (2023), Kuittinen (2023), and Vind (2024) call for more deliberate prioritization of building, fundamental transformation of existing construction practices, and a cultural shift towards learning, long-term thinking, and collaboration, while Bjørn (2024) and Danske Arkitektvirksomheder and AART (2024) appeal for an increased social focus in construction. Supporting this, research show that this transformation can involve greater investment in the early phases of a construction process. Various studies have shown that the initial phases are decisive in achieving project success in relation to cost, efficiency, time delivery, and quality outcomes (Chang, Shen and Ibbs, 2010; Larsen et al., 2018) and that the planning level and effort invested in the beginning is proportional to the overall project performance and user satisfaction (Gibson Jr. et al., 2006). Today, the conventional phases of a construction project are Pre-design, Design, Tendering, Construction and Operation (Naldal, 2019), but taking the pace out of decision-making processes, particularly in the initial phases and make a thorough preliminary examination of the project has proven to have a positive impact on efficiency. Increased planning, checking, testing, and monitoring during the ongoing construction process creates awareness, proactivity, and minimizes errors and exceedance of time and cost (Larsen et al., 2018). As described, the sector calls for building smarter and more considerate, which thus represent a key challenge of current construction processes to build more responsibly, inclusively, and effectively.

### 1.4.3 From Short-term and Economically Driven Construction to Social Value

The demand for construction continues, as in Denmark, the amount of construction started is more or less at the same level as 30 years ago, with a few flunctuations due to the last few years of global crises such as the 2008 financial crash, as shown on figure 4 (Danmarks Statistik, 2024).

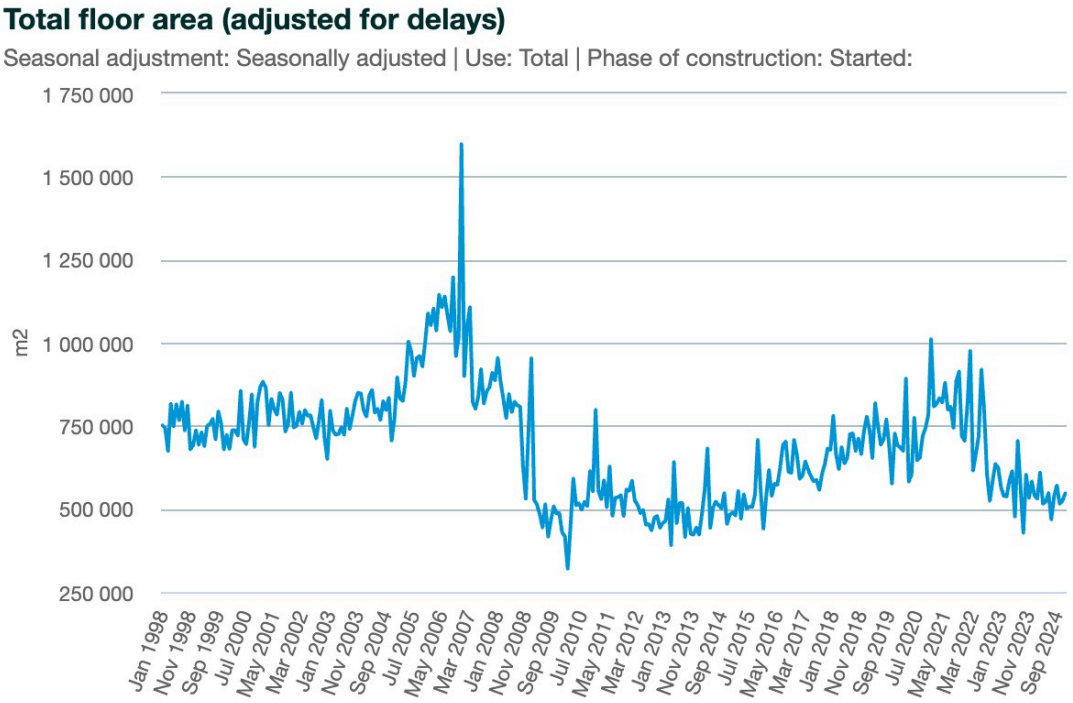



***Figure 4.*** *Total floor area of started construction in Denmark (Danmarks Statistik, 2024).*

Globally as well as in Denmark, the demand for construction driven by economic and population growth, often results in overlooking considerations of social sustainability (Bjørn, 2024; Chang et al., 2016). A key reason for this is a lack of knowledge of what social value in construction is and how to achieve it (Danske Arkitektvirksomheder and AART, 2024). Market dynamics lead the construction sector today, and many projects are driven by efficiency, immediate cost savings, and rapid project completion pushing to the background long-term quality of the building for the users, well-being, adaptability, and social inclusion (Bjørn, 2024; Kuittinen, 2023; Rydin, 2010). This is often due to time constraints and economic incentives in the construction industry, where developers may have limited motivation to prioritize social aspects or a life-cycle perspective (Bjørn, 2024; Danske Arkitektvirksomheder and AART, 2024; Kuittinen, 2023; Rydin, 2010). This results in what Cheshire (2019) calls "*obsolete architecture*", where buildings are built without appropriate consideration of social use, future adaptability, or environmental impact, and frequently demolished and new ones built with low long-term value. Geng et al. (2019) confirms this performance gap between design and operation. As Rydin (2010) argues, constructing purposeful, flexible, inclusive, and accessible buildings is an essential part of sustainable development. However, integrating social values into the bureaucratic value system of the conventional construction process is

challenging as it is focused on efficiency, compliance, and technical aspects (Kuitert et al. 2023). The traditional linear construction model often leads to waste of materials, time, and social potential (Cheshire, 2019; Ellen MacArthur Foundation, 2015; Rydin, 2010). In this regard, Thomson, Gustavsson, and Karvonen (2024) argue for a need for a turn in the construction research field and practice, to move beyond traditional metrics such as efficiency and productivity and address broader societal challenges.

### 1.4.4 Silo Thinking and Limited Collaboration and Participation

Another key challenge of construction processes is disciplinary silo thinking. Thomson, Gustavsson, and Karvonen (2024) argue that cities are shaped by the interaction of intentional planning and market-driven dynamics. Yet, planners designing the city purposefully and market actors responding to economic demand operate parallelly rather than collaborate, which leads to fragmented approaches, silo thinking, and inefficient outcomes (Thomson, Gustavsson, and Karvonen, 2024). To address the urgent issues presented in the previous chapters, construction projects must be connected to wider urban systems and dynamics, and this requires collaboration across disciplinary silos – between planners, architects, engineers, developers, contractors, policy-makers, academics, end users, and communities – integrating diverse perspectives for holistic and context-specific solutions (Lah, 2025; Thomson, Gustavsson and Karvonen, 2024). Mutual understanding, integrated solutions, and a cultural shift towards learning and innovation is essential for driving meaningful urban development (Lah, 2025; Thomson, Gustavsson and Karvonen, 2024; Vind 2024).

For sustainable development, Rogerson, Giddings and Jefferies (2023) likewise argue that construction should include a wider spatial and temporal perspective and they highlight the role of engaging diverse stakeholders in the construction process to ensure that visions reflect the needs and aspirations of all parties and disciplines involved as well as future adaptability. Innes and Booher (2018) also describe how change or real influence does not happen through experts delivering solutions, instead effective engagement and maneuvering of political processes is needed. They advocate a qualitative, interactive, and communicative process rather than logical deductive quantitative analysis as sustainable long-term outcomes are about facilitating a process involving several actors, developing the essential social foundation, and finding solutions in col-laboration (Innes & Booher, 2018). Research shows that by incorporating diverse perspectives, participatory processes improve the alignment between built outcomes and local and user needs, bring valuable knowledge, as well as enhance collaboration, legitimacy, adaptability, inclusion, ownership, and long-term functionality (Danske Arkitektvirksomheder and AART, 2024; Eriksson et al., 2015; Innes and Booher, 2018; Kandusova and Vacha, 2019; Lah, 2025; Sanoff, 2000). Besides fostering social sustainability, aligning with actual needs also lead to more efficient use of resources and reduces the risk of misallocation or waste (Dempsey et al., 2011; Sanoff, 2000). This is also confirmed by post-occupancy evaluations, which show that user-driven designs improve building performance and satisfaction (Preiser et al., 2018).

Yet, the current construction practices limit meaningful participation and feedback loops, which can lead to mismatches between intent of the design and actual use, thereby affecting the functionality and long-term value of buildings, resulting in expensive adjustments later (Danske Arkitektvirksomheder and AART, 2024; Kandusova and Vacha, 2019; Rydin, 2010; Sanoff, 2000). Incorporating meaningful participatory processes can be complex and the common barriers include limited resources, lack of institutional support, organizational cultures, lack of trust, poorly timing of involvement, and participation rarely being required by developers or building owners (Staniszewska et al., 2007; Anuar and Saruwono, 2012; Adamson, 2010). Eriksson et al. (2015) further highlight how effective participation requires structured methods and tools for facilitating the process and call for continued research into how users and stakeholders can be effectively engaged throughout all project phases.

Participation, including interdisciplinary col-laboration and human-centered design, become further important with the advancement of AI and other digital practices in construction to align technology with societal values and ethics, ensuring that it supports human-centered goals and contribute to socially sustainable urban development (Weber-Lewerenz, 2024).

### 1.4.5 Practical Exemplifications of the Challenges in the Construction Sector

The presented challenges are represented and exemplified practically in several cases globally, and in Denmark, very prominently in the grave examples also investigated by the Danish TV-program "*Er der en arkitekt til stede*?". The construction project of Skærbæk Skole illustrates a top-down approach, where political ambitions for iconic architecture overshadowed the everyday needs of the users, resulting in the building failing to deliver essential functions such as essential rooms, outdoor areas, and a sports hall, and the materials used were not suitable for a school environment (Knudsen, 2024; Er der en arkitekt til stede?, 2024a). A lack of participation particularly from school staff and students, and an entirely economically based approach resulted in a mismatch between design and actual needs, ending in even more expensive and long-delayed modifications (ByensEjendom, 2020; Er der en arkitekt til stede?, 2024a; Iwersen, 2020).

Another example is the redevelopment of Hjørring's city center where initial urban visions were compromised by short-term economic interests with the objective of building cheap and selling at high prices (Er der en arkitekt til stede?, 2024b). The project originally intended to create vibrant green public space with commerce, but ultimately resulted in a parking lot surrounded by low-cost concrete structures for businesses and no opportunities for staying in the urban space (Bing, 2024; Er der en arkitekt til stede?, 2024b). The outcome has been widely criticized by local residents, and the area must eventually be redeveloped once again to live up to its potential as a central and livable urban area (Strand, 2024; Er der en arkitekt til stede?, 2024b).

Tejn Harbour Houses on Bornholm also highlights the consequences of disregarding local context. Constructed on a site on the seashore, they are built without taking into consideration architectural quality, the surrounding city, landscape, or weather conditions, resulting in the houses being flooded by a storm surge the same year they were built (Eriksen, 2024; Er der en arkitekt til stede?, 2024c). Now the project faces public backlash, as the buildings have limited local access to the waterfront and residents has taken legal action demanding accountability and compensation from the developer (Krogh, 2025; Er der en arkitekt til stede?, 2024c).

## 1.5 The Participatory Approach of the Hele Landet

As presented above, the conventional construction process faces challenges of short-term economic thinking, rigid planning, standardized practices, and difficulty integrating social aspects, local context, and user needs, leading to both unsustainable and socially inadequate outcomes. These challenges highlight the need to rethink how buildings are planned and delivered in a way that includes social value. The company Hele Landet represents this alternative approach as they significantly engage with social, cultural, and human aspects during construction processes.

Hele Landet is a consultancy company focused on the built environment and function as a social planner or strategic process facilitator (Hele Landet, n.d.-a; INDEX: Design to Improve Life, n.d.), and their methods are largely based on the user-centered design approach "Design to Improve Life" by INDEX: Design to Improve Life, which Hele Landet's partners was a part of. Hele Landet connects diverse actors to anchor projects in the specific context and co-create visions and design for long-term social value, carrying out in practice the aspects of social sustainability described previously (Hele Landet, n.d.-a; INDEX: Design to Improve Life, n.d.). This is achieved through comprehensive partici-patory processes which include social initiatives and building organizational structure, with the aim of informed and well-considered project foundations (Hele Landet, n.d.-a, n.d.-b). As part of these processes, strategic tests and temporary interventions are used to test ideas in practice and generate local engagement by bringing participation out into the urban space (Hele Landet, n.d.-a, n.d.-b). Hele Landet believes that actors other than the public sector can bring positive societal action (Hele Landet, n.d.-a). They see great value in local knowledge and ownership and believe that diverse perspectives, including disagreements, can bring meaningful and improved outcomes when managed properly, creatively, and carefully (Hele Landet, n.d.-a; INDEX: Design to Improve Life, n.d.). Hele Landet collects and synthesizes input and frame a construction project accordingly with a human-centered and target group focus, while considering broader societal agendas (Hele Landet, n.d.-a, n.d.-b; INDEX: Design to Improve Life, n.d.).

Yet, Hele Landet encounters the challenges mentioned, as they put emphasis in different aspects such as participation, experimentation, flexibility, learning processes, and iteration (Hele Landet, n.d.-a) which the conventional construction process has limited room for.

The relevance of this approach of Hele Landet is seen in their involvement in the two ongoing projects, Dreyers Kollegie in Copenhagen, and Håndværkskollegiet in Roskilde. In both cases, Hele Landet facilitated extensive participatory process to align the projects with the needs of future residents and the surrounding society. However, the ambitious participatory processes also contained different challenges, and in this context, these two cases are useful to examine how participatory processes can be embedded into construction practices, leading to the problem statement of the report.

## 1.6 Problem Statement

As presented above, the construction industry is a fundamental pillar of society, shaping individual lives and communities, and it faces increasing pressure to contribute to sustainable development. In construction processes, the social dimension is often overlooked as economic efficiency, technical complexity, short-term profit, and rigid processes dominate, risking misalignments between intention, needs, and use. Moreover, research calls for integrated and human-centered approaches that prioritizes social value and purposeful long-term construction. Simultaneously, research demonstrates the benefits of participatory and interdisciplinary methods. The company Hele Landet exemplifies an approach that involves participatory processes to align buildings with user needs, improve social aspects, and generate long-term value, however, they encounter the contrast of standardized construction processes. The introduction thus demonstrates a need along with an unused potential for creating socially enhanced buildings, and this report investigates this gap and potential of participatory processes with the research question:

*How can Hele Landet's participatory processes be integrated into standardized construction processes to support socially sustainable construction, and what challenges arise in doing so, as explored through two case studies?*

### 1.6.1. Research Design

To investigate how participatory processes can be integrated into conventional construction processes along with its challenges and potentials, the report adopts a research design based on qualitative case-studies. The selected cases are Dreyers Kollegie in Copenhagen and Håndværkskollegiet in Roskilde, as they include high ambitions of participatory processes with financial support and involve encounters with the standardized construction process in different ways. The empirical foundation is formed by five semi-structured interviews with key stakeholders supplemented by observations of workshops as part of the participatory process along with process documents. The theory applied for the analytical lens consists of Actor-Network Theory and Susan Leigh Star's concepts of standardization and conventions. Through the analysis, strategies for integration of participatory processes eventually emerge.

The scope of this report primarily involves key actor groups of architects, building owners, and process consultants. These actors were selected due to their involvement in shaping the technical and

participatory process, their close work with Hele Landet, and their significant decision-making power over the process and final outcome. The broader construction network includes stakeholders such as engineers, contractors, municipalities, and users, who are not included and thereby the report does not aim to provide a comprehensive depiction of all roles. However, the purpose is to get in depth exploration of the actors most influential on negotiating and facilitating participatory processes and the challenges of these actors, which is why the scope is narrowed.

# *Theoretical Framework*

This chapter presents the theoretical framework which the analysis of participatory processes in construction is based on. As this report focuses on the integration of participatory processes, continuous learning, and broader stakeholder participation in construction processes, Actor-Network Theory and Susan Leigh Star's related theory of conventions and standardization are applied to explore how actors, materials, and norms interact and shape construction processes. The following chapters introduce the elements of each framework and outline how they contribute to the analysis.

## 2.1 Susan Leigh Star's standardization and conventions

This report aims to understand why and how the standardization of the construction sector hinders participatory processes. Susan Leigh Star's (1990) article "Power, Technology, and the Phenomenology of Conventions: On Being Allergic to Onions" explores standardization, power structures, and their impact on users through a metaphor of being allergic to onions. Thereby, it is useful to understand the dynamics in a network of actors where individual and unusual actors enter a big and powerful prevailing structure and to examine why the standardized construction process rejects alternative approaches, as indicated in the introduction. By highlighting how standardization and conventions shape power relations and practices, Star's (1990) perspective helps to examine the challenges that Hele Landet encounter and how these structures influence both project outcomes and perceptions of which actors are considered legitimate and valuable within the construction process.

Star's (1990) theory aims to explore the consequences and costs arising in the interaction between individuals, organizations, and standardized technologies. Star's main point is that systems are made to benefit the ones they are designed for and to navigate it, you must fit into its standards (Star, 1990). She describes the system as a *network*. Building on Actor-Network Theory, in Star's (1990) perspective, a network is a constructed association of human and non-human actors, and this network is shaped by conventions, standards, and practices. This aligns with Actor-Network Theory as described in the following chapter. Networks are not just given but have been actively constructed through negotiation and the resulting stability comes at the cost of marginalizing outliers (Bowker and Star, 1999; Star, 1990). Small inconveniences, exemplified by the onion allergy, reveals the network's power dynamics. In this report, Hele Landet and the participatory processes represent this inconvenience to a highly standardized and rigid construction industry strongly governed by conventions. Star (1990) acknowledges how a

system may be designed with a good intention to be efficient, increase predictability, aligning communication, such as the construction process today. However, challenges and exclusion occur when someone or something that fall outside of the network standards enter the system, as described by Star (1990), similar to trying to fit a square peg into a round hole. The network resists deviations. This way, conventions, understood as norms and practices, both enable and constrain action. In relation to Star's points, it is not about rejecting an efficient process completely, but about becoming more conscious and deliberate in how the process is made, shaped, and how it shapes the buildings, its users, and the rest of the stakeholders such as the developers and architects.

The benefits from operating within these established structures is termed as *network externalities* by Star (1990), such as when app developers benefit from the structures already built by smartphone companies and the telecommunication industry. When these structures have become standard, the challenges of introducing new approaches emerge, and alternative practices consequently get expensive or impossible (Star, 1990). As examples are cars and roads universally having the same size, leading a life with digital technology being practically obligatory, and movies always being around two hours. These are stabilized parts of the networks they exist in, which consists of relationships between humans, technologies, and conventions as explained earlier. Often, the stabilized networks will then ignore or erase the various individual experiences and the complexity of human lives including different needs and ways of being, as the system presents itself as the only reality, the "*monovocal exercise of power*" (Star, 1990, p. 98). This silences other perspectives, resisting change, and only one version of the world is allowed to exist. This marginalization results in a loss for those not included and with this, a risk of excluding valuable contributions. Innovation is constrained to the existing infrastructure. Star (1990) encourages a move away from perceiving practices or technology as neutral as they are designed a certain way with certain assumptions and purpose. An example is that even a hammer may be designed in a certain way; the weight, the grip, the materials reflect assumptions about the user, meaning it is designed for a certain kind of hand. The standardization of a network and its corresponding conventions shape our understanding of the world and seeing a construction process as neutral makes us blind to the power structures, assumptions, and norms embedded in the network of the process.

In this regard, Star's theory also exposes how "*it might have been otherwise*" for construction processes, as all stabilized technology and scientific practices are not inevitable outcomes, but constructions realized in a historical, social, and cultural setting and embedded within certain networks (Star, 1990). This means that it can be investigated how a network has been established by social agreements, technical developments, and entrenched norms. Systems can be redesigned for someone else. However, she also explains how some elements, such as the red light in traffic signifying stop, can become effectively irreversible because of how entrenched they are in networks as well as interconnected with other networks (Star, 1990).

Furthermore, Bowker and Star (1999) and Star (1990) describes how the background conditions stabilizing a network and marginalizing diverging actors and viewpoints are often invisible or taken for granted. Bowker and Star (1999) and Star (1990) also uses the concept of "invisible work", describing the

labor keeping systems together, which is often unrecognized as it supports the smooth operation of the process (Star and Strauss, 1999). This involves the work that individuals falling outside of the conventions must do to adapt to systems or infrastructure not intended for them as well as the maintaining work that Star compares to housework and domestic labor. When conventions are tested, this invisible work and the conventions supporting it surface (Star, 1990). In the context of construction processes, the marginality therefore is not merely an outlying matter but the central lens to understanding the current power dynamics and challenges in the network.

## 2.2 Actor-Network Theory

While Susan Leigh Star (1990) describes the standardization and conventions within a network, a way of deconstructing the stabilized network to understand the elements it consists of and to further explain the dynamics operating within the network is through Actor-Network Theory (ANT). Compared to Star, ANT offers a more operational framework for further analysis of Hele Landet's role and interaction with conventional construction processes. Whereas Star focuses on the background standardization and norms that silently govern a network, ANT also includes putting spotlight on the more concrete negotiations and shifting roles in the network (Callon, 1986; Latour, 1987; Law, 1992; Elgaard-Jensen, 2003). Together, these approaches provide a deeper understanding of both the challenges and the transformative potential of participatory processes in construction.

As mentioned in the introduction, the building sector is characterized by strong standardization that tend to block integration of participatory processes. This reflects how dynamics are in place that stabilize the network of actors and counteract change or alternative approaches such as Hele Landet's. To move beyond a simple critique of rigidity and understand these dynamics of stabilization and change, Actor-Network Theory is relevant. Construction processes are shaped by dynamic interactions of actors, materials, institutions, and practices, and ANT precisely emphasizes that both human and non-human actors, including technologies, timelines, financial systems, documents, and objects, function as actors with agency within a network (Law, 1992; Latour, 2005). Human and non-human actors in a construction process for instance both shape the network and are shaped by the network in which they are embedded (Law 1992; Latour, 2005). According to Law (1992), non-human actors can be just as influential as human actors in shaping social practices and in the formation and stabilization of networks, with material elements being particularly crucial in stabilizing complex networks. A key element of this is what Latour (1987) terms "immutable mobiles", which are entities that maintain their form and function as they move through different settings and contexts and exerts authority (Elgaard-Jensen, 2003).

Latour (1988) further argues that physical elements possess agency and responsibility in design as specific design decisions can favor some actors while excluding others. Neglecting these social implications of non-human actors may result in a lack of user empowerment. In this report, it is particularly relevant as the standardized construction process often hinders or overlooks valuable user input.

In relation to Star's conventions, ANT also describes the taken-for-granted norms within a network, which as described in the introduction is relevant for construction processes. When a network reaches a high degree of stabilization, its components, such as technologies, processes, and conventions, are no longer questioned and treated as given and fixed. Latour (1987) refers to this as "black boxed" – something that operates automatically. These black boxed elements strengthen the stability of the network by concealing the negotiations and controversies that originally shaped them and though appearing neutral, they continue to have influence over future actions.

Actor-Network Theory contributes with a perception of buildings not only as physical, technical, and static objects built by top-down decisions and static plans, but as a product of a network of multiple heterogeneous actors. In this network, legitimate knowledge, authority, and project metrics are not predetermined but emerges through negotiations and relations between actors (Latour, 1987; Elgaard-Jensen, 2003). Decisions and power are not viewed as isolated or linear outcomes, but as processes evolving through interactions and negotiations within the network as a web surrounding the actors (Latour, 2005; Elgaard-Jensen, 2003). This stems from ANT's understanding of knowledge as constructed through interactions within the network, rather than as objective, and therefore also constantly evolving and open to reinterpretation and influence (Latour, 1987; Law, 1984; Callon, 1986). In relation to Star's description of practices as constructs, the current metrics of success of construction processes, such as economy and time as mentioned in introduction, are correspondingly not an inevitability but a fact established in specific networks, aligning with John Law's description of the values of McDonalds:

*"These criteria are in no way "natural" or inevitable. Rather they must be seen as cultural constructs. The idea that food should be fast, cheap, or convenient would be anathema, for instance, to certain sections of the French middle class."* (Law, 1984, p. 184)

Accordingly, as Latour further underscores, there is always a translation process and human choices behind a practice or technology:

*"The label 'inhuman' applied to techniques simply overlooks translation mechanisms and the many choices that exist for figuring or de-figuring, personifying or abstracting, embodying or disembodying actors."* (Latour, 1988, p. 303)

Similar to Hele Landet's holistic approach, Actor-Network Theory attempts to embrace complexity, and instead of looking at a problem solitarily and directly focuses on the context the problem is embedded in, the network (Latour, 2005). Thus, in this report, ANT is useful for studying where in the network power is amplified and where it is sidelined, how technical and bureaucratic systems affect the construction process, and how iterative and participatory processes can be integrated in the process and create different results in buildings. This can be examined through tracing the integration or exclusion of participatory processes in a real-life context, such as Dreyers Kollegie and Håndværkskollegiet. As Bruno Latour (2005) suggests, following both the human and non-human actors to uncover the processes and elements by which the world is constructed and reconstructed makes it possible to map how the values

of participatory processes are translated into or rejected by the network of current construction processes. In relation to this, ANT reveals how power does not emerge only from hierarchical organization but from alignment of certain goals, definitions of success, and then stabilization in the network of actors (Callon, 1986; Latour, 1987).

### 2.2.1 Four phases of translation processes

This process of actors gaining power through association and alignment with other actors is what Michel Callon calls the translation process (Callon, 1986; Elgaard-Jensen, 2003). Actors translate an interest into action by aligning other actors with their interests. In the construction process, this lens is useful to analyze how actors in the stabilized network, such as building owners and architects, respond to alternative interests, namely someone advocating for involvement of a broader stakeholder perspective as Hele Landet does. Callon (1986) divides the translation process into four phases: problematization, interessement, enrolment, and mobilization. As Law (1992) writes, these processes are iterative and contestable, and networks are constantly being maintained and negotiated.

1) In the problematization, the problem is defined including the objectives and values. The primary actor attempts to position themselves as an obligatory passage point, an indispensable path to the solution through which all other actors must pass to achieve their objectives (Callon, 1986; Elgaard-Jensen, 2003). The obligatory passage point is thus a key factor for structuring relationships and aligning interests within a network, and this alignment of actors shapes the direction of the network. Without successfully passing this point, the project will fail. To achieve this alignment, knowledge of different actors' motivation, interest, and probable reactions is needed (Callon, 1986; Law, 1992; Elgaard-Jensen, 2003). This underscores the importance of understanding the dynamics of actor-networks and demonstrates the relevance of ANT in this present report as it offers a framework for how action and practical outcomes are negotiated and accomplished in the complexity of the real world – in this case, how Hele Landet achieves or fails at an integration of participatory processes in the construction process.

2) Interessement represents the primary actor attracting the interests of the other actors (Law, 1992) and defining their identities and roles within the network (Callon, 1986). It is the process of translating one world into another. This also involves the recruitment of actors and negotiation of terms of involvement, with the aim of securing the acceptance of the roles (Callon, 1986; Elgaard-Jensen).

3) Enrolment is the effect of a successful interessement when other actors have accepted the interests and roles proposed and defined by the primary actor (Callon, 1986). Here, the translation is maintained, and actors enroll in the network (Elgaard-Jensen, 2003). Some actors impose their interest on others, while other actors give in (Callon, 1986).

4) The mobilization phase is the end of the translation process when a stable network of alliances is established and the actors in the network all work towards the defined objective (Elgaard-Jensen, 2003). The enrolment, where different actors in a network accept and commit to their roles in a project, is turned into active participation. Different actors have been aligned to a shared interest through a series of negotiations, and this alignment makes the desired outcome possible (Callon, 1986). The mobilization is enabled by a translator, meaning a spokesman for the actors being mobilized, who negotiates in the name of these actors (Callon, 1986), e.g., Hele Landet for the users. As Callon (1986) describes it, "*to mobilize, as the word indicates, is to render entities mobile which were not so beforehand*".

Through this analytical lens, the dynamics of the translation processes in the cases are examined to understand how actors are aligned and how participatory processes by Hele Landet disrupt or reconfigure conventional processes. Ultimately, ANT can be a way of seeing the world and be applied in practice. This offers new possibilities for action, creating change, harmonizing with the transformative requirement of the construction sector, as the analytical approach enables an analysis of the conditions under which participatory processes can become stabilized and institutionalized rather than marginalized. Thus, ANT provides this report with the vocabulary for understanding the dynamics of the networks when participatory processes enter the process, including the assembly of the networks, the challenges, and the potential for institutionalization and transformative action.

# *Methods*

This chapter presents the methods for data collection and processing applied in this report to examine the problem statement. The reasoning behind the utilization of the methods, the recognized methodological procedure, and the concrete application of the methods are described, along with reflections of limitations of encompassing the complexity of networks in construction.

## 3.1 Case study

This report applies two cases in the study of participatory processes: the construction projects of Dreyers Kollegie in Copenhagen and Håndværkskollegiet in Roskilde. Studying these cases makes it possible to see how networks evolve in different complex real-life construction processes and how actor relationships shift through the progress of the project. In one case the participatory process occurs in the early stages of the project while the other attempts to incorporate it mid-process. Both cases involve Hele Landet and represent an interaction between participatory processes and established planning structures, norms, budgets, and timelines of the standardized construction process, which is also the reason for selecting them in this study. As Bent Flyvbjerg (2006) precisely argues, cases can be selected to obtain a large amount of information from small samples. The cases in this report offer opportunity to study the process and provide insight into the tensions, challenges, and potentials of the attempted integration into the conventional construction process, including the dynamics of negotiation, translation, and stabilization. Thereby, rather than an examination of the outcomes, the focus is on the underlying processes, structures, and interactions between actors that shape them.

As Flyvbjerg (2006) argues, the value of a case study lies in the engagement with the complexities of real-life situations where case studies can generate context-specific knowledge, challenge assumptions, and bring out the nuances of practice. Thus, case studies can help "*clarify the deeper causes behind a given problem and its consequences"* (Flyvbjerg, 2006, p. 229). In line with these points, this report analyzes two qualitative case studies engaging with the complexities of real-life construction processes. Practices and decisions within specific social and material contexts are examined to enable a nuanced understanding of how participatory processes unfold and how power and conventions impact outcomes. By analyzing and mapping of both human and non-human actors, dominant assumptions embedded in standardized construction processes are challenged. The report thereby generates a context-specific knowledge of the practical and transformative potential of participatory processes in an often rigid sector.

This report also aligns with Robert Yin's (2014) description of case study as an examination of a real-life context of a contemporary phenomenon through single or multiple case studies, namely in this report a multiple-case study of the construction process. This understanding of case studies is supported by Widner, Woolcock & Ortega (2022, pp. 7-8) and aligning with the aim of this report, as it states that an important feature of case studies is:

*"[…] to capture the interactions that produce an important outcome. […] The outcome is the product of bargaining, negotiating, deal-cutting, brinkmanship, and other types of interaction among a set of specified actors."*

Yin (2014) also argues that case studies are particularly suitable when the research question is "how" and "why" and the researcher has limited control over events, which both apply in this report. Yin's (2014) emphasis on contextual depth is followed by drawing on qualitative data from multiple interviews, observations, and documents.
Furthermore, Flyvbjerg (2006) describes that it is possible to generalize based on a single case, most often when cases are strategically chosen as they can test, falsify, or support theories. He also explains that case studies are central to scientific development and innovation (Flyvbjerg, 2006). The cases in this report are particularly interesting, as both of the selected cases involve a high participatory ambition and holds economic support, which distinguishes them from more typical examples of construction processes. In Flyvbjerg's (2006) terms, they function as "critical cases" because they test whether participatory processes can succeed under these favorable conditions, as Flyvbjerg (2006, p. 230) writes: *"If it is not valid for this case, then it is not valid for any (or only few) cases."*. They also function as "extreme cases" in Flyvbjerg's (2006) vocabulary since they have been chosen because of this atypicality and the involvement of Hele Landet and the level of participation is unusually ambitious. Moreover, they are "paradigmatic cases" in the sense that they exemplify a broader pattern within the construction sector regarding the rigidities, power dynamics, and innovation constrains in standardized construction processes.

## 3.2 Semi-structured interviews

To explore how participatory processes are integrated into conventional construction processes, data was gathered by semi-structured interviews with key actors of the two cases, providing an understanding of their roles, perspectives, and how they interact in the construction process. With a focus on actors with decision-power in relation to shaping and implementing participatory processes, the interviewees are in the key actor groups of building owners, participatory process consultants, and architects as these are also closest to Hele Landet's process, are most involved, and holds significant influence on the process and project. The building owners hold the overall decision-making power of the project, the consultants facilitate the participatory process, and the architects play a central role in important decisions and are deeply involved in shaping the process and final outcome, in contrast to many other actors in the construction process. These interviews form the empirical base of the report while the interviews also contributed with information about the two cases such as the timeline and course of the project.

Through the qualitative research method semi-structured interviews, an understanding of the experiences and motivation of the interviewees is gained as well as insights into the interviewee's perception of different phenomena (Kvale and Brinkmann, 2015). In this report, the open-ended form of semi-structured interviews was applied, as the interviewer maintains control over the main direction of the interview, while giving the opportunity for new relevant themes and nuances to emerge during the conversation (Kvale and Brinkmann, 2015). This method thereby contributes with both depth and flexibility.

The method has been used for five interviews as shown in Table 1. The interviewees have been selected based on their roles and relevance for decision-making in the construction process.

| Interviewee | Title | Location | Date | Duration |
|---|---|---|---|---|
| Sille Askefrø Bjørn (Both cases) | Partner, Hele Landet | Hele Landet office | 19.02.2025 | 1hr 30min |
| Morten K. Petersen (Both cases) | Strategic urban planner | Hele Landet office | 13.02.2025 | 1hr 10min |
| Kristian May (Håndværkskollegiet) | Director, BRFfonden and former CEO, MT Højgaard | BRF-fonden office | 04.03.2025 | 1hr |
| Lars Rex (Dreyer Kollegie) | Architect, Vandkunsten | Vandkunsten office | 24.04.2025 | 1hr |
| Susanne Adibi and Rasmus Svingel (Håndværkskollegiet) | Associated partner and architect, LOOP Architects | Online | 14.05.2025 | 1hr |

***Table 1**. List of interviewees.*

All interviews were recorded with permission from the interviewees to prevent loss of information (Kvale and Brinkmann, 2015). Aligning with the ANT approach of following the actors, the initial interviews led to the knowledge and contact of other relevant actors who then were engaged in interviews. For instance, the interview with Hele Landet facilitated the contact to Kristian May, director of BRFfonden. He has personally been responsible of the project management in Håndværkskollegiet and is therefore deeply involved in the process, making him highly relevant to interview, further supported by his experience as head of one Denmark's biggest construction companies, MT Højgaard. The significant role of the architects in participatory processes similarly became apparent in the interviews with both Hele Landet and Kristian May, particularly how external inputs from participatory processes shape or disrupt their workflow.

The method enabled an exploration of pre-defined themes such as process structure, values, collaboration, prioritization of participation, general perception of the construction industry, and entrenched constraints. These themes were included in the interview guides, which were also rooted in the theoretical framework as the questions focused on relational aspects, controversies, how actors perceived their own and other's role, descriptions of the participatory process and how it is managed,

and how standards and norms shape the construction process. Interview guides were made for each interviewee to adapt to their expertise and perspective as well as the time of the progression of this present report. The structure of the interview guides was based on James P. Spradley's (1979) model for interview questions, which explains how going from grand tour questions to mini tour questions is important for a well-conducted interview. Likewise, Spradley (1979) advocates for being attentive in the order of questions, as he distinguishes between *descriptive* questions which aim to obtain detailed descriptions about the interviewee's experiences, *structural* questions which explores how the experiences are organized, and *contrast* questions which exposes how interviewees perceive different concepts. This organization of questions was followed by beginning with descriptive and open-ended questions and then questions aimed at specific moments and practices and how actors and processes were organized and interpreted. This enabled participants to express themselves and reflect in their own way as the processes, roles, networks, and norms were uncovered.

It must be acknowledged that qualitative data comes with uncertainties since subjective statements contain biases and personal interpretations which may lead to biased conclusions (Kvale and Brinkmann, 2015). In this report, both cases include an ongoing process and negotiations which may result in actors being more careful in their statements. With Hele Landet being the gatekeeper for this study's access to the cases and a consultancy company for participatory processes, they have an obvious interest in promoting for high degree of participation, and their interview responses may reflect this through emphasizing positive features and downplaying negative aspects and interpreting events in a way that confirm their own values. Similarly, building owners may respond in a way that legitimizes their management choices, present outcomes as more successful, and downplay conflicts to protect their professional position. Architects may put emphasis on the aesthetics of the outcome and overstate their neutrality, which can result in underplaying compromises and tensions. These biases have been attempted to be mitigated by studying the statements in the context of insights from other actors, documents, observed outcomes, thereby broadening the perspective and being conscious of their role in the network. Besides, the interviewees present unanimous descriptions of the process indicating validity and reliability. Further interviewees, e.g., engineers, users, building owner's professional adviser, could have increased the reliability, the representativity of the process in each case, and elaborated on the challenges and potentials of participatory processes in construction, however this report limited its research field to architects, building developers, and the representatives of the participatory process. Contact was established with a representative from Dreyers Fond, however due to the representative's busy calendar, an interview was not possible within the timeframe of this project. Furthermore, an external perspective such as from researchers within the field or Realdania could also have contributed with further context, comparisons, and critical distance, offering an understanding of the conditions that constrain or institutionalize participatory processes.

Despite these limitations, the selected interviewees offer direct and practical insight into the complex dynamics of participatory processes in construction, making their contributions central and valuable to the aims of this study, as described in the chapters above.

### 3.2.1 Transcription and coding of interviews

Following each interview, the empirical data was processed by transcribing and coding the interviews to prepare it for application in the analysis. Transcriptions provide a detailed and literal account of the interview, however, as it translates the spoken words into written text, it is not a neutral process (Kvale and Brinkmann, 2015). The transformation includes a loss of tone, pace, and body language and the transcriber must interpret the content (Kvale and Brinkmann, 2015). Therefore, transcription can be viewed as the first step in the analytical process and in this report, attention was given to preserving the contextual meaning. The transcriptions were performed manually and aimed at remaining true to the spoken language though ensuring readability. The quotes presented in the report are own translations.

Subsequently, the transcriptions have been processed through coding to extract information from the interviews and enable a systematic and structured analysis. As Campbell et al. (2013) emphasizes, a structured coding enhances the reliability and coherence of qualitative analysis. Kvale and Brinkmann (2015) also explains that by applying codes to the transcription, the statements can be organized which provides a useful overview when working with large text amounts. Meanwhile, coding is also an act of interpretation and construction and segmenting data, as decisions must be taken about what to highlight and how to group it, which shapes the outcome of the analysis (Campbell et al., 2013; Kvale and Brinkmann, 2015). Coding of interviews involves a risk of simplifying and reducing meaning (Kvale and Brinkmann, 2015), and correspondingly in this report, rather than a purely epistemological purpose, coding functions as a pragmatic tool to categorize themes, patterns, and differences relevant to the research question. As a part of this pragmatic approach, the coding process applied both a data-driven and a concept-driven flexible approach, as advocated for by Linneberg and Korsgaard (2021). This means that the codes were generated by a combination of inductively from the interviews themselves and deductively based on theoretical term and afterwards, the coding schemes were refined through an iterative process of categorization, leading to roughly the structure of the analysis.

## 3.3 Field Observations

In addition to the conducted interviews, field observations have contributed to the empirical data collection. Three observations have been conducted with the aim of gaining insight into how participatory processes unfold in practice, including the social interactions in real time, decision-making, and the role of physical aspects such as place and materials. Specifically, the observations consist of three events where the participatory process unfolded and took place in the period leading up to the writing of this report, as shown in Table 2. Due to this, they were applied with an explorative approach, forming the foundation of the understanding of the problem field. All three events contributed with important knowledge for understanding the context, the involved actors, and the related challenges.

As Creswell (2013) describes, observation is a qualitative research method involving watching and noting behaviors and relations in their natural setting. Brinkmann and Tanggaard (2025) outlines how

observations allow the researcher to be present physically in a particular context, giving first-hand knowledge and closeness, strengthening the quality and validity of interpretations, in contrast to retrospective methods such as interviews relying on memory and formulations. They add that the method focuses on uncovering unspoken norms as well as social practices and aligns with ANT in acknowledging how objects form meaning (Brinkmann and Tanggaard, 2025).

For this report, the role of the author has been a *participant as observer* where participation, observing, and taking field notes have been combined to obtain both insider perspectives as well as analytical distance (Creswell, 2013; Brinkmann and Tanggaard, 2015). These notes contained actor roles, discussions, non-verbal interactions, insights, and questions that arose.
Aligning with Yin's (2009) description of the case study approach, observation is a beneficial tool in this report for a detailed understanding, increasing reliability and validity as multiple methods are applied. This method contributed to identifying practices and tensions during the observations and a deeper understanding of how participatory processes are enacted, negotiated, or resisted in a concrete situation of construction processes. Corresponding to the actor-network theory approach, actors were followed in real-life settings, such as meetings and workshops, to observe how networks are formed and maintained.

The observations were connected to Dreyers Kollegie and were conducted subsequently to this author's internship in Hele Landet in spring 2024, which has given the author a preliminary insight into both selected cases and a foundation for the development of the report focus. In the process of Håndværkskollegiet, no workshops were conducted during the process of this report.

| Event | Purpose | Location | Date | Participants |
|---|---|---|---|---|
| Dormitory council workshop Dreyers Kollegie | Reinforce student community and test the interior | Common room Oehlenschlægersgade 1 | 12.12.2024 16.00-20.00 | Hele Landet Student participants |
| Information meeting Dreyers Kollegie | Spread awareness of the dormitory and recruit participants | Valencia Vesterbrogade 32, Copenhagen | 14.01.2025 16.30-19.00 | Hele Landet Dreyers Fond Vandkunsten Student participants Other potential residents |
| Dormitory council workshop Dreyers Kollegie | Follow up on the process and plan study trip | Valencia Vesterbrogade 32, Copenhagen | 27.01.2025 10.00-13.00 | Hele Landet Student participants |

Table 2. Workshops observed.

In the first workshop, the purpose was to strengthen the community sense among the students involved in the participatory process, while testing the interior design of the dormitory's future common room, including its opportunities and limitations. Polaroid pictures of all participants were collected and

displayed, and subsequently, the student participants presented their ideas and progress in relation to interior design, activity planning, application process, and organizational structure. Lastly, to further test the possibilities in the common room and reinforce the social connection, community singing of a song co-written by the group and communal dining concluded the workshop.

***Image 1.*** *Workshop in Dreyers Kollegie (Own photo).*

The second event was aimed at students interested in joining the participatory process or living in the upcoming dormitory. Information about the vision and organization of the dormitory, the building, and the participatory process were presented by Dreyers Fond, Vandkunsten, students involved in the participatory process, and Hele Landet. During the meeting, all participants were invited to engage in dialogue regarding the dormitory's vision, design, and process. In the end of the meeting, interested students signed up for the ongoing participatory process.

In the third event, the aim of the workshop was to generate ideas for the upcoming study trip, follow up on the process so far, and introduce and integrate new participants to the participatory process. To generate ideas for the study trip, which has the objective of bringing inspiration for Dreyers Kollegie, the participants brainstormed ideas individually and in groups to further develop specific relevant destination suggestions. Ultimately, students presented their current proposals for the interior design of the common room.

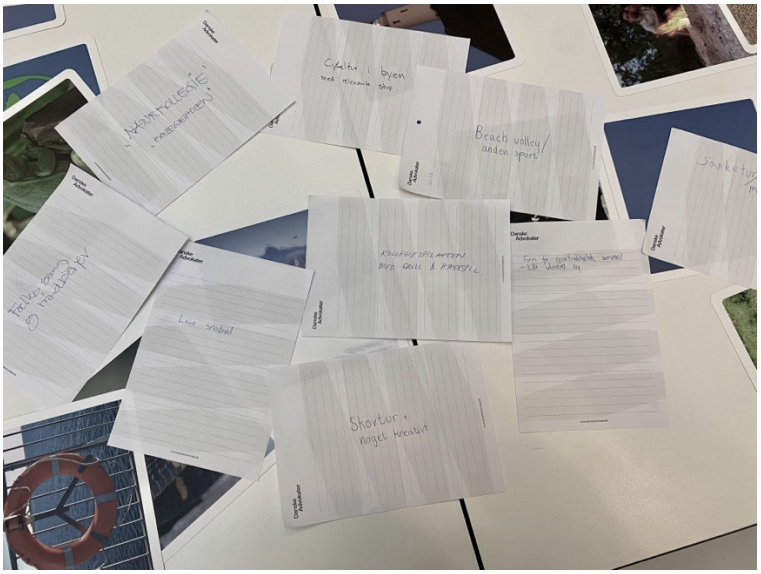



***Image 2.*** *Idea generation in workshop in Dreyers Kollegie (Own photo).*

With the practical nature of the construction industry and the radicality of the attempted transformation in mind, more active workshops and pilot projects engaging more of the actors of the construction process could have been relevant and could offer additional possibilities. Yet, this report assumes an observing role rather than active and experimenting.

## 3.4 Desk Research

To supplement the primary data and expand upon terms and themes emerging during the progress of the report, desk research has been applied. Desk research includes gathering and examining already produced data (Moore, 2006). Specifically in this report, desk research is used to depict the conventional construction process, the context and framework which Hele Landet must operate within, and to gather information about the two selected cases. This involved reviewing academic literature, project websites, legal texts, and media coverage. As Mytton, Diem and van Dam (2016) argues, this is useful to ground the report in existing knowledge, enhancing its validity and depth. Additionally, this method has assisted in shaping the interview guides, enhanced the interviewer's credibility during interviews, and supported the interpretation and discussion of the empirical findings. However, desk research depends on existing and accessible data of a certain quality (Mytton, Diem and van Dam, 2016). While information about the construction process is abundant, the two selected cases are both recent and ongoing, which limits the amount and detail of existing and publicly available data. Therefore, to address this internal project documents, and planning material were collected through Hele Landet.

## 3.5 Document Analysis

To dive into the processes as well as the outcomes of the participatory processes, document analysis was used as part of the data collection in this report. Through document analysis, written texts are evaluated to extract information significant to the research question (Brinkmann and Tanggaard, 2025; Bowen, 2009). Specifically in this report, internal planning documents, blueprints, presentations, legal frameworks, and academic literature have been examined to support the understanding of how expectations and roles are defined, how these non-human actors silently influence the process and decisions in the construction projects, and how integration of participatory process can take place. As Bowen (2009) notes, document analysis can bring essential background information, uncover meaning, track change over time, and verify findings or raise questions, indicating its role as a useful supplement to the other qualitative methods.

As Brinkmann and Tanggaard (2025) describes, the document analysis can focus on either descriptive information mirroring reality, or the intentions and values associated with the document. In this report, both perspectives are applied as some documents assist in describing the timeline and activities of the processes, while other documents are useful for uncovering implicit norms and power dynamics in the construction process. The documents have been analyzed with the criteria listed by Brinkmann and Tanggaard (2025) based on Scott (1990) in mind – about authenticity, credibility, representativeness, and meaning. For instance, several documents were obtained through Hele Landet, which may influence the analysis as Hele Landet have curated available documents. Mitigation of this has been attempted through being conscious of the relevance and trustworthiness of the documents. A combination of an inductive a deductive approach was followed, as patterns and concepts emerged both from the documents themselves and were applied from the theoretical framework. The documents are further useful for triangulation of the empirical data, as they support the interviews and observations and strengthens the overall validity and reliability (Yin, 2009; Creswell, 2013; Brinkmann and Tanggaard, 2025).

# *Empirical Analysis through ANT and Susan Leigh Star*

In this chapter, construction processes of the two cases are analyzed to give insight on how industry norms and frameworks integrate participatory processes and how iterative processes affect outcomes, analyzing both human and non-human actors. This is examined through the lens of Actor-Network Theory, emphasizing the symmetry between human non-human actors and how networks are continuously negotiated. Supporting this is Susan Leigh Star's concept of standardization that describes conventions and network structures as invisible but essential power structures, revealed by "allergy moments" such as new approaches.

## 4.1 Case Descriptions

This chapter introduces the two selected cases by presenting the visions, the process, and the key actors. The descriptions are based on desk research, background information collected from project documents and workshops, and first-hand information gained through an internship in Hele Landet, which provided in-depth knowledge of the processes.

### 4.1.1 Dreyers Kollegie in Copenhagen

Dreyers Kollegie is a dormitory in Copenhagen, being built by Dreyers Fond. The dormitory is intended law and architecture students, and construction will be completed in spring 2026 (Dreyers Kollegie, n.d.). Vandkunsten is the architects of the transformation of an existing building in Vesterbrogade, which will feature 42 rooms, various common rooms, two rooftop terraces, and shared kitchens and bathrooms (Dreyers Kollegie, n.d.). Along with the main building, the dormitory includes a former pub, which will be transformed into the main common room of the whole dormitory (Dreyers Kollegie, n.d.; Dreyers Fond, 2024).


**Image 3.** *Construction of Dreyers Kollegie (Own photo).*

The vision for Dreyers Kollegie centers on creating a place focused on well-being and a diverse, inclusive, and supportive community for students in the two demanding academic fields, which are characterized by high pressure and heterogeneity of students (Dreyers Fond, 2024). The aim is to reframe and expand the perception of the two traditional studies and create more socially aware practices within these fields, particularly by supporting students of diverse socioeconomic backgrounds, genders, ages, and ethnicities in completing their studies (Dreyers Kollegie, n.d.; Dreyers Fond, 2024). Furthermore, the dormitory will encourage development of ideas, networks, and collective action within broader societal agendas to contribute positively to society (Dreyers Kollegie, n.d.).


***Image 4.*** *Rendered image by Vandkunsten of the final building of Dreyers Kollegie (Dreyers Fond, 2024).*


***Image 5.*** *Example of room in Dreyers Kollegie by Vandkunsten (Dreyers Fond, 2024).*

The project differs from typical construction projects in its high participatory ambitions. Hele Landet leads the participatory process, which involves students, industries related to the two studies, and NGOs. Through the participatory processes, the concept, the social and organizational structure, and the interior design of the some of the rooms are developed (Dreyers Kollegie, n.d.). The participatory process encompasses several strategic physical tests, inspiration trips, workshops and idea generation with the participants over a time period of more than two years.

Vandkunsten entered the project already in 2021, while Hele Landet joined the process in 2023 in the middle of the design phase and after the main drawings of the dormitory had been made. In this report, Dreyers Kollegie is analyzed based on interviews with the two project managers in Hele Landet, Sille Askefrø Bjørn and Morten K. Petersen, and lead architect Lars Rex from Vandkunsten, who has been deeply involved in both the technical and participatory part of the construction process. Currently, Dreyers Kollegie is in the construction phase where the main dormitory building is being built, and the last drawings concerning the shared room in the bodega is being finalized.

### 4.1.2 Håndværkskollegiet in Roskilde

The second case investigated in this report is Håndværkskollegiet in Roskilde, which is a student housing project aimed at young people in vocational education. The initiative is led by BRFfonden and includes two similar projects in Herning and Horsens (BRFfonden, 2021). The case in Roskilde, located in the experimental urban development area Musicon, is the third and most experimental of the projects with a budget around 100 million DKK (BRFfonden, 2021; Dagens Byggeri, 2023). Håndværkskollegiet will house 80 residents and include shared spaces and work rooms across 6000 square meters, and students are expected to move in from March 2027 (Dagens Byggeri, 2023).

The vision of the project is to contribute to attracting students to vocational education and address the imbalance of the conventional education system in Denmark, where university educations are often regarded higher than physical and practical educations (BRFfonden, 2021; Musicon, n.d.). BRFfonden aims to create high-quality and well-designed housing for these students, and express appreciation and recognition of craftmanship, while supporting the students in their studies and social life (BRFfonden, 2021; Musicon, n.d.). In this report, BRFfonden is represented by Kristian May, who is the director of the foundation.

***Image 6.*** *Rendered image by LOOP architects illustrating Håndværkskollegiet in Roskilde (LOOP, n.d.).*

Like the case of Dreyers Kollegie, Håndværkskollegiet in Roskilde also stands out as it includes a comprehensive participatory process with broad stakeholder involvement, as students, the local community, artists, and five architectural companies have been involved. Hele Landet has facilitated this process, which included strategic physical tests and workshops, to develop a building program grounded in the residents' and the community's perspectives (LOOP, n.d.). The winning team of architects are LOOP architects and ReVærk, also emerging from the participatory process.

In this report, the participatory process is examined through interviews with Hele Landet's project managers Sille Askefrø Bjørn and Morten K. Petersen, and Susanne Kjær Adibi and Rasmus Svingel from LOOP, who have been some of the main architects on the project of Håndværkskollegiet. At the time of writing, the project is in the final part of the design phase, and construction is about to start.

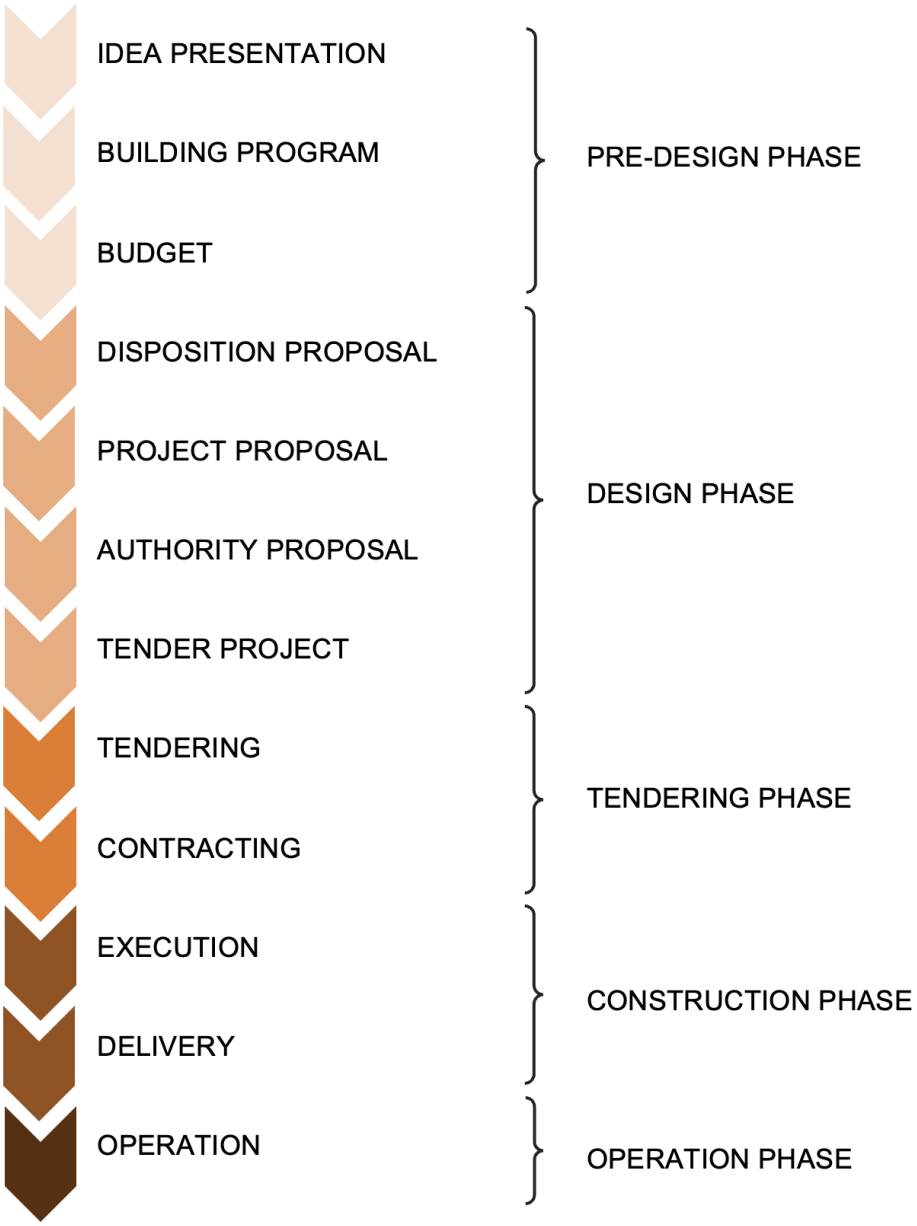
***Image 7.*** *A simulated dormitory kitchen during the process of strategic physical testing (BRFfonden, 2023).*

## 4.2 Current process and practices of a construction project

Prior to analyzing challenges and possibilities of integrating participatory processes, it is relevant to outline the conventional construction process structure, unfolding the technical, regulatory, and organizational complexities that shape this process, which were also touched upon in the introduction. It is within this structure, the "*conventional, conservative, and linear processes*" as Morten has expresses it, that participatory processes currently are attempted to be integrated.

In Denmark, a construction project can be divided into five phases spanning from the initial idea to utilization of the building: Pre-design, Design, Tendering, Construction and Operation (Naldal, 2019). The phases are widely agreed upon although the terminology used to describe them may vary. They are embedded in standards, guidelines, regulation, contracts, roles, and technical requirements. The process is thus governed by these conventions in Star's terms, and these elements are necessary to manage the complexity of construction projects, to coordinate several actors, materials, and timelines, along with coping with uncertainty and financial risks. However, as presented in the introduction, and as the later

chapters uncover, this standardization causes stiffness and boundaries that hinder participatory, innovative, and adaptive approaches.




### 4.2.1 The Pre-design Phase

The first phase is the Pre-design. In this phase, the building owner describes the requirements, wishes, and visions for the building. This phase includes the Idea Presentation, Building Program, and Budget (Naldal, 2019). The Idea Presentation is often formed together with a building consultant and besides the building owner's demands, it consists of relevant illustrations and a general description of e.g., area, environmental requirements, timeframe, technical installations, as well as traffic and organizational conditions (FRI, 2018; Mosegaard, Broch and Nissen, 2021). The economic conditions must also be

included, determining the budget of the project. In the building program, these subjects are further detailed, as the program serve as the foundation for both contracting and the design phase (Naldal, 2019). Additionally, it describes the supply, environmental, archaeological, regulatory, and legal conditions as well as the building owner's possible requirements for working environment, indoor climate, design, construction, digital project design, supervision, and user involvement (FRI, 2018). Throughout this phase, the building consultant confers with the building owner and reviews the building program, ensuring the requirements and budget are thoroughly described.

### 4.2.2 The Design Phase

In this phase, the initial concept of the building project is transformed into actionable plans and designs, including architectural, structural, technical, and operational solutions, based on the building program (Mosegaard, Broch and Nissen, 2021; FRI, 2018). The phase holds decisive power over the planning and design of the specific functional, aesthetic, and technical aspects. Typical actors participating in this phase are architects, landscape architects, engineers, and the building owner along with the building owner's advisor (Naldal, 2019; FRI, 2018). Through the design phase, comprehensive documentation of the project is developed to enable the tendering process, contract formation, and a smooth transition to the construction phase. The schedule, budget, and quality are detailed, all major decisions will be clarified, and building permit obtained from the relevant authorities, such as the municipality, having ensured that the project complies with the Building Regulations (FRI, 2018).

Three important factors to consider in this phase are cost, timeframe, and quality. According to Naldal (2019), depending on the building owner's requirements, they can be prioritized in various ways. Prioritizing one factor will often mean deprioritizing the other factors and therefore, considering the prioritization of these three factors from the beginning is important when preparing the building program (Naldal, 2019).

Throughout the design phase, the role of the building owner is to ensure the project aligns with their vision and objectives, primarily through monitoring, decision-making and approvals of the consultants' proposals, plans, and the overall budget and schedules (FRI, 2018).

### 4.2.3 Tendering Phase, Construction Phase, and Operation Phase

In the tendering phase, contractors are asked to submit bids for the project based on various levels of details of the project, depending on the chosen contract form (FRI, 2018; Naldal, 2019).
The construction phase involves the physical building being realized on site and ends with the handover to the client. After handover, 1-year and 5-year inspections are conducted to see if any defects not detectable at delivery appears, and during this period, the contractor will provide a guarantee of performance (FRI, 2018; Naldal, 2019).

The operation phase is when the client gets responsibility for operation and maintenance of the building after the handover. This phase includes administering technical systems and ongoing repairs to maintain the condition of the building (FRI, 2018; Naldal, 2019).

Overall, the five phases make a construction process more efficient and easier to structure and manage, and the building owner can administer the objectives, resources, and schedule of each phase in the project (FRI, 2018; Naldal, 2019). Each step can be evaluated and monitored, and risks and potential delays can be handled according to these phases. Furthermore, these phases represent a way of aligning communication between the actors.

## 4.3 The Value and Effect of Hele Landet's Participatory Processes

As described in the Introduction, the effect of participatory processes has been documented by several scholars, cases, and practitioners. Still, it is relevant to understand what specifically a company such as Hele Landet offers to a construction project. According to Morten, from Hele Landet, their approach takes the project away from the desks and into the real-world context, developing it iteratively to create more value architecturally, environmentally, and particularly socially. He adds:

*"What we do for the building owner is that we validate the basis of their project and sharpen the focus in terms of what challenges they want to address, what the vision should be, and how we move from idea and challenge to vision, to action, and to reality. And our starting point is that we must co-create with the people it's all about, the target group, and we must do that throughout the entire process."*

This involves loops in the schedule and iterations, as a linear process risks the loss of important feedback and knowledge. Sille mentions that since the people who are going to use the building are the true experts on their own needs, they will bring knowledge and inputs that an architect or building owner could not have thought of. Participatory processes not just collect stakeholders' opinions but actually reshape the actor-network of the construction process to incorporate a more nuanced field of insights and knowledge that the typical technical and economic focus overlooks or cannot deliver. The aim is to validate the project and ensure its function in practice, i.e., ensuring that it fits the particular social and local context while making the building more functional. This is an important feature of participatory processes highlighted by Kristian, Susanne, and Rasmus, to avoid costly rebuilding, which also aligns with the issues presented in the introduction. This reflects that Hele Landet must engage in a translation process where users, architects, building owners, etc. renegotiate their roles and align objectives as elaborated in the following chapters. Consequently, users or a wider range of actors are mobilized through Hele Landet as a translator and change agent, as actors that was previously immobile are identified, heard, activated, and their interests defined. As seen through the perspective of Star, Hele Landet challenges the entrenched

conventions in the construction processes and highlights types of value that usually are underestimated or even invisible work as Star puts it, as elaborated in the following chapters.

Both Susanne and Rasmus from LOOP Architects and Kristian, the building owner of Håndværkskollegiet, reflects on how this process led to a better outcome in Håndværkskollegiet, saying that without the process the project would undoubtedly have been of lower quality as incorporating the users proved to be ingenious and very decisive. They place the participatory process as central to successfully creating spaces where people and communities thrive. For example, in Håndværkskollegiet, the participatory process most importantly led to a building program aligning with the students' needs. Furthermore, it led to a reduced amount of total square meters, while square meters for community were increased. The process was also essential in finding the right placement of the shared spaces and the design of the workrooms.

In Dreyers Kollegie, the participatory processes led to the inclusion of a former pub as the dormitory's main common room, as well as physical changes in the interior design. Some interior changes regarded the main building's rooms, however, in the common room the participants had a high degree of freedom to arrange the room, test it out during the participatory process, and moreover, they ended up building much of the furniture themselves.

Hele Landet is usually active and included in the pre-design phase where they develop the building program, and occasionally in the operation and use phase, as Sille and Morten explains. Their challenge of entering the middle phases is analyzed in a later chapter. Hele Landet calls themselves "social architects", as according to Sille, their work is facilitated only in relation to the built environment, focusing on the human interaction with the physical surroundings. However, she further notes:

*"It is not just about getting input for the building. It is also about building social structures. […] For example, it is about young people holding house meetings, being organized in a dormitory council, and arranging shared activities that they help create, and so on. That social structure is just as important to build as the physical construction, and the two should speak to each other. […] Our processes can be used to get groups of people to talk to each other and pursue something together."*

Here, Sille states that social infrastructure is added to projects. Without the social structure and community building, communities may fragment or fail regardless of how well the physical space is designed, making these processes essential for the ambitions of BRF-fonden and Dreyers Fonden. In ANT terms, formalized structures are needed to build and stabilize a network with a thriving community. Otherwise, arbitrary social norms may form, based on who shouts the loudest, and which will overlook and discriminate some people, as Sille mentions. These formalized social structures are also much appreciated in Dreyers Kollegie, where the participants of Hele Landet's process express a desire for a structure where everyone is included and committed, which was also observed in the workshops. In Vandkunsten and LOOP Architects, Lars, Susanne, and Rasmus also recognizes this work of building the social and organizational structures as essential for projects like Dreyers Kollegie and Håndværkskollegiet.

Sille brings forward an example in Håndværkskollegiet, where a participant, a young insecure and worn-out man, ended up shining with confidence and bursting with useful ideas, as he was being asked and heard in the process, indicating that the participatory process itself may also include individual growth. Kristian also wanted this social structure in Håndværkskollegiet, which Hele Landet delivered, saying that building it physically was easy enough, but making it work socially, organizationally, and professionally for the young residents is something else.

Thus, according to the interviewees, participatory processes create value throughout the network and reshape both material and social outcomes. Ultimately, this also involves ambitions in the bigger picture, as Morten recounts:

*"In all our projects, we try to strengthen the cohesion of our society and balance out inequalities."*

Projects are not just seen as buildings but also social interventions. According to both Sille and Morten, the ambition is that their work not merely create better architecture, but also contributes to broader systemic change.

## 4.4 Challenges of Integrating Participatory Processes

However, when participatory processes are introduced in the conventional construction workflow, resistance occur. Drawing on Actor-Network Theory and Susan Leigh Star's notion of conventions, this chapter explores the frictions that emerge when participatory ambitions meet the rigid frameworks of conventional construction processes. Based on the conducted interviews, the documents gathered from the process, and the observations, this chapter identify points of disagreement and shifts in power and investigates how actors negotiate and stabilize their interests in the network.

### 4.4.1 Disruption of Construction Process Norms

One of the challenges that emerges when integrating participatory processes into the conventional construction process is the disruption of established norms and institutional structures. All interviewees express how actors often perceive participatory processes as a disruption to the project. Kristian describes how it initially was seen as an intrusion of the technical and creative flow and vision by some of the architects during the process in Håndværkskollegiet. Regarding Dreyers Kollegie, Sille also recounts:

*"It's easier to do business as usual because you know you can deliver it and have found a model that is known to work when it comes to building something."* – Morten

*"In the Dreyers project, it has been a disruption which I do not think the building team were pleased about. Because we came in at a point where everything was drawn, and then we come and want to do physical tests and things like that, and that easily becomes a disruption, especially if you do not understand at all what the process is for. And we must acknowledge, that some actors just do not see the point."*

Morten echoes this point about the disruption of the architects' work in Dreyers Kollegie, perceiving the participatory process as a disruption and noting the challenges of it influencing the physical aspects of the project. From an Actor-Network Theory perspective, this introduction of new actors during a process, such as process consultants and potential residents, involves reconfiguring existing stabilized networks, and the new logics and interests of these actors challenges the existing project plans. As mentioned in the introduction, the construction sector is characterized by strong norms, that tend to hinder feedback loops and innovation, and in this case, the early lock-in of design decisions conflicts with the participatory process. Similarly in Star's terms, this is an "allergy moment", challenging the conventions and exposing the rigid and taken-for-granted structures embedded in the construction process that reject alternative practices. As Star points out, systems are made to benefit the ones they are designed for, and in the case of construction processes, they are designed for developers, architects, and contractors to smoothen their processes, with users sidelined and fast construction and short-term profit as purpose. Processes that deviate from the known workflows and norms becomes a disruption. This creates difficult conditions for iterative processes. Regarding the framing of the problem and process as well as the creative room of the architects in Dreyers Kollegie, Morten recognizes that bringing an actor such as Hele Landet in mid-process will disrupt an ongoing process and bring a kind of criticism of the work of the other actors. From Vandkunsten's perspective, Lars adds that this creates confusion of the roles in the process, for example about who is responsible for the architectural and drawing aspects as a collaboration was not systematized. This was also observed during the information meeting, where uncertainty emerged about specific design responsibilities, particularly regarding the roof terrace and common rooms. A similar observation was made during the first workshop, where a carpenter expressed discontent with the participatory process, as he was unaware of the workshop taking place, and did not anticipate the disruption during his work. These points demonstrate that when the network is already stabilized, new contributions risks being perceived as an interference rather than valuable. However, in Dreyers Kollegie, Lars mentions that overall, Hele Landet definitely has had a positive impact on the project, for example by the added common space and the building of organizational and social structures. Sille recalls the disruption and lack of recognition in earlier projects:

*"When they were about to start an urban renewal project in another city, the planning director said: 'That was a really good process, but there's no way we're doing that again.' […] When I was at Arkitema, I also heard from many people that they felt it was a waste of time. […] It is no secret that many architects find citizen or user involvement to be a somewhat annoying process. […]"*

To Sille, this disruption is intentional, as besides building social and organizational infrastructure, the objective of the participatory process is also to view the process as a process of change with opportunities for transformation:

*"What we do also transform where we end up. It is about how you bring many worlds together and arrive at something entirely new, which none of the participants might have imagined on their own. In our timeline, there are loops, and the people who start will not have the same views at the end of the project as they did at the beginning."*

This aligns with ANT's view of networks as always subject to negotiation and change. Sille believes that this way of moving away from a linear and rational approach may add greater value to the project. This view is contested, as Kristian adds that some architects see themselves as artists or experts in what both the building owner and users want, standing in contrast to participatory processes and illustrating the silo thinking in the industry, as indicated in the introduction. Susanne and Rasmus from LOOP also warn that architects must be careful not to position themselves as experts on other – occasionally very particular – people's needs, though architects are required to possess a broad palette of knowledge. Lars from Vandkunsten however questions how much influence a group of participants should have on a building. He argues for a clear division of roles, as his competencies lies in architecture, while process consultants such as Hele Landet have competencies in facilitation and involvement, and although he acknowledges that participatory processes bring valuable knowledge to the project, he maintains the architects' decision-making power to decide how and to what extent the knowledge is applied. To these points, Sille argues that rarely the objective is or should be to create an icon building or something extravagant and wild, but that most architects are not artists, but people with a task to create a well-functioning environment for some other people. In ANT terms, this demonstrates a negotiation of role definition and agency within the actor-network and exposes the architect as a non-neutral agent. The artist or expert architects claim to speak for others and tries to translate the interests of both users and owners into the project through the architect's expertise. This kind of architect attempts to define the problem and position themselves as indispensable for the solution and as the obligatory passage point for the project. Sille's viewpoint is an attempt to reconfigure this standard network through shifting the identity of the architect from artist and expert to a facilitator with a task, redistributing agency away from architects and toward users. This proposes an alternative obligatory passage point, namely the negotiated understanding of functional and social needs. Legitimacy is thus obtained not only through expertise, but also through user input.

From Sille's perspective, the reason for the resistance towards participatory processes may be based on a lack of understanding or knowledge of the value of their process as well as poor communication. Supporting this, Morten refers to the construction industry as "*conservative and conventional*" and states:

*"But we have a responsibility for the kind of built environment we want. We can't just hide behind the idea that we're only doing what we're asked to do within legal limits. I don't think that's good enough."* – Sille

*"My interpretation of it is that I believe the building owner's advisor, the technical part, thinks that the way we work, which is iterative, inclusive, and experimental, is both resource-demanding and unpredictable in terms of outcomes. And therefore, I think the building owner's advisor wanted to cut us out of the process because it was too challenging, and it was also about stepping into new territory. It's easier to do business as usual because you know you can deliver it and have found a model that is known to work when it comes to building something."*

During the construction process, with Hele Landet as the translator, the translation process of user inputs is challenged as traditional actors and stabilized network resist alternative and unconventional processes as they perceive them as undermining their creative control and authority and the project's predictability or simply as irrelevant. This tension between what is seen as relevant and what is seen as expendable also corresponds to Star's phenomenology of conventions, with the design, budget, and deadlines opposing user values and social context. Sille elaborates on this:

*"If you take out the architects, then you have no one to design the building, or you will end up with a really poor project. If you take out the building owner's advisor, then you have no one to manage the legal aspects and handle a construction project as it looks today. If you take out Hele Landet, you can technically still complete the project. Unfortunately. I just do not think it will be nearly as good. We see ourselves as a cornerstone of a good building project. Many people think what we do is really great, but they still believe that our piece can be left out."*

Both Morten and Sille express frustration at the difficulty of legitimizing their contribution. Kristian further notes that some of the architects were unfamiliar with the methods and reluctant to spend time on actors or activities that they were not sure would influence the project. These points resonate with Star's notion of invisible work as the social and organizational effort is initially not recognized as essential and thus perceived expendable as the process can, and often does, occur without any involvement process or social efforts. This makes Hele Landets role being perceived as optional to some actors, according to Sille. However, Kristian mentions that when Hele Landet's activities had taken place, the architects on Håndværkskollegiet actually did perceive the work as valuable, illustrating a re-enrollment into the network as they accept the interests of the building owner Kristian and Hele Landet through their experience of participatory processes as valuable. This also confirms actor-networks as dynamic and changing through negotiation and translation.

In relation to the work and flow of the architects, Sille have attempted to encourage architects to reflect upon their own values and she raises an important question pointing to self-righteousness and insurgence among the architects:

*"Don't architects have a moral responsibility for what they design? I mean, this is deeply political, and they say the same thing I've heard at many architecture firms: 'Well, we work within the boundaries of the law. We do the best we can with what we're given. We are a business, and as long as we're not breaking the law.' So you can say: 'Well, we didn't create the framework.' But we have a responsibility for the kind of built environment we want. We can't just hide behind the idea that we're only doing what we're asked to do within legal limits. I don't think that's good enough."*

According to Sille, the architects leave the moral responsibility to legal frameworks and end up focusing on the business in the end. With an ANT perspective, this is challenged, showing that architects certainly have agency just like all other actors. The architects also participate in shaping the network and thus cannot separate themselves from the consequences of their actions.

### 4.4.2 Economic Logic, Schedule, and Technical Requirements as Structural Limits

With ANT encouraging the perception of non-human elements as actors with agency in a network, economic logic and budget planning appear as powerful actors in construction projects. Sille notes how budget constraints are not a passive background, but influence every decision, even minor user requests:

*"Developers often only have a technical construction language and a focus on money. Every time someone wants to move a tap, it costs money. […] And that's also because if they don't finish on time, it results in daily fines and costs, and the building owner's advisor exists to keep the schedule on track and stay on the contractor's heels."*

This cost discourages such changes as, Sille further states, the construction process today is *"about law, money and schedules, and everything has to go so fast."* Morten echoes this observation and acknowledges that a lot of money is at stake and the schedule must be followed. These points are confirmed by Kristian saying that the ambitions for a building, such as quality or process, depends on how much you are willing to spend, and most construction projects are under time pressure. According to him, this is why participatory processes are not more common. It is about the building owner's budget, unfortunately, he adds, and with BRF-fonden's position as a foundation, they are privileged with a very large budget making the choice available, which is also emphasized by Susanne and Rasmus. This way they can provide the circumstances for participatory processes to flourish, such as a building owner willing to absorb the additional cost and time. In the case of Håndværkskollegiet, Kristian also mentions that it ended up being a much larger testing and involvement process than expected, and thereby also more expensive, but only because they found it valuable to expand it and decided on this deliberately. Morten confirms the advantages of working with a foundation, saying that Hele Landet and foundations generally share the objective of societal gains, though Hele Landet has to uphold a business. This dualism presents another

barrier, as the economic focus of building owners and other actors also affect their perception of Hele Landets motives, thinking that Hele Landet are trying to do upsells and make more money, according to Morten. Sille concurs, noting that this was her impression of Kristian in the case of Håndværkskollegiet when Hele Landet argued for taking part in the design phase of the project, which is analyzed in the subsequent chapter. In ANT terms, these points represent different problematizations as the conventional network has a different problematization, i.e., a different objective and values than the involvement network. Morten addresses further challenges with building owners including foundations:

*"There can also be something that becomes resource-intensive and about business unusual, something you don't know how to handle. And if you have no experience with it, you think, 'okay, let's just do business as usual,' because then you know you can deliver. Even if you're a foundation with a lot of money, there's still a budget, and there's a director who has to be accountable for it. So I think experimenting too much and opening up the process too much can be seen as a challenge. And something that may have unforeseeable consequences."*

Morten experiences that even if the building owner thinks a participatory process may result in a better project outcome, the building owner finds it risky, costly, and uncertain, and prioritizes the schedule and budget, to which he may also be tied. Lars from Vandkunsten confirms this, as he also experiences that participatory processes includes an uncertainty and risk that building owners are not often willing to step into. He further adds that, as architects, they are constrained by the phases of the construction project where the building owner approves each phase, and any subsequent changes will lead to large cost and time increase as the process must be reset and new drawings produced. It may potentially result in added material resources as well if construction has started. The interviewees' statements highlight the non-human actor of time, specifically the schedule, as closely linked to the budget. Time is money – as the timeline is enforced through legal contracts, delays come with costs. The schedule becomes powerful through the pressure to move forward linearly, thus also undermining reflective and participatory activities. All interviewees note that it requires additional financial resources and extra effort, planning, iterations, and explorations to involve users and other actors. Because of this time and budget pressure, all interviewees mention that even though it according to them is clearly a good idea and obviously significantly valuable for the outcome, most developers may not be willing to invest this additional effort, which the foundations are more capable of.

Morten also relates this challenge to technical and planning barriers, acknowledging the complexity of the process:

*"It's very linear, and there's a reason for that. It's incredibly complex, and there are deadlines you have to meet and deliver on. There are also a lot of uncertainties when building, both in terms of whether you have the resources to complete it, and all sorts of things can arise during a construction process that can cause delays. And there's a lot of money at stake as well."*

Construction processes involve large economic investments at stake and complex technical requirements, representing another non-human actor, involving numerous architectural drawings, constructional expertise, electrical installations, heating, ventilation, air conditioning systems, water supply and so forth,

as Lars from Vandkunsten emphasizes and Sille also acknowledges. Consequently, actors resort to the linear and tightly controlled process to manage risk as well as to minimize cost and build quickly, however at the expense of flexibility and user values. The economic logic is embedded deeply in the network as a black box not questioned by those working within its limits, and cost-efficiency and speed are a dominant convention that other aspects must adapt to. Sille mentions, that industry peers have reacted by dismissing the idea of intensive user involvement, saying that "it was only possible because the foundation is so rich", indicating how stabilized the conventions are, as the user process is understood as only viable under special conditions. The network's focus on economic efficiency is so stable that it deflects critique. However, this structure and standard become visible when someone attempts to deviate from it, as Star notes in her onion analogy. The convention of rigid budgeting and scheduling is rooted as the norm, but it becomes noticeable for instance by introducing an unusual degree of participatory processes that does not fit the standard workflow. Financial priorities are set very early in a project as constraints that actors must accept and work within, and changing the budget mid-process can be seen as a threat to the viability of the project. Naturally, this limits feedback loops and adjustments during the construction process. Sille further recounts:

*"There are many times you sit in a meeting, and they say, 'We simply can't afford that,' and then a skilled architect says: 'Well, then we can just draw it like this. And if we use that material instead, we'll save some money, and now we're cutting the internal windows, which were actually a key part of the idea of creating transparency.'"*

Thereby, the ambitions and design are directly reconfigured by the budget logic, as central features are removed to save money, potentially critically affecting the quality of the building. Kristian echoes this negotiation between ideals and resources, saying that often the budget is the reason that ambitions collapse, and this ends up affecting the building and landscape, so for instance instead of a Japanese rock garden you may get an asphalt parking lot. According to Callon's (1986) translation process, this also represents an unsuccessful translation, and the actors in the conventional network maintain their roles. Kristian says that these economic compromises are very common, and though acknowledging that they at times may be due to external factors and necessary, he states that an involvement process could prevent many shortcomings in relation to the users' needs. Yet, actors in a conventional network quickly resort to cutting costs in situations with tension and consequently decrease the quality while also limiting the potential for user-driven innovation as the budget overrules participatory ambitions. The budget becomes an obligatory passage point, and every decision must pass the budget approval, narrowing the possibilities for integrating ideas from users that may require additional funding. An example of this is that during the involvement process of Dreyers Kollegie, participants requested an elevator to make the building accessible by everyone, aligning with the ambitions of Dreyers Fond, but the idea was found to conflict with cost, time, and technical possibilities in the particular phase of the project. Even in the case of an idea emerging during the process, which everyone wants, it may not be implemented due to these elements. Lars further adds that in Vandkunsten they have multiple experiences of requirements from both the Building Regulations and municipality guidelines, such as local plans, being imposed on projects, even though these elements ultimately result in a waste of resources, as they are not utilized by the users of the building. Such building elements could have been better aligned with user needs and the space

*"Many of the outcomes of our processes don't necessarily have an economic value always. It may not be something you can measure quantitatively."* – Morten

utilized efficiently through participatory processes. The strict budget, fixed schedule, regulatory documents, and technical drawings thereby become barriers to efficiency and non-human actors with power, silencing the weak voice of the users. As Law (1992) states, complex networks will particularly be stabilized through material elements. These elements are immutable mobiles, moving across the network and exercises authority. Thus, the selfsame mechanisms designed to ensure success of the project, representing the problematization of the conventional network, can hinder innovation and adaptation of designs to actual user needs.

In ANT terms, rearranging priorities and overcoming the mentioned obstacles necessitates a translation process. An important part of this process is the interessement stage, where the other actors' interest is aroused, in this case in the participatory process. To address the conventional actors, this could be achieved through conveying the actual value of the participatory process, as current valuation mechanisms in construction underestimate participatory processes. Morten points out that:

*"Many of the outcomes of our processes don't necessarily have an economic value always. It may not be something you can measure quantitatively."*

Susanne and Rasmus also mention monetization of social benefits as a potentially effective way to integrate participatory processes into conventional construction processes if possible. As mentioned in the introduction, the benefits of engaging users are qualitative and difficult to translate to economic value, and thus will not appear as direct profit. Improved social cohesion, quality of life, long-term satisfaction, and better building functionality are intangible gains and thus systematically undervalued in decision-making. Since these benefits are outside of the standard metrics, decision-makers stick to what can be measured, aligning with Star's concept of heterogeneous externalities. If participatory practices are not understood or valued, they are dismissed even if they have generative potential. Kristian touches upon this as well stating that he does not believe the gains can be quantified, and he cannot say if the process has resulted in a saving or not compared to if they had a conventional process. This may be measured in evaluations of user satisfaction and life quality, he adds. Yet, he believes the value is indisputable, that the process helped them develop the project they aspired to through reaching the users, and that in principle the right thing to do is to show an interest in the people who will live in the building and their well-being. If this is not done, it may result in either worse quality and functionality for the users or increased costs for transformation.

Though often difficult to quantify, Morten gives a specific example from the participatory process in Håndværkskollegiet which, by testing and observing user interactions, exposed a more efficient design:

*"So a result of that was that we actually didn't need to build 7,000 square meters, we only needed to build 5,000 square meters, where the students are exposed to each other and each other's communities to a much greater extent. That can be translated both into economic terms and in terms of $CO_2$ emissions."*

This way, the economic focus may in some cases undermine its own goal of efficiency by being too rigid as the participatory process here resulted in fewer square meters, directly improving the project economically, environmentally as well as socially. This is a successful moment of translation in ANT terms, as interests of diverse actors, e.g., users, sustainability, building owner, architects, and budget, are brought into alignment. Following the conventions, this iterative discovery might never occur, resulting in the larger, costlier, less social facility being built.

Morten further mentions that what they have done in Håndværkskollegiet, building a social and organizational framework, harmonizing with the users wants and needs, and manifesting a storyline that reflect people also makes the project more attractive and widespread, and in general, this is also part of a business model. These elements, which a company such as Hele Landet brings, are part of a successful project and potentially result in increased profit through higher rent and selling price for instance, he adds. Meanwhile, he expresses frustration as he recognizes that building owners speak the language of economy, and Hele Landet struggles to convey their value in these terms.

Though Morten believes in the expression "*thriving city, thriving business*", he thinks that convincing typical private developers, without the financial support of a foundation, to integrate participatory processes is difficult, as most often, their main focus is on profit, in contrast to Hele Landet, and Hele Landet cannot quantify the profit and the return on investment. With experience in Vandkunsten, Lars confirms this interest of typical developers being cost and profit. Kristian as director of BRFfonden shares this belief, saying that although the value is indisputable and obvious, as mentioned, he thinks persuading developers is about fitting the alternative process into their economic models.

### 4.4.3 The Inaccessibility of the Design Phase and Loss of Knowledge

An example of the budget, schedule, and technical constraints hindering the participatory process is Hele Landets difficulty to access the design phase and take part in the crucial decision regarding the physical aspects. In the case of Håndværkskollegiet, this phase marks a shift in the actor-network, where Hele Landet is sidelined, and the conventional and technical actors take over. With the significant influence the design phase holds, this shift noticeably indicates the power dynamics of the construction process. It also raises the challenge of ensuring that the value created through the participatory process is maintained within the network. Through the lens of Star, the design phase is controlled by conventions and standards that are invisible until this "allergy"-moment. In the perspective of ANT, the exclusion of Hele Landet

signifies a reconfiguration of the network where the technical consultants, schedule, and budget are prioritized again, as conventionally. Morten describes the cut off in the process of Håndværkskollegiet after the pre-design phase:

*"We do a lot of involvement, where many ideas are generated, and it ends with us doing a test, which then results in us creating a building program and selecting a winner. And then there's kind of a cut at that point, the project transitions from us to the technical building owner's advisor, and then that process basically takes off from there."*

Hele Landet's central role in the early phases in facilitating user input and carrying out the experimentation part, shifts as the network reorganizes in the design phase. The obligatory passage point falls back to the technical and economic process with the participatory process sidelined. Sille observes a mental shift in the project as well:

*"Now the playtime was over. Now the door to the playroom was closed, and the adults had to talk, because now came the serious part, and the seriousness was about the money. The focus shifted completely."*

Star describes this moment as the hidden conventions exposing themselves. The participatory process may have been innovative and exciting, however it is exposed as temporary and inferior to the "real" business process. Kristian who represents the building owner, clearly distinguishes between phases relevant to participation and phases relevant to other actors, saying that now they are in the design phase, and it proceeds in a more conventional manner without participatory processes, which may reenter the process closer to the operation phase. In the design phase, he adds, there is no social element or need for Hele Landet, as it is the physical building being built involving electricity, piping and so forth. It is technically complex and should be handled technically, and therefore focus is one these things. Morten and Sille also acknowledges this, saying that in the design phase, the language becomes technical and economical to an even higher extent as it is obviously necessary for the construction of the building. These technical actors are essential for the viability of the project, they both emphasize, and at some point, the actual construction must begin. However, the design phase traditionally consists of actors without the users in top of mind – "a closed forum" for users, Morten expresses it, corresponding with ANT's notion of the stabilized actor-network and Star's invisible conventions where technical actors dominate, and the user is marginalized. They appeal for including a social focus throughout all the phases as they believe it brings a lot of added value, aligning with Danske Arkitektvirksomheder and AART (2024). Rasmus from LOOP nuances the situation:

*"A project is very moldable in the early phases, whereafter things harden as the project progresses. When contractors, fire requirements, and Building Regulations enter the process, things begin to solidify completely."*

Susanne and Rasmus argue that participatory processes have the greatest influence in the early phases, and once decisions move in one direction, there will naturally be fewer options. However, since values and ambitions, not only of the participatory processes, risk being lost during the design phase, a representative of the participatory process could help preserve them, though they believe

*"You have to ensure that everything you do is carried forward; otherwise, many people will feel like, 'What was the point of all that? It didn't lead to anything after all.' It shouldn't just be the coating that makes the pill easier to swallow."* – Sille

Håndværkskollegiet involved very few compromises in this phase. This success is also due to the architects being involved very early in the project, giving them insider knowledge of the participatory process and the development of the building program as well as the competent management of the participatory process, according to Susanne and Rasmus. In ANT terms, as conclusions increase, the network becomes rigid with less flexibility, and Susanne and Rasmus suggest that maintaining the translation into later phases could be achieved with a representative as an obligatory passage point.
Kristian states that for Håndværkskollegiet, most decisions were taken and included in the building program, which he in this case praises, and that the project that won the architectural competition had been loyal to this program. According to the architects and the building owner, Kristian, Håndværkskollegiet thus represent a successful translation of participatory values. He perceives participatory processes as a preliminary process, also placing its power in the early phases. Simultaneously, he positions the building program as an "immutable mobile", a document exerting authority over design decisions. As mentioned previously, he does acknowledge that unfortunate economic compromises may occur in the design phase, nonetheless, in the case of Håndværkskollegiet, he trusts the building program and his own ability as building owner to prioritize optimally. In these statements, he understands this phase as managed by standards, building codes, and engineering limitations, and social actors must retreat. This assumes the participatory process to already be embedded in the building program, meaning the building program in this phase represents the participatory process, and further involvement is thereby unnecessary. Yet, this clean separation ignores the dynamic nature of building projects, as Morten also points out:

*"I think it's really unfortunate, because there's so much in the earlier phases that is important to carry into the entire construction process to ensure a clear thread from what we've discussed with the target group, what we've discussed with the building owner, the analyses we've conducted, and all the insights we've gained. This must also be brought into the next phase so it doesn't suddenly derail, and we end up with a completely different project. So much learning is lost, and the entire anchoring of the project with the target group, all the local actors, all the architects, artists, and other participants in the process is also somewhat dropped, because the technical building owner's advisor doesn't focus on that part."*

Here, Morten highlights the risk of losing the continuity, the ownership and anchoring, and disposing of inputs during the participatory process, which Susanne and Rasmus from LOOP also pointed out. From Vandkunsten's perspective, Lars also notes that involving representatives from the participatory process

in the design phase could be beneficial to maintaining its values throughout the process as otherwise they risk being deprioritized in favor of other aspects. With Star's lens this can be explained as although the value of participatory input is not visible in the design phase, it remains important, and the system merely lacks tools to carry it along, and thereby risks deviation from the project's original ambitions. Both Morten and Sille also concurs with Kristian's statement about Hele Landet having a strong influence through the building program but expresses frustration by not being able to follow Håndværkskollegiet through, as the project in principle may end up completely different in the design phase and subsequent phases. Sille expresses this concern:

*"You have to ensure that everything you do is carried forward; otherwise, many people will feel like, 'What was the point of all that? It didn't lead to anything after all.' It shouldn't just be the coating that makes the pill easier to swallow."*

This suggests a failure to institutionalize participatory practices. Without ensuring the continuity through formalized processes, social aspects become optional, a bonus, and potentially disposable, rather than the backbone of the project, as the participatory process and social ambitions become superficial to a pre-decided project. As described in the introduction, this may also lead to an example of the social performance gap, where visions in the end do not align with the actual outcome, which can be alleviated through dedicated work to ensure the social ambitions throughout the project lifecycle (Danske Arkitektvirksomheder and AART, 2024). In Dreyers Kollegie however, the design phase is currently ongoing and decision-makers – Dreyers Fond – are enrolled and users mobilized. Here, Hele Landet continues the participatory process though still encountering the challenges regarding disruption as described above. Sille further assesses the challenge in this phase:

*"The arguments are like, 'now we've talked enough, now there's been enough process, and now it's time to hammer some nails.' Now it becomes a technical construction project, now the human aspect no longer is relevant. 'We've done that part. Now we can check it off. We've included the people. But what I think is being overlooked is that, even if the users aren't involved when entering the design phase, there are still a lot of people who need to communicate, and they don't do it particularly well, I know that. They don't speak very nicely to each other. The communication is poor."*

Here, Sille argues that Hele Landet's missing role in the design phase not only risks losing input and work from earlier phases, but it is also about relational aspects, collaboration, and potential misunderstandings in the following phases. Morten notes that the mentioned experiences in the design phase of Håndværkskollegiet are representative for most of Hele Landet's projects; even the building owners and developers that begins with choosing the unconventional process, however experimenting, ambitious, visionary, innovative, and involving, the closer to the actual construction, the more conventional and conservative it becomes. In ANT terms, nearing the design phase, the network becomes narrowed as the technical aspects displaces social actors and the translation process collapses. As described in the previous chapter, standardized institutional norms in the stabilized network define the relevant expertise and whose voices should be heard, as Star would point out, and this becomes increasingly visible in the design phase.

*"If a big group of participants want something, they should have it, but it is a big problem if they want something completely different too late in the process."* – Lars

## 4.5 Stabilization and Institutionalization of Participatory Processes

This chapter examines how the economic, time sensitive, and technical network can be subjected to a translation process and reconfigured to embed participatory practices as stable and valued parts throughout a construction project. The analysis of the challenges of integrating participatory processes into construction processes points to various key efforts, and these are analyzed and presented here through the lenses of Actor-Network Theory and Star's analysis of conventions. These measures support Raworth's (2017) principles of Doughnut Economy, calling for a fundamental shift to disrupt business as usual and move the focus from economic growth towards human and environmental well-being. As mentioned in the introduction, this is further underlined by CONCITO (2025), Ecorys (2023), Kuittinen (2023), Lah (2025), Thomson, Gustavsson and Karvonen (2024), and Vind (2024) arguing for a transformation of existing construction practices and a cultural shift towards learning, consideration, innovation, and collaboration.

### 4.5.1 Engaging participatory processes from the outset

As the analysis have shown, the construction process consists of a dynamic and negotiated network. Human and non-human actors influence the network, that traditionally has been organized around a narrow economic logic and valuation, quick construction, and a technical focus, sidelining user needs and other social aspects. As explained earlier, this limits the potential of participatory processes. To address this, based on this analysis, one of the first steps is to clarify roles and expectations and engage actors in participatory processes from the outset. This will limit challenges of integrating participatory processes and align problematizations of the actors early. The following actors illustrate and confirm this strategy.

Morten argues that project objectives and roles including participatory processes should be decided from the outset, based on the experience in Dreyers Kollegie. He elaborates:

*"I don't think it's the right model to first have someone design it and then bring us in to develop the concept afterwards. I believe the building owner has a responsibility to assemble the right team from the beginning, so that the physical aspects can influence the conceptual, and the conceptual can influence the physical."*

Thereby, Morten recognizes that this kind of process requires the right framing and planning from the beginning, to not disrupt an ongoing process. Lars from Vandkunsten adds:

*"If a big group of participants want something, they should have it, but it is a big problem if they want something completely different too late in the process."*

Actors must be mobilized from the start to avoid mid-process "allergy moments". Kristian and Lars agree with this, stating that it is the building owner's choice to prioritize a participatory process from the beginning establishing it as a premise for the project, and other actors must then adapt accordingly. Kristian adds that ensuring that the tender is realistic, meaning that the budget matches the drawn project from the beginning is essential to avoid being forced into economic compromises.

Kristian states that the process of announcing the participatory ambitions from the outset was attempted in Håndværkskollegiet with full support for Hele Landet during the initial phases to ease the adaptation of the other actors, though some actors did show resistance and the participatory process was halted in the design phase. Hence, deciding for and beginning a participatory process from the outset requires more efforts to stabilize it throughout the process, which the other interviewees also acknowledge. The success of the translation process depends on the initial institutional embedding to reduce risk of the participatory process being treated as an add-on. As Kristian argues, transformation will only take root when supported from the top, which was also the case in Dreyers Kollegie, though it was initiated in the middle of the construction process. The building owner has the power to reconfigure the network, legitimize new conventions, define the problematization that ultimately will lead to mobilization of the users. In ANT terms, Hele Landet gains power through the association with other actors. Without this support, users and even Hele Landet will be marginalized and peripheral as they disrupt the established conventions, in Star's terms.

### 4.5.2 Infrastructural Embedding and Formalizing of Participatory Processes

Following this, the challenge of maintaining the value of the participatory process in the network emerges. Hele Landet's challenge is not only institutional but also infrastructural, as shown in the chapter about the economic logic. In the design phase exists an ontology where the world is composed of technical drawings, economy, and deadlines and not relations, local context, or user needs. As long as these ontologies and their related problematizations are incompatible, accessing the design phase will be difficult for participatory processes. Morten acknowledges that other aspects may lead the design phase but stands firm on Hele Landet's relevance there:

*"It's not that I think we should play a lead role in the processes where our competencies aren't crucial for moving the project forward, but it would make sense for us to be involved all the way."*

Regarding these other aspects, Star explains how structures may be invisible but powerful, such as the pressure of budget, the schedule, and technical demands that governs the design phase. With Star's concept of invisible work, participatory processes must therefore be integrated into the conventional construction processes to maintain their power. Similarly, Sille and Morten indicated the failure to institutionalize participatory processes and highlighted the necessity to ensure that the work of the participatory process is carried on throughout the construction process, hence, formalized mechanisms to enforce these processes without disrupting the workflow are essential. In Håndværkskollegiet, Sille attempted to create "parallel tracks", with occasional meetings between the social and construction tracks to reduce disruptions, and though a promising strategy, integration into the conventional process seems unavoidable. Without embedding the participatory practices in metrics, contracts, meetings, KPI's, and deliverables, they remain disposable and optional when complexity and pressure increase. On the contrary, embedding into these elements, including binding documents, could help stabilize values from participatory processes within process.

In extension to this, integrating mechanisms of user evaluation of buildings could track outcomes over time after delivery, and form feedback loops that reinforce the legitimacy of participatory processes. According to Sille, these evaluations are largely absent in Denmark, which Rådet for Bæredygtigt Byggeri (n.d.) confirms, though abundant literature and guides in the field of post-occupancy evaluation exist. Whereas common 1-year and 5-year inspections focus on the technical aspects (Trafik-, Bygge-, og Boligstyrelsen, 2020), post-occupancy evaluation examines the user's experience of the building and can be used to validate and challenge a building's design (The Royal Institute of British Architects, 2020). The missing evaluation means that besides the potential of participatory processes during the construction process, valuable insights from users after construction are lost as well. Incorporating structured evaluations could facilitate learning processes across projects, contributing to closing social performance gaps. Mismatches between planned use and real use can be identified this way, and evaluations can contribute to normalizing the idea of co-designing buildings by multiple actors.

### 4.5.3 Careful Management and Structure and Interdisciplinary Coordination

As the building owner's perspective, Kristian furthermore emphasizes the importance of a clear structure, purpose, and institutional support, which he believes Hele Landet brought in Håndværkskollegiet, to ensure smooth collaboration between diverse actors. Kristian believes that a participatory process must be managed and structured carefully, and all actors must have a clear understanding of their goals and expectations of it. An organized frame – without being rigid –within which the participants have room to be creative with a purpose. All interviewees echo this, saying that a well facilitated process turns the participatory process from undefined at first into a common language, specifically setting the stage and scope, laying out a participation plan, deliverables, relevant discussions, and each actor's purpose and responsibilities through specific tools to facilitate the process. As Star describes this translation process as: "*A set of uncertainties are translated into certainties*" (Star, 1990, p. 97). The architects in LOOP, Susanne and Rasmus, specifically highlight this part of the work of Hele Landet as essential to limiting uncertainty and potential disruption of the architects' work. This demands a special expertise. Sille and Lars also

*"It's very much about communication. Communication can promote everything, and it can ruin everything, and you can ruin a project with it too."* – Sille

describes how a clear project structure is essential for preventing potential conflicts. For instance, they highlight how Hele Landet and Vandkunsten established a practice to minimize disruptions during the process at Dreyers Kollegie. After initial divergence regarding the interior design process responsibility, as described previously, they redefined their respective roles and responsibilities, identifying specific elements of the building which the participants could influence. Specifically, the users became responsible for providing requirements and design ideas related to the rooftop terrace and non-fixed furniture, ensuring clear task division and smoother collaboration. This illustrates a successful translation process despite of a disruption mid-process and alleviates the allergy moment. A problematization and interessement occurs as the actors realigns objectives and negotiate their roles and terms of involvement. The actors accept these objectives and roles and are enrolled in the reconfigured network, leading to a mobilization of the users and Hele Landet as this network stabilizes and ensures that the users' inputs are not just symbolic but actively shapes the project. This is also an example of improving collaboration, and as Sille further argues, their process and structure not only accommodate the needs of the users, but also improves the communication and relationship-building between actors. The communication is foundational and currently deficient, according to her:

*"It's very much about communication. Communication can promote everything, and it can ruin everything, and you can ruin a project with it too."*

Furthermore, as both cases demonstrate, and as Sille points out, a participatory process must be designed to fit the specific actors in the project. Different participatory tools are relevant in different contexts and personalities to enable the specific actors in the project to incorporate it in their process and to see the value of it, which she experienced can transform economically focused building owners into appreciating the participation.

A careful management and structure of the participatory process is thus essential in achieving a successful translation process. This structure and management can be integrated into the technical planning from the outset, through cyclograms and other planning tools, so that instead of disrupting the schedule of the technical aspects of construction, the participatory process is considered with it. Planning and allowing for flexibility and iterative development thereby enables participatory processes and the social innovations they can bring.

### 4.5.4 Educating, Communicating, and Advertising the Value of Participatory Processes

Through the analysis of the challenges, it can be seen that a long-term strategy includes educating relevant actors such as architects, building owners, building owner's consultant, developers, planners, and construction companies to increase understanding and awareness of participatory processes and to recognize their value and necessity, shifting the underlying conventions. According to Callon (1986), there must be a significant value for a certain behavior to change. This value is essential to convey to arouse interest and to increase Hele Landet's credibility, since if participatory practices are not understood or valued, they will be dismissed, even if they hold valuable potential. As Callon (1986, p.13) writes about the amount of value that alternative methods bring: "*This is the only question of any importance in either case.*" Participatory processes entering architecture schools and other relevant institutions of construction actors is one way to convey this value. This strategy is supported by the fact that building owners and decision-makers often contact Hele Landet when they see and hear of the value of their processes in other projects, as Sille and Morten recounts. Or they use Hele Landet in their new projects as in Dreyers Kollegie, where a member of Dreyers Fond had worked with Hele Landet in another project, and thus was central to engaging Hele Landet in Dreyers Kollegie. Sille further adds that if she knew how to spread the word about the importance and value of participatory processes, a company like Hele Landet would definitely have a better business. This suggests that increased marketing and advertisement correspondingly could assist in shifting conventions.

These efforts would reconfigure the conventional network and increase the amount of aligned actors. An example of the benefit of increasing the amount of aligned actors is in Håndværkskollegiet, where Susanne and Rasmus emphasize that the project was fortunate to work with a willing municipality making the site available for testing and a skilled carpenter providing the necessary facilities. By educating, communicating, and advertising participatory processes to a larger extent, translation occurs at a broader level instead of within a single project and interests of building owners, decision-makers, as well as other actors of a construction process are aroused, and they are potentially enrolled into future networks. Over time, this will increase the regularity of participatory processes which then will support embedding them in the construction process norms, as Star claims: "*If half the population were allergic to onions, no doubt some institutionalized processes would have developed.*"

### 4.5.5 Pilot Projects of Participatory Construction Processes

Supporting the conveyance of the value of participatory processes and to shift conventions, pilot projects represent a significant strategy to test, document and confirm the benefits of participatory processes by authorities beyond Hele Landet. Based on the analysis of the challenges, more evidence, documentation, and verification of the benefits of participatory processes is needed. Pilot projects will specifically examine and register the social and design value as well as the potential economic and environmental gains which more conveniently fits the metrics of construction processes. Furthermore, it is a way to innovate on

how current construction processes can create more value, as involve all relevant actors in pilot projects can function as a form of prototyping for integrating more open-ended and uncertain dynamics, which participatory processes entail. This strategy is supported by Morten, stating:

*"I think we need to start very small, with tiny pilot projects aimed at innovating construction processes so that they create more value. It could be a single-family house. It could be a small co-housing project or something similarly. […] Where we maintain that interdisciplinary collaboration throughout the entire construction process, and when the project is finished, we are actually satisfied and can genuinely say: 'great, we achieved what we set out to do with this project.'"*

Sille claims, that pilot projects would improve both outcome and process:

*"If we could get someone like building owners' associations and other interest groups involved in a project that focuses on the process throughout all phases of construction, where we continuously manage change and ensure that the different perspectives we started with are carried through the project, and we prioritize communication throughout the process, then all actors would have better ways of working together."*

Sille also points out, that making the benefits and values observable would support making the processes be perceived as indispensable to the success of construction projects in the perspective of conventional actors and thereby frame it as an obligatory passage point. Though the economic logic within the construction process is enormously stable, as shown in the analysis, shaping more or less all action within the process and resisting attempts of change, it can be seen by the analysis of the interviews, that it is not necessarily a case of irreversibility, in Star's terms. The friction analyzed can be an opportunity to learn and grow. As described in the introduction, understanding user needs and local context is necessary for improved quality of outcomes, and rather than standardized systems overriding social aspects, the tension between these can fuel innovation towards a shift in practices.

As described in the analysis of the challenges, participatory processes require additional effort and resources as an individual approach is needed for each context, making it difficult to standardize, which also represents a challenge of scalability. Small-scale pilot projects that test, iterate, and document methods may offer a way to identify scalable approaches that can gradually be embedded into standard construction processes.

### 4.5.6 Legislation

To support and enhance the efforts proposed, legislative and regulatory interventions can formalize a shift towards integrating participatory processes. As ANT points out, change requires reconfiguring the network's obligatory passage points and stabilizing new standards and this could be supported by new regulations, industry guidelines, and contracts, requiring projects to incorporate a thorough understanding of the users and the local area.

Historically, changes in the Building Regulations, which shape how buildings are designed and constructed, have had large impacts on the buildings produced. For instance, requirements for energy use in houses have required the entire industry to adapt, as seen in figure 5.

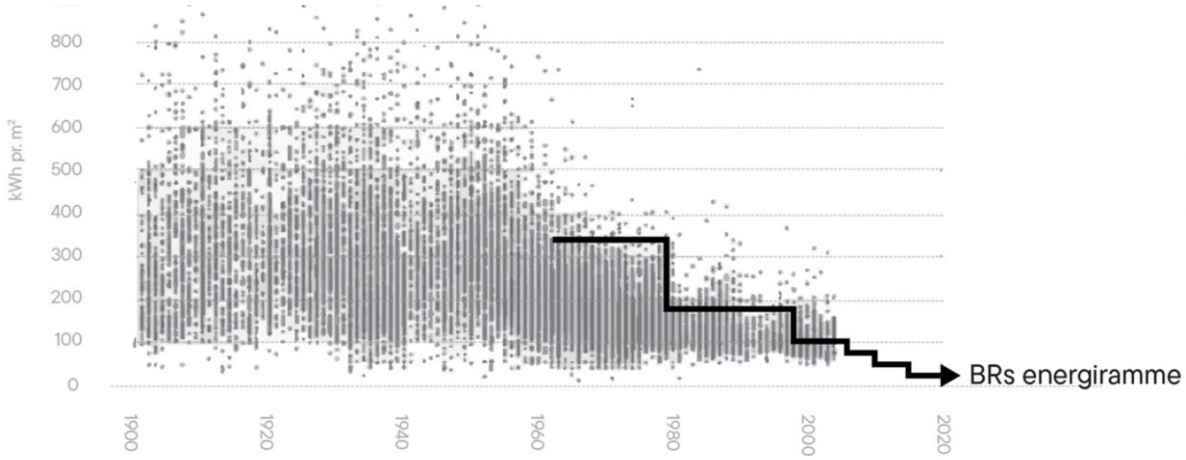



***Figure 5.*** *Actual energy use in 30.000 single-family houses (Reduction Roadmap, 2025).*

Today, the Building Regulations only address social sustainability through accessibility of buildings and the loose phrasing *"buildings must be designed and constructed so that regarding their use, satisfactory conditions are achieved for safety, health, functionality, and usability for users…"* (Bygningsreglementet kap. 9, §196, 2019). This leaves room to freely interpret the need for social aspects. Embedding participation and social sustainability in these regulations could mirror the success of the energy requirements and result in a similar social value effect, as participatory processes then would become standard. A specific example to include in the building regulations is mandatory post-occupancy evaluations, to improve learning across projects and initiate a feedback loop with the users.

Similarly, there is no legal requirement of local plans to include social sustainability or user participation as they involve the overall zoning, physical aspects, and usage regulations for buildings and areas (Miljøministeriet, By- og Landskabsstyrelsen, 2009). Furthermore, often local plans are made by professionals and political committees with limited citizen input other than standard hearings. However, local plans could include further requirements for the construction process, and citizens and stakeholders could be more involved in formulating these visions.

As seen in the analysis, Lars from Vandkunsten, as well as Kristian from BRFfonden, argues that legal enforcement is necessary to ensure wide application of participatory processes, as building owners and developers otherwise will not invest the effort it requires. As Lars suggests, economic incentives and subsidies could reduce the financial part of this effort for developers and building owners. As society may benefit from participatory processes through improved quality of life of its inhabitants and cities with inclusive, functional, efficient, accessible, long-term, and socially supported buildings and urban spaces, looking towards public financing is relevant to encourage prioritization of the social aspects. Additionally, it can be argued that innovation should not be punished with additional expenses.

Morten also supports legislative measures for participatory processes, as it means inclusion of societal values in legislation and regulation:

*"I think it is good that society sets requirements for how we create a good building project. And if it requires demanding a co-creation process with users because that is what we as a society believe creates good buildings and good cities with people in center, then I see no problem with this requirement. Just like there are more and more requirements for environmental impacts and $CO_2$, it could easily be done for social sustainability. […] What are the values that should guide construction and urban development? This is also something that should be defined so that it is ensured that it happens, because otherwise it will just be talk."*

Attempts have been made to integrate these social aspects, such as the optional systems and certification standards of DGNB (DGNB GmbH, 2023) and Bygherreforeningen's social benchmarks (Bygherreforeningen, n.d.). However, these also involve a very limited version of social sustainability, indicating the challenge of implementation in practice.

Nonetheless, successful implementation of legislative and regulatory measures will support institutionalization of participatory processes in construction and may be essential to widespread adoption and more human-centered urban environments.

# *Discussion*

In this chapter, the subject of rethinking value is discussed along with how participatory processes can contribute to this and who holds responsibility. The first part examines prioritization during construction processes where economic priorities dominate. Subsequently, the role of regulation and the challenges in this context are discussed. Ultimately, the social performance gap is addressed together with how perceptions of social sustainability differ. Combining the empirical findings and theoretical perspectives, a shift in construction norms is required.

## 5.1 Rethinking Prioritization in Construction

How priorities are made within the construction industry represent a key barrier to integrating participatory processes. This raises a question of the purpose of construction projects – serving the public, improving a city and social well-being, users, or benefitting the individual project's building owner and actors. Who is being built for? The question involves the degree of intervention in planning and represents the well-known planning themes of the prisoner's dilemma – where individual efforts lead to sub-optimization instead of broader and greater benefits (Forst and Lucianovic, 1977) – and tragedy of the commons (Hardin, 1968) – as without appropriate intervention the individual will optimize personal gain resulting in destroying the value of a common, such as a certain area. As mentioned in the introduction, this dynamic is also addressed by Thomson, Gustavsson, and Karvonen (2024), describing cities as shaped by both planning and market dynamics, which creates conflict between long-term societal goals and short-term returns resulting in hindrance of sustainable urban development.

The market dynamics dominating the industry today does not lead to sustainable development or cities with higher quality of life as Schoenmaker and Stegeman (2023) argues, conversely, the market delivers higher production of short-term projects (Rydin, 2010; Schoenmaker and Stegeman (2023). This calls for new interdisciplinary approaches as outlined in the introduction (Randers et al., 2018; Lah, 2025; Rydin, 2010). It is relevant to note that economic profit is not intrinsically negative, however economic profit from exploitation of nature, humans, or the limited area of our cities is not sustainable Rydin (2010). Furthermore, economic profit and participatory processes do not have to be opposites, as demonstrated in Håndværkskollegiet, where the number of square meters was significantly reduced, resulting in a less expensive building.

As mentioned in the introduction, built-up areas are projected to expand vastly in the next few years (Gao and O'Neill, 2020; Schiavina et al., 2022), and with limited area, building owners should prioritize building valuable and well-thought buildings that respond to user and local needs, rather than resorting to short-term economic solutions. A new prioritization towards investing in participatory processes may contribute to increased social quality in buildings which will stand for several decades and have high social impact (Kawamura and Brady, 2023) and inherently large environmental footprints, as outlined in the introduction (Ecorys, 2023; CONCITO, 2023). Yet, prioritizing participatory processes is not merely a matter of goodwill but necessitates redefining what is perceived as constituting value in the built environment. It is about recognizing a value beyond cost. In ANT terms, the social aspects fail to be mobilized since other aspects dominate the network. Though, in the selected cases, the foundations Dreyers Fond and BRFfonden precisely attempt to put emphasis on social aspects, take responsibility for the surrounding society, and adopt a long-term perspective.

To support these ambitions, in this report, promising strategies for shifting priorities emerged. Measures such as pilot projects, education of actors, social metrics, and legislative or regulatory initiatives may contribute to increase awareness and visibility of the value of participatory processes and furthermore, to rethinking the definition of success in construction projects and move beyond the black box of economic logic towards broader societal considerations. Through this institutionalization of participatory processes, its impact can be moved from individual projects to larger transformation, and as described, the aim of this transformation is to create socially improved buildings and cities and efficient use of the limited area and resources.

As mentioned in the introduction, by adopting the sustainability perspective of Rydin's (2010) Russian doll model, environmental considerations are fundamental and a precondition in any project, though buildings or cities should also encompass human well-being, health, and functionality. One can imagine a scenario of a city built entirely from sustainable materials, contributing to increased biodiversity and carbon capture. It may fulfill environmental goals, however, without consideration of the needs and habits of its residents, shortly the city risks requiring reconstruction and renovating to adapt to the needs of the people. Rydin's (2010) emphasis on integrating social qualities within an environmental framework is also reflected in the Doughnut Economy model (Raworth, 2017), as described in the introduction. In light of this, participatory processes are not just icing on the cake, but fundamental for the performance of a construction project, helping to ensure that social aspects are not lost in conventional processes.

## 5.2 Social Aspects in Regulation

As the findings indicate, decision-making is dominated by an economic logic that shapes what is perceived as valuable in the conventional construction process. This is also echoed by the broader characteristics of the construction industry presented in the introduction, describing it as driven by values of efficiency, rapid completion, linearity, savings, predictability, and short-term interests which sidelines

social concerns of quality of life, ownership, community, social inclusion, adaptability, and long-term use. These findings also align with Næss (2001) stating that getting aspects different from economy and time into the playing field and changing economic structures can be difficult, as mentioned in the introduction.

As outlined by ANT and Star, agency is produced by actors' position within the network, supported by the organization and infrastructure of the network. Rydin (2010) align with this, saying that actors act within institutional norms, which currently limits their ability to include social aspects. As explained previously, social sustainability falls short in the current regulatory frameworks such as the Building Regulations, and thus institutional norms, metrics, and regulations do not recognize or reward social value, reinforcing the mentioned tendencies. Thereby, building owners may be legally responsible for constructing a functioning building in compliance with process requirements, however the moral responsibility of ensuring social well-being, community value, empowerment, ownership, inclusion, and quality of life is far less well-defined. This results in a gap between legal and moral responsibility, and participatory processes such as Hele Landet's are treated as optional or symbolic instead of essential. Yet, as this report indicates, actors cannot have decision-making power without also being morally responsible for the outcome. A central challenge in implementing regulation of social aspects involves the subjective and context-dependent nature of concepts such as ownership, inclusion, and well-being. Regarding legislation, it is inherently a slow and long process and is moreover made through negotiation (Folketinget, n.d., Pierson, 2004). These negotiations are likely to echo many of the dynamics and tensions of the construction process examined in this report, and thus, the path towards legislation may also include the previously presented strategies and the considerations of redefining value, as presented throughout this study.

Though the findings in this report put limit emphasis on the municipality, it can be argued that municipalities should take this broader societal responsibility someway. However, on private property, the municipality can enact local plans that determine how areas may be used, building heights, building percentages, architectural expression, and access conditions, but they cannot refuse construction projects that fully complies with existing laws and plans or require specific architects or suppliers (Planloven, Kap. 5, §15 stk. 2, 2020). Property rights are protected within the planning and building legislation, thus building owners may conduct the process as they see fit within this legislation. The local plans can nonetheless set the overall urban vision for the area and enable alternative approaches, and the role of the municipality thus becomes supporting rather than deeply involved in specific project decisions.

## 5.3 Incorporating Social Sustainability and Bridging the Social Performance Gap

Incorporating social aspects through participatory approaches into the conventional construction process will contribute to an integrated and interdisciplinary approach, as described in the introduction, where

multiple dimensions of sustainability are addressed simultaneously, in line with calls from several scholars advocating for comprehensive sustainable development (Randers et al., 2018; Aylett, 2011; Lah, 2025; Rydin, 2010; Innes and Booher, 2018; Caniglia et al., 2021; Newell, Dale, and Roseland, 2018). The findings in this report further align with the depiction of social sustainability outlined in the introduction. Even projects with strong social ambitions, such as both Håndværkskollegiet and Dreyers Kollegie, struggle to maintain socially responsive participatory processes in focus throughout the construction process, particularly since its value is difficult to quantify or translate into conventional metrics. This is an example of the social performance gap as described in the introduction, where visions of social sustainability and the actual outcome are unaligned (Danske Arkitektvirksomheder and AART, 2024). Though not strongly represented in these cases, it indicates that systemic structures of the construction process in general hinder prioritization of social aspects, as shown in the analysis. Aligning with the findings in this report, Rydin (2010) describes that a reframing of sustainable construction is needed to shift how problems and solutions are defined and prioritized. Bridging the social performance gap requires operationalizing of social sustainability. A new form of valuation, metrics, and sharper definition is needed to incorporate the qualitative aspects of social sustainability like community-building, well-being, and empowerment, rather than current ones that reward time and cost savings (Stender and Walter, 2018). As shown in the analysis, if participatory processes are not embedded structurally in metrics, contracts, planning tools, and governance, it can easily be dropped. However, Bjørn (2024) notes that translating social aspects into specific economic values is also a submission to the market economy. Social aspects should therefore be measured and prioritized on their own terms to encompass the complete benefits. As shown in this report, participatory projects in small-scale can lead the way, but for systemic transformation, institutional norms and frameworks must shift towards recognizing that buildings are not just static physical and technical constructions but also sociocultural actors that shape people's lives for decades (Nguyen et al., 2024; Samuel and Watson, 2023).

Furthermore, the depth of and requirements for social sustainability is understood differently across actors, e.g., seen in the way architects and Hele Landet work with the concept. As shown in the analysis about the role of the architects, architects may preserve their professionalism and ability to design buildings for people generally, whereas Hele Landet attempts to open this professionalism and deep dive into the specific culture and individual users. Unmistakably, architects do take the target group into great consideration, the difference however, may lie in the view of humanity – are human beings fundamentally alike, or are they fundamentally different? Bjørn (2024) presents this dilemma as a duality of how humans are understood: A conventional architect, seeing humans as fundamentally alike, may place a bench with its back to a wall and with an interesting view in front. In contrast, adopting a more pluralistic view of humanity like Hele Landet, the bench would be positioned in collaboration with the specific residents, who might prefer a different placement, maybe even contradicting standardized assumptions of human needs (Bjørn, 2024). Both views aim to design a useful bench as an unused bench has failed in both views. Bjørn (2024) states that the problem is that one view is rooted in biological assumptions, while the other in cultural, and consequently they collide, though both view holds truth and relevance as well as limitations. In the analysis in this report, it is seen that the view of humans as alike seems to have shaped the conventional construction process, likely since it is easier, faster, and more profitable to run the same

process again. The two sides work and exist on different premises, necessitating a high degree of translation, as seen in this report. The question is however, where the balance is between the in-depth investigation of users or other actors and the efficient construction process. In other words, how are thorough participatory processes integrated into the conventional construction process optimally. In this report, this question has been explored.

# *Conclusion*

This report has studied the research question: *How can Hele Landet's participatory processes be integrated into standardized construction processes to support socially sustainable construction, and what challenges arise in doing so, as explored through two case studies?*

The cases of Dreyers Kollegie in Copenhagen and Håndværkskollegiet in Roskilde has been examined through the lens of Actor-Network Theory and Susan Leigh Star's concepts of standardization and conventions. The findings show that all interviewees highlight that participatory processes improves project outcomes and add value beyond conventional concerns, which is reflected in the contributions to elements such as the interior design, configuration of shared spaces, and community building. However, implementing participatory processes is challenged by standardized practices, economic logic, schedule pressure, technical constraints, along with segregation of actors in the construction phases. Rigid schedules, budget limitations, quantitative metrics, and linear project structures result in technical aspects being prioritized over social value, and participatory processes tend to be sidelined. In both cases analyzed, these challenges persist and thus indicate that participatory processes are not stabilized and institutionalized in construction. It is shown that current construction processes lack formal mechanisms to ensure continuity and prioritization of participatory processes, making them optional and vulnerable, rather than the backbone of the project. This risks resulting in a social performance gap, where initial visions are not aligned with the actual outcome.

The report identifies strategies to overcome these challenges and support institutionalization and stabilization of participatory processes. Pilot projects, structured facilitation, widespread communication of the value, embedding into performance indicators, and early engagement and commitment are all strategies that support reframing of conventions and integration of participatory processes into construction processes. Ultimately, integration of participatory processes must be structurally supported by education of various construction actors as well as legislation and regulation such as direct requirements or subsidies for lasting impact and widespread implementation. Thus, a transformation of construction practices towards integration of participatory processes and social value creation requires both rethinking process tools and a normative shift in how construction is perceived and governed.

More specifically, pilot projects can demonstrate and document the value of participatory processes while exploring and innovating scalable integration possibilities with all relevant actors. Education of actors and communicating the value can increase awareness and understanding of participatory processes and arouse interest as behavioral change depends on perceived value, while also supporting normalization of

participatory processes. Structured facilitation can transform initial uncertainty into action-oriented defined roles, foster good communication, prevent disruption, and minimize conflict. Embedding of participatory processes into formal mechanisms such as metrics, contracts, and evaluations can improve social value and maintain attention on user-centered values throughout the process. Early establishment of participatory processes and roles can set the project premise, mitigate later conflicts, and give legitimacy to participatory actors. Legislative and regulatory interventions can eventually enforce prioritization of participatory processes by institutionalization and promote social sustainability.

# *Reference list*


Adamson, D. (2010). Community empowerment: Identifying the barriers to "purposeful" citizen participation. *International Journal of Sociology and Social Policy*, Vol. 30 No. 3/4, pp. 114-126. https://doi.org/10.1108/01443331011033319

Andreasson, C. (2023). *630.000 fejl i byggeriet i 2023 – det kan vi gøre bedre.* Danvak.dk. https://danvak.dk/artikler/630-000-fejl-i-byggeriet-i-2023-det-kan-vi-goere-bedre/

Anuar, M. and Saruwono, M. (2012). Barriers of User's Involvement in the Design Process of Public Parks as Perceived by Landscape Architects. *Procedia - Social and Behavioral Sciences*. 35. 253–259. DOI: 10.1016/j.sbspro.2012.02.086.

Aylett, A. (2011). Municipal Bureaucracies & Integrated Urban Transitions to a Low Carbon Future 1. In H. Bulkeley, V. Castán Broto, M. Hodson, & S. Marvin (Eds.), *Cities and low carbon transitions* (pp. 142–158). Routledge. https://www.researchgate.net/publication/281441875_Municipal_Bureaucracies_Integrated_Urban_Transitions_to_a_Low_Carbon_Future_1

Bacon, N., Cochrane, D. and Woodcraft, S. (2012), Creating strong communities: How to measure the social sustainability of new housing developments, The Berkeley Group, London.

Baldwin, A., & Bordoli, D. (2014). *Handbook for construction planning and scheduling*. John Wiley & Sons.

Behzadan, A. H., Aziz, Z., Anumba, C. J., Kamat, V. R. (2008). Ubiquitous location tracking for context-specific information delivery on construction sites. *Automation in Construction*, Volume 17, Issue 6, Pages 737-748, ISSN 0926-5805, https://doi.org/10.1016/j.autcon.2008.02.002.

Bekendtgørelse af lov om planlægning [Planloven], LBK nr 1157 af 01/07/2020, Lovtidende A (2020). https://www.retsinformation.dk/eli/lta/2020/1157

Bekendtgørelse om bygningsreglement 2018 (BR18) [Bygningsreglementet], BEK nr. 1399 of 12/12/2019, Lovtidende A (2019). https://www.retsinformation.dk/eli/lta/2022/1464

Bekendtgørelse om ændring af bekendtgørelse om bygningsreglement 2018 (BR18) [Bygningsreglementet], BEK nr. 1464 of 28/11/2022, Lovtidende A (2022). https://www.retsinformation.dk/eli/lta/2022/1464

Bierwirth, A., & Thomas, S. (2019). *Energy sufficiency in buildings*. European Council for an Energy Efficient Economy.

Bing, J. (2024, April 17). *Jørgen Bing (SF): Er der en arkitekt til stede?* NordsøPosten. https://nordsoeposten.dk/joergen-bing-sf-er-der-en-arkitekt-til-stede/

Bjørn, N. (2024). Det menneskelige habitat - Hvordan arkitektur forhindrer stress, ensomhed & eksklusion og styrker tryghed, tilknytning & sundhed. Dansk Byplanlaboratorium.

Bowen, G. A. (2009). *Document analysis as a qualitative research method.* Qualitative Research Journal, 9(2), 27–40. https://doi.org/10.3316/QRJ0902027

Bowker, G. C. & Star, S., L. (1999). Sorting Things Out: Classification and Its Consequences The MIT Press. https://doi.org/10.7551/mitpress/6352.001.0001

Brinkmann, S., & Tanggaard, L. (2025). *Kvalitative metoder: En grundbog.* (4. udg.) Hans Reitzels Forlag.

Bulkeley, H. (2006). Urban Sustainability: Learning from Best Practice? Environment and Planning A, 38(6), 1029-1044. https://doi.org/10.1068/a37300

ByensEjendom. (2020). *Jysk skolebyggeri til 90 millioner granskes efter budgetoverskridelser*. Byens Ejendom. https://byensejendom.dk/article/jysk-skolebyggeri-til-90-millioner-granskes-efter-budgetoverskridelser-30801

Bygherreforeningen. (n.d.). *Social bæredygtighed.* Bygherreforeningen. https://bygherreforeningen.dk/baeredygtighed/social/

Callon, M. (1986). *Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay*. The Sociological Review, 32(1_suppl), 196-233. https://doi.org/10.1111/j.1467-954X.1984.tb00113.x

Campbell, J. L., Quincy, C., Osserman, J., & Pedersen, O. K. (2013). *Coding In-depth Semistructured Interviews: Problems of Unitization and Intercoder Reliability and Agreement*. Sociological Methods & Research, 42(3), 294-320. https://doi.org/10.1177/0049124113500475

Caniglia, G., Luederitz, C., von Wirth, T. et al. (2021). A pluralistic and integrated approach to action-oriented knowledge for sustainability. Nat Sustain 4, 93–100. https://doi.org/10.1038/s41893-020-00616-z

Chang, A. S., Shen, F., and Ibbs, W. (2010). *Design and construction coordination problems and planning for design–build project new users*. Canadian Journal of Civil Engineering. 37(12): 1525-1534. https://doi.org/10.1139/L10-090

Chang, R., Soebarto, V., Zhao, Z., Zillante, G. (2016). *Facilitating the transition to sustainable construction: China's policies*. Journal of Cleaner Production, Volume 131, Pages 534-544, ISSN 0959-6526, https://doi.org/10.1016/j.jclepro.2016.04.147.

Cheshire, D. (2019). *Building Revolutions: Applying the Circular Economy to the Built Environment* (1st ed.). RIBA Publishing. https://doi.org/10.4324/9780429346712

Christiansborg, D.B. (2023). Boligministeren holder fast i 50 års levetid for nye bygninger. *BygTek*. [online] 13 Oct. https://bygtek.dk/artikel/byggeri/boligministeren-holder-fast-i-50-rs-levetid-for-nye-bygninger.

Clausen, L. (2003). Innovationsprocessen i byggeriet: Fra idé til implementering i praksis. Technical University of Denmark. Byg Rapport No. R-031. https://backend.orbit.dtu.dk/ws/portalfiles/portal/5275561/byg-r031.pdf

CONCITO. (2020). *Buildings and green transition*. https://concito.dk/en/projekter/bygninger-groen-omstilling

CONCITO. (n.d.). *Bygninger*. https://concito.dk/emne/bygninger

CONCITO. (2025). *Det byggede miljøs betydning for fremtidens arealanvendelse*. https://concito.dk/udgivelser/byggede-miljoes-betydning-fremtidens-arealanvendelse.

Creswell, J. W. (2013). Qualitative Inquiry & Research Design: Choosing among Five Approaches. (3rd ed.). SAGE.

Dagens Byggeri. (2024). *Forsker: Byggeriet kæmper stadig med spildtid og dårlige processer*. Dagens Byggeri. https://dagensbyggeri.dk/byggeri-og-anlaeg/forsker-byggeriet-kaemper-stadig-med-spildtid-og-darlige-processer/

Danmarks Statistik. (2024). *Construction Activity*. https://www.dst.dk/en/Statistik/emner/erhvervsliv/byggeri-og-anlaeg/byggeaktivitet

Danske Arkitektvirksomheder and AART. (2024). *Social Commissioning – et cirkulært levetidsperspektiv*. Realdania. https://www.danskeark.dk/content/social-commissioning-publikation-om-metode-til-haandtere-social-baeredygtighed-og

Davidson, M. (2010), Social Sustainability and the City. *Geography Compass*, 4: 872-880. https://doi.org/10.1111/j.1749-8198.2010.00339.x

Dempsey, N., Bramley, G., Power, S. and Brown, C. (2011), The social dimension of sustainable development: Defining urban social sustainability. Sust. Dev., 19: 289-300. https://doi-org.zorac.aub.aau.dk/10.1002/sd.417

DGNB GmbH. (2023). *DGNB certification criteria*. DGNB GmbH. https://www.dgnb.de/en/certification/important-facts-about-dgnb-certification/criteria

Dreyers Kollegie. (n.d.). *Dreyers Kollegie*. Dreyerskollegie.dk. https://dreyerskollegie.dk/

Dreyers Fond. (n.d.). *Fonden*. Dreyers Fond. https://dreyersfond.dk/fonden/om-fonden/

Dreyers Fond. (2024, February 5). *Dreyers Kollegie*. Dreyers Fond. https://dreyersfond.dk/okay-portfolio2/dreyers-kollegie/

Earth Overshoot Day. (n.d.). *About Earth Overshoot Day*. Earth Overshoot Day. https://overshoot.footprintnetwork.org/about-earth-overshoot-day/.

Earth Overshoot Day. (2025). *Country Overshoot Days 2025*. https://overshoot.footprintnetwork.org/newsroom/country-overshoot-days/.

Ecorys (2023). *Bringing Europe's building sector into the circular economy*. https://www.ecorys.com/case-studies/bringing-europes-building-sector-into-the-circular-economy/

Elgaard-Jensen, T. (2003). *Aktør-netværksteori: En sociologi om kendsgerninger, karakker og kammuslinger*. Institut for Organisation og Arbejdssociologi. Handelshøjskolen i København. Papers in Organization No. 48

Ellen MacArthur Foundation. (2015). *Growth within: A circular economy vision for a competitive Europe*. https://www.ellenmacarthurfoundation.org/growth-within-a-circular-economy-vision-for-a-competitive-europe

Eriksen, E. A. P. (2024, April 29). *Bornholm er også ærgerlig over Tejn Havnehuse*. Bornholms Tidende. https://tidende.dk/debat/bornholm-er-ogsaa-aergerlig-over-tejn-havnehuse/143889

Eriksson, J., Glad, W., & Johansson, M. (2015). User involvement in Swedish residential building projects: a stakeholder perspective. *Journal of Housing and the Built Environment*, *30*(2), 313–329. http://www.jstor.org/stable/43907330

*Er der en arkitekt til stede?, Season 3, Episode 3, Skoleskandalen i Skærbæk* (2024a). DR2, 21 April. https://www.dr.dk/drtv/episode/er-der-en-arkitekt-til-stede_-skoleskandalen-i-skaerbaek_442392

*Er der en arkitekt til stede?, Season 3, Episode 1, Hjørrings bedrøvelige bymidte* (2024b). DR2, 21 April. https://www.dr.dk/drtv/episode/er-der-en-arkitekt-til-stede_-hjoerrings-bedroevelige-bymidte_442391

*Er der en arkitekt til stede?, Season 3, Episode 2, Vandkantsmareridt på Bornholm* (2024c). DR2, 21 April. https://www.dr.dk/drtv/episode/er-der-en-arkitekt-til-stede_-vandkantsmareridt-paa-bornholm_442393

European Commission. (2020a). *The European Green Deal*. European Commission. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en.

European Commission. (2020b). *Renovation wave*. European Commission. https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/renovation-wave_en.

European Commission. (2023a). *Priorities 2024-2029*. https://commission.europa.eu/priorities-2024-2029_en.

European Commission. (2023b). *Circular Economy Action Plan*. European Commission. https://environment.ec.europa.eu/strategy/circular-economy-action-plan_en.

European Commission. (n.d.). *Sustainable urban development*. https://ec.europa.eu/regional_policy/policy/themes/urban-development_en.

European Parliament. (2020). *Social sustainability : concepts and benchmarks*. Directorate-General for Internal Policies of the Union, Geny, B., Drufuca, S., Samek Lodovici, M. et al. Publications Office. https://data.europa.eu/doi/10.2861/679773

Eurostat. (2018). *Overcrowded and under-occupied dwellings*. Europa.eu. https://ec.europa.eu/eurostat/en/web/products-eurostat-news/-/ddn-20180612-1

FEANTSA. (2016). *Filling vacancies—Real estate vacancy in Europe: Local solutions to global problems*. European Federation of National Organisations Working with the Homeless. https://www.feantsa.org/download/long-version8704985128331512819.pdf

Flyvbjerg, B. (2006). Five Misunderstandings About Case-Study Research. *Qualitative Inquiry,* 12(2), 219-245. https://doi.org/10.1177/1077800405284363

Folketinget. (n.d.). *Lovgivningsprocessen*. https://www.ft.dk/da/folkestyret/folketinget/lovgivningsprocessen-i-folketinget.

Forbrugerombudsmanden (2024). *Virksomheders miljømarkedsføring - Forbrugerombudsmandens anbefalinger 2024*. https://forbrugerombudsmanden.dk/longreads/virksomheders-miljoemarkedsfoering-forbrugerombudsmandens-anbefalinger

Forst, B., Lucianovic, J. (1977). *The prisoner's dilemma: Theory and reality*. Journal of Criminal Justice, Volume 5, Issue 1, Pages 55-64, ISSN 0047-2352. https://doi.org/10.1016/0047-2352(77)90025-3.

FRI Foreningen af Rådgivende Ingeniører. (2018). *Ydelsesbeskrivelse for Byggeri og Landskab*. https://www.frinet.dk/media/2131/ydelsesbeskrivelse-byggeri-og-landskab-2018.pdf

FRI Foreningen af Rådgivende Ingeniører and Danske Arkitektvirksomheder. (2024). *Gode råd om udbud*. https://www.frinet.dk/media/zv4bmz24/gode-raad-om-udbud-januar-2024.pdf?utm_source=chatgpt.com

Gao, J., & O'Neill, B. (2020). Mapping global urban land for the 21st century with data-driven simulations and shared socioeconomic pathways. *Nature Communications*, 11(2302). https://doi.org/10.1038/s41467-020-15788-7

Geng, Y., Ji, W., Wang, Z., Lin, B., Zhu, Y. (2019). A review of operating performance in green buildings: Energy use, indoor environmental quality and occupant satisfaction. *Energy and Buildings*, Volume 183, Pages 500-514, ISSN 0378-7788, https://doi.org/10.1016/j.enbuild.2018.11.017.

Gibson Jr, George & Wang, Yu-Ren & Cho, Chung-Suk & Pappas, Michael. (2006). *What Is Preproject Planning, Anyway?* Journal of Management in Engineering - J MANAGE ENG. 22. DOI: 10.1061/(ASCE)0742-597X(2006)22:1(35).

Grum, B. and Grum, D. K. (2020). Concepts of social sustainability based on social infrastructure and quality of life. *Facilities*, Vol. 38 No. 11/12, pp. 783-800. https://doi.org/10.1108/F-04-2020-0042

Hajdasz, M. (2014). Flexible management of repetitive construction processes by an intelligent support system. *Expert Systems with Applications*. Volume 41, Issue 4, Part 1, Pages 962-973, ISSN 0957-4174. https://doi.org/10.1016/j.eswa.2013.06.063.

Hardin, G. (1968). *The Tragedy of the Commons*. Science 162, 1243-1248. DOI:10.1126/science.162.3859.1243

Hele Landet. (n.d.-a). *Tilgang*. Hele Landet. https://www.helelandet.dk/tilgang

Hele Landet. (n.d.-b). *Ydelser*. Hele Landet. https://www.helelandet.dk/ydelser https://www.helelandet.dk/ydelser

Høyer et al. (2024). *Transforming Stengårdsvej: Urban planning through circular strategies*. DPC770015P: Affaldshåndtering, ressourcer og energiplanlægning i bæredygtige byer. Aalborg University.

INDEX: Design to Improve Life (n.d.). *Design to Improve Life - Education*. Copenhagen: INDEX: Design to Improve Life. https://issuu.com/index/docs/edu_uguide02_indhold_eng_print

Innes, J.E., & Booher, D.E. (2018). *Planning with Complexity: An Introduction to Collaborative Rationality for Public Policy* (2nd ed.). Routledge. https://doi.org/10.4324/9781315147949

IPCC (2023). *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 35-115. doi: 10.59327/IPCC/AR6-9789291691647.

IPCC (2018). *Global Warming of 1.5°C.An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, 616 pp. https://doi.org/10.1017/9781009157940

Iwersen, U. (2020, May 4). *Krise-møde: Skærbæk Skole mangler mange millioner*. JydskeVestkysten. https://jv.dk/toender/krise-moede-skaerbaek-skole-mangler-mange-millioner

Jensen, P.A. (2025). Debat: Skal vi have byggestop eller nedrivningsstop? *Klimamonitor*. 21 Jan. https://klimamonitor.dk/debat/art10234669/Skal-vi-have-byggestop-eller-nedrivningsstop.

Jensen, J. O., Jørgensen, M. S., Elle, M., & Lauridsen, E. H. (2012). Has social sustainability left the building? The recent conceptualization of "sustainability" in Danish buildings. *Sustainability: Science, Practice and Policy*, *8*(1), 94–105. https://doi-org.zorac.aub.aau.dk/10.1080/15487733.2012.11908088

Jørgensen, A. (2013). Social LCA - a way ahead? International Journal of Life Cycle Assessment, 18, 296-299. https://doi.org/10.1007/s11367-012-0517-5

Kandusová, V., & Vácha, T. (2019). Rethinking Public Buildings' Functions: The Case for Participatory Design Methodology. *IOP Conference Series: Earth and Environmental Science, 290*. DOI: 10.1088/1755-1315/290/1/012158

Kawamura, S. and Brady, C. (2023). *Social Impact across the Built Environment: Prioritising people throughout the building life cycle*. World Green Building Council. https://worldgbc.org/article/social-impact-paper/.

Knudsen, S. (2024, August 20). *Skærbæk Skole får tiltrængt plads fra nytår*. DanmarkCTV. https://danmarkc.tv/skaerbaek-skole-faar-tiltraengt-plads-fra-nytaar/

Kristensen, F.B. (2023). Forbrugerombudsmanden slår fast: Der findes ingen bæredygtige byggerier i Danmark. *Byrummonitor*. https://byrummonitor.dk/Nyheder/art9203939/Der-findes-ingen-b%C3%A6redygtige-byggerier-i-Danmark.

Krogh, P. (2025, January 7). *Prisen for havudsigt i Tejn blev for høj*. TV2 Regionerne. https://www.tv2bornholm.dk/artikel/prisen-for-havudsigt-i-tejn-blev-for-hoej

Kuitert, L., Willems, J., & Volker, L. (2023). Value integration in multi-functional urban projects: a value driven perspective on sustainability transitions. *Construction Management and Economics*, *42*(2), 182–198. https://doi-org.zorac.aub.aau.dk/10.1080/01446193.2023.2264969

Kuittinen, M. (2023). Building within planetary boundaries: moving construction to stewardship. *Buildings and Cities*, 4(1), pp. 565–574. DOI: https://doi.org/10.5334/bc.351

Kvale, S., & Brinkmann, S. (2015). *Interview: Det kvalitative forskningsinterview som håndværk*. (3 udg.) Hans Reitzels Forlag.

Lah, O. (2025). Breaking the silos: integrated approaches to foster sustainable development and climate action. *Sustain Earth Reviews*. https://doi.org/10.1186/s42055-024-00102-w

Lange-Danielsen, H. (2024). Arkitekt opfordrer til komplet byggestop, hvis vi skal nå klimamålene:»Det er en ond cirkel, som først stopper, når vi holder op med at bygge nyt«. *Jyllands-Posten*. [online] 17 Jun. https://jyllands-posten.dk/bolig/ECE17133766/arkitekt-opfordrer-til-komplet-byggestop-hvis-vi-skal-naa-klimamaalene-det-er-en-ond-cirkel-som-foerst-stopper-naar-vi-holder-op-med-at-bygge-nyt/.

Larsen, J. K., Lindhard, S. M., Brunoe, T. D. and Jensen, K. N. (2018). The Relation between Pre-planning, Commissioning and Enhanced Project Performance, *Construction Economics and Building*, 18(2), pp. 1-14. doi: 10.5130/AJCEB.v18i2.5762.

Latour, B. (1987). Science in Action: How to Follow Scientists and Engineers through Society. Harvard University Press, Cambridge.

Latour, B. (1988). Mixing Humans and Nonhumans Together: The Sociology of a Door-Closer. *Social Problems*, 35(3), 298–310. https://doi.org/10.2307/800624

Latour, B. (2005). *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford Academic. doi: https://doi.org/10.1093/oso/9780199256044.001.0001

Law, J. (1984). "How Much of Society Can the Sociologist Digest at One Sitting? The "Macro" and the "Micro" Revisited for the Case of Fast Food". Studies in Symbolic Interaction. Volume 5. p. 171-96.

Law, J. (1992). *Notes on the theory of actor network: Ordering, strategy and heterogeneity*. Systems Practice, 5, 379-393. http://dx.doi.org/10.1007/BF01059830

Linneberg, M. S. and Korsgaard, S. (2019). Coding qualitative data: a synthesis guiding the novice. *Qualitative Research Journal*, Vol. 19 No. 3, pp. 259-270. https://doi.org/10.1108/QRJ-12-2018-0012

Mahncke, H. and Wiking, M. (2025). *Vores Livskvalitet - Hvad kan vi lære af de lykkeligste danskere?* Realdania. https://realdania.dk/publikationer/faglige-publikationer/vores-livskvalitet.

Miljøministeriet, By- og Landskabsstyrelsen. (2009). Vejledning om lokalplanlægning – Indhold, tilvejebringelse og retsvirkning. Miljøministeriet. https://www.plst.dk/Media/637915963709392540/vejledning_om_lokalplanlaegning_hwu%20(1).pdf

Modvig, P.M. (2024). Debat: Byggestop, lige markedsvilkår og biodiversitet skal fremtidssikre byggeriet. *Byrummonitor*. 21 Nov. https://byrummonitor.dk/Debat/art9928313/Byggestop-lige-markedsvilk%C3%A5r-og-biodiversitet-skal-fremtidssikre-byggeriet.

Moltesen, A., Bonou, A., Wangel, A., Bozhilova-Kisheva, K.P. (2018). Social Life Cycle Assessment: An Introduction. In: Hauschild, M., Rosenbaum, R., Olsen, S. (eds) Life Cycle Assessment. Springer, Cham. https://doi.org/10.1007/978-3-319-56475-3_16

Montgomery, S. de and El-Hassan, I. (2022). Stop ghettoloven og dens meningsløse nedrivninger. *Jyllands-Posten*. 2 Dec. https://jyllands-posten.dk/debat/breve/ECE14641791/stop-ghettoloven-og-dens-meningsloese-nedrivninger/

Moore, N. (2006). *How to Do Research: The Practical Guide to Designing and Managing Research Projects*. Facet. DOI: https://doi.org/10.29085/9781856049825.011

Mosegaard, J., Broch, O.B., Nissen, N. (2021) *Projekteringsmetodik. Fra idéoplæg til bygningsdrift*. 2. udgave. København. Akademisk Forlag.

Mytton, G., Diem, P., & van Dam, P. (2016). *Media audience research*. SAGE Publications, Inc., https://doi.org/10.4135/9789353280178

Naldal, T. (2019). *Byggeriets faser og organisering*. 3. udgave. Praxis.

Newell, R., Dale, A., & Roseland, M. (2018). *Climate Action Co-benefits and Integrated Community Planning: Uncovering the Synergies and Trade-Offs*. The international journal of climate change: Impacts and responses, 10, 1-23. http://doi.org/10.18848/1835-7156/CGP

Nguyen, L. P., van den Berg, P. E., Kemperman, A. D., & Mohammadi, M. (2024). *Social impacts of living in high-rise apartment buildings: The effects of buildings and neighborhoods*. Journal of Urban Affairs, 1–22. https://doi.org/10.1080/07352166.2024.2311165

Næss, P. (2001). Urban Planning and Sustainable Development. *European Planning Studies*, *9*(4), 503–524. https://doi.org/10.1080/713666490. https://mahungroup.com/D10259___Urban%20Planning%20and%20Sustainable%20Development.pdf

OECD (2019), *Global Material Resources Outlook to 2060: Economic Drivers and Environmental Consequences*, OECD Publishing, Paris, https://doi.org/10.1787/9789264307452-en.

Oien, M. (2025). Arkitekter vil stoppe nybyggeri – vi skal 'restaurere, transformere og renovere'. *TV2.dk*. 10 Feb. https://nyheder.tv2.dk/business/2025-02-10-arkitekter-vil-stoppe-nybyggeri-vi-skal-restaurere-transformere-og-renovere.

Paslawski, J. (2008). *Flexibility approach in construction process engineering*, Technological and Economic Development of Economy, 14:4, 518-530, DOI: 10.3846/1392-8619.2008.14.518-530

Pierson, P. (2004). *Politics in Time: History, Institutions, and Social Analysis*. Princeton University Press. http://www.jstor.org/stable/j.ctt7sgkg

Poddighe, E. (2022). *Politeia and the historical account of the polis in Aristotle*. Araucaria, 49(1), 287-309. https://doi.org/10.12795/araucaria.2022.i49.14.

Preiser, W., Hardy, A. & Schramm, U. (2018). From Linear Delivery Process to Life Cycle Phases: The Validity of the Concept of Building Performance Evaluation. DOI: 10.1007/978-3-319-56862-1_1.

Randers, J., Rockström, J., Stoknes, P. E., Golüke, U., Collste, D., & Cornell, S. (2018). Transformation is feasible. How to achieve the sustainable development goals within planetary boundaries. A report to the club of Rome, for its 50 years anniversary. Stockholm resilience centrereport. Accessible from: https://www.stockholmresilience.org/publications/publications/2018-10-17-transformation-is-feasible---how-to-achieve-the-sustainable--development-goals-within-planetary-boundaries.html

Raworth, K. (2017). Doughnut Economics: Seven Ways to Think Like a 21st-century Economist. Random House Business Books.

Raworth, K. (n. d.). *About doughnut economics*. Doughnut Economics Action Lab. https://doughnuteconomics.org/about-doughnut-economics.

Roadmap. (2025). *Reduction Roadmap 2.0*. Reduction Roadmap. https://reductionroadmap.dk/reduction-roadmap-2

Regeringen (2018). '*Et Danmark uden parallelsamfund – Ingen ghettoer i 2030*. Økonomi- og Indenrigsministeriet. https://www.regeringen.dk/aktuelt/tidligere-publikationer/%C3%A9t-danmark-uden-parallelsamfund/

Retolaza, J. L., San-José, L., Ruiz Roqueñi, M. (2019). *Monetarizing the social value: theory and evidence*, CIRIEC-España, revista de economía pública, social y cooperativa, (83), pp. 43–62. doi: 10.7203/CIRIEC-E.83.13418.

Richardson, K. et al. (2023). *Earth beyond six of nine planetary boundaries*. Sci. Adv.9, DOI: 10.1126/sciadv.adh2458

Rogerson, R. J., Giddings, B. and Jefferies, M. (2023). *Constructing the future of the city centre: realizing visions*, Construction Management and Economics, 42(2), pp. 129–145. doi: 10.1080/01446193.2023.2222190.

Ruskin, J. (2010). The Works of John Ruskin. (E. T. Cook & A. Wedderburn, Eds.). Cambridge: Cambridge University Press. https://www.lancaster.ac.uk/media/lancaster-university/content-assets/documents/ruskin/8SevenLampsofArchitecture.pdf.

Rydin, Y. (2010). *Governing for Sustainable Urban Development*. Routledge. https://doi.org/10.4324/9781849775083

Rådet for Bæredygtigt Byggeri. (n.d.). *POE (Post Occupancy Evaluation)*. Rådet for Bæredygtigt Byggeri. https://rfbb.dk/poe

Samuel, F., and Watson, K. (2023). Social value of the built environment. *Buildings and Cities*, 4(1), pp. 938–947. DOI: https://doi.org/10.5334/bc.399

Sanoff, H. (2000). *Community Participation Methods in Design and Planning*. John Wiley & Sons, Inc. DOI: 10.1016/S0169-2046(00)00063-3.

Schiavina, M., Melchiorri, M., Corbane, C., Freire, S., & Batista e Silva, F. (2022). Built-up areas are expanding faster than population growth: Regional patterns and trajectories in Europe. *Journal of Land Use Science*, 17(1), 591–608. DOI: https://doi.org/10.1080/1747423X.2022.2055184

Schoenmaker, D., Stegeman, H. (2023). Can the Market Economy Deal with Sustainability? *De Economist* 171, 25–49. https://doi.org/10.1007/s10645-022-09416-6

Scott, J. (1990). A Matter of Record: Documentary Sources in Social Research. Cambridge, UK. Polity Press.

Solomon, M. J., Chowdhury, A. M. R. (2002). *Knowledge to Action: Evaluation for Learning in a Multi-Organisational Global Partnership*. Development in Practice, 12(3/4), 346–354. http://www.jstor.org/stable/4029506

Spradley, J.P. (1979). *The Ethnographic Interview*. Holt, Rinehart and Winston, Inc.

Staniszewska, S., Jones, N., Newburn, M. and Marshall, S. (2007), User involvement in the development of a research bid: barriers, enablers and impacts. *Health Expectations*, 10: 173-183. https://doi.org/10.1111/j.1369-7625.2007.00436.x

Star, S. L. (1990). Power, Technology and the Phenomenology of Conventions: On being Allergic to Onions. *The Sociological Review*. https://doi.org/10.1111/j.1467-954X.1990.tb03347.x

Star, S.L. & Strauss, A. (1999). Layers of Silence, Arenas of Voice: The Ecology of Visible and Invisible Work. *Computer Supported Cooperative Work (CSCW)* **8**, 9–30 (1999). https://doi.org/10.1023/A:1008651105359

Stender, M., & Walter, A. (2018). *The role of social sustainability in building assessment*. Building Research & Information, 47(5), 598–610. https://doi.org/10.1080/09613218.2018.1468057

Stockholm Resilience Centre (2023). *Planetary Boundaries*. [online] Stockholm Resilience Centre. Available at: https://www.stockholmresilience.org/research/planetary-boundaries.html.

Strand, K. (2024, April 22). *Kurt Strand: Parkeringsplads i Hjørring er et brutalt overgreb på ukendt bisp*. Kristeligt Dagblad. https://www.kristeligt-dagblad.dk/debat/kurt-strand-parkeringsplads-i-hjoerring-er-et-brutalt-overgreb-paa-ukendt-bisp

The Royal Institute of British Architects. (2020). *Post Occupancy Evaluation – An Essential Tool to Improve the Built Environment*. The Royal Institute of British Architects. Available at: https://www.architecture.com/knowledge-and-resources/resources-landing-page/post-occupancy-evaluation-an-essential-tool-to-improve-the-built-environment?srsltid=AfmBOooIOBd1L-bd1WWRGt_SH25tAnrkpm9I3m2CV_7g5109ZYhaXgix

Thomson, C. S., Karrbom Gustavsson, T. and Karvonen, A. (2024) Expanding the field: combining construction management and urban studies to address grand societal challenges. *Construction Management and Economics,* 42(2), pp. 109–113. doi: 10.1080/01446193.2024.2306213.

Trafik-, Bygge-, og Boligstyrelsen. (2020). *Vejledning til Bygningsdelssystem og Eftersynsskema til 1- og 5-års eftersyn Vejledning for byggesagkyndige*. Trafik-, Bygge-, og Boligstyrelsen. https://www.sbst.dk/Media/638249179458397009/Vejledning%20til%20Bygningsdelssystem%20og%20Eftersynsskema%20til%201-%20og%205-%C3%A5rs%20eftersyn%20-%20version%204.pdf

UNDESA. (2019). *Patterns and trends in household size and composition: Evidence from a United Nations dataset*. United Nations Department of Economic and Social Affairs. https://www.un.org/en/development/desa/population/publications/pdf/ageing/household_size_and_composition_technical_report.pdf

UNEP (2023). *Building Materials and The Climate: Constructing A New Future*. UNEP - UN Environment Programme. Available at: https://www.unep.org/resources/report/building-materials-and-climate-constructing-new-future.

United Nations (2024). *The Sustainable Development Goals Report 2024* – June 2024. New York, USA: UN DESA. © UN DESA. https://unstats.un.org/sdgs/report/2024/.

United Nations (n.d.). *The 17 Sustainable Development Goals*. United Nations. https://sdgs.un.org/goals.

UN Global Compact (n.d.). *Social Sustainability*. unglobalcompact.org. https://unglobalcompact.org/what-is-gc/our-work/social.

University of Leeds (2023). *What is Doughnut Economics? | University of Leeds*. University of Leeds. https://pg-online.leeds.ac.uk/blogs/what-is-doughnut-economics/.

Vind, D. L. (ed.) (2024). *Building A Circular Future - Insights from Interdisciplinary Research*. BLOXHUB and Realdania. https://realdania.dk/publikationer/faglige-publikationer/building-a-circular-future

Walker, D. H. T., & Shen, Y. J. (2002). Project understanding, planning, flexibility of management action and construction time performance: two Australian case studies. *Construction Management and Economics*, 20(1), 31–44. https://doi.org/10.1080/01446190110089691

Waly, A. F. & Thabet, W. Y. (2003). A Virtual Construction Environment for preconstruction planning, *Automation in Construction*, Volume 12, Issue 2, Pages 139-154, ISSN 0926-5805. https://doi.org/10.1016/S0926-5805(02)00047-X.

Weber-Lewerenz, B. C. (2024). *Innovation Empowerment in Construction 4.0 by the CDR-Approach: A new field of scientific Research for the digital breakthrough*. Springer Vieweg Wiesbaden. https://link-springer-com.zorac.aub.aau.dk/book/10.1007/978-3-658-43905-7

Widner, J., Woolcock, M., & Nieto, D. O. (Eds.). (2022). *The Case for Case Studies: Methods and Applications in International Development*. Cambridge: Cambridge University Press.

Wieshammer, P., Revilliod, E., Pugnère, V., Sánchez, I., Jespersen, K. (2023). *How to Value Social Sustainability in Urban Development: The Urban Social Sustainability Measurement Tool*. CBS. Available at: https://nordicesglab.cbs.dk/social-sustainability-in-urban-development/

Woodcraft, S. (2015). *Understanding and measuring social sustainability*. In the Journal of Urban Regeneration and Renewal, Volume 8, Issue 2. https://doi.org/10.69554/VRWG6415.

World Health Organization (2023). *Climate change*. World Health Organization. https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health.

World Health Organization. Regional Office for Europe. (2014). Combined or multiple exposure to health stressors in indoor built environments: an evidence-based review prepared for the WHO training workshop "Multiple environmental exposures and risks": 16–18 October 2013, Bonn, Germany. World Health Organization. Regional Office for Europe. https://iris.who.int/handle/10665/350495

Yiftachel, O. and Hedgecock, D. (1993). Urban social sustainability: the planning of an Australian city. Cities, 10.

Yin, R. K. (2014). *Case Study research: Design and Methods*. 5th ed. Los Angeles: Sage.

Zuo, J., Jin, X.-H. and Flynn, L. (2012) 'Social Sustainability in Construction – An Explorative Study', *International Journal of Construction Management*, 12(2), pp. 51–63. doi: 10.1080/15623599.2012.10773190.