

## Resilience Thinking in Museums: Industrial Heritage, Urban Regeneration and Civic Engagement

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### Abstract

Resilience thinking refers to the need to be prepared for the unexpected and unknown. Museums have learned to adjust to societal changes, not least because of the recent global pandemic, which has necessitated the introduction of new ways of activating a diverse public. We discuss how resilience thinking can function as a promoter of the adaptive reuse of industrial heritage by including local heritage knowledge in the ongoing regeneration of former brownfield sites. The current sectoral barriers in the planning system prevent museums from being central participants, despite their well-established local anchoring. Intangible heritage can provide coherence and connection between old buildings, including technical structures and new buildings/infrastructure. This allows for options for museums to voice ongoing creative and critical input and appear as spokespersons for civic involvement. Museums' ability to facilitate local involvement needs to be acknowledged in urban planning.

**Key words:** industrial heritage; museums and civic engagement; resilience thinking; intangible heritage; heritage as social benefit

### Introduction

The town or neighbourhood where a museum is located can be considered a rich resource when it comes to mediating the interactions among regular museum users, visitors and museum professionals. Encouraging critical reflections and creative input from its audience on current topics might strengthen a historical museum's relevance and public interest. The understanding and expectations of museums as primarily cultural institutions dealing with the past have situated museums on the fringe of the planning system. This might, however, provide museums with a form of independence that many other participants in the highly politicized planning system do not have, hence leaving museums a role as potential creative and innovative agents for change.

In this paper, resilience thinking is defined as the need to be prepared for the unexpected and unknown, and it has been noted as a method for better handling unforeseen natural and social changes. Although a large amount of urban planning deals with short-term decision-making, resilience thinking can provide a means for more future thinking, including risk assessments and scenarios. When we use the term resilience in a museum context, we refer to an approach to planning in a broad sense that enables necessary and unexpected changes to take place in the future by adapting in creative and innovative ways that ensure qualitative and liveable environments for its citizens. When it comes to resilience thinking, many museums are already concerned about safeguarding, documenting and ensuring that vital historical knowledge is not lost forever. In the present paper, we place weight on the

creative, unexpected and adaptive aspects of resilience thinking. Museums provide a context where curators' historical insights, urban planners' future visions and citizens' views of liveable neighbourhoods can benefit from each other.

We ask the following main question: How can local museums function as agents in social resilience building? This question is followed by two subsidiary questions: What knowledge and insights do local museum professionals hold that enable them to benefit from local planning? How can museums activate and engage residents, users and visitors in creative place-making in neighbourhoods that are undergoing large transformations?

The paper is organized as follows: after presenting the main perspectives and approaches, we clarify the museum's role in building urban resilience by presenting the museums in Norway as a sector situated between culture and environment. The methods used are briefly introduced, accompanied by a short presentation of the two regeneration sites that have been selected for closer study. Based on examples from the two regeneration sites, we envision some social benefits that industrial heritage conservation brings. In the discussion, we look closer at how museums and NGOs can function as agents in social resilience building and mitigators in the processes of change. We argue that the independent position museums hold in a sector-dominated planning system can enable them to provide alternative inputs in large ongoing regeneration projects and facilitate important civic engagement.

## **Perspectives and approaches: museums' role in building urban resilience**

### ***Museums – a sector situated between culture and environment***

The sectoral division that defines cultural historical museums as cultural institutions and cultural heritage management as environmental planning has not prevented several museums from engaging in heritage planning work. The museum sector has been involved in the documentation and caretaking of former industrial buildings for at least two decades. These efforts were the result of a larger paradigm shift in the 1970s, a decade when Scandinavian museums focused on documenting contemporary everyday life (*Samtidsdokumentasjon*) (Løkka et al. 2021), thus broadening their prime goals: although museums had been focusing on collecting historical artefacts for a long time, documenting contemporary lifestyles and everyday life were brought into focus. Relevance and social significance became factors of importance to museum work.

Technical industrial heritage is a specialized branch of heritage work with its own international institution: the International Committee for the Conservation of Industrial Heritage (TICCIH). Although technical industrial heritage differs substantially in both dimensions and scale, the criteria for its value assessments bears similarities to other heritage work. A list of exceptionally valuable industrial buildings was worked out by cultural heritage management on a national level in Norway (Riksantikvaren 1994), of which several have ended up as museums (Norges Museumsforbund / SIKa 2019; see also Swensen and Berg 2018).

However, the effects of industrialization have been much wider than what the history of machinery and buildings can show. Many towns and cities grew up around one or several cornerstone industries, with factories dominating the cityscape and controlling much of urban everyday life for decades. When the factories permanently closed, they affected large parts of the municipalities, both politically and economically.

The closing of factories has caused problems, such as unemployment and redundant sites, as well as possibilities like regeneration and cultural creativity. The challenges however have primarily been based on knowledge among planners and architects. Although the museum sector has been involved in industrial heritage work, its experience and knowledge from documentation and civic engagement has been largely overlooked in planning. This gap in the planning process will be exemplified by two ongoing regeneration projects of former brownfield sites.

In the past decade, a solid knowledge base concerning urban planning and the adaptive reuse of industrial brownfields has been established. This research has an applied dimension, with contributions covering a series of disciplines within the social sciences and

the humanities (e.g., Oevermann and Mieg 2015; O'Connor and Wynne 2017; Arbab and Alborzi 2022). The early contributions were concerned with bringing to light the role that creative industries could have in urban transformation (Stevenson et al. 2010). The importance of integrating existing structures, including natural resources, into a new urban context is a common denominator in much of the research on adaptive reuse (Carlberg and Christensen 2005; Braae 2012; Braae and Diedrich 2012; Swensen and Stenbro 2013; Stone 2019). Architects and art historians have focused on redefinition when former industrial buildings are turned into monuments of a recent past (Ågotnes et al. 2014; Braae 2015). The darker side of the industrial past has also been noted (Storm 2014; Wicke et al. 2018), including how memories are selected and included in the processes of reinventing post-industrial sites (Orange 2014; Berger 2019).

### ***Resilience in regeneration projects***

Large regeneration projects require long-term perspectives. The scale and duration indicate that change will take place and that unforeseen situations are likely to arise. Uncertainty and change are aspects that urban planning must address; however, current planning practices and tools may not work. Here, resilience revolves around the ability to maintain important processes and functions in the face of changes and unexpected events, which can be understood as a long-term planning focus in which feedback from the actors involved is emphasized. Resilience plays a vital role for communities in their capacity 'for active learning, robustness, ability to innovate and adaptability to change' (Mehmood 2016: 413). Resilience is a way to work with change carried out from the ability to adapt and transform. Hence, weight is placed on the potential to develop and strengthen the required capacities to evolve and change ways of thinking while making active interventions when required. It introduces alternative perspectives: 'This approach is inclusive, incorporating the individual, institutions and neighbourhoods to achieve the broadest possible form of participation' (Turner and Singer 2014: 63). Building resilience requires the involvement of society in its broadest sense towards a change of culture that makes 'collaboration' between society and the environment the main goal (Ernstson et al. 2010: 541).

Policymakers and international development agencies have increasingly referred to resilience (Bene et al. 2012), which is an important planning goal for state and local governments, where historical preservation, heritage communities, urban design, art and culture can be involved (Appler and Rumbach 2016; Lazzeretti and Cooke 2017; Quigley et al. 2018; Fabricatti et al. 2020). Resilience now refers to both the physical and social components of the city. According to Turner and Singer (2014: 63), 'Urban resilience is a proactive approach that provides both a lens through which we can analyse the different problems that cities face as well as providing a framework with space for solutions'. Some believe that the literature can lead to an integrated and better understanding of the links between ecological systems and social dimensions (Maclean et al. 2017). However, frequent use of the term can be mistaken for empty rhetoric. Neuman (2019: 109) asks, 'Is resilience planning's holy grail? ... it has nearly become a mantra'. Resilience has been discussed and referred to within different disciplinary contexts, such as engineering, ecology and evolution (for more information, see Davidou 2012; Burayidi et al. 2019).

With these diverse uses and definitions, both the term and the context within which it is used need to be clarified. Any attempt to integrate resilience into urban planning should always be accompanied by considering the 'what', 'why' and 'for whom' of urban development (Meerow and Newell 2019). Within planning, resilience can sometimes be considered in a restrictive way by being interpreted primarily as an instrument to reduce the risks of undesirable effects of urban development (an engineering resilience approach). The resilience approach, however, enables the creative, unexpected and adaptive to come to the foreground, which is a relevant approach when discussed within a museum context.<sup>1</sup> The diverse use of the term can also be viewed as a strength: it is flexible and adaptable and enables bringing together actors from different levels, locally, regionally and nationally, and across disciplines (UN Habitat 2017).

### ***Intangible heritage as a resource in regeneration***

Intangible heritage is a collective term and, when used in this context, it requires some precision. Folklorists have a long tradition of collecting tales, stories, sayings, rhymes, jokes and naming, including placenames. Today, their practice has been extended to include cultural expressions via diverse social media. The practice stems back to when 'scholars and folklore collectors saw themselves as a rescue team picking their way through a landscape of cultural ruins, where scraps and survivals of the traditional lifestyles could still be found' (Frykman and Löfgren 1987: 59). Intangible heritage can also be extended to include present-day social interactions and cultural performances, along with an awareness of the significance of multisensory experiences (affect, smell, touch, the visual). These aspects have gained a more central place in museums' dissemination practices (Dudley 2010; Levent and Pascal-Leone 2014; Smith 2020).

When 'intangible heritage' is discussed today, much of the attention is based on examining the consequences of UNESCO's International Convention for the Safeguarding of the Intangible Cultural Heritage from 2003. Its introduction aimed to balance the strong overrepresentation of Western cultural expressions. With the implementation of the Convention, a paradigm shift has gradually taken place from valuing monuments, sites and so forth towards safeguarding living heritage (Blake 2018: 18). According to Smith and Akagawa (2009: 2), the convention was met with 'a guarded enthusiasm'. Although many acknowledged and agreed that there was a need, they were uncertain of the consequences of establishing a new misbalance, by highlighting the intangible in relation to the tangible, thereby missing the need to integrate the two approaches. As Kirshenblatt-Gimblett (2004: 57) has pointed out, the act of creating a list requires a process in which 'heritage' is 'identified' and 'assessed' against predefined 'criteria'. World Heritage then gains its own status by becoming a list.<sup>2</sup>

As part of supplementing existing collections, planning new exhibitions and so forth, many local museums carry out in-situ documentation in cooperation with NGOs. Although collecting artefacts still plays a role, museums have placed much emphasis on understanding contexts and use – historical and present day (Watson 2007; Golding and Modest 2013). Involvement, engagement and participation have come to the fore of the museums' agenda (Black 2021). Documentation can involve storytelling, sayings, jokes, rhymes and nicknaming, as well as placenames, as a part of the larger processes of memory work (Orange 2014). In large regeneration projects, there is a demand for such knowledge because much of the historical knowledge is about to give way to new development (i.e., post-industrial landscapes). Intangible heritage can provide a new approach to cultural dialogue and communication when interpreted and defined as 'a cultural practice that is renewed and recreated by practitioners' (Alivizatou 2016: 192; see also Alivizatou 2022).

### **Methods**

The analysis is framed within the structure of case studies, a method that involves the utilization of a wide range of different data sources and analytic strategies (Curran and Perecman 2006: 26).<sup>3</sup> The paper is part of a larger comparative, interdisciplinary study (ADAPT), where a series of empirical data has been examined (structured and unstructured interviews, focus group interviews, analysis of planning documents, on-site observations, historical photos and documents, regular photo documentation of the transformation process, etc.). For this specific exploration of resilience thinking in museums, we have selected three sources for further scrutiny: a focus group interview, unstructured interviews (i.e. informal meetings and conversations) with one of the prime museum curators and information from the literature.

The focus group was arranged as an informal social encounter between four former factory employees and three project researchers. Because of the Covid-19 pandemic, the interview was carried out via digital media (Zoom). This choice of method was based on the strong awareness that a focus group is not an interview with several people but instead is a conversation between people to produce reflections on a subject based on the participants' contributions to the conversation. In this way, knowledge from a focus group would differ from, for example, the sum of the interview data given by these participants as individuals. The

participants in a research conversation influence each other and are involved in knowledge development (Fog 2009), but the focus group also produces the possibility of selecting certain issues and neglecting others (Knight 2002). An informal interview guide was sent to the participants a few days in advance with the aim to instigate a free conversation based on the participants' own insights and experiences from industrial work. A series of informal meetings and conversations with one of the prime museum curators took place between 2018 and 2022. The curator had the role of a key informant in the wider case study because of her in-depth insights into the history of one of the selected sites.



*Fig. 1. Klosterøya, Skien – Fig. 2. Verket, Moss*

At both regeneration sites, industrial production was in operation close to when the planning started. In Klosterøya, the industrial production ended in 2005 and in 2012 in Verket. Klosterøya, Skien (see Fig. 1) shares several of the common traits of former brownfield sites: close proximity to both a river (energy source) and infrastructure (harbours, roads). Although within short walking distance of the city centre, the site was a closed-off area, except for those working there. The situation for Verket, Moss was very similar (see Fig. 2). The closeness to the city centre, to the river (and fiord, in Moss) and their large potential to house densely built new neighbourhoods turned them into attractive areas for public-private cooperation. As cornerstones in the local economy, the industrial factories were well known because they both were built on historic ground. Klosterøya takes its name from the Middle Ages when a monastery was situated here, and Verket is named after the Iron Works that was in operation in the eighteenth century. Map: Geovekst/ Nils Aage Hafsal, Monica Kristiansen, NIKU

### **Museums and adaptive reuse of industrial heritage**

A series of factors has influenced the direction that regeneration has taken in the two cases. Rather than focusing on the many place-specific differences, we highlight two themes: 1) the involvement and role the local museums and NGOs played in the early planning stages of these projects and 2) the means that are used to portray an industrial past in the current era in the largely transformed neighbourhoods.



CASE 1: KLOSTERØYA		CASE 2: VERKET	
Name, former function	Status, contemporary function	Name, former function	Status, contemporary function
Remains from the harbour from Medieval Ages, parts of the former Monastery	Automatic preserved through the Norwegian Plan- and building Act (PBL)	The old street (Gata) is a row of old worker dwellings, stemming from the period of the Old Iron Works	Designated heritage preservation zone through the Norwegian Plan- and building Act (PBL)
'Ladegården' (1766-1771), originally the residence of the manager of one of the old sawmills	Designated heritage through PBL	'Konventionsgården' (1778), the residence of the Manager of the Old Iron Works.	Listed and preserved through the Norwegian Heritage Act
Tobacco factory (1890)	Designated heritage through PBL, in use as offices	Railway iron bridge	In use until 2024, when a railway tunnel will make it redundant. Plans for its further use are discussed on municipal level.
'Sjotien' (1917), former industrial building	Designated heritage through PBA. Now an established cultural institution, housing art gallery and ateliers for artists.	Group of five former industrial buildings from Petresen & Son (est. 1801).	
'Papirfabrikken' PMS, Smieøya (1882), former industrial building	Designated heritage through PBA. Ongoing major preservation work at present (2022). Future use under consideration, for instance café/ restaurants, offices.	Administrasjonsbygget, former industrial building	No formal protection, but is used as school
Group of former industrial buildings/ structures from the largest papermill (Union as)		Verksted, former industrial building	'Sceneri', now Culture Hall (theater, cinema etc.)
'Råstoffkontoret' (after 1916), former industrial building	Reuse as offices	'M6', former industrial building	Reuse as offices and cultural workshop, including café
'Hollenderiet', (1907), former industrial building	Reuse as offices and café. Restored and received the Municipal prize for best building restoration (2019)	The Paper Hall, former industrial building	No formal protection, still standing, but undefined status.
'The chimney' - part of a larger technical industrial structure	Restored and included as part of a square. The old chimney was dismantled and rebuilt in original form due to its status as a symbol from the industrial era.	Kamprenn' (1971) part of larger technical industrial structures.	Its future is uncertain, no agreement has been reached about suitable adaptable reuse or permanent funding.
Production tunnels (five originally)	No formal protection - but two of the five production tunnels are included in the master plan, rehabilitated, now pedestrian paths		
Sources: Skien kommune & Asplan (2006); information from interviews; on-site observations.		Sources: Moss kommune (2015); information from interviews; on-site observations.	

Table 1: Examples of adaptive reuse

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### The involvement of local museums and NGOs

Regulations tend to set the framework for many of the activities in the final phases of regeneration projects. The main actors here are the developers (including property owners, architects and consultants), the local politicians and the planners at the municipal and county levels. However, there are other actors with more informal agendas that may have first instigated regeneration; these actors can provide important creative inputs along the way towards final implementation, and museums and various NGOs may be important parties in ensuring the necessary civic engagement (Allison 2019; Janes and Sandell 2019). There are

both possibilities and limitations that influence the degree to which museums and NGOs are involved (Golding and Modest 2013; Long 2013; O'Neill and Hooper 2019). Most museums in Norway obtain their funding from the Ministry of Culture, with exceptions being university museums, and the sector sets some key requirements and partly guides their priorities via national strategic documents and budget priorities.

Concerning limitations, local museums may be long-established institutions with their own frameworks and priorities that differ somewhat from involvement in regeneration work. Because NGO work is voluntary, members may have special interests and goals defining an established agenda. However, we primarily want to underline the possibilities that such projects have for civic engagement. Museums may be looking for new target groups, experimenting with and testing other ways of mediating their messages (Baggesen 2014). Regeneration projects may provide these options.

There are two museums located in the towns where the regeneration projects have been carried out: Telemark Museum, Skien<sup>4</sup> and Moss by-og industrimuseum, a local unit of Østfoldmuseene in Moss.<sup>5</sup> Although both museums have been involved in mediating parts of the industrial past in the two counties, they do it from different perspectives, which may have influenced the degree of actual involvement in the regeneration projects.

NGOs in both towns have been involved in regeneration in various ways.

#### Skien:

- Skien Historielag: historical society covering a wide field of historical interests with no special priority to industrial history.
- Union Funksjonærforeningen: a trade union giving specific attention to the history of the paper mill 'Union Industrier' (described below).
- A spontaneous NGO was established based on the acknowledgement of the old Monastery Garden on the site during the medieval period, focusing on urban gardening and also succeeding in gaining professional backing.

#### Moss:

- Moss Historielag: historical society covering a wide field of historical interests, including engagement in formulating responses to hearings about the regeneration of Verket.
- Mosseelva's Venner: specializing in ensuring that the river's history and qualities are fully utilized.

### ***The engagement of two parties: Effects and outcomes of their work***

At Klosterøya, Skien, we have chosen to focus on Funksjonærforeningen, Union. This was originally a trade union organizing a section of the employees of Union Industrier. When industrial production closed, a group of former employees decided to engage in safeguarding industrial history. Their work resulted in the publication of a book that made much of the intangible history from the firm Union accessible (Wahlstrøm 2018). The book tells stories from everyday life in Skien's most important workplace, providing accounts stretching over 132 years. The NGO has also played a key role in ensuring that the total photo archive from firm Union was digitized and transferred to the responsible party at the national level: Riksarkivet. Some tools were handed over to Telemark Museum for caretaking.<sup>6</sup> The NGO has its own webpage.<sup>7</sup> Occasionally, former employees have been engaged in guided tours to mediate Klosterøya's industrial history. However, there are a few features to help newcomers 'read' the remains of the old industrial landscape, and the participants in the focus group interview see a potential here for involvement.<sup>8</sup>

In Moss, a major party in ensuring documentation of the production at Peterson & Søn after its closing was Moss by-og industrimuseum, the local unit of Østfoldmuseene. Documentation included filming parts of the production in the paper and cellulose factory

and collecting photos. One museum curator conducted interviews with six former employees (Østfoldmuseene, Moss by-og industrimuseum 2015: 39), while another conducted in-depth interviews with six former residents in 'Gata', the street with the workers' tenements (Østfoldmuseene, Moss by-og industrimuseum 2015: 57). Parts of the collected data were included in the permanent exhibition when Moss by-og industrimuseum established its second unit in Verket 20, one of the former worker's homes. The exhibition included a series of digital media, such as film, photos and soundtracks. Through headsets, the visitor could hear the workers talking about their work in the factory. The exhibition explains why the paper and cellulose industry closed, presents information about proposed plans and highlights parts of the history of the Iron Works and the paper and cellulose factory (Østfoldmuseene, Moss by-og industrimuseum 2015: 4).

### ***Two sites in transformation – degrees of integration and conservation***

In large regeneration projects like Klosterøya and Verket, what is planned for the 'in-between spaces' will drastically affect the 'sense of place' the transformed neighbourhoods will transmit. How heritage assets are integrated in a larger urban web constitutes a central topic in heritage discourses (Carlberg and Christensen 2005; Braae 2012; Swensen and Stenbro 2013; Oevermann and Mieg 2015; Orange 2014; O'Connor and Wynne 2017; Berger 2019; Stone 2019; Arbab and Alborzi 2022).

The process of designating industrial buildings and structures as cultural heritage depends both on formal regulations (acts) and the degrees of local concern and engagement.<sup>9</sup> The planning process started shortly after industrial production ended, and their proximity to the city centre likely made them especially attractive for development, thereby influencing rapid decision-making. The industrial production ended in Klosterøya in 2005 and in Verket in 2012. The fact that these areas were defined as commercial influenced the approaches taken by the municipal planners. Preservation and documentation of modern commercial activities were not included in cultural heritage management, and it was not before the actual closing down that the former industrial sites became interesting from an industrial heritage point of view.

The topography has been a challenge and resource in both regeneration projects. Klosterøya is visually split by a busy road: Klostergata. The western part of the site faces a large lake, and its recreational potential has been fully employed. The eastern part of the site faces the river and is viewed as having potential for compact city building. The two parts are linked at the pedestrian level via the reuse of two former production tunnels. These tunnels play an important role in the pedestrian track that encircles the site. The topography has resulted in elements of zone planning: mainly residential buildings in the western part and offices and educational and cultural buildings in the eastern part.





*Fig. 3. The eastern part of Klosterøya faces the river and is viewed as having the potential for compact city building. The photo shows how Spritzen, a designated former industrial building and now cultural centre and art gallery, is being surrounded by new developments (2021). Photo: O.H. Hagen.*



*Fig. 4. The two parts of Klosterøya are linked at the pedestrian level via reuse of two former production tunnels. These tunnels play an important role today in the pedestrian track that encircles the site. Photo: M.K. Rynning.*

The borders of Verket are the river in the south and a ridge on the northern side. The ongoing development was carried out in stages. The first stage is situated on the southern side, close to the river. This area is closest to the city centre and includes mixed functions (offices, shops, various services and educational and cultural institutions). The others are planned mainly as residential areas. Verket's important historic area, 'Gata', is now included in the regeneration

site, forming the north-eastern boundary of the neighbourhood.



*Fig. 5. The restoration of the natural environment at the riverbank in Verket has been handled with care, and the NGOs have given inputs during these processes. Photo: I.M. Ødegaard.*



*Fig. 6. The first stage of the regeneration of Verket is closest to the city centre and includes mixed functions. The photo illustrates a mix of former industrial buildings adapted for reuse and new development. Photo: I.M. Ødegaard.*

In case 1, Klosterøya, most of the industrial buildings adapted for new use are now used for diverse business enterprises (a series of offices, a café and another planned to open soon). The art gallery, including artists' ateliers, has already been mentioned, and the water purification construction has now turned into an attractive residential building. Infrastructural elements such as the former production tunnels and chimney are now integrated into the larger plan of creating new public spaces. A pedestrian bridge will soon be built close to the secondary school, connecting the two riverbanks, thereby increasing the central position of the site and strengthening accessibility to the city centre. A new park is planned in connection to the pedestrian bridge, and a recently planted fruit forest managed by the school will be integrated into the park.

In case 2, Verket, three of the four standing industrial buildings have been adapted for reuse (offices, school and preschool, cultural arena). The future of the fourth depends on the interested parties. The future of the tall, tower-like structure (*Kamyrkokeren*) is precarious. 'Gata' functions as an important street front and entrance into Verket. Today, it is owned by the developer and rented out to private residents. The regeneration of these houses has been handled with extensive consideration. More discussions and concerns are taking place regarding the modern buildings that are planned close to 'Gata', the historic street with listed buildings dating back to the old Iron Works.<sup>10</sup> The regeneration of the riverbank has been handled by landscape architects. The NGOs have been giving inputs during these processes, and the river is a highly appreciated asset for people who live, work and visit Verket.

Large transformations have the potential to actively use remains from the industrial era. Whether this becomes a wholesale premise for the transformation or appears primarily as historic fragments can depend on major decisions concerning the framework and context, which are made early. Such decisions are closely linked to future visions that have been drawn up by planners and other central actors in the initial planning phases. Another factor of relevance is the way in which the gradual transformation of the area is handled. There is a long timeframe in which unexpected changes might occur. Both regeneration projects operate within an extensive timeframe. Klosterøya started in 2005 and is estimated to be fully developed by 2025; Verket started in 2013 and has a planned finish date of 2038.

Planning can only foresee a certain degree of change: when a regeneration project covers a time span of 20–35 years, some unexpected considerations are likely to appear. How are such changes attended to during the planning process? Examining this requires transforming resilience theory into resilience thinking in practice.

## **Discussion: Museums and NGOs as mitigators in extensive processes of change**

### ***Different ways of approaching industrial remains as heritage***

Because the regeneration and transformation of former industrial sites involve a series of difficult decisions concerning preservation versus demolishing, alternative approaches to established criteria forwarded by the heritage authorities may prove useful. We consider resilience thinking in museums to be a relevant approach when dealing with industrial heritage. Here, resilience is an approach that involves being prepared for change to enable the development of creative and explorative solutions that meet new, unanticipated needs.

One important argument we build our reflections on lies in the character of industrial heritage. The introduction of new technology, as well as needs and urges to make the production process more compatible and profitable, have generally led to continuous adjustments in buildings and infrastructure, sometimes even involving tearing down existing buildings and replacing them with new ones. In other words, they were built to face changes. These characteristics can be described as specific qualities: they combine flexibility and robustness. Such flexibility also mirrors their resilience – their ability to keep up production for approximately 150 years despite international competition and market fluctuations. The fact that they have been exposed to continuous changes and replacements gives them rich potential for adaptation, rebuilding and reconstruction. They are part of an international building tradition in which the engineers were important instigators and have primarily been considered resources and benefits in social economics. It is more the exception than customary that

such structures are included on the heritage managers' list for preservation (Riksantikvaren 1994). Because of the large economy involved in the conservation and adaptive reuse of such encompassing structures, these initiatives must often be promoted and shared by several partners. However, much of the final decisive power is still located with cultural heritage management at the municipal, county or national levels.

If the cultural heritage authorities decide to interact in transformation projects, they must play by a set of formal acts (Norwegian Heritage Act and Planning and Building Act) and value criteria, which can be divided into three broad categories (knowledge values, experience values and use values) (Riksantikvaren 2019), all of which are of relevance when considering the potential of adaptive reuse and alternative activities for old technical industrial buildings and infrastructures.

To enable more of such structures to be considered relevant in large transformation projects, actors promoting alternative approaches for future use, including conservation, have been in demand. Here, the alternative voices of museums and NGOs can make a difference by ensuring that important heritage on the local level is not being ignored or excluded.

### ***Connecting tangible and intangible industrial heritage***

If memories and stories from the former industrial sites (i.e., the intangible heritage) are not integrated in the regeneration processes, the remaining former industrial buildings and infrastructure risk ending up as isolated fragments in a primarily new cityscape. As underlined by Laurajane Smith (2015), it is necessary to move away from the binary divide between tangible and intangible heritage to consider more useful ways of understanding heritage. The industrial worker culture was, to a large extent, 'intangible', including work rituals, jokes, nicknames and storytelling.

The heritage of the former industrial site that members in Funksjonærforeningen were concerned about documenting and safeguarding involved storytelling, naming and meeting places from the old industrial plant, that is, intangible heritage. In their opinion, tangible heritage (buildings and technical structures) was well taken care of, even though they questioned the density and height in parts of the new neighbourhood.

Naming is part of an intangible heritage tradition, and it is interesting to dwell closer on the form of naming that can take place when regeneration is carried out on former industrial sites. The name 'Klosterøya' covers a larger area than just the former industrial site; the name is an unbroken tradition referring to the convent that was established in the Middle Ages. New elements that have been introduced through the regeneration of the site, such as new aluminium stairs and a park, have included references to the convent (Nonnetrappa, Klosterhagen). Most of the old buildings that have been adapted have kept their original naming: Spriten, Portvakta, Hollenderiet and Papirfabrikken. A new part of the area closely situated to the river is 'The Timber Pier' (Tømmerkaia), from loading the timber to the old sawmills. The street names primarily relate to the various factories (Hollenderigata, Papirkaia and Uniongata). In case 2, most of the inspirations for street naming came from the period of the Iron Works (Bernt Ankers gate, Rebekkas gate). The exception is a few buildings named after the production process (M6, Kamyrkokeren). Some names leave the impression of preferring the long gone past by turning the past into 'a foreign country', with reference to Lowenthal's well-recognized book (Lowenthal 1984). Many of the names of places in the new neighbourhoods are randomly picked rather than linking the present to a more recent, familiar past. Research has shown that new ways are found to emphasize, sometimes even magnify, historical traces in urban transformation projects (Swensen 2019: 106-7). Besides naming, other means, such as relocating historic fragments and embedding them with symbolic meanings, converting old functions into modern constructions or repairing or restoring hidden or erased historical traces, can be used (Swensen 2019: 106-7).

It is important to avoid creating new artificial boundaries between tangible and intangible industrial heritage, and this is a task that museums can fill. Certain museums hold special competence and insights related to documenting industrial heritage, thereby building a solid knowledge basis. As described, Moss by-og industrimuseum has integrated a 'rescue team' tradition in their work and partakes in Østfoldmuseenes' regular action plan.<sup>11</sup> This means



a professional team is ready to set out when they learn that businesses in the county plan to close down, a procedure other Norwegian museums have also established. An informal network has, for instance, been built to ensure the exchange of knowledge between museums working with industrial heritage documentation (Norges Museumsforbund / SIKI 2019: 9).<sup>12</sup>

The idea of heritage as an active process (Smith 2015), as 'heritage-making', is today shared by many critical heritage researchers. Regenerating and transforming former industrial sites into new cityscapes necessitates that certain traces and places are lost in the process. Parts of the intangible heritage can be integrated creatively into the new place-making when it is activated through cultural dialogue and communication. This is in accordance with our interpretation of Alivizatos (2016: 192) when she states that heritage can be understood as 'a cultural practice that is renewed and recreated by practitioners'. Historical knowledge provides important bricks for building new neighbourhoods. Regeneration and transformation are not a question of copying or imitating something that has been erased but, rather, it is about creating something new that has a link to the recent past. The tangible and intangible aspects of the industrial past play equally important roles in these processes.

### ***Civic engagement and resilience thinking in museums***

Today, when user participation is stated as essential (in planning as well as in museums), the central role that museums can play in supporting more community-driven approaches to heritage safeguarding must be highlighted (Blake 2018: 29). Participation in museums and archives has been discussed by museum practitioners – as well as theorists – for a long time (such as forms of involvement, by whom, when and at what costs) (Hetland et al. 2020). Today, museum professionals in many countries have turned their attention to 'the social role of the museum' (Soares 2021: 23) or what Alivizatos (2016: 16) describes as 'a people-centred museology'.

Contemporary museums are continuously revising and revitalizing their purpose and goals, including experiments with social interactions and cultural performances in their dissemination practices. In a study of a coproduction of museum exhibitions, Barnes and McPherson (2019) describe museums as hybrid spaces that can adapt and be used for both education and entertainment. Their work exemplifies how 'the museum rhetoric of community engagement can be turned into practice and create a space that is truly inclusive for the communities the museum serves' (Barnes and McPherson 2019: 257).<sup>13</sup>

Alivizatos (2016) has underlined the importance of rethinking contemporary museum work and the relationship between tangible and intangible heritage. The existing division between them affects the sense of responsibility concerning both documentation and safeguarding.<sup>14</sup> The clear division that the cultural heritage authorities make between tangible and intangible heritage in regeneration projects involving former industrial sites is an unproductive approach for several reasons: it influences what becomes associated as being heritage and hinders creative inputs of potential use in changed contexts. In Moss, some former factory employees are providing important assistance when the museum is engaging in the regeneration of Verket. The two parties have cooperated in initiating a debate in the local newspaper about the plans for the new neighbourhood. Another interesting example is collaboration between museum and schools. In Verket, college students have engaged in drawing up a scenario for future adaptive reuse of the large technical industrial structure 'Kamyren'.<sup>15</sup> In Klosterøya, former factory employees have occasionally been engaged by the local college to engage in guided tours around the new neighbourhood. Funksjonærforeningen Union is interested in more such cooperation in the future. A suggestion is to visualize the former industrial landscape better to link the past and the future, for instance by putting up maps, models and sculptures.<sup>16</sup>

In extensive urban development processes, the level of transformation and regeneration is not fixed when the planning process begins. This is a potential arena for the creative exchange of ideas and constructive initiatives.<sup>17</sup> The division into distinct phases of the planning process may raise problems, however. The request and appreciation of creative inputs are most likely to arise in the initial phases of planning. The finalization of a master plan may present barriers to alterations later when the plans are decided on and fixed. The regeneration – or transformation – of these areas can last between 20 and 35 years, and there are different stages in the development related to a series of detailed area plans (*reguleringsplan*).

The starting point is clearly defined: the plan must be politically accepted on the municipal level, including a series of required theme plans. The final date for completion is generally more tentative, taking into consideration that unexpected factors can lead to certain delays. From a resilience and sustainability point of view, the interim period is vital. This is where the unexpected is likely to occur and changes can be made that can benefit the actors involved – whether they are the developers, municipal planners or potential users. The question is whether there is sufficient willingness for successive evaluations in large transformation and regeneration projects.

It is appropriate to ask how the planning process today handles necessary changes. When changes occur and new needs arise, what actors are in charge of capturing this in the current system? It is only when changes to plans are envisaged that they are required by law in the current plan and building act with new zoning consultation statements. This confirms the need for independent parties, and one such party can be museums if they are prepared to take on such a role.

Local museums, in cooperation with various NGOs, have a certain freedom of action that can make them important partners in urban regeneration projects. Museums are not instructed by the same planning procedures and authority structure as urban planners. Sometimes, this is perceived and experienced by the curators as a form of marginalization – but it can also be interpreted as a strength and freedom to have active involvement (Cameron and Kelly 2010; Allison 2019; Janes and Sandell 2019).

In Verket, Moss by-og industrimuseum delivered important historical information during the initial planning phases. Museum professionals have also become important voices in the local media, including providing formal hearings for proposed planning documents. When a planning programme was proposed for the town centre by the municipality of Moss, the curator used the hearing statement as an opportunity to stress,

Preserving typical and characteristic expressions and symbols, which can tell something about the industry that has taken place, within a certain area, in the original place, will be of great value and tool for the urban historical understanding of most people (Østfoldmuseene, Moss by-og industrimuseum 2015: 12).

Relating especially to Verket, the curator made sure to add that 'the museum will request to preserve or incorporate as much as possible of the buildings wherever possible. This could be an exciting move in a new architectural context, while at the same time reflecting the previous industry on the site' (Østfoldmuseene, Moss by-og industrimuseum 2015: 12).<sup>18</sup>

### ***Need for alternative voices and creative inputs***

Cultural heritage can be appreciated from many angles, here based on qualities such as uniqueness, age, eminent architecture, skilled craft, symbolic and visual effects and so forth. We have added a supplementary angle: heritage as a social benefit. This is a resource that can be actively used to promote civic engagement. Managed by the museum, new users of such neighbourhoods can become involved in formulating their expectations, ideas, visions and hopes through various media. The key is the museums' capacity to promote civic engagement in urban regeneration projects.

As part of the attention that we have paid to the role that local museums and NGOs can play in large regeneration projects, resilience includes and enhances feedback from the actors involved. Urban regeneration involves projects requiring long-term planning; here, resilience can be used to evaluate existing strategies, processes and functions. Furthermore, it highlights what it takes to achieve the desired objectives and what changes this requires. It can also help in creating long-term goals and visions for an area, new strategies, measures and so forth, finding opportunities to achieve these (Hagen and Swensen 2022).

Cultural heritage management can be considered a level at which formal and informal partners often interact. Although, on a formal level, cultural heritage management has the specific insight, responsibilities and power involved in decision-making, according to several



acts, museum professionals and NGOs hold specific local, historical and cultural knowledge. These qualifications and situated knowledge can broaden what is understood as heritage (the selection and demarcation of cultural heritage). Because some museum professionals have extensive expertise related to documentation, public mediation and involvement, their experience can supplement discussions at the formal level. Initiatives generated by museum curators may be one of the decisive factors in making a regeneration project successful. They hold qualifications and 'situated knowledge' that can benefit regeneration projects.

This leads to one of our main arguments: there are parts of the industrial heritage that are too often overlooked today because an unnecessary gap exists in Norway between the cultural and environmental (including the heritage) sectors. The planners and heritage managers work within their domain and cultural historical museums, sometimes in cooperation with NGOs. Some cultural historical museums are orientated towards mediating relevant contemporary themes and topics via exhibition and digital media including recent history. This confirms our argument that museums are among the best equipped actors to document and mediate industrial heritage, thereby transgressing the dichotomy of tangible–intangible heritage.<sup>19</sup>

## Conclusion

The present paper has set out to examine how local museums can function as agents in social resilience building. This initial question was followed by two subsidiary questions: What knowledge and insights do local museum professionals hold that enable them to benefit local planning? How can museums activate and engage residents, users and visitors in creative place-making in neighbourhoods undergoing large transformations?

Based on qualitative data from two large, ongoing regeneration projects taking place at former brownfield sites, museums – sometimes in cooperation with various NGOs – hold historical and heritage insights that, only to a minor degree, are known – and acknowledged – as important by other participants in the transformation projects. Because the border between tangible and intangible heritage becomes blurred when regeneration involves a large degree of new development and transformation, the knowledge held by museum professionals becomes critical. Intangible heritage can provide an important link for creating coherence and connection between old buildings, including technical structures and new buildings/infrastructure. Museum professionals are currently the participants who are best trained to record, safeguard and actively reuse intangible heritage. Today, there is a sectoral gap in Norway between the cultural sector and heritage management sector, which is, in part, experienced by the curators in local museums as marginalization. On the other hand, it can also be interpreted as a strength, giving freedom for active involvement by leaving more options open to voice creative and critical input and appearing as a spokesperson for civic involvement. Including larger degrees of resilience thinking in urban regeneration and transformation projects can enable necessary modifications through ongoing evaluations. Museums' long-established position as public arenas is a resource that, to a larger extent, needs to be acknowledged in urban planning.

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## Notes

1. In a systematic literature review of the current academic debates on the relationship between intangible heritage and urban resilience, the researchers find a prevalence of discourses based on an engineering resilience approach. The debate is fragmented and diverse,

- and the researchers conclude that there is a need to better integrate intangible cultural heritage into urban resilience discourses in the future (Tavares et al. 2021).
2. An informative historiography on how museums have related to intangible heritage is presented in Chapter 1 – ‘Museology of Intangible Heritage’ in Alivizatou (2016: 18-21).
  3. More details of the wider case study that this paper is based on has been described in detail elsewhere (Swensen 2021).
  4. Telemark Museum is a regional museum responsible for five units. Two are situated in Skien City. Two units in other municipalities relate to specific themes of industrial interest, such as pottery production (Porselensmuseet, Porsgrunn), and the manor is connected to old timber and ironworks (Ulefos Hovedgaard, Nome). Telemark Museum, ‘Organisasjonen’, n.d. <https://www.telemarkmuseum.no/om-oss/organisasjonen>, accessed 23 October 2023.
  5. Østfoldmuseene is a regional museum for County Østfold. It is situated in Sarpsborg and has the main responsibility for 11 units. One of these units, Moss by-og industrimuseum, is located close to Verket, Moss. Industry has played an important part in the history of County Østfold, and four of the museum units highlight the specific aspects of the industrial history of the county (Borgarsyssel Museum, Sarpsborg; Fredrikstad Museum; Moss by-og industrimuseum; Haldenvassdragets Kanalmuseum). Østfoldmuseene, n.d. <https://www.ostfoldmuseene.no>, accessed 23 October 2023.
  6. Information from focus group interview with four former factory employees Union Industrier. Interview by author, digital, later transcribed recording, 23 March 2021, Oslo.
  7. Union Skien Funksjonærforeningen, ‘Hjem’, 19 January 2015. <https://unionskien.no/>, accessed 23 October 2023.
  8. Information from focus group interview with four former factory employees Union Industrier. Interview by author, digital, later transcribed recording, 23 March 2021, Oslo.
  9. Documentation was part of the first stages of the planning process and regulated by the Norwegian Plan and Building Act (PBA), but the degree of detail has varied between the two sites (Swensen 2021).
  10. Information from informal interviews with curator at Moss by-og industrimuseum. Interview/ short conversations by author, between 1 January 2019 - 31 March 2022, Oslo.
  11. Information from informal interviews with curator at Moss by-og industrimuseum. Interview/ short conversations by author, between 1 January 2019 - 31 March 2022, Oslo.
  12. Information from informal interviews with curator at Moss by-og industrimuseum. Interview/ short conversations by author, between 1 January 2019 - 31 March 2022, Oslo.
  13. For a critical examination of the museums’ rhetoric of user participation, see Robinson (2020).
  14. For instance, the cultural heritage management on the national level, RA, makes a clear distinction between tangible and intangible heritage. The definition that the Norwegian Directorate of Cultural Heritage has included in its online dictionary is that ‘intangible cultural heritage means practice, representations, expressions, knowledge and skills’. For cultural heritage management, ‘intangible cultural heritage is linked to what we cannot preserve about a cultural monument. This applies, for example, to beliefs, traditions, legends and events’. Riksantikvaren, ‘Ordliste og ordforklaringer’, 4 March 2020. <https://www.riksantikvaren.no/ordliste-med-ordforklaringer/>, accessed 23 October 2023.
  15. Information from informal interviews with curator at Moss by-og industrimuseum. Interview/

short conversations by author, between 1 January 2019 - 31 March 2022, Oslo.

16. Information from focus group interview with four former factory employees Union Industrier. Interview by author, digital, later transcribed recording, 23 March 2021, Oslo.
17. The local museum (Moss) was the first agent to engage in documenting the industrial heritage at the site before industrial production closed; as a result, the museum ensured the documentation of both tangible and intangible heritage. Parts of the data collected became the core of the new unit of the local museum, which moved into one of the workers' dwellings located in 'Gata'. All the buildings in 'Gata' were soon bought by the developer and is today an important front of the new neighbourhood that has grown up in Verket.
18. The quotation is from inputs to the proposed planning programme, Moss Municipality, November 2012, Østfold Museums – Moss City and Industrial Museum 21 January 2013 (referred to in Østfoldmuseene, Moss by-og industrimuseum 2015: 12).
19. More attention and resources have been paid to the municipal level of heritage management over the past few years, which have led to increased recognition of the museums by heritage authorities. This has been caused by the redistribution and delegation of authority among heritage management at the county and municipal levels. Based on experiences from projects orientated towards strengthening the heritage role on the municipal level, a new strategy was outlined. The initiative has involved all county municipalities, a series of museums and hundreds of volunteers in more than 350 municipalities (Riksantikvaren 2019). Hence, the knowledge and awareness of cultural heritage have been enhanced.

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