# Telling the stories of Industrial Heritage

*Revealing tangible and intangible values in the transformation of industrial production halls*

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Research Plan

**Graduation Studio** | Revitalising Maritime Heritage

# Telling the stories of Industrial Heritage

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*The rapid growth of industrialisation characterised the 19th and beginning of the 20th century, whilst the end of the 20th and the 21st century signify the opposite: de-industrialisation. The industrial society stood for "a good-producing society where men, materials, and markets were united to produce and distribute goods", Chilingaryan summarises.[1] In today's post-industrial society, we are left with the remains of the industrialisation in the form of Industrial Heritage. The Nizhny Tagil Charter defines Industrial Heritage as "the remains of industrial culture which are of historical, technological, social, architectural or scientific value. It consists of buildings, machinery, workshops, mills and factories, mines and sites, warehouses, stores, energy mills, transport and all its infrastructure, but also the places used for social activity, housing, religious worship and education."[2] Remarkably, this only focuses on the tangible, material legacy the industrial society left behind. In reality, industrialisation characterises much more: it shaped societies, represents technical knowledge and so on. This combination of tangible and intangible dimensions is clarified in the TICCIH Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes: "It includes both material assets – immovable and movable –, and intangible dimensions such as technical know-how, the organisation of work and workers, and the complex social and cultural legacy that shaped the life of communities and brought major organisational changes to entire societies and the world in general."[3]*

*The shift from a good-producing society towards a post-industrial service-providing society resulted in the vacancy of many industrial buildings.[4] A blessing in disguise, the vacant buildings offer opportunities for new development for multiple reasons. For instance, using the existing industrial buildings means that the embodied energy stored in the building remains intact.[5] Therefore it contributes to a more environmentally friendly approach towards the built environment. On a more complex note, the industrial buildings signify the industrial society. Therefore, solely looking from the perspective of sustainable development is not sufficient. The buildings symbolise the narrative of the industrial history. There is a need to challenge the material remains of industrialisation, as this only forms a one-sided narrative, the conservation of Industrial Heritage should provoke this narrative, according to Lagerqvist.[6] Having these structures vacant and available for re-use gives opportunities to (re-)emphasise both the tangible and intangible qualities of the narrative.*

*As de-industrialisation resulted in vacancy, it also had an impact on the industrial society. Companies were relocated or dismantled, leaving the workers without a job, and the community surrounding the industry collapsed. This negative impact has a significant role in the re-use of Industrial Heritage, as it is not always welcomed with open arms by a community that suffered economic collapse and large unemployment.[7] So, when dealing with Industrial Heritage with the goal of re-using the remains, one should keep in mind that it does not only entail tangible heritage with a structural and aesthetic value but that they are also places of memories, both good and bad.[8]*

*The Industrial Heritage thus offers opportunities for regeneration through transformation. This is especially the case for the typology of factories, and their production halls.[9] This typology is characterised by large-volume spaces making it suitable for multiple transformation strategies with minimal impact on the building envelope.[10]*

## RESEARCH AIMS

### *Problem statement*

It has already been established that Industrial Heritage offers opportunities for renewal. Yet, the question lies in the way the transformation is done and the amount of respect that goes into the values of the heritage. Industrial Heritage is a complex entity of tangible and intangible elements which are often already partially lost at the start of renewal. When de-industrialisation resulted in the abandonment of the industrial buildings, they were not yet valued as important.[11] This led to many of the tangible elements disappearing from the building, such as the removal of machinery.[12] In addition, long vacancy often triggers destruction which results in damage to the material evidence. This all leads to a decrease in the tangible heritage.

A common solution to produce both tangible and intangible heritage is to adapt the building into a museum. This museumification of heritage is also a recurring approach for Industrial Heritage. As the appreciation for Industrial Heritage grew, the industrial activities were valued more and considered worthy of remembering, by giving them

1 Naira Chilingaryan, "Industrial Heritage: In-between memory and transformation," (PhD thesis, Bauhaus-Universität Weimar, 2014), 12.

2 The International Committee for the Conservation of the Industrial Heritage (TICCIH), *The Nizhny Tagil Charter for the Industrial Heritage*, 2003, 2.

3 ICOMOS, "TICCIH Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes (The Dublin Principles)", 2011, 2-3.

4 Benjamin Fragner, "Adaptive Reuse", In *Industrial Heritage Re-Tooled: The TICCIH Guide to Industrial Heritage Conservation*, ed. James Douet (Routledge, 2013), 111.

5 Embodied energy means all the energy used to manufacture the building, from materials to transportation. Mark Watson, "Adaptive re-use and embodied energy", In *Industrial Heritage Re-Tooled: The TICCIH Guide to Industrial Heritage Conservation*, ed. James Douet (Routledge, 2013), 136.

6 Bosse Lagerqvist, "The production of industrial heritage and the heritage in industrial production – Working order as model for heritage practices," 2010, 13.

7 Neil Cossons, "Why Preserve the Industrial Heritage?", In *Industrial Heritage Re-Tooled: The TICCIH Guide to Industrial Heritage Conservation*, ed. James Douet (Routledge, 2013), 9.

8 Cossons, 10.

9 Manuala Grecchi, "Industrial Heritage: Sustainable Adaptive Reuse," In *Building Renovation: How to Retrofit and Reuse Existing Buildings to Save Energy and Respond to New Needs*, (SpringerBriefs in Applied Sciences and Technology, 2022), 55.

10 Grecchi, 64.

11 Chilingaryan, 36.

12 Norbert Tempel, "Post-industrial Landscapes", In *Industrial Heritage Re-Tooled: The TICCIH Guide to Industrial Heritage Conservation*, ed. James Douet (Routledge, 2013), 142.

a last life: a museum. "Museums tell the story, and so, the past can become a memory," said Debary.[13] Needless to say, the museumification of Industrial Heritage is one possible option, if this were done for every industrial remain, our post-industrial society would be filled with museums of the past. In addition, one can argue that Industrial Heritage is 'living heritage', it has a continuous link to modern industry and is an important mediator for the past.[14] Its prolonged life is already a living heritage in itself. The way in which the past can be translated into the future is more obvious in the case of the museumification of Industrial Heritage. To the contrary, it is still a quite unknown practice when talking about non-museum functions for the adaptive reuse. In this case, the translation of the narrative of the Industrial Heritage becomes more tricky since it might be less favourable to literally show the way in which the factory was functioning, or that industrial machinery is not as appreciated in someone's living room as it is in a museum.

The above-mentioned difficulties regarding Industrial Heritage and its remains are visible in the case of the Kloos factory in Alblasserdam. This research is a step towards the redesign of the Kloos factory. After decades of vacancy, there is not much left of the industrial remains. Affected by years of natural and human forces, the quality of the buildings has declined significantly. Nevertheless, the impact the factory had on the surroundings should not be underestimated. Therefore, the factory and Alblasserdam would greatly benefit from the regeneration of the tangible and intangible values of the Kloos factory. Its proximity to the UNESCO World Heritage Site of the Kinderdijk Windmills creates opportunities for a connection between both Industrial Heritage sites. The aim of this research is to contribute to the foundation of the redesign and find solutions for a transformation design of the Kloos factory, characterised by multiple large production halls.

### *Research questions*

This leads to the following research question:

*In which ways can the characteristics of Industrial Heritage be translated into a transformation of industrial production halls?*

The main research question will be investigated through three sub-questions researching both history, theory and practice.

SQ1. What are the tangible values of Industrial production hall?
SQ2. What are the intangible values of Industrial production halls?
SQ3. How are production halls transformed to residential, recreational and educational functions

## ACADEMIC CONTEXT

### *Relevance*

The interest in Industrial Heritage arose in the 50s and 60s, making it an already well-established field of research. Key organisations contributed to the awareness of Industrial Heritage such as The International Committee for the Conservation of the Industrial Heritage (TICCIH).

In times when a need for sustainable development in the built environment is dominating, Industrial Heritage can contribute significantly. Board Member of the Architects Council Europe Selma Harrington stated as part of a webinar on Industrial Heritage: "Adaptive Reuse generates new social dynamics in the city and gives the possibility to engage citizens in the decision-making processes, it saves construction materials and urban spaces, contributing to make cities more sustainable."[15] Furthermore, adapting the heritage at hand creates the opportunity for a new narrative of the past by extending its life in the present.

### *Contribution*

As much as there has been written on Industrial Heritage, and its transformation, not much attention has been given to the narrative of the industrial past in these transformations. The focus is often on the material evidence the heritage still offers. This research will therefore contribute to the knowledge there is on adaptive re-use of Industrial Heritage but will focus on the way this narrative can be translated into the redesign. By looking at both literature and case studies, history, theory and practice will generate a framework for solutions and areas of concern.

13 Octave Debary, "Deindustrialization and Museumification: From Exhibited Memory to Forgotten History," *The Annals of the American Academy of Political and Social Science* 595 (2004): 130.

14 Philip Feifan Xie, *Industrial Heritage Tourism* (Bristol: Channel View Publications, 2015), 214.

15 Selma Harrington cited in: Cultural Heritage in Action, "Industrial Heritage Buildings: adapt, reuse, enhance!", 20 April, 2022, https://culturalheritageinaction.eu/industrial-heritage-buildings-adapt-reuse-enhance/.

# LITERATURE

In order to define Industrial Heritage and the tangible and intangible values, this research implements the definition of both the Nizhny Tagil Charter (2003) and the Dublin Principles (2011) as these are both well-accepted documents drafted by the TICCIH, a recognised institution centred around Industrial Heritage.[16]

To demarcate the research, and to find valuable outcomes usable for the design, the research is limited to the 'factories' category of Industrial Heritage, more specifically their large production halls.[17] There is a deliberate choice not to limit the research topic of the industrial production halls to a specific time frame for multiple reasons. First, the factory of Kloos developed over a long time span (from mid 19th century until the 1960s). Therefore, multiple changes have taken place on the site, with different values attached to them according to their timeframe. Secondly, the industrial typologies have changed a lot over time as the technical developments changed. Making interesting to also focus on the characteristics of the older production halls as it creates an idea on how it evolved, otherwise the idea would be rather subjective to a time frame.

The different elements of the research are covered by multiple studies. An important study is the book by James Douet, this book covers almost all the necessary topics of the research.[18] By supplementing this research with more in-depth studies on specific topics, the frame of references exists of history, theory and practice based resources

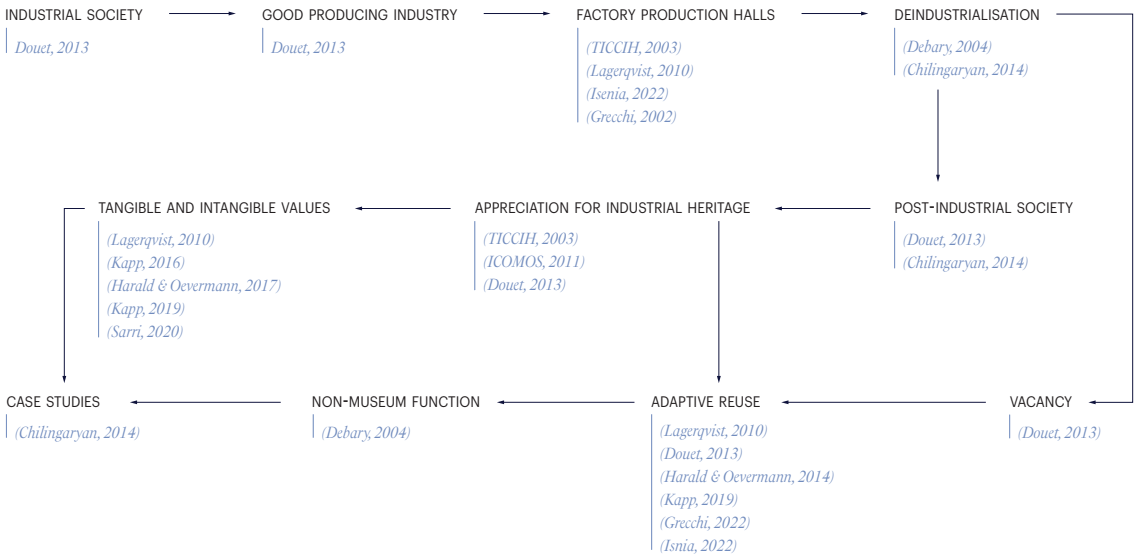


Fig. 2 Frame of references (author's own work)

# METHODOLOGY

## *Methodological framework*

The research consists of two main parts: literature research and empirical research (Fig. 2). The first part forms a theoretical framework on the topic and investigates SQ1 and SQ2. Furthermore, it is also used to create knowledge of the history and theory of adaptive reuse of industrial production halls, as part of SQ3. As clarified in the previous literature review, there is an abundance of available literature.

For the empirical research, a case study method is conducted to get an idea of the current practice of transformation projects of industrial production halls. When doing so, a three-layer method will be applied. This method is based on

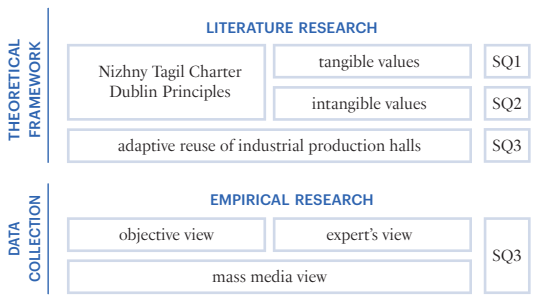


Fig. 1 Methodological framework (author's own work)

16 TICCIH, 2; ICOMOS, 2-3.

17 TICCIH, 2.

18 James Douet, *Industrial Heritage Re-Tooled: The TICCIH Guide to Industrial Heritage Conservation* (Routledge, 2013).

19 See Appendix 1

the 'Locus of Imaginaries' used in the doctoral research of Chilingaryan (Fig. 3).[20] As part of layer 2, semi-structured interviews with the architect of the project will be conducted, this will be done following the Interview Guidelines.[21]

## Case studies

Three case studies have been chosen to exemplify the different functionalities that a transformation project can entail. Of course, many other options are possible but for the scope of this research, the focus is on residential (Lokomotive Winterthur by Knapkiewicz & Fickert), educational (LocHal Tilburg by Civic Architects) and recreational (The Fonderies' Garden by atelier Doazan+Hirschberger).[22]

The locations of all three case studies are in Europe, respectively Switzerland (Winterthur), The Netherlands (Tilburg) and France (Nantes). A deliberate choice not to pick case studies only in The Netherlands but in other countries of Europe as well makes it possible to learn from the approaches in other countries. Additionally, industrialisation was very internationally connected. The vernacular of the industrial buildings refers more to its typology rather than its location.

The case studies show typological similarities with each other and the factory of Kloos, all of them are characterised by a large and high hall in which manufacturing used to take place. Furthermore, they all have the original complicated steel structure as the main base.

## Ethics

There are some critical issues that should be mentioned as they indirectly influence the research.

- **Limitations by language:** the main languages used when searching for sources are English and Dutch. Other languages are harder to use for searching. German and French are understood by the researcher and translation tools can contribute to the understanding of other languages, taking in mind possible errors made in the process.
- **No perception of the user in the case study:** in the methodology of the case studies, an additional layer could be added if the time span of the research was longer to include the image of the people.
- **Critical points in the interviews:** limited by time, only one actor per case study will be interviewed. A deeper research could talk with multiple actors to show the different sides of the image.

LOCUS OF IMAGINARIES

| layer | theme | objective | data |
|---|---|---|---|
| layer 1 | What is there? Who is there? What is going on? | objective view on past and present | plans and images |
| layer 2 | experts' view | image from the inside | interview with architect |
| layer 3 | mass media | image from the outside | articls, videos, and pictures on the internet |

Fig. 3 Case study methodology "Locus of Imaginaries" (author's own work)

- **Economic and legal factors:** the research does not tackle the economic and juridical aspects of the transformation of Industrial Heritage sites, making it more conceptually based.

## Research and design

Although the research and design are two separate elements, they will undoubtedly influence each other. The aim of the research is to create a better understanding of industrial production halls and their values. Doing so, the research contributes significantly to a better substantiation of the design. Reversely, the design helps to formulate a clearer demarcation of the research. The research should help define and accentuate the tangible and intangible characteristics in the design.

The design is focused on an outer dike industrial site in Alblasserdam where the former company Kloos was based. The factory grew significantly in the middle of the 20th century and was known for its production of steel constructions such as train tracks and bridges.[23] After years of vacancy, a new design should be made to revitalise the site. In this design, the values of the industrial heritage and a new functionality should be considered as important factors that can reinforce each other.

20 Chilingaryan, 55.
21 See Appendix 2
22 See Appendix 3
23 D. Boeie et al., *125 jaar: Jubileumnummer "Het Contact"* (Alblasserdam: Offserdrukkerij Kanters n.v., 1968)

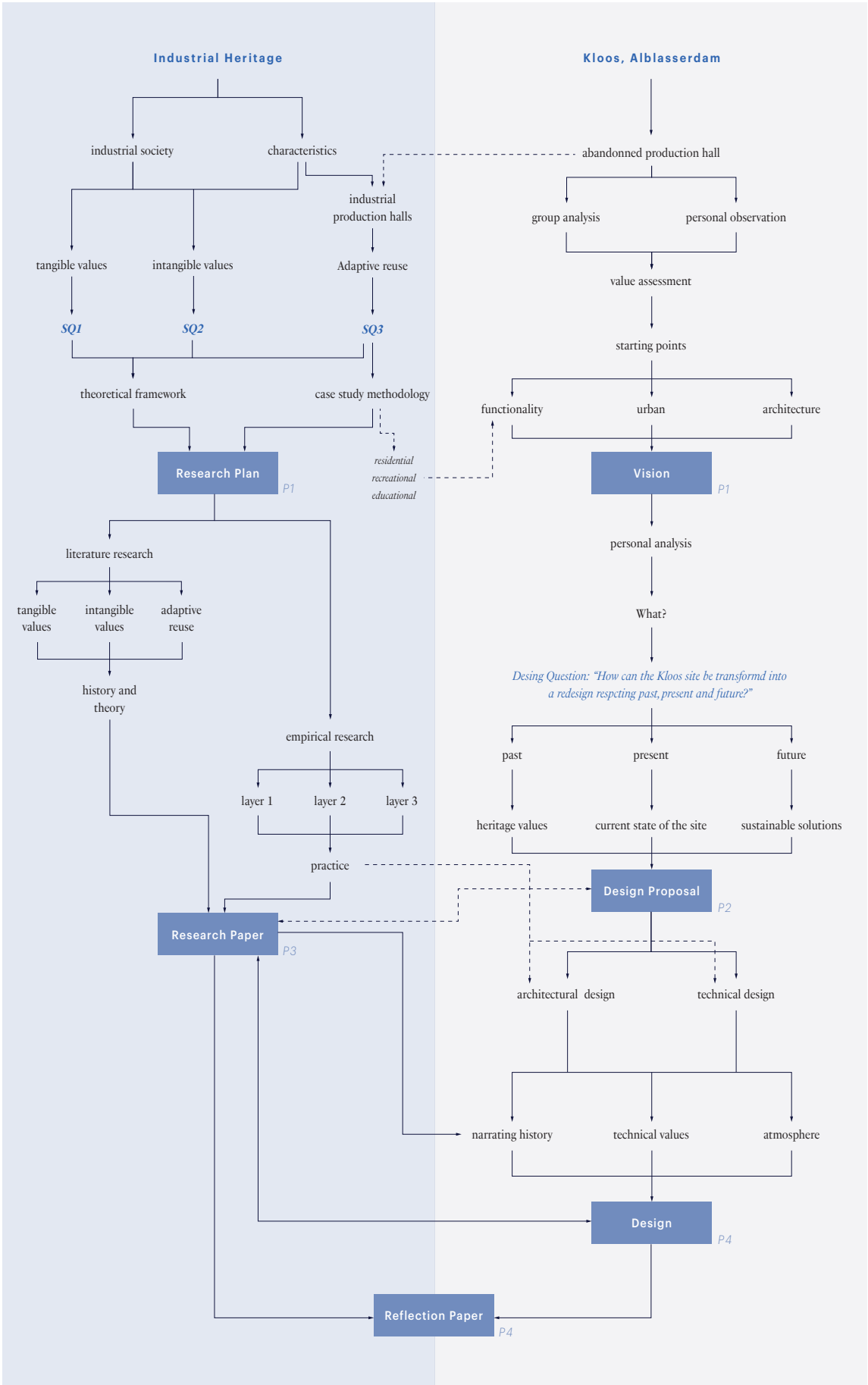


Fig. 4 Research and Design diagram (author's own work)

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Boeie, D., A. den Boer, E. Ouweneel, J. C. Schreutelkamp, A. v. d. Werken. *125 jaar: Jubileumnummer "Het Contact".* Alblasserdam: Offserdrukkerij Kanters n.v., 1968.

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Sarri, Sotiria. "Palimpsest Industry: Industrial Heritage and Intangible Cultural Heritage in the Creative City: A Comparative Analysis of the Old Truman Brewery in London and Technopolis in Athens." *Identidades*, no. 9 (January 1, 2020). https://doi.org/10.5821/identidades.9881.

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# APPENDIX

## *Appendix 1: Literature Review*

**The International Committee for the Conservation of the Industrial Heritage (TICCIH). The Nizhny Tagil Charter for the Industrial Heritage. 2003.**

TYPE theory
TOPIC Conservation of Industrial Heritage and Intangible/Tangible Values
CONTENT framework by an official body focused on Industrial Heritage
RELEVANCE the Charter is of great importance and defines the values of Industrial Heritage

**Debary, Octave. "Deindustrialization and Museumification: From Exhibited Memory to Forgotten History." The Annals of the American Academy of Political and Social Science 595 (2004): 122-133. http://www.jstor.org/stable/4127614.**

TYPE theory
TOPIC adaptive reuse
CONTENT about the phenomenan of industrial tourism, and its consequences
RELEVANCE gives a result of museumification

**Lagerqvist, Bosse. "The production of industrial heritage and the heritage in industrial production – Working order as model for heritage practices." 2010.**

TYPE theory
TOPIC Industrial Production Halls, Tangible Values and Adaptive Reuse of IH
CONTENT different perspectives on heritage values in consequence of how the operative results of heritage processes are designed
RELEVANCE offers strategies for reuse focussing on the emotional and cognitive aspects.

**ICOMOS. TICCIH Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes (The Dublin Principles). 2011.**

TYPE theory
TOPIC Conservation of Industrial Heritage and Intangible/Tangible Values
CONTENT defines Industrial Heritage and creates a framework on how to deal with Industrial Heritage
RELEVANCE influential document on the importance of Industrial Heritage and its meanings

**Douet, James. Industrial Heritage Re-Tooled: The TICCIH Guide to Industrial Heritage Conservation. Routledge, 2013.**

TYPE history and theory
TOPIC Conservation of Industrial Heritage Transformation, Intangible/Tangible Values and Adaptive Reuse of IH
CONTENT preservation, adaptive reuse, legal protection, TICCIH and values
RELEVANCE extensive book with relevant papers on all the topics

**Mieg, Harald A. and Heike Oevermann. Industrial Heritage Sites in Transformation: Clash of Discourses. Taylor & Francis Group, 2014.**

TYPE theory
TOPIC Intangible/Tangible Values and Adaptive Reuse of IH
CONTENT conflict between the values of IH Conservations, Urban Development needs and Architectural Development
RELEVANCE raises the question how the three discourses can be unified and find common ground, uniting values of conservation with new development

**Chilingaryan, Naira. "Industrial Heritage: In-between memory and transformation." PhD thesis., Bauhaus-Universität Weimar, 2014.**

TYPE history and theory
TOPIC Conservation of Industrial Heritage Transformation, Intangible Values and Adaptive Reuse of IH
CONTENT Industrial Heritage in a post-industrial society, the perception and the result of transformation in present times
RELEVANCE position of the Industrial Heritage in todays society is an important factor on the way we perceive the heritage

**Kapp, Paul Hardin. "Intangible Industrial Heritage." US/ICOMOS, 2016.**

TYPE theory
TOPIC Intangible values
CONTENT importance of Intangible Heritage and its meaning for Industrial Heritage
RELEVANCE in-depth focus on intangible Industrial Heritage in specific

**Kapp, Paul Hardin. "HOW INTANGIBLE CULTURAL HERITAGE CAN MAKE HISTORIC PRESERVATION AND POSTINDUSTRIAL REGENERATION MORE SUSTAINABLE." Journal of Architectural and Planning Research 36, no. 1 (2019): 1–14. https://www.jstor.org/stable/26949370.**

TYPE theory
TOPIC Intangible Values and Adaptive Reuse of IH
CONTENT ways that preservation contributes to a more sustainable use of our built environment
RELEVANCE interrelation between historic preservation and sustainability by emphasizing intangible and tangible heritage

**Sarri, Sotiria. "Palimpsest Industry: Industrial Heritage and Intangible Cultural Heritage in the Creative City: A Comparative Analysis of the Old Truman Brewery in London and Technopolis in Athens." Identidades, no. 9 (January 1, 2020). https://doi.org/10.5821/identidades.9881.**

TYPE theory
TOPIC Conservation of Industrial Heritage Transformation and Intangible Values
CONTENT ways of perceiving Intangible Cultural Heritage (ICH) in the case of Industrial Heritage, urban position of Industrial Heritage
RELEVANCE the research puts much attention to the perception of ICH

**Isenia, G. M. "Adaptive reuse of Industrial Heritage: empirical building and location factors" Master Thesis, Eindhoven University of Technology, 2022.**

TYPE history
TOPIC Industrial Production Halls and Adaptive Reuse of IH
CONTENT common types of historic industrial buildings and the factors that influence adaptive reuse
RELEVANCE gives clear characteristics of the typologies of production halls over the years

**Grecchi, Manuela, "Industrial Heritage: Sustainable Adaptive Reuse." In Building Renovation: How to Retrofit and Reuse Existing Buildings to Save Energy and Respond to New Needs, 53-69. SpringerBriefs in Applied Sciences and Technology, 2022.**

TYPE history and theory
TOPIC Industrial Production Halls and Adaptive Reuse of IH
CONTENT adaptive reuse of abandoned industrial buildings as a role of renewal, focus on factory halls
RELEVANCE not literally production halls but some similar points which can be used as to frame production halls and thir qualities

## *Appendix 2: Guidelines semi-structured interviews*

As part of the methodology, semi-structured interviews (SSI) will be conducted with key stakeholders in the transformation processes of the case studies. An SSI is the preferable interview method in this case as it leads to a more in-depth conversation with the interviewee. Yet, to prevent the conversation from side-tracking, an interview guide will serve as a direction during the interview. Furthermore, it will not always be the case that every question should be answered during the interview, a division between the more and less critical questions will be made in case the time of the interview runs out. As some of the interviewees may be situated in a different country, it is possible that the interview will be conducted through an online meeting, in that case, it is more likely that the spontaneity of the interview will be less and the interview guide will play a more important role. The interview guide is dynamic, it is a work in progress that will be drafted after the literature research and possibly adapted according to the interviewee.[1]

In general, the interview guide will consist of three parts, the introduction with the interviewee and the topic, the interview itself and the conclusion. For the first part, it will be important to make sure that the interviewee is comfortable and to introduce them to the topic and the position of the interview in the research. Most importantly, the privacy protection of the interviewee should be discussed and ensured. Following the introduction, the interview will go deeper into the project and the design process. By starting with some easy questions, the interviewee has time to get a bit more comfortable. At the end of the interview, the most crucial points will be repeated to ensure that the interviewer has interpreted the answers correctly.

1 William Adams, "Conducting Semi-Structured Interviews," in *Handbook of practical program evaluation*, ed. Kathryn Newcomer, Harry Hatry and Joseph Wholey (2015), 496.

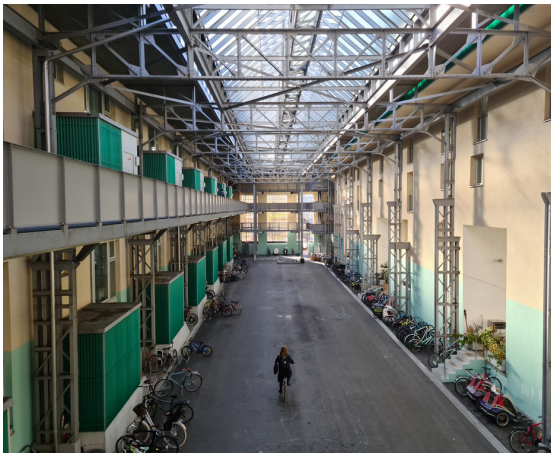
## *Appendix 3: Case studies*

### Lokomotive Winterthur

| | |
|---|---|
| LOCATION | Winterthur, Switzerland |
| TRANS. ARCHITECT | Knapkiewicz & Fickert |
| COMPLETION | 2006 |
| FORMER FUNCTION | Locomotive factory |
| CURRENT FUNCTION | Residential housing |
| INFO | A former locomotive factory has been transformed into 116 apartments, going from maisonettes to single-story apartments and lofts. Winterthur has a strong industrial history, and the building had once an essential place in the city as the factory of the Scheizerische Lokomotiv- und Maschinenfabrik (SLM). In 1991, the city started its regeneration process as the deindustrialisation had led to a vacated city core, where the industry was located. K&F transformed Site No. 2 of the SLM, they used the layout of the old factories for the new development. |
| SOURCES | https://www.axka.ch/bauten/b1/b1.html#<br>http://www.reduce-reuse-recycle.info/Projekt_3_0_id_136.html<br>Andreas Hofer, "The Sulzer/SLM Site in Winterthur, Switzerland: From Factory to the New Town – The Reinvention of the City", In Industrial Heritage Sites in Transformation: Clash of Discourses, ed. Harald A. Mieg and Heike Oevermann (Taylor & Francis Group, 2014), pp. |

**Left:** outside before transformation (source: https://www.axka.ch/bauten/b1/b1.html#)

**Right:** outside after transformation (source: https://www.axka.ch/bauten/b1/b1.html#)

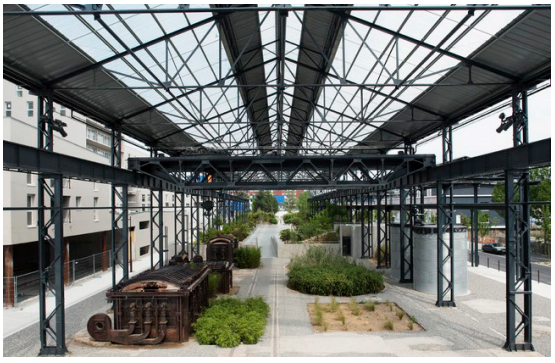


Inside of Lokomotive (source: https://www.winterthur-glossar.ch/ueberbauung-lokomotive)

### The Fonderies' Garden

| | |
|---|---|
| LOCATION | Nantes, France |
| TRANS. ARCHITECT | atelier Doazan+Hirschberger |
| COMPLETION | 2009 |
| FORMER FUNCTION | Sea propeller factory |
| CURRENT FUNCTION | Public park |
| INFO | The Fonderies' Garden is part of an urban planning project. It uses the structure of a former factory of the company Fonderies Atlantique, which was internationally famous for its sea propellers. Under the structure, a botanical garden with plants from all over the world creates a landscape-focused design. Original machinery and rails give a hint of the past of the building. |
| SOURCES | https://architizer.com/projects/fonderies-garden/<br>https://landezine.com/foundries-garden/ |

Outside after transformation (source: https://landezine.com/foundries-garden/)



Inside after transformation (source: https://landezine.com/foundries-garden/)

## LocHal Tilburg

| | |
|---|---|
| LOCATION | Tilburg, The Netherlands |
| TRANS. ARCHITECT | Civic Architects |
| COMPLETION | 2017 |
| FORMER FUNCTION | Locomotive factory |
| CURRENT FUNCTION | Public library |
| INFO | The transformation project of the locomotive factory in Tilburg won the World Building of the Year in 2019. The design gives space to a public library, coworking spaces, meeting rooms, art education and eventrooms. The building is meant to produce new information and knowledge by learning and listening. The architectural design is an interpretation of the original building from 1932, building on its characteristics such as the spaciousness |
| SOURCES | https://www.civicarchitects.eu/nl/projects/lochal-tilburg<br>https://lochal.nl/over-de-lochal/historie |

Archival picture of the production hall (source: https://lochal.nl/over-de-lochal/historie)

Inside of the LocHal after transformation (source: https://www.civicarchitects.eu/nl/projects/lochal-tilburg)