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Value and revitalizing industrial heritage

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Value and Revitalizing Industrial Heritage

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Summary

In every buildings lifespan, at some point it will lose the purpose for which it was built. A house can become too small because of family growth; the family can either move to a bigger house or build an extension so there is enough space for the entire family. The same goes for all other buildings, offices and factories go unused as the owner/renter moves to different location or worse, through bankruptcy. A house can still function as a house for a new family; an office can become the base for a different company or even be made into housing units. But what to do with an old metallurgy plant? Chances are slim that a new metallurgy company will set up in the building. So re-using an industrial building isn’t very likely, however using it for something entirely different is a very plausible scenario, this process is defined as revitalizing.

Revitalizing is one of 7 interventions managers or owners can perform when dealing with or in possession of a building. Revitalizing focuses on re-using the building but with an entirely different function, for example a villa now used as a discothèque or a gas silo used as a training facility for divers. The main advantage of this approach is that a building becomes a financially productive entity again. If one chooses deprivation to be the most suitable action, the building will just sit there until it finally falls down itself. Even though deprivation is almost for free (apart from fences etc) it isn’t generating any income rendering the grounds it is on unused. Unused construction space in the Netherlands is very valuable, because it is rare due to the dense population.

Why isn’t every obsolete building revitalized if it has such bright prospects? The main reasons for this are financing revitalization on one hand and the complexity of the revitalization process on the other. The scale of the average industrial building is very large compared to the average house. Differences in budget needs are even bigger ground pollution is just one factor houses won’t easily encounter and industrial buildings almost always will. Then there is the matter of complexity; what exactly makes revitalization so complex? Is it the scale, the finances, the technique or is it the people around projects or maybe the actors within revitalization process? The complexity question is the main issue in this thesis and will be answered in the end.

The step of every procedure regarding existing buildings is deciding what to do with it; this is when value starts to become relevant. A building that has no value to anyone is often demolished, whereas a building that has an enormous value will never be demolished. It might even receive a monumental status protecting it against deprivation and demolition. But what to do when a building has value but not the kind of value that helps it continue its lifespan financially? In other words value has very different aspects that play different parts in a buildings potential lifespan.

Economic value is the first value aspect industrial buildings are affected by. Examples of economic value are the price of the building, the grounds on which it stands and the costs of its demolition. These are all very basic and relatively easy to sort out, however economic value is also made up of depreciation of properties around a building when demolished or increased property value if the building is re-used or revitalized. Unfortunately economic value is often low for obsolete industrial buildings; demolition costs are high, the parcel is polluted and having an old boarded up building in a neighborhood depreciates the urban environment.

Functional value is the second value aspect influencing obsolete industrial buildings. It is quite obvious that the functional value, of an obsolete building is low, it is not able to perform the function it was built for anymore. The positive side of functional value is
function potential, how much will a building lend itself for function mutation. Scale is an advantage for industrial buildings compared to houses for example; unfortunately it is possible to find old installations that cannot be removed in industrial buildings. If this is the case throughout the building, function possibilities will decrease, sometimes only leaving a museum as a function possibility. Functional value is very important when it comes to revitalization; it can serve as a determinant to both the demolition and revitalization end.

Cultural and historical value is the most important when it comes to industrial buildings, it assesses a building’s soft value, in other words the value that cannot be measured or quantified. This is usually the value aspect emphasized by the people or parties (actors) that try to continue a building’s lifespan. Cultural and historical value covers all value aspects that represent soft values. Examples of this are emotional value, architectural value, artistic value, documentation value and rarity of a building. Because these aspects are hard to quantify due to their personal nature, the best way to understand them is to experience them. One could try to persuade someone of a building’s value using words or models but the experience is so much more effective.

Each of these value aspects and the amount in which they are present can represent one of the 7 interventions. Loads of functional value will eliminate deprivation and demolition as options, while very low cultural and historical value could make deprivation and demolition the best options. It is clear that choosing the right intervention is very dependent on the manager’s knowledge and his/her agenda.

If revitalization is chosen as the most suitable intervention, managers are confronted with high costs and unsecure profits. With function mutation come revenues, revenues that can be used to finance the revitalization entirely creating a self-sustaining building that at some point could pass a break-even point. Unfortunately this construction isn’t always possible, in some cases the building isn’t suitable for a lucrative function so finances need to be attracted through other channels. Governmental or philanthropic funding can also be used to finance revitalization; taking into account that governmental funding is only awarded if certain rules and regulations are abided by. These two constructions can also be combined; this is often the case because of the scale of the average industrial building.

In order for investors or governments to even consider putting money into a project one first needs to give them some sort of incentive or perform an action that enthuses the party using aspects for which he/she could be sensitive to personally or professionally. This philosophy is incorporated in eight actions and incentives:

1. Creating a possibility for plan development.
2. Relax regulation and legislation on various procedures.
3. Publishing results of cultural and historical value analyses.
4. Excursions to successful revitalization projects.
5. Enlarging government funding with public functions as end-use.
6. Familiar project partners.
7. Collaborative plan development with commercial parties.
8. Dividing financial risks between commercial and governmental parties.

Through experts these eight actions and incentives are proved to be more or less effective, the experts also gave some additions while being interviewed on the subject. The experts agreed unanimously that the use of actions and incentives is recommended and would definitely make processes easier.
Research Rapport

Also the experts provided the main project factors that influence revitalization potential and what opportunities and risks these factors posses. Combined with their professional and personal preferences on what action or incentive would stimulate them into participation, an overall usability and effectiveness table can be made.

The final step is compiling all data on value, project factors and projects actors, finance constructions and actions and incentives into a roadmap any manager could use. This roadmap shows what could be done when certain factors are present, what actors should be taken into account and what action or incentive is most prudent in a unique situation. Because of the uniqueness of any project and therefore its process, the roadmap is a guideline that shows what could be done, not what should be done. It is not a solution to all complexity problems it makes them better manageable and serves as a checklist for risks and opportunities in the early (initiative) stage.
# Table of content

Introduction ......................................................................................................... 1

1 Research outline ............................................................................................ 2
  1.1 Problem identification ............................................................................. 2
  1.2 Problem definition .................................................................................. 2
  1.3 Goal ...................................................................................................... 2
  1.4 Questions ............................................................................................... 2
    1.4.1 Main question .................................................................................. 2
    1.4.2 Sub-questions .................................................................................. 2
  1.5 Focus ..................................................................................................... 3
    1.5.1 Levels .............................................................................................. 3
    1.5.2 Project/process phase ....................................................................... 3
  1.6 Relevance ............................................................................................... 4
    1.6.1 Social relevance .............................................................................. 4
    1.6.2 Practical relevance .......................................................................... 4
    1.6.3 Scientific relevance ......................................................................... 4
  1.7 Research model ...................................................................................... 5
  1.8 Definitions .............................................................................................. 5

2 Heritage ......................................................................................................... 6
  2.1 Industrial heritage and its options ......................................................... 6
  2.2 Revitalizing industrial heritage ............................................................... 7
    2.2.1 Process ............................................................................................ 7
    2.2.2 Project ............................................................................................. 8

3 Value ............................................................................................................. 10
  3.1 Managerial aspects ................................................................................ 11
  3.2 Value aspects ........................................................................................ 12
    3.2.1 Economic value .............................................................................. 12
    3.2.2 Functional value ............................................................................. 15
    3.2.3 Cultural and historical value ........................................................... 16
  3.3 Categories of relevant value aspects ....................................................... 18
    3.3.1 Factors in Economic value .............................................................. 18
    3.3.2 Factors in functional value ............................................................. 18
    3.3.3 Factors in Cultural and historical value ....................................... 18

4 Marketing ..................................................................................................... 20
  4.1 Marketing strategies .............................................................................. 20
  4.2 Revitalization and marketing ................................................................. 21
  4.3 Communication ..................................................................................... 22
  4.4 Communicating value in revitalization .................................................... 23

5 Theoretic conclusions .................................................................................... 24

6 Personification ............................................................................................... 25

7 Actions and incentives .................................................................................. 26
  7.1 Financial value actions/incentives .......................................................... 26
  7.2 Functional value actions/incentives ......................................................... 26
  7.3 Cultural and historical value actions/incentives ...................................... 27
  7.4 Process actions/incentives ..................................................................... 27
Research Rapport

**Introduction**

In order for students to graduate from the master Construction Management and Engineering (CME), scientific research is executed. The subject of this research is chosen by the student and approved by the research counsel if within the boundaries Construction Management and Urban Development. The students are divided into two ateliers that represent the focus of their subject:
- Process engineering atelier
- Business engineering atelier

Each student starts with making a research proposal in which he/she elaborates on what he/she wants to research and how. Next step is creating a literature basis for his research, followed by an empiric study in which he/she tries to find the answer to his/her research question. The information of these steps is made into a research document that covers all crucial data for his/her research.

Revitalizing industrial heritage has a bad reputation for being complex, costly and guaranteed of endless procedures. Individuals often wonder why someone is so passionate to preserve a certain building or monument. Demolishing it and building something new is so much more efficient, cheaper and less complex, so why bother? Others however find themselves having positive feelings around a certain structure, some for its history others for its looks. Often they can't really explain what it is that makes them like this so much so they often resort to the term value.

Value is a rather vague and personal term, everyone has a different opinion of value and what is valuable to them. Then we have the aspects value is made out of; architectural value, financial value, emotional value, historic value, family value etc. One can imagine the arguments this could lead to.

Imagine managing a process where you need to tell a project partner that:

- Progress will be slow.
- The project will be very expensive
- It is unsure whether enough money can be made from it to pay for it.
- And they will be working with a large number of people that have very different opinions on what should be done.
- The structure could have many invisible defects.

Multiply this by the amount of project partners the manager could encounter and the different interpretations of value they have. And finally, try to tell them that all this is worth it because of the value it has according to you. People may think you are crazy if you'd use this direct approach, because the equation is completely out of balance. Still, all over the world buildings are being re-used and revitalized, so when choosing the right approach success can still be met.

The goal of this thesis is to make life for managers in these processes a bit easier. Through literature, I will provide a general outline of value. Making it easier to explain what value a certain building or monument has for him or her. In the empiric outline I will try to find out what makes these processes so complex, how this can be simplified and what actions are available for managers to achieve this in real-life situations. Using all the input, I present my conclusions and a roadmap through which the complexity is premeditated, allowing managers to get better control of the process.
1 Research outline

1.1 Problem identification
Throughout the Netherlands, a large number of industrial buildings are unused, through decay, vandalism and lack of interest they are losing their former glory. Reusing and revitalizing them could give an impulse to both the building and its environment. These processes are, usually perceived as expensive and time-consuming. Leading to a decrease in industrial landmarks in the Netherlands.

1.2 Problem definition
The identification results in the following problem definition for this thesis:
Dutch industrial history is slowly demolished one building at the time, because revitalization of these buildings has a bad reputation due to complexity of the process and the high costs associated with this.

1.3 Goal
Finding out what makes revitalization so complex and how value aspects could simplify this.

This results in a roadmap that shows the static steps in a highly dynamic process. The roadmap enables the user to prepare him or her correctly so that the risk of complications can be minimized.

1.4 Questions

1.4.1 Main question
The main question I will try to answer in my thesis is:
"How could revitalization processes be simplified, using value aspects?"

I chose to use 'value' as a guideline to solve the problem definition because it is the main reason why revitalization is done in the first place. A valueless building will be broken down in an instant, as it should be, whereas buildings possessing enough value will be revitalized even though costs are high.

1.4.2 Sub-questions
1 What is industrial heritage?
2 What are key aspects within revitalization processes?
3 What is value?
4 What are relevant aspects of value for revitalizing industrial heritage?
5 What part does value play within revitalization?
6 Which factors are key in revitalization?
7 Which parties are key in revitalization?
8 How can these parties be persuaded into participation?
9 How can value be used for persuasion means?
1.5 Focus

Figure 1.1 shows the main subject revitalization and the used subjects in this thesis to solve the problem definition.

![Figure 1.1: Main subjects in thesis](image)

1.5.1 Levels

This thesis is focused on project level and its direct environment in some degree; figure 1.2 shows different levels from which projects are affected:

- Project
- Direct Environment
- Global Environment

![Figure 1.2: Levels projects are influenced by](image)

1.5.2 Project/process phase

Construction processes can be divided into 5 phases, this thesis is focused on the initiating phase. Figure 1.3 below shows the different phases within a revitalization process.

![Figure 1.3: Model of Phases (Source: Nilessen et. al. 1999)](image)
1.6 Relevanee

1.6.1 Social relevance
Revitalization of monumental buildings like churches, offices and industrial buildings is gaining more and more interest; its position on the public agenda has risen over the years. Some even mention a public outcry to restore some of Holland’s old glory is currently making its way through Dutch municipalities. A few examples of articles covering revitalization or restoration projects:

"Connection between past and present adds to the experience of the site and the built environment people live in, which is shown by government, municipalities and private parties in their care for monuments."
(VNG, 2009)

"...now, after half a century we discover more and more beauty and refinement in the architecture of old... tearing structures down can only be done once and should therefore be thoroughly researched before considered."
(Gelderlander, 2008)

"The municipality of Amsterdam informed that it appreciates the importance of churches. "We are highly supportive of revitalizing old buildings" -Amsterdam alderman"
(Trouw, 2008)

"In Amsterdam, citizens have prevented demolition of various churches and other old buildings like the Vondelkerk..."
(AD, 2007)

"Holland is rich in often beautiful, empty buildings the new Old map assesses them in a single document" government advisor finds 945 buildings that show potential for a second life.
(NRC, 2008)

The organization for Cultural heritage (RCE) in the Netherlands has constructed a list of buildings that are nominated for re-use or revitalization. This list shows 4427 buildings, nominated by either the organization or individuals showing an interest in the building. This characterizes the public interest in keeping history among their urban environment.

1.6.2 Practical relevanee
Revitalization is a highly complicated process, it needs some sort of tool which enables users to inventory crucial aspects and parties swiftly, making life easier for many professionals in this industry. Projects are often cancelled because there isn’t enough insight in primary issues over secondary issues. Furthermore, value is a very multi-interpretable term, a literature study on which aspects play important parts in this term could help managers make more sense of it in the future.

1.6.3 Scientific relevanee
The field in which this research is performed, revitalization/re-use, is one that I have not encountered in the CME curriculum, therefore this research expands my knowledge of disciplines in which CME professionals can perform.

Scientific relevance is gained through statements on existing theories on revitalization and value. Secondly; through empirical research insight is gained on how these theories are implicated in real-life and how they can be used to ones advantage.
1.7 Research model

Subject

CMUD

Revitalizing

Value

Industrial heritage

Relevant aspects of value

Revitalization process

Value in revitalization process

Theoretical outline

Revitalization of Industrial heritage

Relevant value characteristics

Value and marketing

Financial constructions

Theoretical conclusions

Empiric outline

Actions incentives

Expert profile

Private expert interviews

Public expert interviews

Usability actions incentives

Origin of process complexity

Results

Conclusions

Roadmap

Validating conclusion

Figure 1.4: Research model

1.8 Definitions

Re-use
Re-using the building, continuing its original function.

Revitalization
Re-using the structure while instating a new function.

Intervention
A point in time where a decision is made on what action to perform.

Function
Activity in a building. Example: school, function: education

‘Hard’ value
Measurable value, in euro’s, per square meter etc.

‘Soft’ value
Non-measurable value, subjective or not collectively accepted.

Stakeholder
Every party linked to a revitalization project.

Shareholder
Stakeholders linked to a project’s financial aspects.

Actor
Stakeholders active in a project’s revitalization process.
2 Heritage
What exactly is heritage? Is it everything older than 50 years, or is it everything made by important people? If we look up the term in the dictionary, it gives us the following definitions:
1. Practices that are handed down from the past by tradition; "a heritage of freedom".
2. Any attribute or immaterial possession that is inherited from ancestors; "my only inheritance was my mother's blessing"; "the world's heritage of knowledge".
3. That which is inherited; a title or property or estate that passes by law to the heir on the death of the owner.
4. Hereditary succession to a title or an office or property.
This being a study of building aspects and not family heirloom, the focus is on the first definition; especially the word tradition draws the attention. We could interpret that into history. Heritage has something to do with our history, objects, titles, moments, etc. all factors that contributed to our history.

Thinking of building heritage, many world renowned buildings come to mind; the Coliseum (Rome), st. Peters Cathedral (Vatican City), the Eiffel Tower (Paris) or the Sydney Opera House (Sidney). These four examples show that building can have different ages. The coliseum was finished in the year 80 A.D. while the Sydney Opera house was finished 54 years ago. So age doesn't really matter for heritage, other aspects determine its value, these aspects will be further explained in chapter 3.

<table>
<thead>
<tr>
<th>Period</th>
<th>description</th>
<th>classification</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>VI-XV</td>
<td>Middle ages</td>
<td>Ancient building</td>
<td>Heritage out of awe for the period</td>
</tr>
<tr>
<td>XV-XVIII</td>
<td>Renaissance</td>
<td>Antiquity</td>
<td>Heritage because western life started to flourish</td>
</tr>
<tr>
<td>XVIII-XIX</td>
<td>Historicism</td>
<td>Historic monum.</td>
<td>Heritage to reflect on recent history.</td>
</tr>
<tr>
<td>XIX-XX</td>
<td>Rational enlightenment</td>
<td>Monument</td>
<td>Heritage because of memories</td>
</tr>
<tr>
<td>XX (before WWI)</td>
<td>Minor architecture</td>
<td>Historic city</td>
<td>Protecting heritage (old centers) from growth</td>
</tr>
<tr>
<td>XX (INTERBELLM)</td>
<td>Building and enviro.</td>
<td>Urban heritage</td>
<td>Cities as heritage, preserving memories</td>
</tr>
<tr>
<td>XX (POSTWWI)-XXI</td>
<td>Globalization era</td>
<td>Cultural heritage</td>
<td>Global listing of heritage (UNESCO)</td>
</tr>
</tbody>
</table>

Figure 2.1: Historic periods and their heritage classification (source: Roders, 2007)

Figure 2.1 shows the time periods and the reasons why a building from this period could be chosen as heritage. Roders (2007) also quotes an interesting statement: "Monuments can be divided into two classes, dead monuments, i.e. those belonging to a past civilization or serving obsolete purposes, and living monuments, i.e. those which continue to serve the purposes for which they were originally intended." (Locke, 1904, quoted by Roders, 2007)

This thesis focuses on living monuments, buildings that can still fill a purpose higher then merely monumental or 'just to look at'. As seen in the focus (chapter 1.5) I will look into industrial heritage, from figure 2.1 Industrial heritage qualifies from the period XVIII to the present and reflects on recent history and first hand memories.

2.1 Industrial heritage and its options
"The moment the last craftsman has left the building is the moment the decay begins" (Cramer et. al. 2007), this is a rather grim, but true, approach towards buildings. It is a testament to structural decay but also on architectural decay; architecture is highly influenced by time. This also is the case for the public opinion towards historical buildings; it will be highly fluctuant over the years (think of how
fast many concentration camps were destroyed after the World War II and how painstakingly they are being preserved now). Add fast technical developments and we are presented with obsolete buildings and a large question mark to what to do with them.

"From the 1950s Holland became a service society instead of the production society it was" (Belvedere, 1999). This rendered many buildings obsolete. This resulted in a number of industrial buildings that might even have a large emotional value to people or cities.

"The matter of what to do with these buildings is becoming increasingly important on governments agenda's" (Nibbering, 2008), some see it as a burden others see it as a possibility, but the main question always is: "What possibilities does this building have?" Raders (2007) presents 7 types of "intervention" when it comes to heritage:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Deprivation</td>
</tr>
<tr>
<td>2</td>
<td>Preservation</td>
</tr>
<tr>
<td>3</td>
<td>Conservation</td>
</tr>
<tr>
<td>4</td>
<td>Restoration</td>
</tr>
<tr>
<td>5</td>
<td>Rehabilitation</td>
</tr>
<tr>
<td>6</td>
<td>Reconstruction</td>
</tr>
<tr>
<td>7</td>
<td>Demolition</td>
</tr>
</tbody>
</table>

Figure 2.2: Possible interventions and explanation (information source: Raders 2007)

From these 7 possibilities this thesis will focus on the 5th type defined by Raders (2007), re-use of the structure, location and its aesthetics. Raders (2007) mentions re-use without being clear about re-using the building and its function, or giving it a new function. For the remainder of this document, re-use should be interpreted as re-using the building and its function, re-using with a new function is defined as Revitalizing for the remainder of this thesis.

2.2 Revitalizing industrial heritage

Walter Gropius, in times of the Bauhaus, wrote: "Given the speed with which technical developments have progressed in the last decades, we call for a change in the current practice to erect buildings to last hundreds of years. In this day and age buildings become obsolete much faster than in previous generations. For this and economic reasons we argue that the lifetime of a building should be limited. This could make it easier for us to finance new buildings and remove obsolete buildings much faster. This statement shows a harsh opinion towards new construction and obsolete buildings, demolishing them is supported by a respected member of constructional and architectural history. Others have defended obsolete buildings, Franz Ignatz, Michael Neumann, Karl Friedrich Schinkel and Alexander von Humboldt did not agree with Gropius' philosophy. They admired the authenticity of old buildings and tried to continue its 'glory'. (Cramer et. al. 2007)

2.2.1 Process

Revitalization processes are vast, many factors weigh into decision making and lots of stake- and shareholders are active in a project. As seen in chapter 1.6, revitalization has gained an increasingly high place on the governmental agenda, so governments are eager to stimulate if done by the legislation of course. (Kuipers, 2007) Companies specialized in this field are scarce and relatively small scale compared to the projects it focuses on. Then parties surrounding the physical
Research Rapport

location will always have a large influence on the support and/or public opinion of the project. The list of stakeholders goes on and on, the groups of stakeholders are as follows:

<table>
<thead>
<tr>
<th>Revitalization specialists</th>
<th>Government initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residents of urban environment</td>
<td>Media</td>
</tr>
<tr>
<td>Local governments</td>
<td>Province</td>
</tr>
<tr>
<td>Historical agencies</td>
<td>National government</td>
</tr>
<tr>
<td>Plan developers</td>
<td>Financers</td>
</tr>
<tr>
<td>Future residents (newly developed urban environment)</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2.3: list of grouped stakeholders

In appendix 1 an analysis of these stakeholders’ power, interest, and support/opposition is shown. Aspects that influence choices and opinions towards industrial heritage of these stakeholders are:

| Identity | Structural integrity |
| History | Finances |
| Emotion | Functional aspect |
| Lifespan | Urban environment |
| Politics | Aesthetics |
| Performances | substance |

Figure 2.4: List of influences (Roders, 2007. Nibbering, 2008. Scheffers, 2009)

All these aspects are weighed differently by the stakeholders, more or less important to each stakeholder. This proves the complexity of the revitalizing process compared to new plan development. This business has fewer stakeholders because it is new construction, on locations often outside busy urban environment, thus a less complicated flow of data between a lower number of stakeholders.

2.2.2 Project

Project specifications like structure, architecture, spaciousness and climate control need to be looked into for management to make correct decisions when it comes to a projects’ possibility. Models have been developed on the critical factors, some of these factors apply to all large projects but the ones that really stand out in revitalizing industrial buildings are put in to primary questions by Cramer et. al. (2007):

- Is the building in danger of collapsing?
- Are renovation and conversion works financially viable?
- What values should inform the work (economic, historic and idealistic)?

These questions are key to successfully revitalizing an existing building; however I believe these are not the only primary questions:

- What function will the building exercise after renovation?
- How much support does the project have and from which parties? (process)

These questions are crucial to the management; the function chosen goes hand-in-hand with the financial feasibility, whereas the support question is indispensable for a manageable process.

Planning the revitalization phases is particularly necessary, Cramer et. al. (2007) presents the following steps:

1. Building phase plan
2. Plan of damages
3. Plan of fitting and fixtures (conserving the buildings characteristics)
4. Conservation plan (increasing durability)
The first 3 steps concentrate on the physical aspects of the building and it's past. The final step is particularly interesting because of the last plan, illustrating that in order to call a revitalization project successful, it has to be able to stand for many years afterwards, only then will *economic, historical and idealistic* values be safeguarded.

Krabbe and Oskam (1985), present a somewhat similar model, their model distinguishes 4 phases:
1. Analysis
2. Modeling
3. Revitalization plan
4. Finishing and planning
The first phase concerns analyzing a structure for demands, values and usability, in other words the project is screened for possibilities, necessities and potential. In the second phase of this model a large number of designs are made for the project, combining different solutions from all the designs creates one optimal design. The third phase is to analyze the design chosen in phase 2 on risks, threats, costs etc. Finally the design is finished so preparations for the execution of the design can be made. This model shows a more future oriented approach, it is focused on customers, optimizing and preparations.

Combining these models will add up to something like the model made by Doornenbal (quoted by: Nelissen et. al 1999):
1. Feasibility research
2. Physical analyses
3. Regulatory aspect
4. Finalizing design and demand list
5. Construction preparation and execution
This model sums up all the aspects mentioned in the previous 2 models, it contains most of the input needed for a well organized revitalization process, the sequence of the steps however isn't correct in my opinion.

The following model is a revision of the previous models, steps are added and the sequence is altered:
1. Physical analyses: testing structural integrity, diagnosing severity of damages
2. Feasibility research: determining costs of repairs, revenues (through future function) and support.
3. Demand list and initial design: creating a list of demands for the building and a temporary design.
4. Regulatory aspect: Checking the temporary design for following existing regulations, laws and historical agencies.
5. Finalizing design: Creating a definitive design.
7. Execution: execute the plan
8. Conservation plan (only when exploiting): design strategies for the continuation of the project. When a short-term function is chosen in step 2, these plans should also be made in step 2, this will shorten the process the second time.

In step 2, feasibility is mentioned this is solely the economic feasibility of the building. With a new function comes revenue, so performing a feasibility study for possible functions can grant insight into revenues and allows more accurate financial feasibility estimations.
3 Value

This thesis will use value as a guideline through the revitalization of industrial heritage. Webster's dictionary of the English language defines value as, *the measure of how strongly something is desired for its physical or moral beauty, usefulness, rarity etc. esp. expressed in terms of money, effort, etc. one is willing to expend in acquiring, retaining possession of, or preserving it.*

This definition shows value is not just a matter of money, a mistake often made, but has a more substantial meaning. Most interesting to this study is the preserving part of the definition, apparently some things are worth money, labor and time in order to preserve them. Figure 3.1 shows the differences between price and value.

![Figure 3.1: Value-Price-Cost model (Source: Coenen, 2004)](image)

Imagine the green bar being lower than the blue one, the client in this case will have too little benefit of the product to deem it more valuable than the costs. Take for example a bottle of water, in the Netherlands one will pay no more than 3 euro's for it. But think about a vendor in the middle of the dessert, selling bottles for 100 euro's depending on how long the client has been in the dessert he will probably pay the 100 euro's. This shows that value varies depending on location. Another example; a watch handed down from father to son might only be worth 150 euro's in a store, the man will probably pay more than the store price to repair it instead of buying a new watch. This example clearly shows that value is also very personal. The watch is worth 150 euro's in the store, someone not liking won't even pay 80 euro's for it, while the boy wouldn't sell it for 1000.

Throughout the centuries, many brilliant minds have pondered the value question; Plato said "value determination is the most difficult question in all sciences." For buildings, value is determined by the factors shown in figure 3.2; this model is made according to Vitruvius' take on value and its different aspects.
This model shows that value isn’t the sum of its parts, depending on the building it is defined by partial values. This thesis uses some value aspects that are relevant to revitalizing industrial heritage. This will make the idea of value more understandable and allows more detailed analyses of value.

3.1 Managerial aspects

Value management: A structured process of dialogue and debate among a team of designers and decision makers during an intense short-term conference. The primary objective of value management is to develop a common understanding of the design problem, identify explicitly the design objectives, and synthesize a group consensus about the comparative merits of alternative courses of action. Value management makes no pretense about finding an optimal answer; it is solely concerned with establishing a common decision framework around which participants can think and communicate. (Watson et. al, 1987, quoted by Male et. al. 2005)

Value engineering: A systematic procedure directed towards the achievement of the required functions at least cost. Value engineering is based on the assumption that all parties share the understanding of the functions being provided. Further, it is assumed that all feasible design alternatives provide the same level of functional performance, and can therefore be assessed on the basis of cost alone. Within this frame of reference, an increase in value can be directly related to a reduction in cost. (Green, 1994)

These two definitions show two very different managerial aspects of value, value management is focused on value creation through interpersonal improvements, while value engineering is focused on functions and cost, value being the reduction of cost. What both of these terms have in common is; they aim towards a general understanding of the basic package, in other words; all minds must work in sync for a project to run smooth and fast. These terms describe a value approach through work teams.

Male et. al (2005) developed the concept of a project as a value chain. This value chain has a demand- and a supply chain as input for decision making towards value strategies. In other words this theory uses client characteristics and supply chain response in order to create value. Figure 3.3 shows the model Male et. al. developed. This philosophy takes value management to another level instead of the small scale project-team scale it is now on project scale.
As an overview of value management, Male et al. (2007) defined three generic phases identified in Value management studies:

1. Orientation and diagnostic stage; Stakeholder analyses, preparing the management team, mapping the value problem.
2. Workshop phase; alternative stakeholders and perspectives come together to explore and reach a way forward in value through consensus and agreement.
3. Implementation phase; identified as the Achilles heel of Value management, Male et al. (2007) believe that through meetings and workshops desired values can be met, using clients and responsible managers as respondents or in other words quality control.

Literature about value management is admittedly vague about specific aspects. In order to serve value creation better one should look at certain subjects in stead of a general approach.

### 3.2 Value aspects

Value in general is too broad to use in any research, so identifying a set of relevant value aspects is key to keep the process manageable. The value aspects that will be looked into in this thesis are:

- Economic value
- Functional value
- Cultural and historical value

These aspects were found to be the most relevant for revitalizing industrial heritage. These aspects will be explained further over the next paragraphs. Initially, also social value was part of this list, quickly it became clear that social value showed much overlap with both cultural and historical and functional value aspects, therefore no separate paragraphs are dedicated to this aspect.

#### 3.2.1 Economic value

Economic factors in revitalizing heritage need a different approach then normal urban development, a quote by Heertje (2000) explains this very accurately: "Economic experts that knowingly narrow their work to pure coins, banknotes and transactions, play a false role, for they leave aspects that cannot be broken down
Research Rapport

The statement shows that this industry is highly influenced by unquantifiable factors. This being said, one still has to keep ‘chimneys smoking’ and make revitalizations feasible. This chapter covers some important economic aspects parties within the revitalization industry have to deal with at some point.

3.2.1.1 Building aspects
Revitalizing, renovating, re-architecture, re-using, these are all terms that can set off alarm bells in many investors’ heads. This is an understandable reaction, for the simple fact that all the actions these terms represent are complex and thus interpreted as ‘expensive’, at least more expensive than building a new structure of equal capacity and similar looks.

A rule-of-thumb at BOEi, is that new construction is as expensive as the built-in packet, this being walls, installations etc. In this equation the structural renovations isn’t built in. This being a very general rule, it still underlines the general idea that new construction is cheaper than revitalizing. It shows the vast price difference of new construction and revitalizing, painting a rather negative picture. So it is safe to say the financial aspects on building level isn’t a big selling point, there are methods of saving money so the differences aren’t so vast and buildings are better marketable. This however isn’t the goal of this thesis, so no further research will be done in this area.

All isn’t as bad as it seems though, if a monument remains unused, someone will have the responsibility to perform some sort of maintenance (especially in case of a monumental building). These costs are also very high (Rizzo, 2003). If a building isn’t re-used over a long period of time, these costs will grow. It is even pointed out that re-use or revitalizing is the solution instead of the problem. Investors tend to overlook the fact that the high one-time amount of money for revitalization can be outweighed by the long term of small amounts over time.

3.2.1.2 Environment aspects
Last paragraph showed a rather grim image of revitalization; expensive, economic drain, call it what you will. However development of new or redevelopment of old structures, does have value creating capabilities, a subway station within an urban area can increases the value of houses around it (Hilgers, 2008) the same can be said from hospitals, parks or cultural centers.

If a realtor is asked what determines the price of a building he would probably answer: “Location, Location, Location!!” (Visser et. al. 2006) This being the case with houses, it also applies to industrial heritage within an urban environment. When buying a house its location is always important. According to visser et. al. (2006) Holland has little research on how house pricing is affected by public transport or highway range. As shown in the study by Hilgers (2008) transportation is an important aspect when individuals buy a house. Other influential aspects are availability of water and parks, pollution, noise, ethnicity, safety/crime, education, shopping and many more. All aspects influence real-estate prices, so having an unused factory in the neighborhood could enhance crime and noise from people using the project for shelter or troublemaking youth, whereas a former factory now used as a shopping mall increases house prices through added safety, comfort and functional advantages.
Research Rapport

So depending on the function, the economic value of the environment can increase significantly. In chapter 3.2.2 functional aspects of value will be explained further.

In their research Bade and Smid (2008), compare an old city centre to a new city centre on their revenues through shopping, tourism etc. They conclude that the city with old landmarks has a 'unique selling point' with its historic centre. Tourism figures are five times higher and for the catering industry this is even six times. These numbers indicate the economic power of a USP like a historic centre. Unfortunately, industrial heritage is sometimes surrounded by new construction, if this is the case the USP described above does no longer apply, solely the building features, its history and its function determine the projects success in these cases.

3.2.1.3 Feasibility

One could always choose to merely renovate a building and leave it as a dead monument, in stead of a living one. This however is a drain on funds, a large financial impulse is needed for the renovation itself and after operational and maintenance costs that are mandatory to safeguard its continued lifespan. So why not re-use a building so it can generate the income it needs in order to stay among us and maybe even be financially feasible?

As mentioned before feasibility is a difficult question when it comes to revitalizing industrial heritage. Whether ones strategy is chosen perfectly, support and initiative are high it still does not guarantee the project will be revitalized. One needs to be persistent, well connected and a bit lucky to accomplish revitalization per project, but in order to finance revitalization one has two options:

- Finance through function (financing through function exploitation)
- Philanthropic funding (government or philanthropic parties/persons)

When it comes to feasibility one can use either of these constructions or combine them.

3.2.1.4 Conclusion

Economic value has two different faces, it is a burden to find sufficient funds in order to facilitate the revitalization, but if done right and with a well-chosen function as end product it can create financial benefits to itself and its surroundings. So in order to find financial support, one should emphasize the fact that investing in a building creates a pleasant environment.

Unfortunately this also has a downside, at least it does for house owners within the urban environment of a revitalized building, when a monument is revitalized, the parcels or grounds around it will grow in value, as does the house built on it. This will result in a raise in housing taxes, this in turn can be used by the government to fund a part of the revitalization costs. Some inhabitants won't see this as a problem, while others will feel it is pushed on them by the revitalized monument without them asking for it to be revitalized. So informing them of this fact will be a matter of ethics versus the urge of recreating the glory of a monument.

All pros and cons to the side, financial aspects of revitalization is often the reason to choose demolition over revitalization it is the one factor people linked to the project need to be persuaded on in order for a project to continue its lifespan. Nevertheless, revitalization is a very hot topic and municipalities are starting to promote it, this indicates that money issues can be overruled by other factors.
Breaking down to mere value of financial means, revitalization is a de-valuator of money so financial value is always low. If a decent return is what one craves, revitalization should be the last choice. So in order for investors to participate, other value aspects should be emphasized. These other aspects, functional and cultural and historical value, will be further analyzed in the next paragraphs.

3.2.2 Functional value
In this chapter, function should be interpreted as; by what the building is used for after renovating/mutating. This can be almost anything from a parking garage to a theater, from a homeless shelter to a shopping mall.

3.2.2.1 Functional durability
The main threat when it comes to function choice is durability, the matter of how long will a function be interesting is a difficult question. A quick fix is easy, fast and is usually chosen for its short-term success. This could result in loss of function once more and after all efforts to save the building, fall back into decay.

A quick fix has a risk of nullifying all previous efforts of preservation. Unfortunately we can't look into the future and see the effects certain choices might have, but we can think of what function could be needed for a long period of time. For example inhabitants of a small town having to drive for 30 minutes to buy groceries, wouldn't mind a shopping center closer to home, a need that won't become obsolete within 5 years. Better yet, a 'luxury' like this might even stimulate growth, which in turn will result in the need for other functions like social or cultural gatherings.

Another possibility is making a project flexible, in other words, making it suitable for a variety of functions. This will improve its lifespan by enabling many short-term functions over a long period of time instead of using one durable function over that same period. If done right, function choice with durability or flexibility in mind could last the building through decades, which makes it more interesting to invest in.

3.2.2.2 Location
Location is a critical factor in pricing (also shown in paragraph 3.2.1.2), but also in function choice. Turning a monument into a car dealer in the middle of an urban environment might not be the best move. Whereas building a restaurant or pub, could create social interaction and make the neighborhood more attractive/lively.

The infrastructure around a project plays an important role to functional value; projects' capabilities rise if bus stops, train stations and short distances to the highway are present. Other possibilities are using the project to benefit the infrastructure, for example a parking garage or a central bus station. (Heertje, 2000)

3.2.2.3 Social support
Support also plays an important role within function aspects of revitalizing. Financial feasibility, as mentioned in 3.2.1.2, is directly linked to function choice. If there is little support for a function it is highly probable that it wouldn't end up in the building. The people that it was made for refuse going there, the exploiters will leave the building because they have no business and the building falls back into decay once more.
3.2.2.4 Conclusion

A decent amount of research has been done on this subject, models have been constructed over the years focusing on how to choose a function and increase a project’s chances of success. Examples of these models are the ‘herbestemmingswijzer’ by Hek et al. (2004), the ‘pakhuis-potentie-model’ by Dekker et al. (2004), the ‘Groen licht Model’ by Straat (2006, referenced by Kuipers, 2008) and the ‘BOEi 2.0-model’ by Kuipers, (2008). (Models can be found on appendix 2)

It is safe to say that function aspects of a revitalization project are highly important to experts working in the field, the large amount of models is a scientific testament to this fact. Unfortunately one would start thinking this is the only crucial factor, for it is measurable, it provides an answer to the ever complicated financial question and it adds value to the environment with an addition to its regional services.

Functional value is an important issue to revitalization; it allows a second life to be useful and therefore more likely to continue its lifespan for a long time. This paragraph showed that functional value is a powerful tool for the financial feasibility of a project. In fact it is the best way to attract private investors to a project; investors expect a financial return from an investment, an exploitable project is the only thing that can generate this return.

3.2.3 Cultural and historical value

"Decayed industrial buildings and terrains possess an unprecedented Cultural and historical value. The assignment lies in using the identity within new development allocation.‘ – AM (AM, 2008)

This statement is derived from an informational publication by project development company AM, one of the partners in BOEi’s board of shareholders. It states the belief; industrial heritage has high value, but high value to what? AM itself, the built environment or to the project? In this chapter, the cultural and historical aspects of value will be listed.

3.2.3.1 Defining Cultural and historical value

In some cases cultural and historical value is obvious; take Tower Bridge in central London for example. It is a landmark known all over the world, a tourist attraction, a monument and highly valuable to London’s identity. Londoners’ opinions on the bridge are different; many commuters suffer traffic jams when it is raised. Because of the old technology used for this bridge, it raises and lowers rather slow. It also needs a lot of maintenance and restoration in order for it to continue its lifespan. So this bridge costs the city of London a lot of money and its inhabitants loads of traffic grief, still it is unthinkable to replace it with a modern, traffic friendly bridge.

This is an obvious example in which identity, history and culture, outweighs comfort and money, so when does a structure have a cultural or a historical value? When is it greater than comfort and money? Who holds a value to a certain building, and when is this value high enough? All these questions create a difficulty for governments, they are usually responsible for monuments and (industrial) heritage. The list of buildings mentioned in paragraph 1.6.1 shows that many people believe monuments need to be preserved, but what if only one person believes a building should stay while all others only see it as a burden, painful or money down the drain? Cultural and historical value is mainly based on a will for the buildings' continuation, a public or private outcry is needed to persuade governments to take action and/or invest.
The United Nations Educational, Scientific and Cultural Organization or UNESCO has authority over determining international cultural heritage, natural heritage or both. This organization has a list of 878 properties of monumental value. In order to be added to this list a site needs to be of ‘outstanding universal value’ and meet at least one of ten criteria handled by UNESCO. From these ten criteria only six are used for cultural heritage, the others are focused on natural heritage, therefore only the first six are mentioned:

I. to represent a masterpiece of human creative genius;
II. to exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;
III. to bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;
IV. to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;
V. to be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;
VI. to be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. (The Committee considers that this criterion should preferably be used in conjunction with other criteria);

(UNESCO, 2009)

These criteria are excellent examples of value aspects, as well as examples on how hard it is to deem something valuable. Looking into these criteria it becomes clear that they are vague and that becoming a UNESCO monument depends on the commission and public pressure of some kind. The vagueness of these value aspects show how hard it is to prove a structures cultural and historical value.

3.2.3.2 Future historical value

This might look like a strange title, but cultural and historical value should be taken into the future in order for it to have a (continued) lifespan longer than 5 or 10 years. One should always ask him/herself how much affinity future generations will have with a certain building. For example, walking back and forth between eastern and western Berlin might mean little to someone born after the wall was torn down whereas to someone who lived in separated Berlin, crossing the line of white bricks (these indicate the location of the wall) can be an emotional feat. As mentioned in the previous paragraph one should continue educating new generations through its cultural and historical heritage.

It becomes clear that identification is a key issue the environment needs to identify with the building without this, there is little to no chance the project has a shot at successful revitalization. Identification creates support (Groeneboer, 2007) and it can prevent the risk of a ‘quick fix’. (Nibbering, 2008. Scheffers, 2009)

For example the Binnenhof in The Hague, this is where the Dutch parliament is situated, the exact year it was built is unknown, the earliest recording was in 1229 when it was sold to Count Louis the Fourth, by the van Wassenaar family. (Kuyper, 1984) Recently a very modern building was built on the binnenhof, creating a contrast between the old and new. Some people might say it is a bad thing
Research Rapport

overshadowing heritage by new construction, but this raises the question, what will happen in the next 50 years? Will Holland solely consist of monuments, or even monument clusters? Cities like Amsterdam, The Hague or Nijmegen are old cities with a lot of monumental buildings, will these cities become a pile-up of monuments while Rotterdam and Almere are torn down and re-built every ten years? There is no shame in demolishing an old structure, if it doesn't have enough value to its environment or is so worn down it can't be saved, demolishing can be the best option. Once a building has made it to monumental status, it should be checked for potential, or importance to its environment every now and again. Checking its relevance will show when time has come to let go of its monumental status.

3.2.3.3 Conclusion

Cultural and historical value is the basis for the decision whether a building deserves a second life or needs to be demolished. It is made out of support, identity, emotion and many other factors. The fact that these factors are difficult to measure or quantify is the reason why little conclusive research is available on these subjects. Magazines, papers and individuals deem cultural and historical value as important or even crucial but in models and protocols they play a subordinate role compared to financial and functional aspects.

Another important aspect is education, educating new generations on their history creates a new affinity to buildings even though a person wasn't around when the building became monumental. This can safeguard the continuity of a building so past efforts to revitalizing or renovating weren't useless.

3.3 Categories of relevant value aspects

The value aspects mentioned previously are very general and can be interpreted in many ways. In order to define them in an understandable manner, they should be dissected into the factors that influence the main aspect.

3.3.1 Factors in Economic value

The economical value factor is defined by:
- Value increase of environment
- Financing the project
- Continuity (through developments within the project)
- Break-even point (for exploiting party)

3.3.2 Factors in functional value

Functional value consists of the following factors:
- Continuity (through well chosen functions)
- Reaching a financial goal (break-even point)
- Binding the urban environment
- Social support
- Flexibility

3.3.3 Factors in Cultural and historical value

Cultural and historical value is a less ‘touchable’ subject and possesses a ‘soft’ value, so when trying to find factors influencing cultural and historic value, one comes across numerous theories on what is important. This confirms the theory that value
Research Rapport

is a very multi-interpretable term. For example Groeneboer (2007) defines factors influencing support, cultural or historical factors used are:
- Emotion
- Motivation
- Goals
- Vision

Kok et. al. (2006) talks about a more elaborated set of aspects that enable value determination (aspects irrelevant for I.H and previously mentioned are left out):
- Representation value

Divided in Calibration value (moment in history on which valuating objects of the same nature are deemed as value), Symbolic value (value through a link with an important happening) and linked value (value through a link with an important development)
- Rarity
- State of the object

Divided in conceptual authenticity (the concept determines restoration), material authenticity (integrity of materials determines restoration), A-historical authenticity (moment in history determines direction of restoration), Historical authenticity (history of the object is conserved) and Contextual or functional authenticity (original environment of function of the object determine restoration)
- Performance potential
- Documentation

In other (non-credited) research writers speak of a famous person or company, situated in the building giving an impulse to restoration or revitalization. They also bring up urban planning as a determinant; this can have a significant historic value.

In the nota by Belvedere (1999) other factors are distinguished:
- Identity
- Sense of purpose
- Contradiction to globalization
- Source of information
- Source of inspiration
- Esthetics
- Ecological significance
4 Marketing

Marketing is usually interpreted as selling and advertising, but in fact it studies customer behavior and how to anticipate this. The simplest definition for marketing is: "Marketing is managing profitable customer relationships." (Armstrong, 2009) Marketing professionals use strategies to tempt customers into choosing their product instead of another.

4.1 Marketing strategies

In order to determine what strategies to use, first professionals need to analyze the circumstances the company is in. This is done by analyzing the 4 P’s:
- Product
- Price
- Place
- Promotion
  (Armstrong, 2009/Kotler, 2006)

These 4 aspects are be analyzed using SWOT analysis, (Strengths, Weaknesses, Opportunities and Threats) indicating what aspects sale campaigns need to focus on. This part of marketing can be summarized as company aspects, all these aspects are direct affected by the company.

Another part of marketing is the marketplace; the marketplace contains all companies selling products or services. The main issue to marketing managers is how to stay ahead of these companies. This can be done by making at least one of the P’s stands out over competitors. So the company’s decisions on how to profile their P’s, affects their effectiveness and profitability on the market.

The last main part of marketing is the customer; a company’s success is directly linked to this aspect. A company’s strategy is based on a customer profile; which type of customers will buy which type of product. This profile is based on what the customer could be sensitive to, how much he/she is willing to pay and how to ensure return-business.

After analyzing the three parts, a product’s success can be determined, therefore indicating whether it is feasible to launch the product campaign or starting up the company. Often mentioned in a company’s business plan is the strategy through which they will outsell the competition. Examples of strategies are:
- Branding (using a brand to create affinity, Promotion)
- Retailing (selling to end-users instead of half-fabricates, Price, Promotion)
- Wholesaling (Being a middle man, Product, Place)
- Product development (creating unique products and therefore unique markets, Product)
- Advertising (focusing on reaching customers, Promotion)
- Personal selling (getting ‘in a customers face’, Promotion, Place)
- Etc.
  (Armstrong, 2009)

All these strategies use customer aspects, market aspects and company aspects to get ahead of the competition. But how does marketing affect revitalizing? And can the strategies mentioned above help to increase revitalization of industrial heritage?
4.2 Revitalization and marketing

Revitalization is in need of a good marketing plan, its bad reputation and numerous bad examples result in a decrease in the amount industrial building, or depressing its environment with decay. The main aspects, revitalization is affected by are the 4 P's and the factors influencing customer behavior. These factors are:

- Cultural (culture, subculture and social class)
- Social (reference groups, family, roles and status)
- Personal (age and lifecycle stage, occupation, economic situation, lifestyle, personality and self-concept)
- Psychological (Motivation, perception, learning, beliefs and attitudes)

(Armstrong, 2009)

These factors show that a customer or in case of revitalizing, an investor can be persuaded into action using other aspects then maximum financial return. Also, when looking at these factors, the value aspects, explained in chapter 3 come to mind. In other words, managers should try to find out what factors an investor is sensitive to and then focus investors’ attention to the value characteristics that represent these factors. This is an excellent strategy in the early stages of revitalization processes.

When a revitalization process is started and managers look into what functions to give the project, the 4 P’s come into play. In fact, they are creating a new product that has the potential to be unique, so the product ‘P’ plays an important role in this step. As seen in chapter 3.2 the functional value of this product is an important aspect, for both financial feasibility and support. Extensive market research is needed for this ‘P’ to spell success.

Price has been mentioned in chapter 3.1, the financial aspects of value. Price needs a different approach because it could scare potential buyers, (Investors, exploiters etc) Instead it should be handled realistically, all risks should be communicated so creative solutions can be created.

Place is directly linked to product, revitalizations are all unique and are usually a burden to its surroundings, only to be outdone by the revitalization process itself. This ‘P’ is an important factor when choosing a function, as seen in chapter 3.2. If a projects place is the valuable factor, for example a terrain on which a company grew helping the city grow with it, this is not just a functional value aspect but also a cultural and historical value aspect. If this is the case managers could emphasize this unique selling point.

Finally we have promotion, this is probably the most important aspect for the simple fact that revitalization success often drives on support, support from civilians, governments, foundations etc. promoting rigorously can increase support and boost a project’s success-potential. If one chooses to finance a project by exploiting it promotion becomes a different game, instead of playing into the public managers now have to attract renters to the project. This also requires different value aspects to be emphasized, together with providing insight in structural possibilities and flexibility needed to reside in the project.

All in all the four P’s play crucial roles in revitalizing and should be reckoned with, especially in the early stages of the revitalization process.
4.3 Communication

Communication is always key in marketing, with one of the P’s being promotion this pretty much says it all. Armstrong (2009) presents a promotion mix in which five promotion methods are presented, figure 4.1 shows this model:

![Carefully blended mix of promotion tools](source: Armstrong, 2009)

**Figure 4.1: Promotion mix (source: Armstrong, 2009)**

- **Advertising**
  - Pro’s: "Advertising can reach masses of geographically dispersed buyers at a low cost per exposure, and it enables the seller to repeat a message many times."
  - Con’s: Impersonal, on-way communication, not as persuasive as others.

- **Personal selling**
  - Positive: "Personal selling is the most effective tool in certain stages of the buying process, particularly in building up buyers’ preferences, convictions and actions."
  - Negative: Expensive, long term step.

- **Public relations**
  - Positive: The message is not sales oriented, thus more believable. Public relations are able to dramatize a product making it more attractive to a persons specific needs (PR now the needs of this potential clients unlike personal sellers)
  - Negative: None mentioned

- **Direct marketing**
  - Positive: "Non-public, immediate, customized and interactive", easy and fast to execute, good for building one-on-one relationships
  - Negative: None mentioned

- **Sales promotion**
  - Positive: Attract attention and provide a strong incentive to purchase, and can be used to dramatize product offers and to boost sagging sales.
  - Negative: Short term effects, thus ineffective in building long-term clientele.
4.4 Communicating value in revitalization

Looking at paragraph 4.3, it becomes clear that not every promotion tool is usable in revitalization processes. Offering a second revitalized factory for free after purchasing one, may not be the most cost efficient way to attract investors. However the other four aspects could make revitalization feasible.

Revitalizing industrial heritage is a good example of a product that needs a so called "push strategy" (Kotler, 2006). This strategy uses sale force to push a product through channels; the manager induces renters or investors to take a product to the direct customers. Managers use projects’ unique selling points to promote it among potential investors or renters, convincing them to either choose the project for their business or deeming the project worthy of funding.

The next step is to form a custom promotion mix for revitalization, using the relevant promotion tools. These are:
- Advertising (little usability, expensive regarding no need for long term effect)
- Personal selling (usable, personal and very interactive)
- Public relations (almost crucial, goodwill usually comes recommended)
- Direct marketing (long term relations are built creating future PR possibilities)

In order for these to work, project managers need an idea of which finance method (seen in paragraph 3.2.1.3) would be most successful. Because both financial methods need a different promotional approach: If managers choose to finance through function they should emphasize capacity, capability and functional value aspects, however if philanthropic funding is believed to be the way to go managers should emphasize the lack of other possibility, the drain on costs when deprivation continues and most of all the cultural and historical value of the project and/or its location.
5 Theoretic conclusions

Heritage and industrial heritage in particular is a complex matter when it comes to the question every building faces at some point; demolish or re-use? On one hand, industrial heritage has loads of function possibilities; it can be made into a mall, unlike a monumental house. On the other hand a building’s possibilities can be slim: Its location, pollution or built-in machinery. These kinds of problems won’t be found in office building revitalization.

Unfortunately value is a complex matter, it is poorly defined and different opinions exist among individuals on what should be taken into account when talking about value. In this thesis it has become clear that three value aspects apply on revitalization of industrial heritage, these summarize all other value aspects:

- Financial value
- Functional value
- Cultural and historical value

Financial value is always low when revitalization, compared to new construction costs are much higher. Its overall value can be improved by the functional value of the revitalized building; this value aspect indicates the hard and soft value its new function has. When time to decide on the fate of an industrial building, a battle is weighed between cultural and historical value aspects and financial aspects. These aspects are main determinants, functional value aspects is an extra means to finance a revitalization; a living monument generates income, a dead one doesn’t.

Cultural and historical value aspects summarizes all soft values a building possesses, like architectural value, emotional value, identity value, historic value etc. These value aspects cannot be quantified and are usually personal. Nevertheless these value aspects are the determinants whether a building is to be demolished or not. An empty building with no cultural and historical value would probably be demolished, whereas a concentration camp wouldn’t. Sorting out a project’s value using models or committees is already being done, unfortunately there is no protocol on how to propagate this, what could result in all value inventory becoming useless.

Eventually it all comes down to a discussion with cultural and historical value on one side and financing the revitalization on the other side. In other words do; the (cultural and historical value) positive aspects outweigh the (mostly financial) negative ones? One must keep in mind that financing revitalization can be done in two ways:

- Exploiting its new function covers all costs; exploiter needs is willing to accept lower output then he/she could receive from new development.
- Government- or philanthropic funding.

It is obvious that these finance constructions need different process approaches to be successful.

To determine which finance constructions has the most potential, project factors (location, surroundings, structural possibilities etc.) need to be determined, together with the soft value aspects (mostly cultural and historical) these aspects show a project’s unique qualities. This helps the manager to decide which promotion tools he/she could use together with the chosen financial construction. This tool should also be modeled on the people or parties they try to attract; this is done by analyzing what aspects they are sensitive to when it comes to funding or investing.
6 Personification

The first step in the empiric outline meant defining the real life 'players' that make up the 'battle' described in chapter 5. This battle is the main determinant whether one should revitalize or perform a different action, therefore quite interesting for further research. In order for this to be researched one needs the correct terminology for each of these 'players'.

From orientating interviews, counseling meetings and a course previously attended, the idea rose that both aspects should be personified. The aspects are:
- Cultural and historical value aspects
- Financial aspects

These aspects have certain people or parties representing them. Looking into cultural and historical value; the people or parties carrying this side of the argument are those who believe in the cultural and historical value of a building and push the revitalization for it is their wish it continues its existence in their surroundings. Unfortunately they lack the financial means to pay for the revitalization itself. Financial aspects are believed to be personified by financially powerful parties with no idea of cultural or historical value aspects and whose soul intention is to profit from the revitalization.

These two descriptions need a term in order for them to be usable in further empiric research, they are defined as:
- The actor (personification of cultural and historical value)
- The shareholder (personification of financial aspects)

These definitions where used to create a profile for the respondents that would be approached later on, this will be explained further in chapter 8.

We now have the image of an actor that believes a certain building should not be torn down or neglected but should be given a second life. The person has no financial means himself so he or she will need shareholders to finance the revitalization. Also the actor might need parties that could exploit the building after its revitalization process so it would fall back into decay. This conclusion brought the following question: "how can the actor use cultural and historical value and functional value to attract these shareholders and interest them into participating financially in the revitalization?"

This question could be answered through interviewing experts in the revitalization field, experts that played the actor-role in the past and might even have used techniques, actions and/or incentives that inspired participation.
7 Actions and incentives

In this chapter actions and incentives are presented that could have the motivational potential needed for a shareholder to become interested in participating in revitalization. These actions and incentives are based upon the three value aspects mentioned in chapter 3:

- Financial value
- Functional value
- Cultural and historical value

Also, some actions and incentives where focused on the revitalization process. These where believed to be capable of simplifying the revitalization process.

7.1 Financial value actions/incentives

Financial value is proven to be low when it comes to revitalization, however there is a possibility to improve revitalization's financial value and even finance it completely without governmental or philanthropic funding, the first incentive is:

- Creating a possibility for plan development.

This action can be initiated by the owner of the project, its surroundings or more likely by municipalities or other government entities. It is a simple method that uses financial means gathered in one place to finance a project in need elsewhere.

An important note to this action is that it can also be done outside a project's range; it isn't necessary to develop the direct environment or even at the same time of the revitalization process. This makes this action highly usable for governments if they are capable in providing the parcels. This is depends on the necessity to revitalize the building.

The second incentive is:

- Dividing financial risks between commercial and governmental parties.

This also being a governmental incentive, creates a certain amount of trust that one does not stand alone if things go wrong, making it more interesting for a shareholder to participate.

7.2 Functional value actions/incentives

Functional value is a means to an end, but it is still a powerful tool when it comes to attracting financial means, this is used in the actions and incentives:

- Relax regulation and legislation on various procedures.

This incentive, (initiated by governments) enables project teams to create more function possibilities, because he or she has more freedom in altering the structure. Also monumental legislation needs to be relaxed for this. A second manner in which this incentive has a positive effect is through speeding up permit procedures; therefore speeding up the entire revitalization process for this is often the cause for delay.

The fourth incentive is:

- Enlarging government funding with public functions as end-use.

This one speaks for itself; governments invest as a private entity and will be the main exploiting party of the finished project. Examples of public functions: Library, theater, schools etcetera.
7.3 Cultural and historical value actions/incentives

The actions and incentives presented in this paragraph use a different approach; they do not focus on the shareholder wishes but rather try to turn a shareholder into a financially powerful actor.

- Publishing results of cultural and historical value analyses. The basis for this action was previous research into the importance of value, resulting in quantified or qualified value aspects. The models shown on appendix II give an impression on how cultural and historical value is determined. Another method to acquire this value information is through historical agencies, these are often specialized in making these analyses.

- Excursions to successfully revitalized projects. This action is quite self-explaining; let the shareholders experience the value and see the potential of heritage in general show that others have gone before them and how pride project teams are of their revitalization achievements. The grounds for this action were personal experiences and counseling meetings.

7.4 Process actions/incentives

As an addition to the value oriented actions and incentives, process oriented actions and incentives might also have a positive effect on shareholders and actors. Issues like trust and sharing expertise might make aspects like design, contract forming and decision making easier.

- Collaborative plan development with commercial parties. The reason for including this incentive originated from a class within the CME curriculum, called 'collaborative design'. This class teaches the benefits of designing a project together and at the same time, instead of performing a task package and passing it on to the next company or party. In this class it became clear that this method is highly effective in managing risk, therefore creating a more accurate cost prognosis.

- Familiar project partners
This incentive was incorporated without any basis, it is believed to help a process because project partners have a better understanding of each others company policies, know how the other one works and trusts the other party will deliver.
8 Expert study

From literature, orientating interviews, aspects found in previous classes and school projects, a list of actions and incentives was derived. These actions and incentives may or may not posses the capacity to help push a project through financial channels, using cultural and historical value, functional value and financial (value) motives. An expert study is designed to test these actions and incentives on usability and effectiveness with financial support or process simplification in mind.

Testing them is done through interviewing experts; individuals that played an active role in carrying projects and process aspects, in other words: the actor (as mentioned in chapter 6).

8.1 Methodology

When performing an interview three methodologies are available:
- Open interview
- Semi-structured interview
- Fully structured interview

(Baarda et. al. 2005)

This chapter shows what methodology is chosen and why, the profile of the respondents is explained and the interview document that was used for each interview followed from this information.

8.1.1 Interview lay out

The three interview methodologies have different properties; to test the actions and incentives and finding out about relevance of project actors and project factors, the semi-structured interview was determined most usable. Through talking about subjects in stead of just answering questions, a respondent is more at ease and is more likely to become ‘real’ in stead of answering in the way that is expected from him or her. However this methodology comes with the risk of becoming a social chat through which no significant data is acquired, so a well defined subject plus a few standard start-up questions and follow up questions are highly recommended. As an added bonus, the semi-structured interview can provide the interviewer with extra information he or she previously didn’t expect to get.

Baarda et. al (2005)

Using the information above the interview document was developed. This can be found on appendix 3.

8.1.2 Respondent profile

The actions and incentives could be used by many parties as long as they where the party pushing for revitalization in stead of breaking down. The interviews had to be held among parties that were experienced in this field, some as an actor and others as a shareholder. The second condition was that the respondents had different disciplines, because each type of discipline would go about using actions or incentives in a different manner.

The interview was initiated using at least one project the respondent had undertaken in the past or still working on. This allowed the interviewer to find out about relevant factors of various projects and what stakeholders play crucial roles in real-life
situations (a fine example of the semi-structured interview's benefits). Another benefit of the semi-structured interview is that through talking about his/her project, the respondent becomes more at ease and allowing the respondent to get his mind set on that project and its process. (Taking them back to crucial moments they experienced) Anonymity of the respondents within this report also allowed them to speak freely, increasing the scientific relevance of their feedback.

All interviews were recorded and processed later, this summary was sent to the respondent so he or she could verify the information and correct mistakes or misinterpretations. Through this validation the expert study gained the relevance needed to be incorporated in this thesis.

8.2 Interviews private sector

Although respondents are anonymous, their input can be distinguished through their companies' discipline:
- Devp. 1, 2 and 3 (Project developers)
- Arch. 1 and 2 (Architects)
- Advr. 1 and 2 (Advisors)
- N-p. 1 and 2 (non-profit companies)

The interview document proved to be effective in keeping the interview in line of the subject, the start up questions where very useful when the respondent was reluctant to open up. Allowing each respondent to talk about their project proved to be the best ice-breaker. A summary of each interview can be found on appendix 4.

After all interviews where summarized and validated the data needs to be processed. This meant for all the comments on usability to be labeled, through this overlapping statements are bundled so a more structured and usable summary emerges. In other words; through labeling, a large amount of data is simplified in manageable bits. On appendix 5 these labels on usability are shown for the private interviews.

The next step in processing the interview results is determining effectiveness, this is done by asking all respondents to create a ranking of the actions/incentives plus their own additions. All rankings are individually divided in a top three, a top four to six, a top seven to nine and a rest category. This is done because nearly all respondents indicated it was difficult to create an exact ranking. In appendix 6 this is shown by use of color:
- green for top three
- yellow for top four to six
- red for top seven to nine
- grey for the rest category.

Inconsistencies and how they are dealt with are mentioned in the next paragraph.

8.2.1 Result analysis

After processing usability and effectiveness the final outcome of all private interviews has become clear. The ranking below is the order from most effective to least effective according to the private respondents, the bulleted aspects below each action/incentive is the manner in which they are usable according to the private respondents:

1. Creating a possibility for plan development.
   - Has a positive effect on financing
   - Effective on all parties
2. Relax regulation and legislation on various procedures.
   - Can be used to speed up the process
   - Creates functional possibilities and therefore financial benefit.
   - *Architects and advisors are highly sensitive to this.*
   - *Plan developers are not very sensitive to this*
   - *This action kept its ranking (even though it was appreciated differently) because of its broad usability. If applied to the parties sensitive to it, the ranking suffices.*

3. Collaborative plan development with commercial and governmental parties.
   - Creates understanding among parties with different interest, speeding up decision making
   - and creating financial benefit.
   - *An addition mentioned by 5 respondents.*
   - *Advisors and non-profit organizations mentioned this*

4. Publishing results of cultural and historical value analyses.
   - Stimulates governments to finance the project
   - Depending on the focus of the analysis it can have various process improving functions
   - *2 extremes were presented; both believed profits play a superior part.*

5. Excursions to successful revitalization projects.
   - Creates affinity with projects and inspires project teams, speeding up processes, it can also pose as example for different problems.
   - *Arch 2 rated this much higher then the rest, the reason was that this aspect made his project possible.*

6. Creating awareness for projects in need of revitalization.
   - Creating public pressure towards governments can lead to funding.
   - Creating public pressure towards governments can lead to willingness to speed up procedures.
   - *Mentioned by 3 of the respondents*

7. Enlarging government funding with public functions as end-use.
   - This method has a positive effect on financial aspects. If commercial parties aren't interested, this aspect can increase feasibility, of the project. Unfortunately it can have a negative effect on the process.
   - *Opinions highly varied on this action.*
   - *This action lost 2 places in the ranking, it shows little usability and most respondents believe financial involvement of the government creates restrictions and/or advised actors to find commercial exploiters due to their higher flexibility.*

8. Familiar project partners
   - Can speed up processes.
   - Can lead to different financial constructions
   - *Developer 3 rated this exceptionally high, because his project was financed with a commercial partner he often worked with.*
9. Collaborative plan development with commercial parties.
   - Better inventory of risks, more realistic cost estimates (process and financial benefit)
   - Developer 3 rated this exceptionally high, because his project was developed with a commercial partner.

10. Dividing financial risks between commercial and governmental parties.
   - Usable to fill holes in budget.
   - Developer 1 rated this very high through a faulty explanation on the interviewers’ part.

8.2.2 Additions
As seen above only 2 additions made it to the list. The other additions are mentioned only once or twice, I believe this is insufficient to be significant for further use in my research.

8.3 Interviews public sector
The results from the private interviews called for further research. Looking into the actions and incentives, it is clear that some of them can only be initiated by municipalities. Therefore I believe they need to be tested on this party. Also some of the private respondents stressed the fact that government entities interfere too much in revitalization processes, while other respondents mentioned they would have appreciated more involvement from municipalities or other government entities.

Aldermen were chosen to be interviewed, because of their power to make regulatory decisions. If they deemed the actions and incentives, usable and effective this should be sufficient verification. Each alderman’s input can be distinguished by their code:
   - Aldm. 1 to 4 (alderman)

The interview document used for this series of interviews was of course exactly the same as the one used in the private interviews. This is obligatory in order “to prevent inconsistency in the researcher’s dataset” (Baarda et. al, 2005). Processing the data is also done in the same manner as with the private interviews, through these actions, two comparable datasets where made.

8.3.1 Result analysis
In appendix 7 a summary of each public interview can be found. Appendix 8 shows a summary of the usability of each action/incentive as commented by the respondents. Finally appendix 9 shows the spreadsheet with the individual and general ranking. The final outcome of all public interviews is shown below the order of affectivity, from most effective to least effective, and the usability is mentioned for each action/incentive:
   1. Publishing results of cultural and historical value analyses.
      - Stimulates governments to finance the project
      - Very usable to find valuable aspects to work with later on.
      - Almost unanimous in deeming it highly usable

   2. Relax regulation and legislation on various procedures.
      - Can be used to speed up the process
      - Creates functional possibilities and therefore financial benefit.
Research Rapport

- Almost unanimous in deeming it highly important coming from aldermen this shows the willingness of governments to facilitate.

3. Creating a possibility for plan development.
   - Has a positive effect on financing
   - Very handy tool, still a costly tool for municipalities

4. Collaborative plan development with commercial and governmental parties.
   - Creates understanding among parties with different interest, which allows them to find better concessions in function, speeding up processes
   - and creating financial benefit.
   - An addition mentioned by 3 of the aldermen

5. Excursions to successful revitalization projects.
   - Creates affinity with projects and inspires project teams, speeding up processes, it can also pose as example for different problems.
   - During the interviews rated as highly important and very usable, when ranking this was placed lower then anticipated.

6. Familiar project partners
   - Can speed up processes, due to trust and respect.
   - Linked to collaborative plan development with both parties this could mean an even better process.

7. Dividing financial risks between commercial and governmental parties.
   - Usable to fill holes in budget.
   - Opinions are highly fluctuant in this matter therefore it got lower in rank (from 5 to 7).

8. Collaborative plan development with commercial parties.
   - Subordinate to collaborating with governmental parties
   - Quite logical this ended up low, when interviewing aldermen

9. Enlarging government funding with public functions as end-use.
   - This has a lot of potential; unfortunately a municipality depends on a budget that often has other priorities.
   - Even though mentioned having high potential, respondents believe this is a last resort, finding private investors should be investigated first.

8.3.2 Additions

As seen above, 1 addition made it to the list. Being mentioned by all four aldermen while others aren't mentioned more than once it is clear this is valid enough to be added.
9 Conclusions empiric outline

Both public and private respondents agreed unanimously that implicating the actor and the shareholder as separate people was an incorrect assumption; the actor and the shareholder are almost always the same person. This means that the battle mentioned in chapter 5 is internal and therefore even more complicated.

Through the interviews it has become clear that actions and incentives are highly useful, some even say they are crucial. The final rankings are testaments to the existents of the two finance constructions mentioned in chapter 5; the rankings show that private respondents deem functional capabilities as more important, while public respondents are more interested in emphasizing a project's cultural and historical value aspects. This makes sense when looking at the goals both parties have when it comes to investments. Both parties believe that plan development (first financial oriented incentive) is highly useful whereas dividing risk (second financial oriented incentive) is hardly useful.

Looking at the top five of both rankings, they contain the same actions and incentives, presenting a mix between cultural and historical and functional/facilitating actions or incentives. this should be the recipe for success as long as the user of an incentive realizes the possible negative effects it could have.

Because of the project approach used in each interview the respondents gave insight in factors a project is affected by, the ones that covered all factors mentioned where the following:
- Monumental status
- A project's location
- Presence of protective organizations
- Presence of a project champion
- Structural integrity
- Spaciousness

These factors a project may or may not come in contact with, according to the respondents are the main determinants of a project's feasibility.

The rankings and usability, combined with stakeholder and factor information define the revitalization process. They show what methods managers should use to minimize risks and what extra tools are present to manipulate the players within the process in some way.


10 Conclusions and recommendations

This is the final chapter of this thesis, the conclusions from my entire research are found in the next paragraphs.

10.1 Final conclusion

In order to answer the question on how revitalization processes could be simplified I will first answer the question “What makes revitalization so complex?”

In this thesis it has become clear that the reason for revitalization to be so much more complex than a regular construction project is the amount of stakeholders within the process. All of these stakeholders are important for the simple fact that they all have the capability to help a project succeed or to run it into the ground. A manager working in revitalization should keep this in mind at all time.

Now that we know why revitalization is so complex it is clear on how to simplify this complex process: In order to simplify a revitalization process, one should always use a collaborative plan development strategy.

Almost all respondents mentioned this in their interview. Managers that start up a revitalization plan without even talking to municipalities or foundations have no clue of the funding he could acquire and get more frustrated every time a plan is rejected. If this manager would only have met with the municipality, the RCE and some potential investors he would have had a plan that not only gets approved but he might even have sparked some enthusiasm resulting in additional funds, support or partners that share his or her workload. The fact that I haven’t found any literature mentioning this as a crucial determinant for success shows this is a highly underappreciated problem.

10.2 Theoretic and empiric review

Literature provided the following conclusions
- Financial aspects and cultural and historical value play the leading parts in a revitalization process.
- Financing revitalization can be done in two ways or a combination of the two.
- The manner in which managers lobby for financial support for a project is directly affected by the finance method chosen (for its potential success) and implemented by correct usage of value aspects (cultural and historical and functional).
- In order to lobby successfully one should anticipate on a parties 'factors influencing investing/funding behavior'.
- In order to finance a building through function one needs to put focus on product, place and promotion and be realistic about its price.
- A manager needs to analyze a project's factors, in order to determine a projects functional potential, its opportunities and threats and its fund attracting potential.

From these points the expert study was performed and presented the following conclusions:
- Respondents did confirm the lead aspects being cultural and historical value and financial aspects and emphasized the need of affinity with heritage by the

- 34 -
initiators or project drivers, even though the battle is confirmed, they proved that it is not possible to say they are represented by different people or parties. In other words the battle is internal per stakeholder.

- Respondents confirmed the two finance constructions in being the only ways to finance revitalization; they added the fact that a combination of the two is also a good possibility.

- Both private and public respondents emphasized the importance of analyzing project factors in an early stage, enabling them to come up with a realistic plan of attack. Also a list of crucial project factors was given by the respondents.

- Because the respondents had different disciplines, they gave insight in their ‘factors influencing investing/funding behavior’.

- The top five given by the private and public respondents consists of the same actions/incentives and it is therefore highly recommended that managers use these.

All these findings can be bundled into a roadmap enabling any party, laymen or expert, to start a revitalization process as well prepared as possible.

### 10.3 Roadmap

The main recommendation this thesis offers is a roadmap. This roadmap can be used by any person in possession of an industrial building and any project manager involved in revitalization processes. It shows the steps that should be taken to control the process, determine a project’s capabilities and stay realistic along the way. I made this roadmap because it has become clear that managers often struggle with the complexity of revitalization. Every project is unique in factors and actors and the revitalization process is highly dynamic.

The roadmap is a summary of static elements in a dynamic process and even though every project is unique, overlapping factors and actors were found studying various cases. The roadmap is a guideline and demands some input from the user in order for it to work. (One needs to figure out what aspects apply to his/her project.)

#### 10.3.1 Step 0: Intervention choice

This step is called step 0 because it is taken before the revitalization comes into question, it helps the owner to determine what intervention he or she should choose based on its value aspects. Figure 10.1 shows the model with the interventions based on the research by Roders (2006):

Interventions:

1. Deprivation: Do nothing
2. Preservation: Stop further decay with short term solutions
3. Conservation: Stop further decay with long term solutions
4. Restoration: Rebuilding certain parts towards former glory
5. Revitalization: Make operational (again) with a new function
6. Re-use: Make operational (again) with the old function
7. Demolition: Completely break down structure

**Note:** Some terms are slightly altered due to different use of terminology in this thesis then in research by Roders (2006).
Research Rapport

Industrial building

Value analysis

Functional Value

Cultural/historical Value?

- Yes

Present function usable?

- No

New function potential?

- No

Financial Value?

- Yes

Figure 10.1: model of intervention choice (using value as determinant)

This model shows industrial heritage as starting point, the value analysis is done through various models available in literature. The examples on appendix 2 are just a few examples of cultural and historical and functional value determinants.

The next step in this model is asking the practical questions whether a value aspect is present in sufficient quantities or not. This is up to the user because he or she has the information on local policies or adoptive nature of the project’s surroundings. The functional value aspect is divided into two questions; the first is whether the structure’s function it has at the time (its present function) is still usable. The second question asks whether the building has the potential to house new functions successfully. Finally the user adds up all the plusses, minuses and/or neutrals resulting in what intervention is most suitable for his or her project. This step is merely to assist the layman user to start up the process of intervening in a project’s deprivation.

The process of the intervention elaborated in this model is of course the process of revitalization. The other interventions are not elaborated in this model so if they are chosen a different series of steps need to be taken, rendering this roadmap partially or fully unusable.
10.3.2 Step 1: Factor analysis

The first step in the revitalization process is determining what factors are present in a certain project. This roadmap shows what project factors are key determinants in revitalization processes (see figure 10.2). Also, the potential risks and opportunities of these factors are illustrated. It is now up to the user to find a practical approach (function choice, stakeholder analysis, communication plan, marketing strategy, etc.) for the project that cancels out the risks as much as possible and focuses mainly on the opportunities, maximizing the revitalization’s potential success.

<table>
<thead>
<tr>
<th>Project factor</th>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Monumental status</td>
<td>- The possibility of getting funding from governmental institutions is larger.</td>
<td>- Restrictions, with funding comes restrictions in structural changes etc.</td>
</tr>
<tr>
<td></td>
<td>- There is a larger support for taking action and not letting the building derive any further.</td>
<td>- Actor increase, additional actors will be attracted into the process, like RCE (former RACM)</td>
</tr>
<tr>
<td>2. Location</td>
<td><strong>In urban environment:</strong> - More and better exploiting possibilities</td>
<td><strong>In urban environment:</strong> - Resistance from residents (change is often a reason for resistance)</td>
</tr>
<tr>
<td></td>
<td>- Positive support (solving a problem for environment)</td>
<td>- Logistic difficulties</td>
</tr>
<tr>
<td></td>
<td><strong>Outside city limits:</strong> - Fewer actors (now residents or neighbourhood activists)</td>
<td><strong>Outside city limits:</strong> - Fewer function possibilities</td>
</tr>
<tr>
<td></td>
<td>- Fairly free in changing and re-structuring.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Logistics are easier.</td>
<td></td>
</tr>
<tr>
<td>3. Project champion</td>
<td>- Speeding up procedures</td>
<td>- Personal agenda</td>
</tr>
<tr>
<td></td>
<td>- Easier to collect funding</td>
<td>- Elections (person might only have 1 term of 4 years in office)</td>
</tr>
<tr>
<td></td>
<td>- Creator of support among various actors</td>
<td></td>
</tr>
<tr>
<td>4. Structural integrity</td>
<td>- Lower or no restoration costs</td>
<td>- High restoration costs</td>
</tr>
<tr>
<td>The buildings technical state</td>
<td></td>
<td>- High probability of unforeseen costs</td>
</tr>
<tr>
<td>5. Internal structure</td>
<td><strong>Open structure:</strong> - More potential for function mutation.</td>
<td><strong>Open structure:</strong> - Everything is to be filled in.</td>
</tr>
<tr>
<td>Either open or crowded. Are there large halls or is everything filled with embedded tubing or mechanic installations?</td>
<td>- With machinery, museums are more attractive</td>
<td><strong>Crowed structure:</strong> - Few mutation possibilities</td>
</tr>
<tr>
<td>6. Presence of interest-organizations.</td>
<td><strong>Positive project partner if the goals of both interest org. and project team are similar.</strong></td>
<td><strong>Negative project partner, possible delay and constant struggle.</strong></td>
</tr>
<tr>
<td>Varying from environmental to historical, interest organisations have an affinity with a building in either a positive or a negative way.</td>
<td>- Insight in cultural/historical value, acting as a motivator of project teams and bureaucratic parties.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Creating support</td>
<td></td>
</tr>
</tbody>
</table>

Figure 10.2: Table of factors and their Opportunities and threats
### 10.3.3 Step 2: Actor analysis

Now that the key factors have become clear, the next step is to determine what actors are present within the revitalization process. Figure 10.3 shows a list of the most important actors generally found within a revitalization process. The user only has to link the project factors his/her project encountered to the list of actors and find which apply to his or her project. The opportunities and threats of each actor is also listed which helps the user with his or her practical approach.

<table>
<thead>
<tr>
<th>Project actor</th>
<th>example</th>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
</table>
| 1. Owner      | Government (Rijksmuseum) Individual (Mouterij) | - Participation if goals are similar  
- Willingness to sell property (low price) | - Stagnation by thinking the building is worth large sums while no-one would ever pay that amount. |
| 2. Central government | Highest form of government | - Funding (+€)  
- Funding (+€)  
- Speeding up procedures | - Restrictions  
- Contravening |
| 3. Province | Mid-level form of government | - Funding (+€)  
- Speeding up procedures  
- Contravening | - Restrictions  
- Contravening |
| 4. Municipality | Mayor, aldermen | - Funding (+€)  
- Speeding up procedures  
- Contravening | - Restrictions  
- Contravening |
| 5. Citizens | To be split into individuals and groups. These are people that are active in the community and try to get things done or prevent action. | Individual:  
- Motivator of citizens, and sometimes even the project through philanthropic funding.  
- Some individuals are experts on value aspects.  
Group:  
- Positive support, pressure for governments | Individual:  
- Contravening  
Group:  
- Contravening |
| 6. Experts | Archaeologists, RCE Historians | - Possibility of recommendation for funding to governments  
- Cultural and historical value information | - Restrictions on mutation |
| 7. Financially capable experts | BOEi DBF AanZET | - Specialists on revitalization process  
- Financial support (as investor or philanthropist)  
- Network | - Highly selective in which projects they will participate. |
| 8. Non profits | Postcode-loterij philanthropists | - Financial support | |
9. Interest organisations
Organisations that occupy themselves with carrying out certain aspects of a building. (Value, history etc.)

Ancient history documenters.
Foundations linked to the project.
Environmental organisations

- Positive support, pressure towards governments.
- Motivators
- Insight in cultural/historical value aspects

- Contravening

10. Media
Channels through which information is made public or global

TV, radio etc.

- Informing the public (binding them to the project)
- Pressure towards governments
- Creating a good reputation (company and project)

- Negative publicity, resulting in little support etc.

Figure 10.3: Table of actors and their Opportunities and threats

10.3.4 Step 3: Financial construction
Aside from the actors, project factors also have an important effect on the financial construction. As seen in the conclusions two different financial constructions are possible when it comes to revitalization:
- Function exploitation
- Philanthropic funding

As it became clear in the interviews a combination of the two can also be used if it is not possible to fully finance the project using only one. Figure 10.4 shows what finance construction is advised linked to the main project factors, plus the government’s policy on revitalization (now that actors have become clear this can be estimated).

<table>
<thead>
<tr>
<th>Project factor</th>
<th>weigh</th>
<th>Function exploitation</th>
<th>Philanthropic funding</th>
<th>Combination</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Monumental status?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>0</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>no</td>
<td>no</td>
<td>++</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>2. Inner city location?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>++</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>no</td>
<td>no</td>
<td>-</td>
<td>0</td>
<td>+</td>
</tr>
<tr>
<td>3. Structural integrity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sound</td>
<td>Sound</td>
<td>++</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Poor</td>
<td>Poor</td>
<td>+</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>4. Internal structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open</td>
<td>Open</td>
<td>++</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Crowded</td>
<td>Crowded</td>
<td>+</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>5. Governments’ policy on revitalization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>Positive</td>
<td>+</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Negative</td>
<td>Negative</td>
<td>++</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Figure 10.4: Table of actors and their Opportunities and threats

The user only has to add up all the plusses and minuses and find out what is the best construction to finance the project.

10.3.5 Step 4: Actions/incentives
The final step of the roadmap is finding out what actions and incentives managers should use, now knowing what factors and actors apply on their project and what finance construction he/she chose. This last step shows what actions and incentives are best usable for every finance constructions. (figure 10.5) The top 5 are the actions/incentives deemed most effective by both the private and public
respondents. They are therefore advised to be used first. Action/incentive 6 to 9 are less effective and can be used only if the risk of emphasizing the threats (from both factors and actors) is small. As a bonus, the user can use the individual ranking of each interviewed discipline. For example; the aldermen all said the results of cultural and historical value analyses where important to them, so if it is an alderman the user needs to persuade, this should be his first incentive. The rankings can be found on appendix 6 and 9.

<table>
<thead>
<tr>
<th>Action/incentive</th>
<th>Function exploitation</th>
<th>Philanthropic funding</th>
<th>Combination</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Plan development</td>
<td>++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>2. Relax regulation</td>
<td>++</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>3. Collaborative Public/private</td>
<td>++</td>
<td>o</td>
<td>+</td>
</tr>
<tr>
<td>4. Results value analysis</td>
<td>o</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>5. Excursions</td>
<td>+</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>6. Creating awareness</td>
<td>o</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>7. Enlarging funding</td>
<td>o</td>
<td>o</td>
<td>+</td>
</tr>
<tr>
<td>8. Familiar partners</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>9. Collaborative private parties</td>
<td>++</td>
<td>o</td>
<td>+</td>
</tr>
</tbody>
</table>

Figure 10.5: Table of actions and incentives usability with finance construction

Now the user has a good image of problems that can occur in the revitalization process, what he/she should focus on when it comes to determining a process strategy and communication plan. If used in the early stages of a process (initiative phase) this roadmap will show the user all he or she needs to prepare for a successful process.

### 10.4 Recommendations further research

First I will present a few points that I would like to have looked into but wasn’t able to due to time or capability:

- More respondents would be better for action and incentive validation.
- Instead of a roadmap I wanted a model that answers all the users’ questions without needing any input from him/her.
- The information on management strategies could have been incorporated more into the roadmap.

Future research might be able to take these concerns away.

It would be very valuable for the users of the roadmap to have a collection of all value qualifying and quantifying models. A lot of these models are available but they are very scattered.

The uniqueness of every project makes project managers feel like they have to reinvent revitalization over and over. I would like to suggest the formation of a database in which case files are saved from as many projects as possible, emphasizing the decisions that were made, why they were made and what they resulted in. This enables managers to learn from other people’s mistakes and making revitalizing a little bit easier.

I defined three value aspects that I believe are the most important when it comes to revitalization. If these are also relevant in other forms of construction I can’t tell, but I would like to recommend a series of value aspects that summarize all other value aspects we use nowadays. Processes could be simplified if there is some sort of unified method in which parties can communicate about value.
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List of figures

Figure 1.1: Main subjects in thesis ................................................................. 3
Figure 1.2: Levels projects are influenced by .................................................. 3
Figure 1.3: Model of Phases (Source: Nilessen et. al. 1999) .......................... 3
Figure 1.4: Research model ........................................................................... 5
Figure 2.1: Historic periods and their heritage classification (source: Roders, 2007) ........... 6
Figure 2.2: Possible interventions and explanation (information source: Roders 2006) ......... 7
Figure 2.3: List of grouped stakeholder ................................................................ 8
Figure 2.4: List of influences (Roders, 2006. Nibbering, 2008. Scheffers, 2009) ............. 8
Figure 3.1: Value-Price-Cost model (Source: Coenen, 2004) .......................... 10
Figure 3.2: Value aspects (Source: Quick scan 2006) ..................................... 11
Figure 3.3: Strategic elements of the project Value chain (source: Male et al. 2005) ........ 12
Figure 4.1: Promotion mix (source: Armstrong, 2009) .................................... 22
Figure 10.1: model of intervention choice (using value as determinant) ................. 36
Figure 10.2: Table of factors and their Opportunities and threats ....................... 37
Figure 10.3: Table of actors and their Opportunities and threats ....................... 39
Figure 10.4: Table of actors and their Opportunities and threats ....................... 39
Figure 10.5: Table of actions and incentives usability with finance construction ...... 40