

The settlement of designers in Philips heritage in Eindhoven



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Abstract: In this thesis, the reasons for designers to settle in Philips heritage in Eindhoven is discussed. The question is twofold, as it aims to discover why designers settled in Eindhoven on the one hand and why they then decided to move into the former Philips buildings on the other. The answer is that it was a combination of circumstances that drove the designers to the city, but due to Eindhoven's spirit as *city of makers*, it was always bound to happen. The reason for the designers to move into Philips buildings, is that many of these buildings were designed as a *daylight factory*, a typology which will be further elaborated on.

Introduction

Eindhoven is a relatively young city in the south of the Netherlands. Before 1900, it was a small village, nowadays it is the country's largest city outside the Randstad. The main instigator for this rapid growth was the start of Philips. As a result of the industrial revolution, Philips' production grew fast and large factories had to be built in and around Eindhoven's city centre. These factory complexes were closed for the public and took up large parts of the city. In the second half of the 20th century, Philips started moving the production out of Eindhoven and eventually moved its headquarters to Amsterdam. As a result of this, large parts of the city were abandoned and many large buildings in the city centre had to be repurposed.

Despite Philips leaving the city, Eindhoven can still be seen as the Netherlands' tech-capital. The High Tech Campus, ASML and the Technical University Eindhoven being some of the larger names. However, Eindhoven claims to be not just a city of technology, but also a city of design. As a host of the Dutch Design Week – the largest design event in Northern-Europe – and the home of the Design Academy, this self-proclaimed title is not without reason. Many of the designers, like Piet Hein Eek, have settled in former Philips buildings.

As a result of the disappearance of Philips from Eindhoven, the designers settled in the empty industrial buildings. However, this de-industrialisation happened all throughout Western-Europe, so there were empty factories everywhere, therefore this does not necessarily explain the choice of these designers to go to Eindhoven. This paper aims to find out why Eindhoven's industrial heritage is so attractive to designers and why they choose to settle in Eindhoven rather than other cities. The expectation is that various factors were at play in this development. Naturally, the history of Eindhoven as a city of 'makers' has an influence on the *genius loci* of Eindhoven. This might explain why designers were and are attracted to the city of Eindhoven. For their choice to settle in industrial heritage, a reason must be found for the apparent attractiveness of industrial architecture. Eindhoven also has displayed some active *citybranding* over the past years, so it will be interesting to find out if the city has actively tried to attract designers to the city and how they did this.

There is already a lot of existing literature about Eindhoven's industrial heritage and its transformation. The transformation of Strijp S is such a unique urban development at a scale that is rarely seen, thus it has attracted a lot of attention from architectural writers. Some of these writers mention the designers, but none seek for the reasons behind their settlement. This paper aims to fill this gap in the literature by answering the research question: why did designers decide to settle in Philips heritage in Eindhoven? It is important to understand that this question is twofold. Firstly, an answer will be found as to why designers settled in the city of Eindhoven. Secondly, why they settled in the former Philips buildings.

The existing literature does form a solid base to the research. By collecting different sources to form a complete view of Eindhoven's history and development, an attempt can be made at finding a reason for the designers to settle in Eindhoven. Additional literature about the topics that will be discussed, will help complete the picture. Research on the term *genius loci* and on the beauty of industrial architecture will also be important for the research.

In the first chapter, the history of Eindhoven will be described. It is essential to know this history, in order to say anything about the *genius loci*. The chapter will not just cover the appearance and disappearance of Philips, but also other historic developments that might have influenced the *genius loci*.

The second chapter will describe the *genius loci*. This term is widely used withing architectural writing, but will be further discovered in order to find its true meaning for the situation in question. The link can be made with the first chapter, in order to determine Eindhoven's *genius loci*.

The third chapter, a research will be done on Eindhoven's citybranding. The municipality is very active when it comes to citybranding, with *Brainport* as its showpiece. Most of this seems to be aimed at Eindhoven being a tech-city, however design might be mentioned in the literature about this citybranding.

The fourth and final chapter will describe the influence of industrialisation on architecture and some of the more well know industrial heritage transformations in Eindhoven. Research into these buildings and linking certain characteristics to the typology of the *daylight factory* will help in understanding what makes these industrial buildings so suitable for transformation.

The first three chapters will answer why designers decided to go to the city of Eindhoven. Chapter four and five will answer why they went to former Philips buildings. Together, they will answer why designers decided to settle in Philips heritage in Eindhoven.

In Appendix A, you can find a map of Eindhoven, in which all the names of neighbourhoods and streets are pointed out.

Chapter 1. The history of Eindhoven

In order to discover the *genius loci* of Eindhoven, this chapter will discover the city's recent history. Recent history might sound like it is too brief when we are talking about the *genius loci*, but the fact is that Eindhoven's relevant history, simply is not that expansive. Unless noted otherwise, this information comes from the Historical Atlas of Eindhoven, by Abrahamse (2021).

Industrialisation in the nineteenth century

In the late 18th century, Eindhoven's development stayed behind in comparison to port cities like Breda and 's-Hertogenbosch (which were connected to canals at the time). Additionally, the soil was not ideal for agriculture. Industry was on the rise, but due to the poor accessibility of Eindhoven, the growth was limited. However, with the new Eindhoven Canal that was dug in 1846 and the railway that was built in 1866, this accessibility was severely improved. This enabled textile-, tobacco- and soap industries to grow. By the end of the 19th century, Eindhoven and surrounding villages gave place to 72 factories, providing thousands of people with work. Even before the mechanisation, Eindhoven had several thousand textile workers working from home. The growing textile industry was Eindhoven's first sign of becoming an important industrial city. Around the time the railway was built, the tobacco industry began taking over as the main product of the region. Eindhoven's largest company in the end of the 19th century, cigar-maker Mignot & De Block, employed 470 men and women.

The rise of Philips

When you think Eindhoven, you think Philips. Funnily enough, mechanical engineer Gerard Philips first intended to start a factory in Breda in 1890. A year later, he bought a small factory building on the Emmasingel in Eindhoven, a building still standing as the Philips Museum. In 1895, Gerard's brother Anton joined the company as commercial director, which turned out to be a perfect combination with the technical qualities of Gerard. In 1905, production had grown to 4 million light bulbs per year (Nillesen, 2020) and in 1910 2005 employees worked at Philips. With the municipality not able to keep up with the growth, Philips built housing and schools, facilitated healthcare and culture and started sports clubs, like football club PSV. Philips' employees did not just work for Philips, they lived with Philips.

Philips grew so quickly, that a Building Agency was founded within the company, responsible for all new building projects. Across and next to this small factory on the Emmasingel, a massive industrial park appeared, including the Witte Dame, the Lichttoren and at a later stage the new Philips headquarters, the Bruine Heer. Nevertheless, this complex already turned out to be too small after several years.

This shifted Philips' expansion to Strijp. The first new factories were ready in 1915, but because of WWI, the delivery of glass from Germany came to a hold. Philips would not be Philips if they did not have a solution for this, so they built their own glass factory. Strijp was eventually divided into a number of parts, of which Strijp S was the largest. Strijp S covered 25 acres and accommodated 10.000 workers. More importantly, it was completely closed off from the public. Philips' notorious corporate police guarded the gates and only employees could get in or out.



Figure 1: The original Philips factory when still in use (Weijers, 2005)



Figure 2: The same building, now in use as Philips Museum (Glow Eindhoven, 2018)

During WWII, the German occupants used the Philips factories for the production of lights. Because of this, the RAF decided to bomb large parts of Eindhoven, resulting in the destruction of several factories and parts of the old city centre.

After the War

After WWII, the city council decided to demolish large parts of the city centre, with the ambition of making Eindhoven 'a modern city' (Gemeente Eindhoven, no date). As a result of this, the former Philips buildings are currently some of the few pre-war buildings in the city centre. Furthermore, the growth of the population made Eindhoven the fastest growing city in the country, which initiated the build of large neighbourhoods in Woensel and Gestel.

As Philips' core business shifted from lighting to various electronics, the character of the factories changed. Strijp S was no longer a loud factory complex, but was now the heart of the company's product research. With this change, the amount of personnel also decreased. By the end of the 70's, 8000 employees remained and in 2000, there were only 1100 (Schipper, 2007, p.23).

This drastic decrease in number of employees naturally did not just happen because of the change of activities in the factories. Philips started moving production to low income countries in the 80's, because of increasing globalisation. Eventually, Philips even moved its headquarters to Amsterdam in 1997.

Many of the Philips buildings were only sold to the municipality after not being used for many years. The Witte Dame was one of these buildings, until it was saved from demolition in 1990 and eventually repurposed a number of years later. The gates of Strijp S even remained closed until 2007, despite Philips leaving over a decade before.

Eindhoven, city of makers

Surprisingly, the development of Eindhoven was not initiated by Philips, as textile- and tobacco factories were actually the pioneers of Eindhoven's rich history of industry. What is evident, is that Eindhoven has always been a *city of makers*. Whether it is digging a canal to connect the village to other cities in order to grow or creating its own sources of income to make up for the poor soil. Eindhoven has made its own history and there are few cities in the Netherlands that did this as well as Eindhoven.

Chapter 2: Genius Loci

In order to understand the meaning of Eindhoven's history as a *city of makers*, the concept of *genius loci* must be investigated. The term has been used since ancient Rome where it was used as a description of the protective spirit of a place or the dwelling god (Vecco, 2020, p. 226). However, in *Genius Loci: Towards a Phenomenology of Architecture*, Norberg-Schulz presents the term as the core value for place-making. He describes place as "a space with a distinctive character" (Norberg-Schulz, p. 8) and points out various tangible and intangible aspects that form the character of a place, which cannot be reduced to just its properties like spatial relationships. Therefore he proposes to use the philosophical idea of phenomenology in an architectural context.

However, when describing the characteristics of a place, Norberg-Schulz mainly describes the natural elements like water, vegetation, surface and relief (p. 37). And even when discussing man-made places, he claims that a research into man-made place ought to have a natural basis and "take the relationship to the natural environment as its point of departure" (p. 50).

Eindhoven's natural characteristics are barely noticeable anymore and not unique to the Netherlands. Because of this, perhaps using Norberg-Schulz's phenomenology and his definition of *genius loci* is not the right way to assess the value of Eindhoven's history.

Sense of place

As an alternative to the term *genius loci*, *sense of place* will be proposed as an alternative. This term is also quite a vague concept, it resists a simple definition as Barker says that "understanding what creates a true sense of place ... is a complex task" (1979, p. 164). However, according to Lewis, "it is often easier to see its results in human behaviour than to define it [the sense of place] in precise terms" (1979, p. 28). If this approach would be used to define Eindhoven's sense of place, it is the people that define it, rather than the place itself. Norberg-Schulz might argue that the behaviour of these people was formed by the place, as did Relph: the concept of sense of place should be probed "by examining the links between place and the phenomenological foundations of geography" (1976, p. 3), probably referring to Norberg-Schulz' plea for phenomenology.

Nonetheless, Eindhoven's geographical conditions always meant that the city had little resources to develop as a city before industrialisation. The lack of resources like fertile ground, might have been the reason that industrialisation arrived in Eindhoven, but it were the people that eventually made use of this industrialisation to grow Eindhoven to the city that it is today.

Chapter 3: Branding Eindhoven as a creative city

The municipality of Eindhoven has been active for quite a while when it comes to city branding. For a city the size of Eindhoven, it receives a lot of international attention. In fact, in 2018 it received the prize of *Place Brand of the Year*, beating cities like Barcelona (Brouwers, 2018). As Peter Kentie, director of marketing agency Eindhoven365, tells The Place Brand Observer, the place branding started in 2009 with a survey amongst inhabitants of the city. In this survey, the three pillars of the strategy were determined: technology, design and knowledge. Both technology and knowledge are quite straightforward choices, with places like the High Tech Campus, Eindhoven University of Technology and ASML in and around the city. However, design seems like more of an emotional choice rather than a rational one. Especially in texts about the redevelopment of Strijp S, the term 'creative city' is often used.

Reasons to aim for a 'creative city'

In 1988, Yencken introduced the term 'Creative city' in the literary magazine *Meanjin*. In this article, he says a creative city should cherish the inhabitants' creativity and it should offer emotionally satisfactory places and experiences.

In 2009, Evans published the article 'Creative cities, creative spaces and urban policy,' in which he presented the results of "an international study on creative-industry policy and strategy" (Evans, 2009). As main argument for the recognition and promotion of creative industries, he proposes the growth potential in the nineties and the years after that, exactly the years in which Eindhoven started redeveloping Philips heritage. From his research, economic development and employment were the most important rationales for an intervention in municipality policy.

It makes sense that economic improvement is a main reason for a certain policy or strategy, however, investing in other industries could lead to similar results, so it does not necessarily explain why a municipality would invest in the creative industries.

In the past, people bought products that were needed for daily life, but consumption can no longer be explained as simple as that. According to Doevendans (2007, p.13), "people have entered a phase of hyper consumption, they no longer buy to fulfil their needs, but to chase after illusions. Consumption is not purely materialistic, it contains emotions, daydreams, images. This is why we speak of the symbolic, experience, reflective economy." Where culture used to be a luxury, nowadays it is attainable for a much larger demographic, making it a more valuable industry.

Furthermore, the clustering of specific industries is also easy to explain, as is done by Marshall in *Principles of Economics*. According to him, clustering of industries is beneficial to both employer and employee, because there is a "constant market of skill" (Marshall, 1920, p. 156). Employers can easily look for new employees with the necessary skillset and employees are likely to move to places where there is a high demand for their skills. Even for the consumer, clustering will have benefits, according to Marshall, a client will go to a nearby store for a simple purchase, but for an important purchase, he will not mind travelling to a different part of town where there are more stores that specialise in the product he is looking for (Marshall, p. 157).

Chapter 4: The beauty of industrial architecture

The previous chapters have given an explanation as to why Eindhoven is an attractive city for designers. The following chapters will focus on the industrial heritage and its architecture. In order to analyse the former Philips buildings, we have to go back to the origin of why they were designed the way they are.

Industrialisation and corresponding 'isms'

With industrialisation on the rise, society changed and so did the factories, also in Eindhoven. It started with the textile and tobacco industry, in which small machinery was being used. To make room for this machinery, the buildings already had to change significantly, as you can see in figure 3 and figure 4.



Figure 3: Mignot & De Block before machines, end of 19th century (Abrahamse, 2021)



Figure 4: Machinery in Mignot & De Block factory, 1919 (Platenburg, 2010)

You can already see the difference in construction of the building. For the heavy machinery, the timber construction was no longer sufficient and was replaced by concrete columns and beams. Nevertheless, these changes were not as substantial as the ones we can see later on in the Philips factories.

One of the reasons Philips grew to be one of the most successful tech companies in the Netherlands was its strict following of scientific management. Scientific management is a form of management advocated by Fred W. Taylor according to whom “the task of factory management was to determine the best way for the worker to do the job, to provide the proper tools and training, and to provide incentives for good performance. He [Taylor] broke each job down into its individual motions, analysed these to determine which were essential, and timed the workers with a stopwatch. With unnecessary motion eliminated, the worker, following a machinelike routine, became far more productive” (Britannica, 2018). Ironically, Taylorism was not just responsible for the rise of Philips, also for its downfall in Eindhoven. Above all, Taylorism “represents an organisational form without any notion of a career-structure, unlike other organizational models” (Littler, 1978, p. 185). In the 1960’s Philips faced recruitment issues, as many of the newly recruited assembly line workers quit within a year (Pruijt, 1996, p. 35).

Whereas Taylorism was aimed at the employee, Fordism – which can be seen as a direct derivative from Taylorism – focused on mass production on an assembly line. Many companies followed Ford’s example, but few were as successful as Philips. In fact, Henry Ford was so impressed with Philips’ work, he visited Eindhoven. Philips’ successful implementation of Fordism allowed the company to have highly efficient production lines.

Finally, Philips also had a so-called ‘integrated production,’ meaning the company was as much self-sufficient as possible. This started with the production of their own glass for the lightbulbs in 1916, but soon over fifty buildings, producing all sorts of materials and parts, had arisen in Strijp S alone (Geevers, 2014, p. 114).

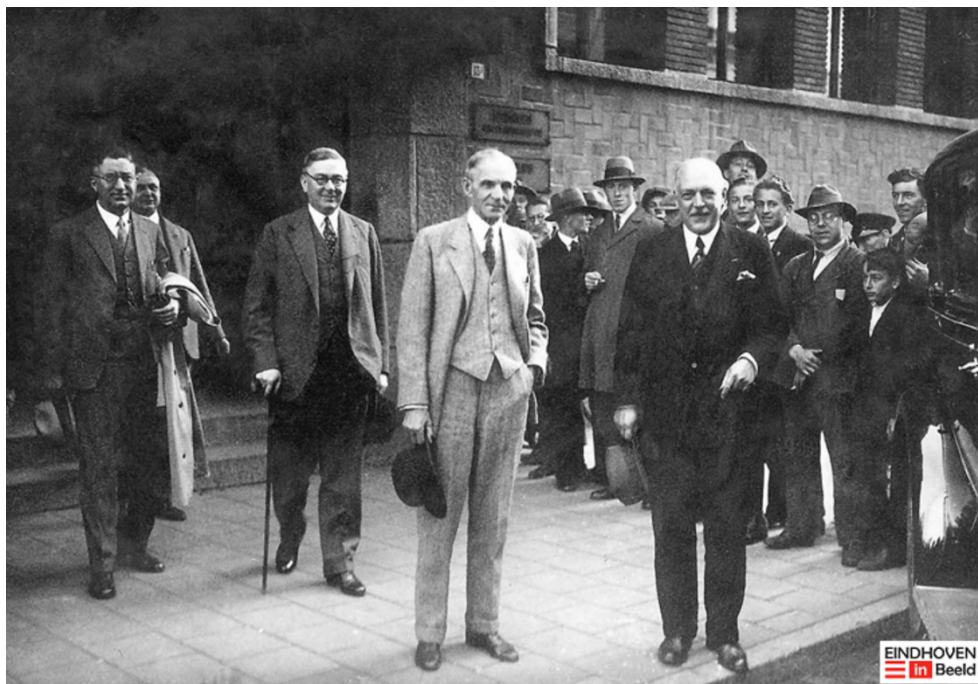


Figure 5: Henry Ford (light grey suit) visiting Eindhoven, on his right Anton Philips, 1930 (van der Meulen, 2008)

Industrialisation and modernism

Industrialisation did not just result in new forms of management or production processes. In *The Taylorized Beauty of the Mechanical* (2006, p. 35), Guillen presents two sides of architectural historians who strongly believed that industrialisation was the single most important factor behind the emergence of modernism. On the one hand, the most obvious reason being that industrialisation provided new materials such as concrete and steel and new techniques that pioneering architects adopted to revolutionise architectural design. On the other hand, some historians criticised the emphasis on materials and prefer to focus on the intellectual trends, which according to them was the main explanation for modernism (Guillen, p. 36). Guillen also points out that industrialisation generated 'demonstration effects', or not hiding certain parts or materials.

According to Guillen, modernists "found their inspiration not in nature but in the rationalised or Taylorised world of machine production ... After reading about scientific management and observing what industrial engineers had accomplished in work rationalisation and design, they proceeded to apply method, standardisation and planning to architecture" (p. 32).

The daylight factory

The scientific management, Fordism and integrated production had a significant influence on the design and arrangement of the buildings. The different functions meant that the design of the buildings varied and that the spatial composition of Strijp S was not at all random. The designs of many of the buildings could be assigned to specific typologies, but for the purpose of this research, the focus will be on the so-called 'daylight factory', as many of the buildings of this typology are currently being used by designers.

One of the most influential architects on the design of industrial buildings was Albert Kahn (1869-1942). He designed multiple factory buildings for Ford after designing the first automobile factory to use reinforced concrete, the Packard Building No. 10, using a system design by his brother, Julius Kahn (Trussed Steel Co., 1904). Ten meter spans were possible because of this system, which allowed for a flexible floorplan. The concrete construction was visible from the outside, which can be seen as an aforementioned 'demonstration effect'.



Figure 6: Albert Kahn's Packard Building No. 10, 1903 (Belo Ravara, 2020)

Industrial architecture started off as utilitarian design, reflecting their social importance. Most early industrial buildings were "multi-storied buildings that combined brick or masonry

bearing walls with heavy timber structural frames to obtain the largest column free interior spaces possible. As the ultimate utilitarian places, their design features not only encouraged an efficient work process but aimed to prevent fires. The fear of fire was so prevalent that insurance companies shaped much of the early architecture. They discouraged interior wall coverings as well as ornament on building exteriors; sought open, partition-free interiors to facilitate extinguishing fires; suggested flat roofs and discouraged the attics; encouraged large windows to facilitate fire suppression; and recommended flat floor areas be separated from interior stairs” (Nelson, 1939, p.175).

However, as the importance and with that the prestige of industry grew, architects started to study and theorise about industrial architecture. With this, the quality of the designs began to improve and certain typologies arose.

From the definition of a *daylight factory*, given by Banham – “a multistory reinforced concrete frame building with large window spans enclosing a spacious grid of concrete columns on each floor of the interior” (Banham, 1986) – several characteristics can be derived. However, there is one aspect missing in this definition, which is the width of the building. If a building is very wide, it can have large windows and open floorplans, but the middle will still be dark. Therefore, as Hildebrand (1974) had already proposed, the limited width of the building will be added to the characteristics.

Characteristics of a daylight factory

- 1. Multiple stories*
- 2. Concrete construction, a spacious grid of columns, providing large spans*
- 3. Large windows providing natural daylight*
- 4. Limited width to allow for daylight across whole floor area*

Several Philips buildings in Eindhoven abide by these characteristics, thus will be discussed in the following chapter.

Chapter 5: Industrial Heritage Transformations in Eindhoven



Figure 7: Witte Dame, Emmasingel, 2022 (own picture)

Witte Dame

The most notable case of Philips heritage in Eindhoven is the Witte Dame (the White Lady), located on west side of the Emmasingel. It was designed by Philips' in-house architects Dirk Roosenburg, A.I.J. de Broekert and J.R. Bouten and built in 1928. Originally, it was used as a lightbulb factory, but some parts for radios were also made there. Despite the name, the building was originally not white: it was only painted white in 1953. In the eighties of the last century, as labour moved to other places, the building was no longer in use and was empty for several years. Plans were made to demolish the building, but after efforts from artist Bert Hermens, who started Stichting Emmasingel (Emmasingel foundation), these plans were cancelled. Hermens was also the one who came up with the name Witte Dame, which stuck with the city's population. The city agreed that the historical value of the building was too significant and contracted architect Bert Dirrix for the renovation, which was completed in 1998. It is now being occupied by the public library, the Design Academy, an art supply store and several other businesses.



Figure 8: Working in the Witte Dame, year unknown (De Witte Dame online)

Many characteristics of the *daylight factory* can be recognised in the building. The six/seven stories were built from a concrete structure, which was designed in a strict 7,2 meter grid, allowing for large open spaces (Groenendijk, 2019). The construction is not as visible from the outside like in Kahn's Packard Building No. 10, but the rhythm of the windows does not hide the grid either. The windows itself are large and reach the ceiling, only being interrupted by the weight bearing columns. The building is approximately 21 meters wide, which means you are never further than 10,5 meters from a window. Combine this with the window size and daylight was always present.



Figure 9: Public library, Witte Dame, 2022 (own picture)

With the renovation, a large part in the middle of the building was opened up, to allow for access to the square behind the building. In this new middle axis, stairs, escalators and bridges were placed to give access to the several occupants of the building. The current segmentation of the building – where the different functions are intentionally vertically dispersed, rather than next to each other – is a strong contrast with the way Philips concentrated uses in specific buildings. Like this, interaction between different users is encouraged in the central axis. This intentional mix of expertise, is exemplary for Eindhoven's ambition of becoming a hub of innovation by mixing design with knowledge and technology.

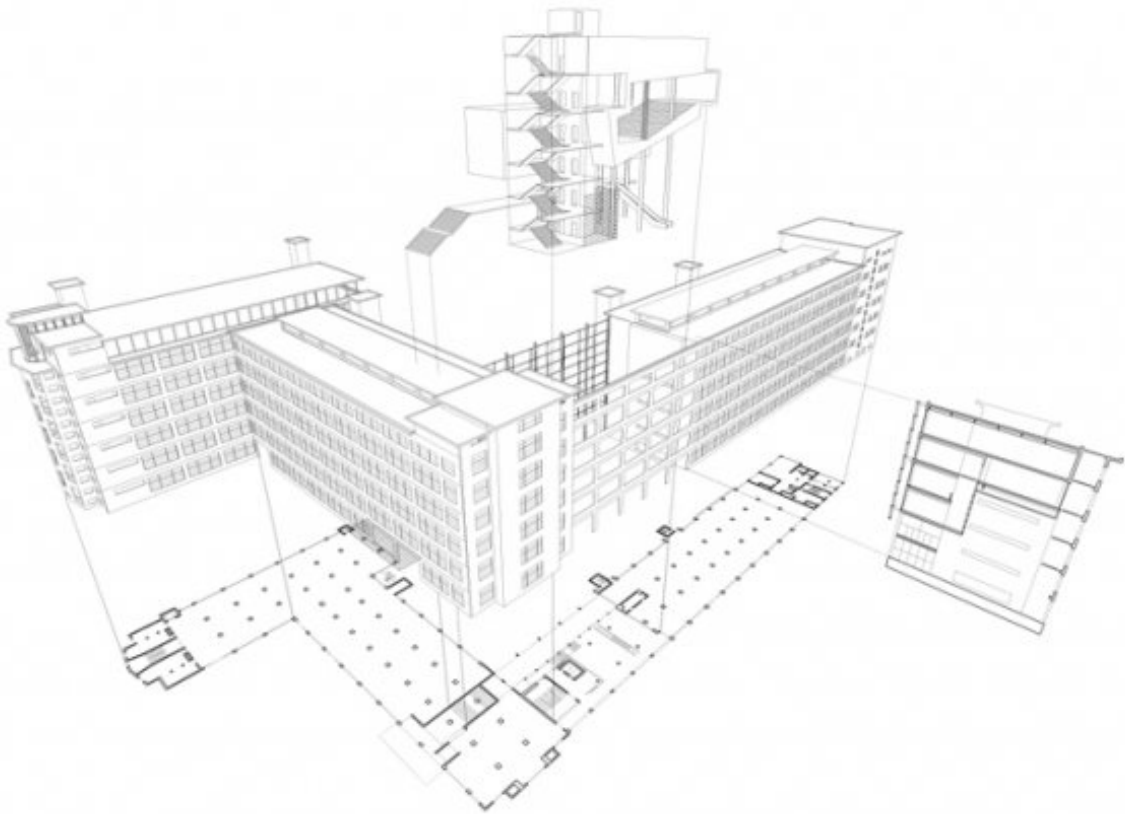


Figure 10: Exploded axo-view of the renovation plans of the Witte Dame (Herbestemming.nu, 2022)



Figure 11: Anton/Gerard, Strijp S, 2022 (own picture)

Anton/Gerard

After Philips also started leaving its premises in Strijp S around the turn of the millennium, but since the buildings were not in the city centre, the task of repurposing them was less urgent. The gates of Strijp S remained closed until 2007, when the municipality – in cooperation with several developers – bought Strijp S from Philips. Being 27 hectares, with 150.000 m² of industrial heritage, one of the largest urban redevelopment projects in Europe was born. Like all Philips factory complexes, Strijp S was divided into compartments, producing different parts and products. On the current Torenallee (formerly Torenstraat), such a compartment can be recognised in the Hoge Rug. This is a set of five buildings where devices like radios were produced.

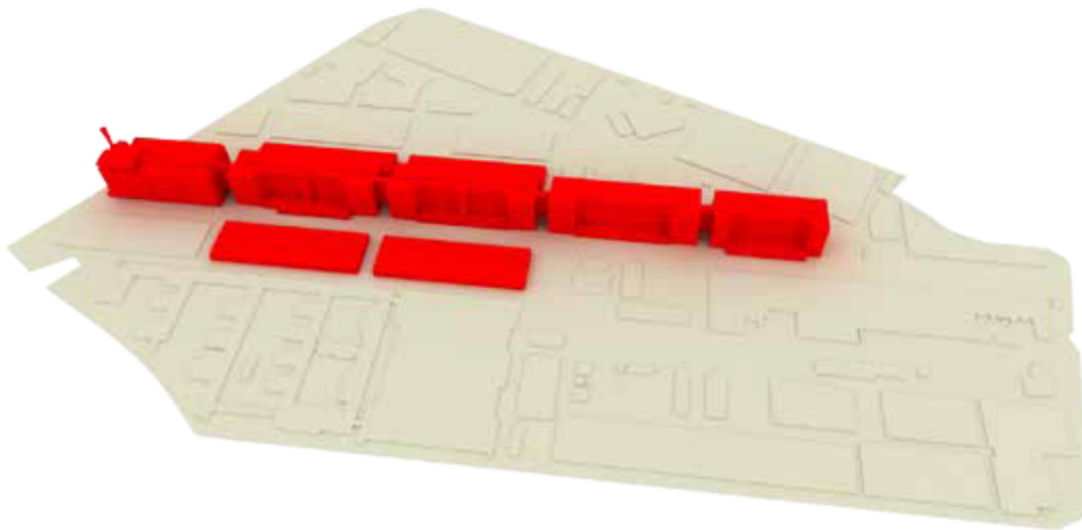


Figure 12: Hoge Rug buildings, Strijp S (Geevers, 2014)

Two of these buildings, Hoge Rug 3 and 4 are now called Anton and Gerard, after Philips' founders. These buildings are very similar to the Witte Dame and are also designed by A.I.J. de Broekert and J.R. Bouten. Like almost all buildings in Strijp S, they were built by the end of the 1920's. After West 8 designed the urban plan, Diederendirrix was commissioned to redevelop Anton and Coenen Sättele did the same for Gerard. As is visible from the renovation drawings of Anton by Diederendirrix, many of the characteristics from the *daylight factory* can once again be recognised. Seven stories, a strict grid – of once again 7,2 meters – of concrete columns, large windows following this grid and a limited width to allow for daylight penetration.

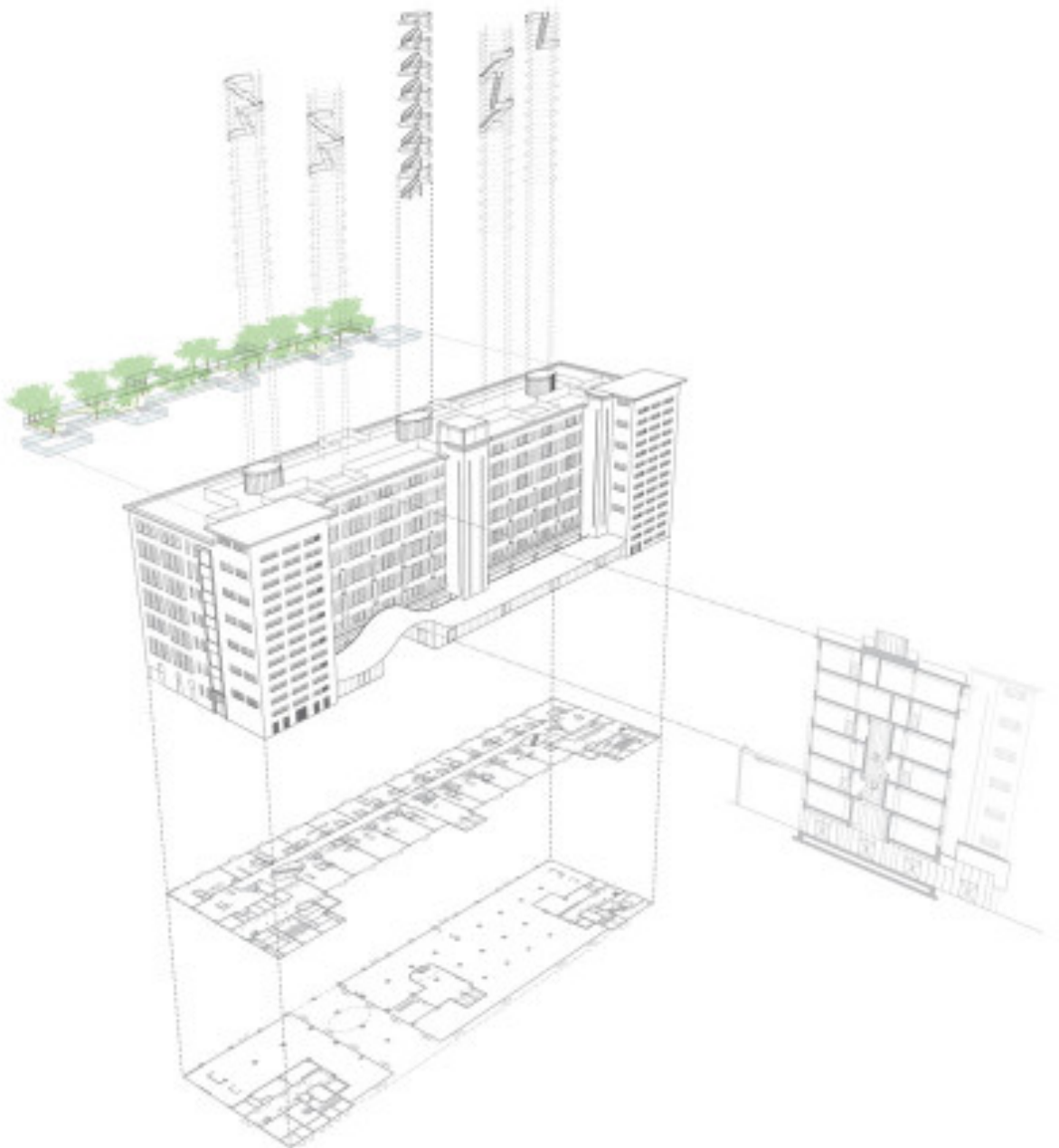


Figure 13: Exploded axo-view of the renovation plans of Anton (Diederendirrix, 2010)

Interestingly, both Anton and Gerard are now mostly filled with apartments, which might seem like a large contrast with the industrial nature of the buildings. However, it is exactly the *daylight factory* principle that makes these buildings suitable for residential use. The grid

provided a natural division for the apartments. The large windows let in plenty of light, which suits the modern requirements for daylight in homes. The limited width naturally determined the floorplan with the corridor in the middle and apartments on either side. The floor plans were also left open, to allow for a flexible layout within the apartments.

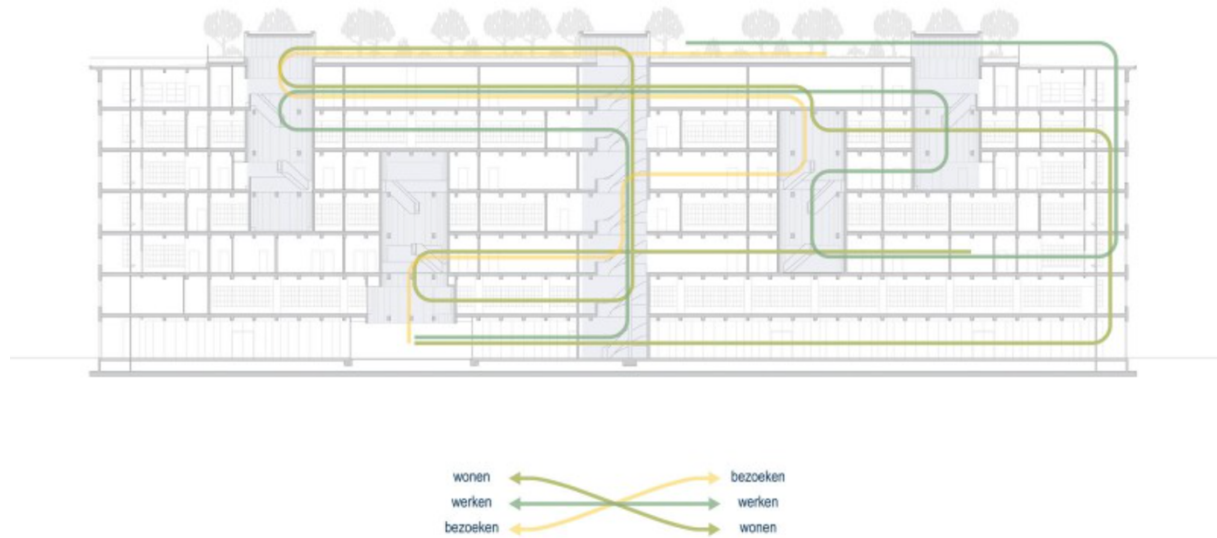


Figure 14: Crossing of routes in Anton, living working and visiting (Diederendirrix, 2010)

Like in the Witte Dame, the crossing of routes of different users is once again part of the renovation plans. In Anton, these routes were made possible five ellipse-formed openings that were cut through all the floors. These axes are the new stairwells, also allowing daylight to get to the corridor.

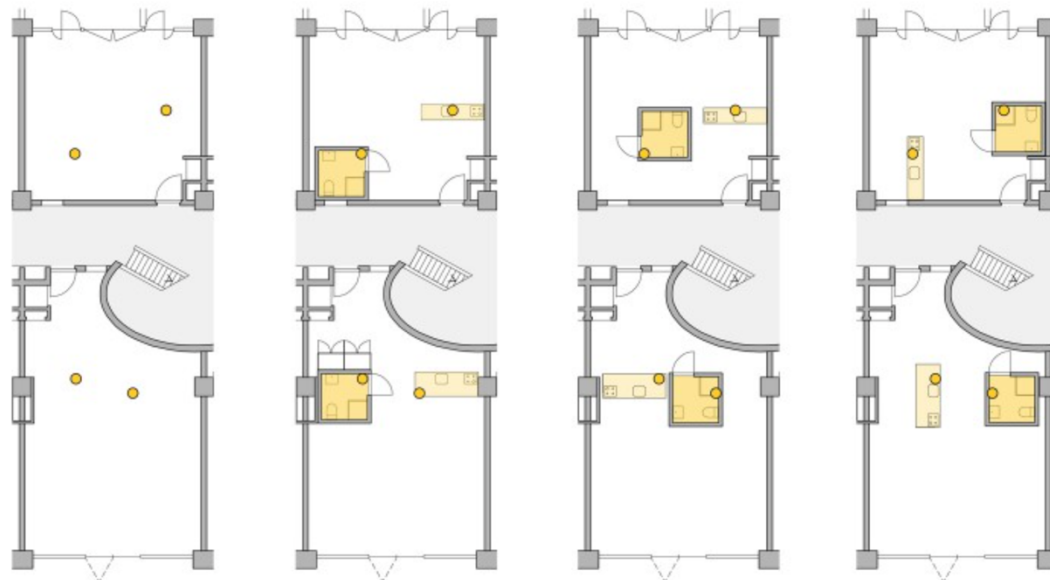


Figure 15: Flexible floorplans of Anton apartments (Diederendirrix, 2010)



Figure 16: New stairwells in Anton (De Architect, 2013)

In Gerard, the changes made by Coenen were not as radical, but the same principle was used to divide the large floorplans into apartments. Central corridors, connected by axes with stairs and elevators. The existing grid of columns determined the size of the lofts, which were once again left with an open floorplan.

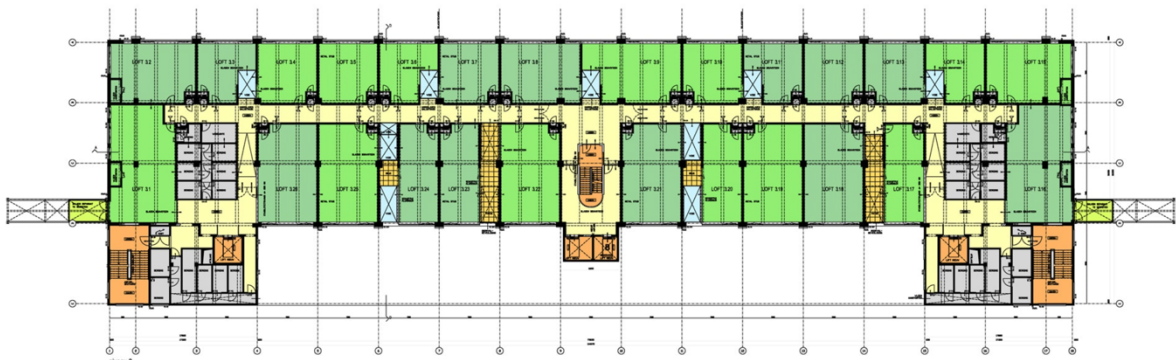


Figure 17: Renovation floorplans of Gerard (Jo Coenen & Co Architecten, 2013)



Figure 18: The canopies on the ground floor of Gerard (own picture)



Figure 19: Urban Shopper in Anton (own picture)

Both Anton and Gerard have public functions on the ground floor, which has been accentuated by canopies. These canopies provide shelter to the entrances of several creative businesses. In Anton, Urban Shopper provides space for small entrepreneurs in the creative industry. Gerard houses the MU Art Foundation, the center of contemporary art, which was formerly situated in the Witte Dame.



Figuur 20: Veemgebouw, 2022 (own picture)

Veemgebouw

As the last part of the Hoge Rug, built in 1942, the design of the Veemgebouw is very different from the other buildings that were discussed. The reason for this, is that it was originally a warehouse, used to store radios, televisions and other household products. Because it was a warehouse, daylight was less important and the building did not follow the same ground rules as the others. The construction was mainly made of concrete, but that was mostly because in 1942 concrete construction had developed substantially and was now cheaper than alternatives. The most notable difference from the outside is the lack of big windows. No assembly lines meant no need for constant daylight and windows were expensive, so kept small.

As part of the renovation, the ground floor was transformed in a so-called food hall. At this moment in time, many of the stalls are empty and it was recently announced that the Albert Heijn supermarket, which is in the same building, will expand in order to deal with these vacancies (Theeuwens, 2022). When walking through the food hall, it feels dark and claustrophobic, because of the distance from the windows and the low ceilings. Taking this as an example, it can be said that the transformation of the Veemgebouw is significantly less successful, because it is lacking the characteristics of a daylight factory. However, the

transformation is still going on, as the residential functions on the higher floors have not been completed yet.



Figuur 21: The parking garage above the food hall, Veemgebouw (own picture)



Figuur 22: Empty food stalls in the Veemgebouw (own picture)

Conclusion

When Philips left Eindhoven, the city was left with one of the most interesting cases of transformation of industrial heritage at the time. Not only did it involve large buildings in the middle of the city centre, a whole neighbourhood was also part of the task at hand. This particular neighbourhood, Strijp S, turned out to become a hub for the creative industry. Various architectural writers, like Doevendans and Geevers have written about this transformation, but none have actively researched the reasons for the settlement of the designers in industrial heritage in Eindhoven.

With the purpose of trying to discover the *genius loci* of Eindhoven, the first chapter described the history of the city. As the soil was not very suitable for agriculture and Eindhoven was not connected to a river or canal, its development stayed behind in comparison to other Dutch cities, like Breda and 's-Hertogenbosch. These circumstances can be seen as the instigator of Eindhoven's habit of creating its own resources. Because of active lobbying from people in Eindhoven, the city was eventually connected to a canal and railroads, which kickstarted the growth of industry in Eindhoven. First it was textile, then soap and tobacco, but the real growth started with Philips. The company rapidly grew out to be one of the most successful technology companies in the world. It can be said that Eindhoven is and has always been a *city of makers*, creating opportunities from nothing.

As the description *city of makers* seems to say something about the *genius loci*, the second chapter looked into the literary background of the term as discussed by Christian Norberg-Schulz in 1980. He placed a heavy importance on the natural characteristics of a place and as Eindhoven's natural footprint is barely noticeable, the term *genius loci* was set aside. Instead, *sense of place* was proposed. This term was described by many architectural writers, all of which had trouble defining it. However, within many of the definitions, behaviour of people seemed present. It was concluded that the sense of place was determined by the people of Eindhoven, specifically because the place itself had little to offer.

The third chapter looked into the citybranding of Eindhoven. Many municipalities try to market their city nowadays, but few do it as successfully as Eindhoven, drawing national and international attention. The city has high ambitions when it comes to developing in terms of technology, knowledge and design. The ambitions for design are prominently present as the term *creative city* is mentioned quite often, especially in texts about Strijp S. Eindhoven is not the only city to embrace this term. With new habits of consumption, where people buy out of emotion, rather than to fulfil their needs, the creative industry has suddenly become a financially attractive market. Therefore, it is not surprising that a city decides to invest in attracting creative workers.

When thinking of industrial buildings, one might not necessarily think of architectural masterpieces. The industrialisation came with new forms of management -Taylorism - and production – Fordism. Both these methods eventually resulted in method, planning and standardisation to be introduced in architecture. Additionally, while on the one hand, the design of many industrial buildings was purely utilitarian, its clean lines and demonstration of materials can be seen as an influence on many well-known modernist architects. The new interest in industrial architecture lead to a new typology, in the form of the *daylight factory*. This typology is present in the form of multiple buildings built by Philips in Eindhoven, which is why determining the characteristics of the typology was necessary, to be able to say

something about the qualities of the Philips buildings. The characteristics of the daylight factory were as follows:

1. *Multiple stories*
2. *Concrete construction, a spacious grid of columns, providing large spans*
3. *Large windows providing natural daylight*
4. *Limited width to allow for daylight across whole floor area*

In the final chapter, the original designs and transformations of several former Philips buildings were discussed. Three of these buildings – the Witte Dame, Anton and Gerard – can be described as *daylight factories*. The transformations of these factories were highly successful because of the corresponding characteristics and the original designs barely had to be altered for the new functions. Where Philips used to concentrate certain functions in buildings as part of their autarchic structure, the mixing of functions is now part of the core values of all the buildings. All the discussed buildings mix residential functions with space for the creative industry, restaurants, offices and public functions. It is interesting to see the contrast with the Veemgebouw. As one of the buildings that was not designed as a daylight factory, its transformation turned out much less successful, eventually resulting in empty food stands on the ground floor, acting as an example for the less successful transformation.

As predicted, the answer to the research question is twofold or perhaps even more complicated. There is not one reason for designers to have settled in Philips heritage in Eindhoven. Instead, a reason can be given as to why designers came to Eindhoven and a separate explanation can be given for their probably motivations to then settle in Philips heritage. Firstly, it has always been the identity of the people of Eindhoven to create their own resources, which is why the term *city of makers* was introduced. As habits of consumption changed, so did industry in Eindhoven. The *city of makers* no longer makes lightbulbs and radios, but all sorts of design. This can be explained by proposing that it is in the spirit of the people, by the active *citybranding* or just by the fact that the Design Academy attracts many people from the same industry.

Secondly, while the creative industry was on the rise, Eindhoven had one of the largest transformation projects on hand. This simultaneous juxtaposition of supply and demand, in combination with the architectural qualities of many of the buildings, automatically lead to designers settling in former Philips buildings.

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Appendix A

