

The changing museum design principles of Wim Quist?

WIM QUIST

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Introduction

According to Lewis (2024) in recent years, the role of museums has undergone a significant transformation. No longer are they merely static repositories of art; instead, they have evolved into vibrant cultural centers that strive for social connection and community engagement. This shift has not only altered the content and function of museums but has also prompted reconsiderations of the architectural approaches applied in designing these institutions (Macdonald, 2006). Is deze ontwikkeling ook te zien bij Wim Quist, een Nederlandse architect die veel verschillende musea heeft ontworpen in de tweede helft van de 20^e eeuw (Van Der Woud & Zwarts, 1989).

This thesis aims to explore this evolution in the context of the work of renowned architect Wim Quist and his architectural firm, Quist Wintermans Architecten. Quist's designs, characterized by their clear geometric shapes and keen attention to detail, have significantly contributed to the field of museum architecture. His work provides a unique lens through which to examine the evolution of design principles related to usage in museum design (Van Der Woud, 2008).

The central research question guiding this thesis is: *"How have design principles related to usage evolved in the perspective of Wim Quist in designing museums over the past decades?"* Through a mixed-methods approach. The first two chapters answer the sub-questions through literature review, primarily using secondary sources. The last three chapters initially use secondary sources in the form of literature review and also primary sources about how the museum was received, just as old newspaper articles. Subsequently, for the last three chapters, a site visit was conducted at the three different case studies to see if and what has changed compared to the past. Lastly, by selecting TripAdvisor reviews, it was examined how the museum is viewed nowadays. The TripAdvisor reviews were selected based on the relevance of the review. The review must specifically be about the use of the museum. However, there are also a number of points of discussion, namely Wim Quist's projects were executed in quick succession, indicating efficient planning and execution. However, the scarcity of information, particularly about the Museon project, posed challenges, suggesting a need for more comprehensive documentation and accessibility of resources.

To answer this research question, three case studies and 3 sub questions are utilized.

Sub-questions:

- How has the concept of museum usage evolved over the years, and how have these developments influenced museum design or design principles? (Chapter 01)
- To what extent does the development of Wim Quist's vision regarding museum design differ from generic development? (Chapter 02)
- How did Wim Quist translate the development in museum usage into its building design over the past years? (Chapter 03 - 05.)

Chapter 03 – 05 will be answered through the analysis of the three different case studies.

Case studies:

- Museon in Den Haag, The Netherlands (chapter 03)
- Museum Beelden aan Zee in Den Haag, The Netherlands (chapter 04)
- Maritiem museum in Rotterdam, The Netherlands (chapter 05)

Chapter 01

Design principles museum

A museum is a permanent institution that does not make a profit and serves society. This institution focuses on researching, collecting, interpreting, preserving, and exhibiting tangible and intangible heritage (Desvallées, 2010). The word museum is derived from the word 'mouseion', which means a place or a temple where the muses are worshipped. A muse is a goddess of art and science in Greek mythology (Naredi-Rainer & Hilger, 2004). In the time of the Greeks, there were no museums, but there were Greek treasure rooms. In these rooms, various treasures, gifts, weapons, booty, and other objects reaching out to God were kept. At this time, it was not about the aesthetic and financial value of the object, but about its iconic value (Naredi-Rainer & Hilger, 2004).

During the Renaissance period from the 14th till the 16th century, collecting objects became popular social activity and an intellectual pursuit for individuals. Therefore, during the renaissance period collection first to be called a 'museum'. The museum emerged as a physical building, but it was not open for public. This development took place in Italy. For instance, the Vatican was the first creation of a building designed to function as a museum, designed by Pope Julius II (Simmons, 2016). As the first museum buildings emerged, so did the gallery. These were often extensions of palaces or castles, characterized by ample natural light, with natural light from above and high ceilings to exhibit paintings and sculptures. Initially, this art was for the residents themselves, but later it became accessible to the broader public (Günay, 2012). Subsequently, museums evolved not only as private buildings but also as public institutions, a development that occurred in the 18th century. The first public museum in the world is The Ashmolean Museum and it was set up in Oxford university. The development of museums with public access made art accessible to the entire populace, not just the upper class. Interest in art and museums grew, particularly after the industrial revolution, which ushered in rapid advancements in technology, art, and science (Günay, 2012).

Since United States was discovered by Columbus in 1492, much art and other objects were brought from United States to Northwestern Europe for exhibition. People were curious about what the United States looked like. Institutions like The British Museum in London and the Louvre in Paris accommodated these American artifacts. Years later, United States itself followed suit, imitating Europe, and the first museum in America, in 1773 was established in South Carolina, focusing on natural history. Nowadays, its presenting the total history of the civil war in United States. During the American Civil War, artist Charles Wilson Bill depicted war events in portraits. He transformed part of his house into a museum in 1787, later moved to Independence Hall (Alexander, 1960).



Figure 1: Section of museum design of Etienne-Louis Boullée (Reddit, n.d.)

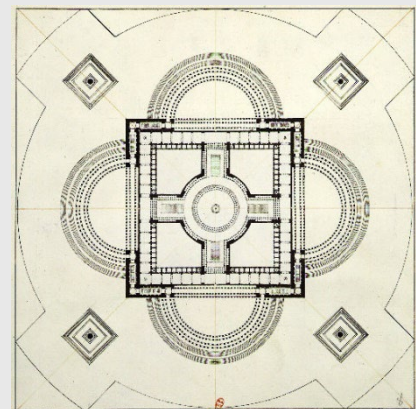


Figure 2: Floor plan of museum design of Etienne-Louis Boullée (Design-is-fine, n.d.)

In the 18th century, design principles shifted from those of the Renaissance. Buildings took on a cross-shaped form with a dome at the intersection. Facades were designed to limit natural light entry to allow for potential top lighting. Natural light remained crucial, preferably from above, and the spaces primarily exhibited natural history, books, antiques, art, and monuments. An example of this architectural style is a museum designed by Etienne-Louis Boullée, as depicted in Figures 1 and 2 (Simmons, 2016).

In Spain, the concept of a public museum developed. King Charles and Napoleon's brother collected art and antiques from various palaces and museums to display at the Prado Museum in Madrid, opened in the 19th century. Over the years, more museums were constructed, following the design principles of the 18th century, although the use of natural light shifted to include side lighting, not just top lighting (Simmons, 2016).

The 20th century saw the emergence of a new generation of museums, influenced by the aftermath of World War I. Germany and Russia, in particular, created museums dedicated to war, showcasing national pride in their militaries. After World War II, much of Europe lay in ruins, creating space for new museums as countries were rebuilt. Additionally, societal changes, notably the rise of democracy worldwide, gave museums an important and independent role as a means of expression (Lewis, n.d.).

In the 20th century, architects also evolved, giving rise to new visions of architecture, particularly in the realm of museums. The architect is the one who designs the building, draws up the plans, and oversees its construction. More broadly, they are the ones who design the envelope around the collections, staff, and the public. From this perspective, architecture influences all elements related to space and light in the museum. Initially, these may seem like secondary concerns, but they are determining factors for the meaning of an exhibition (Desvallées, 2010).

Renowned architects such as Le Corbusier, Ludwig Mies van der Rohe, and Frank Lloyd Wright had their own visions and ideologies concerning form and function, which greatly impacted the design principles of previous centuries. The 'new' architects sought what would make their design a landmark in architectural history, making museums particularly suitable due to their educational and significant cultural roles (Lewis, 2024).

Various new types of museums emerged, such as the Deutsches Museum in Munich, which covers various aspects of Germany itself. Since the 20th century, museums have become very common, attracting visitors from other countries as well. The typology of museums expanded to include subjects such as anthropology and technology (Naredi-Rainer & Hilger, 2004). Not only has the typology changed, but so have the functions. Restoration rooms, laboratories, libraries, museum shops, cafes, and conference rooms have been incorporated into the requirements of museum programs (Lewis, n.d.). According to Desvallées (2010), museums were initially designed to protect art, but this changed in the 20th century, particularly with the introduction of new functions in museums. While the earliest museums primarily sought light from above, solutions for better lighting were also sought during the 20th century (Desvallées, 2010).

According to Bayer's research (1961), during the middle of the 20th century, the design of a museum and exhibition space is based on four different aspects. Firstly, the optimization of layout, which involves designing the layout of a museum and how visitors navigate it in a logical and appealing manner to present the art. Secondly, the flexibility of spaces, as museums increasingly have less permanent exhibitions, requiring exhibition spaces to be flexible to meet various needs, such as different exhibitions, educational programs, and events. Thirdly, the

interactive and participatory elements, which encourage visitors to participate in exhibitions and activities in the museum. The final aspect is the use of outdoor spaces. To enhance the overall visitor experience, the museum may offer opportunities for outdoor installations and events. Therefore, it is important to consider the outdoor space of a museum in the overall museum design.

According to Jencks (2011), in the second half of the 20th century, there was a major architectural movement; postmodernism. Postmodernism, according to Jencks (2011), was characterized by a mixture of new and old architectural movements. This mixture resulted in architecture that did not resemble any previous architectural styles. It is therefore also referred to as a movement characterized by an eclectic style. This movement also influenced the design of museums. Furthermore, architects used historical references, such as classical columns and Gothic arches. In addition, architects embraced irony and parody during postmodernism. Conventions and expectations were played with, giving buildings a humorous twist. During postmodernism, the local context was central, as buildings were designed to fit into their surroundings and historical significance. Finally, postmodernism introduced decorative elements, as facades were adorned with patterns, colors, and sculptural details Jencks (2011).

In the 21st century, museum design principles rapidly changed due to digitalization, affecting how architects approached design. Computer-aided design allowed for better visualization of lighting, monitoring, and even virtual tours. Additionally, parametric and algorithmic design became a new trend, influencing museum design (Lewis, 2024).

These days, museums are no longer just collections of art and artifacts, but educators and community connectors of society. Nowadays, museums are not only found in physical buildings, but art and/or exhibitions can also be viewed online. Museums strive to minimize their ecological footprint and therefore also offer online exhibitions (Globe Content Studio, 2021). The museum experience is also changing. To use the Dutch Railway Museum as an example, before it was renovated in 2005, history was presented in a rather dry manner. Nowadays, there is a theater, walkthrough attraction, roller coaster, and simulator to present history. Vitrines are hardly used anymore (MuseumTV, 2020). According to Komami (2021), because a museum is seen as a community connector, it should also strive to be an inclusive museum where everyone is welcome. Otherwise, a museum cannot serve as a connector of society. To make a museum more inclusive, it is important to make it accessible to everyone, including people with disabilities. Additionally, it is important to base the museum itself and the exhibitions on the five senses of humans. This way, everyone can experience the exhibition and the museum. The concept of "universal museums" has emerged in Japan to address this (Komami, 2021).

In conclusion, museums have evolved over the years, continually developing alongside changing societal needs and expectations. These changes in design principles reflect a focus on flexibility, accessibility, technology, sustainability, societal engagement, experience, and aesthetics.

Chapter 02

General design principles versus Quist's design principles

Chapter 1 describes the history of museum design and how design principles have evolved over the years. In the 19th century, museums were designed in historical styles such as neo-Gothic or neoclassical, seen as a tribute to the cultural heritage of society. Architects aimed to evoke a sense of timelessness and reverence. Museums were perceived as symbols of cultural superiority and national pride, leading to designs emphasizing monumentality with imposing facades and large interiors reflecting the grandeur of collections (Macdonald, 2006).

In the 20th century, there was a shift in design principles towards functionalism with the advent of modernism. The focus was on functionality and efficiency in museum design, emphasizing rationality and user-friendliness, particularly in the early 20th century (Macdonald, 2006). However, according to Lewis (n.d.), in the latter half of the 20th century, architects experimented with new forms and materials. Architects at the time set a trend with unconventional and sculptural forms. Finally, compared to the 19th century, there was a greater emphasis on education and accessibility. Societal changes led museums to focus more on engaging a broader audience and promoting education. These movements prompted architects to design spaces encouraging interaction and participation, through workshops, lectures, and community activities.

In the 21st century, there is a strong emphasis on sustainability in museum design. This involves using environmentally friendly materials, energy-efficient systems, and minimizing the ecological footprint (Globe Content Studio, 2021). Additionally, museums are focusing more on rotating exhibitions, necessitating adaptable spaces and flexible buildings for easy alterations. This includes modular rooms and adjustable presentation and lighting systems (Lindsay, 2020). Furthermore, museums are increasingly integrating digital technologies, allowing for multimedia installations and virtual tours to enhance visitor experiences. Finally, inclusivity is a key design principle, with modern museums striving for diversity not only in collections but also in their designs and visitors. Accessibility for people with diverse backgrounds and limitations is becoming increasingly important, integral to both the design process and the museum experience (MuseumTV, 2020).

According to Wichers (1989), Wim Quist was born in 1930 in Amsterdam. He studied at the Academy of Architecture in Amsterdam. He quickly received various architecture awards, such as the Prix de Rome as a young architect. In 1960, he established his own firm in Rotterdam. With his firm, he designed various museums such as the expansion of the Kroller-Muller, Maritime Museum, Sculptures by the Sea, and the Museon, as well as other buildings such as the Rotterdam theater and the Willemwerf in Rotterdam. Furthermore, Quist was a professor at the Eindhoven University of Technology and was the State Architect from 1975 to 1979. In 1995, he merged with the architecture firm Wintermans to form Quist Wintermans Architects, and he eventually retired as an architect in 2003.

Wim Quist was seen as a rationalist with a fondness for geometric shapes (Wichers, 1989). According to Van Der Woud (2008), Quist does not like powerlessness in architecture. Delivering a building in perfect condition after the dialogue with the client is an ideal image for Quist. Quist differs fundamentally from his colleagues who design a building that must be 'filled in' by the users after delivery. Spaces in the house are filled with planters and calendars where careful emptiness was designed. In addition, Quist designs from minimalism, he set himself against unnecessary decorations in his buildings. Due to his clear approach in

designing minimalist buildings, clear geometric shapes emerge. These geometric shapes influence many of Quist's designs. Quist liked to use, for example, rectangles, circles, cubes, and triangles to translate complex spatial problems into simple solutions. This is clearly visible in the design of The drinking water storage place at the Berenplaat. For this project, Quist had both complex functional and complex spatial requirements that the design had to meet. He translated this into a design with striking droplet-shaped water reservoirs that refer to water, with a filter building in the shape of a rectangular bell jar. As seen in Figure X (Van Der Woud & Zwarts, 1989). Quist also liked to design with diagonal lines to bring movement and dynamics into the building or to make a visual connection with parts of a building such as the Willemswerf office building, which can be seen in Figure X (Van Der Woud, 2008).

For Quist, the relationship between the building and the environment and the function of the building is central to his designs. As with the Maritime Museum in Rotterdam, where Wim Quist succeeded in bringing various opposites in the environment into mutual coherence in one design (Archined, 2023). Quist found it important that in addition to the relationship with the environment, the function of the building was also central to the design. Every building that Quist designed had a specific purpose and function, making his buildings not only aesthetically attractive but also functional. He studied the target group well to get a grip on the functional attractiveness of the building (Arcam, 2022).

Wim Quist has designed museums, specifically in the latter half of the 20th century. Quist is known for his expressive exposition of function and construction (Wichers, 1989). According to Van Der Woud (1999), Quist's designs, particularly museums, are characterized firstly by minimalism. He is renowned for his minimalist approach to architecture, focusing on simple forms, clean lines, and essence. Secondly, he plays with the interplay of light and space, aiming for inviting and open spaces flooded with natural light to illuminate the exhibited artworks and create a sense of serenity. Lastly, functionality is a hallmark of his designs. In the case of museums, this means creating spaces finely tuned to the needs of both the displayed artworks and the visitors.

It is evident that Quist's designs are in a transitional period from the 20th to the 21st century. There is a significant overlap with design principles of the 20th century, but he also incorporates principles from the 21st century into his designs.

Museum design evolution reflects societal changes and architectural advancements. From the 19th century's emphasis on cultural heritage to the 21st century's focus on sustainability and digital integration, museum design continues to evolve. Wim Quist, a renowned architect, embodies this evolution. His rationalist, geometric designs reflect a commitment to functionality and minimalism. Quist's buildings, devoid of unnecessary decorations, deliver more than just a physical structure; they provide a carefully crafted experience. His influence on museum design and architecture underscores the significant role architects play in shaping design principles. Quist's legacy reminds us of the enduring impact of architectural innovation on societal institutions like museums, inspiring contemporary architects to explore new design possibilities.

Chapter 03

Museon



Figure 3: Building Museon (Museon, n.d.)

The Museum for Education, also known as the Museon, as seen in Figure 3, was established in 1904 by Frits Paaschen. He believed that children had insufficient exposure to industry, hence less inclination towards technical professions (Viveen, 1985). According to Baalman (1986), the Museon's museum management aimed for a shift in visitor demographics, targeting more towards adults. Additionally, the museum's collection expanded over time. Consequently, the municipality of The Hague commissioned a new building for the museum, adjacent to the Gemeente Museum Den Haag (now Kunstmuseum Den Haag), an iconic structure designed by Berlage in 1927 and built in 1935 (Baalman, 1986). The museum's entrance is linked to the glass gallery of the Gemeentemuseum, now so prominent that it effectively connects both museums. Initially, Wim Quist faced opposition from heritage enthusiasts. He wanted to connect the Museon to the Gemeente museum by using the aula and studios of the Gemeente museum, but that would mean that the most precious façade of the Berlage's building would be destroyed by Quist. Therefore there is decided that Quist need to find another solution to connect both of the buildings. Due to the respect for Berlage, Quist connected the building by using the same entrance as the Gemeente museum (Karstkarel, 1986).

Quist aimed to harmonize with Berlage's Gemeente Museum, hence he chose a measurement unit of 1.10 meters, twice 0.55 meters, the geometric basis of the Gemeente Museum (Bruynius, 1986). This grid was established based on brick dimensions; a brick with two half joints

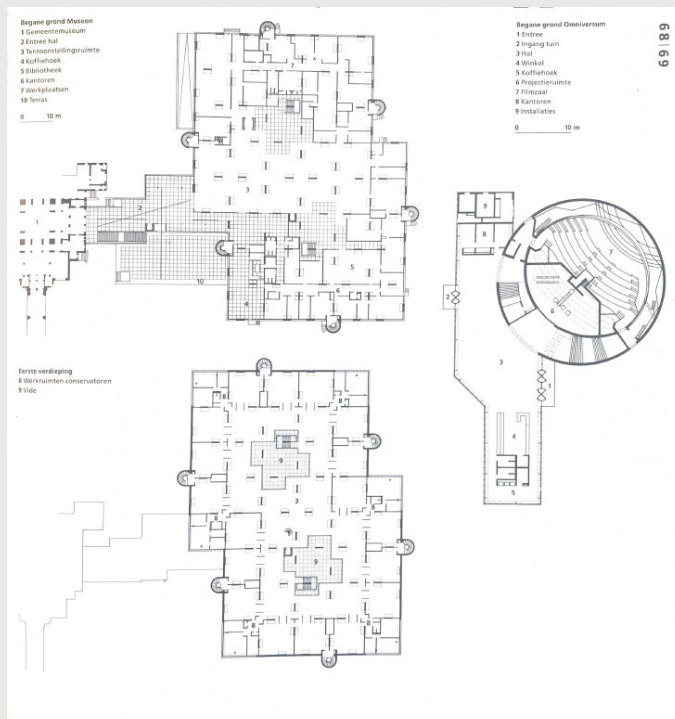


Figure 4: Ground floor and basement Museon (Baalman, 1986)



Figure 5: Column Museum (Own photo, 2024)

measures eleven centimeters in total, thus ten times eleven centimeters equals 1.10 meters (Karstkarel, 1986).

According to Karstkarel (1986), the Museon's floor plan consists of two overlapping squares, as seen in Figure 4. The sides of the grid measuring 9.90 meters are supported by disk columns, quarter-round projecting. The column, shown in Figure 5 height spans two stories, with a width of 2.20 meters. These dimensions create vistas, unexpected views, and partially enclose spaces, providing rhythm. According to Maas (1986a), the column capitals are prominently visible due to the installation channels laid in a raised floor. Initially, Quist intended concentric circles for the building's structure. However, additional functions such as studios, offices, and a library rendered round forms impractical (Baalman, 1986).

Pivot doors were installed between the column disks, creating spaces that can serve as exhibition areas when open, or enclosed spaces when closed, which is shown in

Figure 8. These spaces, located on the first floor, can also be used as classrooms, as evident from the building's floor plans (Maas, 1986a).

To enter the building, an entrance is located at the front of the museum (Knoppert, 1992). On the ground floor, there is an entrance with an introductory space provides visitors with an overview of the museum's offerings. Adjacent to this is the exhibition space, where objects are displayed without extensive explanations, also intended for temporary exhibitions (Van Heuvel, 1986). According to Van Heuvel (1986), classrooms are located on the first floor, which, as mentioned earlier, can be opened to provide additional exhibition space. Two visitor staircases connect the ground and first floors, offering views of the ground floor exhibition through the atriums. Skylights are placed above these atriums. Upon reaching the first floor, there is a transitional area connecting the classrooms and the staircases, also featuring exhibitions on various topics. Curator spaces are located at the corners of the classroom ring surrounding the transitional area (Van Heuvel, 1986). The second floor houses office space for museum staff, along with a machinery room and staff restaurant (Karstkarel, 1986). In the museum's basement, there is a depot and storage space for both the Museon and the Gemeente Museum Den Haag (Van Heuvel, 1986).

From the intersection where the museum is located, it appears symmetrical, but upon closer inspection, it is not (Van Der Woud & Zwarts, 1989).

According to Bruynius (1986), the Gemeente Museum and the Museon are like Siamese twins. Only the slight weathering of the Gemeente Museum reveals its older age compared to the Museon. This contrast is emphasized through the shared entrance.

According to Baalman (1986), the museum looks quite closed and somewhat dull from the outside. Noteworthy in the façade is the yellow brick, echoing the Gemeente Museum. The Museon's façade features a simpler masonry bond, creating a serene appearance. Bronze-colored frames were chosen for the museum's windows, a color also found in the Gemeente Museum. Quist made these choices out of respect for Berlage and his building (Baalman, 1986). According to Maas (1986a), from the outside, it is not immediately apparent that this is a museum. Many solid facades combined with glass panels impart a sense of simplicity. Oval-shaped forms visible in the facade are emergency staircases required for the museum, breaking the rectangular forms of the facade (Van Heuvel, 1986). Also reported by Van Heuvel

(1986), the play of light and sightlines intended by Quist for the Museon's design were unsuccessful. The museum turned out to be quite dark, with few visible sightlines. While visitors can look down from the two central staircases, the space feels small, with a lack of proportion between the space and the exhibitions (Van Heuvel, 1986).

In the present day situation, the entrance is located in front of the Omniversum or people can enter the Museon via the entrance of the Omniversum. Therefore, there are two entrances to access the museum. However, to reach the Museon, one must walk outside through the specially designed garden with various levels. The way of entering the Museon via the Omniversum is later in the years changed, because it was not an entrance in the first when Museon opened. The Gemeente Museum and the Museon are two distinctly different museums, yet they were connected through the same entrance. According to Knoppert (1992) In the Gemeente Museum, this arrangement caused significant noise disturbance.

Nowadays, The museum interior is quite dark. Especially on a rainy day, as on the day of the visit, there is hardly any daylight coming in. The limited light entering through the skylights was also blocked by the two prominent staircases. As a result, the light do not reach the rear parts of the museum, such as the former classrooms, now used solely as exhibition spaces, see Figure 7. In Figure 6, the pivot doors can be seen separating the general exhibition from the classrooms. However, these are no longer classrooms, but have become additional exhibition spaces.

Selected visitor reviews on Tripadvisor confirm this analysis, Gianmaria (2016) wrote that there is no clear route to navigate among the various exhibitions. Everything is placed in one space, and one doesn't know where to begin. Due to the lack of a logical layout in the museum, understanding the central theme of the exhibitions is difficult. According to a review by a Tripadvisor user named Peter (2020), the layout of the museum's exhibition was very illogical. Also, (Rianne) 2020 missed the main theme of the museum, perhaps because the museum's offerings are too diverse. Additionally, the signage was not clear.

Selected visitor reviews on Tripadvisor confirm this analysis, of tvs2012 (2023), it was difficult to navigate through the museum as a person with disabilities. Firstly, the entrance is not on the ground floor, and within the building itself, there are many small stairs. Additionally, one navigates through the museum by using the two main staircases. However, the location of the elevators is not clearly indicated. Compared to the opening of the Museon until now, the museum has not adapted to the inclusivity of the visitor. Entering the Museon is barely manageable for those with mobility issues.

To conclude, The Museon, designed by Wim Quist, is an architectural gem that respects the adjacent Gemeente Museum. However, it faces challenges in accessibility, exhibition layout, and lighting. The museum has two entrances, which can be difficult for some visitors, and the



Figure 6: Pivot doors (Own photo, 2024)

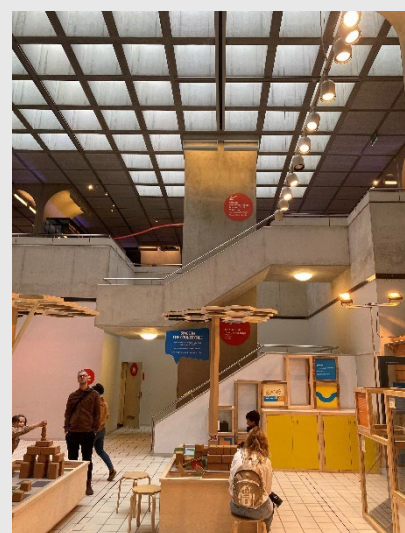


Figure 7: light panels ceiling (Own photo, 2024)

layout of the exhibitions is confusing. Additionally, despite having skylights, the interior is quite dark. Addressing these issues could greatly improve the visitor experience and make the Museon more inclusive and welcoming.

Chapter 04

Maritiem Museum



Figure 8: Maritiem Museum building (Post 65, n.d.)

In 1981, the Rotterdam Municipal Museums Department commissioned Wim Quist to design the Maritime Museum, as shown in Figure 8. It was a challenging task because it had to take into account the metro tunnel, underground cables, sewers, and remnants of an old sluice with a water barrier. Additionally, the site had a height difference of 1.5 meters, and the municipality wanted to incorporate two arcades into the design (Van Der Woud & Zwarts, 1989). According to Mens (1986), the location of the Maritime Museum is essentially in the heart of the city. The construction site is bounded by the quay wall of the Leuvenhaven, Churchill Square, and the 1940-1945 Square. The adjacent traffic flows intersect Westblaak and Coolsingel. The site can be seen in Figure 9. Due to the westward shift of port activities in Rotterdam and the raising of the Maasboulevard to 5 meters above NAP, there were significant considerations that Wim Quist had to take into account in the design.

From September 1981 to January 1982, after receiving the commission, he began working on shape studies. It became clear early on how the museum's shape would be. According to Mens (1986), it is already quite clear in Quist's initial shape studies that he sought to enclose the Blaak side by using an elongated facade. The main volume consists of two unequal triangles with a square volume in the center. Together, these two triangles form an equilateral triangle. The volume is placed as far as possible in the 'armpit' of Churchill Square. The facades



Figure 9: Site Maritiem Museum (Own work, 2024)

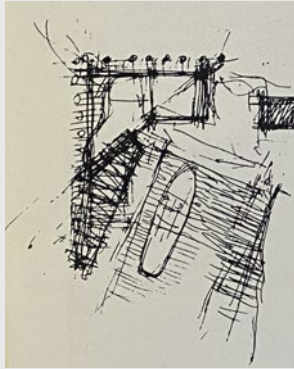


Figure 10: Sketch study 1 (Mens, 1986)

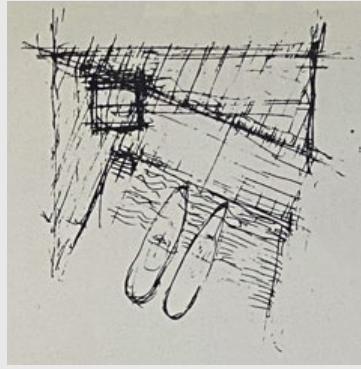


Figure 11: Sketch study 2 (Mens, 1986)

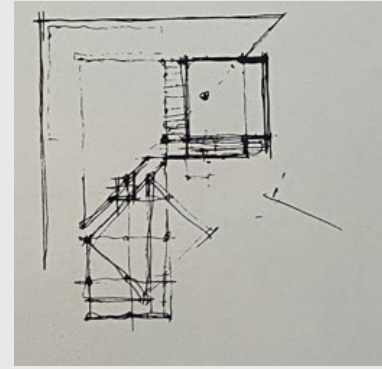


Figure 12: Sketch study 3 (Mens, 1986)

measure 72 x 72 x 102 meters. However, the square space shifts to one side of the floor plan. This development of the sketch study can be seen in Figures 10, 11 & 12. Based on these sketches, Quist shows that he sees architecture as a process (Mens, 1986). Despite the museum's shape resembling a ship, this was certainly not Quist's intention. He explains that the building's shape is not based on a ship.

The museum staff drafted the program requirements for the museum. It stated that the museum should be contemporary, with a balance between technical and thematic elements, high halls, plenty of light, few columns, not a standard showcase museum, no chronological order in the museum, and a connection between indoor and outdoor exhibitions, representing the connection between the city and the port (Mens, 1986). Despite the many level differences in the museum, almost every level is accessible without an elevator. This allows wheelchair users or those using a walker to move around the museum independently. This distance is bridged by means of a footbridge, connecting the ground floor with the first floor. There is also a half floor between these two floors. This ramp is shown in Figure 13.

According to Maas (1986b), the museum wanted to work with a permanent collection and ample space for changing exhibitions. This means that different exhibitions are displayed a few times a year. The permanent collection is called the vademecum in the Maritime Museum. This permanent collection is partly exhibited on the ground floor and on the half floor. In addition to the indoor collection, there is also an outdoor collection. Due to the large dimensions inside the museum, there is no space for this. This includes large ships, a lighthouse, cranes, and other port elements. These elements are located at the Leuvenhaven. The museum's half floor can be reached via the ramp. Through this ramp, museum visitors have a view of the 1940 Square and the Leuvenhaven, thus the outdoor collection, as shown in Figure 14. The ramp also allows for viewing the artwork from a different angle. With a normal staircase, one primarily goes upstairs and does not stop to look back. The museum's half floor is at the same level as the 1940 Square. The facade on the Schiedamse dijk, where one of the two entrances is also located, is characterized by large arcades (Quist, 1986).

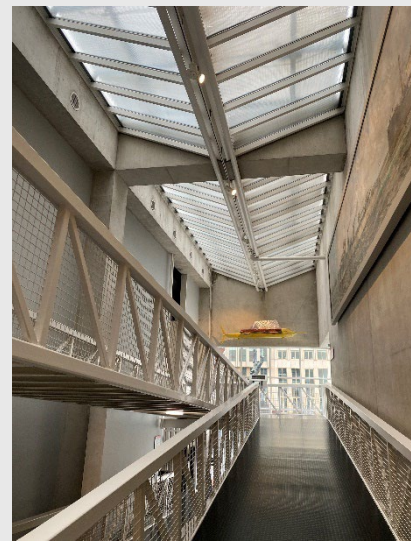


Figure 13: Ramp Martiem Museum (Own photo, 2024)

According to Van Der Woud & Zwarts (1989), the visitor is central to the design. The entrance is positioned parallel to the existing pedestrian routes of the city. This seamlessly integrates the entrance with the existing pedestrian routes. This is depicted in Figure 15 in the floor plans. Consequently, visitors do not need to search for the entrance.

According to Maas (1986b), the arcades on the side of the Schiedamse dijk are quite wide, allowing pedestrians to still somewhat occupy the sidewalk. Maas (1986b) believes that Quist has succeeded in this by preserving Rotterdam's character, as this principle of wide pedestrian areas typifies Rotterdam. In Rotterdam, you will hardly find any narrow streets. Rotterdam is spacious and expansive, as Maas (1986b) describes it. Quist opted for a white German veneer brick, which was not a cheap material, but he compensated for this with asbestos-cement panels for the part of the facade where the library is located. Behind this facade are also the offices, recognizable by the elongated strip windows. This creates a clear functional division in the facade through material and color without a significant contrast (Mens, 1986). According to Maas (1986b), the largest facade side is the south facade. The square volume containing the vademecum, combined with the elongated side of the facade, creates a beautiful interplay of lines both horizontally and vertically as well as diagonally. This, according to Maas (1986b), ensures that both parts of the facade respect each other, creating a beautiful ensemble in the facade.

The museum opened its doors to visitors on Friday, November 7, 1986, and according to Jager (1986), the museum was sobered and stripped of all frills. However, according to Moscoviter (1988), controversy arose about the museum after just one year. A new director, Henk Koops, arrived and wanted to make changes to the museum. He found the combination of the museum and the outdoor collection illogical. When he visited the museum, he felt that it was not clearly indicated that the outdoor collection was also part of the museum. This results in a loss of the connection between the city and the port. According to Moscoviter (1989), it turns out that the museum simply does not meet the expectations that were initially set in several aspects. To begin with, the museum entrance was poorly marked and the climate control is not properly regulated. Due to budget cuts during the design phase, the air conditioner was cut. Additionally, the 'new' form of a museum did not resonate with the public. In a traditional museum,

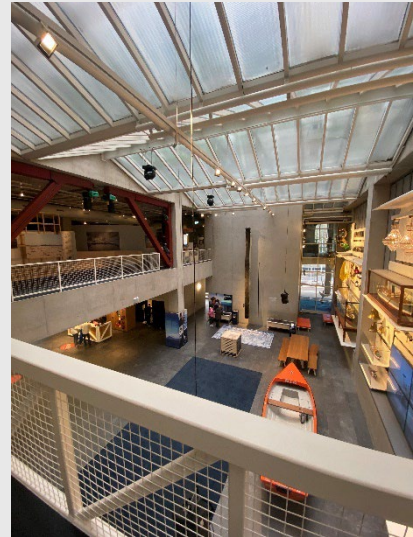


Figure 14: View from the ramp (Own photo, 2024)

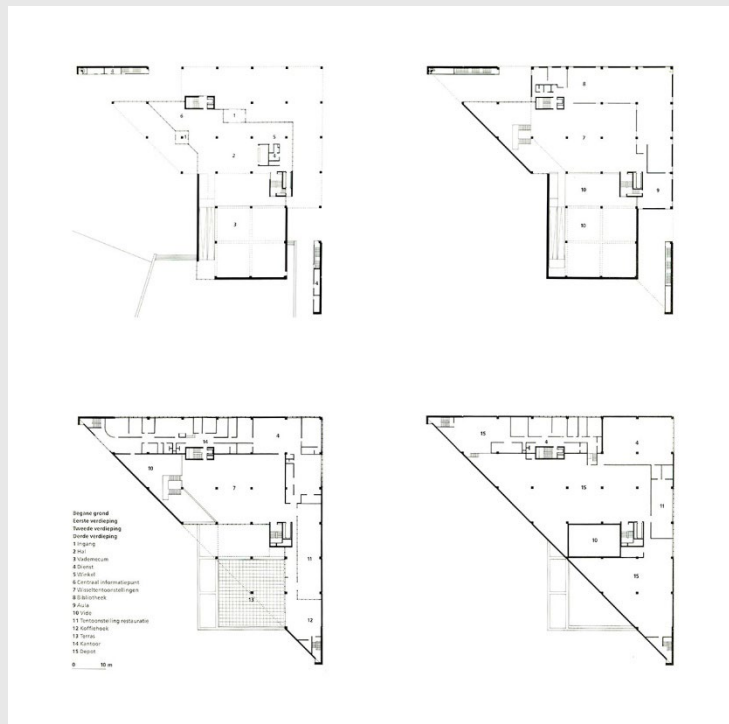


Figure 15: Floor plan Maritiem Museum (Quist architecten, n.d.)

there is a lot of exhibition space, but this is not the case at the Maritime Museum. There is little exhibition space, resulting in many rotating exhibitions. Furthermore, the location of the café is not inviting, and the toilets are also not near the café. Lastly, the entrance should be more clearly located, with the café nearby so that even people who do not visit the museum can come for a cup of coffee, according to Moscoviter (1989). In 2003, the museum was expanded and renovated because Nedlloyd had donated its art collection to the Maritime Museum. To maintain Quist's design concept, it was chosen to expand within the form of the existing museum (Quist Wintermans Architekten, 2021).

In the present day situation, there is a little connection between the outdoor collection and the collection inside the museum itself. There is no specific entrance to access the outdoor section. Visitors would have to go through the same entrance they used to enter the museum to access the outdoor exhibition. However, the outdoor collection is accessible to everyone, not just museum visitors. The entrance was quite easy to find as it was located on the main route, and visitors are essentially drawn in under the arcades. After entering the museum, it is very disorganized. Everything is in one large space, and the ticket counter is a place where people simply walked past. However, once inside the museum and walking up the ramp, the architect's vision becomes clear. A large space with various exhibitions on display, and the ramp offers a different perspective on the exhibited pieces. Because the museum does not follow the 'standard' format of museums, often with chronological order in exhibitions and a narrative, there are various exhibitions visible from different points in the museum, as depicted in Figure 16.

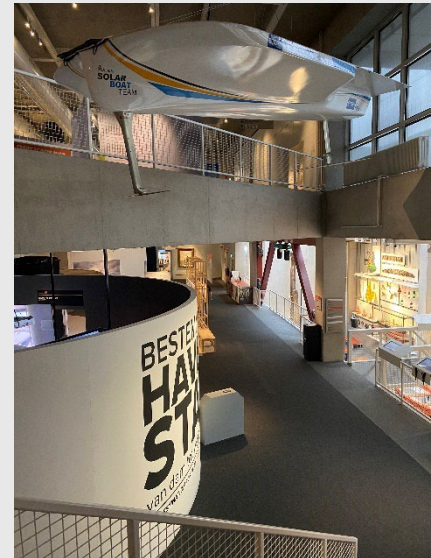


Figure 16: A viewpoint in Maritiem Museum (Own photo, 2024)

Selected visitor reviews on Tripadvisor confirm this analysis, Hendrik_NL (2023) observed the museum's challenging navigation, attributing it to a non-chronological exhibition style that diminishes the overall experience. This layout issue detracts from the museum's appeal, especially considering Rotterdam's distinction as Europe's largest port and its deep historical roots. Hendrik_NL (2023) also pointed out that there's a clear need for a museum that allows visitors to genuinely immerse themselves in and relive history, an experience currently lacking. According to another selected review on Tripadvisor Douglas (2023), mentioned that the outdoor collection was good and extensive, but only one boat per day could be visited. Furthermore, the museum itself was not spectacular. Douglas (2023) notes that there is little to see and lacks the history with its accompanying historical models and documents, it feels like a real disappointment for Douglas (2023).

In conclusion, the Maritime Museum in Rotterdam, designed by Wim Quist, is a unique architectural piece with a distinct shape that unintentionally resembles a ship. Despite its innovative design, the museum has faced criticism for its non-traditional layout and lack of clear signage, leading to a disorganized visitor experience. The outdoor collection, while extensive, lacks a dedicated entrance, causing a disconnect with the indoor exhibits. However, the museum's design concept was preserved during an expansion in 2003. While the museum embodies Rotterdam's expansive character, it faces challenges in visitor experience and functionality, presenting opportunities for future improvements. Despite these issues, the museum remains a significant part of Rotterdam's rich maritime history.

Chapter 05

Museum Beelden aan Zee, Scheveningen



Figure 17: Building Museum Beelden aan Zee (DenHaag.com, n.d.)

In 1826, King Willem I had the pavilion "Von Wied" built specifically for Queen Wilhelmina atop a dune in Scheveningen. (De Telegraaf, 1994) Later, the New or Literary Society "De Witte" bought the pavilion with its accompanying piece of dune of 42,992 square meters. A large part of the dune was resold to eventually renovate the pavilion. Since 1969, the couple Scholten-Miltenburg acquired the first sculpture for the art collection, and in 1994, the private Museum Beelden aan Zee was founded. This museum was the first museum in The Netherlands entirely consisting of sculptures (Scholten, 1994).

The commissioners couple Scholten-Miltenburg decided in the early 1980s that they wanted to create a museum for their sculpture collection. It was immediately clear to them that Wim Quist would design it. According to Schwartz (1994) The commissioners were charmed by his architectural style and simplicity, particularly impressed by his expansion of the Kröller-Müller Museum and the Noord-Brabants Museum. Additionally, architect Louis Kahn was a significant inspiration for Wim Quist, particularly the Kimbell Art Museum in Fort Worth (Schwartz, 1994).

The museum's program included exhibition and service spaces as well as outdoor space for displaying sculptures, as shown in the floor plan in Figure 18 & 19. Both the commissioners and Quist wanted the pavilion to be closely involved with the museum, perhaps even functioning as an exhibition space. However, this option proved impossible due to low ceilings and small spaces. Wim Quist did note that the light at the Scheveningen location by the beach was truly unique, even referencing the Haagsche school, as they were also fascinated by that light. Before the Scheveningen location became an option, a

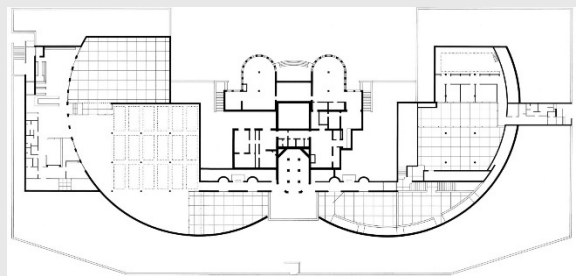


Figure 18: Beelden aan Zee floor plan basement (Quist Architecten, n.d.)

museum was planned for Bilthoven, but this location proved unfeasible. This led to the choice of the Scheveningen location (Scholten, 1994).

The couple Scholten-Miltenburg purchased the pavilion "De Witte" and wanted to expand it into a museum for their sculpture collection. It was a difficult location to expand since the dune landscape cannot move, and the boulevard of Scheveningen lay at the rear. The couple wanted the space around the pavilion to remain open, meaning the museum would have to be built beneath it, requiring the dune to be excavated. Additionally, Delftland, the water board, did not want the dune to disappear as it served as a seawall. However, calculations showed that this was ultimately possible. This prolonged the design process as investigations were conducted into whether the dune could be excavated (Quist, 1998).

Due to the museum being nestled in a dune area, Quist (1998) wrote about the aim to ensure that the museum blended into its surroundings. Thus, concrete walls were used both externally and internally. The mortar was colored the same as the sand of the dune, allowing the building to seamlessly integrate into its environment (Quist, 1998). According to Van der Woud (2008), the basis of the design was established quickly. One of Wim Quist's principles was to create open spaces in the sand at various levels, partially covered and partially not. Lighting and views of the sea were paramount. These principles led to the creation of two half circles converging at a point directly beneath the existing pavilion. Between these two half circles lies the exhibition space, nestled among the dunes, with views of the sea through gaps in the surrounding hills. This formed the basis of the design. The next step was to determine the materials. As mentioned earlier, a sand-colored concrete wall was chosen. Within the museum, the concrete walls were divided into elements measuring 80 centimeters by 120 centimeters, with stainless steel cones threaded into the pour joints, creating a visually calm pattern and serving as attachment points for displaying art. This principle can be seen in Figure 20 (Scholten, 1994).

Initially, Quist wanted to use concrete for the ceiling, but it was too heavy. Therefore, he opted for bare wooden slats and glass in the roof with steel frames. All steel and aluminum in the museum were powder-coated white to focus attention on the concrete walls and the light entering through both the facade windows and the roof. Other materials used included travertine for the floors, again chosen for its light color, those materials are shown in Figure 21 (Scholten, 1994).

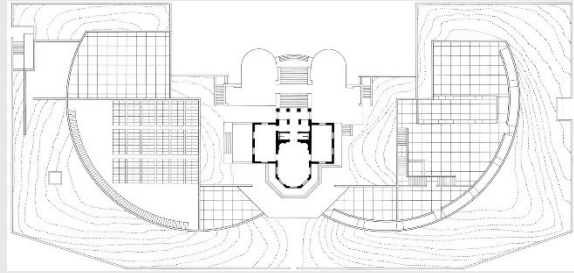


Figure 19: Beelden aan Zee floor plan ground floor (Quist Architekten, n.d.)



Figure 20 Throat seams (own photo, 2024)

Quist even considered the interior design. Quist (1998) writes about that interior design is integral to architecture, creating unity within the building. Therefore, I designed benches made of bare wooden slats, echoing those used in the ceiling, bookshelves for the museum's library, furniture for the restaurant, and the cloakroom. As Quist describes it, this creates a "Gesamtkunstwerk" or total work of art.

Because Quist aimed for a sleek design, he meticulously considered even the smallest details, such as integrating lighting into the concrete exterior walls along the museum. He concealed these lights in the upper edge of the concrete elements of the wall (Scholten, 1994).



Figure 21: Largest exhibition hall (Own photo, 2024)

According to Van Der Post (1994), the museum exudes the atmosphere of the Kimball Museum in Forth Worth, United States, and the Glyptothek in Munich. It radiates a sense of calm and simplicity in a positive sense. According to Metz (1994), this museum is the embodiment of the concept 'Less is more.' This is evident in the materialization of the museum and what it exhibits. Beelden aan Zee cannot exhibit everything at once and therefore ensures a changing exhibition. This also directs more attention to the artworks being exhibited at that moment. Metz (1994) also writes that form and function come together beautifully in the concrete walls. Namely, there is a threaded rod embedded in the heart of each concrete block. This provides rest for the eye and also has something functional, as one can attach things to it.

According to Schwartz (1994), the existing pavilion was built in a neoclassical style. Wim Quist aimed to contrast his museum and pavilion design with the existing "patat cultuur" (French fries culture) of the Scheveningen boulevard. Thus, by excavating around and beneath the pavilion, space was created for the museum, effectively making the museum act as a pedestal for the existing pavilion. The excavation of the dune not only protected nature but also allowed natural elements like sunlight and rain to influence the experience of art. Concrete walls were placed on either side of the museum to enclose it, creating curiosity about what lies behind these walls and fostering a contemplative atmosphere inside. However, these concrete walls caused annoyance for residents.

In the present day situation, it is noticeable that the entrance was not very easy to find because the museum is surrounded by concrete panels. However, this works very well for the aesthetic effect and the experience of the museum. Light streams into the museum from various directions, not only from the sides but also from above, as shown in Figure 21. In the main hall, strips of windows



Figure 22: View of the North sea (Own photo, 2024)

are installed along the outer walls. Occasionally, a tuft of grass is also visible, enhancing the sensation of being in the midst of a dune area. The different spaces are not feel like separate rooms, but rather like one large space with various exhibitions. Additionally, there is a view of the North sea, as shown in Figure 22. The facilities in the museum are quite limited. Upon entering the reception hall, all facilities can be found immediately, including a museum shop, cloakroom, and a small restaurant. Then, the various exhibitions of the museum begin immediately.

Selected visitor reviews on Tripadvisor confirm this analysis, Van Rooijen pointed out that he gets the feeling of truly walking in a dune, a true oasis of tranquility. The building seamlessly merges into the natural surroundings, with the cherry on top being the sea view from the museum. as seen in Figure 24 (Van Rooijen, 2022). According to another selected visitor review on Tripadvisor Visservanklaarwater (2018) wrote that the architecture stood out. Initially, Visservanklaarwater (2018) found it to be a dull beige concrete facade, but once inside, it was discovered that the museum has the shape of a shell. The spaces in the museum are very organized and have beautiful lighting. Inside and outside are connected. The sculptures are beautifully arranged in the various spaces, but there is also a large collection of sculptures outside (pensionaris, 2019). On the Tripadvisor website, a user called Jansens (2019) pointed out that the museum has become too small for the number of visitors. The content of the museum itself is very good, but the museum facilities are less well organized, such as the restaurant, which is actually too small for the number of people who want to sit there, the too small cloakroom, and the staff itself not being adjusted to the large number of visitors.

In conclusion, the Museum Beelden aan Zee, designed by Wim Quist, is a unique architectural achievement that seamlessly integrates into its dune environment in Scheveningen. Despite initial criticisms regarding its concrete facade and the difficulty in locating the entrance, the museum offers a tranquil and aesthetically pleasing experience, as confirmed by visitor reviews. The museum's design, characterized by natural light, views of the North Sea, and a sense of unity within its spaces, contributes to its appeal. However, the museum faces challenges in terms of its size and the organization of its facilities, which are not well-suited to accommodate the increasing number of visitors. These issues present opportunities for future improvements to enhance the visitor experience and more effectively showcase the museum's extensive sculpture collection.

Conclusion

In this thesis, answers are sought to: *How have design principles related to usage evolved in the perspective of Wim Quist in designing museums over the past decades?*

From the results,

The evolution of museums from the Renaissance to the present has seen significant architectural and ideological shifts. The concept of a museum has thus significantly changed over the years. Art has become accessible to everyone, and as a result, a museum has truly become a public building. Also, specifically in recent decades, design principles have significantly changed. In the second half of the 20th century, there was experimentation with new, sculptural forms and with new materials and combinations thereof, such as Wim Quist. Quist implemented geometric shapes in his designs, but he also experimented with new materials, such as concrete in, for example, Beelden aan Zee and Maritime Museum. Unlike some of his contemporaries, Quist did not participate in the extra decoration of buildings or the revival of earlier styles such as Gothic. Instead, he aimed for minimalism and functionality in his designs. Something that belonged in the first half of the 20th century.

Based on the three case studies, it appears that Quist takes into account the context of the museum. He takes into account both the environment of the building and the wishes of the client about what should be exhibited in the museum. As with Beelden aan Zee where the building blends into the dune landscape and large, open spaces are created inside the museum to exhibit art. This allows the museum to also change in what they want to exhibit, making the space functional. This also applies to the Maritime Museum where many different factors had to be taken into account in the environment, but still a museum was designed in which the building comes into its own. Also at the Maritime Museum, the spaces are designed so that different, changing exhibitions can be placed. And through the slope, one has a view of the exhibition at different levels. The same applies to the Museon, out of respect for Berlage, a building was designed that fits both the environment and the adjacent Gemeente Museum. Also inside, the space is designed in such a way that a large space can be made from all small spaces. This keeps the space functional.

Quist has clear design principles that he works with, as shown in chapter 02. However, Quist pays very little attention to the criticism he receives. At the Maritime Museum, comments were made shortly after the opening about the way of exhibiting. There was no clear route of the exhibition and therefore the common thread was missing. People also found the exhibition space too small. This has not been adjusted over the years and people still have the same criticism as at the time. In addition, there had been criticism at Beelden aan Zee about the limited facilities such as the restaurant and the cloakroom. At the Museon, criticism was made about the fact that it was too dark in the museum itself and there too the common thread in the museum was missing. This is still a point of criticism when looking at visitor experiences. What was remarkable was the fact that the Museon has poor accessibility for people in a wheelchair or who have difficulty walking. This came to the fore in one of today's visitor experiences. This is also related to the design principles of 21st century museums, where inclusivity, accessibility are important design principles when designing a museum. Yet the three museums show what the design principles are of Quist and what has been criticized is the result of the application of his design principles. Such as designing from functionality, playing with daylight and making visual connections between spaces.

Because inclusivity and accessibility are design principles that only came into play in the 21st century, it is plausible that in the second half of the 20th century, when Quist designed the three museums, there was no criticism about inclusivity and accessibility yet. As societal needs and expectations continue to evolve, so too must the design principles related to usage in museum architecture continue to evolve.

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