Sleeping Beauty
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Wessel de Jonge is founder and partner in Wessel de Jonge Architects in Rotterdam, a firm with international recognition in the field of adaptive re-use of recent architectural heritage in dynamic urban contexts, as well as an expanding portfolio of new buildings. The portfolio of his architectural practice includes the restorations of the Netherlands Pavilion at the Venice Biennale (Gerrit Rietveld, 1953) and the rehabilitation of the Van Nelle Factory in Rotterdam (Brinkman & Van der Vlugt, 1925-28). He was awarded the World Monument Fund / Knoll Modernism Prize in 2010 for the benchmark restoration and adaptive re-use project for the 1926-28 former Sanatorium 'Zonnestraal'. He is a partner in the design team for the on-going restoration and adaptation of the 1938 Olympic Stadium in Helsinki. Recent projects include the Forum Rotterdam project (with OMA) and the adaptive re-use of the 1960 Orphanage by Aldo van Eyck.

In 1989, he was the co-founder of DOCOMOMO International, a worldwide network of scholars, architects and conservation specialists in the preservation and adaptive re-use of 20th century built heritage. With Prof. H.A.J. Henket he published "Het Nieuwe Bouwen en Restaureren. Het bepalen van de gevolgen van restauratie ingrepen", Zeist 1990. Further noted publications include his chapters in "Van Nelle Monument in progress", Rotterdam 2005: http://www.wesseldejonge.nl/publicaties.php?pubid=11, and in "Sanatorium Zonnestraal. History and restoration of a modern monument", Rotterdam 2010: http://www.wesseldejonge.nl/publicaties.php?pubid=19. His most recent open-access publication is "Sustainable Renewal of the Everyday Modern" in the Journal of Architectural Conservation, Taylor & Francis, London July 2017 (open access): ww.tandfonline.com/doi/full/10.1080/13556207.2017.1326555

Sleeping Beauty

Wessel de Jonge

1. ‘Zonnestraal’ Sanatorium, built 1926–1928, after restoration in 2003. The lightness of the structure almost makes the building dissolve into nature / *photo Michel Kievits - Sybolt Voeten, Breda*

2. Het Schip housing block in Amsterdam (Michel de Klerk, 1921) is an early example of a twentieth century building that was listed in 1974 already / *photo unknown - Museum Het Schip, Amsterdam*

This article is based on the inaugural address of Prof. Wessel de Jonge.[1] *It presents the dilemmas related to the conservation and adaptive reuse of recent architectural heritage particularly focussing on the author's pioneering engagement with Modern Movement buildings.*

The field of operation for built heritage professionals has been widening in scope over the past decades in an unprecedented way. Early conservation professionals were mainly concerned with the restoration of neglected castles, historic mansions and ruinous churches. These represented only a limited quantity of outstanding pre-industrial buildings that were generally also appreciated by the public at large. Successive regulations in the Netherlands suggested that buildings had to be older than 50 years in order to ensure sufficient distance-in-time which would allow for a proper assessment of their historic value. This was reaffirmed in the first Dutch Historic Buildings and Monuments Act of 1961 and the following selection of eligible buildings for legal protection pre-dating 1850. However, since 1980 new policies were developed to actively advance the listing and conservation of heritage buildings from the 1850-1940 period. In order to be able to pursue these policies as soon as the 50-years cut-off date and other administrative constraints would be lifted, a critical selection of such buildings was prioritised.[2,3]

NEW CHALLENGES

The nomination and listing of recent architectural heritage appeared to pose completely new challenges to both the selection and the conservation in comparison to pre-industrial built heritage.

First of all, many buildings of the modern era were constructed using steel, reinforced concrete and other new and often industrially prefabricated building materials. Their ageing and repair was still a blind spot in conservation practice while at the same time these new buildings methods caused modern buildings to decay more rapidly than many of their traditionally built counterparts.

The sheer quantity of buildings produced in the industrial era presented a second challenge. More buildings by far were constructed during the twentieth century than during all preceding ages taken together. The number of twentieth century buildings that needed to be reviewed

1
Wessel de Jonge is Professor of Heritage and Design. His inaugural address was presented on 10 June 2016 under the title 'Sleeping Beauty - About Transitoriness, Timelessness, the Future and Architectural Design'.

2
Kuipers 1998a; Kuipers 1998b. Historic buildings dating to the period 1850–1940 were referred to as 'Young Monuments'. Buildings included in this prioritized selection were the Open Air School in Amsterdam, the Nirwana apartment building in The Hague. Hilversum Town Hall and the Sonneveld House in Rotterdam. See for details www.rijksmonumentenregister.nl.

3
For an overview of the development of the conservation movement see: Glendinning, M. *The Conservation Movement: Antiquity to Modernity*, 2013, Taylor and Francis, Hoboken.

3. The Hilversum Town Hall (Marinus Dudok 1931) was one of the buildings prioritized for listing when the field of heritage preservation broadened to include the 1850–1940 period, and was listed in 1985 / *photo Arie den Dikken, Huizen*

4. Huis Sonneveld (Brinkman & Van der Vlugt 1933) was also one of the buildings preselected to represent the 1850–1940 period. It was listed in 1986 and is a house museum today / *photo Jannes Linders, Rotterdam*

for possible listing could have easily jammed the entire system of designation and funding if traditional procedures were to be followed. New selection instruments had to be developed and hard choices had to be made in order to prevent indecisiveness and carelessness from leading to the loss of the valuable built heritage of our recent past altogether. Given the poor material quality and state of decay of many of these buildings, time was of the essence: it was either choose or loose.

Another crucial aspect was the continuous widening of the focus of attention in heritage preservation. When the first Cultural Heritage Agency was founded in the Netherlands in 1918, those buildings that were generally regarded as architectural heritage included the traditional and pre-industrial built legacy that celebrated nobility through their palaces, the clergy by means of churches and represented civic pride in the form of town halls and other monuments. Since the 1960s, the focus of attention widened to include more modest buildings representing societal developments and everyday life of the past, as well as some early examples of industrial heritage. The legacy of the Modern Movement was gradually becoming part of a conservation-worthy legacy from a more recent past. The paragons of twentieth century architecture and those of the Modern Movement in particular, are mostly ordinary buildings that were designed to create a better life for the masses, often taking the form of healthy housing and schools, hygienic and day-lit workplaces or health-care facilities.

The conservation of these buildings posed an ethical dilemma: they were designed by architects who held critical anti-monumental stance,[4] stating that buildings should be purely functional, and after having lost their function, they should be disposed of. This means that conserving the substance of these 'ordinary' buildings as 'monuments' goes contrary to the original 'idea'.

A last crucial challenge presented itself: Many of the older heritage buildings could be maintained as museums or tourist attractions. The potentially high number of listed twentieth century buildings made this approach unfeasible and implied that finding economically viable uses was the only way to lend them a second lease of life and safeguard their futures.

4
In 1937, Lewis Mumford (1895–1990) echoing the perspectives of Modern Movement architects, proclaimed that 'The death of the Monument'. See Mumford, E. *The CIAM Discourse on Urbanism. 1928–1960.* 2002, MIT Press. Cambridge Mass./ London.

5. The Swedish social housing industry headed by the Secretary of Social Affairs Gustav Möller, as depicted by cartoonist Nils Melander in 1939 (left) / Ernst May's 1929–1931 Westhausen Siedlung at Frankfurt (right) / *photo unknown*

6. The Van Nelle Factory as seen from the entrance in 1930 / *photo Evert van Ojen – Gemeente Archief Rotterdam*

7. Sanatorium 'Zonnestraal' shortly after completion in 1928 / *photo unknown - International Institute for Social History, Amsterdam*

MODERN HERITAGE[5]

The socio-cultural and technological developments of the Industrial Revolution initiated an unprecedented process of urbanisation and a change of lifestyle suited to the spirit and new realities of the Machine Age. Modern times triggered a demand for new and specific building types, such as factories, infrastructural buildings and social housing. The functional programs of buildings also became increasingly diverse and specific. The vanguard architects of the 1920s took the perspective that a direct link exists between a building's design, its technical lifespan and user requirements over time. As the projected timespan for a particular use shortened as well, time and transitoriness became important issues in the architectural discourse, i.e. leading ultimately to either a transitory or to an adaptable architecture. The consequent translation of these ideas into practice produced some remarkable buildings, including the Van Nelle Factory in Rotterdam,[6] and its contemporary Sanatorium 'Zonnestraal' in Hilversum[7] of 1928. Those vanguard architects were ruled by the principle of utmost functionality. A rigorous distinction was followed out between load bearing structure and infill to allow for maximum functional flexibility over time. Light and transparent materials were employed in façades to ensure unrestricted access of daylight and fresh air. Related to the idea of varied lifespans was the introduction of prefabrication of larger building components, which allowed for both the easy replacement of deteriorated parts, as well as future adaptation to respond to functional change.

They took advantage of the specific qualities of materials to build as lightly as possible, with a minimal use of material. Johannes Duiker (1890–1935), one of the foremost Dutch Modern Movement architects, labelled this philosophy ´spiritual economy´ that, as he wrote in 1932, '… leads to the ultimate construction, depending on the applied material, and develops towards the immaterial, the spiritual.'[8] In their search for optimal constructions, Modern Movement architects designed buildings that were extremely sensitive in terms of building physics.

5
Henket and De Jonge 1990.

6
The Van Nelle Factory was designed by Johannes (Jan) Brinkman (1902–1949) and Leendert van der Vlugt (1894–1936) during 1925–1931 and constructed between 1928-1931.

7
Sanatorium 'Zonnestraal' was designed by Johannes (Jan) Duiker (1890-1935) and Bernard Bijvoet (1889–1979) between 1926-1928 and completed 1928–1931. The design team also involved structural engineer Jan Gerko Wiebenga (1886–1974). In this text, the name of Duiker is used so as to represent the team of designers.

8
Duiker 1932.

SLEEPING BEAUTY

In his design for Sanatorium 'Zonnestraal', Duiker produced an early, and arguably his most direct, response to a short-lived functional program. Duiker advocated an architecture that was the result of reason rather than of style, and he attributed great value to the connection between form, function, material, economy and time. He argued that whenever a building's purpose had to change, the form would cease to have a right to exist and the building should either be adapted or demolished altogether. Duiker thus regarded buildings as utilities with limited lifespans by definition. He designed 'Zonnestraal' to be disposable: Based on a solid belief in Science and Progress, the complex was conceived in the conviction that tuberculosis would be exterminated in thirty years' time.

At 'Zonnestraal', Duiker managed to subtly balance user requirements and technical lifespans with the limited budget of the client, thereby creating buildings of breath-taking beauty and great fragility at the same time. Today 'Zonnestraal' – once pre-selected for future nomination as World Heritage – confronts us with the conservation of structures that were intended to be transitory.

DESIGN INTENT

It is clear that the conservation of such buildings poses great challenges in both conceptual and material terms due to their transitory character. Both of these aspects must be understood as part of the original design intent. Sanatorium 'Zonnestraal' seems to embody Adolf Behne's (1885–1948) original 1923 definition of 'functionalism', as opposed to 'rationalism'.[9] Behne – probably inspired by the early works of the German architect Hugo Häring, and more precisely by his 1923–1925 design for the Gut Gurkau Farm – defined functional planning as a design process that departs from the functional program and involves the careful design of individual spaces for each particular use with specific dimensions and performance characteristics, thereby organically producing a tailor-made suit.

8. The Dresselhuys Pavilion of 'Zonnestraal' in the 1930s ***/ photo unknown - International Institute for Social History, Amsterdam***

9. The Dresselhuys Pavilion in 2008 after the roof had collapsed ***/ photo Rudolf Wielinga, Heerenveen***

10. The Dresselhuys Pavilion of 'Zonnestraal' after restoration in 2013 ***/ photo Arie den Dikken, Huizen***

At Sanatorium 'Zonnestraal' each room in the Main Building has its own dimensions and even the height of the spandrels varies according to the particular use of the space concerned. It is self-evident that the specificity of this architectural solution went hand-in-hand with a short functional life expectancy.

The factories for the Van Nelle company, designed almost at the same time, comply more with Behne's definition of 'rationalism' by providing large quantities of generic spaces of which the uses were expected to vary greatly over time. This is typical for production processes. The non-specificity of the factory halls suggested a long functional lifespan was projected, which in turn required a long technical life expectancy.

Sanatorium 'Zonnestraal' and the Van Nelle Factory demonstrate different architectural responses developed in the 1920s to the problem of short-lived functional life expectancy. These differences greatly influence their suitability for adaptive reuse today. A highly specific, tailor-made 'functionalist' building like Sanatorium 'Zonnestraal' may not be easily adaptable to functional change and is therefore likely to have a short functional life expectancy. The non-specific but generic 'long life, loose fit' spatial logic of the Van Nelle Factory lends itself rather easily to adaptation, as was demonstrated by its recent conversion into a centre for design studios and offices. Also for architects today, understanding this lesson from history holds the key to designing new and sustainable buildings for the future.

In short, even within the Modern Movement various architectural concepts have lead to fundamental differences between modern buildings, which therefore require different design approaches when planning their conservation or adaptation. This underlines the need for a comprehensive study of not only the material aspects of a building, but also into the design intent or conceptual background thereof before making design decisions as part of a transformation or conservation project.

9
Behne, A., Bletter, R. H., and Robinson, M. 1996 (1926). Although Behne wrote his text in 1923, before other mayor publications by Walter Gropius (1883–1969) and Erich Mendelsohn (1887–1953), it was only published in 1926. See also Heynen 2014.

11. The interior of the Van Nelle Factory in the late 1920s, featuring novel light fixtures and a conveyor system ***/ photo Jan Kamman – Gemeente Archief Rotterdam***

12. A similar factory hall abandoned in the late 1990s, awaiting restoration and a new use ***/ photo Wessel de Jonge Architects, Rotterdam***

13. After conversion into the Van Nelle Design Factory since 2001, the factory halls today accommodate design studios and offices. To the right, the double-skinned 'climate wall' ***/ photo Michel Kievits - Sybolt Voeten, Breda***

14. The Main Building of Sanatorium 'Zonnestraal' after completion in 1928 / *photo unknown - Het Nieuwe Instituut, Rotterdam*

15. After the removal of all later additions and alterations, this was all that was left of the original substance of the Main Building of Sanatorium 'Zonnestraal'. The upper corner shows the first test for the new glazing / *photo Wessel de Jonge Architects, Rotterdam*

16. The Main Building of Sanatorium 'Zonnestraal' after restoration in 2003 – a representation of the original idea and design intent, rather than original materials / *photo Michel Kievits - Sybolt Voeten, Breda*

GOING GLOBAL

Ironically, the heritage designation of Sanatorium 'Zonnestraal' further canonized this transitory structure as a timeless masterpiece.[10] However paradoxical the heritage status of Duiker's *chef d'oeuvre* may appear, the case of 'Zonnestraal' definitively altered the perspectives of the international conservation world. It inspired the creation of an international platform to share research and early hands-on experience in the conservation of 'modern heritage' among architects, heritage professionals, researchers, students and their teachers. This platform, called DOCOMOMO International – an acronym for the 'International Working Party for the Documentation and Conservation of Buildings, Sites and Neighbourhoods of the Modern Movement – was established at the Eindhoven University of Technology in 1990. After more than 25 years of activity, DOCOMOMO counts over 60 national and regional working parties as well as several trans-national thematic networks. The first steps taken then by the organisation still serve as a reference in the international discourse about twentieth century architectural heritage, that has now entered onto the agendas of such institutes as the UNESCO World Heritage Centre and the International Council on Monuments and Sites (ICOMOS) in Paris, and the Getty Conservation Institute in Los Angeles.

THE 'ZONNESTRAAL' RESTORATION PROJECT

The restoration and adaptive reuse project for the Sanatorium 'Zonnestraal' complex started in 1993.[11] The work on the Main Building was completed ten years later in 2003, and the exterior restoration of one of the two patient pavilions followed only in 2013, twenty years after the initiation of the project. The other pavilion had already been refurbished in the 1950s and still awaits restoration.

Due to earlier refurbishment of the Main Building only the concrete frame, a few partition walls and a portion of the original steel window frames remained of the original building fabric and these could be preserved. The 2003 project further included the restoration of the original façades, partitions and finishes as well as some components of the service systems.

Initially the view was held that the crucial value of this building lay within the conceptual intent of the original designers and the restoration

10
Kuipers 2010. The earliest campaigns to safeguard 'Zonnestraal' were started by architects, among them J. Bakema, in 1960. After the building's listing in 1980 legal protection remained pending due to objections by the then owners. Preliminary protection became effective in 1983 while full legal protection followed only in 1988.

11
Henket, De Jonge 2010b. The project was conducted by Bierman Henket Architects, Wessel de Jonge Architects and Alle Hosper Landscape Architects.

17. Looking through the drawn glass into the main hall on the first floor, featuring tubular radiators, light fixtures and linoleum flooring that were remanufactured for the restoration / *photo Jannes Linders, Rotterdam*

18. The architect's role is like being the leader of a jazz ensemble or a string quartet: each member is equally important but someone has to set the tone / *photo Gjon Mili*

19. By recognizing restrictions as challenges, the architect takes advantage of what is available to make smart designs / *photo unknown*

project therefore aimed at revitalising the physical manifestation thereof. However, during preparatory research, it became apparent that the physical fabric itself was vital to make the full meaning of 'Zonnestraal' in its cultural context and time comprehensible. The retention and – where necessary – restoration of physical fabric became an essential component of the ambition to revitalise Duiker's architectural concept successfully. Some lost elements – including the new steel window casements, the drawn window glass and the terrazzo floorings – had to be reconstructed carefully at high cost. Two original designs of linoleum were even remanufactured. Other replicas of mass produced parts from the 1920s, like window hardware and light fixtures, had to be handcrafted. Other elements could be replaced in a convincing manner by standard products that are still readily available.

Even if the conservation of original fabric was only possible to a limited extent one can convincingly argue that it was a truthful restoration. The 'Zonnestraal' case confirms that the presence of substantial amounts of original material is not a prerequisite for conveying cultural and architectural-historical significance. This observation underlines the ambiguity of the notion 'authenticity'. Today, Sanatorium 'Zonnestraal' houses a variety of independent health services for outpatients, as well as conference facilities.

When the restored building was opened in 2003 it was as if Sleeping Beauty had not only awoken … but had transcended her physical self.

CULTURAL HERITAGE AND ARCHITECTURAL DESIGN

The role of the architect in the conservation, adaptive reuse and transformation of buildings that form part of our cultural heritage requires particular knowledge and skillsets. The first and most important requirement is the inspired creativity and ingenuity of the designer. These lie at the core of any good architectural intervention. When dealing with an existing context or building, it should be the source of inspiration for creativity.

Successful projects are primarily based on making proper and responsible use of the existing qualities of a building. The architect should have highly developed professional skills and command a thorough knowledge of architectural history, including an understanding of the conceptual development of design principles and the related building technologies of the past. Only then will the architect be able to conceptualise a successful reinterpretation of the historic, cultural and architectural values of an existing context or building.

However, in order to develop a future-proofed architectural concept, it is also necessary to have knowledge of the parameters of economic value and the principles of sustainability as well as to understand indoor climate control concepts and technologies.

The architect should not necessarily be a top specialist, but rather be an integrator, operating in a team and collaborating with consultants. His/her role includes, for instance, the providing of advice on historic research, building physics, climate design and structural engineering. It also sometimes means cooperating with fellow architects with different fields of expertise. The role of the architect has changed from being the classic conductor of an orchestra into that of the bandleader of a jazz quartet where each member plays an instrument and is therefore equally indispensable. And yet: somebody has to set the tone.

The architect contributes both to the value creation for historic real estate and to a historic continuity by mastering all of this knowledge and integrating it with ingenious creativity. To my mind an inspiring synergy between old and new can be found in looking for compatibility and balanced contrast, rather than for creating conflict between current demands and existing characteristics – be they historical, architectural or technical.

By recognizing restrictions as challenges, the architect makes use of what is available and, in so doing, generally creates economically viable and sustainable solutions. Following these principles leads to smart designs that make optimal use of a building's properties and values.

20. The Adambräu Brewery in Innsbruck after restoration in 2008 / *photo Christof Lackner, Innsbruck*

21. Section of the Adambräu Brewery showing the perforated silos on top of the glazed brewery hall / *drawing Köberl+Giner, Wucherer and Pfeifer Architects, Innsbruck*

22. View through the diagonally perforated silos that today accommodate an architectural archive collection / *photo Christof Lackner, Innsbruck*

23. The Adambräu Brewery hall today serves as a venue for the Architects' Association of Tirol / *photo Christof Lackner, Innsbruck*

The Adambräu building in Innsbruck serves as a small yet inspiring example of where a typology has been cleverly transformed. Lois Welzenbacher (1889–1955) originally designed this brewery in 1929–1932. Its cool and dark silos initially appeared completely unsuited to any new purpose, but thanks to their stable climatic conditions, the thick concrete silos were eventually found to be perfectly suitable to serve as an archive for architectural drawings and documents for the Tyrolean Architecture Centre. The three collaborating architect's studios, Köberl+Giner, Wucherer and Pfeifer, turned what appeared to be a disadvantage into a positive and useful aspect in their smart 2008 design.

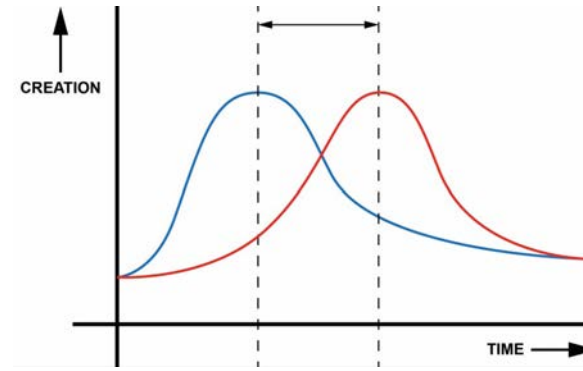
Wherever a mismatch with a new functional use exists, the architect should have the capability to effectively intervene, as long as the historic qualities are sufficiently respected. A successful example of this is the 2011 transformation of the former chapel of the Convent of San Fransesc in Santpedor, Spain. The architect David Closes transformed this sacred building into a modern auditorium.

The Caixa Forum museum and cultural centre in Madrid is a former power station that was transformed by the architects Herzog & De Meuron between 2001 and 2007. They had to find a solution to the lack of much-needed public space around the building: carving out the ground floor of the power station helped to solve this problem albeit at the expense of the original interior fabric that was completely replaced by a new structure.

What all of these projects have in common is the remarkably sharp eye of the (re)designer, able to recognize and interpret the architectural qualities of existing structures which are not obvious to most people, which allows them to make cutting-edge design decisions.

24. The Convent of San Fransesc in Santpedor has been transformed into an auditorium by David Closes / *photo Jordi Suroca, Barcelona*

25. A power station in downtown Madrid after the transformation into the CaixaForum museum by Herzog & De Meuron Architects / *photo* Óscar *Carnicero*



26. The Roman Theatre of Marcellus, completed in 11 BC / *photo Maurizio Olmeda, Rome*

27. The GAK Building in Amsterdam (Ben Merkelbach, Piet Elling, Alexander Bodon 1960) was abandoned in 2005 / *photo Theo van Leur, Amersfoort*

28. A comparison of the 'creative curve' when designing new buildings (blue) and re-designing existing buildings (red) for which the creative process builds on a basis of research / *figure Wessel de Jonge – TU Delft*

LOOKING WITH OTHER EYES

It is self-evident and generally accepted that the Roman Theatre of Marcellus dating from 11 BC forms part of our cultural heritage. Most people will understand that this old structure is not just a pile of rubble, even though its original function was altered by converting it into dwellings during the Renaissance. If, however, we consider the 1960 GAK building in Amsterdam,[12] things become less self-evident. Some may affirm that it is old junk that should be torn down while others see it as an outstanding structure worth preserving. Yet in both cases, an architect should be able to find a clue to the definition of their individual and particular values. One of the most valuable contributions an architect can make to the successful reuse of heritage buildings is his capacity to look at a building with other eyes, in other words in an uncompromised way.

DESIGN DYNAMICS

The design process typically requires much more preparatory research when working with built heritage or other existing buildings than is the case when designing new buildings. In dealing with heritage buildings, the design process takes its historic values and characteristics – established in part through careful historic research and building surveys – as points of departure. Historical and architectural qualities need to be assessed and interpreted into design guidelines for transformation; functional qualities, once identified should be translated into options for new functional programs. This helps the client see the potential of the property.

This is an example of so-called 'research-based design'; a methodology with specific characteristics. The creative curve in research-based design shows how the creative process builds on a basis of research and interpretation that precede the actual design process. This may diverge from the dynamics of general design processes for new buildings, where the creative peak can be reached earlier in the process as fewer preparatory studies are mostly required. Such a difference in dynamics needs to be taken into account, for instance, when operating in teams with other designers and when planning the design process as a whole.

12
The Gemeentelijk Administratie Kantoor (GAK building), designed by Benjamin (Ben) Merkelbach (1901–1961), Petrus (Piet) Elling (1897–1962) and Alexander Bodon (1906–1993) in 1957-1960, is protected as a municipal monument.

THE FUTURE OF HERITAGE & ARCHITECTURE

To conclude, it is worthwhile to consider the future of our field of work. The vacancy of real estate is an increasing challenge in the Netherlands, as it is in many other European countries. Although many professionals in the real estate and building industry do not sufficiently recognise the full consequences, vacancy rates are still speeding up at an alarming rate.

Office buildings in particular are prone to obsolescence, due in part to the general economic downturn of the last years, but also, and more structurally so, due to new work formats that are being adopted. People increasingly work at home for a part of the week and share a workstation at the office. Even though a significant amount of obsolete office buildings have successfully been converted into housing during the last few years, the vacancy rate for commercial office space sky-rocketed in the Netherlands to 16% at the start of 2015.[13] That translated to eight million square metres of vacant office space.

These figures are still on the rise. Experts on the obsolescence of historic buildings at the Cultural Heritage Agency of the Netherlands (RCE) have already warned for many years that the vacancy rates increase by 'one farm a day, two churches a week and a monastery a month'. To this we could add: an office block twice a day!

Of course our society cannot afford to simply demolish every building that has lost its use, be this due to economic reasons (our pensions are invested in them, after all!) or the environmental effects in terms of sustainability. Demolition leads to a huge amount of resources being discarded and wastes large quantities of embodied energy. In the case of buildings with historic significance, demolition becomes even less acceptable for cultural reasons. As the number of obsolete buildings is likely to remain very high in future, this will define the professional field of architects for the coming decades.

Vacancy rates	Year	Volume	Million square meters
Vacancy office space	2017	14,1%	6,8
Vacancy office space	2016	15,8%	7,8
Vacancy office space	2015	16%	8
Vacancy retail space	2015	9%	2,9
Vacancy listed buildings	2015	10.000 buildings	2
Vacancy apartments above shops	2014	40.000 apartments	>3

The Real Estate Chair at the Faculty of Architecture of the Delft University of Technology estimates that even when the economy has fully recovered, six million square metres of extant vacant office space will never get to be used as such due to fast-changing work habits.[14] This is equal to about 70.000 average housing units, or 850 of the proverbial soccer fields.

In addition to this, an alarming amount of shops stand vacant. At the end of 2015, this comprised almost three million square metres of unused floor space, to which can be added numerous churches and other religious, commercial and infrastructural buildings. Historic buildings account for an estimated two million square metres of the total of vacant floor space in the Netherlands.

It is evident that most of the real estate of the future already exists. Architects need to offer their professional expertise to help finding ways of using this properly to serve societal needs. This can be done by preservation, adaptation or transformation, and by making our building stock more sustainable.

CHANCES FOR HERITAGE

It may seem paradoxical that the real estate crisis of the past years should lead to new chances for the revitalization of architectural heritage. Now that the economy is showing signs of recovery, we can assume that the funds and institutes that have traditionally invested in architectural heritage will continue to do so. But new stakeholders will also attempt to profit from the lowered real estate values and take advantage of the various incentives that have been introduced to address the vacancy problem in general.

Built heritage stands out due to a distinctive historic architectural character. This represents a unique selling point that will probably lead to a larger percentage of real estate investments being diverted towards the restoration and adaptive reuse of historic buildings. More historic buildings therefore can be lent a second lease of life and the volume of conservation and adaptive reuse projects is likely to increase. Built heritage professions, including H&A graduates and other young architects can seize the opportunities that are now opening up to kiss our sleeping beauties awake.

13
DTZ Zadelhoff 2015. This reduced slightly to 14,1% by January 2017 (Cushman & Wakefield, formerly DTZ Zadelhoff 2017). Adaptive reuse has been actively stimulated in the Netherlands, through amongst others the National Redevelopment Programme, initiated in 2010.

14
Remøy, and Van der Voordt, 2007.

29. The GAK Building in Amsterdam in 2015, after its transformation into housing for young professionals / *photo Luuk Kramer, Amsterdam*