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Cadavre Exquis: Dutch Architecture with Landscape Methods Vol. 3

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The project that generated this book was as much a crazy adventure as it was a wisely planned research. In any research laboratory great inventions need a playful atmosphere. Oftentimes we are inspired by the big humor of most successful scientists as much as by the exactitude of the most imaginative designers. None of them - none of us - can achieve any new knowledge alone - and thus we would like to express our deep gratitude.

First of all we have to thank the RA VB teaching coordinator Margit Schuster and Head of School Chris van Langen for their trust, curiosity and support. Jan Duursma and Piet Brusse for helping with the exhibition and all RA VB staff for backing up and our colleagues in the teaching staff had a lot of patience with us and our sometimes overly enthusiastic students.

We had two exceptional contributions by André Dekker and Olaf Gipser, who both out of pure curiosity to our subject joined each one of our laboratory situations and contributed by sharing insight into their work on the landscape as artist respectively architect. With similar openness and dedication our visiting Critics Sang Lee form TU Delft & alt.agency and Anna Laura Govoni form urbanus & HIT Shenzhen who will share their insights at the opening.

We also would like to thank the partners in our practices Adriaan Geuze, Edzo Bindels and Martin Biewenga at West 8 and Hans Drexler, Marc Guinand and Freddy Curiel at DGJ to encourage our adventures in academia.

This is not just some hours spent out of our studios but bringing in years of experience and inspiration that we draw form our practice. Here we would like to mention apart how Freddy helped building up this course in the first edition at RA VB.

Gratitude for such inspiration goes even more to our academic masters first of all to Prof. Dr. Clemens Steenbergen and Dr. Wouter Reh. To Prof. Dr. Erik A. de Jong for being (not too) demanding for Daniel as a his parallel work as his PhD student. To all the Staff of TU Delft Landscape Architecture, especially Steffen Nijhuis for his methodological input and Inge Bobbink who let Daniel Teach the nucleus version of this Lab at TU Delft a Urbanism Master Course in 2009. Matthew and Daniel both have drawn much of their inspiration for teaching from Marc Angéll at different times of his exceptional contribution to advancing architectural education at ETH Zürich - we still and for long time will develop from there.

We also had a surprising encounter with Frits Palmboom, whom we owe a bit of inspiration on Landscape in Rotterdam for the design of our model in exchange for us disturbing with collecting a manuscript during his same lecture at RA VB on 6.4.2012.

We also would like to thank all the 12 architects and staff for their work and materials. Dries Kala for baking up his student employee and all the other "bosses" that support our students.

Most of all we thank our students. None of this adventurous process was part of your comfort zone. - You where wonderful companions in this journey - we wish you all the best for these rough times and hope this daring exercise may have contributed to your strength in withstanding these rough times for our beautiful profession.

It’s incredible how many ingredients we mixed in our laboratory into the explosive amalgam of this book and exhibition in such short time. This might be a reasons why this seem a wondrous little book to some of our readers. We will abuse our readers as copy editors as this is a beta-version of a book that was been compiled in 10 weeks in one-day a week job. You are reading correctly - that is 10 working days only for 250 pages. All involved tutors and students alike actually followed at least one regular day job and other academic courses or production. We hope that you will understand why this still seamed a precious momentum to catch in a book.

Please be inspired.

Rotterdam April 2012 - Matthew Skjønsberg & Daniel Jauslin
Introduction Matthew Skjonsberg & Daniel Jauslin

Laboratory Design Analysis

The aim of the laboratory design analysis that Daniel Jauslin and Matthew Skjonsberg have been teaching certainly was to prepare students for change. In this regard it may seem paradoxical that our course was aiming to analyze not just complete designs but contextual situations – factors often considered to be beyond the scope of design per se. In these pages we present the aims of our teaching laboratory and show how analysis can introduce a wide range of methods, like systematic research by drawing or surrealistic games, with layered interpretations involving landscapes.

The studio, described in detail in the publication Cadavre Exquis this publication, was prepared and directed by the authors in 10 sessions from February to April 2012 at Rotterdamse Academie van Bouwkunst RAVB. A group of 34 graduate students with various backgrounds, many with an undergraduate degree in engineering, urbanism or architecture. These studies are maintained parallel to student’s work in design firms or the local administration, as well as those currently looking for jobs. Throughout these 10 weeks first-year master students of RAVB selected, visited, documented and analyzed Dutch Architecture with Landscape Methods under the guidance of the tutors and their guests.

In the laboratory several groups of students analyzed projects from the last 25 years of Dutch architecture, specifically with a view as to understand how they are, or are not, designed like a landscape. Contemporary architecture is increasingly influenced by the concept of landscape, and this is particularly the case in the Netherlands. Like many other places, a new mindset is emerging, transforming the core values of the disciplines of architecture and urbanism with the notion of the organization of architectural space as a landscape. Through experiment our lab develops methods to analyze such phenomena in focused studies of specific cases, understanding how architects use landscape not only as a metaphor but also as a method to design buildings.

The research was collaboratively edited and subsequently exhibited at the faculty along with the publication in this book.
With West 8 and other partners they designed the Arteplage Yverdon-ies-Bains in Switzerland (1997-2002, in which Swiss tutor Daniel Jauslin was involved, then from West 8 Rotterdam). Their Blur building – a response to the idea of bringing the Dutch clouds to the mountains of Switzerland - turned out to be the ultimate landscape design piece, transforming the cloudy sky of the natural landscape into a designed artifact, literally and physically blurring the disciplinary order of building types. Later they again joined West 8 in winning the New York Governor’s Island competition, where they design a spatial visual and sensory experience in a cave-like grotto difficult to separate from the rippling, wavy, immersive landscape (2007-present, in which American tutor Matthew Skjonsberg is involved from West 8 New York and Rotterdam).

In Aberdeen City Gardens Cultural event space is interwoven into a patchwork of recreational and horticultural programmes, while similar forms change programme in a pattern that becomes itself a camouflage. Switching between expectations and reality, DS+R’s Aberdeen design challenges preconceived notions of typology - the hybrid form can ostensibly take on any kind of programme, be it garden, park, theatre or museum. Spaces can remain open, enclosed or covered in concrete or glass. A definition of outdoor design for landscape architecture such as Meto(?) Vroom (1995) has attempted is as obsolete here as Smithson’s (1981) definition of modernist architecture: the art of designing cubic autonomous objects. This design deliberately and strategically crossed disciplinary borders. It challenges the definitions of either discipline - architecture and landscape architecture - and fruitfully expands their respective fields of reference.

Involvement in these epochal changes - experiences then shared with students - means that “Architecture with Landscape Methods” is not only our preferences as tutors or as a group as critics, but is the result of what we experience as designers for some time, and even today. In certain professional practices trans-disciplinary work has become a daily habit. A tutors we have been alternating between sharing of our experiences in architectural education and practice and landscape education and practice, always working on the edge of those two disciplines - or back and forth on a daily basis in working, research and teaching. The tutors of this lab were involved with these projects above, and have at different times encountered similar influences from the disciplines of architecture and landscape.

Our own experience of practice informs how we structure student’s own involvement. From the analyses in the book, compiled by students with their own involvement with practice, sometimes personal acquaintance with the work or the architects becomes apparent. It is thus a unique contemporary document of changes that are taking place in Dutch architecture. While the book may be somewhat premature or unfitted, sometimes the critique unbalanced or too straightforward, it is hoped that the rawness will further involve readers in the empathetic process at work.

We see that students, architects, teachers and audience are finding it unnecessary to distance themselves and are increasingly involved in this kind of emergent contextualism.

Our scope is not a call for Dutch regionalism – our laboratory just found examples right outside the door, as it were, and within reasonable reach for students, potentially providing them direct access to both the buildings and the architects themselves. A preliminary selected was made based on the Yearbook Architecture in the Netherlands. Edited annually since 1989 by the Netherlands Architecture Institute (Brouwers 1989, NAi 1990 - 2011), this gave an overview with a consistent editorial approach and selection methodology, from which students where then free to choose or bring other options (with the advice of the tutors) following their own interests or even personal professional contacts. The two-step selection process led to a wide field of architects from four generations of Dutch practitioners starting with Huig Maaskant (founder of the RAVB), Wim Quist, OMA, SANAA, Mecanoo, MVRDV, NOX, De Zwarte Hond, NL Architects, Onyx, FACT and MonderschijnMoonen.

While the choice of projects was left to student groups in a rather free manner, the research framework was methodically determined, including even standardized forms and layout templates. The methodological approach of the laboratory was to be the common measure applied to all projects - and to trigger the possibilities of initially precise and gradually more playful comparisons.

GROUND, SPACE, IMAGE, PROGRAM: 4 Layers of Landscape Architectural Composition

All our students where confronted with landscape methods that where fully new to them as a conceptual framework. Based on the work of Steenbergen & Reh, the methods are not derived from canonical architectural theory but from a trajectory in the opposite direction: an entry into landscape architecture from the side of architectural theory -Steenbergen and Reh’s (2003) adaptation of Paul Frankl’s (1914) architectural theory into landscape. This theoretical approach was thoroughly explained and illustrated with drawing methods from earlier applications - most of which come from educational experience with Clemens Steenbergen cum suis at TU Delft (2008). This body of work helped to establish the objective of a common architecture-theoretical standing for the course.

We concentrated on analyzing architecture’s essential space and form, thoroughly and with regard to human spatial experience. Frankl’s theory of architecture is especially valuable to us for this analysis, because it specifically identifies phenomenological, spatial, temporal, metaphori cal, and programmatic aspects. It is a very broad approach to analyzing buildings, summarizing several key principles that had previously been laid out by authors like Semper (1863), with a phenomenological approach informed by training Wolfflin (1886). Frankl’s particular skill is combining phenomenological and structural critiques of architecture into a complete system from a human perspective; he combines the logic of making with the sensibilities involved in perceiving architecture. In his opinion, “people are part of architecture” - without them a building would be a “mummy” (p.159). We are here finding ‘intellectual substance, content, and sense of the whole’ (Frankl 1914 p.15 “... [man] gelangt so zu dem gesitigen Gehalt, dem Inhalt, dem Sinn des Ganzen” transl. by the author)
To try and understand the architecture of landscapes, Clemens Steenbergen and Wouter Reh established a hands-on simplification of Frankl - putting him into the tradition of Landscape layer models as developed by Ian McHarg (1969) and Phil Lewis (both students of Gropius at Harvard), or introduced to the Netherlands by Meto Vroom. Steenbergen Reh’s set of layers - basic (or ground) form, spatial form, metaphorical or image form and program form - explains landscape as a composition of four overlapping layers (2003). Their adoption of Frankl’s model of four polarities (Begriffspare Frankl 1914 p.174) Raumform, Körperform, Bildform und Zeckform onto a four layer model of Landscape provides the fundamental structure guiding the analytical study of architecture with landscape methods.

For understanding the structure of our laboratory, we defined the four layers of the landscape architectural composition of Steenbergen and Reh like this (2003, 2008):

- **Ground form** is an analysis of how the natural landscape is reduced, rationalized and activated or otherwise engaged. In the case of architecture, consider here also landscapes that are generated artificially and the tension between grown morphology and built topography. The interaction with or manipulation of the Ground is the essential maneuver to be read out of the projects.

- **Spatial form** in landscape is derived by analysis of the experience of the landscape space, including circulation paths, framings, and picturesque compositions. The relation to and manipulation of the horizon are essential design aspects integral to this layer. In architecture famously the promenade architecturale (coined by Le Corbusier) means an approach to scenically or sequentially read spaces that have various forms of built and void spaces.

- **Metaphorical or Image form** is the analysis of iconographic and mythological images and natural impressions, always connected to the other layers and mostly represented in another of the others. While in landscape design metaphors refer to nature, we distinguish two kinds - those that refer to nature itself and those that make use of technical landscape transformation strategies (like grading or terracing).

- **Programmatic form** is the analysis of functions and the organization of their relationships as influencing the composition — the functional anatomy, as it were. In landscape the programmatic form incorporates the tension between business (negotium) and contemplation of nature (otium) in a constant search for balance from the classical landscape to current times. In contemporary Dutch architecture we discover the program in the sense of political program - we could call it the change of a certain spatial, social or academic situation in a programmatic manner.

Students were guided in utilizing these layered distinctions as a means of analyzing their selected buildings. The methodology focuses on exploring whether and where the landscape analogy is influencing the architectural form of selected projects, almost like a natural science (Zaera 2003). More important than the taxonomy and subdivision of phenomena into the layers is their interrelation. It is the dynamic interaction of layered and simultaneous functions, which is close to the essence of architecture.

Layers themselves are merely a convenient means to identify the elements in connection to the one another, to better understand the aspects that are turning an architectural composition into a composed landscape. Could we show how similar compositional relationships between the layers are being used in indoor and outdoor design?

As different as the subjects are, the design methods yielded commonality. As a group we discussed what drawing would reveal which aspect of a particular project best - students tried various drawing techniques and discussed what drawing would fit where, how do the layers separate or how do they interconnect. Working in groups of course further advanced students skills verbalizing and abstracting their work. to the work was presented and they elaborated their individual research results in a constant group feedback cycle of analysis and representation. In architecture we believe there is truth in the assertion that ‘thinking is drawing and drawing is thinking’. This collective drawing activity is an education of architectural thought. Such thinking leads to insights into the making of architecture. The Director of RAvB van Langen described the course thusly, saying it leads to “huge progress of the students’ capacity in design analysis and the understanding of design mechanisms and to highly enthusiastic reactions of the students.” What is the reason for that?

We believe that design research and analysis are essential in teaching design, should it be an intense academic exercise, practice and interchange. This is very much in line with the Delft approach to landscape architecture our chair expressed in two recent publications with Steffen Nijhuis and Inge Bobbink (2011 & 2012), where we define the mirroring processes of research by design and design by research.
Cadavre Exquis

An important part of our analysis work is to have the students experience that analysis and design are two directions in one process - similar to the distinction between design analysis and design by analysis. After a concentrated phase of working on drawings, often with computers, we found it beneficial to have more physical action and interactions. The last phase of the course therefore involved a combination of layered model building and montage, or bricolage.

Students built models of their analyses, where each layer is detachable as a separate entity, and in a subsequent workshop of the Laboratory Design Analysis we used these ‘4 layer’ models to occupy a site, and then played a game. The game we played has resemblance to the Surrealist game Cadavre Exquis. Cadavre Exquis, also known as exquisite corpse or rotating corpse, is a method by which a collection of words or images is collectively assembled. Each collaborator adds to a composition in sequence, either by following a rule (e.g. the order “adjective – noun – adverb – verb” or “head – body – legs”) or by being allowed to see the end of the drawing the previous person contributed (Brotchie 1995).

In our case the student’s individual ground forms established a set of interconnecting rafts to realize a floating city for the Dutch Delta Games 2028 in the former Dock RDM at the Maas (the location of the Academy) while they traded spatial form, image form and program form according to our rules of the game, as was fully documented on time lapse video (DGJDasGehJa 2012). We could play the game right in front of the academy at the future site, and adjacent to the hall where the students will exhibit a the resulting collaborative model.

In this intentionally surrealistic game, students generated a transformation of their 4 layer architectural composition and a new plot while introducing and actively negotiating qualitative criteria. The game board was a rescaled plot of SANAA’s Kustlinie Almere – one of the analyzed designs. The results of this workshop were used to develop a collective design for the water-borne 2028 Olympic press & officials village in Rotterdam harbor, a program adopted from a proposal that recently accompanied a campaign of our host city.

On the final collective model and exhibit, an unofficial off-show at the Rotterdam Biennale IABR 2012, each group of students builds two pavilions for the village according to their programs. The initial pavilion is a abstracted reading of one of the 12 examples of Dutch Architecture with Landscape Methods, the new pavilion being its own composition consisting of 4 layers of which at least 3 are from other projects and have been appropriated from that other composition by another group of students through interpretation. Our student exhibition presents one group model as the result of the game: it consists of individual analyses decomposed, according to the 4 layers of ground form, spatial form, image form and program form.

The students each time negotiated which layer they would get – sometimes they were lucky and struck upon great correlations, and sometimes they struggled to find any coherence whatsoever. The playful approach to concept and context is not just a game - it is triggering design intelligence trough analytical thinking. The fast game in a nutshell also implies complex design processes that, regrettably, this laboratory did not have time to pursue. The lack of time is - as often experienced in practice - the ultimate force to generate unique solutions.

All projects where thus intensely discussed and continuously modified according to consistent criteria while undergoing several switches in authors and subjects. We believe this method could build on the momentum of the recent past and be a viable means by which to develop scenarios for the near future of architecture - snapshots in a catalog documenting change.

Changes instead of Conclusions

It was important to us not to separate the analytical process from a design process, but rather to show how deeply interrelated they are. We invited the students to critique, disagree or admire, to decompose, repeat, exchange and dispose of concepts as they liked. Design education through analysis became our mantra - design through analysis is a form of synthesis. Analysis is not an issue of history but one of design. Recently historical research and any research on form has come in for critique as ‘formalism’. We disagree, and believe form is the essence of architecture. In architecture this is abstract, and it is very tangible in landscape. Essentially, human existence in the environment requires form in the landscape and takes form in architecture.

The Laboratory experiments we show in our book are crude, fast, funny and efficient. They occurred within very tight educational time constraints (not to mention budget). Of course this is not the theoretical study the amplitude of the subject deserves. Further study should conclude with a theory about the role of landscape as a concept in architectural design. The target should be to clarify the amplitude, variety, and reach of landscape methods in architectural design. More research should clarify if such methods exist, if they are to be taken seriously, and what changes such methods would bring to the discipline of architecture now and in the future.

Another investigation yet to be made is a more general theory of landscape. The aesthetic implications of landscape as spatial phenomenon is not an easy subject. Mostly (and particularly in the context of design teaching and critique) the physical appearance of landscape is confused with its significance as a category of thought. We will continue to focus on experiential qualities of the landscape and the architectural space. Human space interaction being our focus and the common ground of two disciplines that have, since their founding, always learned from each other and are promising to reach a most fruitful phase of their intertwining history.
A parallel theoretical study complementing these experiments would reveal that to experience landscape is not a physiological given but an intellectual performance. That experience can be generated by design of landscapes and architecture. This issue of landscape experience is a subject so vast that it has merely been touched upon in this laboratory, but it is certain to be studied further by the authors of these pages, among others. The path to follow lies in the interaction of further experiment and further theoretical study. We will need to study more details about the landscape experience from studying the built example, which will enhance our theoretical insights, and vice versa. We will need to sharpen our theoretical argument to better understand landscape thinking as a guideline to design.

Landscape is humanity’s aesthetic appropriation of nature. The “invention” of landscape at the beginning of the Renaissance can be identified with the beginning of humanism (Brock 1977 after Burckhardt 1860). Landscape methods in our age could re-establish the human condition as the main driving force of architectural creation. The aesthetics of landscape could be a means of facilitating the reconciliation of man and the built environment. A development in this direction could be a basis for sustainable development with an emphasis on the human perspective.

The establishment of an as-yet-absent theoretical framework for these new aesthetics could transform a mere fashion into a socially relevant movement for the architecture and urbanism of the 21st century. Architecture itself needs to establish fundamentally new answers in the cultural relationship between humanity and nature to be able to integrate issues of sustainability. We therefore need an understanding of the concept of our own living space in relation to our world – if it is well understood, the highly cultural and widely popular topic of landscape could broaden the relevance of architecture in the future of our society.

When it comes to change, high hopes have ever been a kind of communion within the arts. The surrealists that we refer to with our game have been associated with subversive, sometimes playfully anarchist and revolutionary milieu. They where true modernists - changing modern literature, painting, and sculpture for example. In architecture surrealism has only slowly found its’ stand - certainly the early work of Rem Koolhaas and his paranoid critical method (1978) had a large influence on Dutch architecture, even though he found himself oftentimes misunderstood. It was also Koolhaas who proclaimed that his generation – and, therefore, certainly ours as well - are hedonists (1995). Should we intend to change the world? It could be reasonable to be modest. While architecture itself may not shape our changing society, but to reconnect and emphasize them. Drawing inspiration from the implicit terms of aesthetics in landscape, the architectural discipline could develop a real alternative to the invasive practice of architecture where the current dichotomy of nature and culture is profound. With inspiration from the landscape perspective, it may be possible to shift the position and approach of architecture toward nature, moving from an approach of opposition to one of integration. Such a renewal is clearly outside the scope and potential of avant-garde aesthetics alone.

A common recognition of where our efforts should lead in terms of environmental consciousness still seems to be absent from the education, socialization and profession of architecture. But it is a fact that the question of how a building, city or landscape is perceived by its users and inhabitants remains the key question that underlies most of our design work. Designs that please human perception tend to trump the consideration of the natural environment. However, no matter which side of the discourse they fall on, most architects agree that architecture should advance certain aesthetics, and most decision-makers agree that finding a sense of sustainability is a prerequisite to any planning or architectural activity. But the relation between these two priorities – aesthetics and sustainability – changes according to the theoretical and practical views of different actors in the process of design and construction.

The landscape perspective may be able to unite the apparent dichotomies of nature versus culture, aesthetics versus sustainability, showing that these dichotomies do not actually reside at the core of the discipline - this is fundamentally a change in perspective.
17 1a TU Delft Library, Delft 1993-1997 by Mecanoo
decomposed by Adri-Piet Stam, Annelies Bleeker, Linda van Os
30 1b recomposed as CadavreExquis
35 2a Kunsthall, Rotterdam 1990-1992 by OMA
decomposed by Jelle Baars, Martijn Bakker & Sharmila Nasheedi
49 2b recomposed as Design Games
55 3a De Mikkelhorst, Haren 2002-2003 by Onix
decomposed by Shahir Malikzai & Anand Sietaram
68 3b recomposed in The Trading Game
73 4a Son-O-House, Son en Breugel 2000-2004 by NOX/Lars Spuybroek
decomposed by Ruben Sannen, Jan-Willem Terlouw
88 4b recomposed in intermezzo
93 5a Sportspavilion Zestienhoven, Rotterdam 2007-2008
by MoederscheimMoonen Architects
decomposed by Robert Remijnse
106 5b recomposed in The Game
109 6a Ronald McDonald Centre, Amsterdam 2006-2010 by FACT
decomposed by Sarina Da Costa Gomez & Anneke Heins
120 6b recomposed in Reconfigurate - Redesign
125 7a Johnson Wax Building, Mijdrecht 1962-1966 by Maaskant
decomposed by Esther Kats & Jantine Merkens
138 7b recomposed Step by Step
143 8a Museum Beelden aan Zee, Den Haag 1992-1994 by Wim Quist
decomposed by Artie DeWnarain & Paul van den Bergh
155 8b recomposed as Work in Progress
159 8c Museum Beelden aan Zee, Den Haag 1992-1994 by Wim Quist
decomposed by Maarten de Haas & Jeffrey Gouka
170 8d recomposed as Secondo
175 9a Boekenberg Library, Spijkernisse 2008-2012 by MVRDV
decomposed by Rico Goudriaan, Daan Hens, Corné Nuijten & Christine Vriesema
186 9b recomposed Expelling the Layers
191 10a De Kunstlinie, Almere 2004-2006 by SANAA
decomposed by Pascalle Asgarali & Bastiaan van der Sluis
204 10b recomposed as Toetje
209 11a Educatorium, Utrecht 1995-1997 by OMA
decomposed by Emma Westerduin & Arthur Meerloo
222 11b recomposed as a connector
227 12a A8erna, Koog aan de Zaan 2003-2006 by NL Architects
decomposed by Cecilia Dobos & Mattie Le Voyer
240 12b recomposed as Landscape is Architecture
241 13a Bernoulliborg, Groningen 2005-2007 by DeZwarteHond
decomposed by Barend Mense & Ben Wegdam
254 13b recomposed as a New Design
259 Project Credits
260 Index to Yearbook of Dutch Architecture
261 Bibliography
The University Library Delft by Mecanoo is a typical example of architecture that uses design language from landscape design. The building isn’t even a building, it’s a rising landscape.

Inside this **hill of grass** is the concentrated activity of studying, like moles with glasses. Through the grass rises the **cone**, the representative of knowledge and possibility of ‘rising’ through the acquiring of knowledge. In adding a green space to the University area, Mecanoo succeeded in bringing together students from all faculties: on the hill for pleasure, in the hill for diligent studying.

**Summary**
Location: Delft, University district
Typology: Library
Designers: Mecanoo
Design Year: 1993 -1995
Building Year: 1996 -1997
Square meters: 15,000 m²
Program: Library, Bookshop, Offices, University Publisher, Study rooms, Underground book archive, Coffee Bar, Reading rooms, Workstations
The relationship with the neighboring, centrally placed brutalist building of the University auditorium asked for a contrast. By using a landscape in stead of a building, a new unity has been established that marks both functions. Being the only green space in the University area at the time of realization, it was a golden gift to the University district. One that brought students together from all faculties, both for studying and relaxing.

The grass that was already there, has been partially lifted to house under its roots the library and the treasure of rare and irreplaceable books. The lifted grass forms a gallery to view the people passing by at the main axis of the University district; on the other hand it makes the library visible from that axis, behind the brutalist auditorium.

The cone, which pierces through the grass, marks the building as a symbol of knowledge and technology. The cone brings daylight in the heart of the building and houses studying tables. A high standard of sustainability is aspired; the building has the grass-covered roof, high-performance glazed facades and subterranean storage for heating and cooling.

The library is made primarily of steel and has won the Dutch National Steel Prize.
Ground form, landscape as strategy

The library, start of a transformation

The brutalist auditorium gained a brother in public function and a competitor for attention. By making the library a landscape, this relationship was salvaged, a new unity found. The auditorium is like a spaceship landed, the library a molehill raised; the cone the symbol of technology. The grass surrounds both the auditorium and the aula, joining the buildings a second time by landscape

Landscape as a means for joining buildings

Public gain, pioneer - green lung

With the realization of this building, the district gained not only a centrally located library but also a green meeting space for all students and personnel. Unfortunately it is off the main axis of the district. In 2007 this landscape was extended along the main axis as Mekelweg Park.

(Not) Creating landscape

The landscape has been formed by lifting the grass. Literally, the grass sod is cut and lifted. If the building would be removed and the sod let back down, it would fit the grass as it is now. The potential of the landscape around the library is not fulfilled, the green space at Schoemakerstraat is quite barren. The landscape of the library is functional but not wild and alive.

With the building of the green roof, the area around the auditorium that is leading to the library was remodeled to be a green space. It was the start of transforming an austere university area to being an asset in attracting people locally and internationally.
Spatial form, making the location spacious

Face to the street wordt: Angled façades

Lying behind the auditorium, the angled-facade makes a space on each side, either for making a logical entrance or presenting the building to passers-by.

Opening space

Behind the auditorium not only the angled facades open up the location but also the space ‘left’ by the building.

Creation of places

Thus different spaces and places are created in- and outside the building.

Cone as church tower and soft shell

Outside, the cone acts as a landmark and symbol of technology, inside the building it is part of a structure of shells, some hard (wall of books), some soft (curtain walls and pillars cone).
Image form, making metaphors: digging deep & ascending

Underground feeling - Entrance

Students enter the library by going underground. The entrance is like a bunker; while netreing you see the grass above you. Inside this hill of grass you have the opportunity to enhance your skills by way of the books and rise, symbolized by the cone, to the start that you can see at the top of the cone.

The rocket analogy

The cone is supported by the towering bookcase like the space shuttle. The cone looks like a rocket ready to take off to unknown destinations. The stairs into the cone are constructively loose from the ground as if it can be retracted into the cone.

Active Transcendecy

Path to enlightenment
The building features two dimensions, the horizontal and the vertical. The horizontal is associated with the earthly, and has materials connected to the tangible world. The vertical is associated with the divine and has materials associated to the metaphysical world.

Reflection

The three outer walls of the building that were created by the elevation of the landscape are glass facades. The walls have been angled a second time so they reflect the environment. During the daytime the sunlight provides the lighting for reflection. During night time the spots in the roof provides the lighting instead.
Image form
Programmatic form, making knowledge

The student enters the library horizontally, aspiring to raise him/herself in the student career (s)he will follow. By taking the knowledge (the books from the lighted shelves) and actively going up, vertically into the cone and taking the knowledge in, they rise to greater heights.

The library collects not only books. Students from all faculties connect at the library. The faculties lie as bastions in the district. Until the opening of Mekelwegpark, the library was the only shared space for the students at the campus.
Programmatic form
The floor plan and spatial experience are extremely clear. In one view, you see the program of the library. In the first view of the inside you see the books, the study rooms, the workstations and the reading rooms. The organizing principle is the open floor plan with an outside shell (façades) and inside shells. The yellow floor and ceiling bind everything together.
The library tries to be a gain for the whole campus. It succeeds, but at one point. It is in the wrong location. The library’s brilliant design concept is that it’s a landscape. Until reconstruction of the Mekelweg into a park in 2007, it was the only place of public space which was not meant for transit but for ‘being’. Being in the district in a place where you could see other students of other faculties. The idea of making a landscape is also brilliant as an ‘answer’ to its brutalist neighbour.

Unfortunately, it is in the wrong location. The whole university district is laid out around a central axis, Mekelweg park. This is the way that students come from Delft centre and from the train station of Delft Zuid. All the faculties have their main entrance on this park. Also the public functions (auditorium, sports park) have their entrances here. The concept of the district layout was a spinal layout with room to spare at the rear of the buildings for expansion of those same buildings, not for new functions. Unfortunately the library was placed in the rear as a new function, thus being ‘off’ the Mekelweg, the central axis of the district. And behind the immense and impressive brutalist auditorium. In this respect it actually doesn’t help that its appearance is a landscape as can be seen at the picture. It falls away with the surrounding trees and greenery of the neighbouring cemetery. Instead of being at the centre of the district, the closest relationship of the building is on the other side: it meets the adjoining housing area (not for students) in equal height, as an office building.

Luckily this mistake is being cushioned by the fact that this building on its own attracts students away from the central axis. It is also cushioned by the fact that since the Mekelweg is closed for cars, the circulation of traffic is now only limited to the central axis for pedestrians and cyclists. At this moment cars come from a ring road around the district, making the tear of the district the front. In a certain aspect the library is now at the front, only its entrance is not..

A second point of critique is the nature of the landscape. It is still sterile seen from a nature point of view. The Schoenmakerstraat and the Mekelwegpark have higher potential. In this way the landscape that is made still honours the sterile and functional lay-out of the sixties.
The new TU Delft Sports building, Adri-Piet Stam, Annelies Bleeker, Linda van Os
New design

Location

Concepts

Making the building part of the entrance

Roof as continues landscape

SCALE 1:2000
A = BEGIN
B = END

1. TU Delft
2. Kunsthal
3. Mikkelhorst
4. Nox
5. Sportpavilion
6. Ronald McDonald Centre
7. Maaskant
8. Beelden aan Zee
9. Spijkenisse
10. Spijkenisse
11. Educatorium
12. BernauliBorg (?)
Building parts

Ground form, TU Delft - Mecanoo

Lifted grass roof that makes the site a continues landscape

Spatial form, Bernoulliborg, Zwarte hond

The backbone of the building consist of several rooms connected by atria's.

Image form, Sportpaviljoen Zestienhoven -MoederscheimMoonen Architects

View from above give the people in the cafeteria an wide view over the surroundings

Programmatic form, Ronald McDonald Centre, FACT Architects

Sports program, indoor swimming pool, gym hall and soccer fields.
New design

Location

Concepts

Making the building part of the entrance

Roof as continues landscape

SCALE 1:2000
A = BEGIN
B = END
1. TU Delft
2. Kunsthal
3. Mikkelhornal
4. Nox
5. Sportpavilion
6. Ronald McDonald Centre
7. Maaskant
8. Beelden aan Zee
9. Spijkenisse
10. Sanaa
11. Educatorium
12. BernauliBorg (?)
This side up
Kunsthal Rotterdam
Kunsthal Rotterdam 1990-1992

OMA Rem Koolhaas | ‘there is no detail, only a concept’

Continuous Circuit
The Kunsthal Rotterdam, opened in 1992, is an exhibition space. It is located in the Museum Park at the Westzeedijk. The concept is ‘continuous circuit’. The pedestrian ramp is divided by glass, separating the outside, which is open to the public, from the inside, which is part of the circuit. A second ramp, is running parallel and reversed.

On the tower of the Kunsthal Rotterdam a logo placed that is based on the sign stencilled on crates to show which side up. It is an appropriate sign, it transforms the building into one big packing case. The Kunsthal has no collection of its own, it is not a museum. Each year there are 20 to 25 large and small exhibitions.

Like its contents, the building has many faces. As a whole it seems straightforward: it’s a large, flat, square box with a narrow, high tower as a vertical accent. But it is not easy to see how it all fits together. Sometimes the Kunsthal looks transparent and open, at other times introvert and closed. Its appearance can be calm and lucid, but also fragmented. There is no clear front or back. This is the reason that it has been nicknamed both ‘the box of tricks’ and ‘the car park’.

The materials used for the Kunsthal are contrasting. They were put together in quite hard way with no buffer in between. The building forms a mix of cheap and expensive, refined and ordinary materials. Not one space was allowed to be completely perfect, so the visitors are left wondering what deliberate and what isn’t. The various parts of the building seem to be slightly oiled on top of each other; floors sloped and several ramps traverse the structure. For, in addition to being an exhibition building, the Kunsthal is a traffic intersection.

Koolhaas’s building is functional, but at the same time it is a contemporary work of art full of themes, references and special effects. For example the floor
plate under the large exhibition space on the dyke is slightly higher than street level, so that this part of the building seems to float. On the roof there is a bright orange steel girder that sticks out over the edge of the roof for one and a half metres – as if someone has left it lying there by mistake.

In the public areas - three exhibitions spaces, an auditorium and a gallery- flow into another and are linked by a single continuous ramp. In this way the visitor makes a tour through the whole building.

Each interior space has its own atmosphere and lighting, determined by the materials used and the way the light is filtered by various layers. This means that the Kunsthal can provide the right ambience for very different kinds of exhibitions.

‘There is no detail, only a concept’ Koolhaas once said of the building – and that applies to both the architecture and the content.

PROGRAM

The program demanded three major exhibition spaces to be used jointly or separately, an auditorium, and an independently accessible restaurant.

The side presents a dual condition: the southern edge is bordered by the Westzeedijk, a highway on top of a dyke. The northern side, a level lower, faces the Museum park.

The building was conceived as a square crossed by two routes: one, a road running east west, parallel to the Westzeedijk; the other, a public ramp extending the north- south axis of the Museum park.

With these givens, and the fact that these crossings would divide the square into four parts, the challenge became, how to design an exhibition space as four autonomous projects, a sequence of contradictory experiences that would nevertheless form a continuous spiral. In other words, how to imagine a spiral in four separate squares.

The concept of the building is a continuous circuit.
Ground form

Panoramic view from the building towards the park Museumpark

Panoramic view from the building towards the street Westzeedijk

Building location and surrounding buildings

Routing larger area

Area google maps
Axonometry showing building as a connector of the surrounding areas
Spatial form

Routing on groundfloor

Routing on first floor

Routing on second floor
Axonometry showing ongoing routing through building
Drawings show façades and their typical materials

North elevation

South elevation

East elevation

West elevation
Axonometry showing diversion and transparency of façades

Image form
Programmatic form

- Parking
- Restaurant
- Office space
- Auditorium
- Exhibition space

Floorplan basement

Floor plan car tunnel and restaurant access

Floor plan ground floor Hall 1 and press room

Floor plan auditorium and hall 2

Floor plan offices and hall 3

Roof plan
Programmatic form

Axonometry showing programs of rooms and their location in the building.
Composition

Overview showing layers, colors and materials
GROUND FORM
The Kunsthal is located in the Museum park, both were designed by Rem Koolhaas. It is seen as a huge dyke building against the Westzeedijk in Rotterdam. It is also recognizable as a huge flat box were different volumes are stacked variously. It seem quite easily put together, but when you start analysing, you find some interesting marks. Besides that, the Kunsthal is also seen as a kind of gate where two routes intersect each other. The first route leads from the Museum park up to six meters higher where the Westzeedijk is. The second is located underneath the Kunsthal, from the right to the left of the building, where an existing service road is located.

SPATIAL FORM
The routing in the building is one of the main constraints on the design of the Kunsthal. Rem Koolhaas was faced with the challenge to design a building that is split in four different programs. And he had to link the four with one route. Personally we believe that he succeeded very well. His concept is continuous circuit. The route begins in the Museum park, where you face the traffic point. Which leads you to the other side of the building without entering it. You can use the Kunsthal as a covered entrance to the Westzeedijk or the other way around. Underneath the building is a second route, that crosses the building from right to left and here is the so-called traffic point. When you want to enter the Kunsthal, you directly enter the continuous circuit. Once you are on this route, it will lead you through the entire building. Starting from restaurant to hall 3. You will of course pass by hall 1, the auditorium and hall 2. The end point of the route in the Kunsthal is the roof terrace.

IMAGE FORM
At first The Kunsthall looks like one. But, the Kunsthall has no clear front side. All sides can be seen as a front facade.

This is a deliberate choice Rem Koolhaas made. One of the starting points in the design was linking four separate functions with a continuous circuit. Each facade is different, Koolhaas has also quite consciously opted for a difference in materials. Hard and soft materials, cheap and expensive. The various materials were cold-fitted to each other. Throughout the building there are many details emphatically badly finished, is this done by accident? No, he did this on purpose. It seems that no room is completely perfect. The continuing confusion is a translation of the current social instability, a favourite theme of Rem Koolhaas. Rem Koolhaas made some additions to the building in collaboration with various artists. In the design, recognizable in the restaurant and auditorium we see the columns that are positioned slanted. These columns follow the rhythm of the trees you see in the Museum park. The entire flat box (Kunsthal) is interrupted by a vertical accent on the roof. On this vertical volume is a logo. This logo turns the building into a huge transportation box. The Kunsthal is not a museum but it’s an exhibition space. Every year there are between 20 and 25 exhibitions. When you enter the building at the Westzeedijk you will see a huge orange girder over the right side of the building. It seems like a joke, and someone has accidentally left it there. It is a nod to the architecture of Mies van der Rohe. On the Westzeedijk you also see a man standing on the roof with a camel. Like a nomad. This image was designed by an artist with the idea of the continuous changing of art work. The Kunsthal is some sort of in between station. All the art work moves to another destination.

FORM OF PROGRAM
In the Kunsthal houses various functions, that was part of Koolhaas’s design assignment. The building had to accommodate various sizes of exhibitions. However, the building must be in use for one purpose. We find a restaurant, office spaces, an auditorium, parking garage and a shop with books for example. There are also three different exhibition spaces, Hal 1, 2 and 3. And at the top we find a big roof terrace.
Lighting is a very important ingredient in the design. For example, Hall 2, this one is on the level of the Westzeedijk. This is the largest room, wide, very spacious and extremely light. Here and there you see a tiny steel column up to the ceiling, some which exists of carelessly hung plastic plates. Daylight comes in, in various ways. Direct, indirect, filtered and stained. The entire front panel is made of glass, in the roof we see a large number of windows and the side of the wall is colored in soft green tinted glass shelves. The windows in the roof, the pipes and the major part of the support structure are extracted from the eye by large sheets of ribbed plastic, the zigzag-wise plates are placed under the roof. This filters the light, the light which is so nice and soft for the exhibited art and it is no longer harmful. On the side of the building there is a small gallery, separated by a steel grid floor. A second gallery and a staircase with deep steps lead to Hall 3. Along the way, the roof of the ramp is visible, which runs parallel to the stairway. On the roof terrace some Pear trees are planted. Is this the way of ending the park with a reflection on the apple trees that are placed at the entrance of the museum park? Because Koolhaas designed the Museum park and Kunsthal he had the possibility to design both as one.
DesignGames
Kunsthal Rotterdam

Kunsthal, Rem Koolhaas, Jelle Baars, Martijn Bakker & Sharmila Nasheed
Starting Position (Kunsthal - OMA)

Starting location

Spatial form

Programmatic form

Ground form

Image form

Ground form

Spatial form

Programmatic form

Image form
Begin forms (after trading)

Image form: Mikkelhorst - Onix

Spatial form: Kunsthall - OMA

Ground form: Beelden aan Zee - Wim Quist

Programmatic form: Kunsthall - OMA
Abstracted forms

Image form: Everything Under 1 Roof

Spatial form: Continuous Route

Ground form: Imbedded in surroundings

Programmatic form: Exhibition Boxes
End position (the new kunsthal)

Concept design 2.0

Cut plot
Bring up / Push down
Fold for Solar energy and Watercollection
Fit program along continuous route
Make underwater connection to the quay

End location
New design after transformation
one City one Roof
Mikkelhorst is an ecological farm with social care facilities. The farm part of Mikkelhorst is not about large fields, production or animals but about farm life. Mikkelhorst combines a petting zoo, a shop, an educational centre, a tea bar and a social workplace.

The design is based on bringing all the functions literally under a continuous roof. The interior is split up into two sections, the “house” and the stable. To keep up with its environmentally friendly look the building has a high insolation value.

What is the goal of the owner of Mikkelhorst? The main goal is to provide a save and positive day for the visitors.

Mikkelhorst is all about giving professional guidance to those who need help in daily activities. This includes children and people who are either mentally or physically handicapped. Evenly important they provide people with knowledge about the joy of nature and the value of growing your own food. To provide a solid income they also have a small shop and they rent rooms for meetings and parties.
Onix was created in 1994 in the north of Holland. This architectural firm feels that architecture should not be limited to one country. Therefore they also do a lot of projects in the north of Europe. To aid them in this way of working they have made a branch in Sweden to.

They think it is important that a designer keeps a good view on the entire design. Therefore they put a lot of effort in making sure that all the designers are involved from sketch to the actual build.

Quote Onix:
"Onix’s projects illustrate a sharp awareness of the relationship and desired harmony between a building and its surroundings, regardless of whether the environment is an urban or a natural one. Onix represents sustainability in architecture and regards it as an essential responsibility to produce ‘inclusive architecture’ – architecture that excludes no one in advance but, in contrast, is hospitable and democratic”

This mindset has earned them and their projects 21 rewards in the past fifteen years.

Project architect:
Alex van de Beld
1994- present founder/owner/architect Onix
1986-1994 Senior architect De Zwarte Hond
1988-1994 master, Architecture Academy of architecture Groningen (Cum Laude)

Haiko Meijer
1994- present architect Onix
master, Architecture Academy of architecture Groningen (Cum Laude)
Where do the users come from?

There is a demand in the big city for a social health centre for its disabled people. To make a good and healthy centre you need a place with clean air and low noise levels. Big cities are not known for these qualities but they do have a very good infrastructure from and towards smaller towns in the area. The site is located on the edge of a quiet residential area and nature.

**Saving money**
- Using the roads that are already there

**A good view on the entrance**
- A long road without obstacles and a natural fence (ditch) around the area

**Least disturbance to the environment**
- Using a previously build area, using an area that is slightly hidden
All the layers work together to form a safe and free environment. On top of that, the trees block out most of the other buildings. This environment functions as a blank sheet where the building is “painted” on.
Spatial form

Arrangement of windows in the facade

From within the entire plot can be seen

View from inside to outside

View from the street, walled in

View from the gate, frontal

View from inside
The spatial shape starts closed like a walled mansion. The closer you get to the farm the more it opens up. Once inside it is a very open building.
Image form

Shape built up from beams and rectangles

Volumes interaction, the combination of higher and lower sections

Main form of the roof

Texture made by wooden boarding

Roof - horizontal

Facades - Vertical
A play of vertical and horizontal lines to enhance the image of the continuing roof.
Programmatic form

All functions are literally put under one roof.

The roof wraps around all the functions.

Movable openings to make the space that is needed at that moment.

Planned

actually built

The roof that folds around the building looks like it stops halfway.

The roof wraps around all the functions.
Programmatic form
Composition

Image form

Programmatic form

Spacial form

Ground form
As the title explains the main point of this project is that you make a small community and connect all the functions under one roof.

**Ground:** For the project a plot was chosen located on the edge of a calm residential area and a polder landscape. Before this project there used to be an old sewerage system facility. What makes this location extra is that it already has the right roads and a large wall of trees. The old concrete structures half hidden in the ground give the site extra character. The designers used the two islands to make two different sites. On one is the building with a free road hidden between a row of trees. On the other island is a straight and efficient garden.

**Spacial:** Depending on where you are you get a different view. The closer you get to the centre the more freedom you have in your view. From the road you encounter a large row of trees that block the site from view. As you come to the gate you get a clear view of the entire site. Once you get inside it becomes even more open. All the rooms feel as one room and every room had a good view to the outside.

**Image:** Mikkelhorst is the image of a wooden farm. They empower the idea of the roof by using horizontal lines for the roof and vertical lines for the facade. Thought the roof looks like random heights all the lowest parts are on the same height.

**Program:** The program is the core of the project. As noted before it is based on one roof that is wrapped around all the functions. The farm, the office, the health care, the shop and the home are all connected by this large roof. We speak of a roof but it is fact roof plus two walls and a floor that make out this roof.

**Overall:** Mikkelhorst is truly an amazing project. Even in the deeps of winter you can feel the warmth the moment you come in sight. The great part about the project is that all the layers improve the other layers. The ground form makes a solid base. The spacial form makes sure that the building stands out. The image form amplifies the lines of the program form.

In total you get a large and save place that feels very personal. It has all the benefits of the city but not the disadvantages.
The Trading Game

Trade 1
Image form
Museum beelden aan zee

Trade 2
Ground form
Johnson Wax

Trade 3
Program form
Johnson Wax

Trade 4
Program form
De Zwarte Hond

Trade 5
Image form
Aëtna
End layers of the trading game

Ground from Johnson Wax
Building hanging over a sharp line of solid ground and water supported by pillars.

Spacial form Mikkelhorst
Adjustable inner space

Image form A8ema
Mixture of very different materials that amplify the different elements

Program form De Zwarte Hond
The entire building centred around the main room
Interpretation for the new design

Ground form,
The concrete floaters sink partly underwater giving the illusion that the pillars stand in the water.

Spacial form,
The centre hall is used to greet visitors. But there is not always a large room needed. Therefore the walls can shift to make either one large room or several small rooms.

Image form,
Visitors only come here in short durations. Because of this they don’t have the time to get to know the place. To make it the building easier to read you need contrast in the materials.

Program form,
Important buildings stand on the centre of the hill. With our project we merged the building and the hill allowing visitors to walk over the building. This makes the building the centre of all the paths.
New design, The floating hill
the house where sounds live
Son-O-House, Son en Breugel, 2000-2004

Son-O-House, a house where sounds live

public artwork for Industrieschap Ekkersrijt, in collaboration with composer Edwin van der Heide
Son en Breugel, The Netherlands, 2000–2004

“The Son-O-House is one of our typical art projects which allow us to proceed more carefully and slowly (over a period of three to four years) while generating a lot of knowledge that we apply to larger and speedier projects. Son-O-House is what we call ‘a house where sounds live,’ not being a ‘real’ house, but a structure that refers to living and the bodily movements that accompany habit and habitation. In the Son-O-House a sound work is continuously generating new sound patterns activated by sensors picking up movements of visitors.

Along the highway between Son en Breugel and Eindhoven lies a large industrial park in which a special quarter is reserved for companies from the IT and new-media industry. The artworks role is for strengthening the identity of the area, not only as a technological statement but also as a social space where people can organize informal meetings, relax during lunch hours or just enjoy its beauty. The structure is both an architectural and a sound installation that allows people to not just hear sound in a musical structure, but also to participate in the composition of the sound. It is an instrument, score and studio at the same time.

The structure is derived from typical action-landscapes that develop in a house: a fabric of larger scale bodily movements in a corridor or room, together with smaller scale movements around a sink or a drawer. This carefully choreographed set of movements of bodies, limbs and hands are inscribed on paper bands as cuts (an uncut area corresponds with the bodily movement, a cut through the middle corresponds with limbs, and other cuts correspond to a sink or drawer).

“In 1963 Richard Held and Alan Hein conducted a classic and rather merciless neurological experiment in which two kittens were raised in a carousel under closely controlled conditions. One kitten was able to move freely around a circular track while the other was strapped in a suspended gondola. After a number of weeks, the kittens were released from the carousel. The active cat moved and behaved normally, while the passive cat stumbled and bumped into objects, and was afflicted with agnosia, a condition of mental blindness brought on by neurological rather than physiological causes. It could not coordinate its movements with what it saw because in its experience; action and perception had never existed in the same continuum.”
with movements of the hands and feet). They staple the pre-informed paper bands together at the point where they have the most connective potential and as a result curvature emerges. The outcome is an arabesque of complex intertwining lines that is both a reading of movements on various bodily scales and a material structure since the paper curves stand upright in cooperation with each other. Now only these lines have to sweep sideways to marry the open structure of lines with the closed surface on the ground. This results again in a three-dimensional porous structure which is very similar to the structure that is obtained by the combing, curling and parting of air. We digitize this paper analog-computing model and remodel it into the structure of interlacing vaults which sometimes lean on each other or sometimes cut into each other.” (2)

Lars Spuybroek graduated cum laude at the Technical University Delft in 1989. A year later, he won the Archiprix for his Palazzo Pensile, a new royal palace for Queen Beatrix in Rotterdam. Shortly after, he started NOX-magazine with Maurice Nio, of which four issues were published between 1991 and 1995.

Lars Spuybroek has been researching the relationship between art, architecture and computing since the early 1990s. He received international recognition after building the H-two-O-expo in 1997, the first building in the world that incorporates new media and consists of a continuous geometry. With his Rotterdam-based office NOX built the D-tower, an interactive structure changing color with the emotions of the inhabitants of the city (in collaboration with Q. S. Serafijn), and the Son-O-House, a public artwork that generates music by visitors exploring the space in collaboration with Edwin van de Heide). In Lille, France, he built a cluster of cultural buildings (Maison Folies) in 2004.

Since 2006 he is Professor of Architecture and the Ventulett Distinguished Chair at Georgia Institute of Technology in Atlanta. (3)
Ground form

LOCATION: SCIENCE PARK EINDHOVEN (SON EN BREUGEL)

- highway
- subsidiary road
- local road
- pedestrian (path)
- location SON-O-HOUSE

Virtual Routing
Lake
Parking
PROOROM BRABANT
PRODRIVE
EKKERSRIJT
SCIENCE PARK EINDHOVEN
Spatial form / motion to structure

sensors / movement detection

movement / spatial translation

physical transformation / paper ribbons
Spatial form

- Son-O-House, NOX / Lars Spuybroek, Ruben Sannen / Jan Willem Terlouw

Frei Otto / optimized path system with wet wool threads (6)

fixation of the ribbons / structure

sensors that react on movement
Image form / structure

concreet groundfloor

skeleton in stainless steel

(7)

(8)
roofing solution for the 3D form

Vladislav hall / Prague 1493-1502 (10)
Programmatic form / routing

Routing

Sensors reacting on movement

main circulation
secondary circulation
tertiary circulation

infra-red sensor
Programmatic form

hand movement

standing place

interaction with hands

standing
Composition / conclusion

brain activity scan
(11)
digitized painting
computed construction
building complexity
(12) (13)
Conclusive /

Machining Architecture is a term which Spuybroek often uses concerning his work. Not only in the development/design phase but also in the production/realization phase and ultimately as well in the experience. It is another view on architecture, how it originates and what it is capable of. To be effective it has to be consistently carried through in all phases. If this is not the case, it will be detrimental to the final result: a compromise is not an option since the final result will not function as a machine.

The designing method of Spuybroek is extremely interesting. You can divide it in two. At first you could call the analog and the digital method. Spuybroek uses both technologies. In the design phase of Son-O-House an analog system transforms in a digital system and vice versa.

Spuybroek succeeded to develop a design machine (analog and digital) that is able to generate a perception construction from action. In our opinion a beautiful thing: not to see architectural parts as individuals but as a collaborative whole. No longer the Greek pile construction with stereobates, columns, architraves, friezes and pediments, but Gothic: the architecture in which components merge. In which columns pass into vaults and ornaments become constructive elements.

After the design phase follows the realization phase. To avoid having to compromise, the production should derive directly from the design phase. Spuybroek was very aware of the fact that traditional techniques were not sufficient. To produce three-dimensional curved surfaces other materials and techniques were needed. Spuybroek rationalized the blob form by means of an interlocking truss steel grid. Then he developed a ‘textile’ steel fabric pattern that coated the grid.

Digital production stands for custom made and flexibility; standardization of products and intermediate products is no longer the case. Traditional Arts & Crafts have been replaced for Digital Arts & Crafts. Complex shapes and ornamentation of Art Nouveau to merge with the machines of the Bauhaus.

Son-O-House is definitely an experience machine. A three-dimensional curved dazzling pavilion where you enter a physical and mental experience with music-generating sensors. You imagine yourself in a fishy organism that puts you physically and mentally to the test. The beauty of ‘organic’ spaces is the boundlessness, where vertical and horizontal flow into one another. Where terms such as wall and ceiling seem to flow away. The ideas of the utopian and visionary Frederick Kiesler shows a connection.

The relationship between liquid architecture and virtual reality is very easy to make: Architecture that comes from a digital world but can also return into it. Digital media capsulates us, buildings do this less and less. Buildings must not only have a relationship with our physical body but also with our digital perception.

We as architects must stop working as a master builder who designs and executes everything. We must work as a director, as someone who controls machines, processes and systems. As someone who writes scripts. It is a bit like cooking: you have a recipe and techniques but you have to wait for the actual result, a little coincidence. This is something Spuybroek is certainly looking for in his design and production techniques. Machines that can generate forms, that are able to organize themselves and coincidence, that’s where Spuybroek wanted to go.
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Trading game / ground form, spatial form, image form, programmatic form

ground form / KUNSTHAL, OMA
spatial form / De kunstlinie, SANAA
image form / Son-O-House, NOX
programmatic form / beelden aan zee, Wim Quist
The blend

Kunsthal, capsuling the route

SANAA point of view, reflecting the route

location

plan
Three fases of spatial feeling

- sections
- ground plan / programmatic form, beelden aan zee
- interior / spatial form, SANAA
- skin / image form, NOX
The airport football clubsandwich

Sprotspaviljoen Zestienhoven - Moederscheim Moonen Architects
Sportspavilion Zestienhoven 2007-2010

Introduction

The sportspavilion is part of project called ‘Park 16 Hoven’, an area north of Rotterdam that is being developed from an agricultural landscape to a suburban district. The Sport pavilion is a design by MoederscheimMoonen architects and accommodates two soccer clubs.

The story behind the Sportspavilion is that two football clubs, adjacent to each other, where suffering from a bad financial position. Both clubs claimed a lot of space which the local government wanted to develop. In exchange for this space the clubs where given a new and modern clubhouse for accommodation. Benefit of this solution was that both soccer clubs would share the costs and fewer soccer fields without having to fuse.

MoederscheimMoonen architects finished the design in 2007 and it was realized in 2010. On the first floor the sport pavilion accommodates changing rooms and on the second floor a terrace, cafeteria and committee room. The green slope functions as a recreational area to view a soccer game.

MoederscheimMoonen architects is a dutch firm active since 2005. The firmis founded by Erik Moederscheim en Ruud Moonen. The bureau focuses on sustainability and sees them self as a team player where an architect as to work closely and intensively with other disciplines.
Ground form

Ground level

First level

Roof
The plot of the pavilion is parallel and centered on the fields. Proportionally the football field size matches with the sportpavilion ground form.
Spatial form
The spatial routing of the pavilion works with two floors, on the ground floor the entrances are directly connected, on the first floor you can use the stairs inside or on the slopes, or even use the slope itself.
Image form

Materials matching, colors and rectangular shapes on ground, fencing and facade

Rectangular shapes and orientation

Roof and slope in same perspective angle / Parallel slanted shapes

Field disappears in building / Roof and slope reversed copy, roof disappears in the sky
The environment feels as a uniformity caused by the integral design, the pavilion interacts with the surroundings. The roof is masked by a wooven fabric that vibrates with the wind, which relates to the sky and clouds.
Programmatic form

Source: MoederscheimMoonen Architects

Source: MoederscheimMoonen Architects
Programmatic form
Composition
Conclusion

The sports pavilion cleverly fits its surrounding, in form and function.

The ground form of the pavilion is a rectangle proportionally matching a football field. Prominent ground lines are gauging lines, the ground form of the pavilion is parallel and centered on the fields. The pavilion strongly relates to its surrounding by making use of similar rectangular shapes and materials for the pavilion that present in its surrounding. It’s all interacting and feels as a uniformity caused by the integral design.

The ‘lighter then air’ material that is used for the roof to relate to a typical cloudy Dutch sky, in the dark the LED luminates the environment contributing social safety and provides the atmosphere. The green slope, which covers the changing rooms, looks like a terp. It relates the building with the fields and it acts as a tribune and stairs to enter the building. The green slope and the slanted roof are mirrored shapes, the first floor canteen is the sandwich filling. From the terrace you feel the similar perspective angle as a funnel.

Seen from a more areal context the pavilion refers to the airport in several ways. You get a feeling of speed caused by the continuous parallel lines of the ground form and by the perspectives of the building and fencing. The slanted roof relates to the wings of a flying aircraft, and even to the airport traffic tower and aircraft hangars. The canteen’s intern roof construction also looks like the inside of a hangar.

The airport football clubsandwich tastes like more!
The Game

Image: Johnson Wax, Maaskant
Program: Mikkellorst, Onix
The indentational shapes of the image and program form by the end situation of the game, are inserted the new design very subtle to respect the clear and smart design. At the corners of the pavilion it is possible to form outside and inside interstices like the Johnson Wax building without disturbing the functionality and architectural context. It is even adding a new shape referring to the bended slopes and also the wings of an aircraft. The wood of Mikkelhorst is used as a new facade material, which gives a more natural feeling and gives the sports pavilion more body.
The Game - Redesign

Redesign
Curve your enthusiasm
The Ronald McDonald Centre is a sport complex designed and tailored to the special needs of disabled children. Located between the urban and rural fabric of northern Amsterdam is a building where these kids can feel like kids, where they can focus on what they can instead of what they can’t; a place where everyone is treated like a champion. The innovative Centre is outfitted with the latest technology and accommodations such as pools with movable floors and a drowning detection system, lockers with fingerprint recognition and the world’s first LED line sports floor.

At the center of the complex, with a direct view to all the surrounding sports activities, is the clubhouse; wedged between two sunken oval arenas in the elevated landscape and surrounded by trees and grandstand stairs. The trees envelope the landscape such that there is a sense of protected isolation, embracing the lot and the children warmly and naturally. The configuration of the clubhouse, the trees and the grandstand stairs around the arenas is an anchoring design decision as it [re]-creates the sense of an ever-present audience cheering on the children and their parents. Tendered as a BNA Young Architects Competition, the project was won by Peer Glandorff (Fact Architects) with his design of “Stadion Park”. The Centre is built according to NOC*NSF (Dutch Olympic Committee and the Dutch Sport Federation) guidelines, and has been fully funded through sponsoring and donations by the parties involved in the building process: from Only Friends (the users), to the financial and constructional advisors, to contractors and material suppliers.
Peer Glandorff is an Amsterdam Design Academy graduate and founder and principal of FACT Architects, based in Amsterdam as well. After winning the commission for the Ronald McDonald Centre, Peer set out to push the envelope on as many aspects of the building as possible. Working closely with Only Friends he tried to address all of the social consequences of a sports center for handicapped children. The manufacturers were also involved in the process. An example of the collaborative efforts invested in the Ronald McDonald Centre becomes apparent from Peer’s review of Sika Descol -the manufacturer of the sports floors in the clubhouse-;

"As an architect, you try to convince others of your ideas. But you also want to challenge, in order to achieve something special together. This worked out great with Descol. A good example is our collaboration on the sports hall’s line marking. My original idea was to “switch off” those facilities that were irrelevant for a particular sport. This resulted in line marking using light (Pulastic Led Court), an absolute world first for Descol. Another important aspect was the quality that Descol is able to deliver. One knows in advance the requirements set by the end users of the sports floor, and those characteristics must be guaranteed. Descol’s floors are certified by NOC*NSF (National Olympic Committee), which is the quality guarantee that I am looking for as an architect. Ultimately, one looks for partners who not only want to participate, but who are capable and actually deliver.

I am sure that when we look back on this project, we can say to each other: "We created something truly special!"
Ground form _voids in a field

Positioned in a transitional area between rural northern Amsterdam and the Ring is our site, isolated from its surroundings yet perfectly nested into the landscape. Surrounded by trees as a border-definition, trees as an embracing envelope and trees as an audience. The oval sports fields on each side of the building are excavated out of the landscape and surrounded by grandstand stairs doubling as seating. From above, this creates an effect one could refer to as voids in a field.
Ground form_ voids in a field

Image Source: Straatkaart
Spatial form_ bleechers and curves

The design of the complex is driven by a few simple concepts in their purest forms. The oval sportsfields on each end of the lot drive the building by enforcing the shape of the structure wherever they indent or impose upon the form. The importance of shape is then reiterated in the juxtaposition of orthogonal playing fields into curved bases - outdoors as well as indoors - and strengthened by the varying levels throughout the complex. These variations in heights create moments of observation and interaction on the grandstand stairs - or bleechers. When observed in elevation, the curvature finds its way back into the rounded edges of the 1st floor as well as the organically integrated dugouts along the sportsfields. Re-visiting the enveloping trees, it is also interesting to note the curving path the wind is encouraged to take driven by the design choices in this particular landscape.
Spatial form_ bleachers and curves
The image form of the Ronald McDonald Centre is defined by the colorscheme and the curves at play. Colors are used not only to define areas and functions, but they coordinate traffic, flow from floors to ceilings and strengthen the composition of the building in its surroundings. Green for pedestrian sports, blue for watersports and red as traffic. Nevertheless, the red zones are zones for interaction, observation and rest. If you would look at the building with half-closed eyes, the image takes shape in a clear array of colors you could then link directly to their use.

We particularly appreciated this use of color for the kids; aside from the exciting atmosphere it creates, it also gives a sense of clarity and direction we found unprecedented.

Furthermore, the curvature returns as a strong image form element, as again you can not imagine the building without it. Every angle of observation only strengthens this principle as the curves give the building as a whole, a much more dramatic effect.
Image form_bending colors
As mentioned before, The Centre is home to various sports teams and recreational sports players with a physical or mental handicap. The Friends Only organization coordinates sports events and team activities and is also responsible for a large sum of the supporting funds holding the Ronald McDonald Centre to the high standards it is famous for harboring.

Most prominently is the decision to keep all of the sports activities on the ground floor. Parents and kids can circulate on the upper floor to observe and interact; looking straight down into the swimming pool from the deck above or peering out into the field whilst enjoying a cup of coffee in the cafeteria. This programmatic defining line, in effect, creates two flows: sports and everything else. The sports flow is primarily horizontal, moving from one space to the next (just as one would play any sport on a field) and the other movement is vertical (just as one would move up and down the bleechers in a big stadium).
Programmatic form_it’s all fun and games
Reconfiguration _new lots

1. TU Delft
2. Kunsthal
3. Mikkelhorst
4. Nox
5. Sportpavillion
6. Ronald McDonald Centre
7. Maaskant
8. Beelden aan Zee
9. Spijkenisse
10. Sanaa
11. Educatorium
12. Bernoulliborg
13. Aërma
Design Games _supply and exchange_

1. Spatial form - Spijkenisse

2. Programmatic form - TU Delft

3. Image form - Bernouliborg

4. The challenge

Ronald McDonald Centre, FACT Architects, Sarina Da Costa Gomez & Anneke Heins
Reconfiguration _new lots

Converting the existing centre into a fitting pavilion for Lot 6A, allowed us to take a closer look at the ground form and the spatial form, as we tried to stay true to the programmatic and the image form. The most obvious change is the decision to convert the otherwise 'lowered' sports fields into elevated planes, re-arranging the way the spaces are observed and experienced.
Redesign_analyse and recompose

Ground Form

Spatial Form

Image Form

Programmatic Form

Ronald McDonald Centre, FACT Architects, Sarina Da Costa Gomez & Anneke Heins
Designing through analyses resulted in the following composition: a “floating” library imposing its shape on the lot and the adjacent outdoor spaces. We’ve tried to take our cue from each of the “forms” without deviating too much from the original: proving that subtle changes can have massive results.

Notice how the buildings still feel similar; we found it particularly interesting that we managed to achieve this without introducing a single curve in the recomposition.
FORM IN MOTION
The Johnson Wax factory contains a small production department, a big warehouse and an office, situated round a patio. Johnson sr., friend and client of Frank Lloyd Wright, let Maaskant free in the design of the office building. The result, the ‘boomerang’ above the pond, has been designed with the purpose of making a statement. The structure, floor plan and details have the same sculptural quality of that principle. The plasticity of it all is just what it is. The first sketch Maaskant made for the building was a very simple box shaped building, but the client wanted something more spectacular. Something new, futuristic and innovative, something that reflected the vision of business of Johnson Wax.

Bert de Bruyn, architect of Maaskant’s office, made a design in line with the input of Maaskant. He said with spread arms: “It has to be this kind of building” The architect in charge translated this in a building that was completely new for post war Holland. The ‘boomerang’ had a sculptural aesthetics that became a recognizable feature of Maaskant’s office. Furthermore, the boomerang shape/design represents the sign of Johnson Wax, As a consequence the building can be seen as an advertisement. The building is divided into two segments: the factory and the office. The factory has a very functional form, the office being the ‘face’ of the company had to show what the company was about.

*logo as inspiration for an iconic building or a ‘decorated shed’*
Hugh (or Huig) Aart Maaskant (1907-1977), is one of the main architects of the reconstruction of Rotterdam after the Second World War. Hugh Aart Maaskant was one of the first one of architects who were engaged with the aesthetic side of industrial buildings. The work of Maaskant can be characterized by the large scale of the buildings.

Maaskant was born in Rotterdam; where he studied architecture at the well-known Academy of Fine Arts and Technical Sciences. After a short period working at the architectural firm of Jos de Jonge, he joined the office of William van Tijen. In 1937 Maaskant and van Tijen became companions. Together they specialized in building industrial and business centers. The plan for the development of business centers in the municipality of Rotterdam arose already in the thirties of this century, but it came into execution after the Second World War. The destruction of the city following World War II made it possible and necessary to execute the plan. The most famous structure was the large commercial building, Groothandelskantoor (1951), nearby the central train station of Rotterdam City.

Originally, Maaskant had some ‘big’ commercial clients, like the Hilton Hotel in Amsterdam, which contributed to his success and popularity. However, he was accused that he was an architect of capitalism, which was supported by the monumentality of his designs and buildings. Especially the provincial house of Den Bosch, a hundred meters high tower, has been criticized. Maaskant resisted from the criticism by gathering new projects and assignments for a variety of clients. The Tomadohuis (1962) on the outskirts of the town of Dordrecht is a special building that was designed by Maaskant. Because of its special design the building seems to float. This “floating” office building had a unibody construction.

Maaskant became well-known by the general public with the design of recreational buildings like the Rotterdam Euromast and the pier at Scheveningen. Furthermore, Maaskant created many new houses and associated facilities such as schools. In the fifties and sixties Maaskant realized a large number of new private houses and several schools.
Ground form

location of the building with surrounding landscape

aerial view of the polder landscape

panoramic view of the building and nearby landscape

section of the building and surrounding landscape
Ground form
Spatial form

Schiphol 1964

Whaletail

YB-49

Johnson Wax Logo

Translation to form

Static

Dynamic
Spatial form
Image form
Image form
Programmatic form

Lobby

Board room

Hallway

Offices

View at the building
Programmatic form
Composition
For the both of us this was the first analysis in which we came in direct contact with a design of Hugh Maaskant. When we first visited the location the design was very different from what we would expect when visiting a factory with office space. Of course we saw some pictures of the building before visiting, but still it was a weird object to see in that kind of landscape. In Dutch it is a ‘vreemde eend in de bijt’, what means ‘weird object in it’s context’. It seems that the form of the building is most important, it is a statement and billboard for the Johnson Wax factory, and the function of being an office is subordinate to that purpose.

You enter the building on a staircase or through a corridor from the factory building. When entering, you walk into a lobby with views at the landscape. In the lobby there is a round wall leading you to the board room. From that board room there are wide views at the surrounding landscape. The incidence of light through the big windows is a surprising element. The notched shape of the windows in the offices ensures that the focus, from within the offices, is both on the landscape and on the building itself. This triangular shape is in contrast with the smooth shape of the building. If either aspect, organic or geometric, would be missing, this would probably cause an imbalanced design.

The factory building is a geometric shape which is in contrast with the flowing shape of the boomerang. It also highlights the functional separation. The boomerang has a commercial function and the factory has a production function.

What we disliked was the flat translation and explanation of the architect on the design. We thought that the statement, that it was just emerged from halving the X from the Johnson Wax logo, was very poor. Therefore we wanted to search for deeper layers. We came across the landscape aspect in the design. The placements, both flat and in height, are essential for all the valuable features of the design. The design is not as flat as only a simplification of a logo, but it is much deeper than you initially see. It is form in motion, flying through the landscape.
Second step

Third step

Transformation step: Ground form Mikkelhorst, Haren

Transformation step: Programmatic form Mikkelhorst, Haren

Fourth step

Transformation step: Programmatic form Sportspavilion Zestienhoven
Art versus Architecture
Museum Beelden aan zee, Den Haag, 1994

Museum Beelden aan Zee (Museum of Statues at Sea) The museum is located at short distance from the sea, hence the name Museum Beelden aan Zee (Museum of Statues at Sea). The museum is not recognizable from the coast nor is it recognizable from the boulevard. The museum is hidden in the dunes and completely built underneath the ground level. When they started to build the museum, The Hague demanded that it would be hidden from the view. A part of the dunes was dug out and the museum was built into the dunes.

This location, where the museum is placed, is the same place where the Pavilion von Wied was built, in the year 1826, in order of King William the first. This became visually a part of the museum, but programmatically only the cellar of the pavilion plays a role in the museum.

The dunes are a part of the seawall. In the Second World War, these dunes changed in a defense line, with bunkers embedded into the dunes. If we look at the museum right now, you could say that the architect wanted to refer back to the old days, where concrete and the dunes became one.

The architect Wim Quist designed a wall around the dune, to protect the building from being seen from outside, but also to refer back to the days when bunkers ruled the dunes. The layout of the building also shows the qualities of the bunker. The design exists out of two half circles, which form a defense against the dunes. The circles exist out of solid concrete, colored precisely like the sand of the dunes, so that you cannot really speak of a clear transition between the dunes and the museum. The two circles come together at the point where the cellar of Pavilion von Wied is.

Layout
The museum has several exhibition spaces that are integrated in various ways on the site. Despite the fact that the floor level is below the dunes, the architect clearly distinguishes indoor and outdoor spaces. When entering the museum you come into a common room where the wardrobe, toilet rooms, reception, library, office and a small restaurant are located.

From the entrance space you walk into the first exhibition space, which is housed in one of the half circles. Inside this is clearly reflected in the round shape of the walls. From inside this space you can look outside into two patios. These patios form two outdoor exhibition spaces. You are quickly drawn into a hallway that leads to the second main exhibition space: the basement of the Von Wied Pavilion. This space is an exhibition area where you have a comprehensive view of the dunes where the museum is built into. Here you experience the vast space and the transitions between inside and outside.
From this room, your senses are stimulated again by a corridor, a reflection of the previous one, a route designed by the architect to guide you through the museum. This corridor guides you to the second circular segment that the architect has used as exhibition space. This vast space is completely outdoors.

There is also a room underneath this outside exhibition space. This room is different by design. This difference in design is researched by Maarten and Jeffrey (also featured in this book). Light and space dictate the design of the pavilion. The way in which the architect has combined the different indoor and outdoor spaces play a key role in the design. The indoor and outdoor spaces are fluently mixed by the use of glass and ongoing concrete walls. But while walking through the building you can quickly see that it is an architect his museum. The function of the building should be the exhibition of art, but the building attracts so much attention that you are quickly in a struggle between art and architecture. The way you feel in the vast indoor and outdoor spaces is magnificent, but it distracts from its purpose. The focus on the architectural design is so enormously present that you almost immediately forget what you came for: art. It is questionable if the architect succeeded in putting art, function and users before architecture.

Art vs. Architecture
Ground form

The museum is hidden and isolated in the dunes, underneath and in between the royal Dutch pavilion.
Ground form

Walls

Dune and pavilion

Situation and built environment

Built environment, dune and pavilion in the model
Spatial form

Classic building on top of new building within old landscape within new concrete wall

Spatial form model

The museum is physically almost completely mirrored through the heart of the building, but the program (exhibition) is completely mirrored within the physical mirrored
Similar shaped rooms are mirrored through the heart and contribute to the readability of the museum, although they are not identical, they share similarities in shape, program, and/or inside-outside location.
Image form

1. Facade seen from the street, entrance side, from a distance

2. Facade feeling when approaching

3. Locked in / Bunker feeling, from the inside as well as outside
Art struggles with the image form of Museum Beelden aan Zee. It is the architecture that prevails. That is why many artists do not appreciate this museum (in contrary to architects, who mainly love this museum)
The four main spaces within the museum, each with a different flavour, but still within the same framework. A lot of the architecture details attract too much attention in most artists opinion, but are adored by architects. The photos speak for themselves.

- **Routing, guided by design.**
- **First and largest exhibition space.** Metal construction feels temporary inside the concrete walls.
- **Central exhibition space and foundation of the pavilion on top.** The foundation is cladded with white stucco.
- **Inside and Outside exhibition spaces.** The main outside exhibition space. Concrete and air rule the visual field.
- **Entrance and outside exhibition space.** The outside exhibition space feels like it is only there because of the symmetry, materials used feel cheap and inconsistent.
Different rooms, different styles, different art, combined with a guided routing through design result in spaces with different atmospheres. This has as a result that some rooms or spaces are better suited for art, and some art will therefore get more attention than other art.
Composition

The central exhibition space, with the adjacent outside exhibition rooms, contain the four layers in its purest form and they are all connected and interwoven.

Ground form = Green
Spacial form = Blue
Image form = Yellow
Program. form = Red

G = Ground form
S = Spacial form
I = Image form
P = Program. form
We tried to make it clear throughout this analysis that we are not sure that this architectural beauty of a museum (with some flaws here and there) might not be the perfect answer to the demands of a museum. This building attracts so much attention to itself that it is quickly forgotten that it is supposed to be a museum. While having a conversation with an artist about this museum we, Artie and Paul, came to the insight that it is not a good museum for art. While we were at first quite enthusiastic during our first visit, we later came to the conclusion that we too never really looked to the art, although we have been walking around the museum for more than three hours. That is absurd. We understand that partly the reason we did not look at art is because we had to analyze the museum as architects, but a big part of it is also due to the amount (the overkill) of architecture in this museum. So while we had fun analyzing this museum, and while we appreciate the architecture, the details, the layout and the materialization in itself, we also came to the conclusion never to forget what you are designing for. Never forget, that in a museum art should be number one, never number two.

Artie Dewnarain, Paul van den Bergh
The game

1. Starting point
2. Given away: image (sand brick)
   Received: Mikkolhorst wood
3. Given away: programmatic form
   Received: son o house (sound)
4. Given away: Ground
   Received: Boekenburg spijkenisse
5. Given away: Image (wood Mikkolhorst)
   Received: Kunsthals
6. Given away: Image kunsthals
   Received: Sarahuis
Recieved Layers

Spatial: Educatorium

Programmatic form: Son-O-House: handmovemnt, standingplace

Image: Sarahuis Natural Light, see through from room to room tot the outside

Ground: Boekenberg
Total oriëntation

Layer integrated in our design
Design proces

Spatial:
The main form of the Educatorium includes round forms and a slab these elements are very characteristic for the spatial form and the design. We have integrated these characteristic elements in our design by lifting the building above the water or lifting the total pavilion of the ground. The main purpose why we have chosen for this option is because of the Educatorium has done the same thing. We have also integrated the slab and the round forms in our design and these are recognizable as elements that refer to the Educatorium.

Image:
The image of Sara house is focused on the nature. The user need to have the possibility to see the nature if he is standing inside the building. It doesn’t matter if the person is standing in a room that’s totally not connecting to the façade. The view from a room to another one is everywhere the same because you’ve got the view to the nature. To made this possible the architect used only transparent materials.

Programmatic form:
The most important thing with the programmatic form, from the building Son-O-House, was the feeling of the people who are inside the pavilion. The experience is different every time. The architect has realised this by creating standing points and handmovements inside the pavilion. In our own design where the 4 layers are combined is this important layer also integrated in the design. On the first floor you can experience the sound of the water, you can smell it, because there is a holl made in the floor. You can listen to the water that is smashing at the surface of the pavilion. This is how we have integrated the experience of the user, the main important element from Son-O-House in our design. The shape of the gap in the floor is like this because of the standingpoints that are placed around this gap.

Ground:
For the ground we have analysed the groundform of the Boekenberg platform. The conclusion that we made was that total orientation is the main element for this building in his environment.
Pictures
Statues in a Sea of Architecture

Architect, Wim Quist

Wim Quist born 1930 in Amsterdam. At the age of 18 he needed to go in the Dutch obligatory military service. And worked as an engineer in the machine rooms of the navy. After that he studied architecture at the Amsterdamse Academie van Bouwkunst in 1960. After years of college left Amsterdam and settled in Rotterdam.

In the beginning of his career he worked for the city of Rotterdam. In these years he got known for the tree projects for the Rotterdamse Waterleidingbedrijf. As an architect Quist had some strong influences in the rebuilt of the city Rotterdam. For example the building as Schouwburg, het Maritiem museum, het Robeco kantoor and the Willemswerf.

The designs of Wim Quist are related to the modernism but for his abstract formlanguage and his use of geometrical forms in his designing he also was seen as a rationalism architect. Quist worked with clear elementary forms, mostly of raw materials and precise detailing.

In the ouvre of Wim Quist you will find several museum designs. For example the Museum Kroller Muller (1977), the Museon (1985), the maritiem museum (1979) the Cobramuseum (1995) and the museum Beelden aan zee (1992). Besides his building designs he also designed several civiel constructions. And spoke at symposia about architecture, changing society and changing view on architecture and the commissioning of buildings. From 1975 till 1979 Wim Quist occupy the job of chief government architect of the Netherlands.

Museum Beelden aan Zee

Client.
The museum is designed for the art collectors Theo en Lida Scholten. Back in the '90 the couple was looking for a Location to exhibit their art collection that consists of mainly statues. The museum in private ownership has a changing collection of contemporary, modern sculptures.

Location.
Hided in the dunes of Scheveningen, like a pearl in the sand, lays the museum “Beelden aan Zee”. Until 1994 this location of the museum was
defined by the image of the historical pavilion Von Wied. This Pavilion was originally build in 1826 by assignment of King Willem the first (also known as Willem de Zwijger). In origin the pavilion had a close relationship with with the beach and sea of Scheveningen and served as a beach house for his wife Princes Wilhelmine van Prussia.

After 1994 the museum, that is on the exact same location as the pavilion, did not change any thing in this situation. They build the museum underneath the dunes, and underneath the foundation of the historical pavilion. The museum is not recognizable from the surrounding and thereby not disturbing the pavilion.

Architectonic design.
Wim Quist was from the early ‘90 assigned to design a museum that is dedicated to exhibit sculptures. The municipality of the Hague set the design rules for the museum. They could not disturb te surroundings - neighborhood - beach - pavilion.

The building with its ground form that consists from two circles, is dug out of the dunes around the pavilion. In the middle (our core) of the museum is the only point the pavilion an the museum meet, In the basement of the pavilion they created a space in between the columns of the foundation.

Quist selected a variety of materials that came close to the sand‘isch’ colors. The whole building is made out of the materials: (sand colored) concrete, aluminum, Italic granite, beech and American Pinewood.

The gathering of the materials are all trough the whole museum very subtle detailed. They paid attention on every little detail. From showcase fixation on the tie rods in the concrete wall to the wooden door connected without doorframe on a hinge in the wall.

the poetical design is characterized by the endless view lines, endless space, evident picking of materials, evident construction and thereby giving the sculptures in the museum “the fullest attention, what it deserves”.

Experience.
If you enter the museum there is no confirmation with the busy chaotic city live. You are enclosed in the inner world of the museum. High walls and dune barricade’s lead your eyes along the sand colored material to the dutch skies our endless plains of the North sea. The only relation there is is between visitor, sculptures and architecture.
Ground form

Location

Section

01. Entree / hall
02. Restaurant
03. Auditorium
04. Office
05. Exposition
06. Patio
07. Sculpture garden

Ground forming arches
Ground form

"Museum Beelden Aan Zee" by Wim Quist, Maarten de Haas & Jeffrey Gouka

Grid meets exposition blocks

Grid meets fine details

Grid runs through entire museum

Grid meets curved wall
Spatial form

Overview sketches

A. view over endless sea, use of the dune to filter the view from "city chaos"

A. Halfway the museum, a moment to enjoy the endless seeking sea
Spatial form

C. “invisible” construction

D. Endless walls will lead you to open spaces

B. One of the three patio’s, no surroundings but the dutch sky

E. Endless corridors give access to the different expositions spaces

"Museum Beelden Aan Zee" by Wim Quist, Maarten de Haas & Jeffrey Gouka
Image form

Front facade, one of the few places where the facade of the museum is visible

Situation around the year 1800, the pavilion in the dunes at the sea site

Situation after 1994, the pavilion still got his close relationship with the sea, only it has got a museum forms a foundation
Retaining wall forming the barriers of the museum

Outside barrier wall in detail

Museum covered in dunes

Tie rods covering the bare concrete walls

"Museum Beelden Aan Zee" by Wim Quist, Maarten de Haas & Jeffrey Gouka
Programmatic form

Audience + Sculpture + Architecture = Overkill architecture?, where are the sculptures?
Programmatic form

Model: programmatic layer
Yellow: Restaurant and auditorium, open for the public
Black: Exposition space, open for the public
Blue: Outside exposition space, open for the public
Red: Depot and offices, closed for the public

Relation diagram

e: entrance
d: depot
t: toilet
k: office
r: restaurant
te: exposition space
h: hall
p: patio (outside exposition space)

Here they are.. And here..
Composition
Conclusion.

Like described in the introduction the museum wanted to create a strong relationship between visitor the statues and the architecture with the dutch sea side landscape. The last component, architecture, gave us some questions.

When we visited the museum the architecture was really dominant. An overkill of architecture, is there still attention for the sculptures in the museum. The statues completely disappear in the decor of endless spaces, viewless sandy colors and the construction with its strong appearance.

The spaces aren’t in function of the exhibition, but the exhibition is in function of its building. walking through the museum we, looking with an architectural eye, didn’t saw any statue. just wondering around from space to space and looking at the the architecture in all its facets. So the statues are more like decoration for the building, or to give it a purpose.

We think this is not really what an artist wants for its peace of art, that its in a museum that completely ignores their artwork.

Than the name. Beelden aan Zee (Statues at Sea) it’s called. So the museum is at a Sea side and there is a strong connection between the museum and the sea (in one space, where there is an architectural node, everything is coming together). But as a concept this name completely off. What you expect of it, is the sculptures on a background of the sea and maybe beach. But in stead they made an more introvert building, with loads of architecture in it.
Surreal game

Checkpoint Alpha
Transmitting from location 8A

Checkpoint Charlie
Programmatic form: son o house
Transmitting from location 8B

Checkpoint Bravo
Image form: Sand for Mikelhorst wood
Transmitting from location A
Checkpoint **Echo**  
*Image: Mikkellhorst wood for Kunsthall*  
*Transmitting from location B*

Checkpoint **Delta**  
*Ground form: Boekenburg Spijkenisse*  
*Transmitting from location B*

Checkpoint **Hotel**  
*Image: Kunsthall for Sanaa house*  
*Transmitting from location B*
Design Game

Ground form
MVRDV Book Mountain

How we read it:
Mono material
Dutch village
Square

Spatial form
Rem Koolhaas Educatorium

How we read it:
Split level
Joint spaces
Design Game

Image form
SANAA Building

How we read it:
Glass
Impressive in size

Programmatic form
NOX Son-o-house

How we read it:
Standing
Touching
Experience

"Museum Beelden Aan Zee" by Wim Quist, Maarten de Haas & Jeffrey Gouka
MIRROR MIRROR ON THE WALL, WHO’S THE BIGGEST OF THEM ALL?
The following analyses is about the “Bookmountain” project. A library designed by MVRDV.
The Bookmountain is located in Spijkenisse, a city in the Netherlands located below Rotterdam.

Spijkenisse is a city, a city on the rise. The city has several prestigious projects under construction, as a theater by UN Studio, a newly developed city center and a large housing project near the river. As a result, special projects established as the raising of the old mill spijkernenise. The MVRDV library is a big part of all the prestigious projects in progress.
The fact is, despite all these large and urban projects, the inhabitants of Spijkenisse are still calling the city centre the ‘village’. This is how the contrast between the urban and the rural character is again clearly emphasized. The library is in the middle of these two worlds and that fact is readable within the design.
The library is surrounded by apartments and housing, these houses are part of the MVRDV project. Across the library is a medieval church located.
One of the peculiarities of the project is the fact that the clash between an urban character and the village feeling of the place is mixed in the projects. The shape of the buildings and the materialisation of the buildings is directly derived from it’s surroundings. Whilst the size of the buildings is clearly “Oversized”. Like Winy Maas says: “It is like Gullivers Island, it is all out of proportion”.
The library is not only an urban statement, it is also one of the most sustainable libraries in the world. Installations, materials and plants within the building are acting like a small natural environment.
The downside concluded in our Analysis is the fact that the concept of MVRDV is questionable. The concept behind the building is transparency and accessibility for the inhabitants of Spijkenisse.
The fact that MVRDV used a reflecting material as a tool for transparency is a big flaw in the whole design.

The Analysis is built up in 4 layers:
The Ground Form
The Spatial Form
The Image Form
The Programmatic Form
The four layers will explain the whole building in a simple way.
Ground form

Project site, everything has a 'brick look'.

The roof of the new structures are derived from old farms.

The library is the tallest building around.
The project site is located along the historical center of the village. Throughout the years, the marketsquare changed location several times, but in the new setting, it returned to its original place next to the church. The site is filled with a library and a residential program, which are divided on the space in such a way that two different squares are left over: the market square and a square in between the residential buildings. The main entrance of the library is on the marketsquare. The project is part of the transition program for the village of Spijkenisse to become a city. In that way, the design combines big, urban scales with characteristics of the village settings of the area.
Spatial form
Spatial form

The spatial form within the library is divided in 3 area’s
- The enclosed space within the “mountain”.
- the semi- enclosed space created by the “bell Jar” on top of the enclosed space.
- the outside.

The shapes of the enclosed mountain is derived from the way the program is stacked. Because the program is stacked like a layer cake, different areas are created on the top of each layer. These areas are reading and walking area’s.

The routing through the building, which is on top of the enclosed layers, and leads you to the top of the mountain where an overview on Spijkenisse is presented to you.

The shape of the bell jar is an echo from the past, it is inspired by the roof of an old farm. The contradiction between the urban and the village feeling is increased in this way. The shape reminds of a village, but the sheer size of the bell jar, and the chosen material reminds more of the city.
Ingredients of the Image form

Material mountain
Surrounding bricklook is chosen

Material Bell Jar
Reflecting glass exterior and wooden old farm style construction

Material function
Books were thrown against the mountain

Greenhouse effect
Bell jar skin creates freedom
To define the strategy that was used to create a mountain of books in the middle of the municipality of Spijkenisse, we compared the design to other similar images of designs. R. Buckminster Fuller created a geodetical dome in Seattle with just a small amount of materials. Within this enormous dome a total freedom is created in the form of space in its surrounding space. With this principle it is possible to create the wanted space in every random surrounding, urban or countryside. So is the dome used as a big greenhouse to create a autonomous biosphere within it.

Another library that was designed by OMA in Seattle is done the other way around. Segregated volumes were placed on different levels in downtown Seattle and to give this volumic carcass a skin it lookes like a big skin was layed over it and sucked vacuum from within so the space inbetween the volumes got separated from the urban surroundings.

A combination of both of these techniques MVRDV used in Spijkenisse. To create a space that gives you the feeling that you are reading a book on a mountain of books in the middle of Spijkenisse, a dome was used in the form of a traditional Spijkenissian farm. Space within space, free in all aspects.
The programmatic form can be separated into three basic components: the inner program, the library, and the outside reading areas. The inner program has several components among them the auditorium, the conference room, the area for playing brain teasers, the offices, and the commercial area. These functions were added to attract more people and give the library an interlocal public. The reading terraces are the place to explore the collection of the library overlooking Spijkenisse in the background.
The programmatic form consists of the stacked different inner functions. The functions can be distinguished to the inner or more formal spaces and the stacking of the books on the walls. Beside the core functions of books and reading those books there is also attention for a wider attraction of people, therefore the commercial and other related activities are introduced within the program. The inner functions differ in size so stacking them creates the space needed for public program.
Composition

- Brickwork
- Glass
- Stacked level
- Reading terrace
- Bookshelves
The Boekenberg is part of the transition plan to upgrade Spijkenisse from a village to a city-like environment. To express this transition, the architects used shapes and materials that are familiar to the area, and combined these with new, urban size dimensions. In several interviews villagers criticized the library as being too big, that it dominates the city center.

To encourage the residents of Spijkenisse to read, MVRDV aimed to expose the books to the public. They designed the library as being a mountain of books. All supportive functions of the program are concealed within the mountain, so the actual library can be wrapped around it to be visible to the outside world. The books are stacked around the slopes of the mountain and sheltered by a big, glass bell jar covering the entire building.

To protect the books from weathering, a strict climate control system is applied to the interior. This also includes the reduction of UV light entering the building, which gets accomplished by an additional layer of filtering foil on the glass of the bell jar. As a result, the entire facade acts as a gigantic mirror when viewed from outside. By daylight, when most people will pass the building, the books are not visible at all. Only from inside, or at night when the interior lights are on, the mountain can be seen in its full glory. Due to this, the initial plan of exposing the books to the public gets ruined by the attempt to expose them. How paradoxical can it be?
The trading game

New Programmatic form: Saanaa Pavilion.
The program is cut up in different spaces, the space in between is wandering area.

New Spatial form: Ronald Mac Donald centre
The spatial form has a starting shape of a beam, this shape is influenced by it’s environmental setting, that is why the 2 circles are cut out of the basic beam shape.

New Ground form: Kunsthal Museumpark by OMA
The museumpark is a mixture of nature and exhibition in a linear space.

Original image form: Bookmountain MVRDV spijkenisse
The image form is the abstracted shape of an old farm, materialised in a reflecting glass bell jar.
A new Design

New design based on the merged ingredient forms of the layers traded during the surrealistic game.
Explaining the layers

New Programmatic form: Saanaa Pavilion.
In the new design, the staircase spaces and the core floating spaces within the bel jar are used as small parts of park and stages of exhibition mixed within the pavillion.

New Spatial form: Ronald Mac Donald centre
The spatial form has a starting shape of a beam, this shape is influenced by it’s environmental setting, that is how the stair form takes shape. It is derived from the sloping of the surrounding into a whole in the pontoon.
Explaining the layers

New Ground form: Kunsthala Museumpark by OMA
The museumpark is a mixture of nature and exhibition. The surrounding natural environment leads the visitor into the staircased tube, where nature is the route through the exhibition. Entering the core, nature and exhibition are seperated in one space because of the input of the programmatic form.

Original image form: Bookmountain MVRDV spijkenisse
The image form is the abstracted shape of an old farm, materialised in a reflecting glass bell jar. The image form was put into a new translation of its surroundings. The image of this bell jar creates space into water that defines a new typology and apart from that presenting a spectacular view of Holland; the everlasting marine life and the economic docks, the heart of Rotterdam in one view.
FRAMING CULTURE
De Kunstlinie, Sanaa

Stadstheater Almere, SANAA, Pascalle Asgarali & Bastiaan van der Sluis 191
Stadstheater, Almere 1998 - 2007

The Kunstlinie, also known as the Stadstheater, is a cultural center for arts and theater, located in the new city center of Almere. The Japanese office SANAA designed the building in cooperation with Martien van Goor Architects. After winning this competition in 1999, the partnership ended and SANAA went on with the job. In early 2007 the Kunstlinie was officially opened.

Program Masterplan
The building stretches across the man-made lake, Weerwater, at the southeast of the city, under OMA’s master plan.

The mixed program of the master plan is composed of approximately 67,600 m² commercial, 9,000 m² leisure, 890 housing units and 3,300 constructed parking spaces.
The program of the new city center includes also a new library, a hotel, a pop music hall and a theatre. The commercial concepts were tested on the proposed urban blocks and the hybrid combination of programs. The boulevard alongside the Weerwater, the Esplanade, is utilized for leisure, nightlife and cultural programs to achieve a vital waterfront.

The stadstheater in Almere combines theater- and public cultural facilities. The building stretches across the man made lake, Weerwater, at the southeast of the city, under OMA’s master plan.
The complex consists of a 1000-seat theater, a 350-seat auditorium, a 150-seat performance room, and a studio for music, painting, sculpture, dance and computer art. From the Large hall to the piano room, rooms of diverse sizes are connected directly to each other. Space is arranged equally in the one story building. Circulation allows visitors to wander following a number of different paths. In different rooms a vast array of activities is taking place simultaneously. The program comes to life.

Status: Build
Competition: 1994 (First Prize)
Construction: December 1998
Completion: 2007
Client: City of Almere / Almere Hart CV
Budget: 750 million
Site: Centre of new town on reclaimed land
Now that the climate is such that bombastic architecture is associated with the greed and excess that caused the financial crisis, SANAA remained true. In a climate where most firms kind of rush to follow the latest trend, they stay focused on their own way of doing things. And they’ve become experts in doing this.

SANAA is known for applying clear forms and simple solutions for complex programs. This style is clearly visible in the Kunstlinie. There is no hierarchy in the design, all areas are equally important for the functioning of the building. The spaces flow into one another. The use of standard corridors is minimalized. The partition walls consist mainly of glass and very thin and light, which makes the building see through. It’s possible to view and observe more rooms at once.

Kazuyo Sejima and Ryue Nishizawa have been working collaboratively under the name ‘Sanaa’ since 1995. Sejima studied architecture at the Japan Women’s University before collaborating with architect Toyo Ito. She launched her own practice in 1987 and was named ‘young architect of the year’ in Japan in 1992. Nishizawa studied architecture at Yokohama National University and, in addition to his work with Sejima, has also maintained an independent practice since 1997.

Sejima and Nishizawa have been awarded many prizes such as the ‘Gold lion’ at Venice Biennale (2004) and the ‘Arnold Brunner Memorial’ medal of the American Academy of Arts and Letters (2002). In 2010, Sejima and Nishizawa were awarded the ‘Pritzker Prize’, the highest of honours in architecture.
Ground form

Public spaces Masterplan  Buildings Masterplan

Distances: surrounded functions connected to the stadstheater

Routing

Masterplan; like a maze
Context: Chaos City vs. Serenity Weerwater

Situation: prominent location with views on the Weerwater

Sanaa: visually lower, mentally higher

On the foot of the Masterplan, on the edge of the city and nature lies the Kunstlinie. In front of her lies an open space called ‘Esplanade’. Because of last named the view on the building is wide and serenity takes over which leaves an impression with the visitor.
Spatial form

- Slab of concrete
- Boxes refer to program and functions
- Horizontal to landscape, vertical to city

- Courtyards
- Main axis
- Artificial light and daylight combined in rooms
- Courtyard daylight effect
Concept: Transparency and accessibility are translated into a design which can be defined as rooms joining on another. Three corridors create a clear and visible axis, excluding any form of disorientation.
See through from room to room to the outside

Natural light / glass walls

Sketch Sanaa: Inside is always outside

Transparency of the building combined with framed views refers to the building being open and accessible. The use of calm materials and colours create a serene and calm atmosphere.
Sketch: Program clusters

Corridors: Ending at wall, provided with artificial light

Corridors: Ending at nature, provided with natural light
Programmatic form

Sketch: Program clusters

Diagram: Program percentages

27.5% stadsschouwburg (stadstheater)
23.7% remaining spaces (toilets, emergency corridors, etc.)
14.7% foyer’s & entrances
14.2% music
5.3% patio’s
4.8% painting & crafts
4.2% dance & drama
3.5% photo & computer arts
2.1% theatre cafe
Programmatic form

Outside: 1 building
Inside: 2 programs

Entrance
Finances

PAY
FREE
PROFIT
MINIMUM

Open Space (black)
Used Space (black)

Sketch Sanaa: Different programs

Dutch Architecture with Landscape Methods 3
Composition

Prominent location at the Weerwater

Adding program framed by boxes

Framing views

Keeping building and program transparent

View from Weerwater - Model by SANAA

From above - Model by SANAA
After visiting the location and the building, we soon came across the architects' intention. We were, like others, impressed by the serenity and calmness of the building just lying there at the end of the city, floating on the edge of the Esplanade and the Weerwater. The Kunstlinie seems to lay lower than the rest of OMA's Masterplan, but has in fact the most important place of all. While floating on land and water, having a lot of space around her, the building succeeds in visualizing her personality: being open.

Realization of the building brought along many difficulties. Sanaa had trouble with converting the design according to Dutch building regulations. It took quite an effort to realize the thin appearance of the building. Unfortunately this had influence on the end result. While analyzing we came to the conclusion that the decisions which had been made to lower the costs also lowered the speciality of the building itself. Looking at the front facade where the main entrance is, we can tell that the slimness of the building has been broken by the thickness of the door profiles. The present solution was chosen because of the budget, and not because of building regulations. This was not how Sanaa originally designed it. Another matter relating to costs is the 'wobbling' glass facade. The glass which has been used is thinner than originally chosen. Because of the large surfaces, the glass façade wobble's as shown on the pictures on the right. This results in a broken (blurry & fuzzy) reflection of the landscape.

The building seems one but is divided by two programs. There is free access to the Kunstlinie's area. The Stadstheater is not free and only accessible when or if the program allows it. The way organization and money is divided goes in a similar way. First named program is only based on subsidy, the other on entrance fees and has profit based structure. This has influence on the experience of the building.

The initial design made by Sanaa is a remarkable project, but through economical interference it never will be what it should.
The Trading Game

Starting point

First new layer

Switching location

End point with all new layers
New location - surrounded by water

**Ground form** - De Kunstlinie, SANAA
Prominent location at Weerwater

**Image form** - Educatorium, OMA
Different volumes, shapes and functions

**Spatial form** - Son-O-house, NOX/ Lars Spuybroek
Motion becomes structure

**Programmatic form** - Boekenberg, MVRDV
Placing volumes and functions, creating rest-space
THE NEW DESIGN IS A SPORTS CENTER FOR THE STAFF OF THE OLYMPICS. IT’S ALL ABOUT MOVEMENT. MOVEMENT IS RELATED TO ALL LAYERS. MOVEMENT IN LANDSCAPE OR IN PLOT REFERS TO THE DUTCH POLDER. PLACING/STACKING PROGRAM, FUNCTION AND IMAGE CREATE INTERESTING UNDEFINED SPACES WHERE ALL SORTS OF ACTIVITY CAN TAKE PLACE. RESULTING IN A DYNAMIC ATMOSPHERE AND LANDSCAPE.

Ground form - in the center surrounded by water

Spatial form - space defined by movement

Dynamic landscape: Stacked volumes, flowing water, open space

Image form - different themes, different colours, Every function has his own theme

Programmatic form - randomly placing/stacking functions create space

Olympics = dynamic movement
GARDEN OF EDUCATION

EDUCATORIUM, OMA

Educatorium, OMA, Emma Westerduin & Arthur Meerloo
The OMA designed Educatorium is located in the Uithof, the University campus of Utrecht. In 1967 J.A.C van der Steur developed a Masterplan for the campus area. In 1984 Rem Koolhaas was asked to redeveloped the area. OMA designed a spatial plan for the campus with strict design rules. The Educatorium was completed in 1997. The building fills the missing link by connecting two big faculties. Educatorium is situated in the centre of the campus and is used by all the faculties through it’s program. The building houses two big lecture spaces, two big exam rooms and the largest cafeteria of the campus.

Educatorium is designed by the rules of the masterplan. One of the rules is to continue the outside space into the building. The Educatorium slab is pliable and continues from the entrance floor into the roof. The slab is like a field with inclosed spaces. These spaces represent the physical program. The remaining space functions as circulating, waiting, meeting and studying space. This remaining space consist of different ambiences. OMA used different materials and spatial forms to create these ambiences, they also added elements to create an optical illusion.
The Office for Metropolitan Architecture is an office practicing architecture, urbanism and cultural analysis. OMA was found by Rem Koolhaas in 1975. In the early eighties the office was famous not for their buildwork but for their lectures, discussions, competitions and publications.

In 1984 Rem Koolhaas was asked to redevelop the Uithof Masterplan. OMA was building more in and around the Netherlands. In 1992 OMA had an international break true with the KunstHal in Rotterdam. In 1995 OMA published S, M, L, XL a book with all the office opinions and styles up until then.

After this OMA did a great series of buildings like Villa dall’Ava, different Prada stores, Dutch embassy in Berlin, casa da musica and the largest project so far the CCTV tower in Beijing.

OMA now has offices in Rotterdam, New York, Hong Kong, Beijing and soon in Doha.

The work of OMA won several international awards and is influential.
Ground form

The masterplan of the Uithof (J.A.C. van der Steur), dictates every corner to be fully used. The tight grid allows the buildings to be expressive towards the street.

The centralized position of the Educatorium gives it opportunities to be a chain in the large program of the campus. Connecting the Educatorium directly to adjacent buildings.

The direct passage from the Educatorium creates the first under passage which will lead students to the library and to the University of Utrecht.
Ground form

Direct connection to the University of Utrecht, Library and to the Basketbar.

Expressive to the street.

Direct connection to the school and practicum rooms.

Fast moving transportation past the building. Pedestrians can cross the masterplan through the buildings.
Spatial form

The tightness of the masterplan grid will loosen up when you are inside the Eduactorium. The continue of motion at the streetside will continue endlessly through the whole building. This kind of spatial form is first seen at the Auditorium of TU Delft by Van den Broek Baakema.

Raising this kind of an slab will form some interesting vertical relations. Floor becomes ceiling and vides will rise as an reaction to the flipping building.

This continues slab works like an artist painting, the architect can use this as an canvas on which he can sprinkle his volumes.

Finally leaving a rest space which acts like an urban landscape. And the most beautifull, it makes spots to fill in by the students. And thats what you experience in this building, everybody has his own favorite spot.
The spatial connecting flows like an urban landscape throughout the building. Creating spots on every corner with all its own supporters.

Allowing the user to enter at street level, it flows like a fluid slab. Getting cut off from the master-plan grid and entering any different world.

Educatorium, Rem Koolhaas (OMA), Emma Westerduin & Arthur Meerloo
Four images to discover... 

airy and cool ↔ tight and warm

@ night, The slab is recognizable from the outside. When the night has fallen the shape comes to life and the program gets visible from the outside.

One building, one urban landscape. Not only the shape of the slab contribute to the spatial awareness. The use of materials and lighting effects adds a real layer of emotional spaces. Your senses get a little bit messed up, but that is what makes it personal. You can definitely choose your environment, whatever your mood is.

This pattern of materialisation is continued throughout the whole slab. Breaking up at the auditorium and exam rooms. These volumes are in one theme, to focus attention. The rest of the building has all kinds of unique properties depending on the locations in the slab.
Entering this building feels actually like entering an urban landscape. Different kinds of area’s form taste related spots. The number of people in your company and the thing you are up to. You are welcome to enter and to wonder around. The building tells you where you are welcome and which places are more private.
Programmatic form

To understand the Educatorium you really need to zoom out to the masterplan of Van der Steur. The mix of these large functions (exam rooms, auditoriums and cafetaria) doesn’t come together as a complete school. There are no real classes to lecture. The centralized position of this building forms, in the large masterplan scale a link between the surrounding buildings.

The recognisable shape of the slope is partly functional. The auditorium and the cafetaria are strategically placed on top of each other, forming a seamless link.

Referring to the spatial is the programmatic form similar to the created volumes. Sprinkled on the slab all kinds of spots around them.

Even more interesting is the contra space resulting from the programmatic form. This is where you experience the never ending movement through the building, experiencing all the atmospheres and you are in the garden of education.
The great variety of the Educatorium allows different users from the campus to use the auditorium, thereby making this building supplemental to the masterplan.
The Garden of Education

The first glance at the Educatorium of OMA is remarkable. Everybody instantly recognizes the curved slab and you will never forget it. It is a powerful facade even more so at night. The dynamics invert and the program gets lit up. The program itself isn’t really extraordinary, two big auditoriums and a couple of exam rooms. It seems that the school isn’t complete. And that’s kind of true, it isn’t a complete school. The Masterplan of Van der Steur is programmatical divided into different kinds of specialities. Thereby forming a large campus of science. The heart of the campus needed a centre which enhances the hole masterplan. A centre which can provide access to divisible functionalities.

Rem Koolhaas could make this possible with this central lying plot. He made a building which creates connections instead of breaking them by being a building. His passage to the library and the University is creating real indoor pedestrian traffic. Thereby redirecting pedestrians from having to go around the building.

So with this building he adds one thing to the program: connection.

Obviously the slab is an eye popping element in the facade, but it’s not just beauty. It takes you by hand and walks you through the building in a never ending walk around the college rooms. You will experience the walk as absolutely divers. Every corner is different in lighting, material and airiness.

If it is your first visit, you may get a confused. But seeing the students choosing their spot makes it understandable. The huge amount of diversified surroundings lets you choose where and when to sit there. Depending on your mood, your task and if you are there with friends. The endless walk of odd atmospheric combinations make it feel like an Garden of Education.
The Game (strategy)

Our goal:  - maintain the ground form  -

“find the centre of the Sanaa plan and connect with our neighbours, forming a public connection in the masterplan.”
The game steps

The Start

Trade 1

Trade 2

Trade 3

Final trade

Ground form: Educatorium Utrecht
Spatial form: Educatorium Utrecht
Image form: Educatorium Utrecht
Programmatic form: Educatorium Utrecht

Ground form: Educatorium Utrecht
Spatial form: Educatorium Utrecht
Image form: Educatorium Utrecht
Programmatic form: Alternativa Zaandam

Ground form: Educatorium Utrecht
Spatial form: Educatorium Utrecht
Image form: Sanaa Almere
Programmatic form: Alternativa Zaandam

Ground form: Educatorium Utrecht
Spatial form: Beelden aan Zee, Den Haag
Image form: Sanaa Almere
Programmatic form: Alternativa Zaandam

Ground form: Educatorium Utrecht
Spatial form: Beelden aan Zee, Den Haag
Image form: Kunsthal Rotterdam
Programmatic form: Alternativa Zaandam

Educatorium, Rem Koolhaas (OMA), Emma Westerduin & Arthur Meerloo 223
The recomposition

Programmatic form
A8erna, NL Architects

The programatics of the A8erna plan doesn’t form a static program. The motion of the pedestrians is reflected on the programmatic form. Thereby will be making this a stretched program along a connecting route.

Image form
Kunsthall, OMA

Similar to the Educatorium, the Kunsthall has got a lot of optical illusions and different atmospheres. We use them in this composition to border the different area’s defined by the spatial form of the Beelden aan Zee.

Spatial form
Beelden aan Zee, Wim Quist

Beelden aan Zee uses a routing throughout the building which is apparently symetrical. But with some minor adjustments in the museum duplicates its area’s. To form negative spaces of existing area’s they added a ton of new atmospheres.

Ground form
Educatorium, OMA

Maintaining the strong connecting link of the Educatorium. This was our startingpoint to follow our strategy. While playing the game we searched for a spot where we could manage this connection. Hoping to end in a middle position.
Compiling this together we took an central postion where the A8erna program takes his position. From there on we took those connecting roads to give it an flavor of Beelden aan Zee Museum. We reflected the connecting roads and made them negative to eachother. So we have the same volume, only one is outdoors, the other indoors.

Our recomposition of the Educatorium transformed it self into a contector on a different level. The social connecting is like an garden, where people meet. A garden in an urban surrounding, the Urban Garden.
A8erna is the renovation of the space under elevated Highway A8. Koog is a village near Amsterdam. It is located at the river Zaan. In the early seventies a new Freeway was constructed. In order to cross the river the Highway A8 was built on columns. The space under the deck is strangely monumental: a stretched ‘Cathedral’. After 30 years of inertia, the remarkable space under the road could perhaps be considered an opportunity instead a disaster. Maybe a new type of urban life could be accommodated here? The new road crosses town in a fascinating way. It produced a brutal cut in the urban tissue. Ironically, progress has resulted in a radical separation between the Church and the State: on one side of the elevated highway is a Chapel and on the other the former City Hall.

In close collaboration with the local government new program was added to the derelict and deserted strip. A chain of interventions explores the unique potential of covered urban space: A skate-zone, the Graffiti ‘Gallery’, Sports Fields, a Supermarket, the Fish and Flower Shop, Parking for 120 cars, the ‘Dry Square’ and a Mini-marina. Under the road from West to East you’ll find: ‘loveseats’, a Skate Bowl, the ‘Ramp Scape’ and Toy Area, a Break Dance Stage, a Soccerfield, a Basketball Pitch, Pocket Parking, a Cross Street, the Covered Square with the Supermarket XL, ‘Letters Columns’ by Mark Ruygrok, the Flower and Fish Shop, another Cross Street, a sculptural Bus Stop, a Mini-marina, the ‘Panorama Deck’ and the river.

The ‘Mickey Mouse’ shaped Skate Bowl is a kind of excavated blob that sits under the highway. It is build up from polystyrene blocks that are sliced by computer-controlled foam cutter and sprayed over with concrete.

The Supermarket will be clad in customized corrugated steel plates. The wavy panels span from top to bottom in one stretch, over six meters. The intensified folding allows for extra stability. And it discourages graffiti.
A8erna, Koog aan de Zaan, 2003-2006

Due to the position of the columns of the viaduct, the parking was unprecedently spacious, but completely inefficient. By placing the parking in a ring around the supermarket - the cars ‘docking’ on the ‘mothership’ - all these functions could be added by roughly keeping the same amount of marking spaces.

The so-called Dry Square is slightly elevated to overlook the parked cars around it. Redundant greenery was removed from the square in front of the Church that as such became much more attractive and usable. Markets and fairs can take place now. On Queensday for instance, it becomes a lively hangout. On the square, the original city plan is highlighted in a lighter brick. It articulates the configuration of houses that used to be here: Dogville Square. Wooden plateaus indicate the position of former living rooms.

The dense construction along the riverbanks prevents public interaction with the River. By introducing the Mini Harbour, that is excavated from the land under the highway, the water connects to Main Street. Reflections of the water animate the ‘ceiling’. A jetty allows access to the first two columns in the stream. The ‘Panorma Deck’ features wonderful views over the river. In an unexpected way the elevated highway offers the opportunity to reconnect the village to the source of its existence. And it is a good spot to go fishing...

The A8 developed from a desolated parking lot to a lively mixed-use area, from westland it becomes focal point, from ‘down town periphery’ it turned into center.

Public Space: 22,500 m²
Shopping: 1,500 m²
Budget: 2,100,000 Euro
Ground form

Skate Park  A8 Highway  Shopping “Mall”  “Recreation”  Public “Living room”  Marina

A8erna, Koog aan de Zaan, The Netherlands - Google map - photoshop by Cecilia Dobos
Ground form

A8 - Diagram of location

‘Spine & Ribs’ - Diagram of roads

‘Preliminary’ - Diagram of green

‘Live’ - Diagram of Housing

‘Admin’ - Diagram of Institutions

‘Situate’ - Diagram of all Layers

A8erna, NL Architects, Cecilia Dobos and Mattie Le Voyer
Spatial form

Longitudinal section, transversal sections and General plan 1 : 2000 - Drawings Courtesy Mattie Le Voyer
Spatial form

Hierarchies in the fragmented space - 3D model Courtesy Mattie Le Voyer
Image form

'Transitions' - stone, wood, brick

'Colors' - gray & orange

'Sign & shine' - illuminated text

'Origami' - facade

'Define' - steel

'Soften' - stone & green

'Play' - color up pavement

'Pattern' - wood

Photographs by Cecilia Dobos and Mattie Le Voyer
Materials and colors sandwich - 3D model Courtesy Mattie Le Voyer
Programmatic form

General programmatic plan 1: 2000 - Drawing Courtesy Mattie Le Voyer
Programmatic form
Composition

Matching between physical limits and color sequences - 3D Courtesy Mattie Le Voyer
A8erna is a long stretched vitalized urban “junkspace” under the A8 highway. It brings new functions to this abounded dark and sad urbanised area. The highway completely cuts this historical neighbourhood apart. This drastic separation is clearly shown on the ground form by the housings, industries and institutions.

This extremely long, about 500 meter long, ground form hosts five programs in which three are under the highway and two are attached to the sides. The prolonged “infinity” of this urban space is even more emphasised by the linearly located marina, shopping ‘hall’ and the ‘urban recreational’ space. The programs are cut off and definitely separated by the crossing local roads. The ground form is limited to the outline of the above highway. There are no interconnections between the ground forms and programs. No programs flow from one to another, rather all clearly defined. The limit of the ground form is followed by the limits of the spatial form. The spatial form is greatly fragmented by the more and less random columns, programmatic boxes and cutting roads. This covered urban area creates many in-between zones that block the natural flow of the spatial form, therefore it feels fragmented, surrounded, included but separated. Image form of A8erna use very strong defined colours that detach all the programs from one to another. Under the highway the marina, the shopping mall and the skate park is disconnected by two way roads. The marina’s image form is greatly connected to its function and it strengthen its appearance. The shopping mall is the strongest and most effective program among all. It hosts Albert Heijn, a fish and flower market. The ring line parking around it robustly divides the ‘street life’ from the ‘shopping life’. The urban recreational space provide entertainment for skaters, basketball and football players. Outside of the highway’s boundary is the zone of the green bubbles and the resting area front of the church.

A8erna clearly defines the existing boundaries and it does not go beyond. It is a fragmented space full of limitations and separation.
Landscape is Architecture - Architecture is Landscape

fragmentation

in-between

disappearance

educational

Ground form
Bernoulliborg / De Zwarte Hond

Spatial form
A8erna / NL Architects

Image form
Museum Beelden aan Zee / Wim Quist

Programmatic form
Educatorium / OMA
Landscape is Architecture

- Landscape and architecture encounter

- Disappearance in the surroundings

- Fragmentation and transition

Melting
Heemraadssingel Rotterdam

Anamorphosis
Felice Varini

Cadavre exquis inspiration
Filip Dujardin
Landscape is Architecture - Architecture is Landscape

Design process - Drawing Courtesy Mattie Le Voyer
Landscape is Architecture - Architecture is Landscape

A8erna, NL Architects, Cecilia Dobos and Mattie Le Voyer
THE MEDIEVAL BERNOULLIBORG
The Bernoulliborg is a building designed by DeZwarteHond Groningen from 2005 till 2007. It is a building in the science department of the Groningen university. The master plan was designed by West 8. They designed a campus area with various different sized blocks on a green carpet of grass. With the analysis we tried to see if the design of DeZwarteHond fits the campus environment or that it is a building separated from its context.
Bibliography:
Map: Google Maps
Pictures: Bernoulliborg documentation courtesy of the DeZwarteHond
Drawings: Made by Barend Mense and Ben Wegdam
Ground form

The original plan of the Bernoulliborg in the campus area.

The directions of the roads make the building an interesting obstruction in the original plan.

In the build plan the block is a less interesting intervention in the bigger green campus.
The grass line surrounding the block doesn’t add much quality to the building.
Spatial form (Parts)

The building consist of three towers with bridges between them. Under the bridges are the open spaces.

The spaces between the tower have a spacious open quality

The students have work space in the ‘leftover space’ shaped by the blob
The open spaces between the towers look like ‘leftover’ spaces with college and working room inside them that open the building for different uses than the formal office-like spaces.
Image form (Parts)

The block in the open field with a small green grass line surrounding it, together with the towers make the building have a castle like association.

The elevations show the construction is visible on the outside but give the image that the 1st floor was shortened in the end phase of the design. The beam makes a weird curve in the end.
The impressive massive block with the towers transforms the building into a somewhat modern castle.
Programmatic form (Parts)

The first two levels of the facade on the front side are transparent. Because of the transparent faces the spaces between the towers look even more like bridges.

Meeting spots are situated in the middle levels of the building. The upper levels consist of individual class rooms and offices.
Programmatic form (Conclusion page)
Composition
In the elevation we saw that the beams in the facade were in a weird shape at the first 2 floors because the first two floors were probably made smaller in the end. This was not translated correctly in the facade. The building looks more dynamic in the evening with the windows enlightened. During the day the blue facade looks a little bit dull. The blob shaped college room makes the rest of the space surrounding it in an interesting meeting place were students can read, discuss and work in groups. Standard space plans are changed because of the different possibilities. The building is also not as open as you would expect from the glass facade. The image form with the fort resemblance also fits to the reaction of the building to its context.

The open space in the building has a transparent facade. The spacious qualities are made visible for the people from the outside.
The new building is in the existing envelope of the old building, a block in an open field.
In this section it is easily visible that the new design is still a bridge structure with buildings holding it like the Bernoulliborg. But now literally opened up the building because of the critique we had on the existing building. The upper floor and the space under the bridge is now open for everyone and makes so the feeling of freedom is empowered.
The image of the building refers to the old telegraph, the new methods of communication have an important role in our lifes which can’t be denied. The communication concept is visible in form, programm and spatial where people meet in formal and informal ways. The new form has a more readable architecture and in comparison with the castle image of the Bernoulliborg a more open image.
The new design will change to a more inviting public function. The program will offer bars and culture on top with the bridge as a nice relaxing viewpoint. The first 3 floors will offer a library in the cone and studying areas in the spaces on the left.
Project Credits and addresses to be added
References:


Lars Spuybroek & Manuel De Landa (2004). NOX, Machining Architecture, Paperback


Cadavre Exquis /
dutch architecture with landscape methods vol. 3 /
laboratory design analysis /
exhibition / academie van Bouwkunst Rotterdam /
Matthew Skjonsberg west8 / Daniel Jauslin dgj /

Contemporary architecture is increasingly influenced by the concept of landscape, and this is particularly the case in the Netherlands. Like many other places, a new mindset is emerging, transforming the core values of the disciplines of architecture and urbanism with the notion of the organization of architectural space as a landscape. Through experiment our lab develops methods to analyze such phenomena in focused studies of specific cases, understanding how architects use landscape not only as a metaphor but also as a method to design buildings. 32 students selected and analyzed outstanding work of a wide field of architects from four generations of Dutch practitioners starting with Huig Maaskant (founder of the RAVB), Wim Quist, OMA, SANAA, Mecanoo, MVRDV, NOX, De Zwarte Hond, NL Architects, Onyx, FACT and MonderschijnMoonen. Students drew and built models of their analyses, where four layer sare detachable as a separate entity, and then played a game the Surrealist called Cadavre Exquis. The resulting in a dismantled floating olympic village for Rotterdam, which is exhibited with a view on it’s site at the historic docklands Heijplaat form 20.4.-14.6.2012

info:
opening / 20.04.2012 11:00 am book and model presentation
until / 15.04.2012 hours /mo th 7:00 - 22:00 / tu we 19:00 / fr 22:00
location / rotterdamse academie van bouwkunst / innovation dock
heijplaat / rdm campus / rdm-kade 59 / haven#2600, rotterdam
route / www.ravb.nl/route ferry / www.aqualiner.nl

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