

Amsterdam Airport Schiphol | Wayfinding and Signage



Project 2 | Graphic Design IV

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Design Bachelor | 3^o year

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2

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Evolutionary history of the airport, its construction and the entire team involved, in order to understand the case study in depth.

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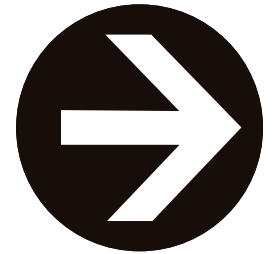
Mijksenaar

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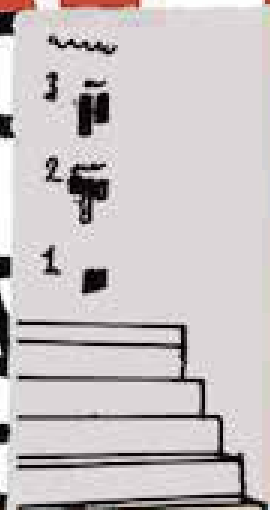
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Introduction



Orientarion and Navegation

What is Wayfinding ?

Information systems that guide people through a physical environment

Orientation and navigation are two words that are very present in anyone's daily life. Increasingly, with the confusion of big cities and with the entry and exit of people from places to others, societies need to evolve in organizational terms and to indicate people, in the best way, whatever direction they need to go. The human perception of space is to obtain too much information that allows you to collect elements necessary for a natural navigation based on your experiences and points of reference. The more confusing the space is, the less human perception of it will be. So what is Wayfinfing ?

“Information system that guide people though a physical enviornment”

Wayfinding is a term that integrates Information and Communication Design and refers to the orientation of people through products that are presented in certain physical environments and that help to better understand and experience the space where they are. Following what was said above, this type of Design is very important in complex places of great hustle, urban centers, health or education institutions. Human motivation is innovation and development. As the facilities in these same sectors evolve and grow, there must be systems and signs that organize the space and keep it stable in case there are moments of overpopulation in the space. A well-produced wayfinding is discreet, effective and gives the user a sense of security and well-being as they feel oriented in the space where it is presented.

With Wayfinding comes the projection of various types of signage and as such, for a case study with this topic to be addressed, it is also important to understand what we mean by signage and what are the main functions it has. "Signage it is the process of conveying information, based on the principle of marking, signaling something. Its objective is the transmission of information through the appropriate arrangement of visual signals. It is used to guide, inform and guide individuals. It is a tool that aims to facilitate mobility, establishing communication between the system and the observer. The information present in the signage must convey notions about the space to be explored, such as distances, location, points of interest, directions, etc." (*Maia Amanda , 2013 at Cliché Magazine*)

The main functions of signage are: to identify, in terms of referring people to key words about where you are or where you want to go; Guide, by the presence of arrows that refer to the spatial orientation of where you want to go; Inform, through colors, pictograms or both, something that immediately allows the user to clarify what he needs and how to obtain it; To warn, with regard to permissions or prohibitions in specific spaces, as is the case with the prohibition of smoking indoors.

This report will be a case study of Wayfinding signage, from an institution chosen by the author of the work, where we will talk about various aspects of this type of Design and how the construction process of the specific project was carried out.



Figure. 2 Design by dn&co. Photograph by Rory Gardiner.



Figure. 3



Schiphol airport



Schipol Airport is the largest airport in the Netherlands and one of the main ones in all of Europe. It is located in the municipality of Haarlemmermeer in the north of the Netherlands. The airport is owned by the Schiphol Group, which will be discussed in the next chapters of this report.

The history of this airport began in 1916, after several Haarlemmermeer lands were recovered. It was a project started by pioneers who defended values of progress and change and since that year, over more than a century, it has been a space in constant evolution and in nowadays considered the main airport in the Netherlands. The second world war was very much part of the Dutch country which led to Schiphol also being a military base in 1919. When the war ended, the airport continued to be under constant beating and became a much more commercial institution.

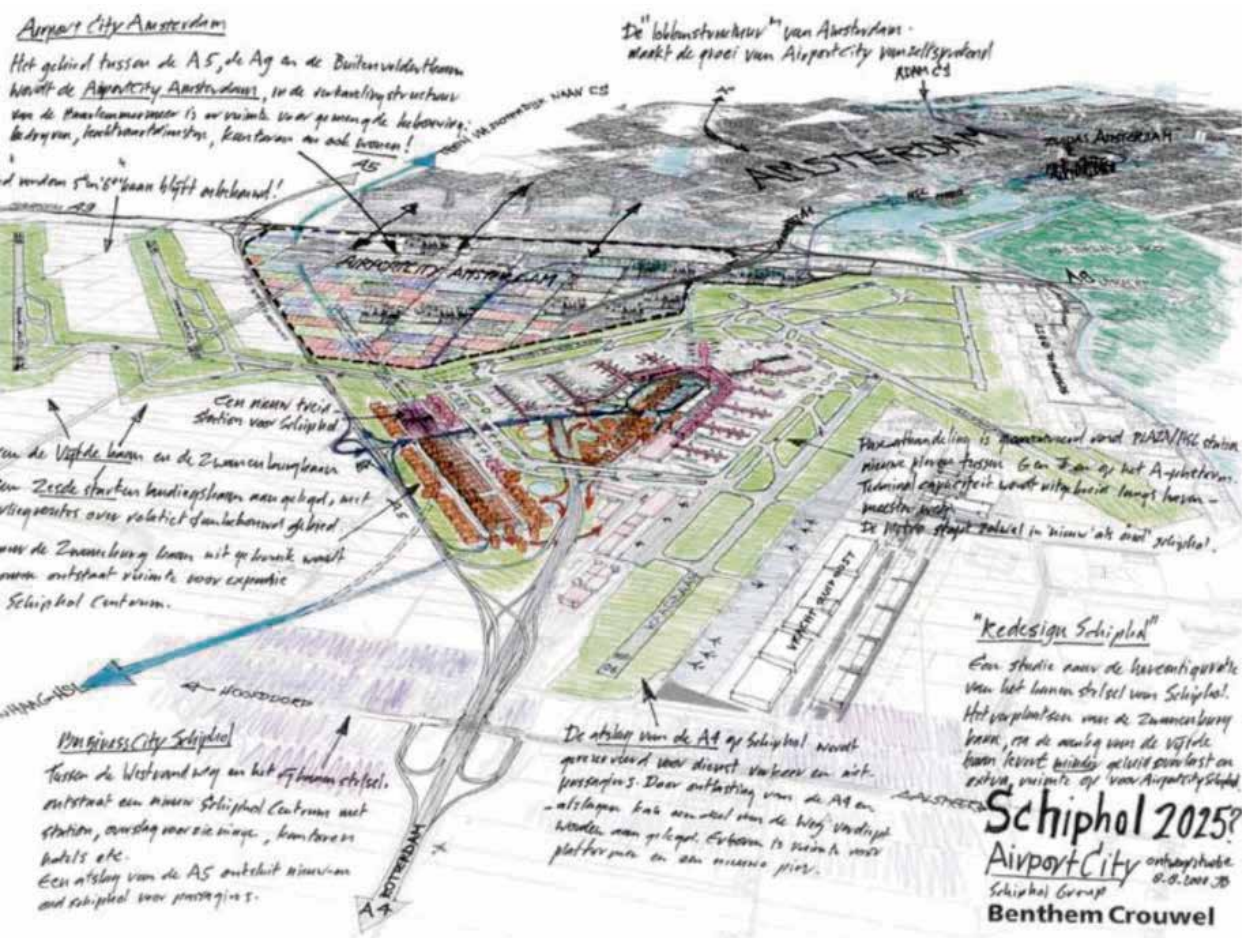
The great year of evolution for the Amsterdam airport was undoubtedly the year of the Olympic Games in 1928, which was located exactly in this city. This forced the owners to engage in rapid expansion as demand for their services increased by more than a quarter compared to previous years.

Later, Schipol airport was bombed due to the German invasion of Dutch territory. This event had its truce and appointed the Luftwaffe as the new airport control with the aim of being an air force base. This was named: Fliegerhorst 561 and was considered the strongest and most defended German military base.

Chronological and historical order based on Schiphol | From muddy puddle to global hub; A whistle-stop tour through the rich history of the Netherlands' national airport.



Figure. 4 Paul Mijksenaar company logo , LinkedIn



The second world war completely destroyed the airport, the Germans evacuated due to the British troops. Until 1945 the Dutch managed to recover and rebuild the facilities of Schiphol and being out of war was easier to restore and reorganize the entire institution. It was in this year and after a lot of work in field that the Netherlands established Schiphol as the national airport of the Netherlands, aiming to increase and accompany the air traffic in Europe. Over the course of five years, the airport manager, Jan Dellaert, organized a team and projected various wishes for the evolution of the facilities, runways and towers. Not everything was carried out at the time due to lack of budget, but the project at the time shows how Schiphol is today.

Over the years, other plans were made for Schiphol, which would make it not only an airport but a tourist attraction.

Various types of stores began to be opened and effectively began to receive many more visitors.

"Currently, Schiphol is the gateway for 55 million passengers a year, as well as 1.6 million tonnes of cargo and where 65,000 people earn a living. An airport that constantly innovates, stands out and aims to be one of the most sustainable in the world"

(Aeroin Amsterdam Schiphol Airport, celebrates 100 years., Mar 2016)

Figure. 5 Planum, Journal of Urbanism I Megastructure Schiphol . Design in Spectacular Simplicity 2013 ; 14-15/16



Figure. 6



Mijksenaar



Designer

Paul Mijksenaar

Born in 1944, 78 years old from Amsterdam

Born 1944, Paul Mijksenaar is a visual information designer, trained at the Institute for Applied Arts Education Amsterdam in Product Design. He founded the Design Bureau Mijksenaar, located in Amsterdam and New York. Currently, he remains the director of the company.

“As a designer, you have to think in time and see things in sequence. You have to see information as a narrative form”

Mijksenaar ,

“ Besides his practice Paul Mijksenaar is also a professor in Visual Information Design at the faculty of Industrial Design Engineering at the Delft University of Technology in the Netherlands. He also writes a monthly article in the Dutch newspaper NRC Handelsblad about everyday problems and solving them using information design.”

put here quote reference



Figure. 7



Figure. 42

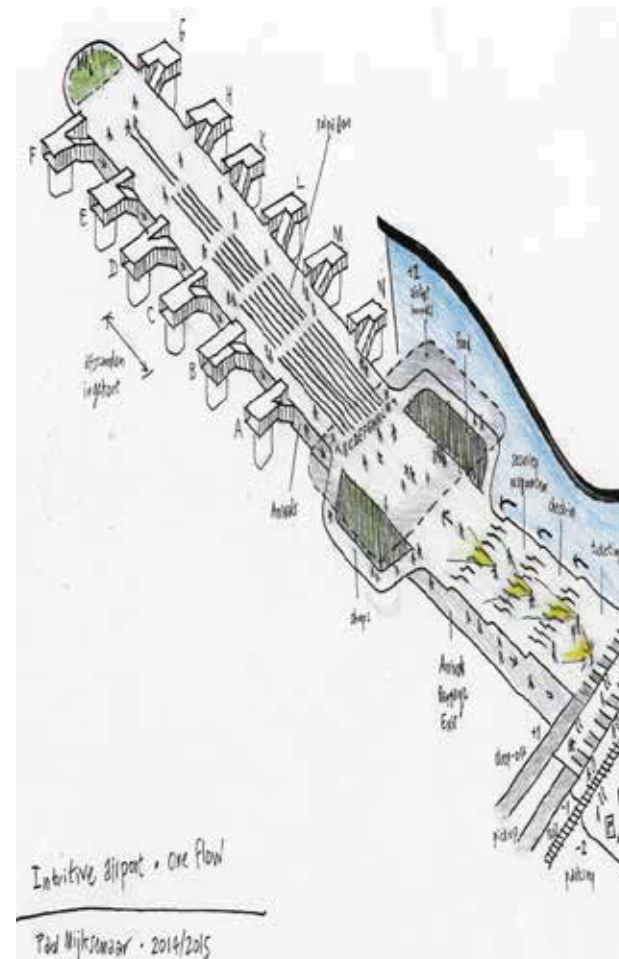
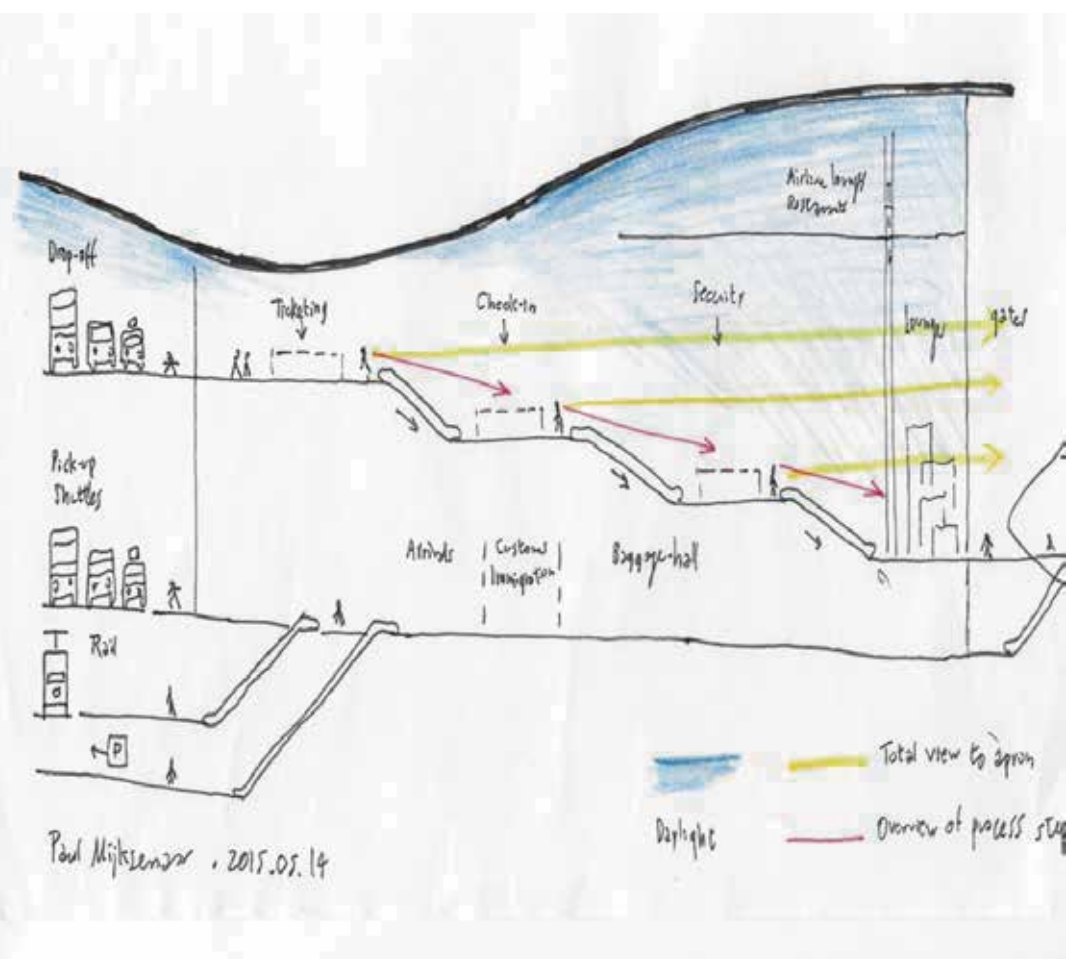


Figure. 43

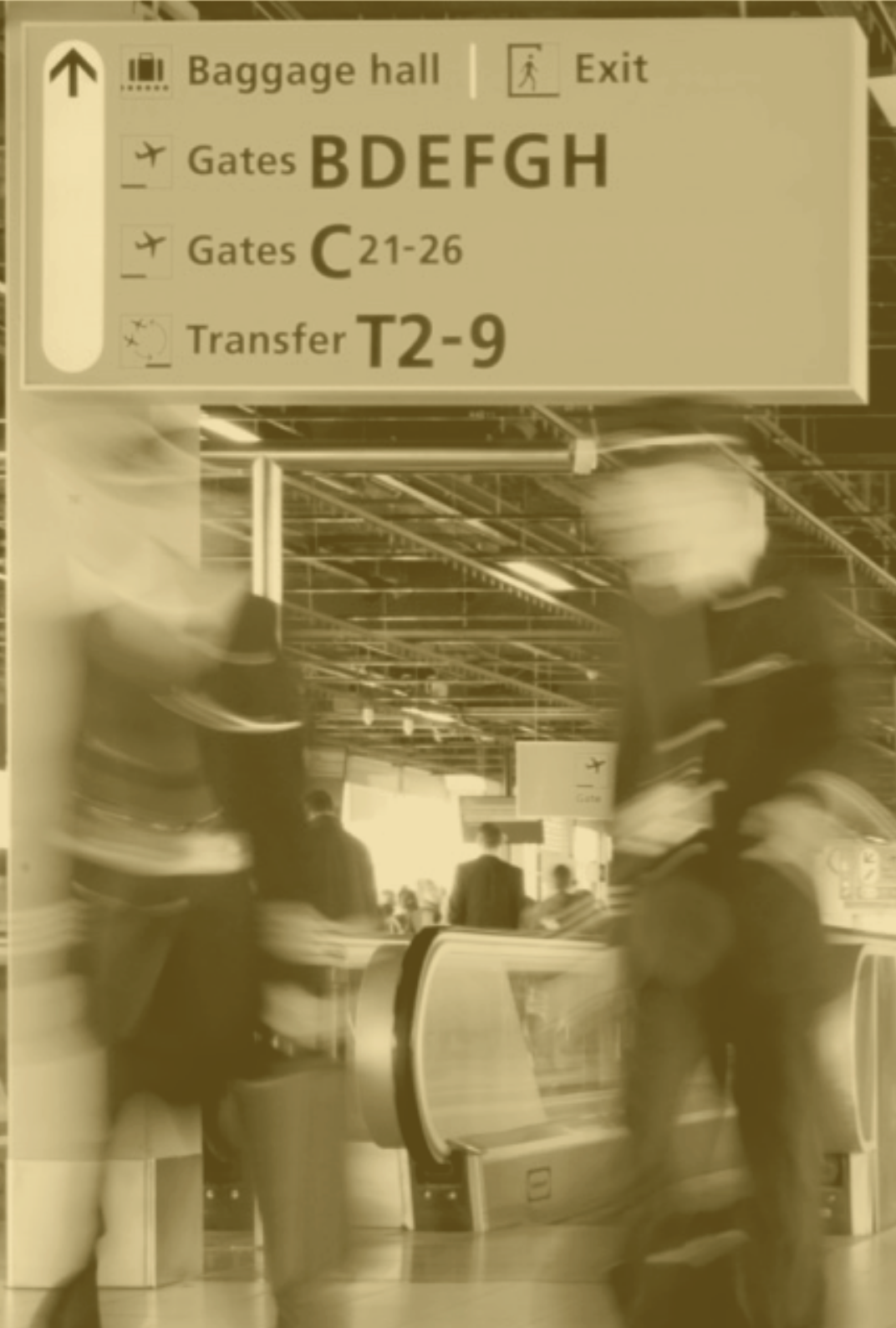
Mijksennar Schipol Group

**“Connecting people
with spaces and places”**

“Well to begin with I was by myself at home. No clients, no space, no agency. So I bought a desk and put it in the bedroom. I ordered a second landline telephone and I hired a secretary. I thought, whatever happens, I need a secretary, because they did the typing and took care of the bills etc. But she couldn't sit in the bedroom of course. So I needed an office. Thankfully I quickly got some big projects.

(...) My first commission on my own was Schiphol Airport. They were changing a lot, a new terminal and new roads etc. That was a funny story, how I got the commission. I knew the head of the design department of Schiphol Airport and we got along well. The wayfinding at the time was designed by Benno Wissing at Total Design. Long, long before, maybe twenty years before. And he was no longer involved. He was living in America and Total Design did nothing for Schiphol Airport anymore, so they did it themselves.”

(Paul Mijksennar at a interview , Graham Sturt 2017)



With many projects in mind to go ahead, Paul found himself in the need to find a bigger space to work and a team to help him carry out the scale of the projects that were required of him, in 1986, the Mijksenaar group was created and later he ended up joining the Schiphol Group where they still work as a team. This group, is one of the best known in the Netherlands for its strong work organization and corporate values. It has five fundamental principles to gain the respect of users, and they are called the 5 C's:

“Clear | Does it simplify the complex?

Comprehensive | Is it usable by everyone, anytime?

Consistent | Is it reliable from beginning to end?

Conspicuous | Is it visible and legible?

Catchy | Does it attract and focus the attention?”

(Mijksenaar Group , Reliability is everything , webpage)

The projects of the Mijksenaar foundation are very diverse. They can be just buildings of certain institutions or projects for an entire city. They Design a lot of maps and pictograms and use these same works to produce wayfindings considered by Dutch Design to be excellent. They are known for the design of Schiphol Airport, Terminal 4 at John F. Kennedy Airport in New York, International Airport in Washington, Amsterdam's Artis zoo among others.

Mijksenaar, has worked in 15 different countries with his projects, has expanded the group to America and with this he currently has two team headquarters, one in Amsterdam and another in New York.

The book Wayfinding at Schiphol was launched in 2008, which presents the Design Thinking behind this creation and all the work developed throughout the project. The present case study was based on this work, as it is the most suitable considering the theme.



Figure. 10 Paul Mijksenaar company logo , LinkedIn

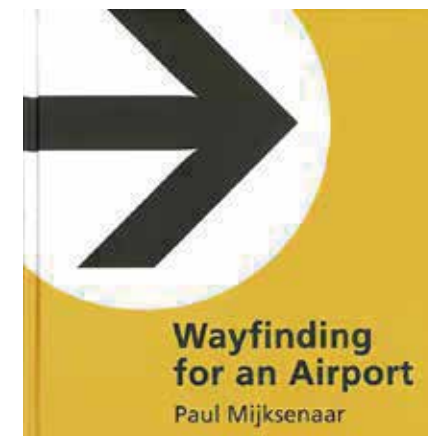


Figure. 10 Wayfinding for an Airport (2019) , Paul Mijksenaar from Paul Mijksenaar Foundation , Stichting Paul Mijksenaar



Figure. 11



Case study



“To the majority of visitors entering and exiting the Netherlands, Schiphol Airport is their first experience of Dutch design. A huge, sprawling transport hub, with 64,000,000 travellers passing through annually, it’s a model of Dutch ordered efficiency, replicated by countless other airports globally. A good part of the airports success can be attributed to something we take wholly for granted — it’s award winning wayfinding system. Seamlessly consistent in every aspect from approach road to gate it helps ensure you park, check-in, shop, board and ultimately fly away with stress levels at a minimum — a welcome relief for many a weary traveller.”

(Graham Sturt An English Creative Director in Amsterdam , 2017)

As Schiphol airport, one of the most prestigious and frequented in Europe, there is a need to maintain and exceed the expectations of space, developing more and more tools that organize facilities and create natural wayfindings for people to feel comfortable and oriented. This airport was not always as successful as it is today, when it comes to signage and Wayfinding. The previous work view in 1967 was Wissings Design , mas later was replaced by Mijkeseenaar work.



Figure. 12



Figure. 13

In 1986, it was when Mijksenaar was introduced to the problem of Wayfindings that happened in the airport of Schiphol. Hans Beukelman, head of the design department at Amsterdam Airport Schiphol, asked the designer to start a case study on the synthetics at that time on display at Schiphol and to assess how they could be improved. At the time there was a big controversy with this request, since Paul was quite honest when pointing to a conference room of the airport team, everything that should be changed. But as Schiphol was constantly expanding, with new compartments, divisions, departure lounges, etc., it was decided to extend Mijksenaar's work on the airport's development.

“Bureau Mijksenaar wins the competition for the commission for wayfinding signage at Schiphol. Two orientation research reports are written: one on the principles and one on the concept proposals. Both deal with ergonomic aspects in order to evaluate how the traveller relates to the wayfinding signage. Aspects such as field of vision, sightlines, visibility, colour contrasts, routing, decision points, signs, maps, and everything else involved in getting the traveller through an airport without problems. Once all this has been clarified, the needed decisions are based on better evidence and made more quickly.”

(Chris Vermaas, September 2015 , Dutch Graphic Roots)

Figure. 14



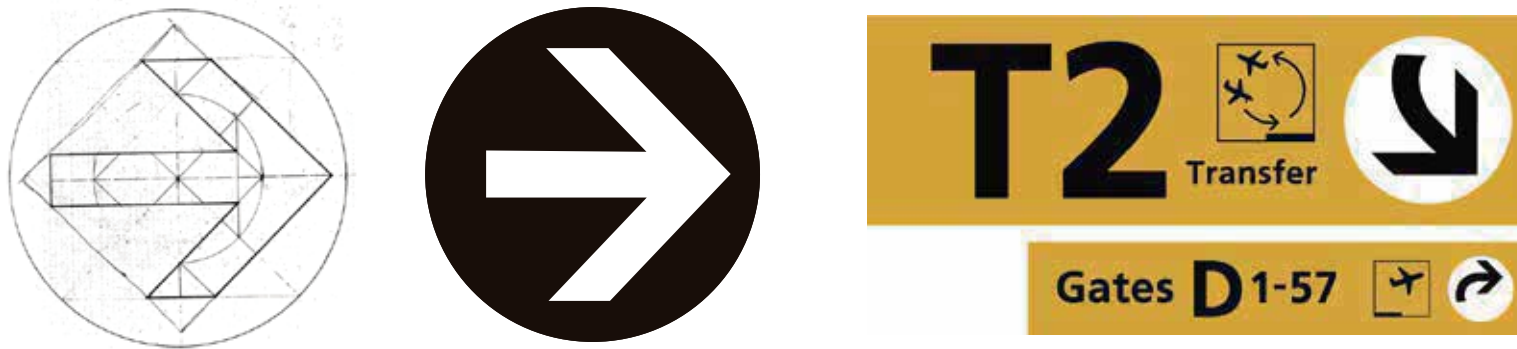


Figure. 15,16,17

Paul Mijksenaar follows a very specific pattern, which follows the guidelines of Dutch Design, as discussed above. In all of his projects, he tries to follow a line that characterizes his work and that immediately connects both his name and the role he is intended to perform. This line of thinking is always, for the author, focused on the utility and its needs, so he tries to put himself in the role of the users so that the end is as successful as possible. What characterizes Mijksenaar's work in terms of wayfindings and signage is a suitable typography that is strong, large, accessible to everyone and above all that is capable of obtaining information within the sign itself; Colors that contrast, accompanied by lighting and finally, several pictograms that are quite simple so that there is an easy reading on the contrasting and illuminated background. The Designer is careful not to put more information in the same spaces than is necessary, therefore, each area also has the information that the traveler needs when he presents himself there.

Pictograms

Taken from his book, Wayfinding for an Airport 2019, this page is intended to showcase some of the many simple Pictograms that Paul Mijksenaar and his team designed.

Page layout taken from the book Planum, Journal of Urbanism I Megastructure Schiphol Figure. 18







Figure. 19



Material and Scale



Schiphol as a building was created by architect Benthem Crouwel Naco and its interior by Kho Liang Ie Associates. The project of this airport seeks to give energy to passengers and therefore a roof and walls were built in glass, as well as a large space so that there is always plenty of light. The goal is for people to feel awake, energized and comfortable, so taking into account these characteristics, it is also important to intelligently organize the Wayfinding signage as well as distribute the project throughout the space with the most appropriate measures and materials, so that the even more energetic users traveling, taking advantage of the qualities of a bright space. "The security areas inside the central terminals are designed with careful attention to calming lighting, tight acoustics to reduce noise, curved lanes, and materials, such as ceramic wood and even potted plants, that offer organic warmth. Lofting the security checkpoints in a level above the main terminal near the check-in, and consolidating all checkpoints into one area, as the airport did in 2015, also helped improve flow, remove the need for checks at the gates, and create a more relaxing, passenger-first experience." (Patrick Sisson , 2017 for Curbed : This design-savvy airport shows air travel doesn't have to be terrible)



Figure. 20



Taking into account the space, the signs are made of very simple materials, with geometric shapes of parallelepipeds, but that are translucent so that they are all illuminated inside so that the information board stands out in the middle of the crowd. This, with the right color tone, wakes people up and can dictate the hustle and bustle of the airport. Analyzing the space and the physical products of wayfinding signage, they are all presented at a height sufficient for the visibility of a person of any physical stature. The upper signs (above your head) are about 3 meters high when they are horizontally oriented, every 15 meters the information is repeated, when it comes to gates, terminals, security or bathrooms (for example, if you want to go to the bathroom and you saw this same sign, around the 25 steps you will find a new sign that will guide you to the bathroom), information such as luggage collection centers, luggage conveyors or information centers, are presented with cubes with different pictograms and each cube will have a different measure depending on the emphasis that needs to be given to that space (for example, on the baggage reclaim conveyor, the information cubes with the number of the carpet are about 1m x1m x1m because it repeats the sign with different numbers, also indicating different mats, about 10 meters in front of this one).

Figure. 21 , 22 , 23, 24





Typography & Color Systems



BERLIN
1898
BERTHOLD

“Berthold first published Akzidenz-Grotesk in 1898. Originally named “Accidenz-Grotesk” the design originates from Royal Grotesk light by royal type-cutter Ferdinand Theinhardt. The Theinhardt foundry later merged with Berthold and also supplied The regular, medium and bold weights.”

Download Font Editorial Staff, March 30, 2019

**AKZIDENZ
GROTESK
BQ**

Akzidenz GroteskBQ Bold
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ

Akzidenz GroteskBQ Light
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ

The original BERTHOLD font was redrawn in several versions. In 1966, Akzidenz Grotesk BQ was one of those versions, being a project guided by Günter Gerhard Lange, then art director at Berthold from Royal Grotesk light by royal type-cutter Ferdinand Theinhardt. This typeface was the first chosen typography to be chosen for Schiphol Wayfinding Signage with its Bold and Light versions (shown above), as it is a very visible, perceptible and strong font that stands out with the right background color that overlaps it. Although it's a good font, after some times, was not considered the best one to do the job so, was replaced by Mijksenaar.

“Mijksenaart (...) replaced the Akzidenz Grotesk font with the more legible Frutiger, simplifies the layout and tightens the vocabulary.”

(Vermaas, 2015)

**FRUTIGER
ADRIAN
FRUTIGER
1968**

Frutiger

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

Frutiger Bold

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ

When it came to replacing the work of Wissing's signs at Schiphol, Bureau Mijksenaar tried to keep what was good and practical but replace what didn't make sense and ended up complicating the function of signage. Replaces Akzidenz Grotesk with the Frutiger font considered much more readable as well as noticeable and strong.

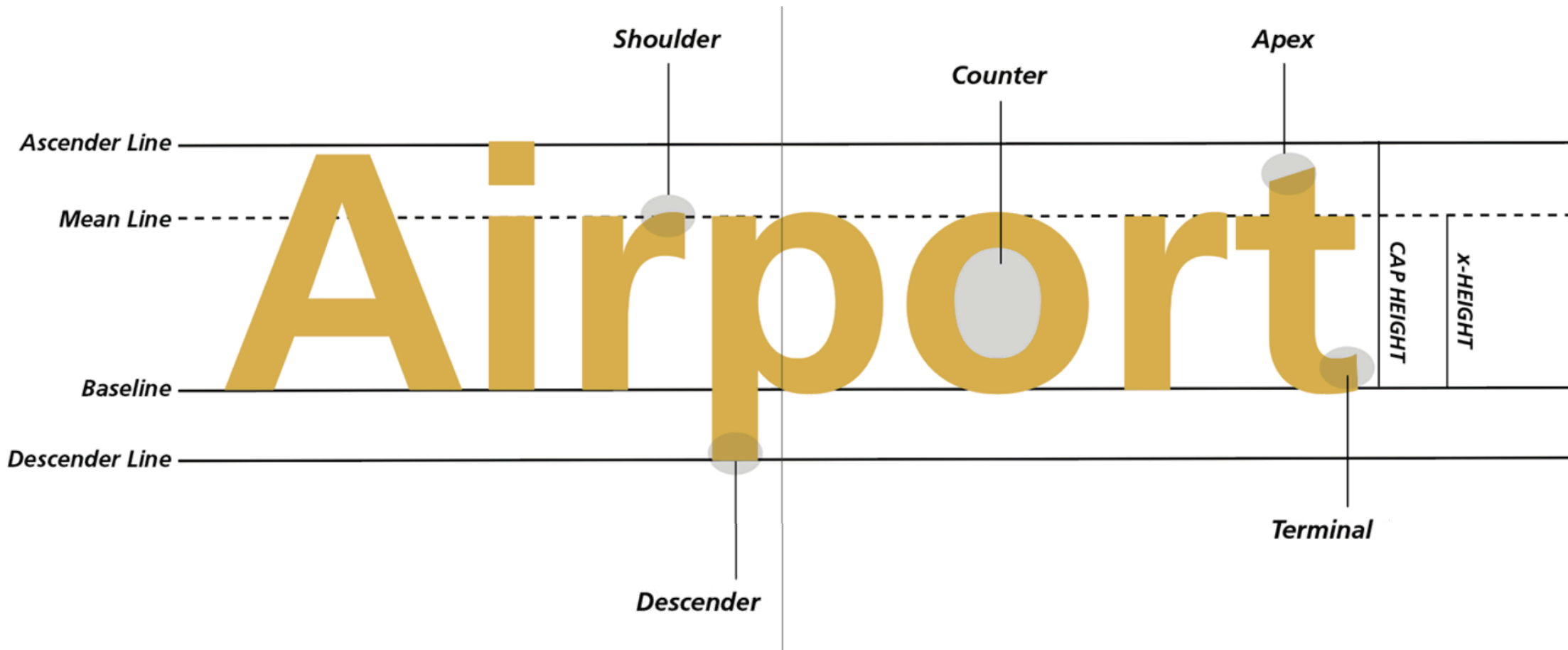


Figure. 26



Figure. 27 Akzidenz Grotesk at Schipol, Benno Wissing, Total Design, 1967.



Figure. 28 Frutiger at Schipol, Paul Mijksenaar Wayfinding Design 1990

“Typography is key, because it’s the arrangement of information. I developed a system because t here’s a list of eight variables in typography. What is important for readers, what can they see?

(...) For years and years I always used Gill Sans, but for signing we mainly use Frutiger and nowadays also the fonts of some Dutch type designers but never the Helvetica! The main difference is that the Frutiger the typeface is more open. A 3 and an 8 in Helvetica from a distance look the same. In Frutiger you can clearly see the difference between a 3 and an 8 or a 6 and a 9 or something like that. The typeface has to be open.

(Paul Mijksenaar at a interview , Graham Sturt 2017)

In addition to typography, colors were also a very important element since the beginning of the Wayfinding Signage project for Schiphol. Interior architect Kho Liang requested two specific colors from Benno Wissing and it was agreed that yellow and green would never come out of the airport's wayfinding signage process. Later, when Mijksenaar started his work in this institution, he added some more colors that also accompanied the growth of the airport. However, his work is known for its simplicity in pictograms and signs to make it easier for the user to read, therefore, there would never be more than two colors in a sign, with the exception of the white circles that only serve to improve the reading of the orientation arrows. Mijksenaar knowing that they needed to do more, a new color system is created.

"It has been decided to reserve the color green exclusively for escape route signs. At Schiphol he signs directing to airport facilities were changed to a reverse color contrast of the yellow light-related signs: yellow text on a black background. Commercial destinations were directed using signs with white text." (Black, 2017).

We currently have a few colors in the Schiphol Wayfinding palette: yellow for departures and arrivals, red for prohibitions, green for safety signs or emergency exits, blue for restaurants, retails or roads, light gray for staff and dark gray for facilities.

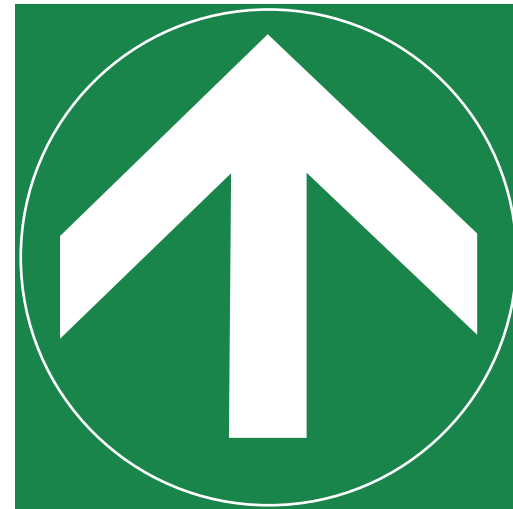
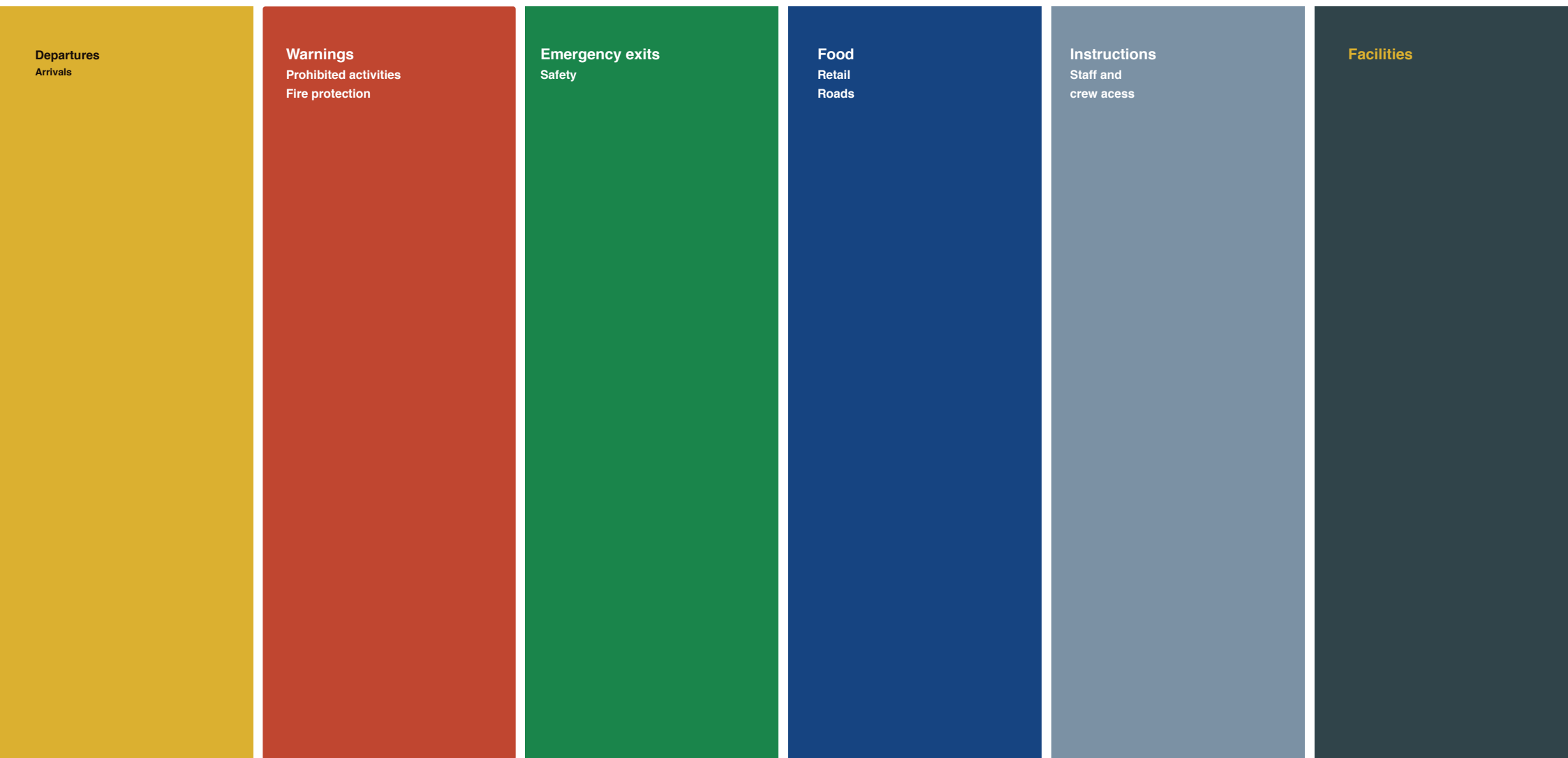


Figure. 29 , 20



Color Layout idea from , Wayfinding for an Airport by Paul Mijksenaar

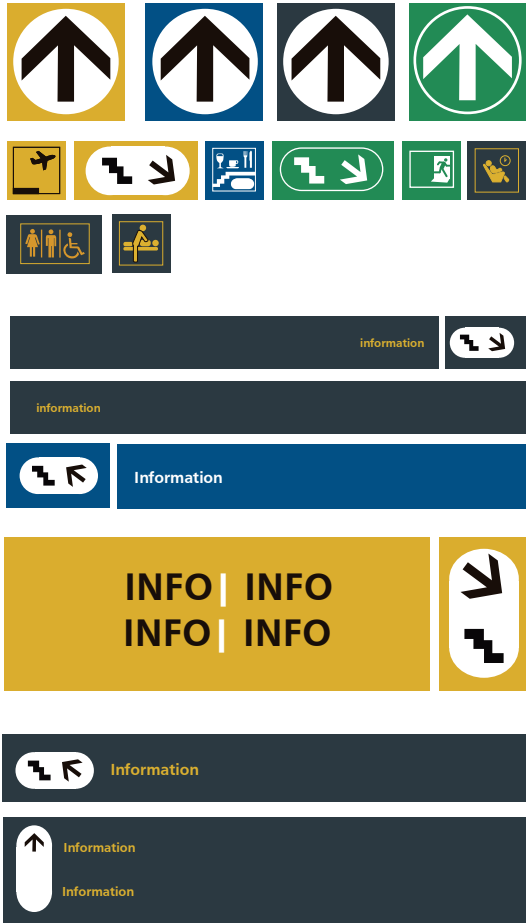
Figure. 31





Analysing Atom Design





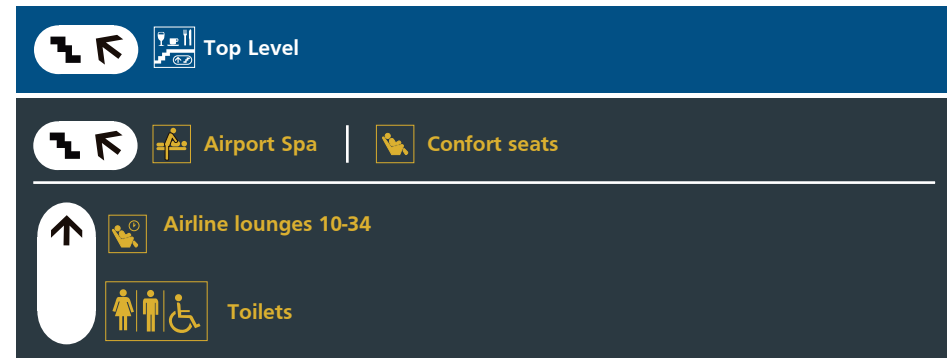
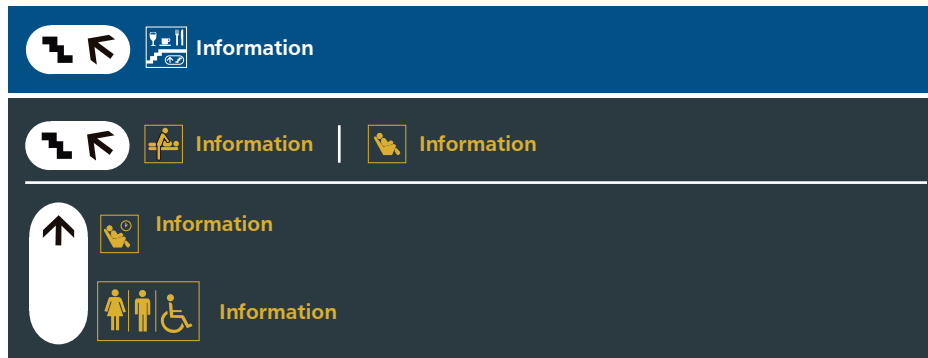
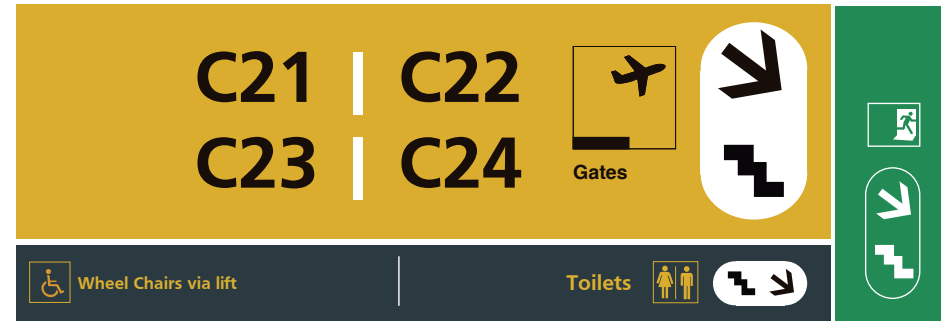
ATOM



MOLECULES



ORGANISMS



Exercise layout taken from figures 32 and 33 identified in the Figure Reference of the Report

TEMPLATES

SIGNS



Figure. 34



Conclusions





Wayfinding signage is something that is constantly changing as it intends to keep up with the evolution of spaces, institutions and society. With the great objective of guiding and informing its users, doing this type of Design is not easy and it is much more difficult to be successful. The work started by Wissing and continued by Mijksenaar is one of the most successful in Europe when it comes to airport Wayfinding. This project was creating and evolving basic rules of this area of Design and is nowadays studied in several parts of the world. Over time, this Wayfinding line has been expanded and improved to more airports around the world and the success has not diminished. As a personal opinion, having already frequented Schiphol airport more than once, I felt quite natural the way the signs directed me to my needs without me being very focused or looking for a lot of time. Concluding this case study, after understanding the process of evolution and creation of this Wayfinding signage at Schiphol airport, there are many reasons to consider it a positive case of how to develop Information Design.



Baggage hall



Arrivals hall



Transfer service



All other gates



Figure 1. Lighting the Way: Five Trends in Wayfinding Design. Retrived from <https://creativecloud.adobe.com/pt/discover/article/lighting-the-way-five-trends-in-wayfinding-design>

Figure 2. Design by dn&co. Photograph by Rory Gardiner. Retrived from <https://creativecloud.adobe.com/pt/discover/article/lighting-the-way-five-trends-in-wayfinding-design>

Figure 3. Chapter 2 cover | Schipol Airport, main entrance. Retrived from <https://www.centraleschipholtaxi.nl/en/pick-up-procedure/>

Figure 4. Departure of Prince Bernhard to Canada on the 1st flight from Amsterdam to Curacao at Schiphol airport, 1949. Retrived from <https://blog.klmmemorabilia.com/2020/04/27/kingsday-2020/>

Figure 5. Planum , Journal of Urbanism I Megastructure Schiphol . Design in Spectacular Simplicity 2013 ; 14-15/16. Retrived from <https://issuu.com/planumnet/docs/def/15>

Figure 6. Paul Mijksenaar at work. Mijksenaar Studio — Amsterdam , Graham Sturt. Retrived from <https://medium.com/dutch-design-heroes/dutch-design-heroes-paul-mijksenaar-8305716a57e6>

Figure 7. Paul Mijksenaar Portrait. Photograph by Aatjan Renders . Retrived from <https://www.dutchgraphicroots.nl/en/paul-mijksenaar/>

Figure 8. Schiphol Airport. Wayfinding for an airport Mijksenaar group. Retrived from <https://www.mijksenaar.com/en/>

Figure 9. Paul Mijksenaar company logo , LinkedIn. Retrived from https://pt.linkedin.com/company/mijksenaar?trk=public_profile_experience-item_profile-section-card_subtitle-click

Figure 10. Wayfinding for an Airport (2019) , Paul Mijksenaar from Paul Mijksenaar Foundation , Stichting Paul Mijksenaar Retrived from <https://www.centraleschipholtaxi.nl/en/pick-up-procedure/>

Figure 11. Schiphol Airport Departures. Retrived from <https://www.istockphoto.com/pt/search/2/image?phrase=interior+of+schiphol+airport>

Figure 12. Wissings Design at Schiphol airport 1967. Retrived from <https://www.dutchgraphicroots.nl/en/benno-wissing/>

Figure 13. Schiphol wayfinding signage, from 1989. Retrived from <https://www.dutchgraphicroots.nl/en/paul-mijksenaar/>

Figure 14. London airport layout system, for basic rules of certain signs and arrows. Retrived from <https://agi-open-london.tumblr.com/post/45982429289/margaret-calvert-airport-signage-system-1972>

Figure 15. Set of images, sketch pictograms. Improved Wissing arrow. By Mijksenaar Retrived from

Figure 16. Set of images, sketch pictograms. Final Arrow. By Mijksenaar Retrived from

Figure 15. Set of images, sketch pictograms. Signage to Transfer. By Mijksenaar Retrived from

Figure 18. Pictograms introduced to Schiphol Airport by Mijksenaar in 1990. Retrived from <https://issuu.com/planumnet/docs/def/15>

Figure 19. Schiphol airport during night Retrived from <https://www.sleepingairports.net/guides/amsterdam-airport-guide.htm>

Figure 20. Wayfinding Schiphol, Mijksenaar wayfinding experts. By Thoas Retrived from <http://thoas.nl/blog/2018/04/05/schiphol-wayfinding/>

Figure 21. KLM advertisement frame 1, KLM Schiphol Transfer & Arrival information By Jan Juzef Cyrka, PRS Retrived from <https://www.youtube.com/watch?v=29weVp2pmAM&t=74s>

Figure 22. Schiphol Amsterdam Airport Netherlands July 2017 Retrived from <https://www.shutterstock.com/pf/image-photo/people-airport-during-summer-holidays-schiphol-682343713>

Figure 23. Luggage mat room, Schiphol Retrived from <https://vbenvh.nl/en/project/wayfinding/amsterdam-airport-schiphol-2/>

Figure 24. KLM advertisement frame 2 KLM Schiphol Transfer & Arrival information By Jan Juzef Cyrka, PRS Retrived from <https://www.youtube.com/watch?v=29weVp2pmAM&t=74s>

Figure 25. Frutiger Typography, Cover from Frutiger type specimen book by Erik Swider Retrived from <https://www.behance.net/gallery/78177077/Frutiger-type-specimen-book>

Figure 26. Frutiger Typography, Anatomy from Frutiger type specimen book by Erik Swider Retrived from <https://www.behance.net/gallery/78177077/Frutiger-type-specimen-book>

Figure 27. Akzidenz Grotesk BQ, at Schiphol by Benn Wissing Design, Total Design, 1967 Retrived from <https://medium.com/dutch-design-heroes/dutch-design-heroes-paul-mijksenaar-8305716a57e6>

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