Communal spaces within a large-scale education building: The Technikon complex

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Thesis Framework

Thesis statement

While meeting and communal spaces in large-scale educational complexes are often envisioned as dynamic environments that allow for interaction and collaboration, their practical implementation presents significant challenges. The complexity of balancing accessibility, spatial organization, and the needs of diverse user groups makes it difficult to achieve the intended level of engagement.[1] The Technikon Complex in Rotterdam, designed by H.A. Maaskant between 1955 and 1971, serves as a primary case study to explore the discrepancies between architectural intention and the real-world functionality of meeting and communal spaces within an educational setting.

Methodology

This research employs a qualitative approach that combines archival research, spatial analysis, and theoretical sources to assess the role of meeting and communal spaces in large-scale educational complexes. The methodology is built up out of several elements:

Archival research: Primary sources, including original design documents, blueprints, and written architectural critiques, will be analysed to understand the design intentions of Maaskant and other stakeholders involved in the Technikon project. The primary sources are mainly to be found in the Nieuwe Instituut in Rotterdam.

Spatial analysis: The layout and architectural elements of the Technikon will be examined through floor plans, site visits, and photographic evidence to analyse how meeting and communal spaces were designed to facilitate interaction.

Theoretical sources: Secondary literature will be used to contextualize the architectural and educational principles underlying the design of communal spaces in mid-20th-century school buildings. These sources include architectural theory, historical case studies, and frameworks that discuss the social function of educational space. In addition, published interviews with Maaskant and other voices provide an understanding of the intentions and challenges of the Technikon complex. Furthermore, published interviews with users at the time will give insight into the experiences within the building.

Research gap

While there are many studies on educational architecture and communal spaces, research specifically on meeting spaces in large-scale multi-school complexes from the mid-20th century is limited. Authors like Dudek (2000)[2] explore school design broadly, looking at examples from around the world, while Hofmeister (2020)[3] shifts the focus to sustainability in school buildings. Neufert's standards[4] and Sanoff's design principles[5] provide functional and spatial frameworks, but do not explore the

[1] Dudek, M. (2000). *Architecture of Schools: The New Learning Environments*. Oxford: Architectural Press.
[2] Dudek, M. (2000). *Architecture of Schools: The New Learning Environments*. Oxford: Architectural Press.
[3] Hofmeister, S. (2020). School buildings: Spaces for learning and the community. *München: DETAIL*.
[4] Neufert, E., & Neufert, P. (2012). *Architects' data* (4th ed.). Oxford: Wiley-Blackwell.
[5] Sanoff, H. (1994). *School design*. New York: Van Nostrand Reinhold.

lived experience of shared institutional spaces. Similarly, Markus (1993)[6] addresses the social function of architecture in educational contexts but focuses on school buildings in general.

Most studies either examine general school design or focus on the educational functions of individual buildings, without much detail on how meeting and communal spaces in large institutions were originally designed, used, and later adapted.

Although there is literature on the Technikon, it tends to focus on its role in vocational education rather than the architectural significance of its shared meeting spaces. Books such as “Architect H.A. Maaskant” by Fluks (1983)[7] and “Architect in progress” by Provoost (2013)[8] highlight the work of Maaskant, but do not specifically analyse how and if the common spaces support interaction and learning.

This thesis aims to fill that gap by examining how the Technikon’s communal and meeting spaces functioned, how they were originally intended, and how they were used in practice.

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[6] Markus, T. A. (1993). *Buildings & power: Freedom and control in the origin of modern building types.* London: Routledge.
[7] Fluks, M. (1983). *Architect H.A. Maaskant, 1907-1977*. Amsterdam: Uitgeverij Van Gennep
[8] Provoost, M. (2013). Hugh Maaskant: *Architect of progress*. Rotterdam: nai010 publishers.

Introduction

Background and significance

The role of architecture in shaping educational environments has been widely researched and debated. School buildings do more than provide a physical space for learning, they also reflect broader social, cultural, and pedagogical ideologies.[9] Large-scale educational complexes built in the mid-20th century are particularly interesting, as they emerged during a period of architectural experimentation driven by the rapid expansion of the number of people in education in the post-war era.[10]

One notable example is the Technikon in Rotterdam, designed by architect H.A. Maaskant between 1955 and 1971. Initially planned as a collection of separate vocational schools, the design evolved into a single, large-scale complex housing multiple institutions under one roof. This shift was driven by both practical needs, such as maximizing space and sharing resources, and Maaskant's vision of monumental, flexible spaces that could adapt to changing educational demands.[11] The Technikon, along with its sports tower, the Akragon, became a landmark of post-war Dutch educational architecture, embodying ideals of progress and urban integration.[12] The large scale of the complex was a direct response to the growing need for space, as the number of students and institutions kept increasing. As a result, the final design included eight schools, a theatre, and a sports centre.

Research objectives

This thesis examines the architectural and functional aspects of communal and meeting spaces within the Technikon. Specifically, it seeks to address the following research questions:

How did the communal spaces within the Technikon complex facilitate interactions and integration between users from diverse educational and leisure functions?

> *What design strategies were implemented in the Technikon to encourage interaction among diverse user groups, according to primary design documentation?*
>
> *How did the spatial organization of the Technikon facilitate or hinder interaction among students and faculty?*
>
> *How were the communal spaces utilized by diverse groups, such as teachers, students, and visitors?*
>
> *Were there any barriers (physical, social, cultural) that affected the mixing of diverse users in these spaces?*
>
> *What were the thoughts about this unique educational complex at the time of designing and building?*

[9] Dudek, M. (2000). *Architecture of Schools: The New Learning Environments*. Oxford: Architectural Press.
[10] Boersma, T., Verstegen, T., & Van Bergeijk, H. (1996). Nederland naar school: twee eeuwen bouwen voor een veranderend onderwijs. Rotterdam: NAi Uitgevers
[11] Provoost, M. (2013). Hugh Maaskant: *Architect of progress*. Rotterdam: nai010 publishers.
[12] Fluks, M. (1983). *Architect H.A. Maaskant, 1907-1977*. Amsterdam: Uitgeverij Van Gennep

By addressing these questions, the study aims to contribute to a deeper understanding of the successes and limitations of large-scale educational complexes in promoting engagement and collaboration.

Structure of the thesis

The first chapter examines the historical and institutional background of the Technikon complex. It begins with the post-war demand for technical education in Rotterdam, tracing the rapid increase in student numbers and the resulting need for new school facilities. Through a combination of archival documents, period publications, and interviews, this chapter reconstructs the rationale behind Maaskant's proposal for a single, large-scale building to house multiple vocational schools. It also outlines the functional inventory and spatial distribution of the complex, including the later addition of the Akragon sports tower. Attention is paid to how architectural strategies were employed to allow multiple institutions to coexist within a single structure, while maintaining a degree of autonomy.

The second chapter offers a closer analysis of the spatial organization of the Technikon. It draws on floor plans, building sections, and project documentation to examine how the complex was structured according to function, user group, and acoustic or practical demands. This includes a discussion of how schools were clustered, where public versus private functions were located, and how shared facilities such as the library and theatre were positioned to serve multiple groups. Special attention is given to circulation routes, vertical movement, and the spatial positioning of communal nodes intended to stimulate interaction across school boundaries. The chapter also addresses the limitations posed by institutional rules, which often conflicted with the open-access ideals embedded in the architectural layout.

The third chapter focuses on the role of communal spaces in promoting interaction within the Technikon. Drawing on both primary sources and secondary literature on educational architecture, this chapter identifies key spaces, such as the assembly hall, canteens, corridors, and theatre, intended to facilitate both formal and informal engagement. It considers how these spaces were meant to function, how they were actually used, and to what extent the original ambitions for openness and exchange were realised. A recurring theme is the tension between architectural intent and institutional regulation, although the building was designed to encourage encounters between students from different schools, access limitations and administrative decisions often restricted such interaction. This chapter also incorporates post-occupancy reflections and interviews with users to examine how these communal areas were experienced in practice.

The conclusion synthesizes the research findings, situating the Technikon within broader architectural-historical narratives around post-war educational buildings. The focus lies on understanding how architectural strategies were negotiated, adapted, or constrained by institutional and social realities. The thesis contributes to a growing body of research that reconsiders large-scale educational complexes not only as functional typologies, but as historically situated spatial frameworks shaped by both architectural ambition and institutional practice. Possible directions for future research will also be mentioned in the conclusion of this thesis.

I. The organization of multiple schools in one building

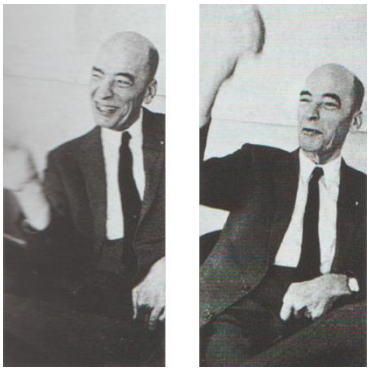
1.1 Historical context of the Technikon Complex

In the decades following the Second World War, the Netherlands underwent a profound demographic and societal transformation. One of the most defining factors was the rapid population growth, driven largely by the post-war baby boom. Between 1947 and 1971, the Dutch population increased from 9.6 to 13.2 million.[13] This surge placed significant pressure on many public services, particularly the education system.[14]

Starting in the 1950s, schools across the country began to overcrowd as municipalities struggled to accommodate the growing number of pupils.[15] At the same time, the nature of education was also changing. While pre-war schooling had often been organized according to religious or ideological divisions, and aimed at a relatively small portion of the population, post-war policy reframed education as both a social right and an essential investment in economic reconstruction.[16]

Alongside this quantitative growth, there was also a qualitative shift in the structure of education. The system became more diversified, with increasing emphasis on vocational and technical training. As the Dutch economy modernized, so did the need for skilled labour. This led to a growing demand for vocational schools, technical institutes, and specialized training facilities.[17] The number of students for technical and vocational classes more than doubled between 1950 and 1970.[18] As a result, new educational buildings needed to accommodate not only more students but also a wider range of functions, such as workshops, laboratories, and practical training spaces.

In cities like Rotterdam, already facing challenges of reconstruction and housing shortages, the pressure was particularly acute.[19] The idea of grouping several vocational schools within a single large complex emerged as a practical and forward-looking solution. It enabled efficient use of space and aligned with new pedagogical and urban planning ideas that emphasized flexibility, collaboration, and accessibility. The Technikon complex stands as a clear example of how demographic pressures, evolving educational philosophies, and architectural ambition converged in the post-war Netherlands.

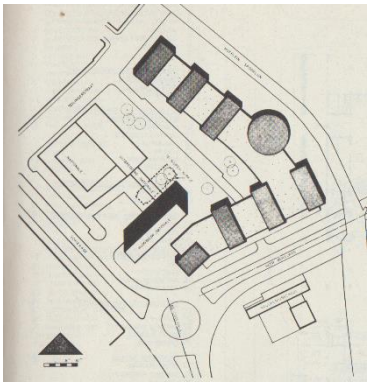


1 *Architect H.A. Maaskant during the1971 interview*

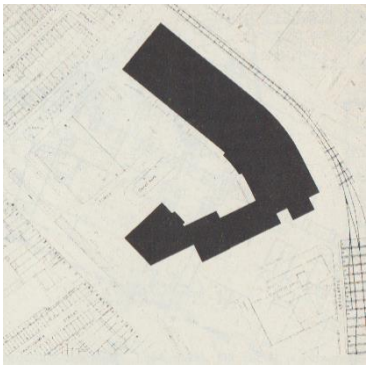
With a shortage of technical schools in Rotterdam, the alderman for education proposed a plan to facilitate several technical schools on one site. He sketched out a

[13] Schuyt, C. J. M., Taverne, E., & Van Voorst, S. (2000). *1950: Welvaart in zwart-wit*. In *Nederlandse cultuur in Europese context* (pp. 220–330). Den Haag: Sdu B.V.
[14] Boersma, T., Verstegen, T., & Van Bergeijk, H. (1996*). Nederland naar school: twee eeuwen bouwen voor een veranderend onderwijs.* Rotterdam: NAi Uitgevers
[15] Boersma, T., Verstegen, T., & Van Bergeijk, H. (1996*). Nederland naar school: twee eeuwen bouwen voor een veranderend onderwijs.* Rotterdam: NAi Uitgevers
[16] Boersma, T., Verstegen, T., & Van Bergeijk, H. (1996*). Nederland naar school: twee eeuwen bouwen voor een veranderend onderwijs.* Rotterdam: NAi Uitgevers
[17] Boersma, T., Verstegen, T., & Van Bergeijk, H. (1996*). Nederland naar school: twee eeuwen bouwen voor een veranderend onderwijs.* Rotterdam: NAi Uitgevers
[18] Provoost, M. (2013). *Hugh Maaskant: Architect of progress*. Rotterdam: nai010 publishers.
[19] Blom, A., Vermaat, S., & de Vries, B. (2014). *Post-war reconstruction in the Netherlands 1945-1965: The future of a bright and brutal heritage*. nai010.

plan for seven separate buildings and sent it to Maaskant. However, Maaskant strongly disagreed, remarking in a 1971 interview, "*I thought it was a disaster that Rotterdam would get seven of those small buildings, kind of village-like.*"[20] Maaskant proposed to create one large-scale building to house all schools, this way there would be more flexibility in the spatial layout.[21] According to Maaskant, this made the communal spaces and technical library more accessible for the students from the different schools.[22] Furthermore, a large-scale building was preferred by Maaskant as it would become more dominant in the city. Maaskant himself stated in the same interview, "*the large scale actually came because I found it of urban necessity.*"[23]
The project had a total of seventeen involved parties, all with conflicting interests.[24] Apart from that, due to the ever-growing number of students, the program was constantly subject to change. Many changes were made throughout the years of design and construction, and ultimately, the Technikon was completed in 1971. It housed eight schools and accommodated 3,000 students aged 12 to 20. In addition, the complex included a public technical library, a theatre, and a sports tower. The sports tower, the Akragon, was added later. As requirements for sports facilities expanded to include a swimming pool, a large sports hall, and six standard gymnasiums, Maaskant designed the tower. However, he was never fully satisfied with its height, saying, "I have never seen a tower that is high enough."[25] Due to restrictions, he could not build as tall as he wanted, and the tower ended up with 'only' eight floors. By the time it was finished, the schools had grown even further, and another floor was now actually desired by others as well, but it was no longer possible. Eventually, a steel skeleton was used to enclose the roof terrace, creating another sports hall.[26]



2 *The municipal sketch 1955*



3 *Site plan 1971*

1.2 Functional inventory

In 1956, at the start of the project, a structure plan was drawn. This plan was contained within a curved volume, running along the railway line at the back of the building. As its cross-section, it had an inverted T shape, initially with only three floors.[27]

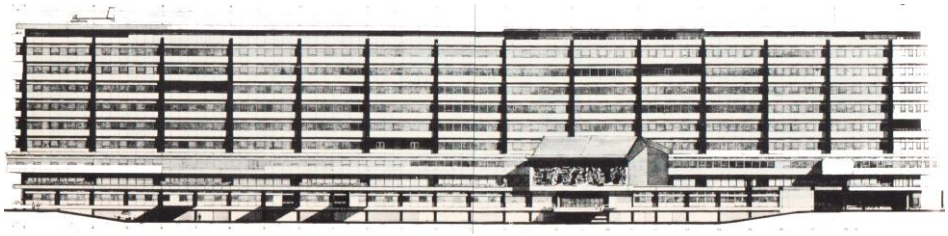
A set of requirements, meant for technical schools, was to be met for each individual school, predetermined measurements and amounts were present for classrooms, staircases, hallways, and toilets. As a result, the building originally housed seven separate schools, with each their own entrances, hallways, and canteens. With this, and the information about occupancy, a structure plan was made for the main building that would house the separate schools. The resulting structure resembled a slightly curved I-shape, reflecting both the constraints of the site and the need for one large-scale building for the organization of multiple institutions. Later, due to an increasing number of students, and a higher demand for space by the schools, a

[20] Geurtsen, R., & Engel, H. (1971). "Ik ben een rustig mens": Interview met Maaskant, Van Dommelen en De Koning. *BOUW: Centraal Weekblad voor het Bouwwezen*, jaargang 26, nummer 52. P. 1889-1898.
[21] M.C. de Koning, h.b.o. (1971). Het centrum voor beroepsonderwijs Technikon te Rotterdam. Toelichting architectenbureau Maaskant van Dommelen Kroos ir. Senf. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26 nummer 52. P. 1882-1888.
[22] Fluks, M. (1983). *Architect H.A. Maaskant, 1907-1977*. Amsterdam: Uitgeverij Van Gennep
[23] Geurtsen, R., & Engel, H. (1971). "Ik ben een rustig mens": Interview met Maaskant, Van Dommelen en De Koning. *BOUW: Centraal Weekblad voor het Bouwwezen*, jaargang 26, nummer 52. P. 1889-1898.
[24] Provoost, M. (2013). *Hugh Maaskant: Architect of progress*. Rotterdam: nai010 publishers.
[25] Geurtsen, R., & Engel, H. (1971). "Ik ben een rustig mens": Interview met Maaskant, Van Dommelen en De Koning. *BOUW: Centraal Weekblad voor het Bouwwezen*, jaargang 26, nummer 52. P. 1889-1898.
[26] M.C. de Koning, h.b.o. (1971). Het centrum voor beroepsonderwijs Technikon te Rotterdam. Toelichting architectenbureau Maaskant van Dommelen Kroos ir. Senf. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26 nummer 52. P. 1882-1888.
[27] Provoost, M. (2013). *Hugh Maaskant: Architect of progress*. Rotterdam: nai010 publishers.

building bridging the original complex with the sports tower was added, creating an L shape. In the end, six schools occupied the long side of the complex, and two occupied the short side.[28]

In the bend on the long side of the building, the school hall, entrance, and public technical library were situated. The sports facilities were planned to be placed at the end of the short side of the L, though it was planned for a later stadium.[29] At first, the tower consisted of only four floors, which were stacked as volumes on top of each other. However, as the design progressed, the desired floor area increased, leading to the addition of four more floors. This expansion further increased the demand for sports facilities, for which an eight-floor-high tower was eventually designed, much against Maaskant's desire, who would have preferred a higher tower.[30]

Furthermore, a new requirement was a school hall that could house up to 500 people.[31] This hall was later integrated as a theatre on the first floor of the complex, directly above the main entrance. The theatre not only fulfilled educational needs but also functioned as a semi-public space for performances, meetings, and events, making it a key communal node.



5 *Front façade of main building volume*

Each school retained its own functional autonomy, with dedicated classrooms, specialized rooms for training, like hairdressing salons or bakery kitchens. Still, infrastructural facilities such as machinery for technical departments were centralized in the basement. This arrangement minimized noise pollution and structural complications while allowing multiple schools to make use of shared equipment.[32]

4 *Main entrance with artwork by Karel Appel*

6 *The Akragon sports tower*

1.3 Architectural strategies for coexistence

The Technikon integrated several architectural strategies to allow multiple schools to coexist within a single building complex while maintaining both functional independence and opportunities for interaction.

Zoning and spatial hierarchy played a critical role in the design. Public functions such as the main entrance, library, and theatre were concentrated near the central bend of the long wing, easily accessible to all users.[33] Meanwhile, more private or institutional

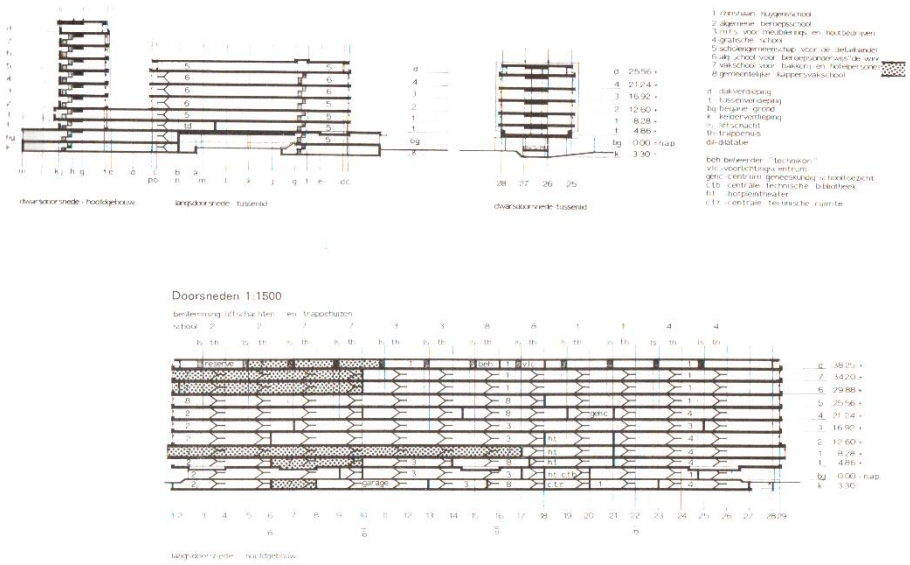
[28] Maaskant H.A. (1957-1970) *Nijverheidscholen Technikon te Rotterdam.* Nieuwe Instituut Archive, MAAX .110303421. Rotterdam
[29] M.C. de Koning, h.b.o. (1971). Het centrum voor beroepsonderwijs Technikon te Rotterdam. Toelichting architectenbureau Maaskant van Dommelen Kroos ir. Senf. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26 nummer 52. P. 1882-1888.
[30] Fluks, M. (1983). *Architect H.A. Maaskant, 1907-1977*. Amsterdam: Uitgeverij Van Gennep
[31] M.C. de Koning, h.b.o. (1971). Het centrum voor beroepsonderwijs Technikon te Rotterdam. Toelichting architectenbureau Maaskant van Dommelen Kroos ir. Senf. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26 nummer 52. P. 1882-1888.
[32] M.C. de Koning, h.b.o. (1971). Het centrum voor beroepsonderwijs Technikon te Rotterdam. Toelichting architectenbureau Maaskant van Dommelen Kroos ir. Senf. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26 nummer 52. P. 1882-1888.
[33] Provoost, M. (2013). *Hugh Maaskant: Architect of progress*. Rotterdam: nai010 publishers.

functions, like administrative offices or staff rooms, were positioned deeper within each school's section.[34]

Circulation strategies were tailored to accommodate diverse user flows. Each school had its own set of staircases, as well as elevators. Notably, special elevators were designed for full classes, 26 students, to move together between floors, while smaller elevators were reserved for teachers.[35]

Furthermore, there was a sunken driveway to the basement, which was meant for logistics and as a way to the bicycle and moped storage. The placement in front of the building was due to the fact that visitors had to enter the building from the front side, along the open square.[36] Later in this thesis, the collective quality of the 'car gutter' will be discussed.

Classrooms were positioned toward the open square, away from the railway, to benefit from natural light and reduce noise. In terms of vertical layout, schools were distributed across multiple floors rather than having each school occupy a single floor. This intentional layering aimed to create moments of encounter, students from different schools might share staircases or pass each other in shared circulation spaces.[37]



9 *Sections with the numbered schools assigned to the floors*

8 *Stairs towards the entrances going over the sunken driveway*

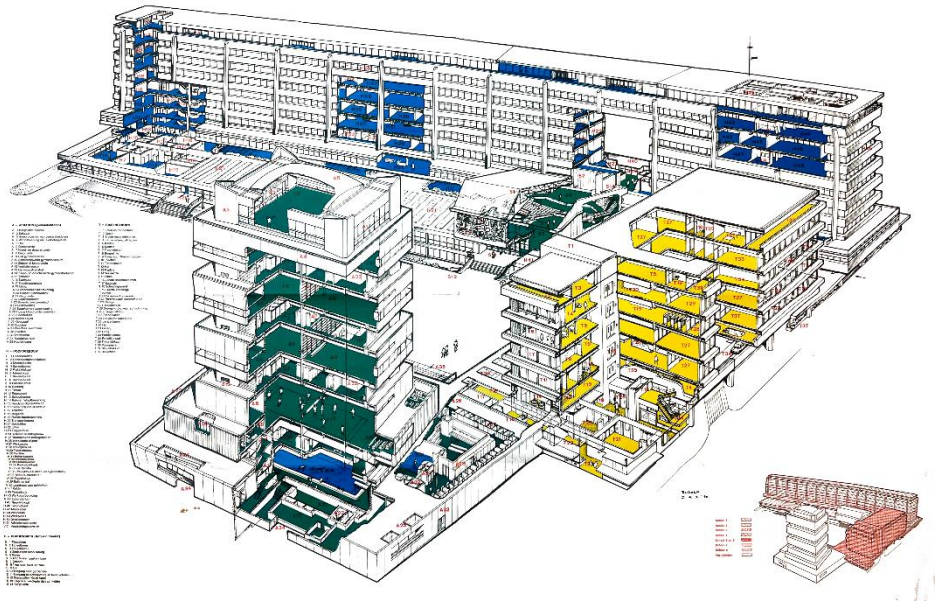
10 *Inside the sunken driveway*

Canteens were initially meant to be shared by the several schools. They were placed throughout the building, their size was initially twice as big, but due to the growth in the number of students, they would eventually be halved to make space for more classrooms. This meant that they were to be used in shifts, still allowing interaction but less than originally intended for.[38] In the end there was no general canteen for all

[34] Maaskant H.A. (1957-1970) *Nijverheidscholen Technikon te Rotterdam.* Nieuwe Instituut Archive, MAAX .110303421. Rotterdam
[35] Provoost, M. (2013). *Hugh Maaskant: Architect of progress*. Rotterdam: nai010 publishers.
[36] M.C. de Koning, h.b.o. (1971). Het centrum voor beroepsonderwijs Technikon te Rotterdam. Toelichting architectenbureau Maaskant van Dommelen Kroos ir. Senf. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26 nummer 52. P. 1882-1888.
[37] TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). *Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs* (2e uitg). Delft: Technische Hogeschool Delft
[38] M.C. de Koning, h.b.o. (1971). Het centrum voor beroepsonderwijs Technikon te Rotterdam. Toelichting architectenbureau Maaskant van Dommelen Kroos ir. Senf. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26 nummer 52. P. 1882-1888.

schools in the complex, about this, J.H.N. Grandia, deputy director of school advisory service in Rotterdam, at the time of the interview, 31st of march and the 1st of April 1971, says, "*Maybe it didn't turn out that way, but it was originally the intention... In such a communal canteen, there would be a mixing of students, it could be a great meeting point*."[39]

Technical spaces with noisy machinery were placed in the basement for both acoustic and structural reasons. These spaces were shared by multiple schools, which required careful coordination in scheduling and layout.[40] Due to the scheduling, different schools rarely used the same space at the same time, limiting interactions between students from different schools.[41]



11 *Folder with an exploded perspective drawing to explain the Technikon complex 1970*

[39] TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). *Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs* (2e uitg). Delft: Technische Hogeschool Delft
[40] Provoost, M. (2013). *Hugh Maaskant: Architect of progress*. Rotterdam: nai010 publishers.
[41] TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). *Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs* (2e uitg). Delft: Technische Hogeschool Delft

II. Spatial organization of the Technikon

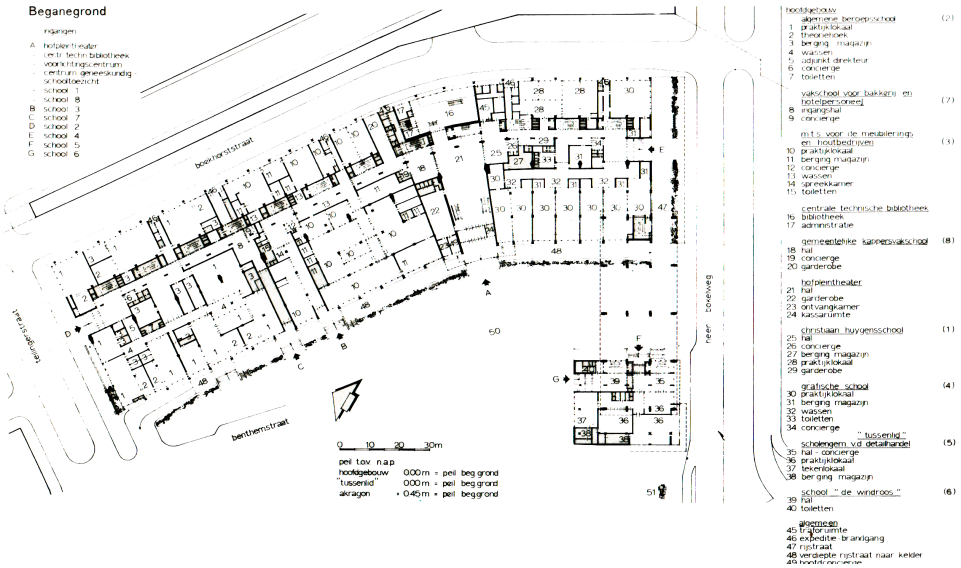
2.1 Clustering based on function

The spatial organization of the Technikon was structured to balance collaboration and separation. Schools were grouped based on academic focus, allowing for shared resource access while minimizing disruptions. Laboratories, workshops, and libraries were strategically placed to serve multiple schools. This approach was intended to facilitate interdisciplinary collaboration. However, the practical application of these shared resources was often restricted by individual school policies.[42] These restrictions and their effect on user experience will be discussed in Chapter three of this thesis.

Disciplinary clustering

Similar disciplines were positioned closer together to avoid conflicts in noise levels and workflow. On the long side of the L, six out of the eight schools were located, which were the municipal hairdressing school, the Christiaan Huygensschool, the vocational school for bakery and hotel staff, the graphic school, the general vocational school, and the secondary technical school for furnishing and woodworking companies. On the shorter side of the L, known as the 'interlinking section', the retail school, and the "Windroos" school were situated. The placement of these last two institutions appears to have been more pragmatic, filling the residual space after the longer wing reached capacity. [43]

All eight schools had their own entrance, except for the hairdressing school and the Christiaan Huygensschool, which shared their entrance with each other as well as with the theatre and central library. On the floor plan, the ground floor is shown, where the entrances and the different schools can be seen.



12 *Annotated ground floor plan of the Technikon Complex*

[42] Provoost, M. (2013). *Hugh Maaskant: Architect of progress*. Rotterdam: nai010 publishers.

[43] TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). *Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs* (2e uitg). Delft: Technische Hogeschool Delft

Technical infrastructure

The basement of the complex was designated for technical infrastructure. Heavy machinery, including shared mechanical equipment for woodworking and metalworking classes, was housed here. This not only isolated noise and vibration from the classrooms above but also created a zone where resources could be shared across schools with similar workshop needs. Apart from that, the storage for both bikes and mopeds was also located there, with the sunken driveway being to access way. This subterranean level functioned as both a logistical and infrastructural base for the complex.[44]

Centralized facilities

The theatre and the technical library were placed in the bend of the L-shaped building, emphasizing their role as shared facilities accessible from multiple directions. Their central location allowed them to serve as neutral meeting grounds, not specifically being part of any one school, but rather of the complex as a whole.[45]

The Akragon

The sports functions were clustered vertically within the Akragon tower, which was a later addition to the whole project. The tower's functions included a swimming pool, a large sports hall, and six standard gymnasiums, providing a concentrated zone for physical education accessible to all users of the complex. The vertical stacking of these spaces reflected Maaskant's broader urban vision.[46]

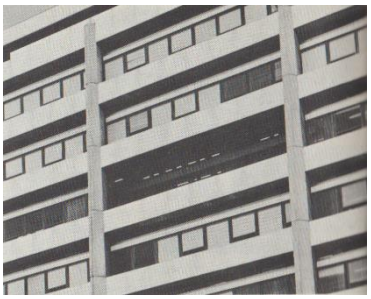
2.2 Shared and exclusive spaces

The Technikon complex was designed to accommodate both shared and exclusive functions, a duality that reflected the broader institutional ambitions of collaboration and the practical need for autonomy. While each school operated as an independent unit with its own administrative and instructional core, a number of shared facilities were integrated into the overall design to, mostly, promote to resource efficiency, the possibility for interaction between user groups was a positive and desired side effect. The resource efficiency was the main reason, as this would also reduce costs.[47]

Semi-shared spaces included classrooms, and workshops, as they were used by different user groups from the several schools, though rarely at the same time.[48] More exclusive were the staff offices, and teacher rooms. Both of these types of spaces were often distributed over multiple floors per school, rather than assigning each institution to a single level. This vertical layering meant that users from different institutions would cross paths in staircases and shared circulation areas, potentially encouraging informal interactions. Despite these opportunities, certain areas remained clearly demarcated and restricted to specific user groups. The head of each school had an

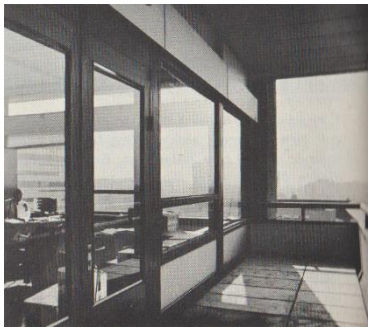
[44] M.C. de Koning, h.b.o. (1971). Het centrum voor beroepsonderwijs Technikon te Rotterdam. Toelichting architectenbureau Maaskant van Dommelen Kroos ir. Senf. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26 nummer 52. P. 1882-1888.
[45] Provoost, M. (2013). *Hugh Maaskant: Architect of progress*. Rotterdam: nai010 publishers.
[46] Geurtsen, R., & Engel, H. (1971). "Ik ben een rustig mens": Interview met Maaskant, Van Dommelen en De Koning. *BOUW: Centraal Weekblad voor het Bouwwezen*, jaargang 26, nummer 52. P. 1889-1898.
[47] Geurtsen, R., & Engel, H. (1971). "Ik ben een rustig mens": Interview met Maaskant, Van Dommelen en De Koning. *BOUW: Centraal Weekblad voor het Bouwwezen*, jaargang 26, nummer 52. P. 1889-1898.
[48] TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). *Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs* (2e uitg). Delft: Technische Hogeschool Delft

office located within the school's dedicated zone, emphasizing hierarchical boundaries within the otherwise integrated complex.[49] Furthermore, the director's private loggia subtly interrupted the otherwise uniform façade facing the public square, marking his elevated status and visually reinforcing institutional hierarchy.[50] This can be seen as an architectural gesture that subtly asserts hierarchy and importance. In interviews with some students in 1970, a year after the school opened, it became clear that there was barely a connection between the students and teachers, and the connection was even less with the school's director, he was seen as a 'vague shadow', that would sometimes show up for speeches.[51]



13 *Loggia from the exterior*

Shared spaces included the public technical library, the theatre, and the sports tower. The library was accessible to all students and staff and was positioned centrally to serve as a common for the entire complex.[52] The theatre, designed to host up to 500 people, doubled as a school or assembly hall and public event space, accommodating both institutional events and external performances. These spaces were conceived not only for efficiency but also as places of collective identity, where users from different schools could, in theory, participate in shared activities and events.[53] The actual user experience and the lack of freedom of use for these spaces will be discussed in the third chapter of this thesis.



14 *Inside the director's private loggia*

The boundary between shared and exclusive was further reinforced by circulation logic. Each school had its own dedicated staircases and elevators, some of which were dimensioned to accommodate full class groups. Separate elevators for teachers provided additional privacy and spatial hierarchy. As a result, while students might encounter others in passing or in shared facilities, the day-to-day experience of space remained largely defined by institutional affiliation.[54] Furthermore, even in circulation spaces, there were strict rules, limiting students from interacting with each other. The influence of institutional rules on the intended shared spaces and circulation spaces will be discussed in the next chapter of this thesis.

2.3 Nodes of interaction

Within the Technikon, specific architectural nodes were designed to promote interaction across institutional boundaries. These nodes, areas where circulation routes converged or shared facilities were accessed, were critical to the building's ambition to function as more than just a cluster of schools.[55] Apart from intended nodes, unintended nodes were created by users.

Intended nodes

The most prominent of these was the assembly hall near the main entrance, which also functioned as the access point to the public library and as a theatre. This area, located in the bend of the L, was intended as a social hub. It provided a transitional

[49] Provoost, M. (2013). *Hugh Maaskant: Architect of progress*. Rotterdam: nai010 publishers.
[50] Provoost, M. (2013). *Hugh Maaskant: Architect of progress*. Rotterdam: nai010 publishers.
[51] Prins, B., van Es, M., Hylkema, N., Stolk, A. (1971) Gebruikers aan het woord. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26, nummer 49. P. 1772-1775.
[52] M.C. de Koning, h.b.o. (1971). Het centrum voor beroepsonderwijs Technikon te Rotterdam. Toelichting architectenbureau Maaskant van Dommelen Kroos ir. Senf. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26 nummer 52. P. 1882-1888.
[53] TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). *Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs* (2e uitg). Delft: Technische Hogeschool Delft
[54] Prins, B., van Es, M., Hylkema, N., Stolk, A. (1971) Gebruikers aan het woord. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26, nummer 49. P. 1772-1775.
[55] Geurtsen, R., & Engel, H. (1971). "Ik ben een rustig mens": Interview met Maaskant, Van Dommelen en De Koning. *BOUW: Centraal Weekblad voor het Bouwwezen*, jaargang 26, nummer 52. P. 1889-1898.

zone between institutions and framed shared activities within a neutral spatial context. Because of its position and its programmatic mix, it was one of the few places where students from different schools might congregate informally.[56]

Vertical circulation zones also functioned as nodes of potential interaction. The design intentionally placed schools over multiple levels rather than horizontally segregating them. As a result, staircases and elevator landings became shared vertical corridors, where users from different schools could encounter one another. The elevators sized for full class groups emphasized efficiency but also meant that different classes could overlap at peak times.[57]

Despite these architectural efforts, many of the intended interaction zones were regulated in practice. Institutional rules, staffing logistics, and timetabling reduced the likelihood of unstructured engagement. Nevertheless, the Technikon's layout reveals a conscious effort to weave social potential into the architectural fabric, even if such potential was not always fully realized.[58]

15 *Moments of interaction in front of the entrance*

16 *'The only collective space in the project', the sunken driveway*

Unintended nodes

The most prominent unintended node is the sunken driveway in front of the building. The collective function of this space was created due to the fact that almost everyone using the complex had to come here to put away either their bike or moped. Students started meeting each other here, as the institutional rules were not as strict as in some other places in the complex. In the book 'Aanzet tot een methodische architektuur kritiek – Technikon Rotterdam – monument voor het beroepsonderwijs' by TH Delft, the sunken driveway is called "the only collective space in the project.[59]

Another node would be the stairs towards the elevated entrances, these spaces were visually connected with the sunken driveway. Just like the 'car gutter', the space was on the exterior, a place where institutional rules were less strict.[60]

[56] TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). *Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs* (2e uitg). Delft: Technische Hogeschool Delft
[57] M.C. de Koning, h.b.o. (1971). Het centrum voor beroepsonderwijs Technikon te Rotterdam. Toelichting architectenbureau Maaskant van Dommelen Kroos ir. Senf. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26 nummer 52. P. 1882-1888.
[58] Provoost, M. (2013). *Hugh Maaskant: Architect of progress*. Rotterdam: nai010 publishers.
[59] TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). *Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs* (2e uitg). Delft: Technische Hogeschool Delft
[60] M.C. de Koning, h.b.o. (1971). Het centrum voor beroepsonderwijs Technikon te Rotterdam. Toelichting architectenbureau Maaskant van Dommelen Kroos ir. Senf. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26 nummer 52. P. 1882-1888.

III. The role of communal spaces in promoting interaction

3.1 Types of communal spaces within the Technikon

The design of communal spaces in educational settings plays a crucial role in allowing interaction among users, as discussed by Dudek (2000)[61], who explores the role of school architecture in shaping educational spaces. Sanoff (1994)[62] further emphasizes that well-designed communal spaces can enhance both formal and informal learning interactions. Within the Technikon, various communal spaces were incorporated to facilitate both formal and informal interactions among its diverse types of users.

Assembly hall

The most prominent designed and intended communal space was to be the assembly hall, placed directly above the entrance, and meant to be available for all user groups from the different schools. The assembly hall was designed to house up to 500 people, more was not possible due to restrictions and requirements regarding fire safety. The idea for the hall was to create a space for parties, performances, and other leisure activities.[63] In practice the assembly hall was the theatre, and it only functioned as theatre, there was not large flat part and could thus not function as communal hall according to the director of the Christiaan Huygensschool.[64] To a question, in a 1971 interview, about the hall only functioning as theatre, van der Ploeg, councillor of education in Rotterdam, says "*As theatre it functions well, you can see that every evening*."[65]

Circulation spaces

Other communal spaces would be the corridors, vertical circulation spaces, and entrances, while mainly intended as transitional spaces, these were also spaces meant for people from different schools to meet. The architectural intent was to create open, fluid movement, however, the imposed restrictions meant that students often remained within their respective educational divisions.[66]

Canteens

Each separate school also had its own canteen, which in the design of Maaskant was not necessarily to only be used by students from that school, as the idea was to have the schools intertwine through these kinds of common spaces .[67] In initial designs, when the school was still relatively small scale, the idea was to have one canteen that could be shared by students from all schools. However, due to increase in scale and

[61] Dudek, M. (2000). *Architecture of Schools: The New Learning Environments*. Oxford: Architectural Press.
[62] Sanoff, H. (1994). *School design*. Londen: Routledge
[63] M.C. de Koning, h.b.o. (1971). Het centrum voor beroepsonderwijs Technikon te Rotterdam. Toelichting architectenbureau Maaskant van Dommelen Kroos ir. Senf. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26 nummer 52. P. 1882-1888.
[64] Geurtsen, R (1971) v.d. Ploeg: "Ik kan niet een een spijker in de muur slaan." Interview met v.an der Ploeg. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26, nummer 49. P. 1776-1781.
[65] Geurtsen, R (1971) v.d. Ploeg: "Ik kan niet een een spijker in de muur slaan." Interview met v.an der Ploeg. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26, nummer 49. P. 1776-1781.
[66] Provoost, M. (2013). *Hugh Maaskant: Architect of progress*. Rotterdam: nai010 publishers.
[67] Geurtsen, R., & Engel, H. (1971). "Ik ben een rustig mens": Interview met Maaskant, Van Dommelen en De Koning. *BOUW: Centraal Weekblad voor het Bouwwezen*, jaargang 26, nummer 52. P. 1889-1898.

building restrictions, eventually each school had to have their own canteen.[68] In the 1971 interview with Grandia, he mentions that a common canteen was desired, as young people could then share information with each other.[69]
The separate canteens were seen as common spaces, which would provide a setting for informal socialization, where students could gather and interact beyond the usual classroom experience.[70] However, archival documentation and contemporary reviews suggest that these spaces were not always used as intended. Many students were obliged to remain within their respective school sections, limiting cross-disciplinary interaction.[71] How such regulations influenced the user's experiences within the common spaces will be discussed in *3.3 Architectural intent vs. Institutional rules*.

Theatre and sports
The theatre and sports facilities were included to provide shared spaces for cross-disciplinary engagement. These areas were intended to allow students to participate in cultural and athletic activities, encouraging collaboration beyond academic boundaries.[72] The sports tower, the Akragon, was an ambitious addition that symbolized Maaskant's vision of large-scale, multifunctional educational environment.[73] Although the Akragon was meant to serve all students, its separation from the main building limited its accessibility for some user groups.[74] Furthermore, also here restrictions applied, which will be discussed in the third paragraph of this chapter.

3.2 User experience

One of the key ambitions in the design of large-scale educational complexes is to ensure interaction between different user groups, students, staff, and visitors, across various educational levels and disciplines. In theory, shared communal spaces such as libraries, theatres, or dining areas are expected to encourage cross-disciplinary exchange and cultivate a sense of institutional cohesion. However, achieving this goal is far from straightforward. To only provide shared space does not guarantee interaction, social dynamics, institutional policies, and spatial hierarchies often shape how and if such contact actually occurs.[75]

Within the Technikon complex, a diverse range of user groups coexisted. The building accommodated eight separate schools offering different vocational and general educational tracks, including graphic design, bakery and hospitality training, retail, hairdressing, technical crafts, and secondary general education. These schools catered to students aged approximately 12 to 20 years old, representing both lower and upper secondary education levels. Staff included teachers, administrative personnel, workshop supervisors, and cleaning and support staff. In addition, the public technical library and the theatre drew in visitors from outside the school

[68] TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). *Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs* (2e uitg). Delft: Technische Hogeschool Delft
[69] TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). *Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs* (2e uitg). Delft: Technische Hogeschool Delft
[70] Dudek, M. (2000). *Architecture of Schools: The New Learning Environments*. Oxford: Architectural Press.
[71] Geurtsen, R (1971) v.d. Ploeg: "Ik kan niet een een spijker in de muur slaan." Interview met v.an der Ploeg. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26, nummer 49. P. 1776-1781.
[72] Provoost, M. (2013). *Hugh Maaskant: Architect of progress*. Rotterdam: nai010 publishers.
[73] Geurtsen, R., & Engel, H. (1971). "Ik ben een rustig mens": Interview met Maaskant, Van Dommelen en De Koning. *BOUW: Centraal Weekblad voor het Bouwwezen*, jaargang 26, nummer 52. P. 1889-1898.
[74] Fluks, M. (1983). *Architect H.A. Maaskant, 1907-1977*. Amsterdam: Uitgeverij Van Gennep
[75] Hertzberger, H., Ghaït, L., & Vlijmen, M. v. (2016). *Lessons for students in architecture (; I. Rike, Trans.; Seventh edition).* Rotterdam: Nai010 Publishers.

system, adding another layer to the complex's user landscape. These overlapping functions created potential opportunities for interaction, but also logistical and institutional challenges that shaped how users experienced the building.

One of the challenges in large-scale educational complexes is ensuring this interaction between diverse user groups. In the case of the Technikon, several strategies were considered to promote mixing. The Technikon housed students with varying academic and vocational interests. Each school operated independently but shared some communal spaces. Maaskant's design included open access to shared facilities such as the library, theatre and sports tower to promote inter-school interactions. However, in practice, institutional policies, and physical barriers often restricted movement between different educational groups.[76]

17 *Users of the Technikon complex*

The intended integration of different user groups was also influenced by social and cultural factors. Spatial design alone cannot guarantee interaction, social structures within the schools played a defining role.[77] In the case of the Technikon, due to restrictions, students were often not able to have interaction between several schools, as for example doors were locked, or the large scale of the building left little time between classes for spontaneous interaction. One of the students (graphic school) in an interview in 1970 says, "*the complex feels like a prison, in the past you could at least go outside during recess. Now, before you get the, the classes will start again*."[78] In that same interview another student (Christiaan Huygensschool) says "*You are in a hurry to get into school because you have to go upstairs ten minutes before class starts to be on time.*"[79]

The Technikon's design aimed to integrate communal spaces that encouraged interaction while maintaining necessary separations for focused learning. Open canteens, a shared theatre, and common corridors were intended to allow engagement among different student groups. However, administrative decisions to restrict certain areas undermined these objectives.[80]

Corridors, circulation spaces, and entrances, while intended as transitional spaces, also functioned as meeting points. However, certain design choices in the Technikon, such as hidden elevators that only stopped on designated floors and locked doors between different schools, limited interactions by students from the various schools. The limiting by institutional rules will be discussed in the next sub-chapter.

[76] TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs (2e uitg).
[77] Hertzberger, H., Ghaït, L., & Vlijmen, M. v. (2016). *Lessons for students in architecture (; I. Rike, Trans.; Seventh edition).* Rotterdam: Nai010 Publishers.
[78] Prins, B., van Es, M., Hylkema, N., Stolk, A. (1971) Gebruikers aan het woord**.** *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26, nummer 49. P. 1772-1775.
[79] Prins, B., van Es, M., Hylkema, N., Stolk, A. (1971) Gebruikers aan het woord**.** *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26, nummer 49. P. 1772-1775.
[80] TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs (2e uitg).

3.3 Architectural intent vs. Institutional rules

A key research focus is the contrast between Maaskant's architectural intentions and the actual experiences of users. Maaskant envisioned open and accessible communal areas where students from different schools could interact freely.[81] However, institutional rules, such as locked doors and restricted elevator access, significantly altered the intended functionality. Users often found themselves confined to their designated school areas, reducing opportunities for inter-school engagement.[82]

User interviews conducted in the first phase, within a year after construction finished, revealed that while students and faculty appreciated the grandeur of the design, they often found it impractical for daily use.[83] Many communal spaces remained underutilized due to barriers that emerged post-construction, highlighting the gap between design vision and real-world application. In the interview conducted in 1970, a question was asked about the combination of eight school, to which one of the students said, "*They haven't put them together at all. At least you don't notice it, all the doors are hermetically sealed.*"[84] Some other students were talking about strict rules within the complex, they mention them as restrictions in their freedom and opportunity to engage with each other.

"*You are not allowed in the other buildings, the doors are closed.*" (general vocational school)
"You may not stand in the hall or sit on the sidewalk." (vocational school for bakery)
"You are not allowed to put bags in the hallway, otherwise the walls will get dirty'." (Graphic school)
"*You can go up with the student lift, but you have to walk down. There is a separate teacher's lift*." (vocational school for bakery)
"*Sometimes you can't use the elevator because there are too many classes, then you have to walk to the seventh. You're not allowed to have fun on the stairs, otherwise you'll be sent down and you have to start all over again*." (vocational school for bakery)
"*Outside of classes, you are not allowed to go to the Akragon to do sports if you feel like it*." (general vocational school)
These quotes are all taken from the BOUW publication 'Gebruikers aan het woord' in 1971.[85]

A year later another interview was conducted, asking groups of students questions about the rules within the Technikon complex. Their answers again show that there were still a lot of restrictions, and the building felt cold as there were no decorations. Another thing students mentions is about the relationship with the teachers, "*The relationship between students and teachers has become more distant, you are a number here, you disappear in the crowd. There is little contact between students from different departments within a school; in the other building you were more dependent on each other*", said a group of students in the interview half a year after the first phase.[86]

[81] Provoost, M. (2013). *Hugh Maaskant: Architect of progress*. Rotterdam: nai010 publishers.
[82] TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs (2e uitg). Delft
[83] TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs (2e uitg).
[84] Prins, B., van Es, M., Hylkema, N., Stolk, A. (1971) Gebruikers aan het woord**.** *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26, nummer 49. P. 1772-1775.
[85] Prins, B., van Es, M., Hylkema, N., Stolk, A. (1971) Gebruikers aan het woord**.** *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26, nummer 49. P. 1772-1775.
[86] Prins, B., van Es, M., Hylkema, N., Stolk, A. (1971) Gebruikers aan het woord**.** *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26, nummer 49. P. 1772-1775.

Furthermore, access to shared spaces was not always unrestricted. Timetabling and institutional regulation often limited who could use which space and when. For example, the gymnasiums in the Akragon had to be scheduled between schools, and the theatre's use often depended on pre-approved programming.[87] In practice, this meant that while spaces were technically shared, they were often used in isolated time slots, reducing the intended interaction between user groups.

About the theatre was not a lot of positive response in this same interview. The students say that the theatre can not be used for their plays, as there is already a theatre group in the building. Another student mentions that the theatre is used almost every evening by other parties, that the students themselves did not get the change to make use of it.[88] About this matter, van der Ploeg in the 1971 interview, responds slightly annoyed, he says that doing spontaneous things in a city is not possible, and that if students and the schools would plan ahead, they would be able to make use of the theatre.[89]
After the publication in 'BOUW: centraal weekblad voor het bouwwezen' in 1971, architect H.A. Maaskant said that measures were taken to ensure that the theatre is available for students every Monday evening, and that during the day it would also almost always be available for school related events.[90]

[87] TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). *Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs* (2e uitg). Delft: Technische Hogeschool Delft
[88] Prins, B., van Es, M., Hylkema, N., Stolk, A. (1971) Gebruikers aan het woord**.** *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26, nummer 49. P. 1772-1775.
[89] Geurtsen, R (1971) v.d. Ploeg: "Ik kan niet een een spijker in de muur slaan." Interview met v.an der Ploeg. *BOUW: centraal weekblad voor het bouwwezen:* jaargang 26, nummer 49. P. 1776-1781.
[90] TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). *Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs* (2e uitg). Delft: Technische Hogeschool Delft

Conclusion

The Technikon complex represents an ambitious architectural response to post-war educational demands, aiming to centralize multiple vocational institutions into one cohesive structure. While its monumental scale and integrated facilities reflect Maaskant's vision of openness and urban significance, the project reveals a persistent tension between architectural intention and institutional implementation.

The design incorporated spatial strategies to promote interaction: disciplinary clustering was balanced with shared facilities such as the library, theatre, and sports tower. Circulation systems were structured to generate overlap, and communal spaces were distributed to stimulate casual encounters. However, these potentials were regularly hindered by practical and institutional constraints. Locked doors, dedicated staff elevators, and school-specific scheduling patterns undercut the openness the architecture proposed. Communal areas such as the canteens, the theatre, and vertical circulation points, functioned less as vibrant meeting grounds and more as administratively regulated zones.

The communal spaces, in particular, illustrate the complexity of translating spatial ideals into lived experience. Although designed to facilitate engagement across institutional lines, in practice, these spaces were often controlled, inaccessible, or functionally limited. Student interviews conducted shortly after the building's opening highlight a sense of confinement and missed opportunities for interaction. They felt isolated within their own school segments, while architectural gestures intended to allow engagement between users, such as the assembly hall or rather theatre, or sports tower, were often repurposed or restricted.

Nonetheless, the Technikon reveals how spatial ambition can coexist with institutional pragmatism. It offers a historical case study of both the potential and limitations of shared architecture in educational settings. What becomes clear is that design alone cannot ensure social integration, it must be supported by policies and programming. The effectiveness of communal spaces relies not just on spatial logic, but on the institutional willingness to allow those spaces to function freely.

This study thus contributes to a growing understanding of how large-scale educational architecture can be both visionary and conflicted. It shows that while the Technikon's layout supported the possibility for interaction, the reality of user experience was far more fragmented. By reflecting critically on how design and governance intersect, the Technikon serves as both a model and a cautionary tale for future educational projects.

Bibliography

Primary

1. Geurtsen, R. (1971) Technikon, monument voor het beroepsonderwijs.
   BOUW: centraal weekblad voor het bouwwezen: jaargang 26, nummer 49. P. 1766-1767, 17. Object number: B-113972

2. Geurtsen, R (1971) v.d. Ploeg: "Ik kan niet een een spijker in de muur slaan." Interview met v.d. Ploeg.
   BOUW: centraal weekblad voor het bouwwezen: jaargang 26, nummer 49. P. 1776-1781.

3. M.C. de Koning, h.b.o. (1971). Het centrum voor beroepsonderwijs Technikon te Rotterdam. Toelichting architectenbureau Maaskant van Dommelen Kroos ir. Senf
   BOUW: centraal weekblad voor het bouwwezen: jaargang 26 nummer 52. P. 1882-1888. Object number: B-84602

4. (1971) Het Akragon Torengebouw voor de sport van het Centrum voor Beroepsonderwijs Technikon Rotterdam architecten Maaskant van Dommelen Kroos ir. Senf medewerkend architect M.C. de Koning, h.b.o.
   BOUW: centraal weekblad voor het bouwwezen: jaargang 26, nummer 38. P. 1354-1359. Object number: B-84223

5. Koning, M.C. de (1971) Technikon. Centrum voor beroepsonderwijs Rotterdam.
   Polytechnisch Tijdschrift [PT]: uitgave B, P. 737b-742b. Object number: B-113973

6. Olij, C. (1994) Rotterdam: grondige opknapbeurt voor grootschalig scholencomplex Technikon.
   Stedenbouw: tijdschrift voor stedenbouw en architectuur: jaargang 46 nummer 509. P. 55-57. Object number: B-110382

7. Scholencomplex Technikon, Hofpleintheater en Gymnastiekgebouw.
   Architectuur Rotterdam 1945-1970: 48 gebouwen gedocumenteerd: nummer 39. Object number: B-110984

8. Technikon: Hofplein theater, Akragon (sporttoren), Techn. Bibliotheek, zwembad, sporthal 1970. Stadsarchief Rotterdam, X F 578. Rotterdam

9. TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs (2e uitg).
   TH Delft, Afdeling der Bouwkunde

10. Thunnissen, A.W.P. (1963) Bouwen voor een open samenleving.
    Tijdschrift voor Architectuur en Beeldende Kunsten: Katholiek Bouwblad: jaargang 2, nummer 30. P. 26-38. Object number: B-68111

11. Technikon, monument voor het beroepsonderwijs. (1971)
    BOUW: centraal weekblad voor het bouwwezen: jaargang 26, nummer 52. P. 1889-1898. Object number: B-113971

12. Prins, B., van Es, M., Hylkema, N., Stolk, A. (1971) Gebruikers aan het woord.
    BOUW: centraal weekblad voor het bouwwezen: jaargang 26, nummer 49. P. 1772-1775. Object number: B-81378

13. (1971) Onderwijs als maatschappelijke factor.
BOUW: centraal weekblad voor het bouwwezen: jaargang 26, nummer 49. P. 1768-1771. Object number: B-101878

14. Vollemand K. (1971) Karel Appel van Vragende kinderen tot Technikon.
Karel Appel van Vragende kinderen tot Technikon; jaargang 26, nummer 52. P. 1904-1906. Object number: B-92436

15. Uitbreiding nijverheidsscholencomplex Zomerhofkwartier Akragon Rotterdam. 1964/08/25; 1969/08/15 Nieuwe Instituut Archive, MAAX.110395292. Rotterdam

16. Nijverheidscholen Technikon te Rotterdam. 1957/01/29; 1970/12/15 Nieuwe Instituut Archive, MAAX .110303421. Rotterdam

17. Geurtsen, R., Engel, H. (1971) "Ik ben een rustig mens" Interview met Maaskant, Van Dommelen en De Koning.
BOUW: centraal weekblad voor het bouwwezen: jaargang 26, nummer 52. P. 1889-1898.

Secondary

1. Boersma, T., Verstegen, T., & Van Bergeijk, H. (1996). *Nederland naar school: twee eeuwen bouwen voor een veranderend onderwijs*.
Rotterdam: NAi Uitgevers

2. Cusveller, S., & Kirkpatrick, J. (1988). *Drie pleinen, zes ontwerpen: Rotterdam '88, de stad als podium*
Rotterdam. Uitgeverij 010.

3. Dudek, M. (2000). *Architecture of schools: the new learning environments*.
Oxford: Architectural Press.

4. Fluks M. (1983) *Architect H.A. Maaskant, 1907-1977.*
Amsterdam: Van Gennep

5. Hertzberger, H., Ghaït, L., & Vlijmen, M. v. (2016). *Lessons for students in architecture (; I. Rike, Trans.; Seventh edition)*.
Rotterdam: Nai010 Publishers.

6. Hofmeister, S. (2020). *School buildings: Spaces for learning and the community*
München: DETAIL. https://doi-org.tudelft.idm.oclc.org/10.11129/9783955535179

7. Ibelings, H., Boer, S. d., & Architectenbureau Van den Broek en Bakema. (2000*). Van den Broek en Bakema 1948-1988: architectuur en stedenbouw: de functie van de vorm*.
Rotterdam: NAi Uitgevers

8. Kramer, S. (2009). *Schools: Educational spaces*.
Salenstein: Braun Publishing.

9. Kramer, S. (2018). *Building to educate: School architecture & design*.
Salenstein: Braun Publishing.

10. Loeff, K., Meijel, L. V., Opmeer, P., & Rijksdienst voor de Monumentenzorg. (2002). CATEGORIAAL ONDERZOEK WEDEROPBOUW.
https://www.cultureelerfgoed.nl/binaries/cultureelerfgoed/documenten/publicaties/2002/01/01/scholen-categoriaal-onderzoek-wederopbouw-1940-1965/scholen.pdf

11. Neufert, E., & Neufert, P. (2012). *Architects' data* (4th ed.).
Oxford: Wiley-Blackwell.

12. Markus, T. A. (1993). *Buildings & power: Freedom and control in the origin of modern building types.*
London: Routledge.

13. Provoost M. (2013). *Architect of progress.*
Rotterdam: Nai010 Publishers.

14. Sanoff, H. (1994). School design.
New York: Van Nostrand Reinhold.

15. Scholencomplex Technikon, Hofpleintheater, Gymnastiekgebouw Akragon. Platform Wederopbouw Rotterdam.
https://wederopbouwrotterdam.nl/artikelen/scholencomplex-technikon-hofpleintheater-gymnastiekgebouw-akragon

16. Schuyt, C. J. M., Taverne, E., & Voorst, S. v. (2000). *1950: welvaart in zwart-wit. In Nederlandse cultuur in Europese context.*
Den Haag: Sdu Uitgevers.

Illustrations

1-3 Provoost, M. (2013). Hugh Maaskant: *Architect of progress*. Rotterdam: nai010 publishers.

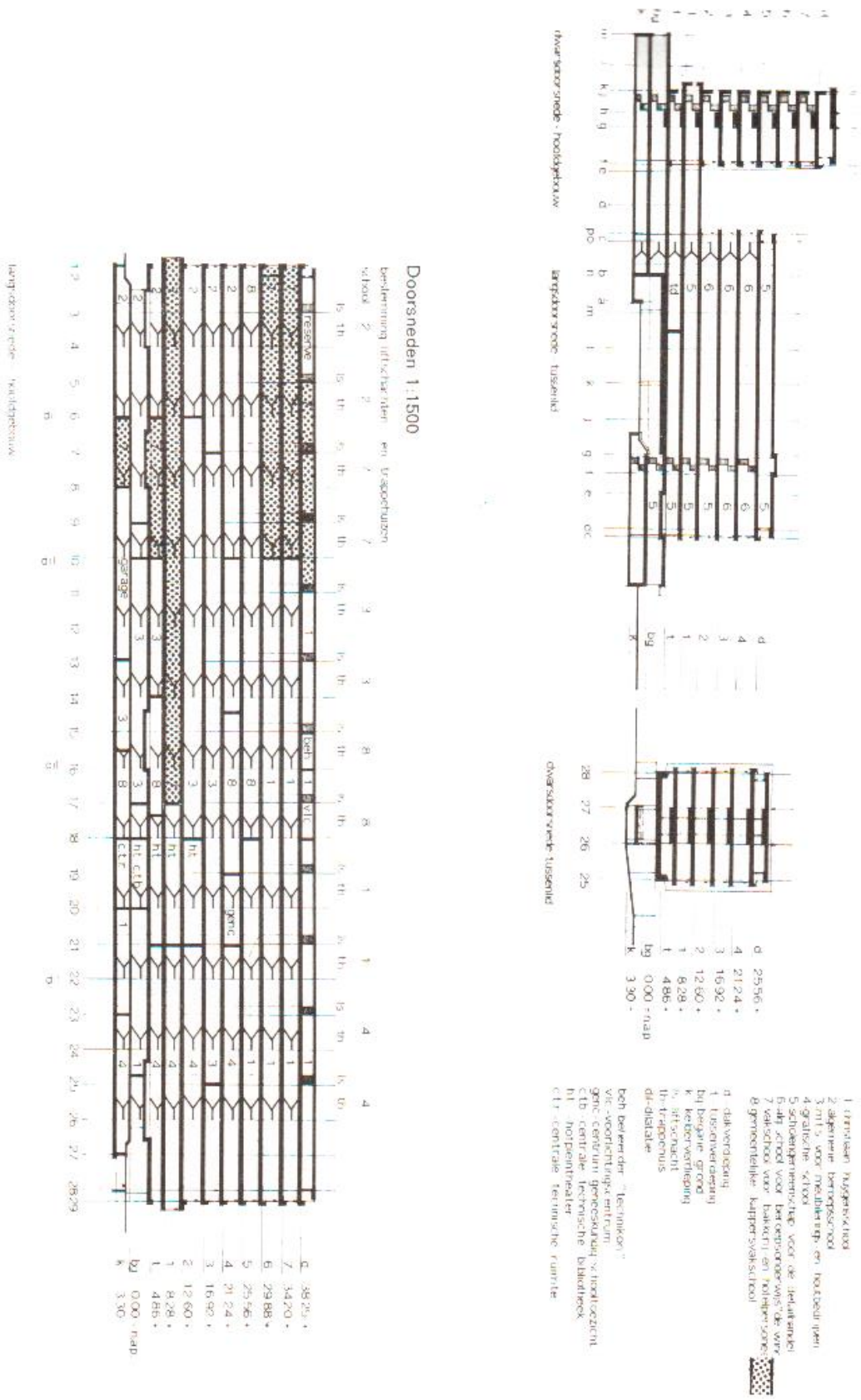
4-10 TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). *Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs* (2e uitg). Delft: Technische Hogeschool Delft

11 Technikon: Hofplein theater, Akragon (sporttoren), Techn. Biblio-theek, zwembad, sporthal 1970. Stadsarchief Rotterdam, X F 578. Rotterdam

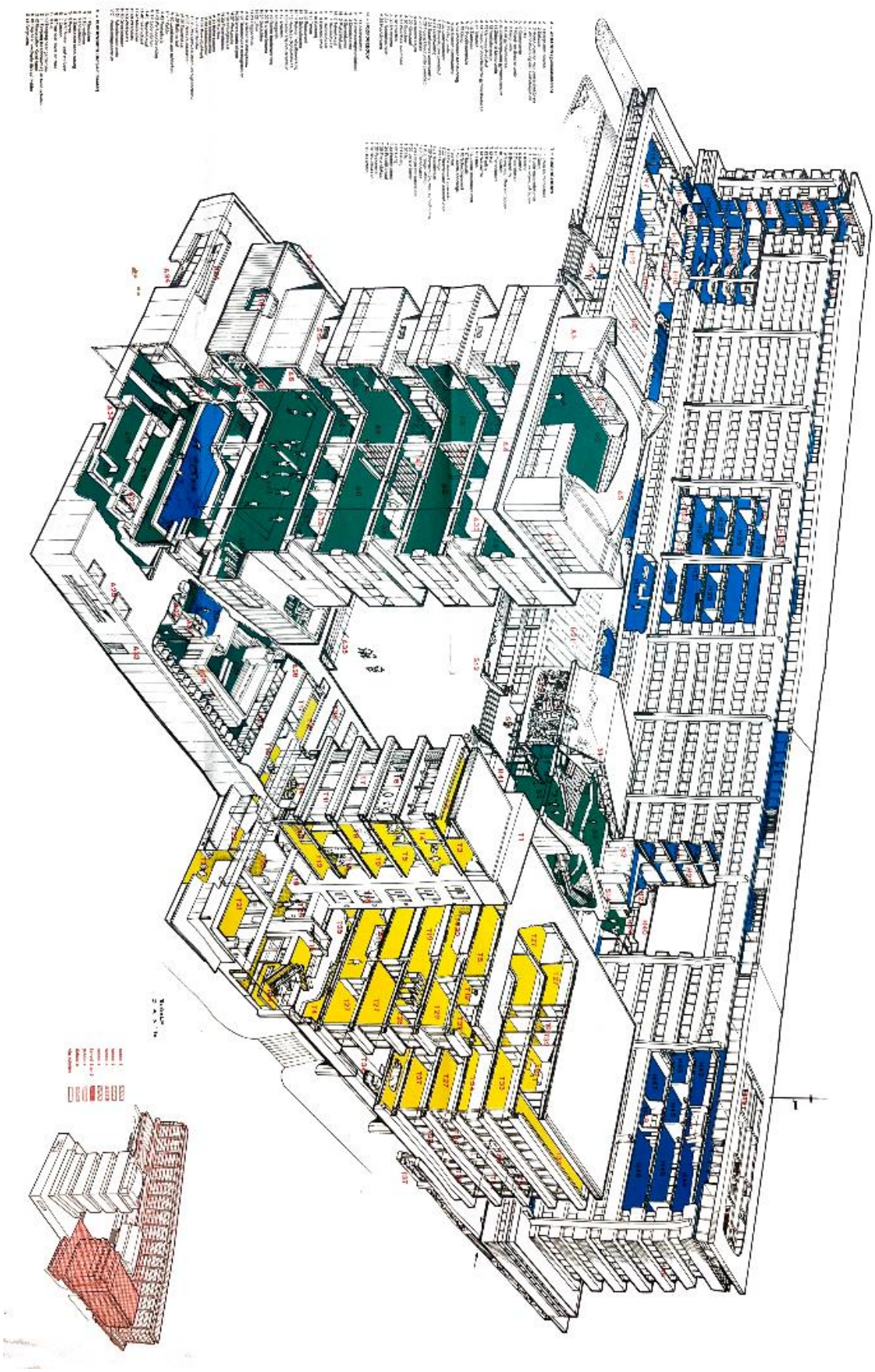
12-17 TH Delft, W. T., & TH Delft, Afdeling der Bouwkunde Projektraad. (1972). *Aanzet tot een methodische architektuur kritiek - Technikon Rotterdam - monument voor het beroepsonderwijs* (2e uitg). Delft: Technische Hogeschool Delft

Appendix

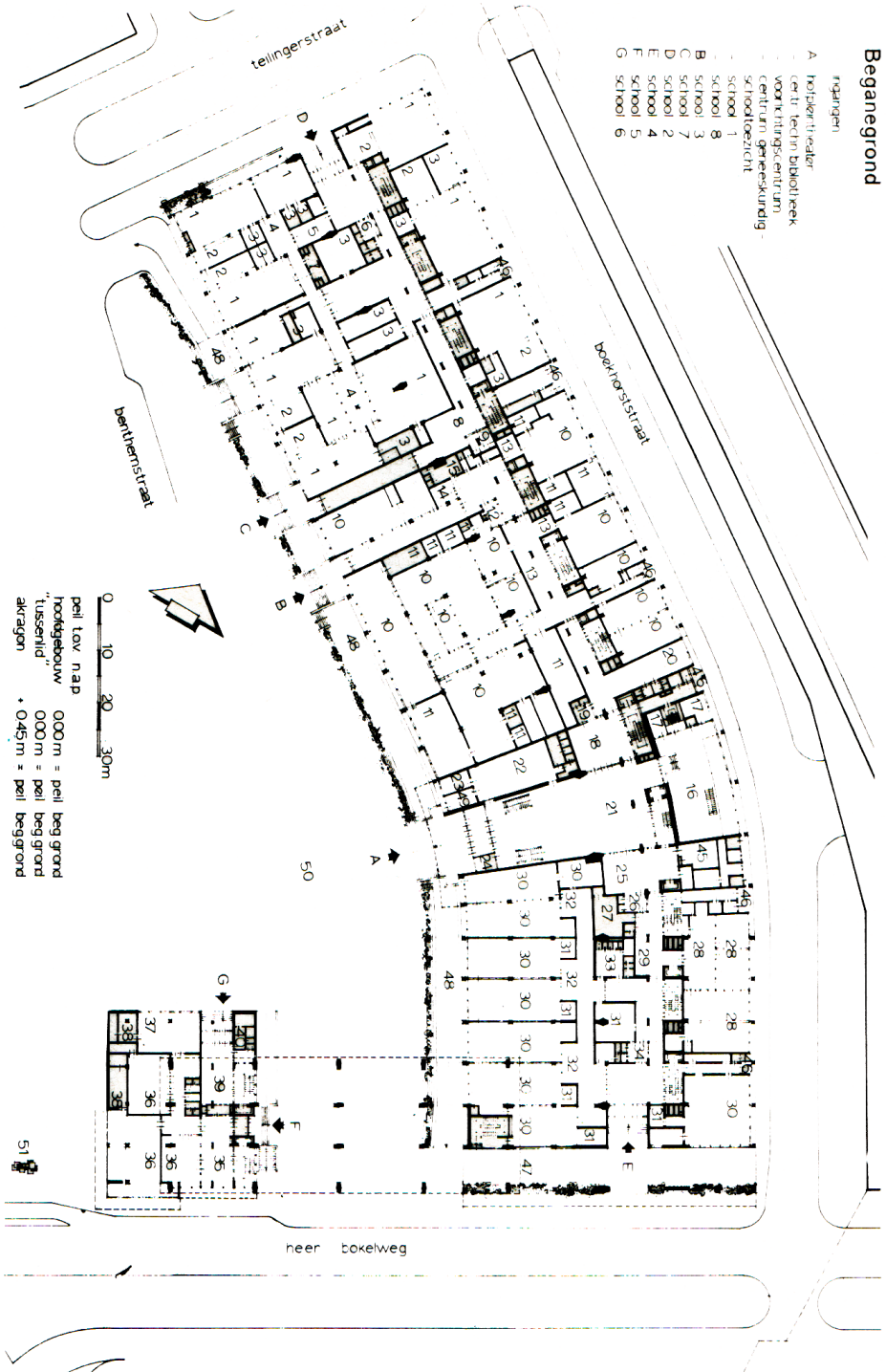
9 Sections with the numbered schools assigned to the floors



11 *Folder with an exploded perspective drawing to explain the Technikon complex 1970*



Annotated ground floor plan of the Technikon Complex



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