

Unveiling User's Experience

Department of Affective and Spatial Experience





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Paola Ak
Officer for Radical Empathy

The Officer for Radical Empathy embodies the essence of empathy, forging connections through a profound understanding of diverse perspectives. With an unwavering commitment to inclusivity, she creates spaces where every voice is heard and valued. Her expertise lies in fostering understanding and bridging divides, championing empathy as a catalyst for positive change, thereby paving the way for a more compassionate and harmonious community.



Océane Brosteaux
Behavior Analyst

As the behavior Analyst of the Department of the Affective Spatial Experience Océane has always worked closely to the users to understand their needs and their way of living in and around the space. Thanks to her research she became an expert in her field.



Tim Müller
Chief of Communication

The Chief of Communication plays a pivotal role in group coordination and external engagement. He exhibits exceptional writing skills and is distinguished by his adept linguistic proficiency. His responsibilities encompass ensuring inclusivity, nurturing a cohesive team spirit, and enhancing the group's external image.





Thin Myat Noe

Field Researcher

In her capacity as a field researcher, she navigated the diverse landscape of the ETH campus to unearth nuanced insights. Her role extended beyond observation, embodying a dedication to capturing the essence of underutilized spaces and their entanglement with fire regulations.



Sacha M. J. Toupance

Specialist in Campus Users Dynamics and On-Site Investigations

After three years roaming the EPFL campus, Sacha joined DASE to bring a sensitive approach to the ETH portfolio. In his research, he focus on the observation and analysis of behaviors as tools for understanding space. By prioritizing this approach, Sacha seeks to contribute to a deeper understanding of the affective dimensions that influence and shape spatial experiences within the ETH campus.



Lucia Zeng

Spatial Project Manager

As a project manager, she organized the on-site interventions and gathered all necessary material in order to conduct those safely. While engaging with the actors of ETH and interviewing key figures she gains an insights on how things are organized within specialities.





Department of Affective and Spatial Experience



Introduction and definition of our mission

The Dept. of Affective and Spatial Experience (DASE) is founded upon a set of fundamental axioms that underpin its approach to understanding and learning from the user experience of the campus environment. These axioms serve as guiding principles, shaping the methodology and objectives of the program.

The first axiom posits that every individual on the campus possesses a significant degree of spatial intelligence and holds a distinctive, personal comprehension of the layout and features of the campus. This assumption recognizes the inherent diversity in the ways in which users perceive and interact with the physical environment. It emphasizes the richness of perspectives and insights that each individual brings to their engagement with the campus space.

The second axiom acknowledges a crucial disparity between the conventional architectural tools traditionally employed to analyze the campus and the intricate, sensitive, and emotional experiences of its users. This recognition highlights the limitations of conventional methods in fully capturing the nuanced and subjective dimensions of human interaction with the built environment. It underscores the imperative to develop alternative approaches that can delve into the intricacies of these experiences.

Within the framework of these axioms, the DASE sets four specific learning objectives aimed at deepening our understanding of the campus environment and enriching the experiences of its users:

1. Developing Methods and Protocols

The Dept. seeks to create methods, protocols, and experimental frameworks capable of comprehending, approximating, and capturing the diverse range of experiences encountered by campus users. The ulterior motive is the thought that affect and user experience can advance our own understanding of space.

2. Unveiling Alternative Uses and Potential Spaces:

DASE endeavors to uncover alternative uses and latent potential, as well as to reveal spatial behaviors or uses that may have previously gone unnoticed or that were invisibilised, overlooked. This objective involves a rigorous investigation into the campus environment in order to expand our understanding of design by considering both governancy and user agency dynamics as knowledge.

3. Leveraging Subjectivity and Sensitivity

The Dept. encourages its members to leverage their own subjectivity, embodied experiences, and perceptual faculties as tools for understanding the campus. This entails transcending the role of a detached observer and adopting a more empathetic and sensitive perspective towards the ETH campus. By doing so, participants gain deeper insights into the lived experiences of the space.

4. Developing Expressive Languages

DASE aims to find and cultivate languages and modes of expression that enable us to articulate and communicate our discoveries effectively. The challenge is to find ways to draw affective qualities and experiences of space. This encompasses a diverse range of mediums, from visual representations to verbal explorations, mapping performances or storytelling... that empower the members of the Dept. to convey the nuanced dimensions of their insights.



In essence, the DASE embodies a holistic and innovative approach to the study of campus environments. By embracing these axioms and learning objectives, its members are empowered to engage with the campus in a manner that transcends conventional realms, ultimately seeking a richer and more nuanced understanding of the spaces we inhabit. Through this endeavor, DASE seeks to contribute to the ongoing evolution and enhancement of the campus experience for all its users.

The Department of Affective Spatial Experience (DASE) operates on a nuanced understanding of its core components, which can be defined as follows:

'Affective'

- **Affect and subjective emotions:** Within our department, 'affective' refers to the realm of emotions and subjective experiences. We recognize the raise of affective theories within many disciplines and we advocate for them to be understood as tools for our capacity to understand space. We recognize the limits of cognitive approaches and wish to call for listening more closely to the emotions in order to understand what is going on around us.
- **Capacity for empathy:** We recognize the importance of empathy as a fundamental capacity within our exploration of affective spatial experiences. This entails the ability to step into the shoes of others, to try to understand and share different emotional states. Empathy serves as a key instrument in our pursuit of comprehending diverse subjectivities but also as a way to develop knowledge. Through sharing the experiences of others, we use our bodies to understand and feel differently.
- **Attempt to understand and speculate on other subjectivities:** The department wishes to engage in a concerted effort to comprehend and speculate upon the unique subjectivities of individuals. This involves a deliberate and respectful exploration of the experiences, emotions, and perspectives of others.

'Spatial'

- **Subjectivities in time and space:** The 'spatial' dimension underscores the understanding that subjectivities are inherently situated within specific temporal and spatial contexts. It recognizes that our experiences are fundamentally rooted in the physical and temporal dimensions of the environments we inhabit.

- **Invitation to develop a precise understanding of existing spatial conditions:** DASE invites us to embark on a journey towards a meticulous and nuanced comprehension of the spatial conditions that currently exist. This entails a rigorous examination of the layout, and atmosphere of the spaces we encounter.

'Experience'

- **Experiment for ourselves:** 'Experience' conveys a commitment to firsthand engagement and experimentation. It urges us to actively immerse ourselves in the environments we seek to understand, to move beyond theoretical contemplation and into practical, embodied investigations.
- **Walking in other people's shoes:** This means a deliberate effort to inhabit the perspectives and experiences of others. It is an invitation to temporarily adopt different vantage points, thereby gaining insights into the unique ways in which spaces affect diverse individuals.
- **Understanding how space affects its users:** Central to the notion of 'experience' is the aspiration to comprehend the impact of space on its occupants. It involves a dynamic exploration of how the physical attributes and configurations of a space shape the experiences, emotions, and interactions of those who inhabit it.

Our department is perceived as an opportunity and endeavor to explore and understand the affective feature of space: its capacity to affect and the way it is affected. It serves as a platform for the curation of alternative perspectives on our campus environment in order to better understand it. The fundamental questions that guide our inquiry include: **How can we authentically capture the experiences of others and integrate them into our own existence? What implications does this process hold? How do we challenge and expand our own understanding of the campus environment? And crucially, how can we speculate on the experiences of others without imposing our own preconceptions?**

These inquiries lie at the heart of our mission, leading us towards a deeper and more inclusive understanding of the affective spatial experiences that shape our shared campus environment. Through these explorations, we aim to contribute to a more empathetic, insightful, and enriched engagement with the spaces we collectively inhabit. ■



Strategies and organisation

To optimize the richness and diversity of our research, we employ a dual-pronged approach. The activities of the DASE are divided into three different research angles.

By adopting multiple angles and deployment strategies, we aim to diversify the range of insights and experiment with different methods. This approach broadens the scope of our findings, allowing for a comprehensive understanding of the affective spatial experiences on the campus.

Through the implementation of these varied strategies, we seek to extend our research coverage across different areas and user groups within the campus. This comprehensive approach ensures a thorough examination of the diverse spatial contexts and user experiences that collectively constitute the ETH environment.

The iterative nature of our research methodology confers several key advantages. It tries to foster an ongoing and dynamic engagement with the research site. This continuous interaction enables us to adapt and refine our approach in response to evolving conditions and emerging insights.

The flexibility inherent in an iterative methodology allows for the evolution and refinement of research methods over time. This adaptive capacity ensures that our approach remains attuned to the specific nuances and demands of the research context.

Recognizing the potential for unforeseen challenges or inaccuracies, the iterative process affords us the opportunity for course correction. It enables us to address any shortcomings or errors that may arise, bolstering the overall rigor and reliability of our research outcomes.

The iterative framework encourages a consistent and critical reflection on our research actions. This introspective process serves as a safeguard against complacency, prompting us to continually refine and enhance our methodologies in pursuit of more robust and insightful findings.



The research framework encompasses three distinct research angles and corresponding deployment strategies, each designed to offer unique insights into the affective spatial experiences within the ETH campus:

RANDOMIZED FOLLOWING:

Following people is a simple and trivial answer to the central question of this research: how can we capture the real uses, the routes actually taken and true behaviors of the users? It serves as a practical, straightforward way of approximating other people's experiences by observing their behaviors in space. We wish to shift our perspective with the ulterior motive of understanding how the campus space affects its users.

A DAY AS...:

We followed a participant observation, putting ourselves in the shoes of the chosen people and taking part in their activities. In order to get general answers from everyone, we decided to create a series of questions concerning their perception of work and spaces. We also asked everyone to take a photo in their space.

PICNIC INTERVENTIONS:

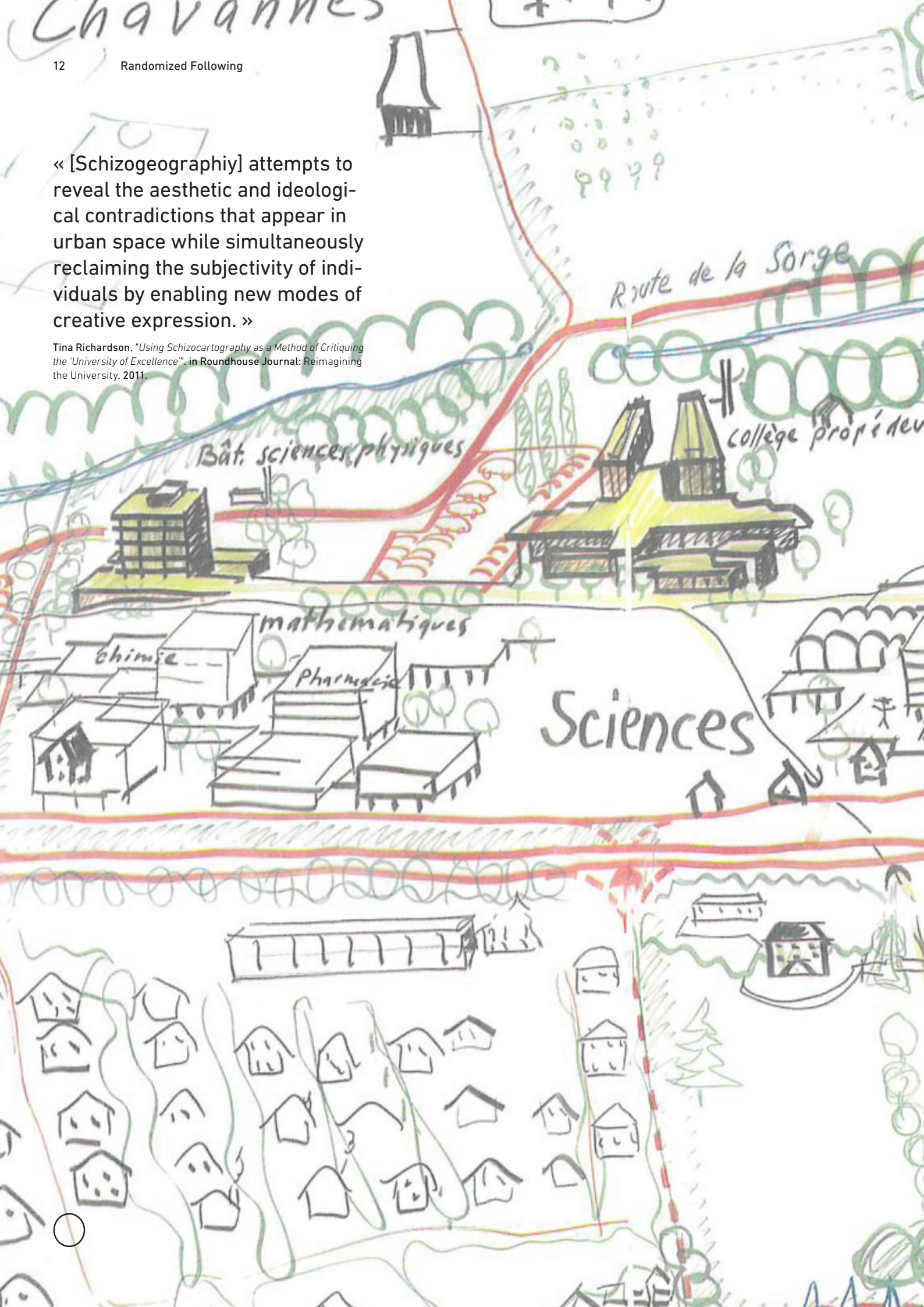
We looked into the affective and spatial experiences at ETH Hönggerberg. These interventions seek to unravel the intricate relationship between individuals and their campus environment. By orchestrating unofficial picnics within specific yet underused spaces, we aim to understand the reason for their unoccupied state. This initiative is designed to uncover the latent potential of these spaces, which, despite experiencing significant foot traffic, often remain neglected outside of scheduled events. We also discuss the reasons for the underuse of these spaces, taking into account usage regulations and fire escape regulations.

In summary, our research framework embraces a multifaceted approach, deploying diverse research angles and strategies to comprehensively investigate the affective spatial experiences within the ETH campus. This iterative methodology not only ensures a dynamic and responsive engagement with the research site but also facilitates the refinement and evolution of our methods over time. Through these deliberate and reflective research practices, we aim to contribute to a deeper understanding of the complex interplay between individuals and their surrounding spatial environments within the ETH campus. ■



« [Schizogeography] attempts to reveal the aesthetic and ideological contradictions that appear in urban space while simultaneously reclaiming the subjectivity of individuals by enabling new modes of creative expression. »

Tina Richardson. "Using Schizocartography as a Method of Critiquing the 'University of Excellence'". in *Roundhouse Journal: Reimagining the University*. 2011.



Randomized Following: Behavior and Usage Patterns on the ETH Campus.

Sacha M. J. Toupance
Specialist in Campus Users' Dynamics and On-Site Investigations

ABSTRACT: I try to approximate the experience of users of the ETH campus. I use the act of walking as our primary tool to understand for ourselves the site, taking our subjective experiences into consideration. My choice of method is suitable for the aim to take other uses into consideration: I set up protocols to follow different users on a random basis. I wish to shift my perspective on the campus, to discover unexpected paths, behaviours and relations.

KEYWORDS: USES - USERS - BEHAVIOURS - ETH CAMPUS - DYNAMICS - OBSERVATIONS - WALKING - CARTOGRAPHY - MAPPING - SCHIZOGEOGRAPHY - PERFORMANCE

This research work is part of the many endeavors that compose the Department of Affective Spatial Experience (DASE).

I see this department as an opportunity to embody subjectivities that are not our own, to develop alternative ways of looking at our campus, to shift our point of view. It is an attempt to capture other people experiences and try to walk in other people's shoes for a while. We also understand how space affect its users and following people is only one way of trying to understand this dynamic. We believe that our own understanding of the campus as student architects is limited: our tools are not sufficient to precisely reflect upon the real users' experience of the campus. Bearing that in mind, the DASE tries to develop methods, protocols, experiments capable of understanding, approximating, capturing these experiences.

I will attempt here to develop a method for following random people as they move around the campus. I will try to define a clear and definite framework to enable this act to be a tool for understanding. Finally, I will attempt to organize my observations, find a way to communicate them in order to propose a different language to better understand our campus and its dynamics.

This research proposal accompanies and complements the other strategies put in place within the DASE, by attempting to take different routes in order to diversify the knowledge produced. While one of the strategies attempts to intervene and directly meet the users of the campus, to activate space and have an active attitude on-site, this proposal tries to reveal silent uses and behaviours, on which a discourse or rationalisation from its actors would not necessarily be fruitful. Another monitoring proposal has been put in place within the DASE in the form of job-shadowing: the information gathered this way is important and the sample of people that are monitored and interviewed is essential. However, my proposal here is to make the decision of the person being followed and monitored arbitrary. I believe that it could allow us to discover unexpected paths, alternative uses and unexpected behaviours. ■





Unconnected
region

Agent C

Subject
(person followed)

C. Nolan. Following. 1998

EXT. BUSY STREET IN THE WEST END - DAY

The Young Man (long hair, unshaven) exits a café and walks along the road. His eye is caught by a man passing by in the opposite direction. The man is in his mid-twenties, dark haired wearing a dark suit. He is carrying an old bag.

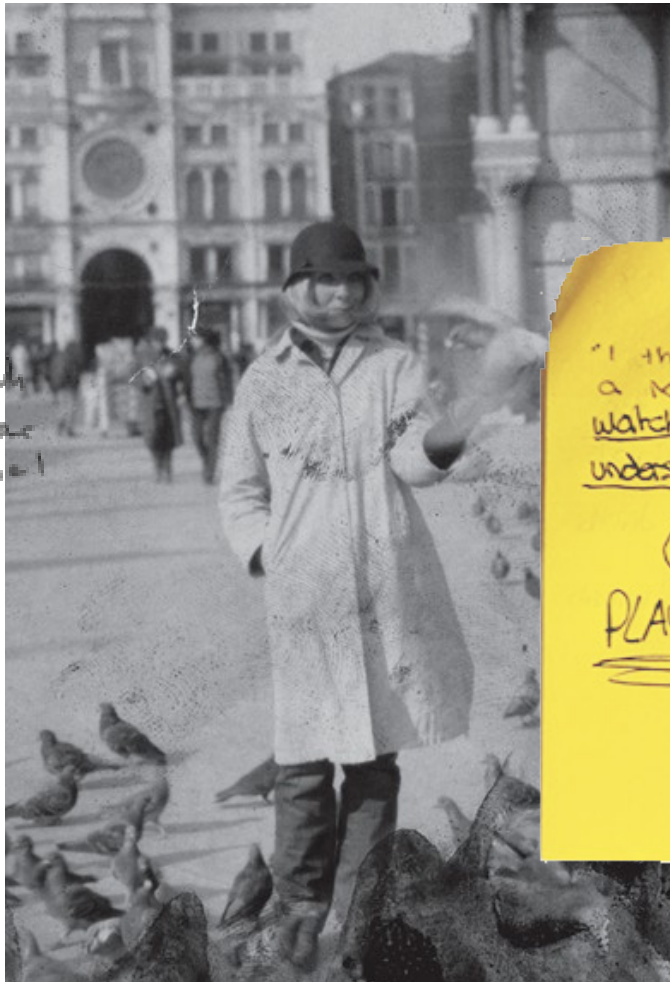
YOUNG MAN (V.O.) (CONT'D)

I spotted the dangers soon enough.
I could tell I was hooked and I
made up rules.

The most important rule was that even if I found where a person worked or lived, I would never follow the same person twice.

Backward
goal





followers)

Approach to similar positional values

"I thought it was like reading a novel in real life, just watching him and trying to understand"

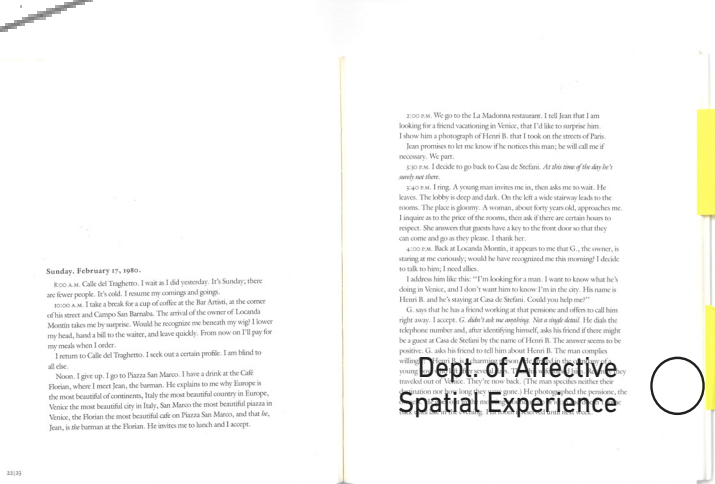
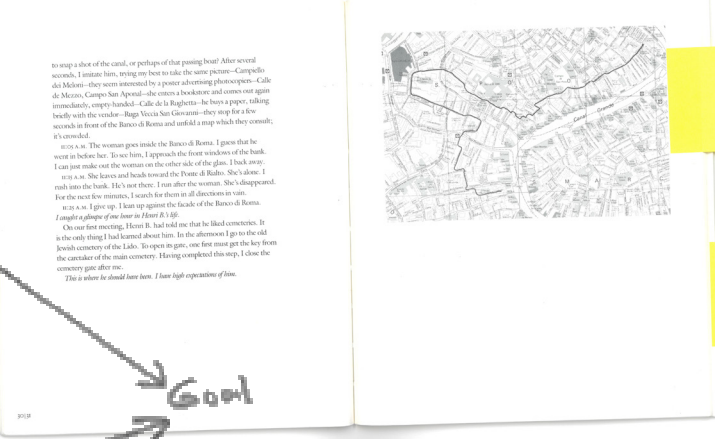
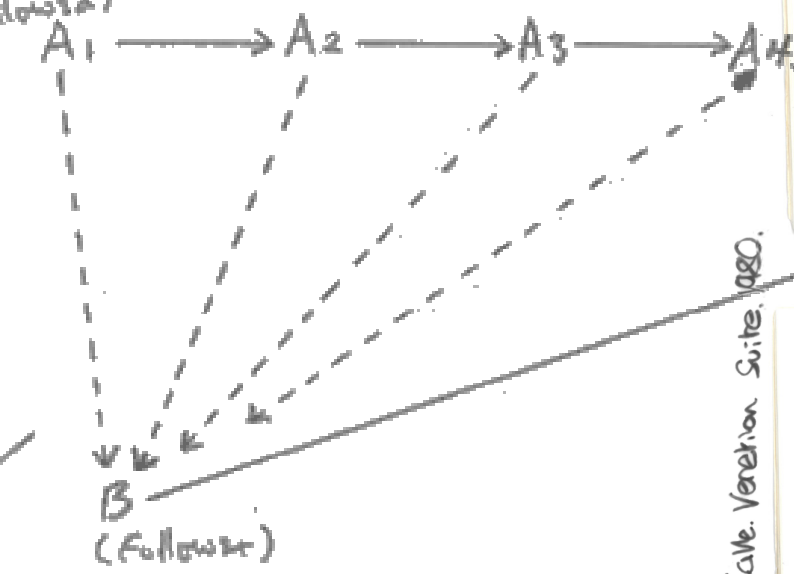
Layout
PLAYFUL

⚠ consent

stumbles
y in the
tall,
overnight

son
(down)

Forward goal



Sophie Calle. Venetian Suite. 1990.

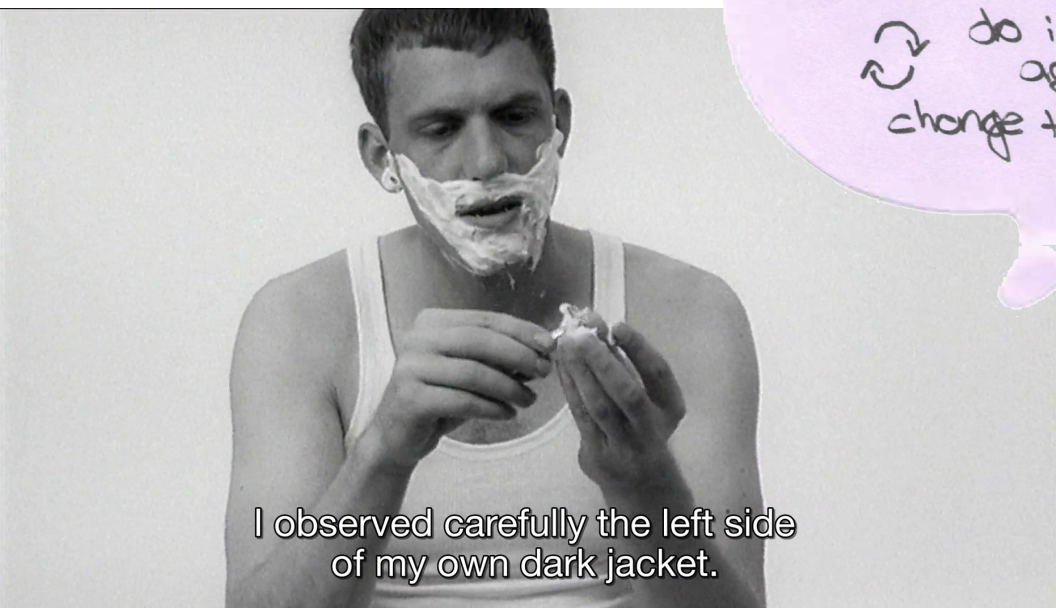
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Spatial Experience



PROTOCOLS

iterative process

↻ do it again and
again
change the prompt



I observed carefully the left side
of my own dark jacket.

Lars von Trier. The Five Obstructions. 2003



Where is ~~the cemetery?~~ university?

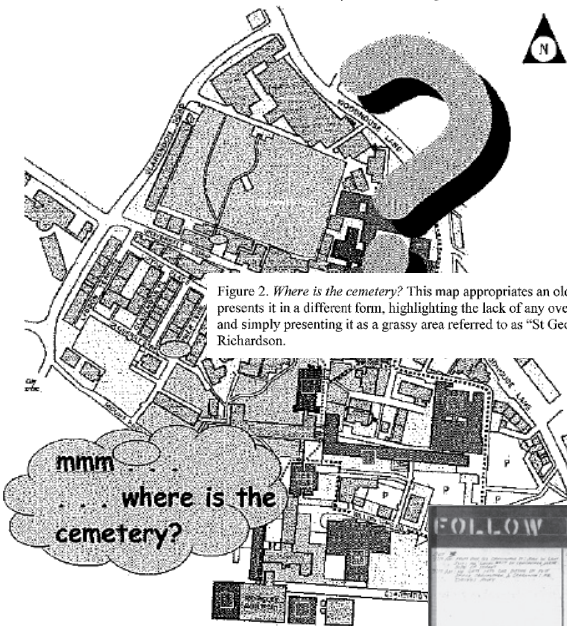
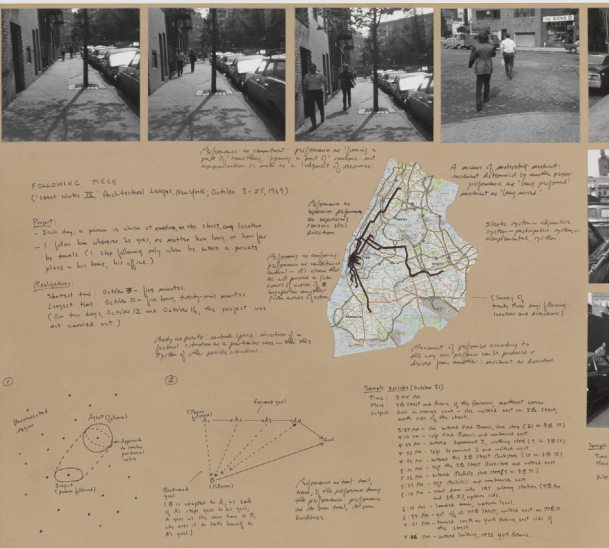
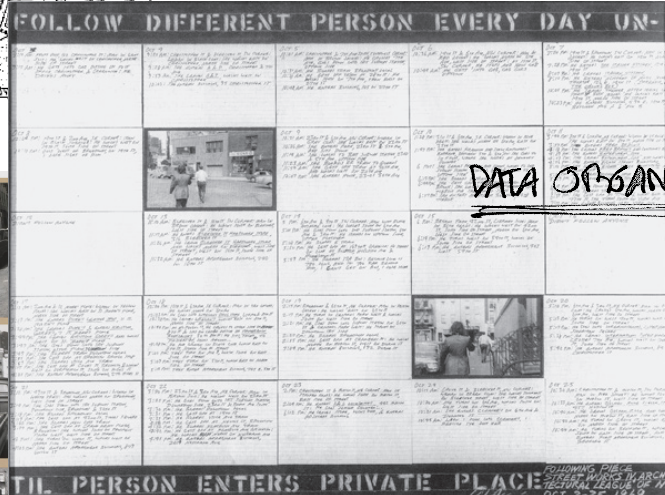


Figure 2. *Where is the cemetery?* This map appropriates an old online university map and presents it in a different form, highlighting the lack of any overt reference to the cemetery and simply presenting it as a grassy area referred to as "St George's Field." CC Tina Richardson.

Vito Accardi, Following Piece, 1969



LEEDS UNI.

Figure 4. *Leeds Uni: The Book of Life*. Amy Dawson situates the places that are important to her on campus within the covers of a book. She also uses a title, key, and color-coding (some of the traditional map elements). Her map is ordered, clear, and has some good detail. © Amy Dawson. Reprinted courtesy of Amy Dawson.

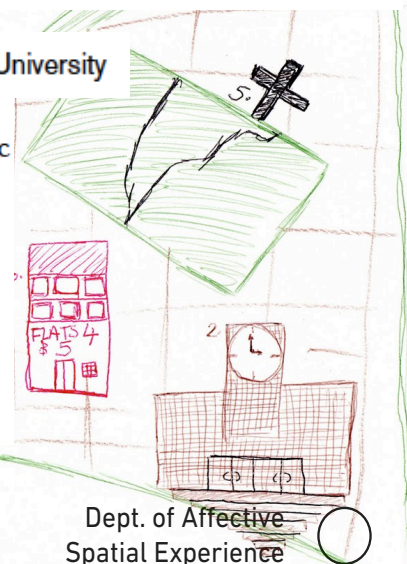
Using Schizocartography as a Method of Critiquing the 'University of Excellence'

Tina Richardson

Roundhouse Journal | Reimagining the University

All dominant powers require a particular worldview to maintain the status quo. The university presents a particular outward face, consciously structured to support its specific messages.² Like many businesses, the university does not disclose everything about itself. This practice of representation is a mediated one in which the university attempts to foster a like-minded view in the recipients of its representational medium, be it the university website, or the appearance of its campus. One of the most important aspects of this process is that the university does not appear incongruent in what it is attempting to say about itself, meaning that it must represent itself selectively.

what is left out?



1. Leeds University Union - The heart of campus
2. The Parkinson Building - Centre of knowledge
3. The EDGE gym - Health fitness & well-being

5. The Cemetery
6. Henry Price - Flats 4 & 5 = THE BEST!
7. Charles Norris - WHETTON - FLAT 1!

Methodology and research framework

Establishing a detailed methodology helps me to avoid unexpected circumstances and to set the theoretical framework for on-site experiments. I will discuss all the features involved in this research and define their roles. Naturally, constant evaluation of the effectiveness of the tools mentioned is necessary throughout the whole process. This list has evolved during the entire data collection phase.

The tools involved in this experiment are as follows:

WALKING AS A TOOL

This research is based on a hypothesis of the experience: I believe that direct exposure to the field will allow me to reveal features that a standard top-down view would not allow (e.g. analyzing plans of the campus on our computers). That is why pacing our site will be my main method of action. It is also a way of engaging our bodies into the campus experience: I wish to be aware of how it feels. Not only will walking be an opportunity to discover places and fill our collection of datas/give us the keys to build our schizocartography, but it will also be a chance to collect another kind of results: sensory datas. I will try to be aware of the feelings that come over me as I walk; of warmth, tiredness, comfort or discomfort, presence of smells, visual impressions, ... The body is directly involved in this research and my subjectivity is considered as a survey tool - if not the only one, at least the most important.

RANDOMNESS AS A TOOL

Our aim is to discover 'new' or 'unexpected' uses around campus. Therefore I need to develop a method that inevitably embraces a certain degree of randomness. It is an attempt to distance myself as best as I can from a top-down approach to the on-site experience - avoiding to approach a site knowing in advance what you find there. This randomness

feature will be used to diversify data collection by taking unseen, unsuspected paths and discover new possibilities.

FOLLOWING PEOPLE

Tracking people is the simple and trivial answer to the central question of this research: how can I capture the real uses, the routes actually taken and behaviors of the users of the campus? It is a practical, straightforward way of approximating other people's experiences and understand how the space of the campus affects its users.

Anonymity during tracking is open to discussion. For the moment, I consider that this feature meets the comfort required by the person doing the following. The aim is also to reflect the real, natural uses and behaviours of the persons that are being followed.

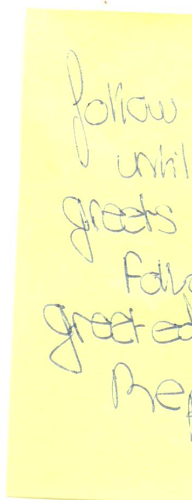
The question of the consent of the persons being followed will always remain a matter of ongoing discussions. For the moment, my response to this issue is the use of (the) protocol(s).

SETTING UP A PROTOCOL

I see the protocol as a multi-purpose tool:

- It allows me to give a strict framework to the act of following people
- It ensures the *random* nature of these trackings
- It ensures a systematic aspect of the data collection and allows the results to be diversified
- It is a tool that allows discussion, evolution and requalification at any time during the research process.

The protocols act as safety nets and guardrails to ensure that the trackings proceed smoothly. For that reason, the protocol is intended to be exhaustive.



DEFINING A COSTUME

S. Calle was inspiring because her performance featured this reflection on her body in space and the way she looked after her appearance as she followed this mysterious gentleman around Venice. I was quite jealous of the playfulness of her performance and this was in sharp contrast to the form of a report. But as I understood that I would be the one moving around the campus and following its users, there was the question of what to do with my body. Consequently I needed an attitude (my 'how not to be a creep' guide) and a costume.

COLLECTION OF DATA

Data collection was the methodological point that fluctuated the most during the research. It was always a question of collecting spatial information, i.e. the routes I would take while following people. So I used a tracking application on my phone that allowed me to record my whereabouts live.

The central question was what view or discourse to apply to this. The inspirations were diverse, from the rigid methods of V. Acconci to the exhaustiveness of *Espèces d'espaces*, G. Perec. Spontaneously, I began to compile a record of my travels and some written comments. They had to be observations feelings, sensory impressions. I realized soon enough that I had to include this in my protocol. So I decided to bring with me a camera and a notebook and intensify my involvement. Instead of being the passive observer I had become in the first steps of this research, which we at DASE refute in our principles, I had to become part of this data collection. ■

protocol of TRANSPARENCY

- Chose one member of the direction of ETA and follow this person for a day
- Every closed door, spaces you cannot access should be

1. Chose one building
2. Position yourself at its main entrance and follow the first person to pass through the door
3. Follow this person until they leave the building
4. Repeat
5. Map every paths, doors you cross ; study less-used spaces

Protocol:

- (1) chose a colour that you are wearing
- (2) start following the first person you cross path with who wears the same color
- (3) Eventually this person will cross path with someone who wears a similar color - the following may stop at this moment

- (4) chose another colour from this person you'll follow this new person

- (5) Repeat until exhaustion

someone
this person
someone else
follow the
person.
repeat

Considerations surrounding the research, discussion of results and takeaways

The purpose of this research is to sharpen the way we look at the ETH campus as a way to enhance and guide the act of design. It is an attempt to embody the user experience and find a way to express it.

Before presenting the method and the data collection, I would like to introduce this work and the way in which I tackled it. I will discuss the aims of the research and its limitations, as well as my way of thinking about the results.

what I expected to discover and what I learnt from this

At the start of this research, I was curious about the knowledge value of such a method. I had in mind Vito Acconci's attempt to (re)discover the streets of New York (*Following Piece*, 1969), as well as the research of the Situationists International, which has to do with psychogeography. I saw in these approaches to territorial explorations something radical, different. It was a way of going beyond a traditional reading of a map. From a personal point of view, I knew absolutely nothing about the campus and had just moved to Zürich. It was an opportunity to try out a new way of looking at the territory; I would not study the campus plans, I would not learn too much about its configurations and I would prefer an on-site approach. The reading of Tina Richardson was enlightening because she combined these different tactics of territorial analysis with the academic institution, turning these methods into dissident tools:

"[...] schizocartography enables alternative existential modes for individuals seeking to challenge dominant representations and power structures. It offers a method of cartography that both questions dominant power structures while at the same time enabling subjective voices to appear from underlying postmodern topography." (1)

I realised that by going to the site and conducting these following experiments, I was developing an alternative mental map of the campus in my head. I started understanding places based on memories of people I had followed, and discovered places I didn't know. Moreover, I developed a special sense of awareness of how to use the campus; I learned more and more shortcuts to get from one building to another, and understood the connections between the university spaces and the adjacent areas of the city.

I understood that the campus space was divided into areas of expertise; the spaces that constitute ETH are mastered by the users who occupy them. Therefore, each user has a certain area of expertise in which they are more or less expert. Since I moved from one person to another as a consequence of my protocol, I developed a complex network of situated spatial knowledge.

It was probably at this point that I realised the power of my protocols. They became powerful tools because they were my way of guaranteeing the quality of the data I was collecting. When I changed the protocol a little, the experiments were more or less conclusive. I also realised that I could refine them to make them specific study tools: by defining more rigid rules, I could use my protocols to focus on certain areas of the campus.

how I interpret and react to the limits of my research

There is something necessarily elusive, something that cannot be totally grasped. The research method inherently contains its own limits. For reasons of consent, because I want so badly to establish a safe investigation for the people involved and for myself, numerous limits are drawn up in the protocols and in the different guides. This results in many closed doors encountered. French sociologist and philosopher Jean Baudrillard answers to Sophie Calle's *Suite vénitienne* (1980) in a text called *Please follow me* (1983). In a few

(1) Tina Richardson, "Using Schizocartography as a Method of Critiquing the 'University of Excellence'", in *Roundhouse Journal: Reimagining the University*, 2011.



striking lines, he evokes a gap inevitably engendered by the act of following:

"[...] what's important is that it is the shadowing in itself that is the other's double life. To shadow another is to give him, in fact, a double life, a parallel existence. Any commonplace existence can be transfigured (without one's knowledge), any exceptional existence can be made commonplace. It is this effect of doubling that makes the object surreal in its banality and weaves around it the strange (eventually dangerous?) web of seduction." (2)

I know for a fact that I am doomed to be kept stuck in this gap. This distance becomes the weakness of this research project. Ultimately, I know that my observations and perceptions of the people I follow will be coloured by the filter of my own projections. I also know there is nothing I can do to counter it. In fact, I believe that the only operation I can carry out is to include this inevitability in my method. I needed to understand at some point that my body was a central lens of understanding. I needed to project myself in this research, find ways to engage my body on-site. That is why I started thinking about a costume.

how I reflect upon the data I have gathered

Data collection was definitely paramount in this research, but I still believe that it would have benefited from more ambitious consideration. Perhaps I should have made it more rigorous like V. Acconci and developed a precise system and layout. My data collection is fragmentary, somewhat random and takes variable forms. It contains maps, route outlines, fragments of on-site observations, on-the-spot photographs and diary entries.

During the collection, I tried to embrace my subjectivity and focus on what caught my eyes. I gathered moments, glimpses, I started to build a kind of random catalogue. I collected experiences, moments of intensity and calm. The idea was to collect the sensitive memories of campus users, to be in their shoes, to borrow their spatial memories and approximate their affective memories.

Then I would return to the site, always with the intention of enriching this collection, adding lines to a catalogue that could never be finished, but could only expand.

What should we do with these data? What are they destined for? Are these collections of memories of strangers intended to become operational? If I believe

that the real knowledge value of this experience lies more in the process, in the making and re-making of my protocols and the development of my method, I do understand that I have here the keys to understanding a complex space. I have put together a series of observations that enable me to bring to light some of the spatial tensions of the campus and concur with the conclusions of my fellow colleagues at the end of this report, but it also allowed me to draw personal claims.

First of all, there is a crucial and urgent need to develop better tools to monitor and understand what my research was trying to reveal: the effect of space on campus users. When I first presented my method, the ETH real estate panelists immediately offered their methods for understanding where users are located on campus and general movements. When I asked for access to these methods, I was explained that they were in fact data from connections to the school's wifi network located around campus. What can we make of this data? In my spectrum of research, they seem rather inconclusive: they are silent data that do not produce any knowledge regarding usership and affective appreciations of the campus. In contrast, my data are what they are, they have the merit of being ambitious and full of life.

Secondly, I believe that these methods for understanding usership cannot be limited to lazy questionnaires sent by e-mail (where the user is motivated to give their opinion by participating in a selection to win vouchers in the ETH merchandising store). I now understand that the rather ludicrous and radical aspect of following people on site results from this enormous gap.

WE NEED METHODS to grasp and understand what I was looking for so eagerly when I put on my costume and picked up my creep guide. ■

(2) Jean Baudrillard, 'Please Follow Me', from *Please Follow Me*, in *Suite Venitienne*, by Sophie Calle, trans. Dany Barash and Danny Hatfield, Seattle, WA: Bay Press, 1988.



How not to be a creep - a guide

- 1/ I define myself as a follower
- not a stalker, neither a creep
- 2/ I will ask periodic feedbacks
throughout the process to
ensure that the first point
remain true
- 3/ I declare that randomness is
my research method and a
tool that is useful to achieve
my goal
- 4/ I define clear and strict rules
of play / protocols BEFOREHAND
to ensure that my 'followings'
are the result of pure luck and
randomness

5/ I am not disclosing any clues to the identity of the followed-one. the followed-ones are just back in space devoid of age, gender and appearance

Any comments on the journey of a followed-one will be the product of my imagination, my personal fictions or my own sensitive experience

6// I am a reasonable person and understand that protocols can sometimes malfunction

therefore I am giving myself the right to stop following protocols if they should interfere with the comfort of a followed-one or my own notion of easement.



Protocols #1

COSTUME

fancy top not
to misfit in
the institution

special trousers
convertible into
shorts to adapt to
all weather



basic hat to
be 'passe-partout'



an interesting newspaper
in case I have to wait

A discreet journal
to take notes and
record thoughts, feelings

+ Import

Feed

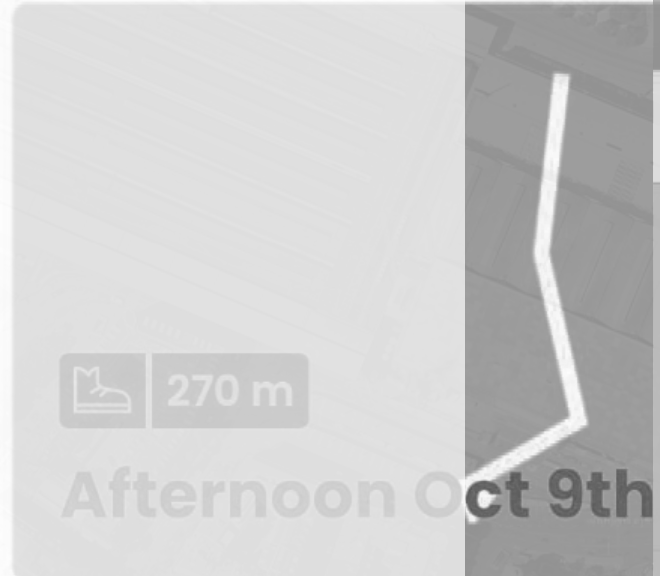
3:05

- 3 4G+ 50% +



Sacha Toupance

Oct 9, 2023 at 1:59 PM



Add a comment...



Relive

DATA COLLECTION



DURATION

3:40

DISTANCE

268 m

ELEVATION

49 m

Randomized Following

27



See stats of this activity



Started at 1:52 PM

Google



Finished at 1:56 PM

Recording

Hiking

Post

0.0

KM

0:11

13:01

/KM

PAUSE

Dept. of Affective
Spatial Experience



PROTOCOL

- 1/ Chose one color from the clothes you are wearing.
- 2/ Start following the first person you encounter wearing this color.
- 3/ Eventually this person will cross path with someone wearing a different color.
The following may stop at this moment.
- 4/ Chose another color from the clothes of this new person.
Start following this person.
- 5/ Repeat until exhaustion.



COL #1

ring that same color.

ne wearing a similar color.

erson.



PROTOCOL

0/ Start the experience at the entrance of the Hauptgebäude.

1/ Chose one color from the clothes you are wearing.

2/ Start following the first person you encounter wearing this color.

The following may stop if:

- the person enters a room you are not invited in
- the person leaves the campus with no apparent intention of returning

If the following stops as a consequence of one of these conditions, go back to step 1.

3/ Eventually this person will cross path with someone wearing the same color.

The following may stop at this moment.

4/ Chose another color from the clothes of this new person.

Start following this person.

5/ Repeat until exhaustion.



COL #2

de.

ring that same color.

n (you will make sure to document this space instead)
t intention to come back
reasons, you shall start again from point 0/.

ne wearing a similar color.

erson.



PROTOCOL

- 0/ Start the experience at the entrance of the Hauptgebäude.
- 0'/ Set a timer to a certain amount of time. This will depend on the weather.
- 00'/ Prepare a notebook and a camera: you shall take notes and pictures during the following. You will take pictures of things that catch your eye.
- 1/ Chose one color from the clothes you are wearing.
- 2/ Start following the first person you encounter wearing this color.

The following may stop if:

- the person enters a room you are not invited in
- the person leaves the campus with no apparent reason

side an ETH building is authorized; you shall start a timer.

- the person shows signs of awareness of you
- the person pronounces the following words:

"I want to understand how people move around campus. Here is my business card."

"Do you mind talking about your experience of the campus?"

If the following stops as a consequence of one of these:

- ~~3/ Eventually this person will cross path with someone else.~~
- ~~—The following may stop at this moment. Eventually, if the following lasts longer than 30 minutes, you will stop following this person's clothes and go to the entrance of the building.~~
- ~~4/ Chose another color from the clothes of this new person.~~
- ~~—Start following this person.~~
- ~~5/ Repeat until exhaustion.~~

OL #3

de.

determine the duration of the performance.

notes of everything you observe and feel during the
your eye.

ring that same color.

n (you will make sure to document this space instead)

t intention to come back (15 minutes of following out-
mer everytime you step outside of one).

our presence, in which case you may try to approach

ords: *"I am a student of the Affective Architecture Chair and try to*

d. [you will hand your business card at this moment]

reasons, you shall start again from point 0/.

~~ne wearing a similar color.~~

y, this person will sit or start an activity. If this activi-

g this person. You will chose a new color from this

you are in. Start again from point 2/.

erson.

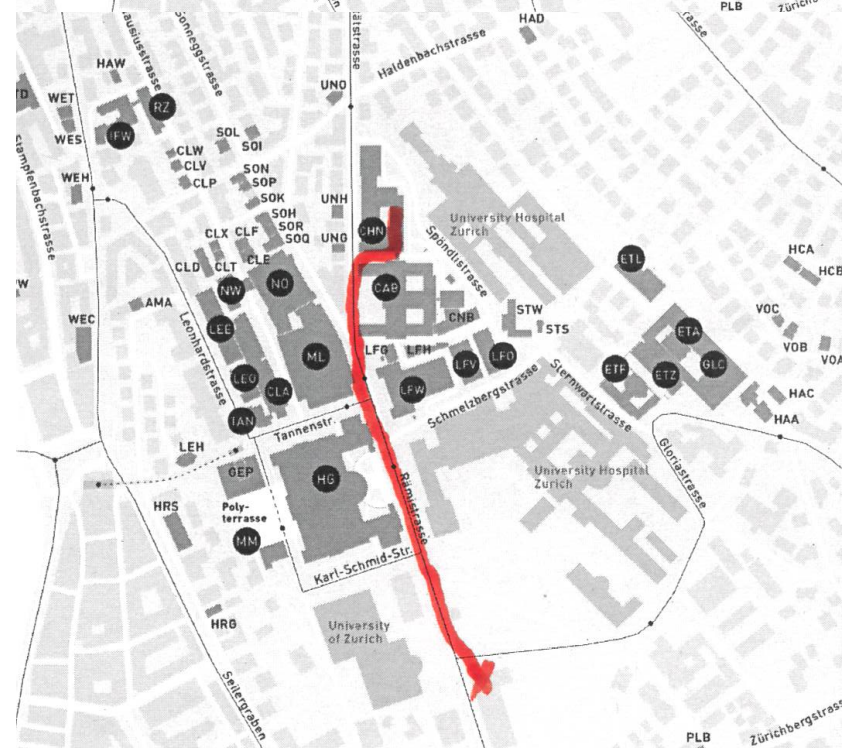
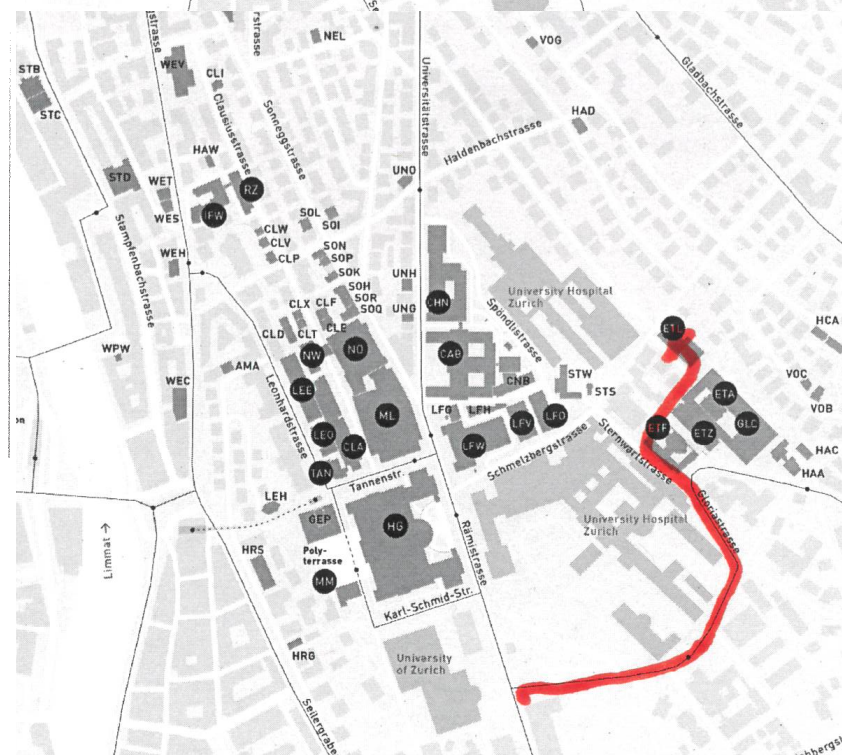
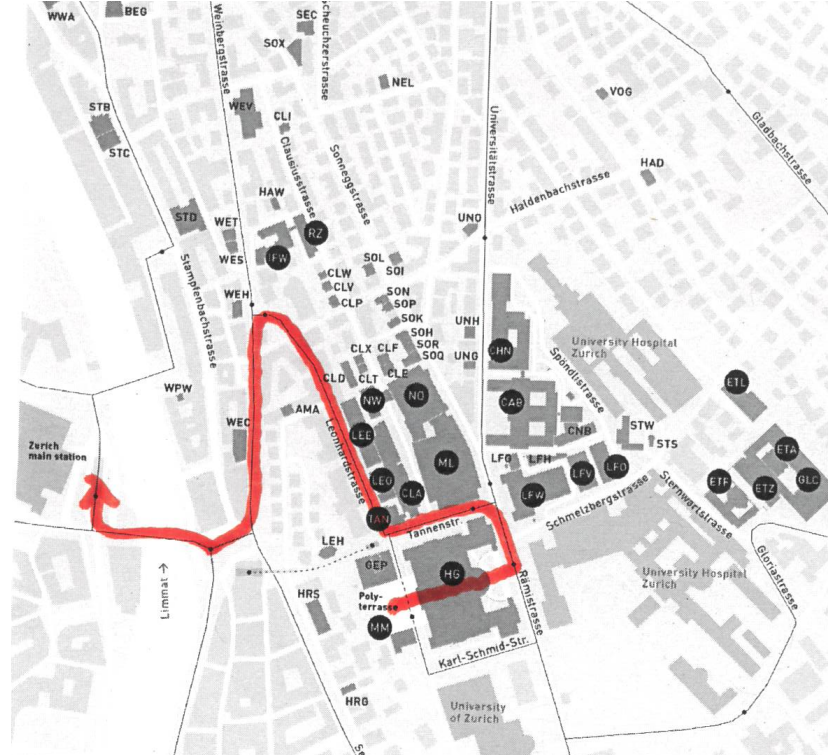


- 09:45 - A beige bag passes in front of me
the white scarf calls to me
- we pass between some buildings, through a sort of car park
 - no official entrance for us
 - white scarf moves with ease through the building and enters an atypical room
 - a sort of association space with sofas, a table football, few people chatting and some decorations

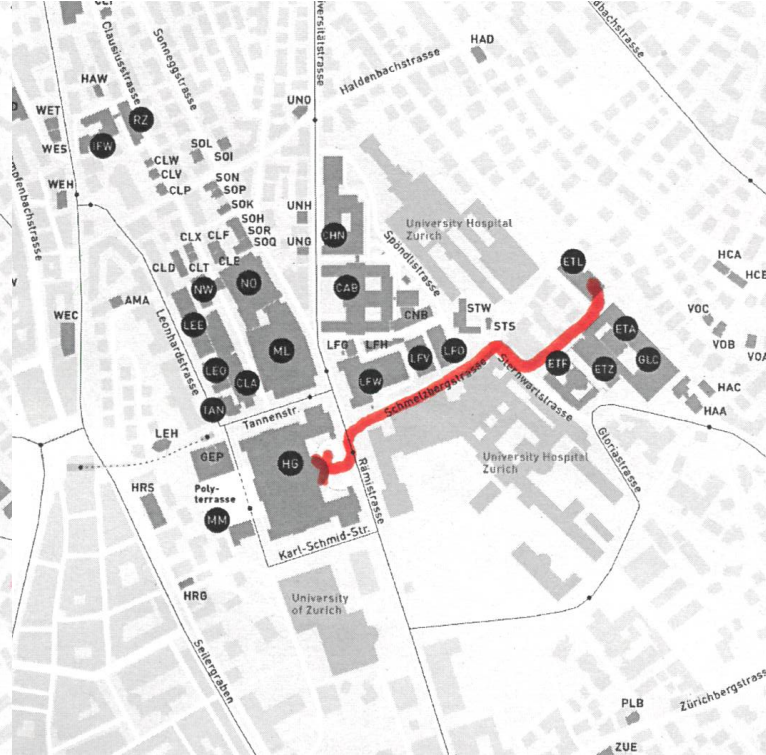
- 09:24
- a pair of pink trousers passes me by - it's my chance to set off again
 - The person wears a beige pull-over
 - what's the deal with these fast walks?
 - we pass by a sports field. Beige pull-over stops to look through the fence for a while. When it's my turn to imitate him, I certainly don't see the same thing as he does.
 - I move quite fast
- 09:36 - Beige pull-over enters the sports centre

I take a quick photo and already a pair of white trousers passes me by - here we go again

- 12:01 - I give up on following in front of a train that goes to Geneva

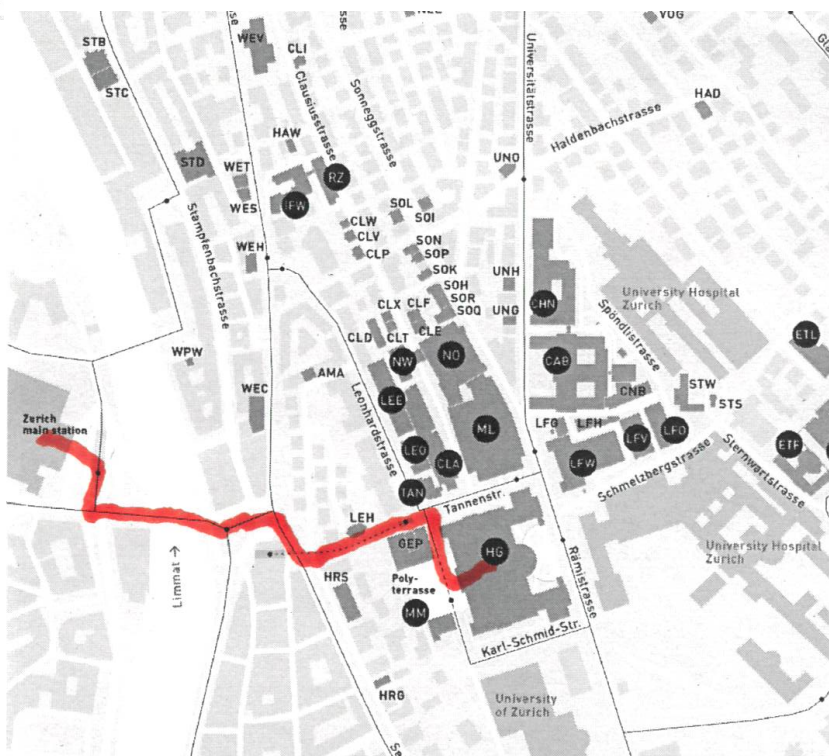
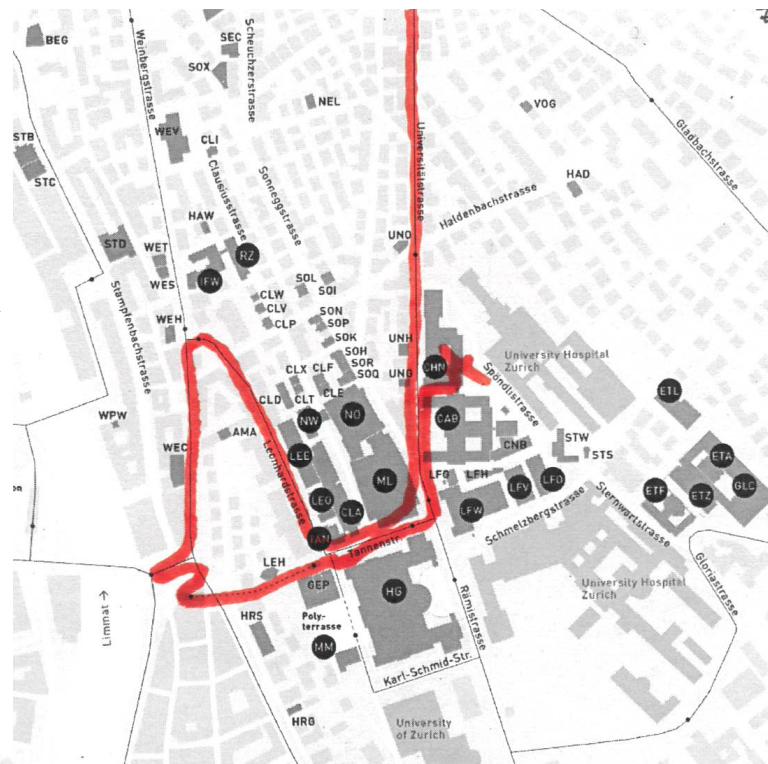


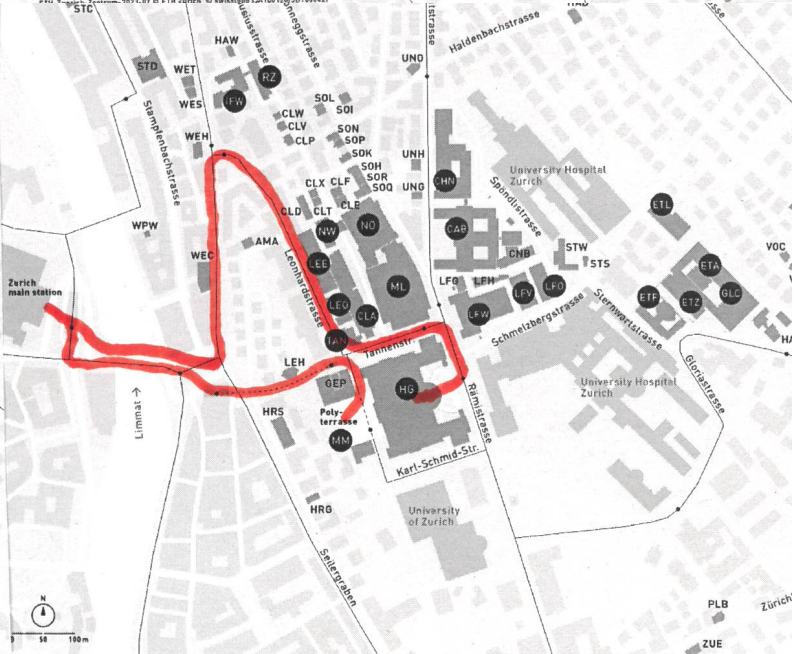
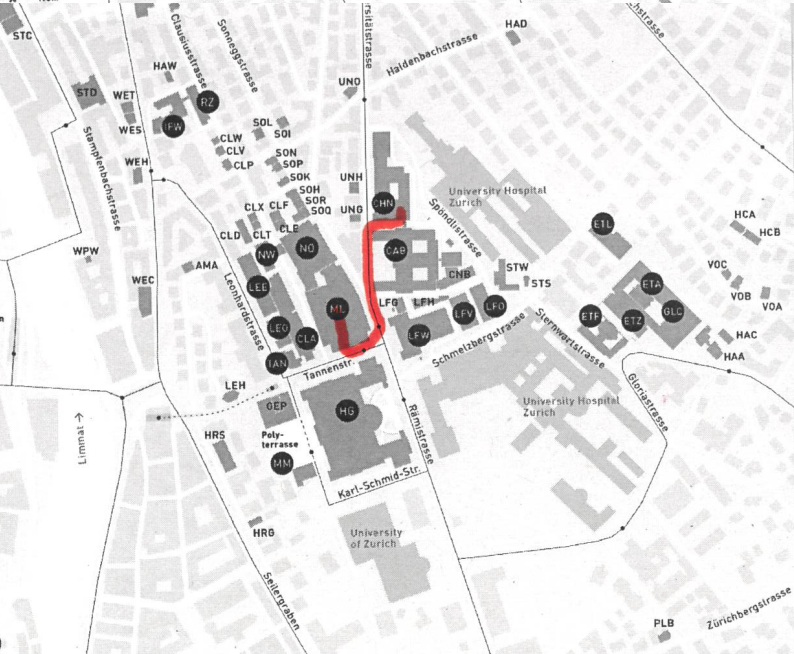
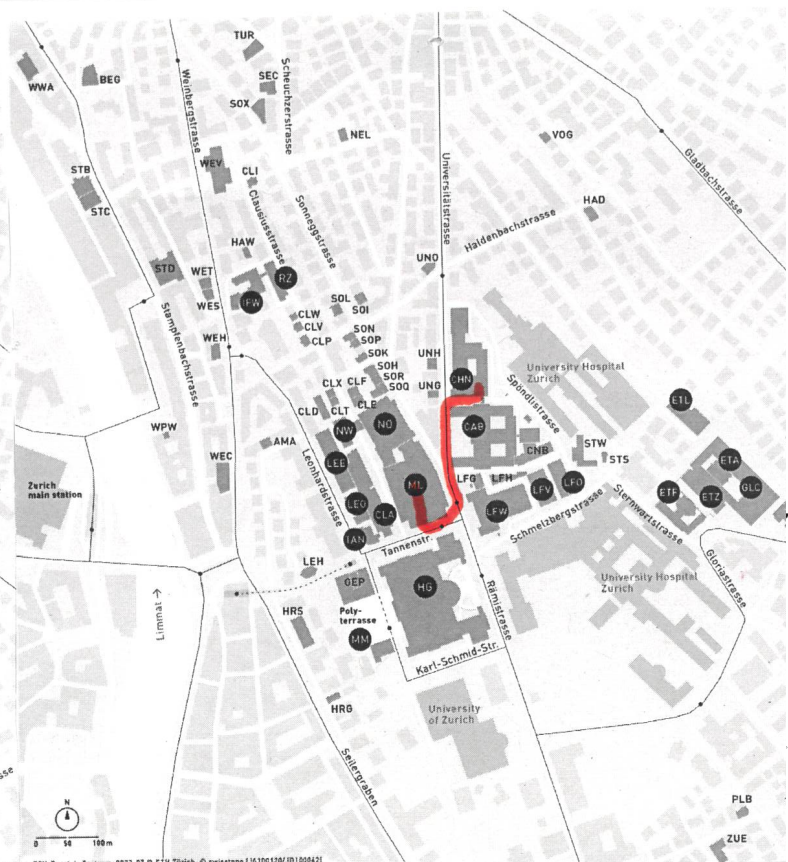
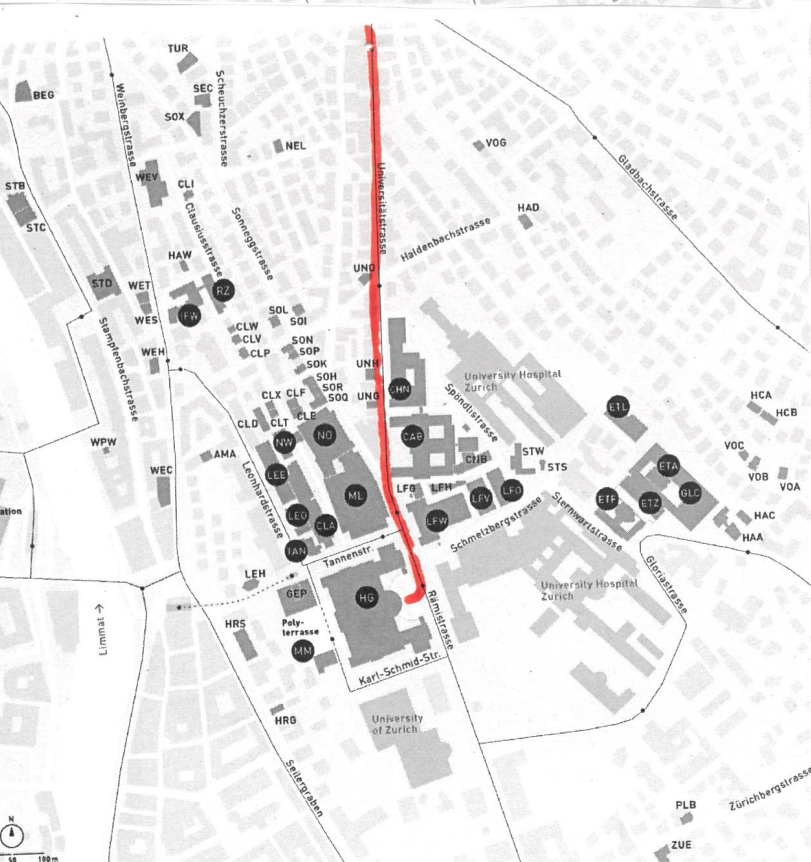
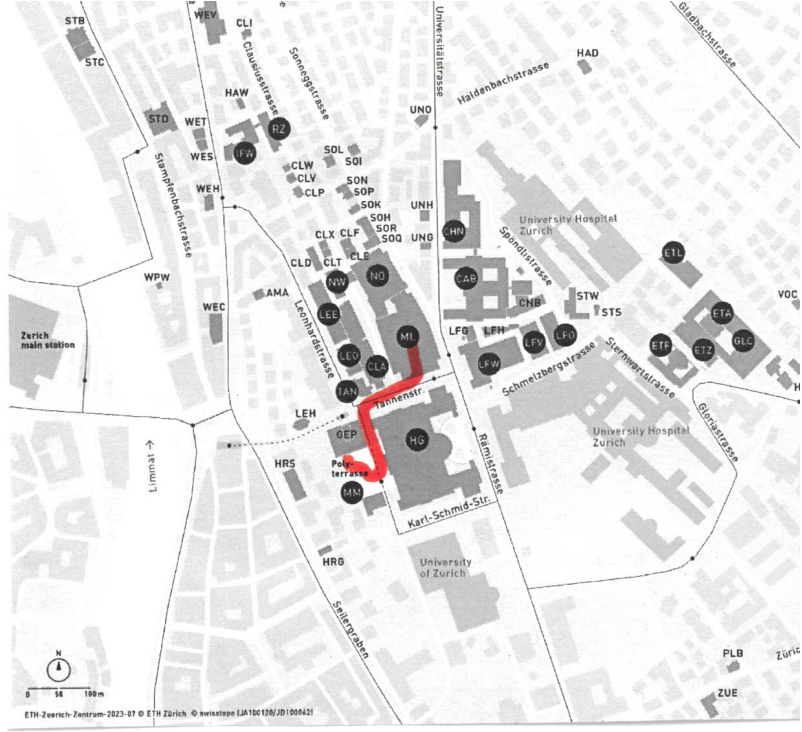
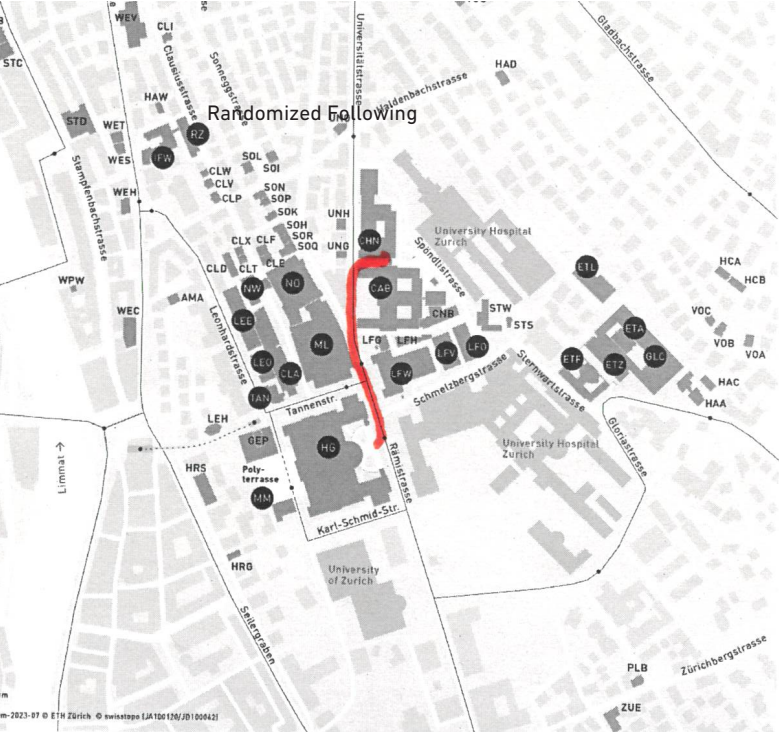
- At the tram stops in front of the building
I see pink pullover
- We take a tram and we arrive at Hauptgebäude
We head towards the terrace
- Sunbathe
- 12:25 - Sandwich time



11:42

- A striped zebra bag sunbathes on the terrace
It suits me well, I also sunbathe while reading
my newspaper
- zebra bag gets up and rushes to the furniture
I wonder if I should get in the same compartment
I finally sit in front and it makes me laugh
- during this short journey, it will be the person
following me





- 13:17 - / green shirt leaves class at Hauptgebäude
 - Moves fast. I almost lost track
- 13:20 - Why this path? Not logical
- 13:23 - Back where we started 
 green shirt goes back in class
 I'll follow...
- 14:17 - 45 minutes of german-speaking class about 'Umweltwissenschaften'
 I lost track of green shirt, too eager to leave
 I know understand the need to take a walk around the building

- 15:24 - I lost track of the red cap in the traffic jam
 This person wears a red cardigan and a navy-blue t-shirt
- We are at the tram station and will wait 13 minutes
 The person is busy and seems to use public space as an extension of the office: phone calls, panic-reading and notes taking
- We stop ~~at~~ the park of Ickel campus. We will take a break on a bench there. The person reads a book, I read my journal
- 16:15 - We take the tram and head to Aöing campus

- 14:24 - I follow a beige backpacker; thought we would spend time at the entrance cafeteria in Hauptgebäude but we're now heading to the city using the small sponsored funicular
- At the train station we seem to be waiting + what for?
- We're back in the tram
 Back in Hauptgebäude
 We just picked up someone at the train station



Tuesday

08:32 - My day begins at the Hauptgebäude according to protocol. At this time of day, the vestibule is packed to the rafters with people passing in front of me. I've already chosen a color: red, like my sweater. I'm used to this protocol by now, and I know that depending on the color I choose on myself, the time spent following the same person will be longer or shorter. Red works well.

08:41 approx. - Someone in a red sweater passes by, and I jump at the chance. I cheat a little, it's a sort of red and white striped jersey, but good enough. I start the track monitoring on my phone.

What suddenly worries me is that we're already leaving the building, even though it's 8:30 am.

08:46 - We're in the tram. I set a timer on my phone; if the person doesn't get off in 15 minutes, I return to my starting point.

Fortunately we get off a few minutes later and head for the university campus park. We enter the beginning of the park and I imitate the person I am; I sit on a bench.









The person drinks a coffee. I go through my newspaper. I wonder how long we'll be here. The protocol is clear: after 30 minutes, I can leave.

It's cold, but there's something peaceful about coming here, to know that the university is elsewhere.

09:12 - We get up. Back on the tram. We retrace our steps.

We head into the Umweltwissenschaften building. In the main hall, the person starts moving things around. The person seems to be in a hurry.

09:34 approx - People arrive. The hall fills up. I've settled into the upstairs cafeteria. I watch from a distance.

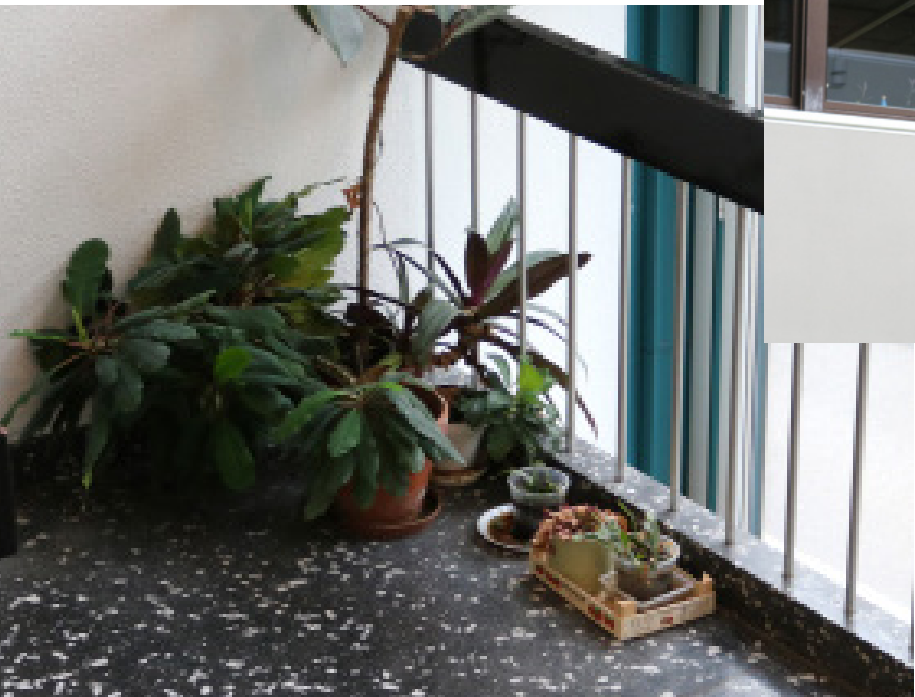
An event is about to begin.

09:43 - The protocol is clear: I've been here for 30 minutes. I shall now stop following this person.









A day as...

Listening to the unheard voices

Ak Paola
Officer for Radical Empathy

Brosteaux Océane
Behavior Analyst

Müller Tim
Chief of Communication

ABSTRACT: We try to understand how a diversity of users, especially those who are most often ignored, interact with their environment. By spending days or half-days with these people, we want to understand their professional daily lives and discover the different obstacles they may encounter and take these as opportunities to create forms of intelligence. Through this experiment, which we have entitled "A day as...", we hope to obtain concrete answers so that we can design scenarios for improvements or recommendations to different organizations, such as: ETH Real Estate, architects or Competence Center.

KEYWORDS: USERS - PARTICIPATORY WORK - FORMS OF INTELLIGENCE - DIVERSITY - UNHEARD VOICES - CAMPUS COVERAGE - SPATIAL EXPERIENCE - CARE

The research focuses on analyzing the affective and spatial experience of ETH users in and around the various buildings, which means understanding how buildings affect the way they do, act or move through space. Understanding and taking into account their point of view is a priority for us. Indeed, by bringing to light the unheard voices of ETH, we'll gain significant data and a new way of positioning ourselves as architects.

We have outlined a method that include both anthropological approaches and participatory work. The methodology we have defined, is described below.

1. We formulated some **research questions**, namely:

- How to understand the campus through the spatial experience and intelligence of a diversity of users?
- Can we identify uses and spatial needs that are not always being considered in ETH Real Estate policies?
- Would our method of experimenting with role play and on-day internships become a new way of analysing and designing for architects and Real Estate Management?

2. Review of antecedents

By digging into the subject, we found that some studies and research had already been done concerning e.g.

people in wheelchair at ETH, describing how eth's buildings are designed and how they can be more accessible for everyone.

However, while reading all this, we questioned why then classrooms are fixed for example? ETH claims to be inclusive, is it? Does anyone can come in freely? In which buildings? At what time? For what? What are the methods that ETH developed to include everyone? With our research, we will try to find out the various aspects to take into account when using these terms, such as inclusivity or diversity.

3. Research method

We decided to make an observation and role play experiment. By participating directly in the professional daily lives of various users of the ETH campuses, not only as observers but also as actors, we became users of these same spaces ourselves. Therefore, it has created an informal dialogue between us all, enabling the understanding of their behavior and strategies they developed within these buildings.

4. Choosing study subjects

We contacted a broad spectrum of ETH users, so that they could cover as many time slots as possible and as many locations as possible. Therefore we chose to get in touch with:

- An apprentice
- An employee of ASVZ
- A biochemistry student





- d. A Cook from a Mensa
- e. An employee of facility management
- f. A person with reduced mobility
- g. A PhD Student
- h. An employee of the Post Office/Info point
- i. An employee of security service

5. Collecting the data

We followed a participant observation, putting ourselves in the shoes of the chosen people and taking part in their activities. In order to get general answers from everyone, we decided to create a series of questions concerning their perception of work and spaces. We also asked everyone to take a photo in their space. Furthermore, throughout the day we kept a detailed diary describing the day, trying to emphasise the space and the affective experience of users.

6. Interpretation of the data

We decided to compare all the "Day as..." we did in order to find common grounds between the diversity of users we met. By doing so, we will understand what needs are in common and where we could possibly intervene or make some recommendations for future buildings, for architects or even for the Real Estate Department.

7. Elaboration of the research

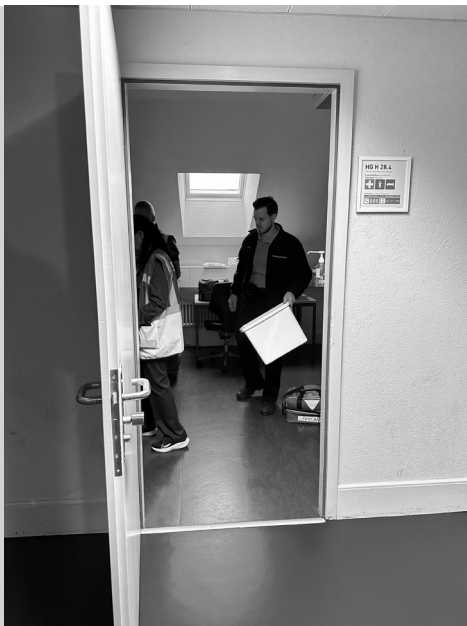
By building up a report that will be a summary of the research, we want to make visible what we experienced during "A day as...", in terms of spatiality,

difficulty and discovery. Other than that and most importantly, we want to make visible all the person that are not heard on a daily basis. Emphasizing their behavior, their intelligence and also their struggles. We hope that thanks to this report we will make visible inequalities in terms of mobility, salaries, working conditions and many other aspects to a broader public. We claim that people have developed forms of intelligence to overcome some of these inequalities. By listening those unheard voices, we claim that change will happen more thoughtfully and with more care. Our aim is to ensure that all users can be heard, but also listened to.

Even though we believe in our method and encourage others to actively continue our field study, we will have a critique vision of our final work. We already know that this project is only a selection of some users that are present in and around the ETH buildings. Therefore, it would need more time and more resources to cover everything.

We will make a conclusion of our research angle but also put it together with the other strategies put in place within the DASE. By taking different routes, we assume that our department will diversify its results and point of views. Our general aim is to understand how users interact with what surrounds them, but also mainly to make visible what is yet invisible or still made invisible. ■





First Aid Intervention in the Medical Room of the Main Building

Troubleshooting of a Heating System in the Main Building



Dario

ETH security staff at the Hönggerberg and Zentrum campuses





Inspection of the Ventilation Shaft in the ML Building During the Prescribed Inspection Rounds

Portrait of ETH Security Service Member Dario



Dario is a 32-year-old professional currently working in the security service department at the ETH. He is fluent in three languages: German, English, and Italian. His role in the security service involves safeguarding the ETH's assets, ensuring the safety of its staff and students, and maintaining the security of the institution. His multilingual skills are beneficial in interacting with a diverse and international community at the ETH.

He spent his early childhood in Switzerland, but later moved to Italy with his family, where he completed his schooling. However, he didn't envision his future in Italy and subsequently returned to Switzerland. Back in Switzerland, he embarked on various educational pursuits, but many of them were short-lived. It was only after exploring various other career options and finding them unsatisfying that he ultimately found his calling in the field of building security.

Dario initially worked at a Security company and, after a few years, applied for a position at Credit Suisse, where he also had to undergo firearms training. He spent several months working there in shifts. However, in 2018, he decided to seek a new

challenge and more diversity in his career beyond building security. This led him to apply for a position at ETH, where he could have more interactions with people and experience a more varied role. Over time, he has risen through the ranks and currently holds the position of Director of Security Services at ETH.

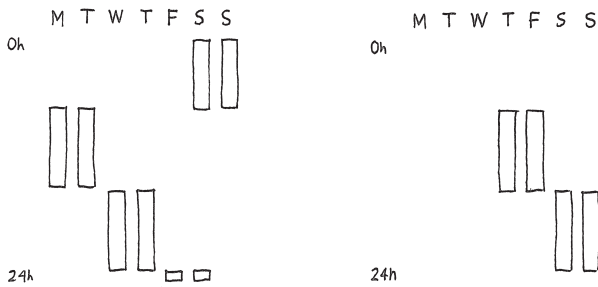
The ETH security team consists of 18 members and is based at ETH Hönggerberg. This location also houses the emergency response center where all calls to the internal number 888 are directed. From there, the nearest field personnel are alerted to take necessary actions on-site. Their responsibilities encompass building security checks, as well as providing first aid in medical or chemical emergencies. They are the first responders when it comes to technical issues with electrical or heating systems. In quieter moments, they engage in independent office projects aimed at enhancing daily operations. Over the past few years, Dario's projects have included acquiring and repainting the two service vehicles and optimizing the prescribed building inspection rounds.

The ETH security service is responsible for ensuring the safety of a diverse portfolio of buildings within the ETH campus, primarily concentrated around the two main campuses. However, some peripheral buildings are managed by external security firms due to their considerable distance and the insufficient number of staff members to cover them effectively.

The challenge of limited personnel for all buildings can be attributed to ETH's planned cost-cutting measures, which may become even more pronounced in the future. ■



New Shift Schedule



The security service staff can be categorized into three distinct groups. First, there are those who work at the central office located on Hönggerberg. Their responsibilities include answering calls and handling various office tasks. Second, there are on-site personnel who conduct patrols and are ready to respond to emergencies when needed. Lastly, there's the third group of employees who possess the flexibility to perform both central office and field duties in a rotational system, alternating between these responsibilities. This hybrid group is what all new employees are trained for over a three-month period. Employees who are specialized in either one of the two areas are typically long-serving staff who have been with ETH for a considerable duration. All new contracts are now exclusively designed for the hybrid role to promote diversity and variety for the staff.

- Alarmzentrale 0645-1500/
1445-2300 / 2245-0700
- SDO Hönggerberg 0645-1500/
1445-2300 / 2245-0700
- SDO Zentrum 0615-1500/
1415-2300 / 2215-0700

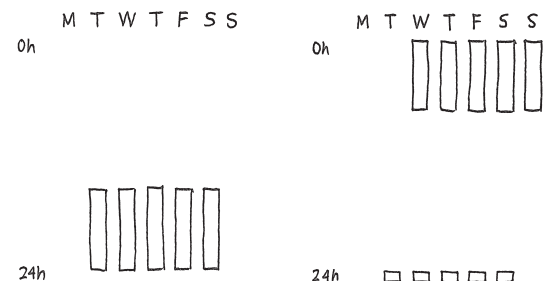
- No Jetlag ⊕
- 3 days off ⊕
- balanced shift distribution ⊕

The shift times are divided into three 8-hour shifts, each with distinct daily responsibilities. During the morning shift, the security team is primarily prepared for emergency responses, dedicating the remainder of their time to advancing their individual projects.

The evening shift is primarily dedicated to conducting inspection rounds in various ETH properties, in addition to remaining on standby for emergencies. Furthermore, certain buildings must be secured for the night due to security reasons, including accessible computer rooms that house valuable equipment.

The night shift is fundamentally similar to the evening shift, focusing predominantly on building inspections. However, due to a reduced workforce during this time, they also directly forward medical emergency calls to the ambulance service. Otherwise, their responsibilities align closely with those of the evening shift.

Old Shift Schedule



- 2 days off ⊖
- Jetlag ⊖
- Shift schedule easily customizable ⊕

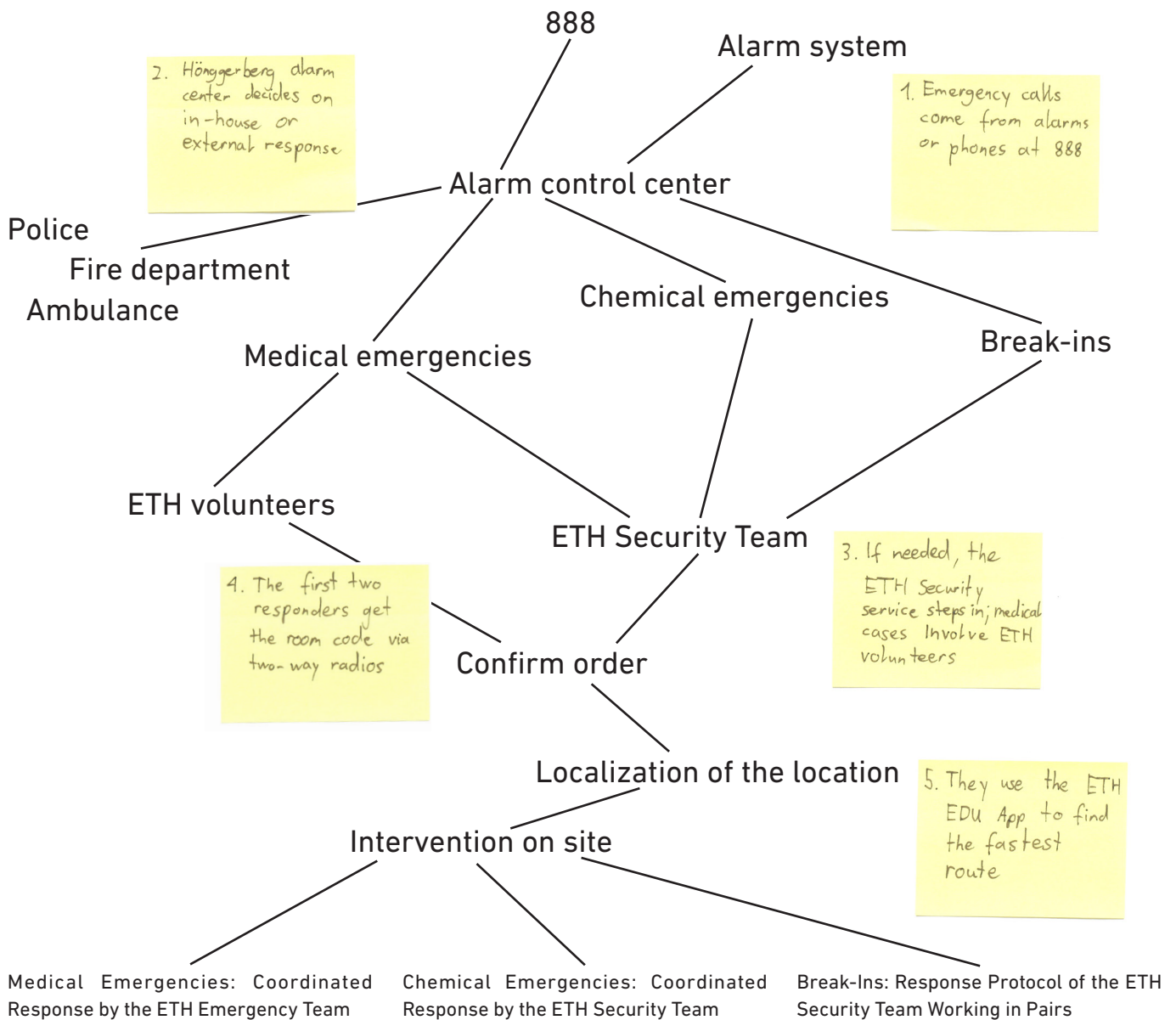
Application of shift schedule to the ETH

This new shift plan exemplifies the underlying issue at ETH. Could this shift operation be a direction in which ETH could evolve for better utilization of the existing spaces? It would significantly reduce the simultaneously required floor area and minimize the downtime of the rooms. Lecture halls, offices, and other spaces could be utilized over a more extended period. The financial savings in building costs would be enormous, with positive implications extending beyond ETH. Public transportation would be relieved during rush hours and evenly distributed throughout the day.

The concept of a shift operation may initially sound like a drastic measure, but it is already being tested at ETH with the idea of shared workspaces. Instead of a daily recurring rhythm, adjusting the schedule to an 8-hour shift might not be such a significant leap, but it could have a big impact on our everyday life.



Emergency notification schedule



In a medical emergency, the ETH Emergency Response Team swiftly mobilizes as a two-person unit, prioritizing patient location and initial assessment. If the situation is severe, they promptly request an ambulance; otherwise, they provide immediate first aid using a supplied medical kit. Following each response, a detailed report is mandatory, documenting essential patient information and incident specifics. Additionally, ETH buildings are equipped with designated first aid rooms, providing a space for patients to rest and recover before seeking further assistance.

In a chemical emergency, the ETH Security Team employs a two-person response protocol. They first locate the triggering sensor and use its display to identify the specific chemical responsible. A portable testing device is then used for a thorough verification test. During testing, one team member remains on standby for safety, ready to assist if health issues arise. If a hazardous substance is confirmed, appropriate measures are taken. It's important to note that most alarms are false, triggered by the sensors' high sensitivity even to small substance quantities.

In the case of a potential break-in, the ETH Security Service deploys a two-person response team. Initially, an external examination is conducted using flashlights to detect signs of intrusion. If anything suspicious is found, the police are immediately notified; otherwise, the team enters through the main entrance. Inside, they use a control panel to identify the specific sensor triggering the alarm. A thorough inspection is then carried out around that sensor, and if nothing is amiss, the incident is recorded as a false alarm. However, if any suspicious activity is observed, the police are alerted once again.



Office of the ETH Security Service in the HG



Own Opinion

The ETH Security Service office is, in my opinion, simultaneously small and minimalist yet disproportionately large, considering its staff is typically alone, especially during the morning shift. Given this brief utilization, the office's prominent location on the ground floor of the main building seems excessive. It could be effectively shared with another institution, resulting in significant space savings.

The room is also in urgent need of renovation and only looks somewhat presentable through individual efforts like repainting the walls and adding personal items such as the armchair. Otherwise, the room could require significant renovation.

Renovation should always be preferred over new construction.



Critical reflection

The role of the security service at ETH can be seen as the embodiment of humanity in the vacant buildings and spaces of the university. Its necessity only becomes apparent when the premises are deserted, as the security service must be on-site when no one else is using the facilities. In an ideal situation where all ETH spaces are constantly in use, a security service would be superfluous. In such a scenario, individuals present would take care of security aspects themselves, such as preventing thefts.

The security service can be viewed as paid actors whose purpose is to bring life to the buildings so they don't appear completely abandoned. The fact that during our tour, the security service emphasized multiple times that a corpse could remain undiscovered in a room for years highlights the extent of vacant spaces at ETH. Interestingly, we didn't have to go far to find such spaces; we found them right in the main building.

Dario also criticizes that the freely downloadable EDU app poses a significant security risk to ETH. The app provides access to almost all floor plans of ETH buildings, including rooms not intended for the public, where valuable equipment may be stored in the worst-case scenario. Especially in labs with expensive equipment, the app significantly facilitates a thief's break-in.

The emergency plan of the ETH security service clearly illustrates how intricate and cumbersome the university's structure is. In emergencies, the security service must come from a distance, as no one else is available on-site. A more efficient solution would be to direct alarms during the day directly to the specifically responsible individuals on-site to quickly address defects or false alarms. Otherwise, the security service merely serves as a documentation organ for the absent specifically responsible person.



Dario receives more detailed information about the patient via the service telephone.



Diary Security Management (Dario):

- 08:57 Meeting at the fountain in the entrance hall of the main building with Dario.
- 08:59 To begin with, Dario wanted to show me around his office and give a little introduction to his job. However, just now an emergency came in that someone is not well.
- 09:00 He received the emergency call on his radio from his dispatch center, which answers all calls through the internal number 888. The control center is stationed on the Höggerberg.
- 09:09 After a quick pickup of the rescue case in his small office in the HG building, we take the elevator to the 6 floor to the library to find the patient.
- 09:08 Since we can't find the patient, Dario calls the center again to report the status. They tell us that the patient is now one floor below in the men's room.
- 09:11 It's amazing how well Dario knows his way around the building and actually knows exactly where to go for every room number. Someone else from the emergency team, who actually works in the library and can also help in emergencies, is already waiting outside the restroom.
- 09:15 He tells us that the patient is in a toilet cubicle and that he is most likely suffering from food poisoning or allergies.
- 09:19 We wait so long in front of the toilet until he comes out. After a few minutes, a third person from the emergency team arrives, even though only two are supposed to come in an emergency. In an emergency, the helpers have to accept or decline on the radio whether they can come or not. This prevents too many people from coming to help.
- 09:28 After the patient comes out of the restroom, they take him to an emergency room next to the library. Dario tells me that there is such an emergency room in many buildings at ETH.
- 09:29 I have to wait outside the room because there is not much space in the small room. The room consists of a bed, a chair and a small table. The room looks very small and can only be opened by someone from the emergency group.
- 09:38 Dario tells me that they get about 3 emergency calls a week, and most of the other emergencies are some sort of technical glitch. Alarm systems of the buildings are very prone to false alarms.
- 09:49 In the end, the patient decides to stay in the room and rest a bit more and then go home. Every time a patient is admitted, a report must be made with the patient's name and ETH number.
- 09:52 The member of the emergency team who works in the library is obliged to visit the patient from time to time. This is the end of the mission for Dario.

- 09:57 Now we go back to the security team's office. I notice the improvised door sign of the room. It says SGU Alarm Organization but SGU has been crossed out and provisionally replaced with FSB. Dario tells me that's because the security team has been moved from Security to Facilities Management.
- 10:01 The office is very small and consists of a WC, a large safe, coffee machine and a small work / recreation room.
- 10:05 Dario proudly explains to me that the rest room was designed this way by his team. They painted one wall blue and one orange to make it more homey. The large armchair, also comes from an employee who no longer needed it at home.
- 10:11 Now he shows me a little PowerPoint that should illustrate how their team is structured. It becomes clear that their area of responsibility is very branched out and the tasks vary greatly depending on the time of day and the clock. In the morning shift, the employees are ready for emergencies. Otherwise, they work on individual projects, such as repainting the office or Dario's project: restructuring the info sheets of the respective tasks of the individual buildings of ETH.
- 10:16 During the afternoon shift, in addition to emergency operations, they are on inspection tours of individual buildings, checking to see if things are locked that should be locked or if, for example, fire extinguishers are still sealed or emergency kits are still complete.
- 10:21 In the event of a defect, problems must be documented in their internal portal or, at best, just repaired. Often, these are small problems that can be solved with a simple wrench or a bit of dexterity. If this is not possible, they must document the problem by photo and write a small description text. They then upload this to their internal portal.
- 10:28 Now Dario explains to me what to do in the event of a gas alarm. For this, they have many different test devices that can measure various gases. In an emergency, they have to get everyone out of the office and then always go to the scene in pairs. Someone is then the person who goes into a room with the test equipment and the other one stays outside and observes how the colleague is doing. If he suffocates, he can call for help without putting himself in danger.
- 10:34 To help identify the source, many ETH buildings have gas detectors that measure the most common gases and warn if there is a problem. In this way, the leak or the defective detector can often be identified quite quickly.
- 10:39 To get into the building of Desire Dario has 2 different possibilities. He can use the ETH card, which allows him to enter all ETH buildings, but he has to enter the code each time, which takes a lot of time. That's why he always carries a big bunch of keys.

with him, which has the most frequently used keys of the ETH. For less frequently visited ETH buildings, he has to get the key from the office safe. One of these rarely visited buildings is the Atelier Gieb.

- 10:47 In addition, it is important to say that the security team is not responsible for all ETH buildings. Many remote buildings, such as the ONA, are managed by an external security company. This often makes sense, because the journey would be much too long for a building, but exactly with the example ONA it makes less sense, because the OCTAVO is trusted by the ETH security and the way to the ONA would not be far. This often has bureaucratic reasons that are not always completely understandable.
- 10:55 Now we set off on a small inspection tour to an external location, the GIMA building on the Vorder Adlisberg. It is a geo magnetic measuring station and currently unmaned. It has only a few measuring systems that still have to be cleared out.
- 10:59 He shows me one of their 2 emergency vehicles. They are both electric and also from a project of the employees. They are inspired by a police car, in blue and white.
- 11:06 The trunk is full of stuff, they need in an emergency / problem. It is divided according to different reasons for use. For example, there is a suitcase for chemical accidents and one for medical emergencies. But also simple things like a fire extinguisher or barrier tape are present. It is interesting, that not all things may be used by the security service. Some items are only there as support for other people. For example a jumpsuit for chemical operations.
- 11:12 While driving, the radio suddenly starts ringing. Dario explains to me that this is because the radio has lost its connection, as we are much too far away from the campus. In case of an emergency, he can now only be reached via his clubby phone, although this is also difficult because there is very poor reception at the GIMA building.
- 11:16 He now wants to show me an example of how we must proceed in the event of an alarm. First, he waits a little further away from the house until a second colleague comes, since they only do everything in pairs for their safety. Then he looks with the flashlight if there are any signs of burglary on the fence or on the windows/building facade. If yes, he calls the police, if no he approaches the building and opens it carefully. At each entrance there is an alarm detector display, with the building plan, which then tells him where the alarm detector is located. He can then check this for traces of attack and take further that indicates where the alarm has been triggered. He can now compare this number, which the alarm detector displays, with the building, which then tells

him where the alarm detector is located. He can then check this for traces of attack and take further measures.

11:23 When leaving the building he must disarm the alarm system with a code and then leave the building within 30 seconds or the alarm will go off.

11:35 Now we continue to Villa Hatt. This is the guest house of the ETH. He tells me that they have a big problem with homeless people camping outside on the terrace, because the villa is so rarely visited. It is only used when prominent guests from abroad need a place to stay. Otherwise it is always empty.

11:41 It looks like that the villa is inhabited this time, because there is light burning also otherwise everything looks very well maintained.

11:50 Now we go back to the main building to have a lunch break. We park the car again in the garage of the main building. From there it is only a very short walk to his office.

11:55 For his lunch, Dario often takes something himself, since he has to eat alone any ways and thus saves a lot of money. If he doesn't have anything with him, he often goes to buy something at the kiosk in the entrance. Today was no exception. We buy a chicken sandwich.

11:59 Now we go back to the office, as this is the best place in the main building to have a relaxed undisturbed meal. In his opinion, there is a lack of other indoor dining options. This is accompanied by another coffee from the coffee machine in the office.

12:02 He tells me what a shift change typically looks like and what there is to consider. You always have to pass on any abnormalities to the next person who takes over the next shift.

12:14 After wards, the person who finishes the shift must always drive to Höggerberg with his equipment with the keys and the emergency vehicle, because that is where the main station is located. There they lock up their personal belongings and the car is then used for the person's shift at Höggerberg.

12:17 Before that, the other employee, who is taking over Dario's shift, drove from the Höggerberg to the main building with his equipment in the second car to then take the shift. This way, the cars are always in an exchange and not assigned to one location.

12:21 All this driving around is due to the fact that you always have to finish your shift at the main head quarters on Höggerberg. This makes the main building location very unpopular, as the shift always takes half an hour longer.

- 12:23 I asked Dario what it looks like for events, like the Poly Ball, are they in charge of that or someone else? He answers that they collaborate and organize, but they are too few people to do everything themselves, so an external security company is actually always called in. But there are also events with which they have nothing to do and only the external security company is called in.
- 12:31 Dario still says that the profession is actually quite interesting, because on the one hand you are very alone, but at the same time you still have a lot of contact with other people, because you are actually never stationary and always discover something new.
- 12:36 He says the job is certainly not for everyone, as you work shifts and have both day but also night shifts. You always have 2 days morning, then 2 days afternoon and then 2 days night shift. This is followed by 3 days off and actually even 4 because the day on which you had night shift can actually even be counted. However, this is only recently so and was also a project of an employee to improve the working conditions.
- 12:41 Now we go out and recreate a control route in the ML. Each building has instructions for which rooms, places and doors need to be controlled. So it comes to the fact that some buildings take longer to control than others. On average, it takes about 30 minutes per building.
- 12:45 Only now do I realize how many rooms we students have access to, as very few are locked and many can be opened without a key.
- 12:51 ~~Rooms that are most often locked and many can be opened without a key.~~
Rooms that are most often locked are mainly heating rooms or chemistry rooms that contain any valuable or dangerous items.
- 12:56 After this little round we finish our job shadowing and I head home.



Sascha

Cook in the food market canteen on the Hönggerberg campus



Sascha in his office



Photo studio for the presentation of the meals



Sascha creating the menu plan for next week



Sascha, the head chef of the Food Markets kitchen, is 32 years old and resides in Winterthur. His workdays, Monday to Friday, start early at 6:00 and usually conclude at 15:15, with occasional exceptions ending at 13:45. The Food Market Mensa operates under the SV-Group, an external company focused on profit-oriented practices and cost optimization.

Similar to the arrangement with ETH, Sascha is externally employed by the SV-Group. His role primarily involves organizational tasks, such as ingredient procurement and menu compilation. For menu development, he can access a vast internal database of several thousand recipes, which must be adjusted daily due to fluctuating ingredient prices influenced by current political situations in the Middle East and Eastern Europe. Consequently, no menu is offered exactly the same twice. Sascha's responsibilities also include daily photography of meals, promptly shared with guests on screens and via the website. While he seldom cooks in the kitchen, he is constantly in motion between storage, refrigeration, and freezer areas, frequently assisting as needed.

Regarding Sascha's salary, he mentions that it barely covers living expenses, especially considering the significant time and effort invested. A considerable portion is allocated to commuting to ETH H  nggerberg, where early shifts and the lengthy commute from Winterthur make public transportation impractical due to the lack of early buses. The rising fuel prices further impact the profitability of Sascha's job.

Examining Sascha's work environment reveals a flat hierarchy, with a team leader and all other employees on equal footing, fostering a collaborative atmosphere. This helpfulness varies throughout the day, with early mornings focused on individual menu sections. However, this changes post-9:30 break, where employees assist those furthest behind to ensure menus are completed by 11:15.

The kitchen is divided into three parts: the main kitchen in the southern section, the garnish kitchen in the northern part primarily used for salad preparation, and the show kitchen in the central area, mainly active during lunch for plating

and selling dishes. Additional storage rooms, each assigned to an employee responsible for maintaining order and reporting shortages to Sascha, contribute to potential inefficiencies due to their scattered locations.¶

Considering the age distribution of employees, there's significant diversity, with individuals nearing retirement working alongside apprentices. The staff's origins are varied, yet the kitchen crew is predominantly male, while lunchtime sales staff is mostly female. During staff shortages, mutual assistance prevails, extending to other core tasks. ■



Unsorted, freshly arrived shelf in the refrigerated room



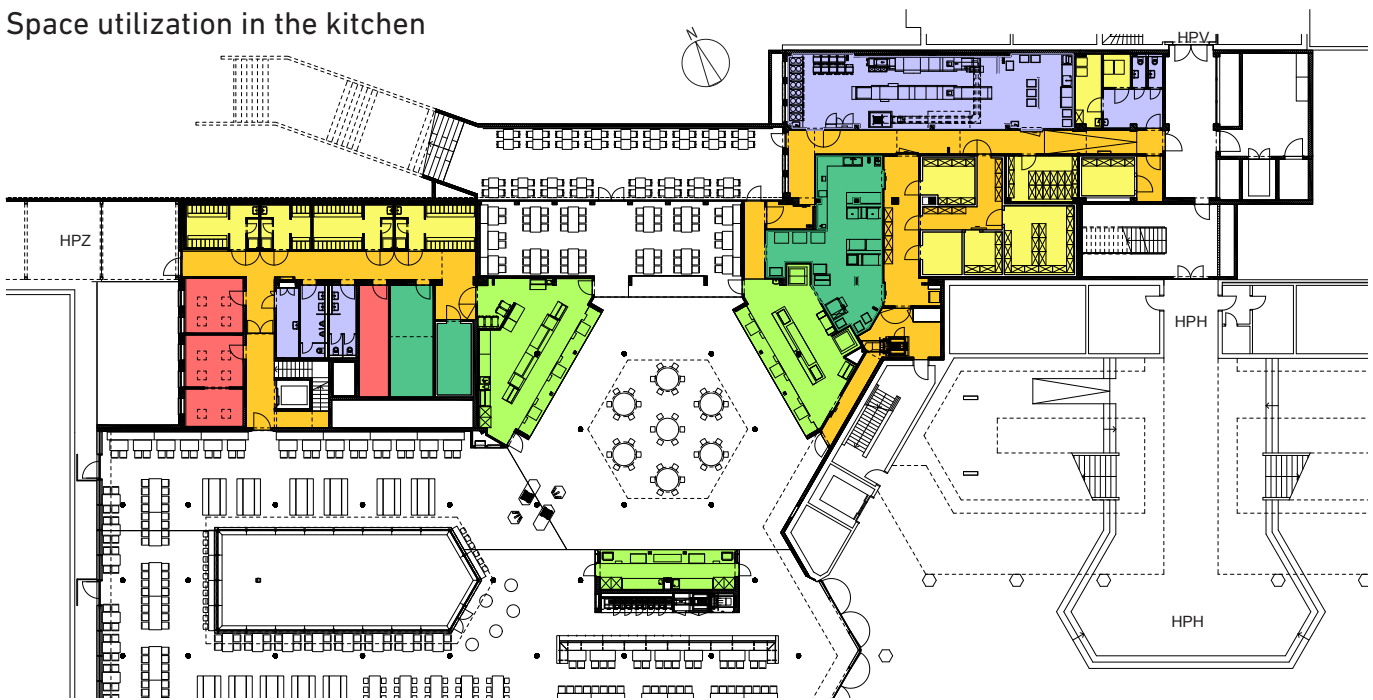
Fully sorted shelf in the refrigerated room



Dry storage room in the basement of the HPR building



Space utilization in the kitchen



The kitchen faces a significant challenge in space utilization: it is excessively intricate, offering no efficient storage solutions. Chefs are compelled to place their serving carts wherever there is room in the kitchen, causing obstruction for other cooks. This results in an ongoing power struggle among staff, as everyone needs their cart close to their workstation, but adequate space is elusive. Additionally, the numerous space-dividing walls make communication cumbersome, potentially causing organizational issues. According to Sascha, these room dividers serve little purpose, existing only to block our view of natural light. The corridor between the kitchen and the cold storage rooms is entirely unnecessary. No one uses this corridor, and it merely extends the journey to the cold storage and back to the kitchen.

The spatial separation of the two kitchen sections is far from optimal. The northern kitchen section is entirely cut off from the main kitchen. Moreover, it is not even a proper kitchen; rather, it's an empty space used for plating. This limitation in kitchen space significantly influences the quantity of freshly prepared dishes and determines what must be delivered pre-made.

The distribution of storage areas is also

suboptimal: some types of food that need dry but non-refrigerated storage have excessive space that is never fully utilized. Conversely, perishable items requiring refrigeration face a scarcity of space. This area is always in short supply and should ideally offer more flexibility, as these items require more frequent deliveries and rapid processing, making shelving unnecessary but, due to space constraints, essential and space-consuming.

Another critical point of critique is the arrangement of the show kitchen: from a customer's perspective, the counter with the payment terminals comes first. Behind it is a heated shelf for warming already prepared plates, which sellers use when a customer makes a purchase. Behind this is the plating area, which lacks sufficient space for individual ingredients for many meals, forcing cooks to awkwardly stack pots. Behind this are the pizza ovens or fryers. With the pizza ovens, there's an issue: the pizza peel is so long that, when removing the pizza from the oven, one almost stabs a colleague at the plating station. This has led to accidents, such as a colleague accidentally hitting me and dropping the pizza from the peel. These incidents occur daily and could easily be avoided with a bit more space.



- Main kitchen
- Office space
- Show kitchen
- Corridor
- Dishwashing room
- Storage room

The problem of corridors

The spatial arrangement of rooms in the kitchen poses one of the most significant challenges for the staff. Primarily consisting of corridors, it results in extended transportation routes for goods within the kitchen. Additionally, the division of kitchen spaces into northern and southern sections is suboptimal. Goods must navigate through the guest sales area, a cumbersome and unhygienic process.

The layout of the corridors makes little sense, occupying more space than the actual kitchen areas. This issue arises because the dishwashing group's employees are not permitted to traverse the kitchen. Consequently, a small kitchen is surrounded by a vast corridor.

ETH's fire regulations prohibit leaving anything in the corridor, which is impractical for daily use. For instance, during lunchtime, dish carts unavoidably need to be parked in the corridor next to the show kitchen. While technically forbidden, it is unavoidable as there is no other area near the kitchen for dish storage. In the event of an unexpected external inspection by food inspectors, employees must discreetly ensure that all corridors are cleared of dish carts.

Another critique of the corridors is that in the southern section, they diminish the natural light entering the kitchen. The limited and small windows hinder adequate lighting. Additionally, considerable distances must be covered to retrieve cooking utensils/tools from the pantry. This becomes a potential hazard, especially when chefs need new tools, as spending time away from their cooking station carries a risk of accidents.

The narrow corridors also pose a collision risk, with employees swiftly maneuvering with food through the corridors and around corners, increasing the likelihood of collisions. Crossing paths with two food carts is often challenging.

Sascha's proposed improvement involves spatially separating the kitchen and the dishwashing section. For instance, relocating the kitchen to the southern wing and dedicating the northern wing entirely to dish-related activities. This eliminates the need for corridors and creates numerous new workspaces. Such a change would contribute to better working conditions for both departments and, aside from relocating the dishwashing conveyor, would not be excessively costly.



Temporary plate trolley storage in the corridor



Dry storage room in the basement of the HPR building



Vegetables in the corridor of the cold room shortly before processing



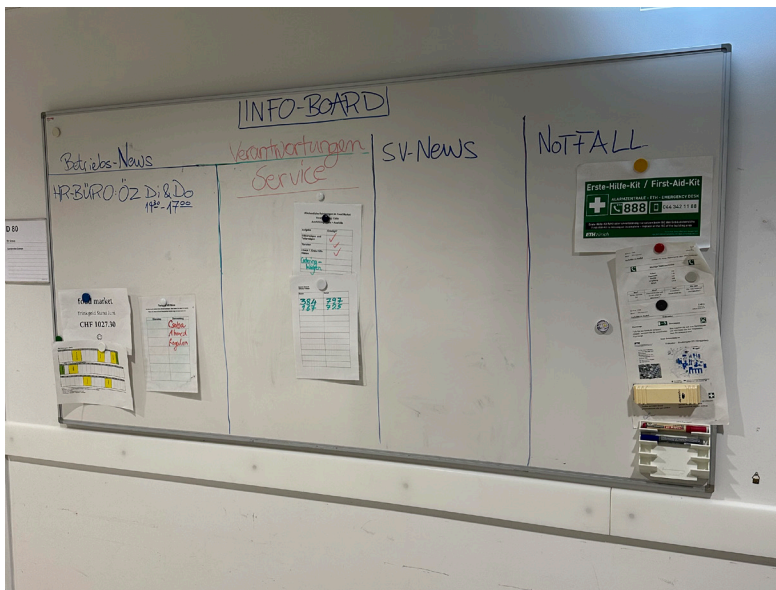
Critical reflection

After a day in the kitchen, it stands out to me that the layout appears as though it was never designed for a kitchen but rather repurposed as one. The rooms are all very interchangeable and don't stand out positively in their functionality. Throughout the day, there's a prevailing sense that these spaces were not kitchens originally, and that's exactly how it felt. All the rooms are too similar and differ only in the machines they house. Oversights, like not considering enough space for employees to use a pizza peel to put a pizza into the oven without accidentally bumping into their colleagues, become apparent. The issue of limited space, where two storage carts can cross paths in the kitchen, highlights the lack of thoughtful planning in the layout. Additionally, the long transport distances of goods from the storage to the kitchen, passing through office spaces and the dining area, exacerbate the challenges.

Individuality should always take precedence over the alternative reuse in case there is no longer a need for a kitchen in this location in a few years, and the space needs to be repurposed. While this might seem economically favorable from a real estate perspective, it generates an incredible additional workload for the workers on-site.

It would be advisable, in future space planning for specific purposes, to involve someone who will later be working in that space. This approach could help avoid such problems. Many of their points may not be feasible from a fire safety perspective; however, it is essential to push these guidelines as far as possible in favor of the well-being of the employees.





Diary Cook (Sascha):

- 6:30 Meeting with Sascha at the Food Market Mensa.
- 6:33 Dressing in work clothes in very small changing room. Each employee has a small Locker.
- 6:35 Showing the refrigerator and freezer rooms.
- 6:37 The kitchen is very winding and consists of countless individual small rooms.
- 6:41 Sascha is the one who coordinates all operations of the employees and helps when there are internal problems.
- 6:45 The 2 bosses and Sascha have their own very spacious office, all other employees have no place of retreat so far.
- 6:49 Each employee is responsible for something, so someone for meat, another for vegetables and someone for cereals. Each also has his refrigerator chamber and is responsible for its order and cleanliness.
- 6:53 It becomes apparent that some have a very different idea of order than others.
- ~~6:57 Als erste Arbeit muss ich Blumenkohl schneiden mit einem Ikea ähnlichen Messer.~~
- 6:57 The first job I have to cut cauliflower with a knife similar to one from Ikea.
- 7:01 Viji is the person responsible for the vegetables. Together we have to cut 100 kilos of cauliflower.
- 7:08 In front of me there is a window facing the aisle through which everyone looks in as they walk by to see what we are doing.
- 7:14 Each cauliflower must be quartered and defoliated, and then marinated.
- 7:18 The lack of space behind the work table always becomes a problem, as the trolleys have no room to pass.
- 7:31 Due to the huge cooking pot in the background, the floor starts to get slippery, which gives one trouble.
- 7:38 The pots for storing the cauliflower have to be fetched in the dish room, which is a small world tour through the different corridors and rooms.
- 7:48 Again and again caterpillars come out of the cauliflower, which in my opinion testifies to quality and promises a product close to nature.
- 7:56 Slowly it starts to get noisy because of all the different machines, which makes communication difficult.
- 8:07 From the outside it looks like a big mess, because everyone is doing something completely different.
- 8:12 The employees clean up everything beforehand, since each workstation is used by several people at the same time. Cleaning rags are in short supply.

- 8:21 There is a lack of the same storage container. You have to organize among themselves.
- 8:28 The work shirt is rather small for me and very short. I have to pull it down again and again because it always slides up under the apron.
- 8:35 The cutting of the cauliflower is finished. I take them to the cold storage room.
- 9:45 Now I go with Sascha to the photo shoot of the various menus. They are always photographed anew every day.
- 9:48 The photo station looks much smaller and less professional than expected.
- 9:51 The photographed presentation plates end up in the trash afterwards, because they have been standing around for far too long.
- 9:56 Again and again, I noticed the long walks through the aisles to the different preparation stations.
- 10:01 Time for a little coffee. Everyone makes his break at a different time, because you can not simply pause while cooking.
- 10:05 There is a small coffee maker in the storage room for the glasses. However, you can not stay there. You spend your break in the Mensa Room.
- 10:07 What is striking is that in the kitchen no one is the boss of anyone else. Accordingly, it is also quite chaotic.
- 10:09 It feels like every employee likes to have me as an assistant, because it makes one's job a lot easier.
- 10:14 Now I have to assemble burgers. Note that the burger patty must be reversed, because the water flowed through the storage to one side. Underneath comes a craquette-like patty and at the end on top a processed cheese.
- 10:21 This work is quite boring and very monotonous. You always turn your body from left to right and vice versa to get all the ingredients.
- 10:30 For me as a cheese hater, the taste is quite strong and penetrating.
- 10:36 There is a huge mess of different smells in the kitchen.
- 10:42 You have to ~~keep patting around~~ clean your workplace again and again, which takes up what feels like half of your working time.
- 10:50 Sascha tells me that due to the current political situation, many recipes from the portfolio can no longer be cooked because they are no longer profitable. That's why they have to keep creating new meals.

- 11:07 Now I have to cut limes, which will be used as toppings on the menu.
- 11:18 Previously I cut my finger a bit while cutting cauliflower, which is now causing a burn when combined with lime juice.
- 11:20 Now there is a short speech by Sascha for all employees, in the hall with the order counters, so that all employees know what is on the menu plan today.
- 11:23 Attention is also drawn to possible allergens.
- 11:28 Each cook now brings their food to the 3 ordering areas.
- 11:30 The canteen opens.
- 11:35 There is no specific role assignment of who does which menu. One helps each other where one can. There is a rule that no more than 5 portions per dish may be prepared.
- 11:43 I have short time to take something to eat myself, so that I am ready again when the rush hour starts in 10 min. I take a break again alone.
- 11:57 Now I have to first scoop the sauces next to the rice in the Fire area and then place a piece of cilantro on top.
- 12:07 Again and again I burn my hand on the hot surface that is supposed to keep the dishes warm.
- 12:16 Because there is little rush for my menu, I am ordered to the pasta station.
- 12:21 I have to cut pizza and help arrange the pasta plates at the same time.
- 12:31 When an ingredient is running low, you have to call out the kitchen so they know what to bring. Sometimes it's not so easy to know when it's the right time to reorder something.
- 12:35 The atmosphere is more tense than before in the preparation phase. Everyone wants to prevent a bottle neck from occurring.
- 12:47 Now I have to get new plates in the dishroom, which is not so easy, because there are empty plate carts all over the place waiting to be refilled. You can't get through at all.
- 12:55 A chef tells me to be a little more economical with the bacon in the portions, since it doesn't have more in stock.
- 13:01 Now that there are fewer customers, a few employees start cleaning the cooking utensils.
- 13:07 I start cleaning the large stationary cooking pots with a ~~steel towel~~.

steel mook. This is quite a tiring thing to do.

13:15 I have to get back to serving as the 2nd wave of students begins.

13:21 For the first time I see someone I know ordering. You are really in your moodle when you're scooping, so you don't even notice the people around you.

13:31 Now I have to finish cleaning the pot and later ask Sasha a few questions for our project.

13:45 Sasha's and my shift ends now. I throw the used apron and top into the designated bin in the prep room.

Maxim Kästli

Biochemistry student at ETH in the 5th semester of his Bachelor's degree.





Maxim in HCI J174, solving tasks for the upcoming lesson

Maxim is a 20-year-old biochemistry student at ETH, currently in his 5th semester of the bachelor's program. His daily routine is characterized by long lecture days and very brief lunch breaks. Maxim resides in Männedorf, a village on the southern slope of Lake Zurich. Living with his family allows him to save a considerable amount of money that he would otherwise invest in renting his own place. In return, he accepts the trade-off of a one-hour commute every day to reach the Hönggerberg campus.

Maxim utilizes his time on the train to prepare for lectures, solve any potential homework, and even as a designated lunch break. With lectures scheduled only on 3 days, he has the luxury of using the remaining 2 weekdays to earn money or enjoy free time. Currently, he provides tutoring to high school students as a side job, but he is also actively seeking another part-time job with regular hours, though he has not found one yet. Additionally, each semester, he spends three intensive weeks in the laboratory, crucial for meeting course requirements.

Given the density of his lectures and short breaks, forming connections with other biochemistry students proves challenging for Maxim. Interaction during class is limited as he needs to focus on listening, and lunch breaks are not conducive to socializing due to the variety of elective courses chosen each semester, preventing students from having lunch in the same place. Moreover, lunchtimes often need to be used for transitioning to the next lecture. Another factor contributing to the difficulty in making connections is that only around 30 students in his year are studying biochemistry, leading to many lectures being combined with students from different programs. Establishing connections with these students becomes even more challenging as they often share only one lecture with Maxim. ■



Lunch at Höggerberg

Due to Maxim's tight schedule, he often finds himself with no time to simply grab a meal. In his short breaks, which last only about 15 minutes, it is impossible to go to Fusion Mensa, Food Market Mensa, or Rice Up. The wait times to receive the food are too long to return in time for the next lecture. Even if one could barely make it back in time for the lecture, eating during class is frowned upon by professors, as it could create disruptive noise.

Therefore, the only solution is to shop at Coop in the morning before lectures or bring food from home, which then must be consumed cold because there wouldn't be enough time to warm it up before the next microwave opportunity.

In addition to the already short 15-minute breaks, one must also subtract the time needed to reach the new lecture hall. This often results in effective breaks of only ten minutes, which must be used to eat something.

Maxim would appreciate it if lunch breaks were extended and the remaining breaks during lectures were shortened. This would lead to a more enjoyable lunchtime, during which he could also spend time with his fellow students. A longer lunch break could provide students with the opportunity to relax and nourish themselves in a pleasant atmosphere, strengthening community cohesion. Alternatively, allowing food in lecture rooms could be very helpful in extending the lunchtime into the lectures.

Own opinion

The concept of maximizing the continuous utilization of lecture halls by avoiding long breaks is fundamentally beneficial from a real estate perspective, as it prevents daytime vacancies and reduces property costs. One idea could be the reintroduction of online lectures if the concept involves foregoing extended breaks and doesn't emphasize the communal aspect. This way, the expenses for a large lecture hall could be saved, allowing students to attend from the comfort of their homes. This approach worked effectively during the COVID-19 pandemic, and the technical infrastructure is already in place. However, it may conflict with the values of the ETH of a traditional in-person university experience.



Lunch at Höggerberg (Travel times one way)

HCI J Floor (Maxim's floor with the most lectures) **1.**

to Fusion Mensa:	1:30min	1.
to Food Market Mensa:	4min	2.
to Rice up:	6min	3.
to Coop:	2:30min	4.

HIL E Floor (Lecture hall) **2.**

to Fusion Mensa:	3min	1.
to Food Market Mensa:	4:30min	2.
to Rice up:	5min	3.
to Coop:	2:30min	4.

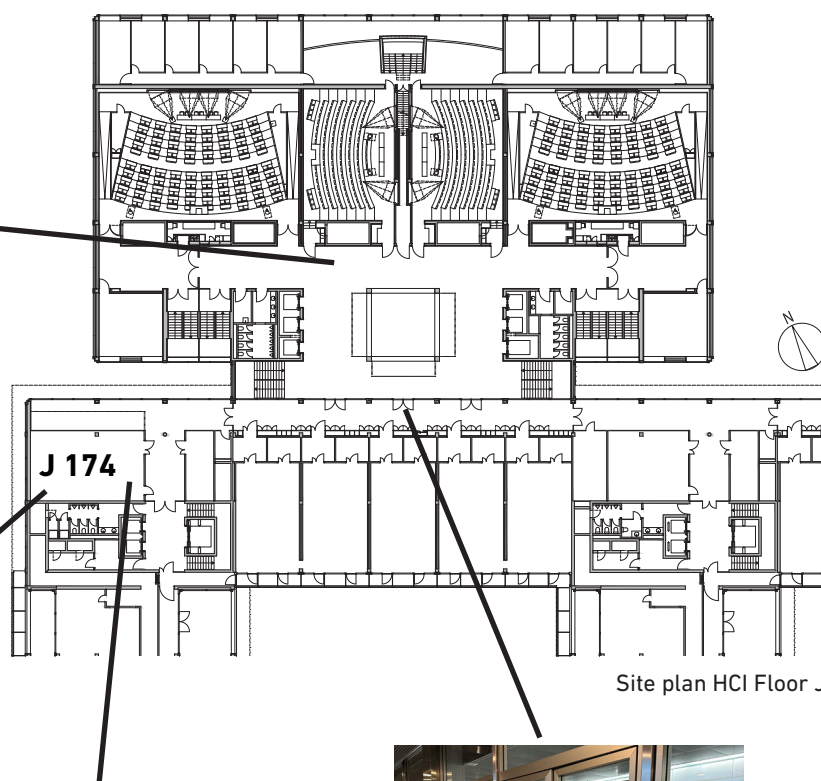
HPH E Floor (Lecture hall) **3.**

to Fusion Mensa:	3min	1.
to Food Market Mensa:	1min	2.
to Rice up:	7min	3.
to Coop:	3min	4.

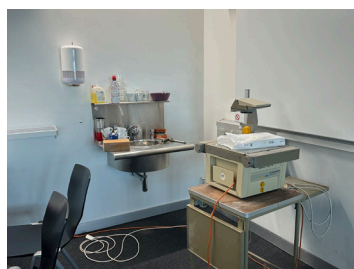
Free workspaces in the HCI



Uninviting and always occupied workplaces



Site plan HCI Floor J



Dirty sink and overhead projector in J 174



Maxim and fellow students working at J 174



Intimidating entrance door to the chemistry wing of the HCI

Due to the fact that Maxim only has lectures and no dedicated workspace, it is very challenging for students like him to find a quiet place where they can study or solve tasks without interruptions. Often, when Maxim wanted to work independently at ETH, he had to search for a spot in the stuffy and often overcrowded chemistry library or sit at a table in the hallway outside the lecture halls. However, working in these places is practically impossible due to the ambient noise being too loud, and the constant flow of people makes focused work unfeasible.

As a result, Maxim had to continually seek new ideas for undisturbed workspaces. He began occupying various meeting rooms in the chemistry laboratory section. He noticed that some rooms were never actually used. One of these rooms, J174, a small lecture room with few tables and chairs, became his go-to spot. The room seemed more like a storage area and was in disarray before Maxim and his fellow students tidied it up a bit. The sink is still filled with unwashed dishes and trash.

Since then, all biochemistry students use this room as their refuge when they want to work undisturbed. However, it is not particularly pleasant to work there, and it becomes evident why

this room is likely avoided by others. As the room is located in the sector of chemical laboratories, the ventilation is set up to quickly extract any potential chemicals. This results in a constant uncomfortable cold air flow in the room. While this airflow is probably imperceptible when moving around the lab, sitting at the table for an extended period makes one quickly feel cold, increasing the risk of catching a cold compared to another room.

One positive aspect is that the room is almost always available, even though anyone can see inside, and technically anyone could work there. However, it is quite discouraging for many students to simply settle in a room, even if it is usually unoccupied.

This raises the question of how many other rooms there might be that are rarely used but could be optimally utilized for students to work in. So far, the reality is that students struggle to find a free workspace at ETH. This issue intensifies during the summer study period when even more students need a quiet place to study. At that time, it is practically impossible to find a spot, although many rooms are likely vacant as the ETH experiences much less activity during this period.



Diary Biochemistry Student (Maxim):

- 07:45 Meeting in front of the HCI with biochemistry student
- 07:47 Arrival at lecture hall HCI J3 two minutes late
- 07:50 The lecture room is much smaller than usual lectures and the professor looks very young
- 07:54 The ambient noise in the room is so suppressed that even the chatter of a keyboard would be considered annoying
- 07:59 The person to my left has developed a special way of typing on the keyboard to make as little noise as possible. It looks a little bit like a blind person writing.
- 08:01 The first time is to interrogate something like whispering. However, it immediately falls silent again
- 08:04 I'm wondering about the title: „Organic chemistry for biochemistry and chemical Biology.“
- 08:07 The small whispering intervals start to accumulate
- 08:09 The first time I have the feeling that I have understood something from the lecture
- 08:13 The creaking of the chair is starting to get on my nerves. Every time I lean back more or less strongly, the backrest makes noise.
- 08:19 The professor starts asking questions and everyone is much calmer again.
- 08:24 ~~The creaking~~ Others seem to have the problem with the creaking chairs as well
- 08:27 The professor takes a 15-minute break.
- 08:30 Every person in the room seems to immediately make their way to coop.
- 08:42 Everyone is now eating something in the lecture hall before the lecture continues.
- 08:50 The lecture continues and some new students joined.
- 08:55 My cell phone is now vibrating almost continuously, because the others of the group will meet at 9 o'clock

- 09:01 My attention is now noticeably reduced. I keep going back to my phone to scroll an Instagram
- 09:10 Slowly, I start bobbing my foot in time to the second hand of the clock
- 09:16 Now I discover in the 2nd front row a comrade from highschool to whom I actually had no more contact.
- 09:19 End of the lecture. Everyone is knocking on the table.
- 09:20 Maxim is now going to an empty lecture room to solve the homework he has to do until today.
- 09:25 This lecture room is more or less their living room where everyone spends their free time
- 09:35 The temperature in the room is very low and the AC is really strong. I need my pullover.
- 09:46 I'm now starting to get a little bit hungry. The lecture listening is more ~~expected~~ exhausting than expected.
- 09:54 It is so quiet in the room that the air conditioner seems really loud in comparison.
- 10:16 Everyone is quietly working on his or her job. There is little interaction between students. If there are conversations then about work.
- 10:32 Every 5 minutes I put on and take off my sweater, because it is too cold without and too hot with.
- 10:55 I am wondering why the glass bottle with the murky water¹³ in the corner on the floor. It somehow looks like it has a use
- 11:04 A student explains to me that this is the water that has dripped from the black board at the sewage. But why one collects that he could not answer.
- 11:16 Now it's time to grab some food. We're going to the rice up as usual.
- 11:30 We're now eating the food in front of the HIL. He is normally eating the food alone, because each student has an individual schedule.
- 11:46 The lecture starts now in the same room as before. In the HCI 73.

- 11:50 It looks like not everyone got enough time to eat before. Some are eating now during the lesson.
- 11:56 A big difference to the classrooms I know, is that each of these desks has a Microphone to answer questions of the professor. I'm wondering if it would be possible to misuse it.
- 12:01 One big difference I recognized, is the chair. The one now is not creaking, but other ones in front of me are creaking.
- 12:02 The rattling of the keyboards is notable. It creates a nice ^{steady} background sound.
- 12:09 Remarkable is also the variety of different water bottles from the students. They look like ~~some~~ small liftoff columns where each student can represent himself/herself. There are some with a cow pattern, different stickers and also one with a really strange mouthpiece.
- 12:17 It's really difficult to follow the professor, what he's saying. The lunch makes me very tired.
- 12:28 The not very long legroom of the tables is really annoying me. I'm always banging my knee at the metal tube of the AC coming out in front of the writing surface. I won't imagine which problems a really large person is facing.
- 12:35 There's a break from 12:32-12:50. Once again the break is the main time to chat with each other, but now the students aren't the same like in the morning. Which results in some different friend groups for each course.
- 12:51 ~~The break~~ During the break most of the students stay in the Lecture room. You're only leaving it if you have to go on the toilet.
- 13:00 The Professor is now talking prokaryotic genes structure. It's impossible to understand what he's saying.
- 13:09 I can hear in small distances the belly rumble of my neighbour. She's the same one who ate in the beginning of the lesson her food during class.
- 13:15 It is striking that the chemists use for every thing, no matter how trivial, an

Abbreviation.

13:20 The lesson is starting to get really, really boring. He's now since 10 minutes stuck describing something no one in the room understands.

13:26 I'm now more and more focussing on the time and hoping the lesson ends soon.

13:37 It would be interesting to know why there are three projection screens, but only one beamer heading towards the screen in the middle.

13:40 This is the ending of the lesson, but now they have one exercise to do.

13:45 Again a small coprim to grab some coffee.

13:50 The students have some time to look at their solution of the exercise they did at home and then compare it with the solutions provided.

13:52 I'm feeling really suspicious, I'm the only one without a computer, just writing my diary.

14:00 There's not much chatting, even though we're allowed to talk to each other. Complete difference to an architecture lesson.

14:05 Even with the help of the solutions, Maxim is struggling, to get the script to run. He looks really confused.

14:14 Because of the missing social interaction everyone is trying to understand the solution alone, which is really something new for me as an architecture student, who is used to do everything in group work.

14:19 It's now been a really long time to solve the questions and I'm feeling really useless because I can't help at all.

14:28 My back is now starting to hurt a little bit from all the sitting on the same chair with not much leg space.

14:37 And again an other break. Nearly everyone is staying at his/her place.

14:46 It's remarkable that during this break the noise level is much higher. It feels like everyone is getting to know each other.

14:50 It's the end of the pause and now an assistant is going to present the solutions. Afterwards everyone has to solve a quiz by it's own.

14:59 The trend with the different water bottles is not only spread through the students, but also the assistants and the Professor have a special bottle.

15:04 Now we have to do a quiz. My goal is to get one answer right.

15:15 After some discussions, I got kicked out of the lesson, because the quiz counts for their grade.

15:19 I'm now waiting in front of the HV ~~out~~ until the quiz is finished.

15:41 Maxim comes out of the building and immediately says goodbye, as he has to go to a dentist appointment



Marcel and Nadine

Post officers at Info Point in Hönggerberg campus



Nadine and Marcel in the Info Point at the Hönggerber campus next to Globi mascot

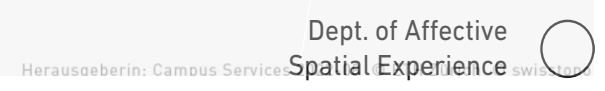
Marcel and Nadine both work as post officers at the information point on the Hönggerberg campus. Marcel is 60 years old, the oldest member of the team, and has been working there for over 20 years. He loves what he does; to his mind, it's the best job he could find because it's so varied. Nadine is younger, around 30, and is the team manager. Not only does she work at the Hönggerberg information point, but she also sometimes gives talks to explain what her department does and offers as a service to users of the ETH buildings.

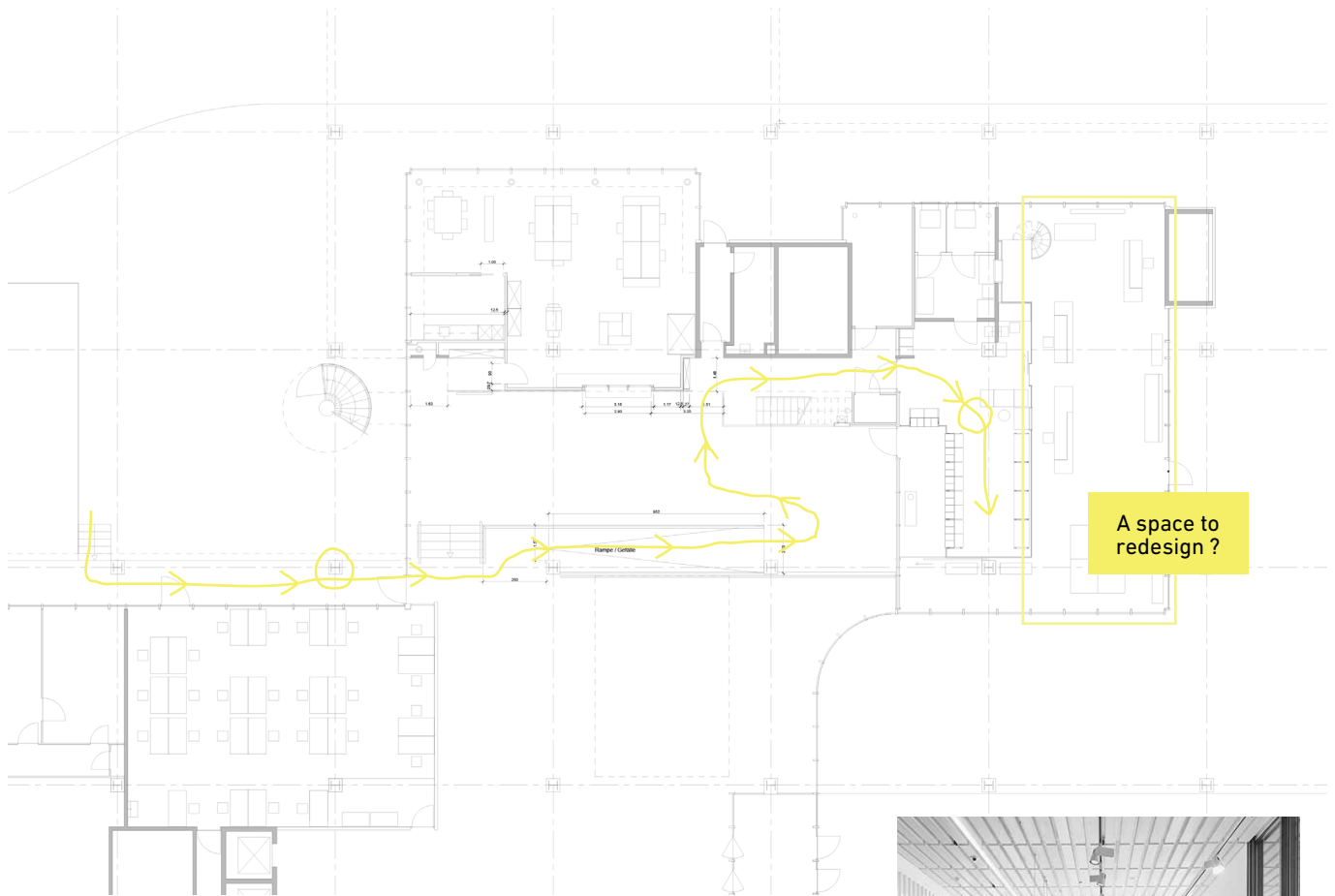
Nadine and Marcel both work 100% from Monday to Friday. The manager is sometimes able to work from home, but the rest of the employees can't really do so, as their presence is required to complete the tasks. There are two different shifts, one starting at 7am and finishing at 4.10pm with an hour's break from 11am to 12pm, the other starting at 7.45 am and finishing at 5.15 pm with a break from 12.15 pm to 1.15pm. They have the opportunity to take a few breaks during the day while ensuring that there is

always someone at the reception desk, which is why they usually take short breaks individually.

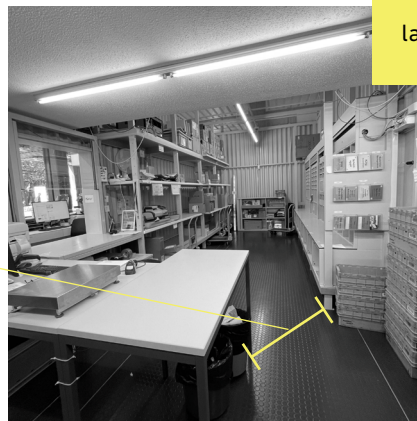
Their job is no ordinary postman's job. They have to be able to send a simple letter, give directions to students lost on campus, pay the salaries of certain 'guest' professors, and welcome children who come to learn all sorts of things thanks to Globi, the scientific mascot for the younger ones, and many other things. As they have to be very versatile and are constantly in contact with users, English is very important to them. Although the team is not composed of people from Switzerland, all the employees speak at least German and English so that they can answer most of the students' questions without there being a language barrier. They both live in the Zürich area and never come by car as parking is far too expensive. Therefore, they use the bus and train to get to ETH. They both said that the mobility to come to the Hönggerberg campus is quite bad as it is only accessible by bus and by car. There is no train, tram or metro going there, which would be much faster and easier. ■



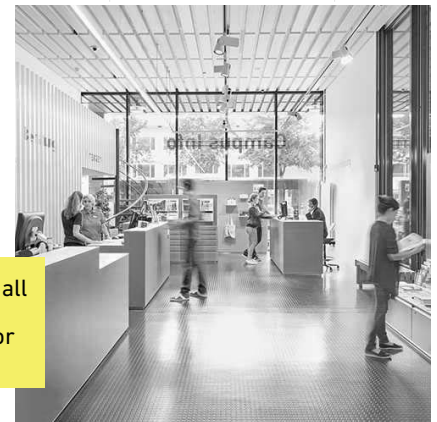




The space at the Information Point on the Höggerberg campus was not designed for such a variety of tasks, which is why many of them cannot be carried out or are but with struggles. Firstly, the goods that arrive daily have to be transported through a number of rooms, doors and inevitably obstacles. This is not yet the main issue. It's the lack of space that poses a big problem every morning, because the storage area is far too small to be used in a pleasant and efficient way. The racks are too wide, or rather the corridors are **too narrow**. The shelves are always overcrowded. There's a real lack of space, both for storage and for mobility.



Huge entrance hall
VS
lack of space for
the storage



On the other hand, the reception area is very spacious. Customers entering this large hall are directed to various offices with staff who can help them directly. Although this entrance hall is currently pleasant for customers, employees are wondering whether it might not be possible to redesign it to save space for storing deliveries.

Bumping into the
pillar everytime.



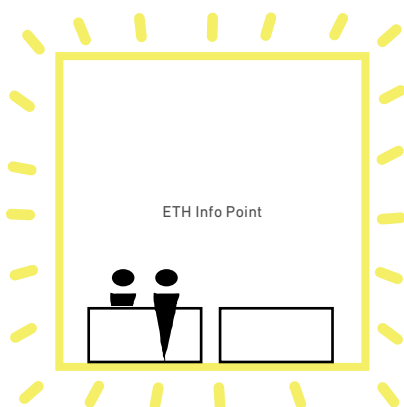
When I entered into the workspace it seemed optimal: a spacious double-height entrance hall with plenty of natural light coming in thanks to large windows covering almost the entire height of the façade.

After talking with the employees my point of view changed a bit. In fact, they explained that while this glass façade brings in a lot of light, it also brings in a lot of heat in summer and cold in winter. To regulate these temperature differences, an air-conditioning system is in constant operation, making a considerable amount of noise. As a result, their comfort is at stake during the whole years round.

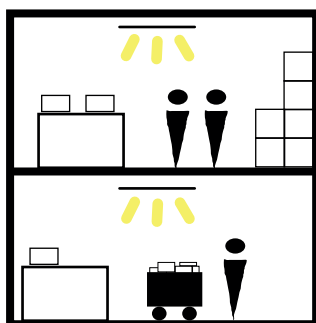
They pointed out something I hadn't noticed at first glance. Behind the reception offices, the building consists of two floors with no natural light. The ground floor have an office and a storage area for deliveries. The only way upstairs is through a narrow spiral staircase that leads to a small corridor at the end of which are two office tables and a kitchenette with no access to water. Once again, the spaces have not been thought through, so they don't work well and cause a lot of discomfort, mainly for the employees and their tasks.



Entrance hall



Office + Storage



My own opinion

I was lucky enough to share the day with two employees who did not always have the same opinions, so I can now express my own feelings. For me, this day was rich in information and discoveries. I understood the complexity and multifunctionality of the Info Point. To talk more specifically about the workspace environment, I think it is totally unsuited to what they are asked to do. The only really pleasant space, the lobby or reception area, is unfortunately the one that is least efficiently used. If I would have been an ordinary customer, I would never have noticed the many discomforts present in their professional daily lives. I'm grateful to have spent "A day as..." with them, and thank them again.



Diary Post Officers (Marcel and Nadine):

- POST OFFICER / INFO POINT - 04.10.23

- 09:52 - "You are more than welcome to stop by now." I will finally be able to ask all my questions.
- 09:58 - I'm going downstairs in the ONA building where we asked the day before for a person who we could follow.
- 10:00 - I arrive in the space where nobody is there, I'm asking one man that is smoking outside that I'm looking for "Marcel Herzog". He laughs at me and tells me that I'm at the wrong post office. He shows me on Google Maps exactly where I have to go.
- 10:10 - I'm taking the bus to Hönegg after going to the wrong post office.
- 10:25 - I'm entering in the Info Point at Hönegg. The hall entrance is bright thanks to the glass facade.
- 10:26 - I approach slowly and shyly one of the desks to ask for "Marcel Herzog". As soon as I said his name, his colleague opened a sliding door and he came out from his really small office.
- 10:30 - We sit down next to the glass facade and talk for
- 10:50 - After having asked him many questions about his job, he showed me the different spaces.

10:55 - He's showing me the storage room in the back of the main desks. He's explaining to me that every morning they get many packages and have to deal with the very narrow and small space they have for them.

11:12 - The narrow, steel and quite dangerous spiral staircase... Marcel tells me before going up to be careful.

11:17 - Arriving upstairs (alive!), I enter a very small called "office space" but that would be a corridor to my mind.

11:20 - In the back of that "office space", they have a room where they can eat.

11:30 - He tells me that it's his lunch break and if I want we can meet up again at 12:30.

11:40 - I go to HPH building for the "Picnic" that Uly and Lucia are organising. We are talking, we are looking at, I feel quite uncomfortable being there but I'm forcing myself to stay.

12:31 - I'm going back inside the Info Point building, I see once again Marcel. He is with Nadine, who is the person I was writing to by email.



- 12:35 - They both welcome me and then I followed Nadine for the rest of the day.
- 12:50 - She is telling me why she couldn't meet me up this morning - she had a presentation. She shows me the presentation, as it was about explaining their job. Thanks to that I understood that their job wasn't only to be a post officer but they had also many other tasks.
- 13:02 - We are going to the bank office they have. You need a special code to enter that space, as there is the treasury and a safe box in there. The space is small, but big enough for the use of it.
- 13:11 - I'm impressed that they have access to money like that, even more because they are not hired by the Swiss Bank. I think is interesting.
- 13:15 - She is showing me where the delivery trucks are coming and then what (way too long) pathway all the packages have to go through before arriving in the office.
- 13:22 - She is taking me in the backside of the office and telling me that this place is way too small (once again...).

- 13:26 - I am asking her many questions. She seems really happy to reply to all of them.
- 13:36 - I'm taking a picture of both of them (Nadine and Marcel) in front of Globi, which is an astronaut mascot for kids coming at the ETH.
- 13:43 - I'm thanking them both for this day. They tell me that I'm more than welcome to come back again if I have some other questions.
- 13:47 - I'm leaving the space and go back home.



Merita

Member of the Facility Management in the Höggerberg Campus



Merita replacing her sick colleague

Merita Shehu is a 31-year-old female staff member of Vebego Company, an outside firm hired by ETH. Merita is from Kosovo, but grew up in Italy and moved to Lausanne 3 years ago. She therefore speaks Albanian, Italian and some English. During the week she lives with her family, which resides around Zurich, while on weekends she returns to Lausanne to her husband.

After completing her compulsory education, Merita trained as a cashier. Later, she started working in facility management, a job she enjoys very much. Among the Vebego AG employees working at ETH, Merita is one of the few with European origins. Most employees come from outside Europe, and often their degrees are not recognized in our country, forcing them to take jobs that do not require language skills and school certificates.

Merita is young and started working at ETH on the Höggerberg Campus eight months ago. She is in charge of the HIA, HIB, HIF, HIL, and HIT buildings. Her boss, called "objective chef," is in charge of organizing the division of the team and the tasks of everyone within these five buildings. Similarly, for other groups of buildings on the Höggerberg Campus, there are other "objective chefs" who coordinate the work. The "objective chef" is also the direct contact person in case of need.

As one of the newest arrivals, ready to adapt and always full of enthusiasm, Merita has taken on the role of "wild card." They move her from day to day in case someone is absent, or ask her to take care of non-routine jobs, such as cleaning stains on steel. She works six hours a day, starting at 6 a.m., like all her colleagues, and finishing at 12 noon. Very few of them work until noon; in fact, at working in facility management at ETH also means having very short hours (2 or 3 hours), since all classrooms and main hallways have to be ready before classes start, which is at 8:00. For this reason, most facility management members have a second (or even third) job to supplement their salary. These very short work hours, combined with regular after-work commitments, added to transportation time, lead to an almost complete lack of team spirit. In addition, starting the shift so early leads many to have to opt for the car because of the lack of public transportation. ■



About the day of a member of the Facility Management at the Höggerberg campus

The workday:

The workday at Vebego AG in the ETH Höggerberg facilities begins promptly at 6:00 a.m. with badge activation via each employee's personal cell phone, located in the B-floor storage space where the objective chef resides. Inside the storeroom are lockers in which personal belongings and aprons to be worn during the work shift can be stored.

After equipping themselves with their aprons, each employee proceeds to pick up the materials needed to perform their assigned cleaning and hygiene tasks. At this time, the objective chef communicates any changes or specific instructions regarding the day's work.

Afterwards, each employee heads to his or her usual work area (unless changes have been made) to retrieve the necessary tools and materials, such as cleaning carts, toilet paper, towels, vacuum cleaner, mop, and disinfectant, in order to perform his or her work tasks. Those rooms are for us almost hidden. Non physically, but I never saw them before, because I have nothing to do with those rooms. Merita's work area was, in the day I followed her, the E floor of the HIL building in the early morning, then the B Floor, then the HIA building and at the end the archive in the HDB building.

It should be noted that the work performed under these conditions is mainly solitary and requires a high degree of autonomy, as each employee has an individual area of competence and specific tasks to perform independently.

Despite the few hours available before classes begin and the huge size of the various ETH buildings, Vebego AG manages to organize and execute the cleaning work optimally.

Workhours and team spirit:

Vebego AG employees perform their duties in a highly efficient manner in order to complete the work in the shortest possible time. This efficiency is often motivated by the fact that most of the employees have additional jobs to compensate for the limited hours offered at ETH, as the lessons start at 8:00 a.m. Even those who work a six-hour period often don't do breaks to end their shifts early, probably due to a lack of team spirit, in part due to the autonomous division of areas of responsibility and very short work hours. Indeed, employees have no real contact with colleagues

Spatial and affective experience:

During my 'A day as...' I was able to see how Merita behaves in different buildings, depending on their context. In the HIL Merita could **move freely** and noise was certainly not a problem, as the other ETH users had not yet arrived. In general, in the HIL, I find that all Merita's colleagues spread themselves out quite a bit, even leaving the Hoover in the **middle of the corridor**, for example. The work in the HIL, where most of the employees are, is very well structured, as you never clash and never have to wait to do your work. In the HIA building there was no colleague of Merita's, in fact, despite the fact that she told me several times that her work was very lonely, I could see the difference in her mood. In the HDB library, on the other hand, she was with two other colleagues. Here they could spread out and working in the archive, which is on the lower floor, there was a **feeling of isolation** whereby they felt free to shout and laugh loudly while working, while forgetting that there were offices on the upper floor.

In a scenario where **the spaces used are divided in zones** depending **on the** time of day, then there might be a chance for more bonds to be formed, as people would work for more time, in the same space.

Another **scenario** could be cleaning while the other users are there, thus **hiring fewer staff** but making them work longer hours. For example, finish cleaning the classrooms that are used for lessons and the toilets, and cleaning the more "public spaces" such as corridors, lifts and the rest of the spaces.

The badge for the HIA, HIB, HIL, HIF and HIT buildings is located in the storeroom on floor B of the HIL building. Each employee swipes his or her cell phone on the badge through the Vebego app.



An employee's trolley. The only car

Spatial Experience

The structure of Vebego AG

Graphic representation of Vebego AG's organizational structure through equipment and outfit.

Head of Vebego



Vebego ETH Management



Objective Chef



Full-time cleaner

in and around ETH buildings

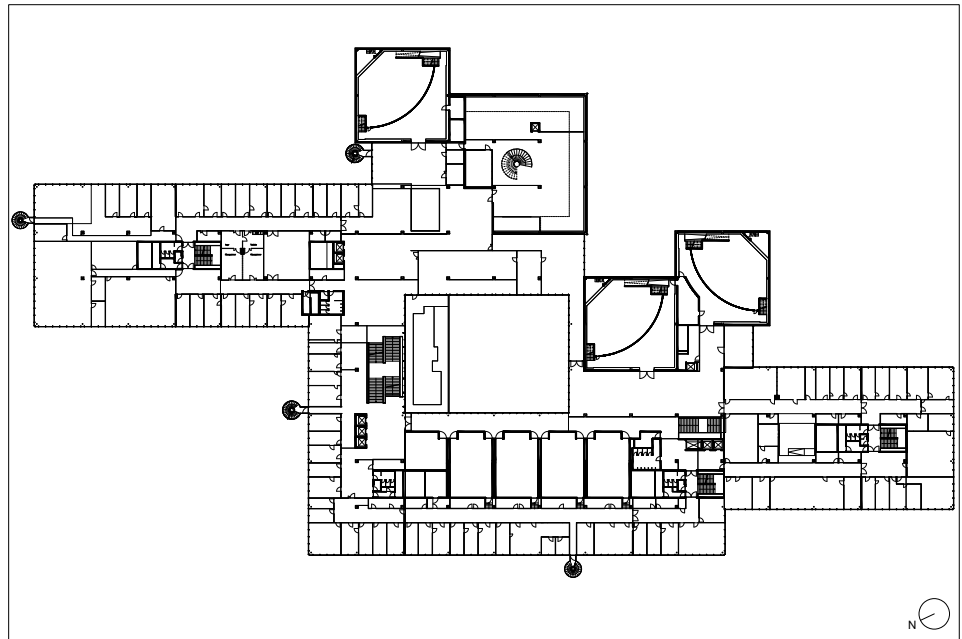


Part-time cleaner

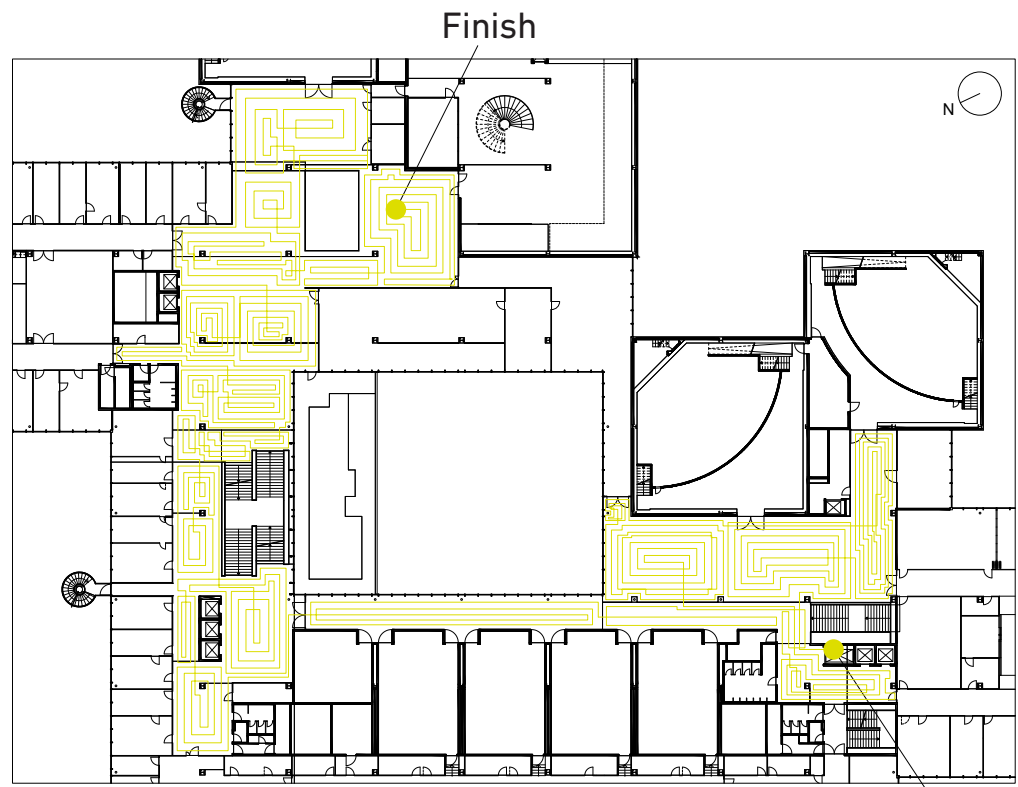


During my **experience** I saw another reality of the ETH. Never-before-used classrooms, totally unknown spaces and 'secret' corridors. In addition to the fact that you have discovered more buildings and spaces in 8 months than I have in 3 years, the general experience, from the very first **arrival**, is different from that of a student: in fact, when I arrived in the square in front of the HIL, everything was still closed, empty and silent, giving a feeling of unease.

The space they have available, on the other hand, seemed sufficient to me, although I personally think it might be nice to create a few more spaces in the various buildings, where those who work in the same area can meet, even if they do just 5 minutes break.



Cleaning a small lecture hall or seminar room requires at least thirty minutes of work for each. At the same time, cleaning the hallway on floor E of the HIL building on the Hönggerberg campus with a mop machine takes two hours and is a weekly job. Because of the considerable size of the ETH buildings and the need to complete cleaning tasks in areas designated for daily classes, a large team is needed that can work simultaneously in different areas of the buildings to ensure that the work is completed in time for the start of classes.



Diary Facility Management (Merita):

3 October 2023

Cleaning staff

5:46 AM I get off bus number 80. It is still quite dark and I am tired. Everything is very quiet, probably everyone is very tired. The square in front of the ETH-HIL Building is almost deserted: a few women are walking towards the HIL (I think they will be part of the cleaning team) and a man is smoking a cigarette, probably before starting working. He is also in his own thoughts.

5:50 AM I enter in the HIL. Everything is empty and silent. I look at the building around me and it looks different, despite the fact that I have entered it several times before. I think it's because my eyes are usually caught by people when I enter here.

5:52 AM I'm in front of the elevator waiting it to go down to floor B, where the cleaning staff's storeroom is.

5:53 AM I get off the lift and there is a lot more movement on floor B than in the rest of the building. I see at least 10 women, one after the other, going in and out of the storeroom. The objective chef hands them their materials (gloves and pale red mops) and informs them if they need to replace someone who is missing. Each time they enter they swipe their phones over the badge to confirm that they have started work.

5:55 AM The objective chef sees me and says hello. He tells me that the lady I will be working with will be arriving shortly.

5:57 AM A young boy enters in the storeroom.

6:05 AM I'm still waiting and listening to what they say. All look at me in a strange way.

6:07 AM The objective chef gives me a blue apron with the inscription "Vebege" (the name of the cleaning company)

6:09 AM Merita comes. I will stay with her. She is young. The objective chef says her that I will work with her and she looks happy.

6:11 AM I put my personal stuff in her locker. It's not too small & not too big. This is also blue.

6:13 AM She prepares the machine to clean the floor. She was the last one that comes in the store room, so now nobody is here.

6:17 AM With the "good lift" (that I never used before) we go to the E-Floor to clean the floor. She has to clean the corridors.

6:19 AM Start to clean. She divides the whole E-Floor in sections. It doesn't look laborious, but she has to stay concentrated.

6:21 AM I see other people (women) of the cleaning team cleaning the lecture halls in the E-Floor with the vacuum cleaner. Shyly I ask them what they have to clean. A woman, about 50 years old, tells me she has to clean the floor, the blackboard and the tables. Each room takes 15-20 min. She doesn't speak neither German, English nor Italian. She is from Albania. We speak in gestures and she writes the numbers on the table with her finger.

6:29 AM Another woman goes to the cafeteria and cleans the tables, the chairs and the cafeteria counters. Then she clean there with the vacuum cleaner. She looks at me

several times. I think she feels judged and afraid of the way I observe, watch the clock and take notes.

6:45AM Another woman of the cleaning team, Josephine, cleans with the vacuum cleaner the lifts. She listens to music with the headphones and she is in a good mood.

6:46AM Merita, who is cleaning the E-Floor goes and scares Josephine. Their laughter aloud interrupts the absence of voices in the corridors.

6:50AM The woman cleaning the cafeteria finishes and goes to the next zone with her cleaning trolley.

7:00AM Merita comes to me and says "come with me" in a low voice. We go to the cafeteria and get coffee from the machines. She explains to me that she couldn't actually take this break. She works 6 hours, so she is entitled to have half-hour break, but she doesn't take it so that she can finish half an hour earlier and can go have lunch with her husband who comes home from work. She also does some gossip about the other members of the cleaning staff. To stay a bit hidden from the boss and the other members of the cleaning staff, we stay a bit in the edge of the cafeteria.

7:07AM Continue to clean the E-Floor. Some students enter in the building. They are very silent and looks very tired.

7:15AM A woman of the cleaning team cleans the toilets of the E-Floor. She is showing to a colleague, that has to change the zone, where the toilets of the new zone are. They looks very fatigued.

7:20AM A man is coming to the E-Floor and cleans the edges from the dust and from the spiderwebs. I try to go there and speak with him to collect some informations. He is very shy at the beginning, but then he speaks and tells me what he has to do.

7:21AM The objective chef comes to check if everything is okay and the man suddenly, almost afraid, picks up his tool for the dust and the spiderwebs again and starts to work very hard.

7:51AM A Greek woman is cleaning the toilets of all stories in another zone. I ask her if I can ask her some questions and she reply smiling "only if it doesn't take too long".

8:10AM Another woman is cleaning the stairs with the vacuum cleaner. She is cleaning up very fast, because all the students are going up to the lectures halls right now. It's clearly not comfortable.

8:17AM E-Floor is finish to be cleaned with the machine.

8:25AM We go with the "good lift" down to the B-Floor and start to clean this. Here there is no natural light. It's so strange.

8:51AM Finish the B-Floor. It was enough for me to stay in this corridor with no natural light.

9:00AM A lot of members are finish for today. They are all in a hurry and a little tired. Many of them have to go to their next place of work, so they say a quick goodbye and then go.

9:05AM We walk toward the HIA building, passing through the B-Floor of the HIL and the HIF. I didn't know they

were connected. It's a labyrinth for me, while Merita seems to know these connections very well. She tells me what goes on in the rooms, but without knowing exactly what they actually do. She explains to me that she has been working here for 8 months.

9:11 AM We start to clean the lift in the HIA Building. We have to clean it only with water because there are some stains given from a product that the cleaning company before used. She is annoyed to do this.

9:40 AM Start a short illegal break behind the HIA building. We return as soon as she finishes the cigarette.

9:51 AM continue to clean the elevator. It's clear that she is very tired and annoyed. She slows down the cleaning and gets lost in conversation.

10:15 AM We give up with the elevator and stop cleaning.

10:17 AM Again behind the HIA Building to smoke a cigarette.

10:30 AM Go back to the B-Floor in the HIL. We pass through the buildings again, but this time through the D-Floor and not B-Floor.

10:43 AM Go to the coop. She meet the objective chef of other buildings. She is also from the Balkan countries. They speak together and they were very happy to see each other.

10:55 AM We make our way toward the library HDB to clean the dust from the top of the shelves.

11:10 AM Start to clean there. Again without natural light.

I'm very tired now. There are two other women already in the library. They are giving 100%. One of the two women, goes after a bit. The other one

is fighting to finish part of the library before noon. She deserves the shouts in a gentle way about not splitting apart to do it, because they don't get paid more if they work harder or longer anyway, but the lady doesn't listen to her. It's very chaotic now: they speak very loud and the vacuum machine is also very loud. The woman drips with sweat and continuously wipes her face with her T-Shirt. She is drenched in sweat

11:52AM Reorder the room very fast and bring the tools to the storage room present in the HDB Building.

11:54AM A worker of the office on the ground floor comes down and says that we have to be quieter.

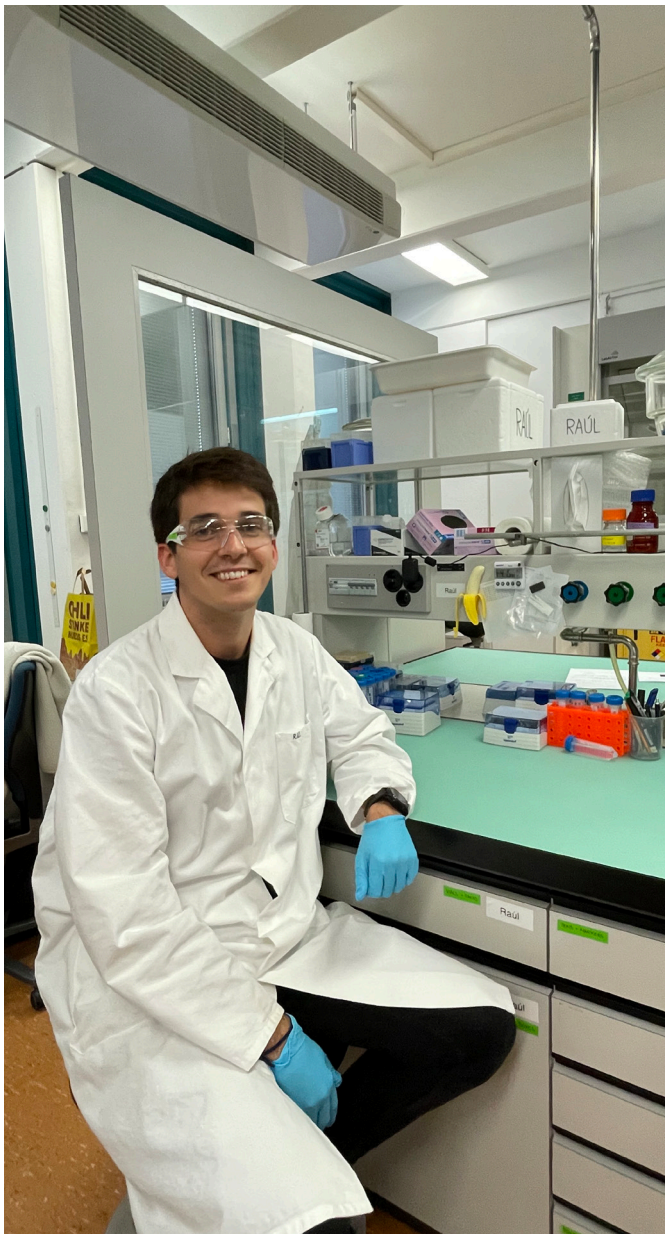
11:56AM Take all the tools that have to be brought to the storeroom in HIL Building. During the way from HDB to HIL the woman was very silent. Probably she was destroyed from the hard work. The square is now more alive.

12:02AM Pass the badge in the B-Floor. Take off the apron and take our stuff from the blue locker. Speak a bit with a colleague in the quiet dark storeroom.

12:07AM We say goodbye with a hug. Finally a bit of natural light!

Raúl

PhD Student in Toxicology in Zentrum campus



Raúl in front of his desk wearing his goggles, gloves and chemistry blouse

Raúl is a PhD Student in Toxicology. The application for his position was highly sought-after, with over 150 people applying for the job. Thanks to his many qualifications, he was selected. It has been almost a year since he started working for ETH Zürich. Raúl was a little worried that he would not be as lucky as other people because he was from Spain, but when it comes to taking on this job, ETH is looking for the best person in the field and do not care about the origin. In fact, the people working in this laboratory come from all over Europe and all over the world.

PhD students are hired for four years, with a review of their progress each year. After the fourth year, if the research is conclusive, they can be hired for a further two years.

He earns around 3000.- CHF a month, which is enough to live on. He has more or less the freedom to adapt his working hours, because nobody is watching him every day. As long as he does what he has to do, that is what counts for his employer. However, all PhD students work 100%, and according to their contract, they are not allowed to work elsewhere. ETH wants its employees to be fully committed to their research.

He doesn't live far from where he works; he only has to take a tram to get to the building. He lives in a shared flat with six other people. He really enjoys what he does, even though he sometimes finds it very boring. Everything takes a lot of time and you have to be extremely methodical to carry out your experiments. Of course, he is supervised by someone who helps him but also expects him to come to certain results.

The toxicology department has a whole floor dedicated to research. There are many different laboratories, each with a different level of security and a specific function. This department has a large budget, so employees can simply order things when they need them, as long as the amount does not exceed 300.- CHF they do not have to ask the head for authorisation. ■





A day as ...

"Although it was a very long day, I was able to take part in Raul's process. It was very rewarding and, above all, a totally new experience for me. I had never mixed bacteria to extract their DNA, as I'm sure most of us have never done. It was a unique experience and I'll remember it for a long time to come."

- Océane, experiencing "A day as ..."

09:27 - We go to the kitchen they have on this floor to make ourselves a tea.
 09:31 - We go to the dinning/meeting/relaxing room.
 09:32 - Some colleagues are coming. I'm explaining why I am here and I ask them some questions.
 09:48 - We go to the lab to take some samples again.
 10:12 - We go to another lab to mix some samples together. In this lab we are alone.
 10:20 - I'm watching him putting again and again water, water + bacteria, water + bacteria + poop in different tubes each time. Really repetitive and it seems quite boring to do.
 10:32 - He just realized that he did something wrong with some of the tubes. He's sad. But he tells me that it happens quite often that you need to redo everything because you made one small mistake.
 10:40 - We go again in the basement as he needs some poop to redo what he just messed up.
 10:46 - In the basement there is the storage with everything they need. There is a huge fridge at -80°C that contains "sleeping bacteria".

10:47 - Still in the basement, there is also a lab that is constantly at 4°C, to some different kind of experimentations.
 10:50 - We're going upstairs again. He's taking a key from the kitchen to show me on more lab two storeys upper.
 10:56 - Entering the "radioactive lab", where there is a robot that can be programmed to make some samples. Raul cannot use it because his protocol is not fixed yet.
 11:00 - Going back to the lab, watching him mixing samples again and again. I'm asking him many questions.
 11:25 - He asks me if I want to help him. I was super happy about this proposal.
 11:26 - I'm putting on a chemistry blouse and some gloves.
 11:29 - He's explaining to me what I have to do and how.
 11:32 - I'm doing what he just explained me, very precisely and methodically.
 11:40 - Finished my part of work I could do.
 12:10 - Going to the kitchen to heat our lunch.
 12:15 - We are eating in the dining room.
 12:45 - Having a small coffee with the team.
 13:06 - Raul explains to me how he gets the fecal samples donors and tells me how I could be a donor myself.





During the day, I learned that there are a lot of precise rules to follow in order to carry out an experiment while respecting safety measures. I imagined what these guidelines might look like:

Art. 1 - You must always wear goggles while working in the laboratory.

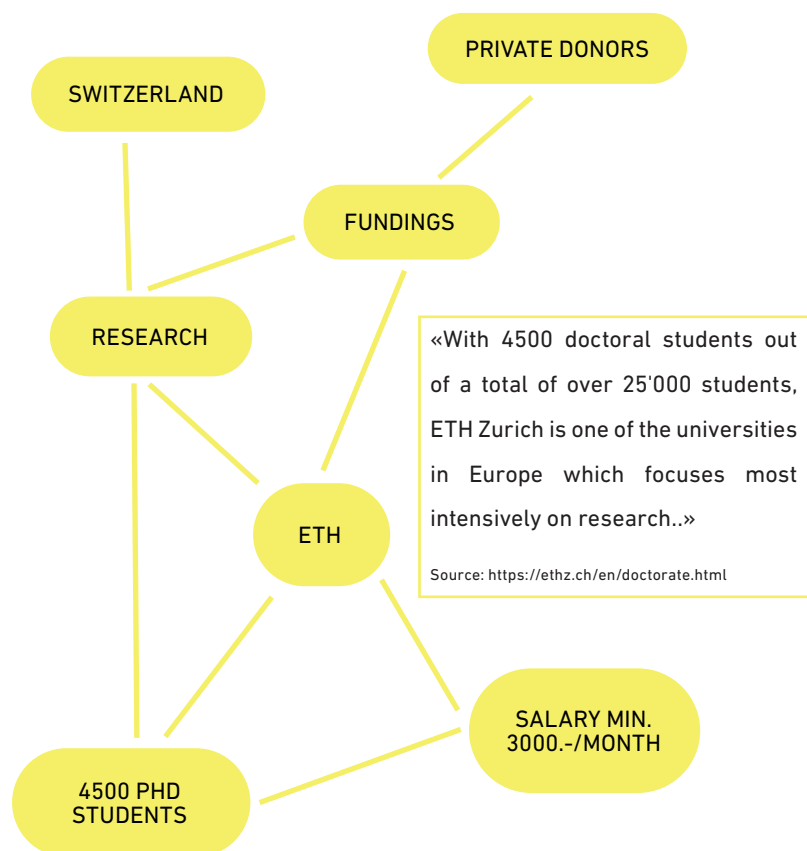
Art.2 - You must always wear your personal chemistry blouse when you are inside a laboratory.

Art.3 - Wearing latex medical gloves are mandatory during the process. When touching another surfaces, you must change pair of gloves.

Art.4 - It is madatory to wash your hands with soap and water, and after that desinfect them with a hydroalcoholic gel to remove all possible bacterias.

Art.5 - You can not work alone in the laboratory for security reasons.

Art.6 - Writing down a protocol for the process of the experiment is mandatory. Each step has to be precisly described and validated by the professor in charge. ■





The spatial layout of this floor dedicated to laboratory research demonstrates a clear concern for functionality and efficiency. Specialized laboratories are logically arranged along the main corridor, facilitating the circulation of researchers and minimizing potential disruption between teams.

However, a key aspect to consider in spatial design is flexibility. Researchers, often faced with rapid developments in their fields, need adaptable spaces that can accommodate constantly evolving specialist equipment. The current layout could benefit from a more modular approach, allowing easy reconfiguration to meet changing research needs.

The collaborative zones are strategically placed, encouraging communication between researchers. However, the spatial aspect of these areas could be further optimized to encourage more informal collaboration. Open spaces with flexible seating could encourage spontaneous discussions, stimulating creativity and the exchange of ideas.

As far as safety is concerned, although doors with restricted access are mentioned, spatial planning should also take into account clear escape routes and easy access to safety equipment. Spatial safety is just as important as physical safety, especially in an environment where potentially hazardous substances are frequently handled.

In summary, the spatial aspect of this laboratory

research environment is well designed overall, but adjustments to increase flexibility, encourage more informal collaboration, enhance spatial safety and incorporate wellness elements would help create an even more optimal environment for scientific research.

My own opinion

I had the opportunity to spend the day alongside Raúl, who was delighted to show me around his work and integrate me as much as possible into his process.

I explored different areas, from laboratories to cold rooms to storage areas. This gave me a more or less complete picture of the research center. Spaces were generally spacious and well-lit. Each PhD student has his or her own office and assigned workspace in the laboratory, which is a considerable advantage. However, not once during the day did I observe Raúl going to his office or assigned workstation. I think it might be worth considering adjustments in this area. Many people involved in space design, whether architects or other professionals, are often subject to strict rules. I hope that in the future, a direct analysis of how users use spaces will play a central role in the design process. This could enable spaces to be more finely tuned to the real needs of individuals, thus promoting a more efficient and pleasant working environment.



Pre-Diary PhD Student (Shana and Raúl):

- 08:52 Arrive at the LFO and wait in the hallway for Prof. Dr. Shana Sturbo
- 08:53 A banana prohibition sign hangs from the ceiling in the hallway
- 08:55 Shana Sturbo comes and takes me to room D 15.2 and the meeting starts
- 08:57 Short presentation of me, why I am here
- 09:02 Woman in front of me seems to be documenting the entire meeting
- 09:03 The professor hides in a couch
- 09:04 On my left side, there are 2 sofas and in front of me are 6 school looking desks
- 09:05 In the beginning they are discussing about the missing laboratory coats
- 09:06 There are 14 people in the room and everyone is rather young
- 09:08 On the wall hangs a large picture of a man who looks like Alain Berset
- 09:08 The man on my left yawns all the time
- 09:10 I recognized that the clock on the wall is 4 minutes ahead
- 09:12 They are discussing some Excel table, about cucumbers
- 09:13 Awkward silence
- 09:13 Start of a presentation. Something with "metabolite". The very long title goes over 3 lines
- 09:15 Link with obesity and inflammation, the picture shown looks like a Mitochondrion
- 09:17 The ventilator of the Beamer is really annoying, it keeps turning on and off.
- 09:21 Someone in a red shirt is joining the room
- 09:24 I've completely lost what they're talking about. The graph looks like the ones on a stock exchange
- 09:27 The people in front of the room look like they lost their interest and just started talking to each other.
- 09:29 On the opposite wall is a book rack full of biochemistry books. On it lies a bible, which looks as if it found no more place in

the book rack and was therefore discarded

09:32 End of the presentation, the presenter has now to answer questions

09:35 Now it's starting to get a little bit warm in here with 15 people,
The air quality isn't great

09:38 An other person starts presenting now. Her title is even longer,
than the one before.

09:40 The presenting table is definitely too high for her. We're only
seeing her shoulders and head.

09:43 The chair I'm sitting on is now getting really uncomfortable, because
of the poor ergonomics. The people on the sofas look a lot more
comfortable

09:49 Now she's starting to talk about Alzheimer

09:53 Someone is in the kitchen making coffee

09:54 All the people outside of the room are looking like they're having
a break.

09:59 End of the presentation, start of some questions

10:01 You can hear the sound of a water pipe on the ceiling

10:02 Coffee break

10:05 Everyone stands in the small kitchen to make coffee

10:08 After everyone has their coffee, they all go into the echoing hallway

10:10 Raúl a PhD Student volunteers for one day that I can accompany him.
He promises to write me an e-mail by tomorrow on which day
I should accompany him.

Diary PhD Student (Raúl):

PhD Student in Toxicology - Raúl 11.10.23

08:30 - Waiting for the tram 10 to go to the Zentrum to meet Raúl.

08:43 - I'm checking the map to know exactly where I have to go when I get out of the tram.

08:54 - I found the room I have to meet Raúl but as I'm a bit in advance I go quickly to the toilets.

08:55 - I'm surprised to see showers in the toilets. This is not common.

09:01 - I see Raúl in the hallway, we introduce to each other.

09:05 - I leave my stuff in his office, which is quite big and has some high windows.

09:06 - We go to the basement to trash some boxes, 3 floors down and then up again, I'm talking to him and therefore I'm breathing heavily.

09:10 - Entering the lab.

09:11 - He is putting some samples in a machine.

09:12 - During the samples are processed by the machine, he is showing me the different labs the toxicology department have, in total 10 labs for 15 researchers.

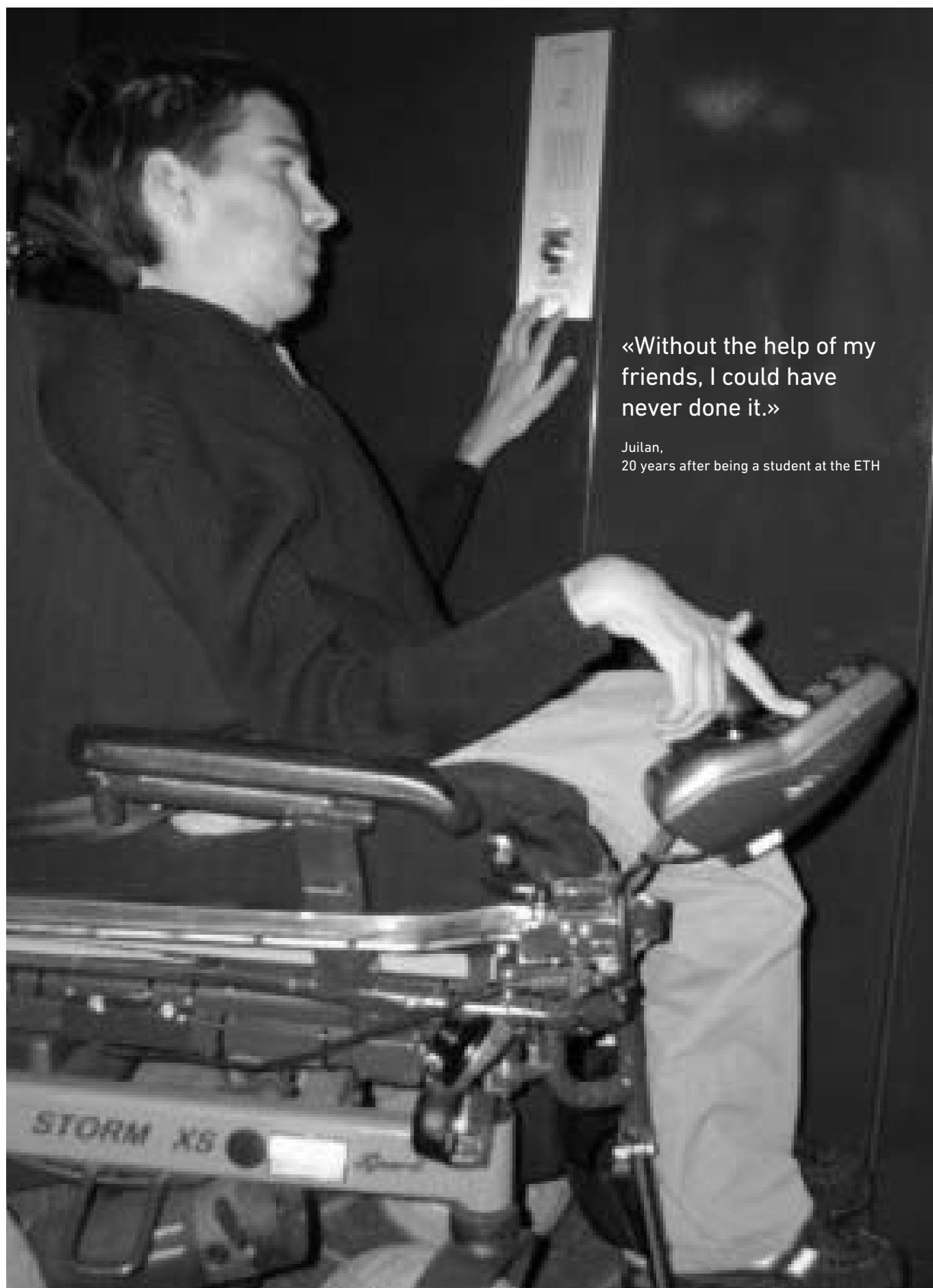
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- 13:06 - Raul explaining to me how he gets the fecal samples donors and tells me how I could be a donor myself.

- 13:15 - Going down to the basement to put some stuff in the storage room and the refrigerator room.
- 13:20 - Quickly go to the toilets before going back to the lab.
- 13:43 - He's telling me that I will be useful once again! Great!
- 13:51 - I'm putting on the chemistry jacket, the gloves and the goggles.
- 13:53 - Raúl explains what I have to do.
- 14:01 - I did everything he explained, he took some pictures of me.
- 14:15 - We change lab to centrifuge the tubes we just filled in.
- 14:20 - Centrifuging is done, we go back again to the lab.
- 14:33 - I'm watching him continue his (slow) process.
- 15:15 - Going back and forth from a lab to another.
- 15:42 - He's telling me that he's nearly done for today.
- 16:16 - I'm taking a picture of him in front of his desk.
- 16:23 - We say goodbye to each other and I leave the building.





«Without the help of my friends, I could have never done it.»

Juilan,
20 years after being a student at the ETH

Julian

Former student in engineering in Zentrum campus

Julian is a former student of ETH in the field of engineering, from 2001 to 2007, more than fifteen years ago. He experienced his student years differently because, due to his disability, he always had to use an electric wheelchair to get around the ETH buildings. He had no assistant to help him get around, but thanks to his friends he was able to overcome the many obstacles that were in his way. Despite having good friends, his social life remained very complicated, as the vast majority of events are not designed for people with reduced mobility.

As he lived in St.-Gallen, all his journeys had to be well planned, especially as at the time not all station platforms were at the same level as train entrances, same goes for the buses or the trams. The signage in the stations and in the ETH buildings was practically non-existent, which meant that you had to know the building well to get around without too much trouble.

Even though he had a different way of moving in and around the buildings, he had exactly the same timetable from the others, which was sometimes a bit of a problem when he had to change buildings between lessons. Everytime, this happened he took a private and specialized taxi to be able to attend the courses on other places. Thankfully he mostly had courses in the same building.

The main problem he encountered during his studies was "finding the entrance". Obviously, after a while you know the route to take, but everytime there is a new location it takes a lot (time and energywise) to get there in time.

Even though it was not easy everyday, he is proud of having studying and thank to his time at ETH he directly found a job. In fact, one of his teacher offered him a job position in his firm that just started. He took this great opportunity and is still working there.

Depending on your disability, your needs can be really different. To his mind, nowadays it is becoming a bit more common to build up new typologies or adapt old buildings. that works for as many people as possible. Universal design is a dream that is hard to achive but not impossible if you really care about it. ■

My own opinion

It was important for me to talk to a person with reduced mobility who had studied at ETH, and I had the opportunity to chat with Julian. This contact made me realize that, although the theme of accessibility for all is addressed in contemporary discourse, it still struggles to become fully embedded in the design process of new spaces.

As we delve deeper into this issue, it becomes clear that many of us live with some form of disability, be it visual, auditory, sensory or physical. To varying degrees, we all face limitations in certain areas. This underlines the importance of integrating the diversity of needs and abilities into the design of spaces, in order to create an accessible and inclusive environment for all individuals.



Annette Schäublin

Employee at the Info Desk at the Polyterrasse



Annette sitting at the Info Desk reception.

Annette works as an employee at the ASVZ Info Desk located at Polyterrasse on the Campus Zentrum. She is 50 years old and works 60%, covering one morning shift and two afternoon shifts.

At the ASVZ Info Desk there are three shifts, due to the extended opening hours of the gym, which, however, allows everyone to train comfortably. The first shift starts at 6:15 a.m. and ends at 12:15 p.m., the second runs from 12:15 p.m. to 6:15 p.m., and the third runs from 6:15 p.m. to 11 p.m. The last shift is covered by students instead of ASVZ employees. Each shift lasts six hours, so to complete the eight-hour working day, the employees work an additional two hours in the administrative office opposite the Info Desk, where they handle answers to emails or phone calls. Annette puts these two hours before the afternoon shift or after the morning shift, and so do her colleagues. In addition to the structure of the working hours that contribute, according to Annette, to an extremely pleasant working environment, the director of the ASVZ also goes the extra mile for the well-being of his employees. This commitment manifests itself through small gestures of courtesy such as offering gipfeli after meetings, and a generous willingness to meet his employees' requests.

Her work is quite varied, as many of her tasks depend on the requests of the ASVZ members. Annette is responsible for the reception of people who come to the Info Desk, but also for maintaining cleanliness, order and respect for the rules within the gym. It is her responsibility to manage everything related to the loan of material, the delivery and return of keys, and to provide first aid in case of need. Due to these various tasks, Annette never spends a whole day sitting in front of the computer, nor a whole day standing.

To ensure that the rules are maintained and respected in the gym, it is necessary to carry out control "rounds" which take place every two or three hours: during these rounds, Annette fills the disinfectant containers, checks that paper is available to clean the equipment, makes sure that everyone respects the gym rules and that everyone has a towel. ■



*Over 120 sports offerings
48 administrative staff
1,100+ sports instructors*

*A legacy of 84 years, witnessing continuous growth in
both team and offerings.*

The ASVZ:

The Zurich Sports Association (ASVZ) represents a vibrant community dedicated to physical well-being and the promotion of sporting activity within the university environment and beyond. Founded with the aim of providing sports and recreational opportunities to members of the Zurich academic community, the ASVZ plays a key role in promoting a healthy and active lifestyle.



T-Bow. T stands for training and therapy.

The ASVZ consists of a dynamic team of professionals, including more than 1,100 highly qualified instructors and an administrative team of 48 people. The team is committed to providing a wide range of sports activities, adapted to meet the needs of all levels of ability and interests. With a competent teaching staff, the ASVZ offers stimulating lessons and training programmes ranging from traditional to innovative disciplines, ensuring a complete sports experience.

The ASVZ offers more than 120 diversified and include team sports, fitness, outdoor activities and many other options, aimed at satisfying the preferences of a wide range of participants. The association operates various sports facilities and gyms around Zurich, offering convenient and widespread access for all members.

Since there are many courses that require additional materials, such as platforms, elastic bands, ropes, and more, it is necessary to have constant monitoring of the condition of the materials.

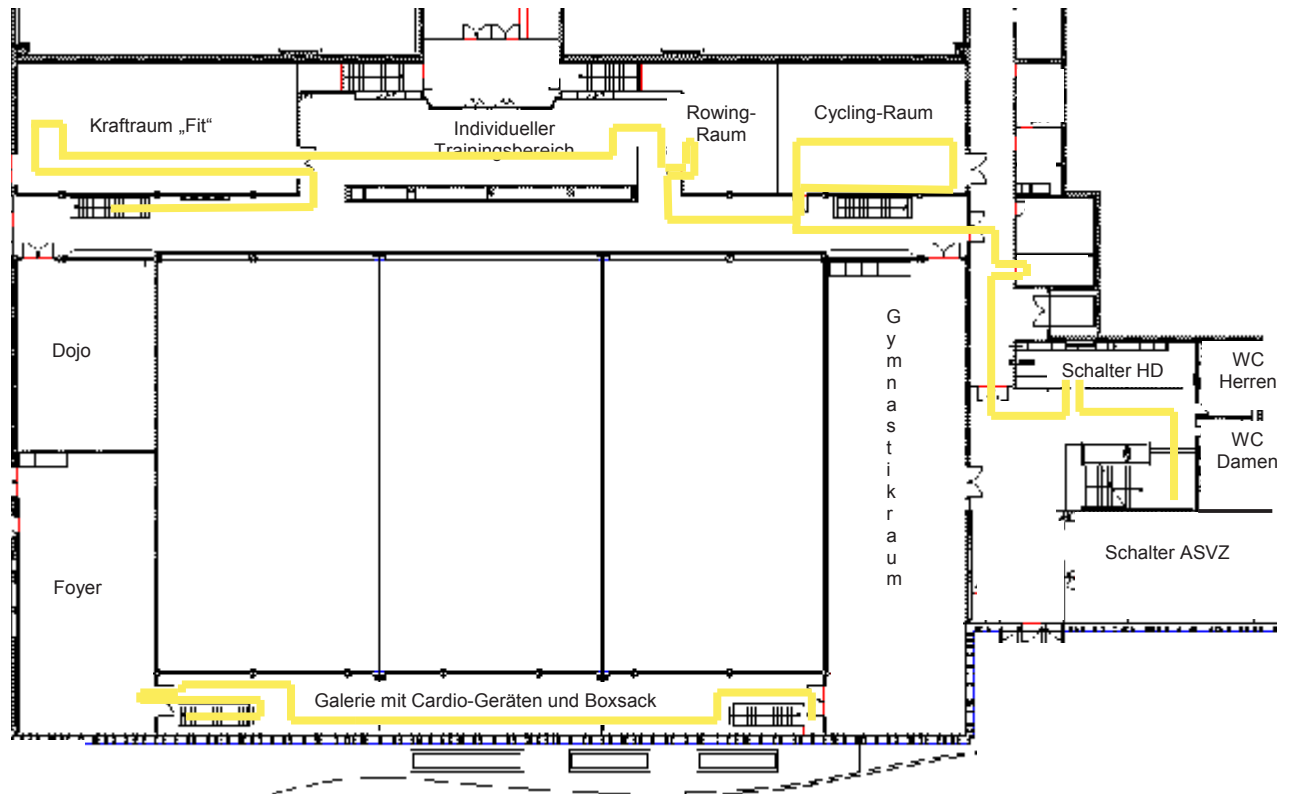
Annette is also in charge of helping with the replacement of gym equipment. In this case she was responsible for replacing the T-Bow rubbers. These rubbers are replaced every two or three years, as they no longer retain their anti-slip properties as they age and make training more difficult and sometimes even more dangerous. This course allows around 70 people to train simultaneously.



The Rounds:

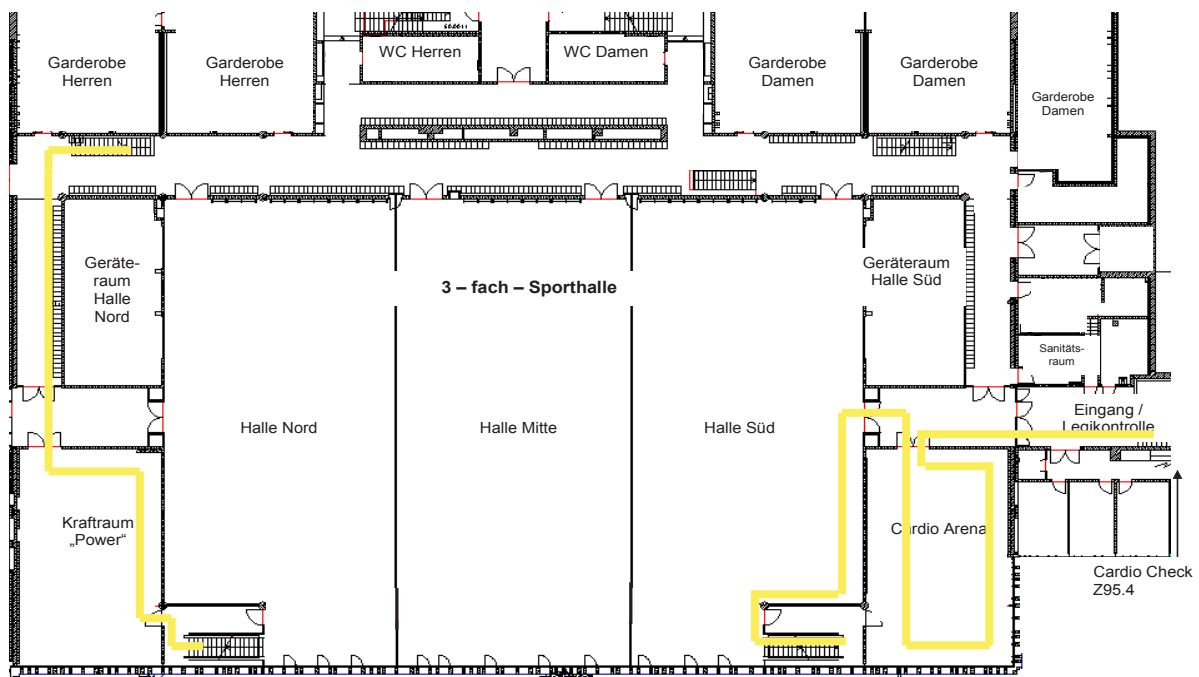
Übersichtsplan Polyterrasse

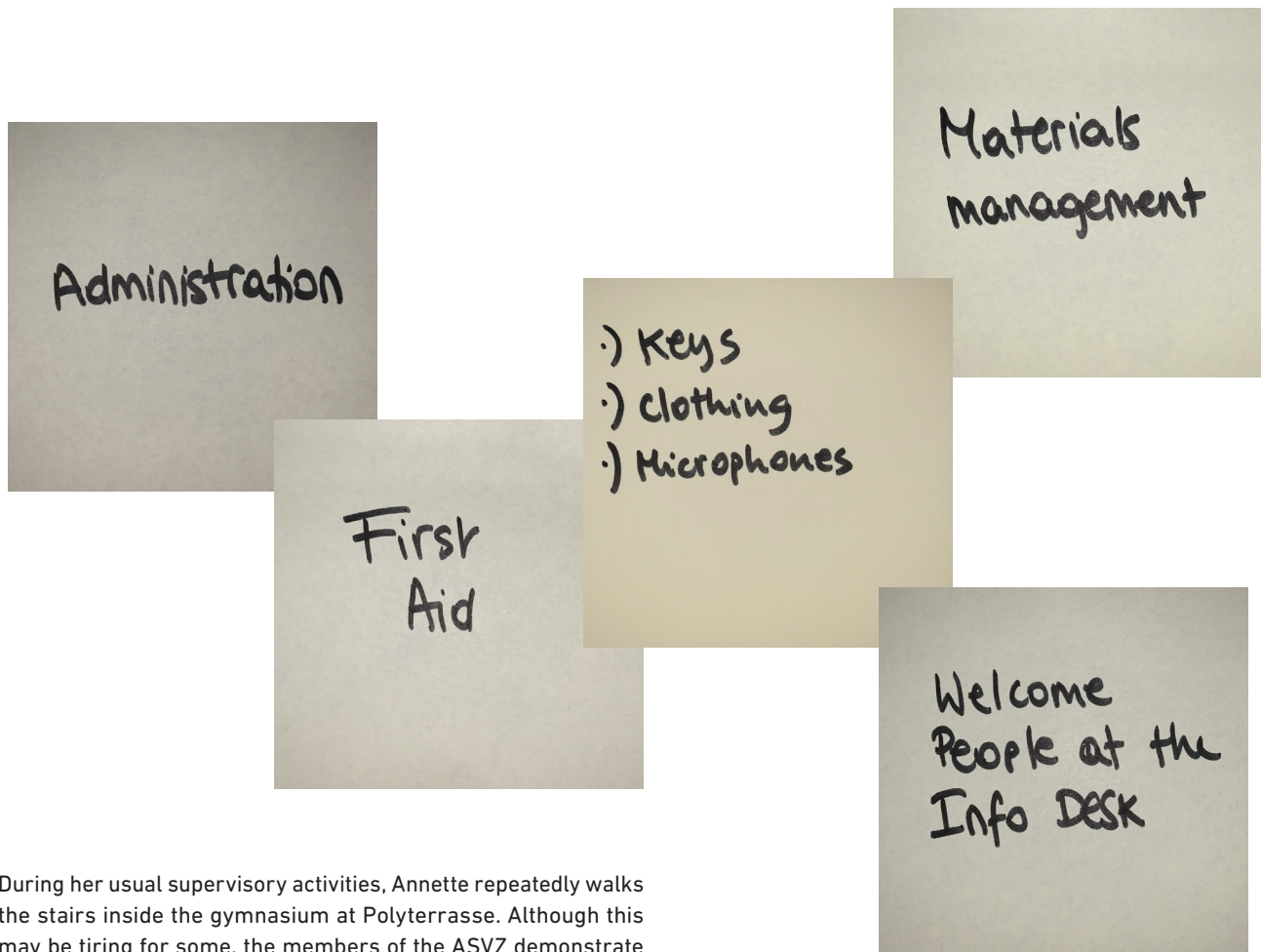
Obergeschoss: ETH Zentrum, MM A-Stock



Übersichtsplan Polyterrasse

Untergeschoss: ETH Zentrum, MM Z-Stock





During her usual supervisory activities, Annette repeatedly walks the stairs inside the gymnasium at Polyterrasse. Although this may be tiring for some, the members of the ASVZ demonstrate their willingness to do so in order to keep themselves active during their 'office' duties. This route, in addition to ensuring the inspection of all rooms in the facility, has the added advantage of facilitating chance encounters with various individuals, helping to make her day less monotonous.

Annette's route follows a pre-determined sequence: she starts in the cardio room, then goes through the corridor above the gyms, containing cross equipment, a boxing bag and some exercise bikes. Next, she checks into a room intended for different activities depending on the day and time of day. Continuing, she goes downstairs to inspect the weight room, then moves upstairs, inspecting the room equipped with gymnastics equipment, through the rowing room and finally to the room intended for group classes with cyclettes. Finally, Annette deposits the disinfectant in the storage room before returning to the Info Desk. This route takes approximately 15 minutes and cannot extend beyond this time, as the Info Desk is unmanned during this time, although for any emergency situations, control staff are available next to the Info Desk.

As course times vary, not all rooms are occupied simultaneously and have different levels of attendance. The weight room, in general, has a higher concentration of users, while the class rooms often remain empty, being accessible only during the presence of the teachers.

Diary ASVZ Employee (Annette):

31 October 2023

ASVZ Polyterrasse

13:28 go to the ASVZ Info Point in the Polyterrasse, walking through the very noisy Mensa.

13:30 meet Annette at the Info Point. She welcomes me in the room behind the white wall.

13:39 move to a room in front of the Info Point. This room has to be rearranged to create 2 desk-offices and they are thinking of how to do it. The light is very bad there and the shape of the room too.

13:44 walk to the next room, where there are administration offices. The room is grey. I couldn't stay the whole day here.

13:47 go one floor up where the office of the Director, Vice-Director and of other "important" people. Here the walls are of a light green and the offices are full of green plants. The light is much better, also thanks to the light colors.

13:52 go downstairs to see other offices. Also those offices are grey. They give me a cold feeling.

13:53 see a mini table tennis in an angle of the grey corridor, where there are also a coffee machine and a small sofa. They give a bit of colour to this grey cold space.

13:55 meet a sport teacher there. She explains me how does their work work and why they change always the place where they work. She explains me also that most of them see the change as something positive, because the routine is more varieted.

14:01 walk back upstairs to the info point. we take the disinfectant bottle. We have to start the first control of the afternoon. In one day they do ~8 controls. We enter in the first cardio room. Only two people are there. It's also a bit cold here. Annette fill the disinfectant

and the paper. She is also controlling that everyone has the towel.

14.04 Go in another room and do the same. Here is very silent: there is only a guy playing basketball alone and another one on the cyclette.

14.07 Go again downstairs to the weight room and fill also here the disinfectant. Controlling also here if all have the towel. Here are a lot more people. I hear all the people breathing hard and the sound of the big weights falling on the floor.

14.10 go again upstairs and reach the room with the sports machines. Here are also many people, but there is much more space than in the weight room.

14.15 walk back to the info point. Sandra is waiting Annette. She is body and mind trainer.

14.23 Sandra asks me if I want to help her changing the anti-slip under the T-Bow. We go downstairs (again) and we enter in a room under the stairs. We start to work in this room lighted only by natural light. We use the drill to change the anti-slip.

15.44 finally finish the work. My knees hurt a lot. We go again up to the Info Point.

15.55 Annette offers me a coffee and I sit in an edge of the room. Is a bit strange because there are no windows and the chair is looking to the wall.

16.02 Annette start hang the clothes in the room to let them dry. I'm confused.

16.32 A student comes in the info point. He works there in the evening. He used only the fridge to put the food during his lessons.

16.32 A woman comes and says Annette that something fell on the ground and now is dirty. We have to go.

16.39 Come back to the info point and take my stuff and say Annette goodbye.

Virginia Hernandez

An apprentice laboratory technician at the ETH physics laboratory

Virginia, in the centre, and at the sides her supervisors Michael and Martin.



Virginia is an apprentice laboratory technician at the ETH physics laboratory, located on the Höggerberg campus in the HPR building. The knowledge required for her work is extensive, ranging from computer science to electrical engineering, from construction to polymechanics. Her tasks vary from the more administrative to the more practical, such as the revision of pumps. As an apprentice, Virginia not only spends her time at work,

but also goes to school two days a week. Her school, which is one for the whole of German-speaking Switzerland, is located in Zurich. In the classroom they learn in depth about the function, usefulness and properties of the equipment they work with, while on the job they put what they learn into practice.

On days when she is in the physics lab, Virginia starts at 7.30 am and finishes at



Hönggerberg Campus.

Highlighted buildings: Buildings where machinery pick-up takes place.

4.30 pm. Both in the morning and in the afternoon, she shares a half-hour break with her colleagues and supervisors. During the morning break, it is common to go to the cafeteria in the HCI building, where the cafeteria barista knows everyone's preferences by heart. In the afternoon, however, they prefer to stay in their workshop in the lounge area, to enjoy a coffee or tea.

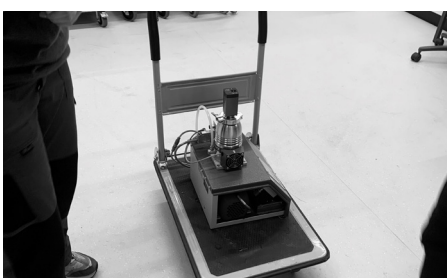
Virginia is deeply satisfied and grateful for her work and for the spirit of cooperation that characterises her relationship with colleagues and supervisors. They are always ready to offer help and advice, but at the same time give her the opportunity to put what she learns into practice with her own hands.

A job that requires moving between ETH buildings:

Virginia's work involves the transfer of machinery of considerable economic value from one building to another. This movement is mainly necessary because of the progressive mixing of building functions that has taken place in recent decades. Whereas initially each building was destined for a single function, also expressed in the name itself (HPF: acronym for Hönggerberg Festkörperphysik, HPH: Hönggerberg Physik Hörsaalgebäude, HPP: Hönggerberg Physik Praktikumgebäude, HPT: Hönggerberg Technische Physik, ...), today this distinction is less and less evident.



This situation, coupled with the incessant technological development, means that laboratories, which require the use of some of the equipment subject to the Virginia-led revision, have to rely more and more frequently on this shifting practice. The latter involves picking up the instruments and transporting them to the laboratory for revision, followed by their return to their place of origin. For some buildings, this operation is relatively easy and convenient to perform. However, for many others, the difficulty lies mainly in the fact that a trolley is required to move machinery that often has extremely delicate and sensitive parts, as well as considerable weight. Not infrequently, one finds oneself having to travel longer distances due to obstacles such as stairs, ramps that are too steep, door openings that are too narrow, narrow corridors or floors with too irregular a surface. ■



Aesthetic and utility issues:

Virginia has acquired several strategies to facilitate her movements and overcome some of the obstacles, but each time she is faced with some difficulty that slows down her work.

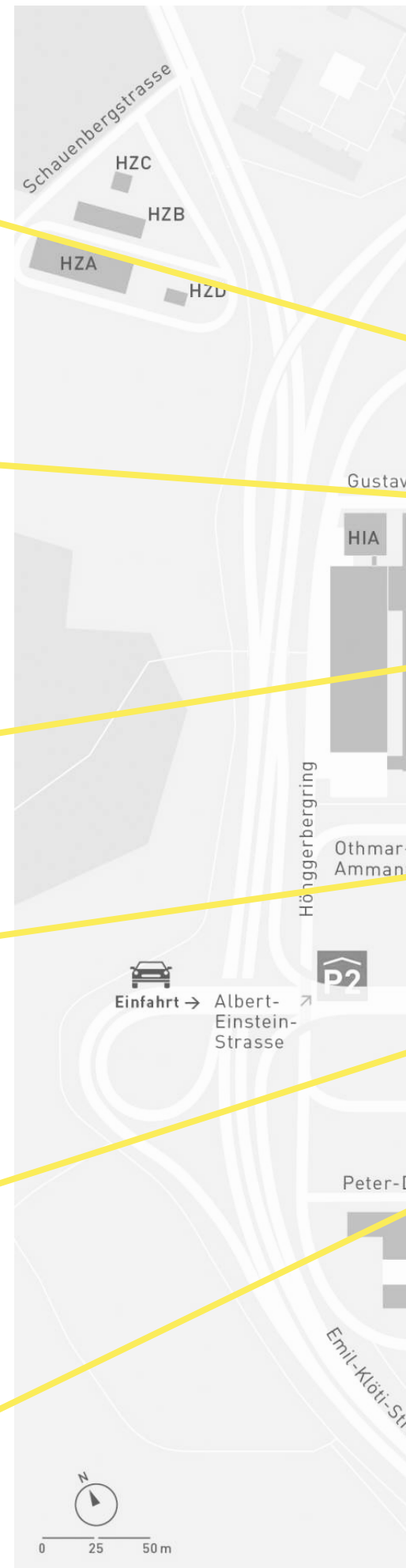
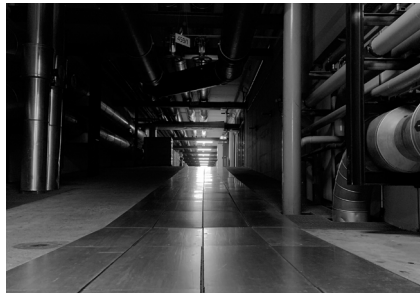
To get from the HPR building to the HPF, there are two options: one can either opt for an initially external route, reaching the HPZ building and then proceeding to the basement floor to reach the HPF, or one can use the lift from the HPR building, go through the basement floor of the HPH and reach the HPF via the car garage. Both routes have advantages and disadvantages.

The first route starts with resin gravel flooring, which generates considerable vibrations for both the carriage and the machinery, thus creating the risk of damaging the equipment. Next, several doors with steps are encountered, which are a significant obstacle for heavy machinery. The underground level has slopes that make it difficult to push the trolley or slow it down when descending. In addition, this route takes a little longer because of the doors and lifts.

The second route is preferred mainly because of the floor of the parking area, which is very smooth. However, the first part has a 90-degree bend immediately after a door with a step. If the machinery to be transported is large, this route is not feasible and an alternative route must be taken. In the garage, the dimensions are quite large, but the main problem is the danger posed by cars; they can cause damage or be damaged in the process.

A further example concerns the transfer from the laboratory to the HCI building. Here again, two options are available: an external and an internal route. However, the first solution may prove problematic when transporting weather-sensitive materials, especially during rain. Whenever possible, one waits for a period of favourable weather to transport the materials, otherwise one uses a waterproof cover to protect the machinery. In addition, the presence of steep slopes poses a significant difficulty when it comes to moving materials of considerable weight.

As for the internal route, it again involves passing through the garage. However, in this case, transporting a heavy machine is impracticable due to an extremely steep spiral ramp. In addition, it is essential that there are two people present to ensure that, when descending or ascending the ramp, no





Diary Apprentice (Virginia):

8 novembre 2023

Apprentice

8:28 Enter in the HPH Building in Hønggerberg Campus. It's so big and so empty at the same time.

8:30 Meet Virginia in front of the HPH Mensa. She is the only one here, so I'm sure that she is who I have to meet.

8:32 We approach the giant cube and pass it. I looked at it strangely because I don't know what it is and what are the "scratches" on it.

8:35 Enter in the room 86.1 HPR. I'm already confused. Is this another building? I ask her and she shows me the map to explain me where we exactly are. She laughs because we will see a lot of buildings today. I didn't imagine that this office could be so colorful. I hear also music here.

8:37 Meet Martin and Michael. They are Virginia's supervisor. They explain me a bit what they do in their job and then continue to work.

8:43 Virginia shows me the "street" they have to do, when they have to bring some machines to the HCI building. We go out from the door next to their office/laboratory, and Virginia explains that they always struggle with the obstacles present on the floor: the carpet, the step of the door and the granulated floor. They are all in a row and it's always a problem to transport the material, because it is very sensible and the vibrations are a problem.

8:45 We are in front of the HCI Building, there are stairs and with the trolley they are a barrier. To go in the HCI with the trolley we have to do a much longer walk.

8:49 I notice a door to avoid the longer walk with the trolley. We go there and try to open it, but it's closed from outside. You need a key.

8:52 We see a man delivering some material. Virginia explains me they have always problem to find the right room. She shows me which is the path they have to do. I'm totally lost, and she is lost too I think. Corridor, lift, door, corridor, door, corridor, office. And always steps.

8:56 We come back to the office.

9:00 Coffee Break. We go to the HCI Mensa to take a coffee. Michael explains me a lot of problems of the ETH Building. I'm confused and surprised at the same time.

9:17 We meet other colleagues. They are always happy to meet and speak with each other.

9:28 Stand up and go back to the work. We meet other colleagues before reach the sliding doors.

9:35 Back in the office.

9:39 Michael explains me that there are always problems with the machineries because they are always very big and the doors are too small.

9:45 We have to go to take a pump that has problems. We take a trolley with us.

9:47 Go out of the office with the trolley. I help Virginia because there is a step that blocks the trolley.

9:48 Go out of the HPR Building. The floor has tiles made of gravel. The trolley is so noisy. We don't speak with each other. There is too much noise.

9:50 We are in front of the door of the HPR Building. Now we can

7 speak again. We want to go one floor down, but we have to enter the building to go down, because outside there are only stairs.

9:52 We are in the lift and go down to the C floor.

9:53 We come out of the lift and I'm surprised to see after opening the door that we are in the underground floor.

9:54 We are walking under pipes of different sizes and colors. There are so many people here. It is literally used as a normal corridor. Everyone can walk through.

9:56 Also here the floor presents problems. There are several descent and ascent. Now it's not a big problem for Virginia, because there is nothing on the trolley. But her supervisor explains that if they have to bring heavy machineries, then they have always to be two to push and to brake the trolley.

10:01 Arrive to the HPF building and take the pump. In this building there are ramps where the doors are.

10:05 We go back to the HPR building. We walk in the garage this time, because here the asphalt is much more flat than in the rest of the campus.

10:15 We take a lift, but I have no idea of where we are.

10:21 We are back in the room 86.1 HPR building.

10:30 Virginia's supervisor asks her to control that all the screws of a pump she repaired yesterday are tightened well.

10:44 Virginia put some small glass tiles in the machinery that does the coating. She explains that this process takes ~1 hour and they have to do it more or less 10 times a month.

10:52 A student comes in their laboratory to use the vertical drill. He doesn't know where one of the drill bits is, so he asks Virginia.

C

10:55 Now she has to take a material for the coating process.

There are so many materials. There is also written on the drawers that gloves must be used.

10:57 I notice some very thick windows in the office. I ask her if they are made like this for security reasons. The supervisor hears me and explains me that there wasn't before windows, everything was closed before.

11:20 A colleague of Michael comes and speaks with him. He is from the University Zurich.

11:35 Virginia repairs a pump and I go.

Conclusion

Immersing ourselves in the daily reality of workers users through a day-long immersive tracking experience reveals rich insights into how space influences their perception and impacts their performance. This approach offers unparalleled contextual understanding, revealing nuances crucial to optimizing work environments.

Each profile reveals its own unique set of spatial challenges. By identifying these distinct challenges, it becomes possible to design tailor-made solutions, shaped to meet the specific needs of each individual.

Beyond physical constraints, this experience highlights the profound impact of the environment on workers' well-being. From ambient lighting to the layout of workstations, every element contributes to creating an atmosphere that is either conducive or hindering. Understanding these factors enables us to consider adjustments aimed at improving the quality of life at work. The case of Nadine and Marcel, as well as that of Virginia, illustrates how the design of working environments can influence professional performance. In the first case, both individuals work in offices without natural lighting. Their desks are positioned behind the Info Desk, which is designed to be accessible to the public and is therefore arranged frontally, resulting in offices with no openings to allow natural light to pass through. In the case of Virginia, the layout of the workspaces also determines the duration of work activities. The analysis shows that the routes to be travelled from one point to another are prolonged, generating additional risks. The quality of working life could be less stressful in the absence of the anxiety caused by the possibility of damaging equipment and the need to plan alternative routes due to too narrow corridors and passageways .

Space optimization emerges as a key area of focus. By observing users as they go about their routines, possibilities for improving efficiency emerge. The clearest example is that of Merita. Facility management draws up operational plans to optimise the use of space in order to maximise working efficiency. However, these plans do not always consider the needs and well-being of employees. Within ETH, employees follow precise and efficient routes within

the spaces, designed to avoid collisions and facilitate movement. Although these routes are designed without fully considering human needs for contact and interaction, facility managers have managed to make movements within the buildings extremely efficient. From clever rearrangements of workspaces to the introduction of ergonomic elements, the recommendations resulting from this experiment aim to create environments that promote productivity while preserving workers' well-being.

In addition, a close examination of the tools and technology used on a daily basis suggests avenues for the development of more appropriate solutions . The disparity between technological resources, available tools and the ability to meet demands, including those for space, is considerable between a PhD student and a cook within the ETH environment. Raul, the PhD student, has ample financial means through which he can request supplies and his requests are generally met without problems. Moreover, the premises at his disposal are numerous and well equipped to meet his specific needs and type of work. On the other hand, Sacha, the canteen cook in the HPH building, despite being involved in a daily activity that requires considerable physical effort, seems to work in workspaces located in less utilised areas of the building and which were not originally designed to accommodate a kitchen of this size and have not been adapted as the canteen and students grow. The availability of spaces adapted to individual requirements depends on the priority the ETH attaches and the self-image it wishes to offer. From simplifying interfaces to integrating functionalities better aligned with real user needs, this approach offers valuable insights for shaping the next generation of professional tools.

In conclusion, this immersive exploration reveals that space plays a fundamental role in working life. By understanding the nuances of how space is perceived, and responding to the challenges specific to each individual, it becomes possible to create work environments that foster professional fulfillment, while paving the way for increased and sustainable productivity. ■





Underutilized Spaces:

refers to an overlooked area that is not fully or efficiently utilized to its potential or intended purpose. They could be in the buildings, urban areas and landscapes.



Reimagining Spaces: Spatial Interventions in Underutilized Spaces with Fire Regulation

Thin Myat Noe
Field Researcher

Lucia Zeng
Spatial Project Manager

ABSTRACT: The study delves into the multifaceted relationship between spatial interventions in underutilized spaces and the imperative of fire regulation compliance. Drawing on an array of case studies and physical interventions, this report seeks to offer insights and propose to redefine the underutilized spaces of ETH campus while adhering to fire safety standards. The paper focuses on the transformative potential of these 3 typologies of underused area: Entrance lobby, Hallway, Rooftop.

KEYWORDS: SPACES - UNDERUTILIZED - FIRE REGULATIONS - SPATIAL INTERVENTION - ETH CAMPUS - OBSERVATIONS - FIELD RESEARCH

1.1 Research Objective and Questions:

The overarching aim of our research and physical intervention was to uncover the dynamics surrounding spatial utilization at ETH and its potential intersections with regulatory constraints. We hope to achieve a better understanding of the regulatory frameworks, with the aim to reimagine the underutilized spaces of ETH and to shed light on the problem of underusage and vacancy in university facilities, which is becoming more and more visible as we grow. We sought to answer a series of interconnected questions to help guide our research objectives:

- How does ETH employ its physical spaces?
- Which spaces of ETH can be classified as underutilized or functional?
- What factors contribute to the underutilization of certain spaces at ETH?
- Are spatial dimensions, architectural design, or other considerations playing a role? Are they designed to preserve institutional spaciousness, potentially at the expense of functional use?
- To what extent do regulations and building codes act as constraints on the realization of the full

potential of these underutilized spaces?

- Is the change in regulations or policies needed to unlock the full potential of such spaces?

The planning of the educational institution requires more than solely to educate its students. The institution itself serves as a dynamic ecosystem that involves different stakeholders from professors to non-academic and external staff. The institute should be the place where everyone comes together and interact. At ETH, spaces such as entrance lobbies, hallways and rooftops serve as public spaces and yet they are rarely a space for encounter, interaction, collaboration, and relaxation.

Functional and recreational spaces become scarce due to regulatory constraints. Fire regulations, safety codes, and other institutional guidelines impose restrictions on how spaces are designed and utilized within these institutions.

How can a space be designed or reimaged to be more accessible and tangible to the variety of different users across the university campus? Who is the space designed for and what challenges does the university face with the growing need for space coming from the increasing campus population and the ever-changing culture surrounding us?

2. Methodology and Data Collection

Before establishing our formal research endeavour, a preliminary phase of small interventions was carried out within HPH and HIL at ETH H nggerberg. With the aim of increasing the desirability of the overlooked spaces within the campus, we set out a picnic intervention. Though the intervention at HPH went smoothly, we encountered a circumstance at HIL where we were required to vacate a building due to fire regulations. These experiences served as the catalyst for our overarching research inquiry:

Are underutilized spaces intricately linked to fire regulations?

In pursuit of this question, our methodology encompassed the following steps:

2.1 LOOKING INTO BASIC FIRE REGULATIONS

Our research sought to illuminate the relationship between spatial utilization and regulatory frameworks. Thus, it was necessary to gain a comprehensive understanding of the fundamental fire regulations for educational building typologies. We consulted the VKF-Brandschutzvorschriften and extracted relevant information essential for our research angle.

2.2 COLLECTION AND ANALYSIS OF FLOOR PLANS

The overarching objective was to identify the underutilized spaces of ETH and propose better uses within the regulation. Therefore, we collected the floor plans of the chosen sites and analysed the fire-regulated spaces and evacuation routes.

2.3 PHYSICAL OBSERVATION ON SITE

Our preliminary research through the picnic intervention provided us with invaluable insights into

students and other stakeholders' behaviours. Together with our observation and video documentation, we used informal interviews with the participants of the intervention as a tool to collect data. From this, we received their perception of the institution, collected valuable feedback and studied their behaviour.

2.4 CONSULTATION WITH FIRE SAFETY STAFF

The dialogues with Andreas Sidler of The Safety, Health and Environment (SGU) department at ETH Zurich, revealed the underlying reasons for the certain spaces within the campus that are largely unoccupied and underutilized. After gaining a comprehensive understanding of the fire regulatory constraints, we consulted on the potential of certain spaces to work around the regulations to enhance the functionality.

2.5 CASE STUDIES

A few case studies were examined to understand specific contexts, challenges and solutions relevant to our research angle. The selection of Leutschenbach School by Christian Kerez and HIL777 is driven by specific criteria. Leutschenbach school project provides us with insights into innovative solutions to meet fire regulation compliance while creating efficient learning spaces. On the other hand, HIL777 is an example of intervention, highlighting challenges from which we can learn.

2.6 INTERVENTION

As a concluding endeavour, we are exploring to arrange another intervention for our Competence Centre, to be hosted in one of the identified underutilized spaces. This practical initiative will not only serve as a proving ground for the feasibility of reinvigorating these areas but will also provide invaluable insights into their greater potential.

References



"BIGNIK ist kein Event im herkömmlichen Sinne. Es ist eine künstlerische Intervention, die aus den lokal vorhandenen Ressourcen des «Textilland Ostschweiz» schöpft, und an der breite Teile der Bevölkerung massgeblich beteiligt sind. BIGNIK ist der Versuch, eine einzigartige gemeinschaftliche Tradition für die Region zu schaffen. Eine Plattform für Begegnungen und Geschichten."

Source: DAS IST BIKNIK,
<https://www.bignik.ch/>

"Spanish rug maker Nanimarquina celebrated its 25th anniversary by laying dozens of rugs across Plaça de la Virreina in Barcelona. Passers-by and children were invited to lounge on the huge patchwork, which comprised more than 60 rugs of different shapes and sizes."

Source: Nanimarquina, Rugs in Plaça de la Virreina, Barcelona, 2012.



3. On-Site Research: PicNic Interventions - HPH

1. CHOICE OF SPACE

The location for the first on-site intervention was chosen after a walk around the campus of Höggerberg. From a bypasser's perspective, the space looks extremely empty even though there are exhibitions from time to time. The over dimensioning of the foyer makes it less approachable to people. Therefore we planned an attempt to give the space a splash of color to even out its greyness and non-human scaling.

2. SET-UP & SUBJECTIVE FEELINGS TOWARDS THE SPACE

In order to be able to build up an indoor picnic setting, we collected 9 blankets of different colours and patterns and spread them out on the floor towards the right side of the HPH foyer. Plushed rats, a big sign and flyers were used to gain attention for the intervention. Different set-up strategies were used in order to see how most interaction between the intervention and other users could be achieved. At times we acted as part of the intervention by being present and asking students and staff members to sit down and discuss with us. This allowed us to ask the users of the building about their opinions and thoughts on the facility and the space it provides.

This unusual activity in the foyer of HPH brought a lot of discomfort at the beginning but as we got more used to the setting, the feeling of comfort became easier to achieve. From a subjective point of view, the space shows the potential to be granted an alternative usage during unoccupied hours.

3. PEOPLE WATCHING

During the hours spent on-site, various members of the institute entered and used the hall. Students went to lectures which took place two floors further

up, cleaning staff entered another connected space unfamiliar to us and people walked inside the Food Market either to work, study or eat. The space towards the right side of the hall was left mostly untouched, even though there was an exhibition taking place.

The diagram, which records the people flow derived from observation is depicted on the right page.

4. INTERACTIONS

Most interactions during the interventions occurred between us and the students who were on their way to lectures. During conversations, some similar opinions and comments came up:

-Students do not realize, that the space at HPH could be used for sitting and waiting. The interaction pushes its' potential into the spotlight.

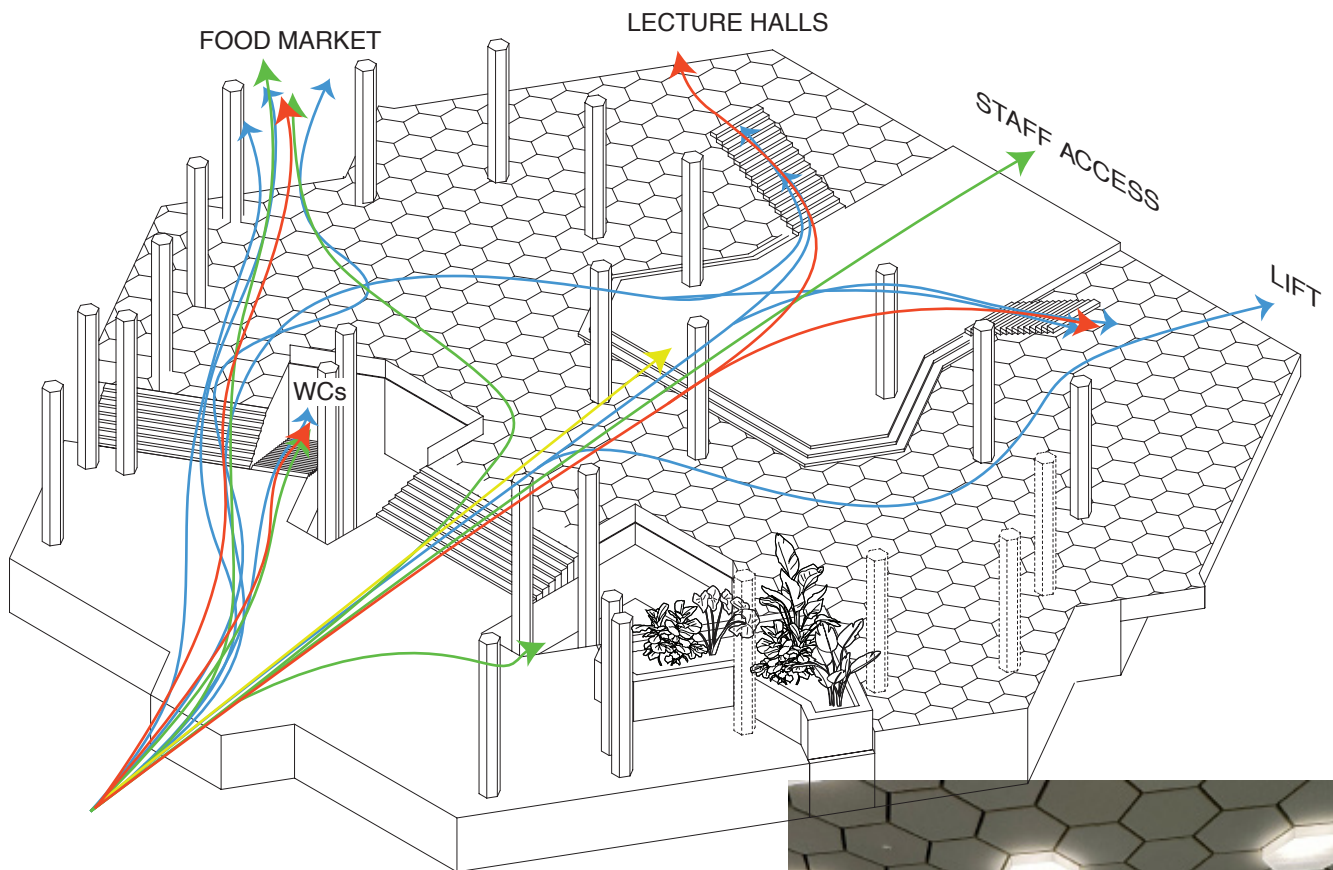
-The usage of the space would heavily depend on the weather. During cold and rainy days, it makes sense to have sitting opportunities inside of the building.

5. TAKE-AWAYS

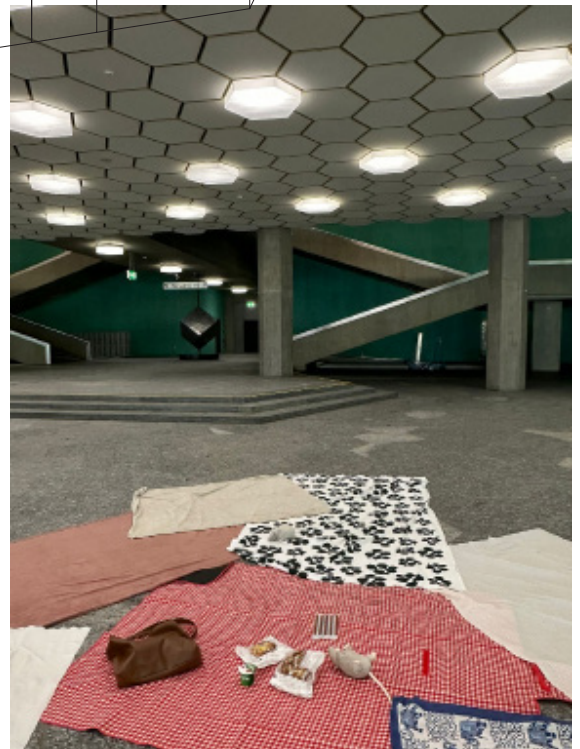
The intervention gave us new insights into how people move through buildings depending on what circumstances can be encountered within a space. There is a purpose in someone's destination. In order to get ETH bodies to use a space, there needs to be somewhat of a purpose. A room with free, open space could lack a program and therefore also lacks purpose.

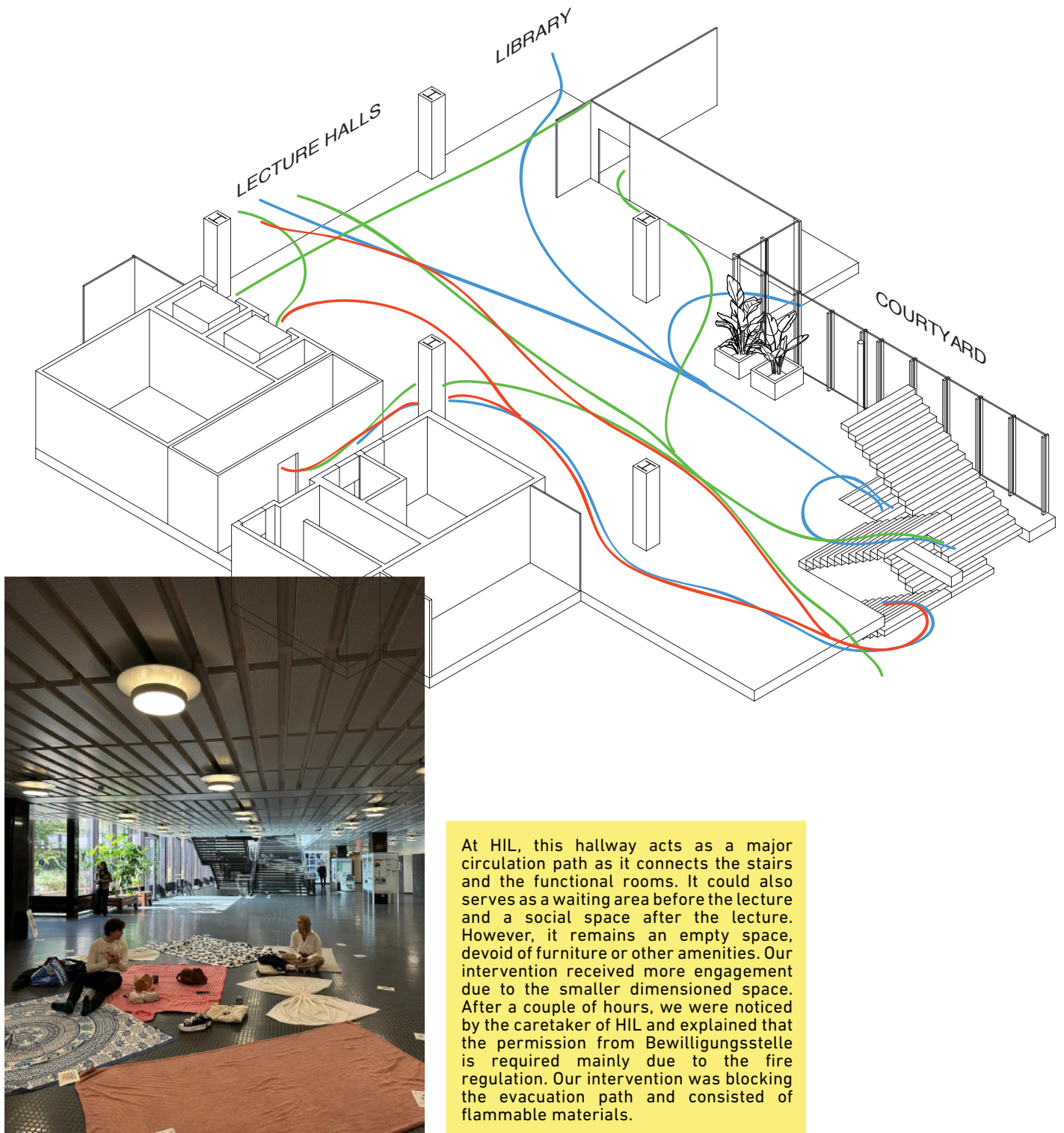
What limits the usage of a space? Why is no function given to certain spaces?

These are questions we will try to tackle as well.



Conclusion from the Picnic Intervention: Majority of foot path is limited to the lecture halls upstairs or the food market. The spacious yet empty space on the right side of the entrance hall is often unnoticed and unoccupied. We set out a picnic in the hall, a few students joined however the engagement is not satisfactory. The utilization of this space is highly contingent on weather and seasonal conditions according to the students. They would have been more inclined to participate if the intervention had taken place on rainy, snowy, or cold days. Nonetheless, they would still appreciate the redefinition of this often overlooked area.





3.1 On-Site Research: PicNic Interventions - HIL

1. CHOICE OF SPACE

HIL is another building that could be considered one of the busier buildings on the campus of Höggerberg. The rather wide hallway area on the E-Floor of HIL connects different services of the building and also acts as an exhibition space, mostly at the end of semesters. During the semester itself, the space stays rather empty while serving only as a foot traffic zone.

We thought, it could be interesting to set up another picnic intervention in this area, in order to observe what interactions and insight could be collected.

2. SET-UP & SUBJECTIVE FEELINGS TOWARDS THE SPACE

In a similar way to the intervention in HPH, picnic blankets were set up in the middle of the hallway. Pushed rats, a wooden sign and flyers were also put on the floor in order to gain attention from people passing by. As an addition one of the plants that can be seen on the picture was later moved into the middle of the space as well, surrounded by the blankets.

In comparison to the entrance hall of HPH, the hallway in HIL felt significantly less uncomfortable, since the ceiling was also lower. The lights and plants create a slightly more "comfortable" ambience.

3. PEOPLE WATCHING

During the time spent at this place, students, staff members as well as professors and lecturers passed by or interacted with us. The outdoor terrace served as a place to smoke during lecture breaks and students were passing by in order to get to the library or to their lecture.

Through observation, another foot-traffic map could be created.

4. INTERACTIONS

If we compare the amount of interactions that occurred during the intervention at HPH and HIL, a lot more could be counted in HIL. People were more comfortable asking about the purpose of the intervention and joined for quick conversations during their lectures or study breaks. Some lecturers also engaged in a talk with us and the students who joined.

However after roughly one and a half hours, one of the building staff members approached us to check whether we had permission to use the space or not. The staff member proceeded to explain to us in a very kind manner, how permission can be obtained. Following this interaction we had time to pack up our equipment and leave the area within an hour, since the picnic intervention was considered an informal "event" that was not announced to the facility staff in advance and not allowed since it breached fire safety regulations.

5. TAKE-AWAYS

These results bring us a step further in our research:

- In what way is the inoccupancy of spaces related to fire regulations and safety?
- If the governance of the space has authority over the usership bodies, how does that change if it would become more lenient?
- Who makes the decisions on how a space needs to be governed and do they cooperate with the users?

PICNIC EQUIPMENT



FLYERS

About 30 flyers were printed out onto an A5 sized piece of paper in order to make people passing by, aware that something is happening and that they are welcome to join. Since this intervention was not officially promoted as an event, this was necessary to attract people.



PICNIC BLANKETS, RATS & CAMERA +MUSIC

In order to be able to create a picnic setting, we collected a bunch of blankets that we distributed on the floors. The rats served as an additional tool in order to attract more attention in a playful and fun way. This method showed itself to be most effective in turning people's heads around.

PICNIC SIGN

Learning from the intervention, a bigger PicNic sign, A2 sized, was later printed out and glued onto a wooden board. This allowed us to gain a lot more attention and raised curiosity in people passing by. Compared to before, more people stopped by took a look at the intervention and joined eventually.



A FORM OF DOCUMENTATION: Video Time Lapses, Pictures, the Students and Us



4. Fire Regulations

It is fundamental to dive into the basic principles and significance of fire regulation to further understand the constraints and possibilities it offers for reimagining underutilized spaces.

1 KEY COMPONENTS OF THE REGULATION

The goal of these regulations is to comprehensively address the specific requirements and guidelines related to the design and construction of escape routes in buildings. These regulations aim to achieve several objectives:

The primary objective is to facilitate a deep understanding of the key principles and requirements governing escape routes within buildings, with a particular focus on factors such as the length, width, and the requisite number of escape routes. By doing so, the regulations seek to explain the critical importance of compliance with these rules, emphasizing that adherence is important for ensuring the safety of people during emergency situations, such as fires or other disasters. Furthermore, the regulations are expected to delve into the complex design and construction considerations that architects, builders, and safety personnel must take into account when planning escape routes within various types of buildings. It is often underscored how these rules can have a significant impact on the architectural and structural design of buildings, especially with regards to the layout and dimensions of escape routes.

2 WHO MAKES THOSE REGULATIONS?

The VKF Regulations are created through a history of long-lived experience and get renewed every 6 years in order to ensure relevance to the everchanging ways of building and new technologies.

The SGU department of ETHZ defines and reviews fire escape routes and plans to invite new strategies for the buildings of ETH to keep the provided space flexible for its users and actors of the University. SGU ETH follows the VKF regulations and is trained to apply these definitions on the buildings of ETH

3 CONNECTION TO THE INTERVENTION

a) Balance and Prioritization:

In the research, one can discuss the need to strike a balance between creating additional functional spaces for students and maintaining safety, also considering prioritizing underused spaces that are further away from primary escape routes and areas that have the potential for repurposing without compromising safety.

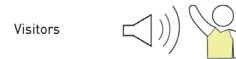
b) Adaptation and Flexibility:

The research can highlight the importance of adaptability in building design and space utilization. Regulations are in place to ensure safety, but do they necessarily restrict repurposing possibilities? The university can attempt to explore flexible and innovative design solutions that meet both safety requirements and the evolving needs of students.

By incorporating these considerations into our research, we can identify underused spaces within the university building that have the potential for repurposing, while ideally respecting safety regulations. The key is to attempt to build a balance between creating functional spaces for students and other users while ensuring compliance with safety standards. In case a balance between those cannot be met, questions around whether the regulations make sense or not, arise.

Sensitization of ETH-Members - Fire Safety Behaviour

Alarmierung im Ereignisfall



Voice alarm systems

At ETH, voice alarm systems are installed where required by law or deemed useful. These are triggered automatically in the event of an evacuation.



Emergency number

ETH members have the option of storing an emergency number (CMN or private mobile number) in the address database in order to be notified directly in the event of an alarm - www.adressen.ethz.ch



Landline or softphone call

Employees with a registered workstation in the affected building receive a phone call.



Evacuation support

Monday to Friday, between 7 a.m. and 5 p.m., the fire alarm team, the security service and the on-call staff of Facility Services provide support in the event of an evacuation. They explicitly check larger rooms such as lecture halls and seminar rooms for persons present and instruct them to leave the building.

building.

On weekends and between 5 p.m. and 7 a.m., the security service and the on-call staff of Facility Services provide support.



E-mail

NOTE: Students, regardless of their location, will receive an email indicating the building involved.

How should I behave?



Inform others.

Help people with mobility impairments (e.g. wheelchair, pregnant women) and disabilities (hearing or sight). If you know of colleagues who are for example experiencing anxiety, help them as well.

Please follow the instructions of the emergency services, the fire alarm team and the SSHE staff.



Take your personal belongings with you (coat, bag, keys, cell phone, etc.).



Lock your computer.

Leave the building calmly.



Pass on information about the location of persons in the building (e.g. persons with limited mobility, visually impaired persons, injured persons) or about ongoing safety-relevant experiments, etc. to the ETH intervention units or to the fire and police emergency services.



Go to the assembly point (PDF, 1.7 MB) [↓](#).

If no assembly point has been defined for your building, stay at a safe distance from the building.



Wait for further information.

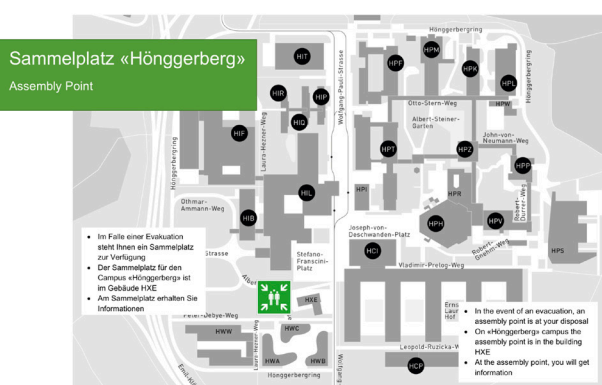
A possible return to the building will be communicated on the same channels as the evacuation request.



On sites or in buildings where ETH is a tenant, the relevant behavioral instructions of the site or building operator normally apply.

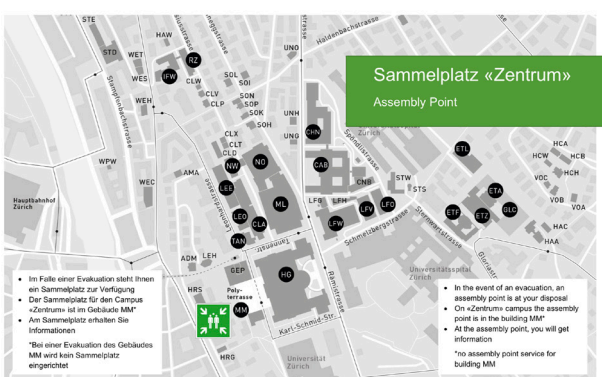
ETH zürich

Abteilung Sicherheit,
Gesundheit und Umwelt



ETH zürich

Abteilung Sicherheit,
Gesundheit und Umwelt



Feuer – was tun? Fire – what to do	Evakuierung – was tun? Evacuation – what to do	Unfall – was tun? Accident – what to do
1. Alarmzentrale anrufen Call the Emergency Desk 2. Sich und andere retten Alert others and evacuate 3. Türen schließen Close all doors 4. Brand bekämpfen Fight the fire	1. Andere informieren Spread the word 2. Gebäude verlassen Leave the building 3. Evakuationsleiter informieren Inform the evacuation leader 4. Zum Sammelplatz gehen Go to the assembly point	1. Alarmzentrale anrufen Call the Emergency Desk 2. Erste Hilfe leisten Administer first aid 3. Herzstillstand – reanimieren Cardiac arrest – resuscitate 4. Defibrillator anwenden Use the defibrillator
Alle Notfälle / All emergencies: 888 Extern / External: 044 342 11 88 ETH Zürich, SSO, www.ethz.ch/ssg	Alle Notfälle / All emergencies: 888 Extern / External: 044 342 11 88 ETH Zürich, SSO, www.ethz.ch/ssg	Alle Notfälle / All emergencies: 888 Extern / External: 044 342 11 88 ETH Zürich, SSO, www.ethz.ch/ssg

4.1 Fire Regulations

Basic Guidelines for Educational Buildings

VKF-Vereinigung Kantonaler Feuerversicherungen - Brandschutzarbeitshilfe

The VKF Regulation focuses on the design and dimensioning of escape routes in buildings, particularly addressing aspects related to the length and width of both vertical and horizontal escape routes. Here are the key elements:

PRINCIPLES (7.1): Escape routes should be designed for quick and safe use, considering factors like building layout, occupancy, and the use of fire protection closures between horizontal and vertical escape routes.

MEASUREMENT (7.2): The total escape route length includes routes within rooms and corridors, measured along walkway lines. Stairs in use units are measured horizontally. The distance within vertical escape routes to a safe outdoor location is not measured. Escape route widths are measured between perimeter walls or railings.

QUANTITY, LENGTH, AND WIDTH (7.3): The number of vertical escape routes and exits depends on floor area, route length, and occupancy. Multiple vertical escape routes should lead independently to a safe outdoor location. Horizontal connections between vertical escape routes follow similar requirements.

NUMBER OF VERTICAL ESCAPE ROUTES (7.3.2): Based on floor area, buildings either require at least one or two vertical escape routes for areas exceeding 900 square meters.

TOTAL LENGTH OF ESCAPE ROUTES (7.3.3): The total length of escape routes should not exceed 35 meters if they lead to a vertical escape route or exit to a safe outdoor location. If they lead to at least two spaced vertical escape routes, the limit is 50 meters.

ESCAPE ROUTE LENGTH WITHIN UTILIZATION UNIT (7.3.4): In the utilization unit, the maximum escape route length is 35 meters. Overmentioned

rooms can have a maximum of 50 meters with multiple escape directions. Escape routes within the unit may lead to a horizontal or vertical escape route via one adjacent room.

WIDTH AND HEIGHTS OF ESCAPE ROUTES

(7.3.5): The width of escape routes is determined by the room with the largest occupancy. Minimum width for horizontal escape routes is 1.2 meters. Door clearance width is 0.9 meters, and clearance height is 2.0 meters for doors and 2.1 meters for escape routes. These dimensions can be reduced for doors to subordinate rooms.

EXECUTION (7.4): This section outlines requirements for different types of escape routes, including vertical escape routes without fire protection closures, stairs, exterior stairs, horizontal escape routes, arbors, and doors.

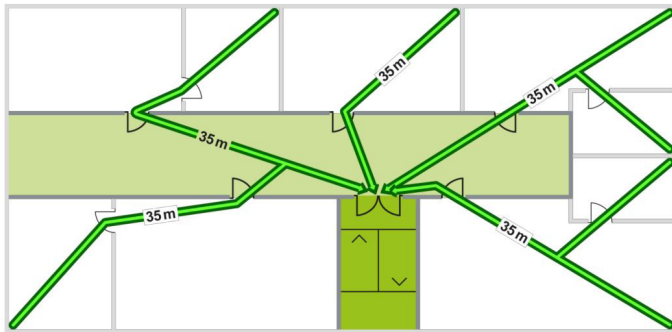
USAGE-RELATED REQUIREMENTS (7.5): This section addresses specific requirements for different building types, such as day care centres and rooms with large occupancies.

MARKING AND SAFETY LIGHTING (7.6): Exits and escape routes should be marked with escape signs, and safety lighting should be installed in escape routes.

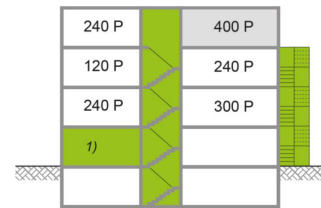
SMOKE AND HEAT EXTRACTION SYSTEMS (7.7): Smoke and heat extraction systems are required in certain building types, particularly in school buildings of medium height, with specific criteria for ventilation and operational readiness.

These regulations aim to ensure the design and construction of escape routes that facilitate quick and safe evacuation during emergency situations, considering various building and occupancy factors.

zu Ziffer 3.4.3 Fluchtweg innerhalb der Nutzungseinheit (Schulen)



Mehrere Räume mit einer Belegung > 100 Personen in verschiedenen Geschossen



Massgebend für die Fluchtwegbreiten ist das Geschoss mit dem Raum mit der grössten Personenbelegung.

Raum für 400 Personen

Berechnung der Fluchtwegbreiten (Ausgangs- und Treppenlaufbreiten):

$$400 \text{ P} \cdot 0,6 \text{ m} = 4,0 \text{ m}$$

60 P

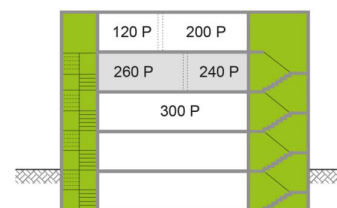
Lösungsvarianten:

$$\text{a: } 2 \cdot 2,0 \text{ m} = 4,0 \text{ m}$$

$$\text{b: } 2 \cdot 1,2 \text{ m} + 1 \cdot 1,6 \text{ m} = 4,0 \text{ m}$$

$$\text{c: } 1 \cdot 2,5 \text{ m} + 1 \cdot 1,5 \text{ m} = 4,0 \text{ m}$$

1) Verbindungskorridor auf der Zugangsebene direkt an einen sicheren Ort im Freien mit den gleichen Anforderungen wie an den vertikalen Fluchtweg.



Zwei mit einer Schiebewand unterteilte Räume für 260 und 240 Personen.

Berechnung der Fluchtwegbreiten (Ausgangs- und Treppenlaufbreiten):

$$260 + 240 \text{ Personen} = 500 \text{ Personen}$$

$$500 \text{ P} \cdot 0,6 \text{ m} = 5,0 \text{ m}$$

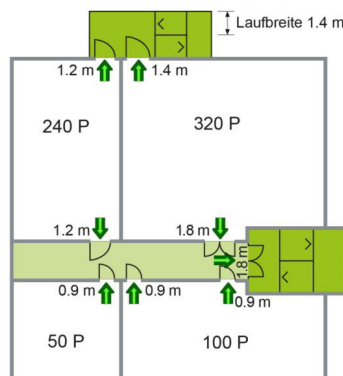
60 P

Lösungsvariante:

$$3 \cdot 1,2 \text{ m} + 1 \cdot 1,4 \text{ m} = 5,0 \text{ m}$$

zu Ziffer 3.5.3 Raumausgänge

Mehrere Räume mit einer Belegung > 100 Personen im gleichen Geschoss



Obergeschoss

Massgebend für die Fluchtwegbreiten ist der Raum mit der grössten Personenbelegung.

Raum für 320 Personen

Berechnung der Fluchtwegbreiten (Ausgangs- und Treppenlaufbreiten):

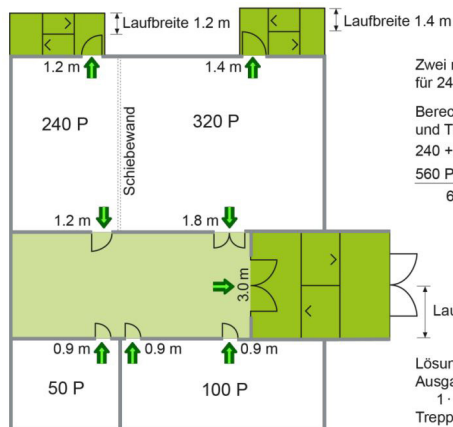
$$320 \text{ P} \cdot 0,6 \text{ m} = 3,2 \text{ m}$$

60 P

Lösungsvariante:

$$\text{Ausgangsbreiten } 1 \cdot 1,8 \text{ m} + 1 \cdot 1,4 \text{ m} = 3,2 \text{ m}$$

$$\text{Treppenlaufbreiten } 1 \cdot 1,8 \text{ m} + 1 \cdot 1,4 \text{ m} = 3,2 \text{ m}$$



Obergeschoss

Zwei mit einer Schiebewand unterteilte Räume für 240 und 320 Personen.

Berechnung der Fluchtwegbreiten (Ausgangs- und Treppenlaufbreiten):

$$240 + 320 \text{ Personen} = 560 \text{ Personen}$$

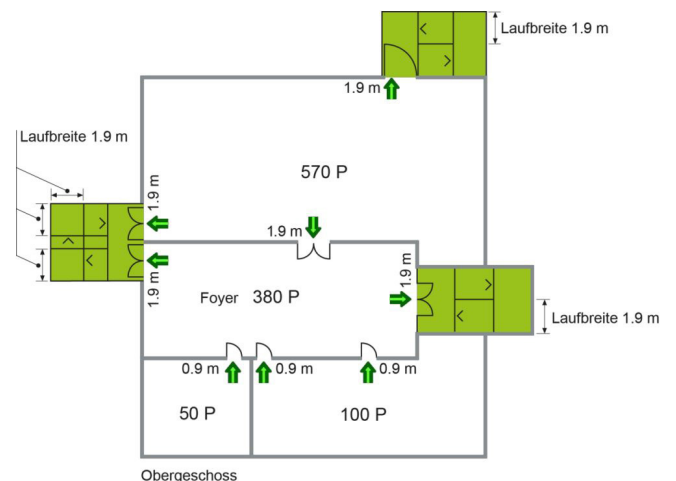
$$560 \text{ P} \cdot 0,6 \text{ m} = 5,6 \text{ m}$$

60 P

Lösungsvariante:

$$\text{Ausgangsbreiten } 1 \cdot 1,8 \text{ m} + 1 \cdot 1,4 \text{ m} + 2 \cdot 1,2 \text{ m} = 5,6 \text{ m}$$

$$\text{Treppenlaufbreiten } 1 \cdot 3,0 \text{ m} + 1 \cdot 1,4 \text{ m} + 1 \cdot 1,2 \text{ m} = 5,6 \text{ m}$$



Obergeschoss

Raum für 570 Personen

Berechnung der Fluchtwegbreiten (Ausgangs- und Treppenlaufbreiten):

$$570 \text{ P} \cdot 0,6 \text{ m} = 5,7 \text{ m}$$

60 P

Lösungsvariante:

$$\text{Ausgangsbreiten } 3 \cdot 1,9 \text{ m} = 5,7 \text{ m}$$

$$\text{Treppenlaufbreiten } 3 \cdot 1,9 \text{ m} = 5,7 \text{ m}$$

4.2 Consultation with Andreas Sidler

Expert for Explosion- & Firesafety (SGU)

After looking at the official documents for fire escape routes and regulations at ETH, we have collected several questions, where we are unsure, how the regulation is executed. We arranged the opportunity to ask an expert from of explosion and fire-safety department to give us answers to some of the unclarities.

We have explained our Pic-Nic intervention to Mr. Sidler as an introduction of our semester project, so he becomes familiar with what our goal of this interview is.

1. Why does the entrance hall of HPH stay unoccupied, even though the space is officially designed for holding events that hold a maximum capacity of 1300 people? Can unofficial temporary events act as a placeholder, during times when the space is not reserved for events?

The space is not necessarily unused or empty even during times when it looks to be. Every space or room at ETH has its defined function and falls under a category of usage. In this case, the usage of the entrance hall of HPH exists as a circulation space where people are allowed to move around and do what they have to do in the building. So even if the space looks unoccupied, it still serves the function it was designated for. HPH is also a bit of a special case because the hall is separated into six different sections, which are available for renting. This system exists in order to avoid conflict between the users who want to use and share the space, which might also be a reason why it is seen as or feels "empty".

2. Could you imagine the open spaces at HIL or HPH to be used as a cafe, study space, for apéros or something else? Where are the limits to the usage of those spaces, what activities are allowed what not? When does it start becoming a problem for the fire safety department?

The hall of HPH of course can be used for various activities, assuming one has permission to do it. The reason, why nobody from the staff tried to interrupt the Pic-Nic event in HPH is because they most likely assumed that permission had been granted. As long as there is no open fire or a device that could possibly become a fire hazard, the SGU generally has no problems with it. That doesn't mean that it's super restricting either. The office for permissions

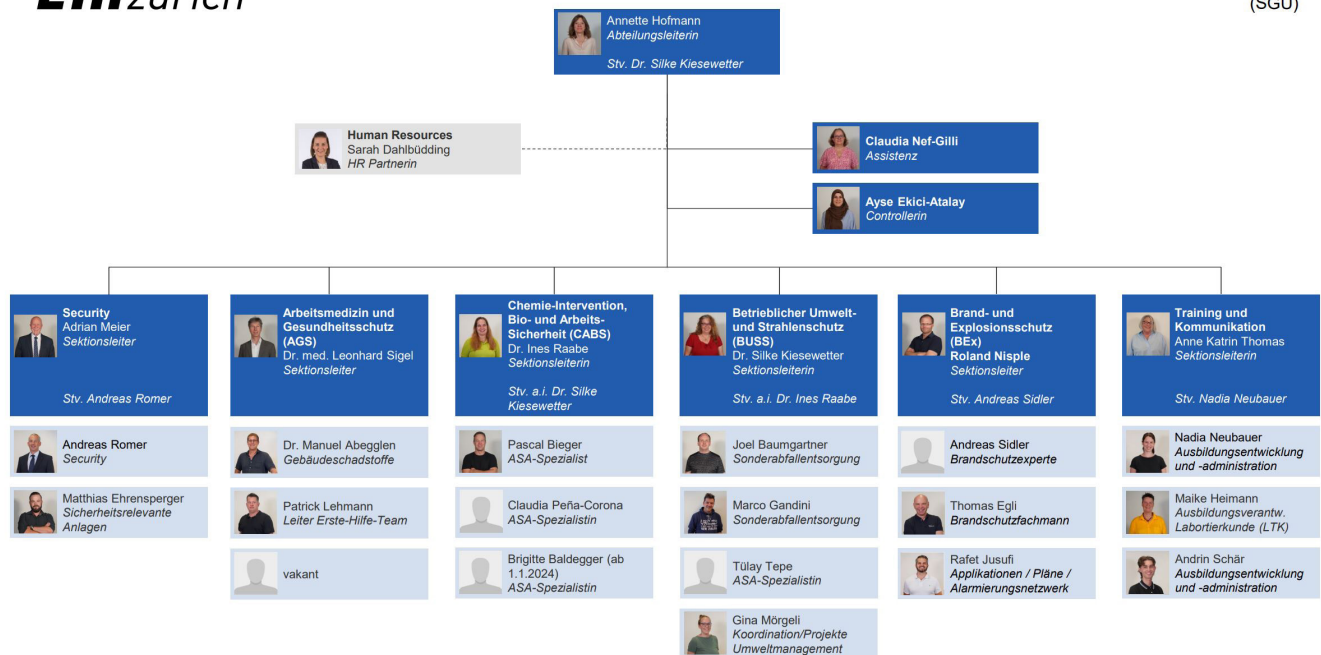
usually gives you their terms for each individual building. A fire could still break out, even if the event was conducted within guidelines, shit happens.

At the same time, if the fire was started intentionally or if guidelines were violated, the perpetrator or the event leader is going to be held responsible. The same goes for false alarms if they can be tracked down to a person. In this case, ETH will send the bill to whoever started the false alarm unless it was an accident. This happens in the building of HIL fairly often when students spray their models in the studios.

The entrance lobby of HIL works a lot differently compared to HPH. Since the building was built during a time before the fire safety guidelines became this strict, it doesn't necessarily comply with the current rules, which is why the entrance hall is officially considered an escape corridor and not an open space. This makes the usage of space especially restricting. Nonetheless, the building houses both the Department of Architecture and Civil & Environmental Engineering, which are known to need space for exhibitions and project demonstrations. All the materials exhibited are usually known to be inflammable and not immensely fire-resistant. With this much space at the entrance of HIL, ETH still wants to be able to provide space to its users. This means that events can still take place but only under much more active supervision. In order to be able to handle those events, most electronic devices, such as coffee machines, cooking devices etc., are not allowed in both entrance lobbies, the main and the one next to the Alumni Lounge. This rule applies to anyone using the space, regardless of their position in the school.

3. Project 777 in the atrium area of HIL: This was a project conducted by a group of architecture students and professors who wanted to create a space for the exchange of ideas and opinions of students during planned events. They first had permission and complied with reservation and fire safety regulations but as time passed by, they had to stop their activities because of complications with the fire safety department. Do you know anything about this and why were they stopped?

The space at HIL is technically also a rentable space, just with a lot more restrictions. For this project, it could have been, that the



materials used during the event were not allowed anymore with time. It might have something to do with the office for permission as well. Generally, he was unfamiliar with what could have been the problem.

Because fire restrictions have put a toll on the open usage of the entrance of HIL, standing in the way of the necessary events of its' users, ETH and SNU have also been looking for solutions in order to make that space more flexible. In the future, the main staircase of HIL will be put into a glass box, separating it from the open space. This results in two different rooms with different programs, which is necessary for HIL because of its architecture and construction. In this way, the space will become a lot more free and more flexible towards its usage.

4. How fireproof do the fixed fire escape corridors and stairwell have to be?

Only the absolutely necessary furniture and electrical devices are usually allowed. In many cases, one will only see a light bulb in the escape stairwells. Staircases are generally meant to be kept free and barely allow any program in them. However, this does not necessarily mean, that those dwellings do not allow any fire in at all. One mainly tries to minimize the burning time in case of a fire. Depending on the program of a room or space, the VKF provides a list of approved materials in those areas. Escape corridors should generally also be kept free, exceptions can be made if it does not strip the function of the corridor but this is to be consulted with both the office for permissions and the SNU together.

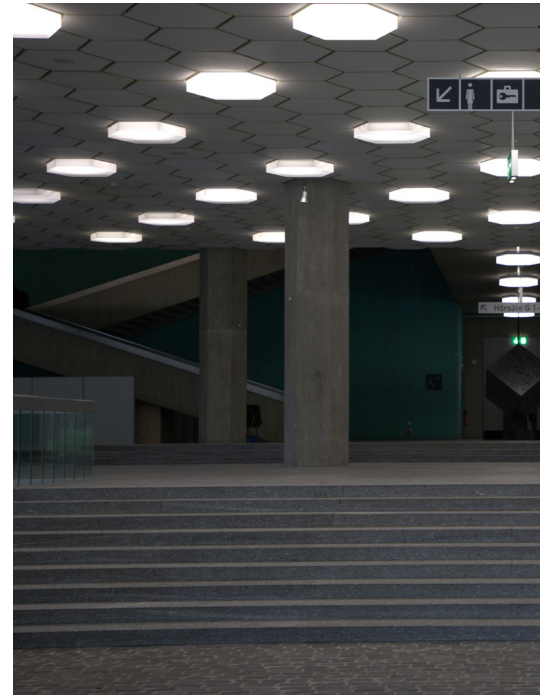
5. How do escape routes fixed? Who decides where space must be kept free?

The plans are made by trained professionals. There is a course and exam that covers the content of the VKF. The amount of space and breadth of the escape routes are calculated considering the maximum amount of people in rooms and buildings, which is very individual.

6. What problems have you gotten in touch with before?

With different events come different situations. There have been more false alarms than real fire events each year. In a publication that is created on a yearly basis, the events, in which fire alarms went off are listed.

The SNU is not only responsible for fire safety but also for the overall health and safety of the users of the campus. If events get out of control, events might get cancelled on the spot, just like how it was almost the case for the "Erstifest" this year.



Entrance Lobby

The entrance lobby, often the first physical encounter of an academic institution, holds the potential to be a thriving hub of activity, engagement, and community. Yet, many lobbies at ETH are often conspicuously empty and underutilized. They are reduced to mere circulation paths during busy lecture hours. On rare occasions, events and exhibitions are hosted. However, they are still not being used to its full potential. Thus the question arises: how can these entrance lobbies, the gateway of an educational institute, be more than just transitional zones?



The research sites are HPH, HIL and HCI buildings.

Usage of the chosen buildings:

- HPH: Hörsaalgebäude Physik, Mensa (Food Market)
- HIL: Bauwissenschaften, D-ARCH, D-BAUG, Alumni Lounge
- HCI: D-CHAB, D-MATL, Mikrobiologie, Mensa (Fusion)

The selection criteria for those spaces are based on their status as the most heavily frequented buildings on the ETH Hönggerberg campus. They are central to the Hönggerberg campus, serving as the primary destinations for students, faculty, and staff. These facilities are equipped with many amenities such as Mensa, Shops, Post Office and Lounge. Despite being the most frequented buildings, we could still pinpoint the often empty spaces during certain hours.

Underutilised areas:

- HPH lower ground near the lockers

- HPH ground floor foyer

-HIL main entrance foyer, around staircase and atrium area

-HIL Alumni entrance Lobby

-HCI Fusion entrance

-HCI outdoor passageway entrances

The factors contributing to their underutilization primarily stem from the absence of furnishings that invite people to relax, engage and socialize. This sources back to the strict fire regulation that limits the design potential of these spaces.

Building entrances play a crucial role in setting the tone and creating a first impression for those who enter. Architectural design can evoke a range of emotions and perceptions that influence how people feel when they approach and enter a building. However, due to strictly held fire regulations, entrance foyers often are unable to let

the architecture that shapes the space live up to its full usage potential. The limitation makes it difficult to think beyond its architecture and to focus on its' interior design. The unopenness to develop strategies for making inside spaces more attractive to its users on a bottom-up level plays a significant role in how our institute looks today.

GOAL

In this section of the report, we will discuss fire regulations that limit the use of the spaces that we have chosen for analysis. Realizing what the restriction represents, may help to understand what changes can be made for the future development of the university campus.



Abschnitt 3: Ausserordentliche Benützung

Art. 7 Zweck der ausserordentlichen Benützung

Für andere als die in Art. 5 genannten Zwecke können Räume nach Massgabe ihrer Eignung und Verfügbarkeit für akademische, kulturelle, didaktische, gesellige oder administrative Anlässe überlassen werden für:

- Institutionen des ETH-Bereichs und Oberbehörden der ETH;
- Partnerorganisationen der ETH;
- die Universität Zürich;
- wissenschaftliche Vereinigungen, denen die ETH Zürich oder ein ETH-Angehöriger im Rahmen seiner dienstlichen Funktion angehört;
- vom Bund subventionierte wissenschaftliche Organisationen.



Abschnitt 2: Ordentliche Benützung

Art. 5 Zweck der ordentlichen Benützung

Die ordentliche Benützung der Räume der ETH dient folgenden Zwecken:

- Lehre der ETH;
- Forschung der ETH;
- offizielle Weiterbildungsveranstaltungen der ETH;
- Verwaltung der ETH;
- Sitzungen der Organe der ETH;
- andere offizielle Veranstaltungen der ETH für ihre Hochschulangehörigen;
- weitere Bedürfnisse des ETH-Betriebs in den dafür bestimmten Räumen (Wohnen, Verpflegung, Sport, Freizeit).





ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich



SGU
Sicherheit, Gesundheit, und Umwelt

Sicherheitsauflagen für Veranstaltungen in den Foyers im Gebäude HIL der ETH Zürich

Geltungsbereich
Dieses Merkblatt gilt für die Nutzung der Ausstellungsflächen, der Foyers des HIL sowie dessen Aussenbereich. Es richtet sich an Mieter und Nutzer dieser Flächen und ist als Ergänzung der Veranstaltungsbewilligung zu betrachten. Im Weiteren sind den Anordnungs- und Verantwortlichen Personen der Ausstellung Betrieb sowie der Abteilung Sicherheit, Gesundheit und Umwelt (SGU) Folge zu leisten. Weitere Auflagen durch Behörden bleiben vorbehalten.

Fluchtwege / Türen freihalten

- Feuerwehrezufahrten, Flucht- und Rettungswege sind jederzeit freizuhalten.
- Fluchtwege müssen im Licht mindestens 1.20 m aufweisen.
- Türen dürfen nicht mit Keilen oder dergleichen blockiert werden.
- Fluchtwegkennzeichen dürfen nicht verdeckt werden und müssen jederzeit gut sichtbar sein.
- Die maximal zulässigen Personenbelegungen gemäss dem ETH Rauminformationssystem dürfen nicht überschritten werden.
- Veranstaltungen in Fluchtwegen sind grundsätzlich nicht erlaubt. In speziellen, dafür vorgesehenen Bereichen können, auf Anfrage, Veranstaltungen mit besonderen Auflagen durchgeführt werden.
- Fluchtwegpläne unter www.plan.ethz.ch (netzhz-Login).

Elektrische Geräte / Installationen

- Elektrische Beleuchtungskörper müssen die vom Hersteller festgelegten Sicherheitsabstände zu brennbaren Materialien aufweisen.
- Für Elektroinstallationen muss ein Sicherheitsnachweis (SiNa) geführt werden.
- Elektrische Geräte wie Beamer, Fernseher usw. dürfen nur während der Gebäudeöffnungszeiten betrieben werden und müssen der SN EN 60950, SN EN 62368 oder der SN EN 60065 entsprechen.
- Der Gebrauch von Nebelmaschinen, Pyrotechnik oder dergleichen ist untersagt.

Dekorationen

- Ausstellungselemente oder Dekorationen dürfen die Sicht auf Fluchtwegkennzeichen nicht beeinträchtigen.

Grill- und Kochstellen / offene Feuer

- Dürfen nur ausserhalb des Gebäudes betrieben werden oder in dafür eingerichteten Küchen.
- Auf Dächern und Terrassen dürfen keine Finnenkerzen oder Feuerschalen betrieben werden.
- Es muss eine geeignete Löschleinrichtung durch den Veranstalter bereitgestellt werden (Löschdecke, Handfeuerlöscher).
- Kochstellen müssen auf nichtbrennbaren Unterlagen platziert werden.
- Für flüssiggasbetriebene Geräte gilt speziell:
 - Betrieb nur ausserhalb von Gebäuden
 - Abstand zu Notausgängen von mindestens 5m ist einzuhalten
 - keine Schächte, Vertiefungen im Umkreis von 3m
 - Anschlussschläuche dürfen nicht älter als 5 Jahre sein
 - vor Inbetriebnahme ist eine visuelle Sicherheitsprüfung auf Beschädigungen sowie Dichtheit der Bauelemente vorzunehmen.

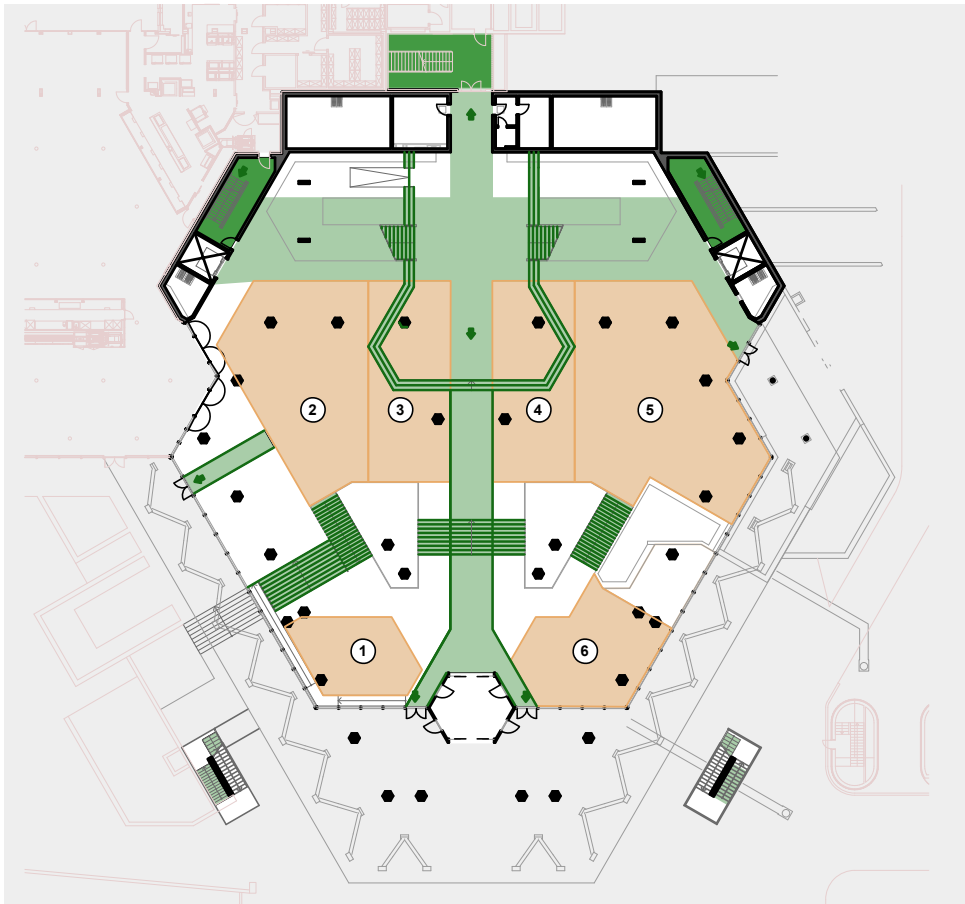
Weitere Auflagen

- Für Veranstaltungen ist ein Gesuch bei der Abteilung Services einzureichen. Die im Bewilligungsschreiben aufgeführten Auflagen sind einzuhalten.
- Es sind auch die geltenden VKF Brandschutzvorschriften sowie die Merkblätter der Feuerpolizei der Stadt Zürich zu berücksichtigen.

Zürich im Juli 2022

Erstellt durch die Sektion Brand- und Explosionsschutz der Abteilung SGU in Zusammenarbeit mit Services

Entrance Lobby Floor Plans Analysis

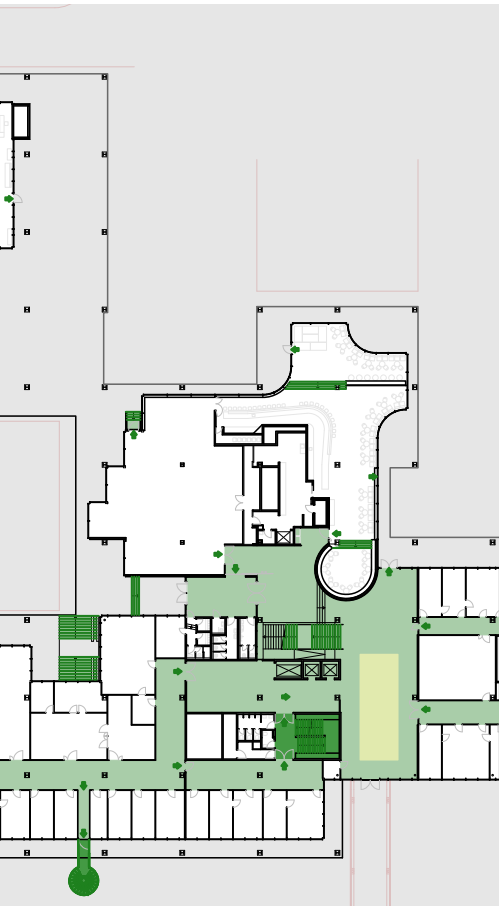


 Escape Corridor - keep free

 Escape Stairwell - keep free

 Escape Corridor with sp

 Rentable Open-Space



Special Regulations

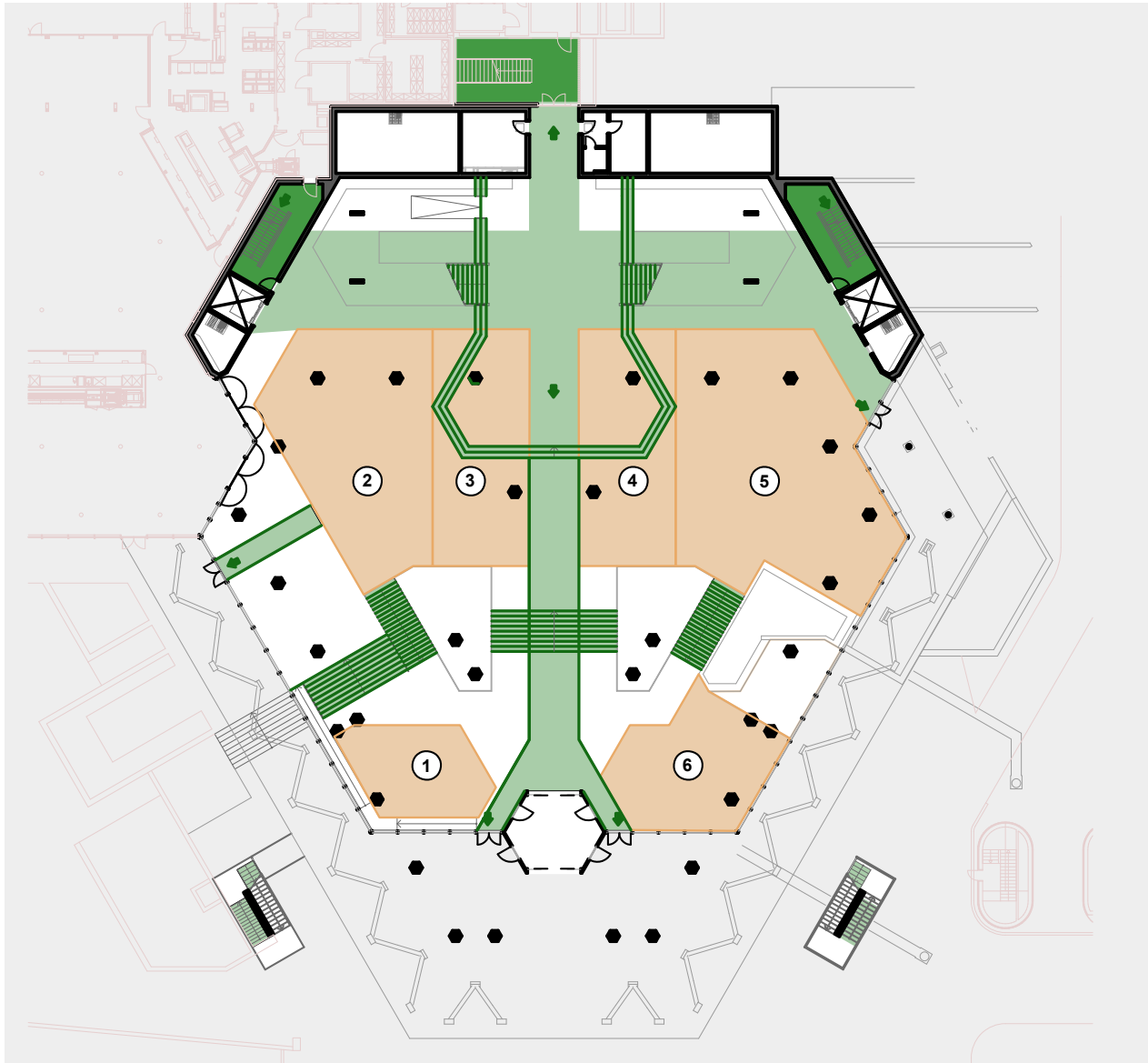


Escape Direction Sign



Rooms / Spaces with Program

HPH E-Floor



■ Escape Corridor - keep free

■ Escape Stairwell - keep free

■ Escape Corridor with special Regulations

■ Rentable Open-Space

Rooms / Spaces with Program

➔ Escape Direction Sign

HPH E-FLOOR

1 SPACE DESCRIPTION

When someone first enters the foyer of HPH, they might be impressed by the geometrical and modern architecture of the building. The entrance foyer is mainly empty and does not seem to be a place where social interaction would take place. Even though it is used by various agents, one does not encounter a lot of people except during lunch hours. On the left side of the hall, the entrance to the Food Market can be found. On the other side, there is nothing besides some plants and a monument of Albert Einstein and sometimes a small scaled exhibition.

2 CURRENT ORGANIZATION

The entrance floor of HPH is designed to work as a stage-like space, where events can be held. Thanks to this composition, the space can be used quite flexibly as long as the escape routes and exits are kept free. Since the building mainly consists of stone and glass materials, it makes it more difficult for a fire to spread.

According to the "Vereinigung Kantonalen Feuerversicherungen", also called the VKF, this building requires at least two vertical escape routes, as well as enough exits for the number of people that can be present in the building. The escape route must not exceed 50 meters.

These following articles apply to this typology of space:
VKF - Brandschutzaufgaben für Schulbauten: 2016

7.3.3 Total length of escape routes, section 3

3 For overheight rooms, the maximum escape route length can be increased to 50 m in consultation with the fire protection authority, provided that several escape directions are available.

7.5.2 Rooms with large occupancy, sections 4 & 5

4 The relevant occupancy rate for determining the required escape routes must be recorded in writing and is binding. If no binding information is available (e.g. seating plans), area-related assumptions must be made. If necessary, these shall be adapted to the specific building

5 The number and width of exits shall be determined based on the occupancy of persons.

As depicted in the Floorplan on the left, the rentable open space of HPH is divided into six parts:

1. Includes 70m² for max 100 people
2. Includes 212m² for max 275 people
3. Includes 141m² for max 190 people
4. Includes 141m² for max 190 people
5. Includes 313m² for max 400 people
6. Includes 110m² for max 145 people

For calculating the minimum required breadth for exists, we need to combine the maximum capacity of people allowed in the room:

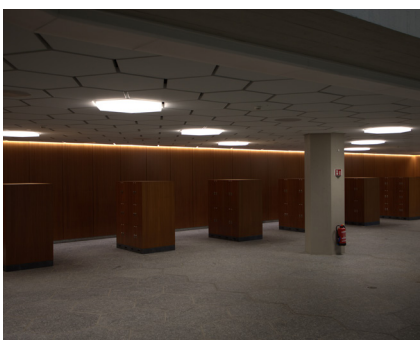
$1300P \times 0.6 / 60 = 13$ meters in total required

All exits combined: $2+2+2+2+4+1.2+1.2+1.8=16.2$ meters in total

=> The building has enough emergency exits

Thanks to the consultation with an expert on explosion and fire safety from the SGU department, it is safe to say, that the usage of the space can become quite flexible. In order to keep an overview of the space, ETH regulates it through rental agreements. This allows different users to occupy the space in various ways, which are not as restricting as in other buildings, not designed to carry events.

It is usually assumed, that ETH members, who make use of this space have acquired permission to do so, which is why during the intervention, no authorities have approached it with great concern.



HIL D-FLOOR

1 SPACE DESCRIPTION

As one enters HIL from its main entrance, one is greeted with the information centre on the right side and a huge space in combination with the main staircase on the left side. The open space is sometimes occupied by architecture exhibitions made by students or serves as a space for master presentations. The atrium space in front of the information centre creates another interesting volumetry with a ceiling almost three stories high. Overall the entrance foyer seems extremely spacious

2 CURRENT ORGANIZATION

The ground floor for the building HIL of the campus Höggerberg functions in a much more complex way compared to HPH even tho it provides an over-dimensioned open space in a similar way. Since there is no spatial separation of the main stairwell to the open space, the whole area of its' main lobby is officially considered an escape corridor. This means, that the occupation of the space will be significantly more restricting than in the entrance hall of HPH.

Since the main occupants of this building are the Department of Architecture, Civil Engineers and Environmental Engineers, HIL hosts a lot of different exhibitions, events and final project reviews throughout the year. This requires strict regulation of occupancy time frames and permissions. In order to hold the events safely, ETH heightens the attentiveness of its security services.

In order for the building to gain more flexibility again, ETH is working on trying to physically separate the staircase from the open space.

Does it really make sense to work around the regulations in such a costly manner? Could it be considered to change up the regulations instead?

These following articles must apply to this typology of space:

VKF - Brandschutzaufgaben für Schulbauten: 2016

7.3.3 Total length of escape routes, section 1,2 & 3

1 In the utilization unit, the maximum escape route length is 35 m.

2 If the exits do not lead directly to a safe place outside within 35 m or open into a vertical escape route, a horizontal escape route (e.g. corridor with fire resistance or arcade) is required as a connection.

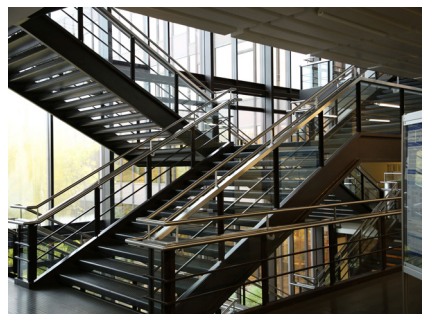
3 For overheight rooms, the maximum escape route length can be increased to 50 m in consultation with the fire protection authority, provided that several escape directions are available.

7.5.2 Rooms with large occupancy, sections 4 & 5

4 The relevant occupancy rate for determining the required escape routes must be recorded in writing and is binding. If no binding information is available (e.g. seating plans), area-related assumptions must be made. If necessary, these shall be adapted to the specific building

5 The number and width of exits shall be determined based on the occupancy of persons.

In conclusion, the restrictions and possibilities of using open spaces within the university facilities differ. The regulations regarding usage and safety are dynamic and depend on various factors, including building design, materials used, and the history of the space. For example, HIL's entrance hall, due to its architecture, is officially considered an escape corridor, making its usage more restrictive. Could there be a workaround to avoid such laborious solutions?



HIL D-Floor



Escape Corridor - keep free

Escape Stairwell - keep free

Escape Corridor with special Regulations

Rentable Open-Space

Rooms / Spaces with Program

Escape Direction Sign

HCI E-Floor



Escape Corridor - keep free

Escape Stairwell - keep free

Escape Corridor with special Regulations

Rentable Open-Space

Rooms / Spaces with Program

Escape Direction Sign

HCI E-FLOOR

1 SPACE DESCRIPTION

HCI has many different main entrances, one leads directly to the double-floored Fusion Food Hall, and the other ones are located towards the outdoor passageway that connects the labs of HCI with its main body which is used by many different actors. When entering the main body through its passageway one stands in front of a spiral staircase leading up to the second floor serving as a connection of the two mensa floors. There are also three lifts on each side.

2 CURRENT ORGANIZATION

The building of HCI also is considered one of the most used buildings of ETH due to the building program. On the one hand, the building contains one of the two main food providers of the campus H  nggerberg. It is the largest and most expensive building on campus, as it also has a multiple-story library, study spaces, lecture halls, seminar rooms and labs for the chemistry and biology departments.

Similar to the stairwell situation in HIL, the one in HCI is not separated from the staircase either, which might explain why the area between the outside corridor and the food hall is defined as an Escape stairwell.

These following articles must apply to this typology of space:

VKF - Brandschutzauflagen f  r Schulbauten: 2016

7.3.3 Total length of escape routes, section 1,2 & 3

1 In the utilization unit, the maximum escape route length is 35 m.

2 If the exits do not lead directly to a safe place outside within 35 m or open into a vertical escape route, a horizontal escape route (e.g. corridor with fire resistance or arcade) is required as a connection.

3 For overheight rooms, the maximum escape route length can be increased to 50 m in consultation with the fire protection authority, provided that several escape directions are available.

7.5.2 Rooms with large occupancy, sections 4 & 5

4 The relevant occupancy rate for determining the required escape routes must be recorded in writing and is binding. If no binding information is available (e.g. seating plans), area-related assumptions must be made. If necessary, these shall be adapted to the specific building

5 The number and width of exits shall be determined based on the occupancy of persons.

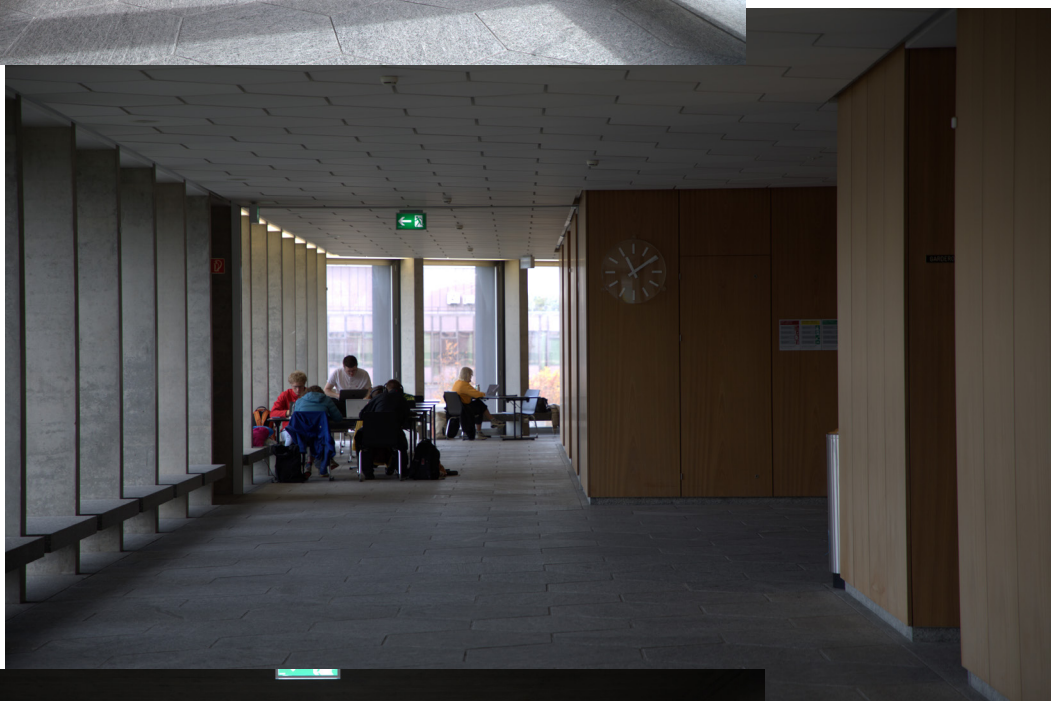
Different from the other two spaces which have been analysed, the outside corridor might deserve the most attention as an "open space". The hallway provides access to all connecting "arms" of the building and leads up to the sports and the HPH building. Since the area is considered an outside area, fire regulations do not apply in the same way, which allows the space to gain flexibility for various programs.

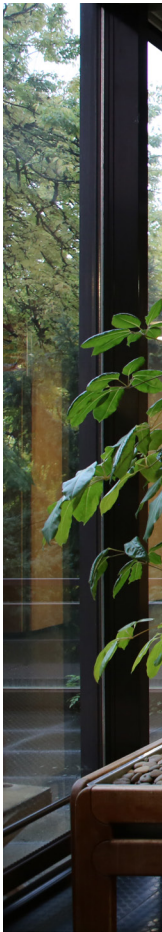


Hallway

An integral component of the building that connects the functional spaces of ETH. As an educational institute with large numbers of students and other stakeholders, the academic corridors are usually larger to accommodate the flow of people, especially before and after the lectures. Despite the spaciousness, these over-dimensioned hallways are often relegated to mere passageways and are often empty during lectures. These halls have strict restrictions as they are considered evacuation routes. This research aims to explore how we can go around the regulations to create a more flexible communal hallway.

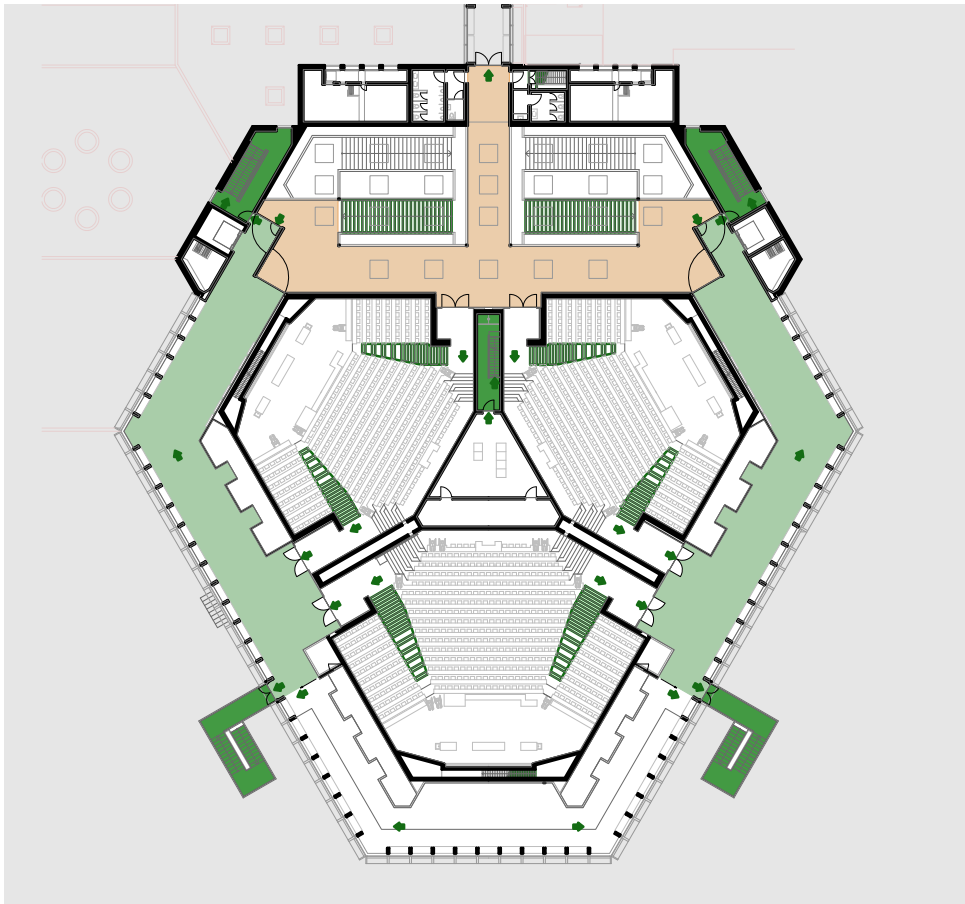






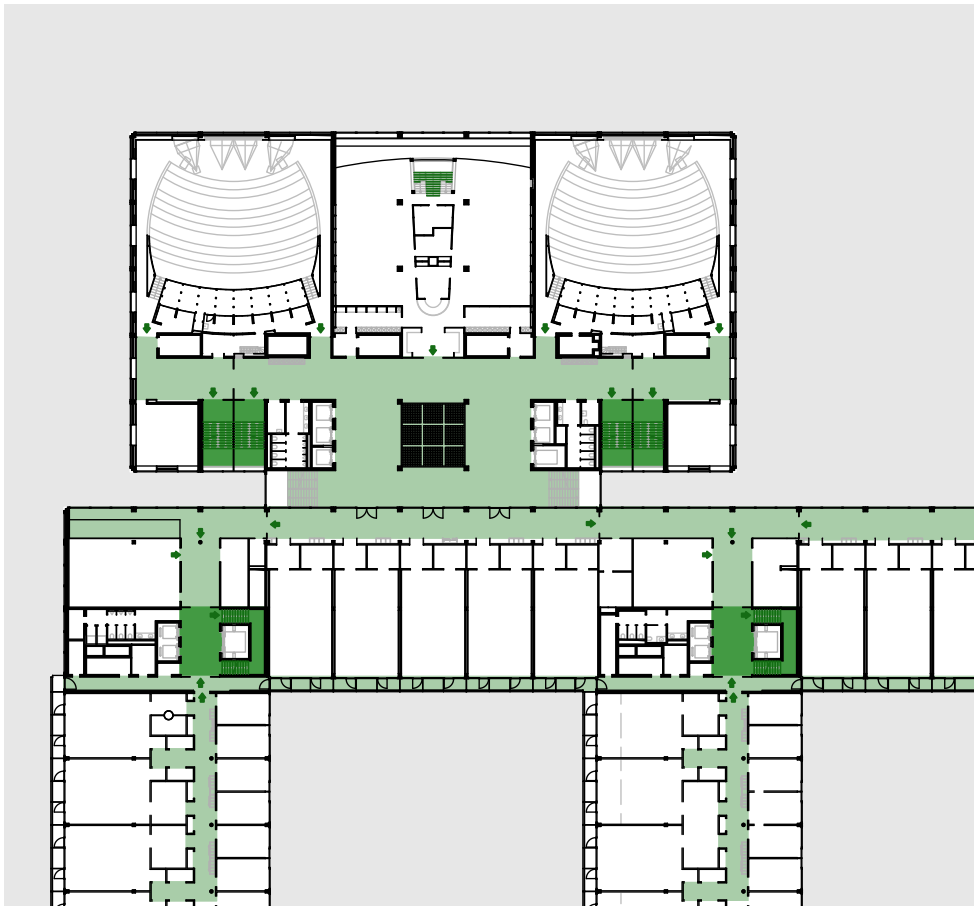
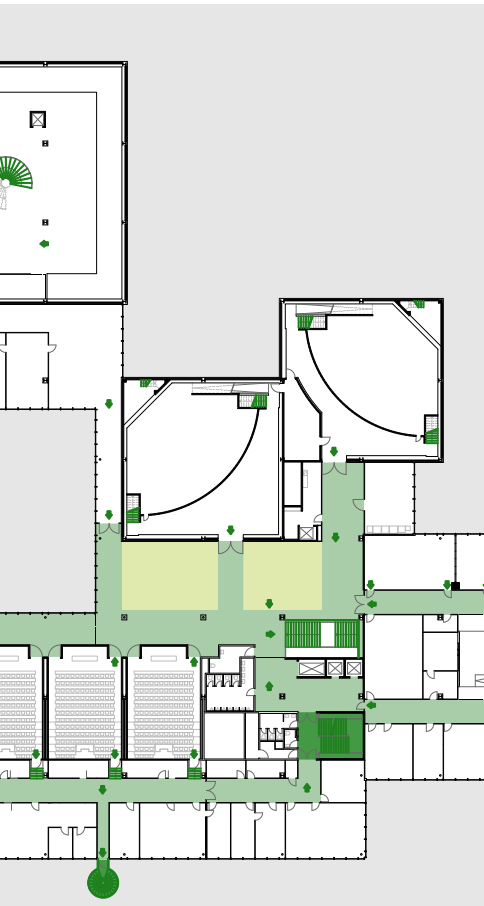


Hallway Floor Plans Analysis



-  Escape Corridor - keep free
-  Escape Stairwell - keep free

-  Escape Corridor with s
-  Rentable- / Open-Spac



Special Regulations

ce

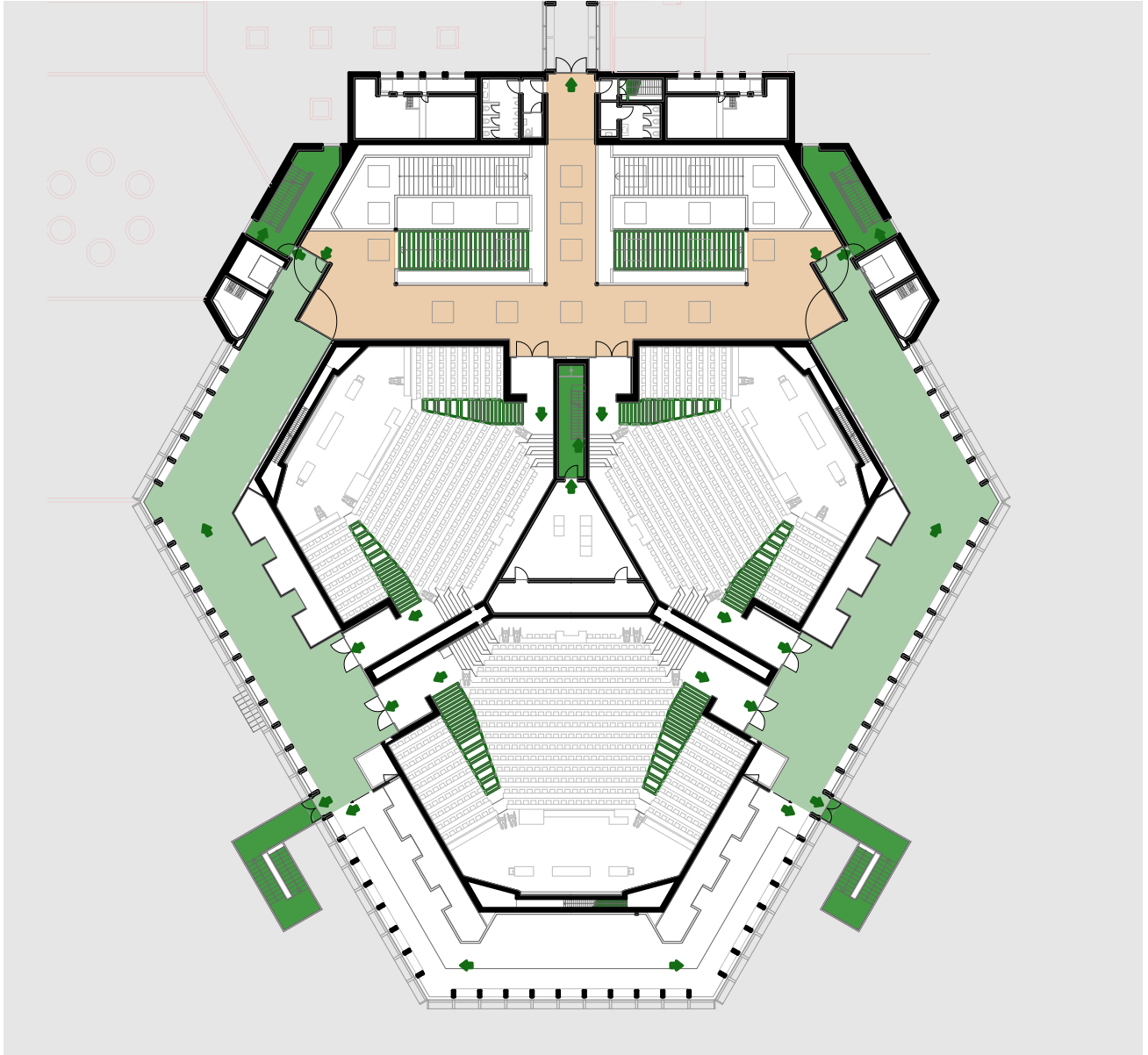


Escape Direction Sign



Rooms / Spaces with Program

HPH G-Floor



 Escape Corridor - keep free

 Rentable Open-Space

 Escape Stairwell - keep free

 Rooms / Spaces with Program

 Escape Corridor with special Regulations

 Escape Direction Sign

HPH G-FLOOR

1 SPACE DESCRIPTION

One usually goes to the G-floor if there is a lecture one needs to attend or if one is looking for a study space. The hallway that leads to the different entrances for the lectures is rather wide and empty. It is designed in a way, that the hallway surrounds all lecture halls like a circle. There is a study zone, which only occupies one-third of the hallway and is usually filled with working students. Desks and chairs are positioned towards the large windows and mostly equipped with power outlets, turning it into a popular space for students to fully dive into their studies. In addition to that, the hallway is also equipped with a longitudinal wardrobe along its' inner facade, which is blended in seamlessly but also almost never used. This wardrobe seems unnecessary and takes away space in the hallway making it more narrow.

2 CURRENT ORGANIZATION

On this floor, another rentable open space exists. Even though the rentable space is located directly in the main connection between two buildings, it can still be used for events, since it is directly connected to one of the vertical escape routes. The main staircase does not serve as a vertical escape route during evacuation. Instead, four other vertical escape routes which are located on the sides of the building can be used for evacuation, making the official rental space available. The study zone is also separated from the main escape route, which contributes to the reason, it can be used as a study area with furnishing.

Following Articles of the VKF apply to this space:

7.3.4 Escape route length within the floor or utilization unit,

In the utilization unit, the maximum escape route length is 35 m.

If the exits do not lead directly to a safe place outside within 35 m or open into a vertical escape route, a horizontal escape

route (e.g. corridor with fire resistance or arcade) is required as a connection.

7.3.5 Width and heights of escape routes

The width of doors, horizontal and vertical escape routes must be dimensioned according to the number of persons. The room with the largest occupancy determines the required width of the escape route (see Clause 7.5.2).

The minimum width of horizontal escape routes must be 1.2m.

7.4.4 Horizontal escape routes

Horizontal escape routes shall be extended to vertical escape routes or to a safe location outdoors.

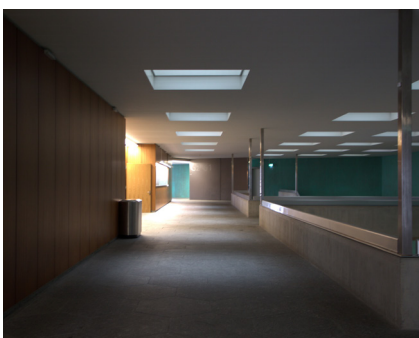
7.5.2 Rooms with large occupancy

The occupancy of rooms is decisive for the number and dimensioning of the required escape routes (exits, horizontal and vertical escape routes). It depends on the size, use and location of the rooms.

The number and width of exits shall be determined based on the occupancy of persons.

Though this hallway already provides space for its students, there could be a suggestion to extend the usage of its space towards the windows. By removing its' wardrobe function, more space could be generated and be used by the building's occupants. The rentable space around the main staircase, which does not function as a fire escape stairwell, could also introduce an alternative program when it is not rented.

Instead of keeping hallway regulations simple, by leaving them empty, initiatives can be found in order to improve the area.



HIL E-FLOOR

1 SPACE DESCRIPTION

The E-floor is where the accesses to the three lecture halls of HIL can be found. Besides connecting lecture halls through its hallway it also gives one access to the library and seminar rooms as well as staff offices. In front of the library, there is an atrium space that allows one to see the entrance foyer below. The very spacious hallway surrounding the atrium was one of the spaces where on-site picnic interventions by our group were conducted.

2 CURRENT ORGANIZATION

Similarly to the floor below, the entrance foyer, the hallway is officially labelled as an escape corridor and a primary traffic zone with special regulations. This means, that the space should be kept free at all times unless it is reserved for exhibitions held by its departments. Outside of the exhibition days the hallway stays empty and can only be used for events with very strictly kept permission regulations. During events, the security of the space is heightened.

Following Articles of the VKF apply to this space:

7.3.4 Escape route length within the floor or utilization unit, Sections 1 & 2

In the utilization unit, the maximum escape route length is 35 m.

If the exits do not lead directly to a safe place outside within 35 m or open into a vertical escape route, a horizontal escape route (e.g. corridor with fire resistance or arcade) is required as a connection.

7.3.5 Width and heights of escape routes

The width of doors, horizontal and vertical escape routes must be dimensioned according to the number of persons. The room with the largest occupancy determines the required width of the escape route (see Clause 7.5.2).

The minimum width of horizontal escape routes must be 1.2 m.

The clear passage width of doors must be at least 0.9 m.

7.4.4 Horizontal escape routes

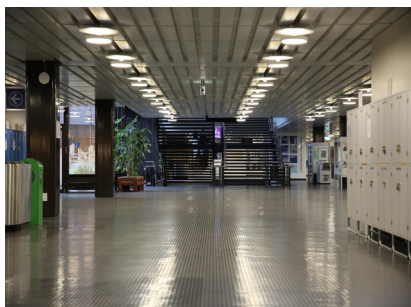
Horizontal escape routes shall be extended to vertical escape routes or to a safe location outdoors.

7.5.2 Rooms with large occupancy

The occupancy of rooms is decisive for the number and dimensioning of the required escape routes (exits, horizontal and vertical escape routes). It depends on the size, use and location of the rooms.

The number and width of exits shall be determined based on the occupancy of persons.

HIL is a multifunctional building that holds a large amount of offices, students, seminar rooms, lecture halls, staff members etc. However, the building fails to provide space for its occupants that would allow them to gain a balance between work and break settings. Even though plenty of space could be available, it is often not the case, since fire regulations are extremely restricting. In order to find a solution that could help reimagine the space, one has to either work around the regulations and separate strongly fire-regulated spaces from open spaces, or the regulations for this building might have to be reconsidered and redesigned.



HIL E-Floor



Escape Corridor - keep free

Escape Stairwell - keep free

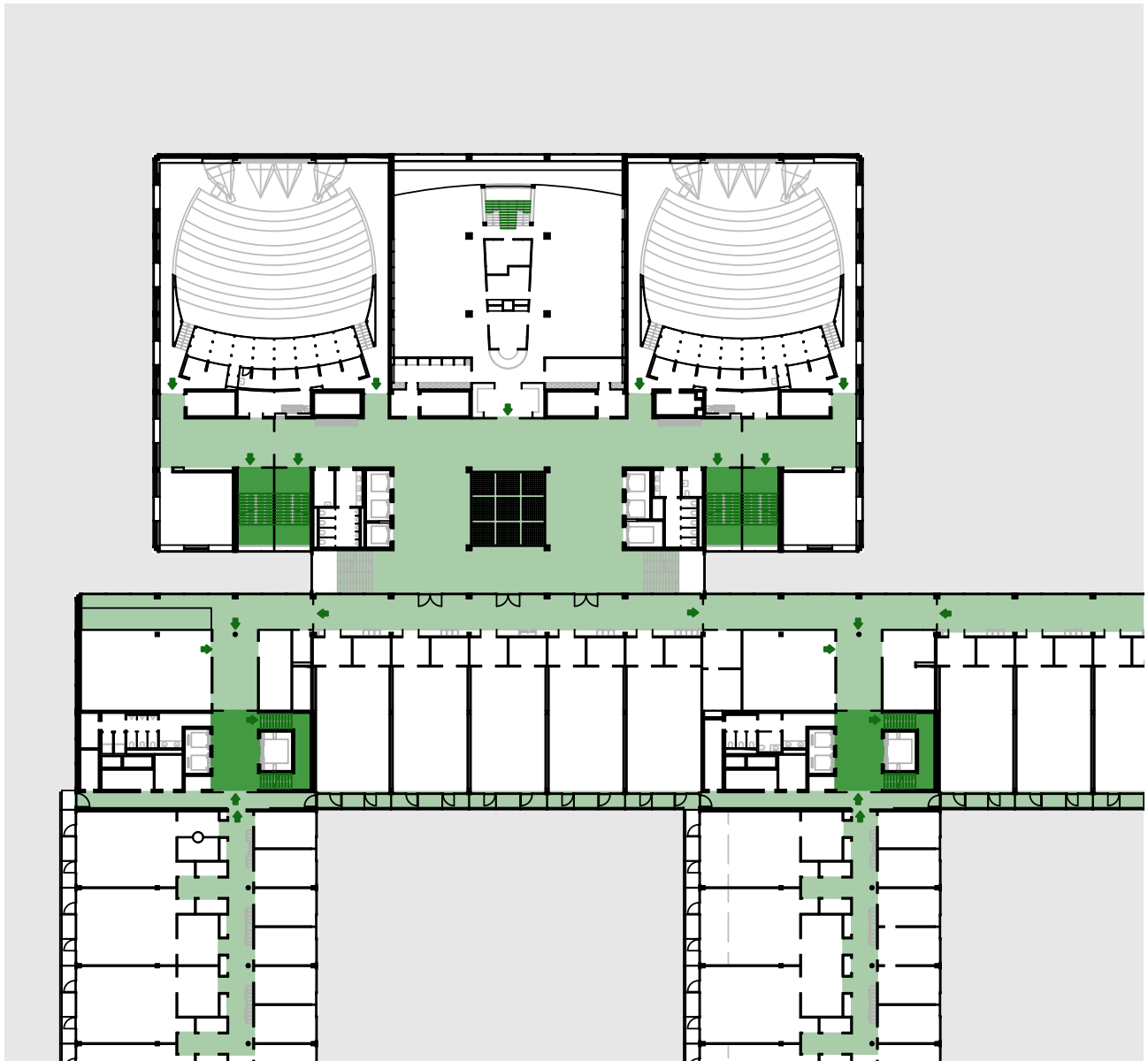
Escape Corridor with special Regulations

Rentable Open-Space

Rooms / Spaces with Program

Escape Direction Sign

HCI G-Floor



Escape Corridor - keep free

Escape Stairwell - keep free

Escape Corridor with special Regulations

Rentable Open-Space

Rooms / Spaces with Program

Escape Direction Sign

HCI G-FLOOR

1 SPACE DESCRIPTION

The G-floor is another floor that provides access to the main lecture halls of the building. Apart from two lecture halls, there are two seminar rooms that are also used by students to study, when they are not occupied. The main body of HCI is divided symmetrically into two parts. The middle space of the hallway serves as an atrium where the ceiling reaches up to the top floor. Though the space in the middle subjectively looks "nicer", people avoid standing in that square, since the space has no official program, it shows potential for usage or furnishing.

2 CURRENT ORGANIZATION

The hallways of this floor should generally be kept free since they are the main traffic zone, during evacuations and lead to the building's horizontal escape routes. The atrium square however is not affected by this regulation and can in theory become a space with the opportunity for an upgrade in order to create more usable space for ETH members. Beyond the glass wall, most laboratories are located and hallways stay narrow and make an alternative use in those spaces difficult. Each arm of the building has multiple escape stairwells that lead to outdoor areas.

Following Articles of the VKF apply to this space:

7.3.4 Escape route length within the floor or utilization unit, Sections 1 & 2

In the utilization unit, the maximum escape route length is 35 m.

If the exits do not lead directly to a safe place outside within 35 m or open into a vertical escape route, a horizontal escape route (e.g. corridor with fire resistance or arcade) is required as a connection.

7.3.5 Width and heights of escape routes

The width of doors, horizontal and vertical escape routes must be dimensioned according to the number of persons. The room with the largest occupancy determines the required width of the escape route (see Clause 7.5.2).

The minimum width of horizontal escape routes must be 1.2 m.

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Horizontal escape routes shall be extended to vertical escape routes or to a safe location outdoors.

7.5.2 Rooms with large occupancy

The occupancy of rooms is decisive for the number and dimensioning of the required escape routes (exits, horizontal and vertical escape routes). It depends on the size, use and location of the rooms.

The number and width of exits shall be determined based on the occupancy of persons.

In the example of HCI alternative usages inside of fire-regulated hallways can already be found. There are study spaces and small-scale exhibitions placed around the atrium. In the middle space, there still is a lack of presence that could invite students to actually use it. Even though that middle square is not restricted by fire regulation directly, there is no program in it. One could consider placing some interaction-triggering intervention program in this space.



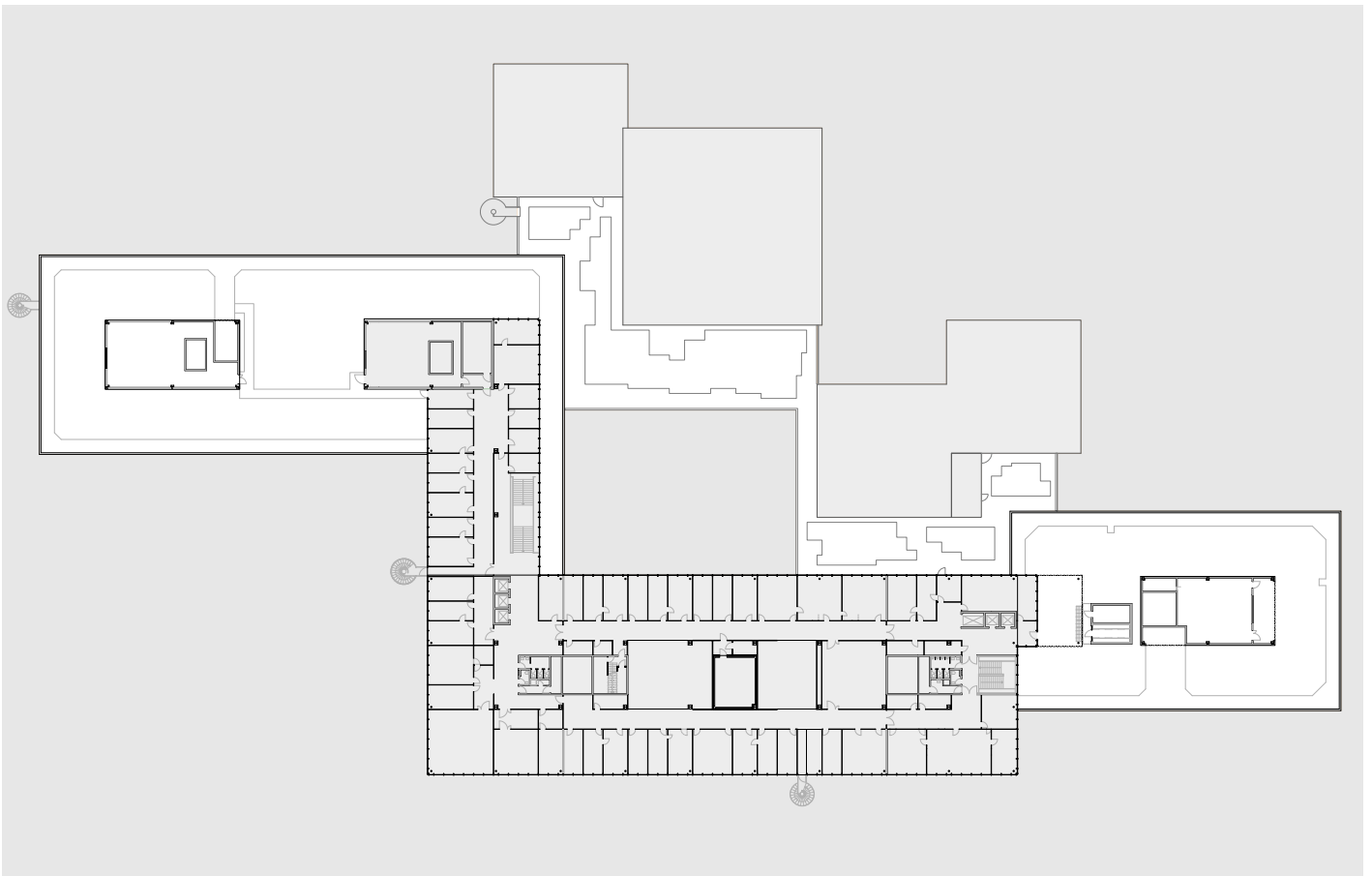


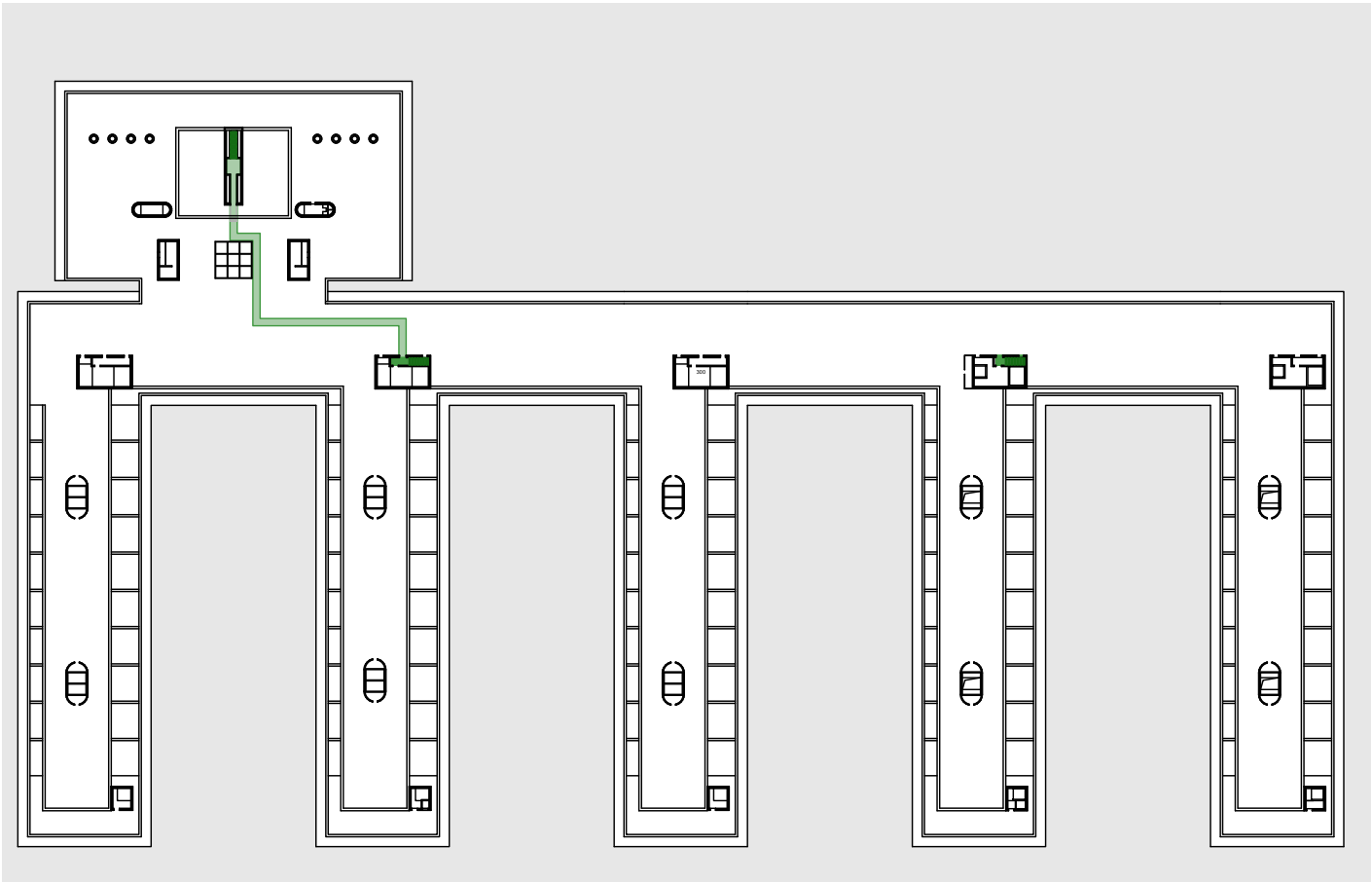
Rooftops

The rooftops of educational institutions often embody untapped potential for elevated spatial experiences. At ETH, however, these spaces are often inaccessible without special permission. Even when the rooftops are accessible, they remain underused despite all the potentials it can have. We investigate how rooftops can transcend their current underutilized state, and aims to redefine these elevated spaces as vibrant hubs for diverse activities within the regulations.



Rooftop Floor Plans Analysis





HIL Rooftops

1 Space Description

The building of HIL holds space for not only one rooftop but four in total on different elevation levels. The cube-like architecture creates a courtyard in the middle of the building with two accessible roof terraces surrounding it on the F- & E-floor levels. The courtyard roof terrace already brings some character into the space since there have been attempts to make the space greener and more enjoyable to spend time in. It connects the two wings of the rather generously built environment.

On the other hand, the two rooftops on the H-floor level are physically separated. One is located on the right and one is on the left wing rooftop. Both are accessible to the public but do not have access to a directly connected stairwell, meaning it can only be reached by going inside the building and making your way up. In comparison to the courtyard roof terrace, those rooftops are left rather untouched by furniture, decoration or program. However, this does not necessarily mean that they are completely unused. It is often a popular space for apéros or departmental events. One of the rooftops also serves as a space where 3D models are printed and printers are stored.

2 Current Organization

Guardrails and Safety Barriers:

To ensure the safety of students and staff, regulations require the installation of secure guardrails and safety barriers along rooftop edges to prevent falls. These safety measures must meet height and design standards to minimize the risk of accidents.

Access and Egress:

Clearly defined access points and safe egress routes are essential for rooftop safety within a school environment. Regulations typically outline specific requirements for stairways, ladders, or access hatches to facilitate secure rooftop access and evacuation during emergencies.

Fire Safety:

School rooftop areas must adhere to stringent fire safety regulations. Fire suppression systems, such as sprinklers or fire extinguishers, may be mandated to mitigate fire risks,

especially in spaces where students gather.

Electrical Safety:

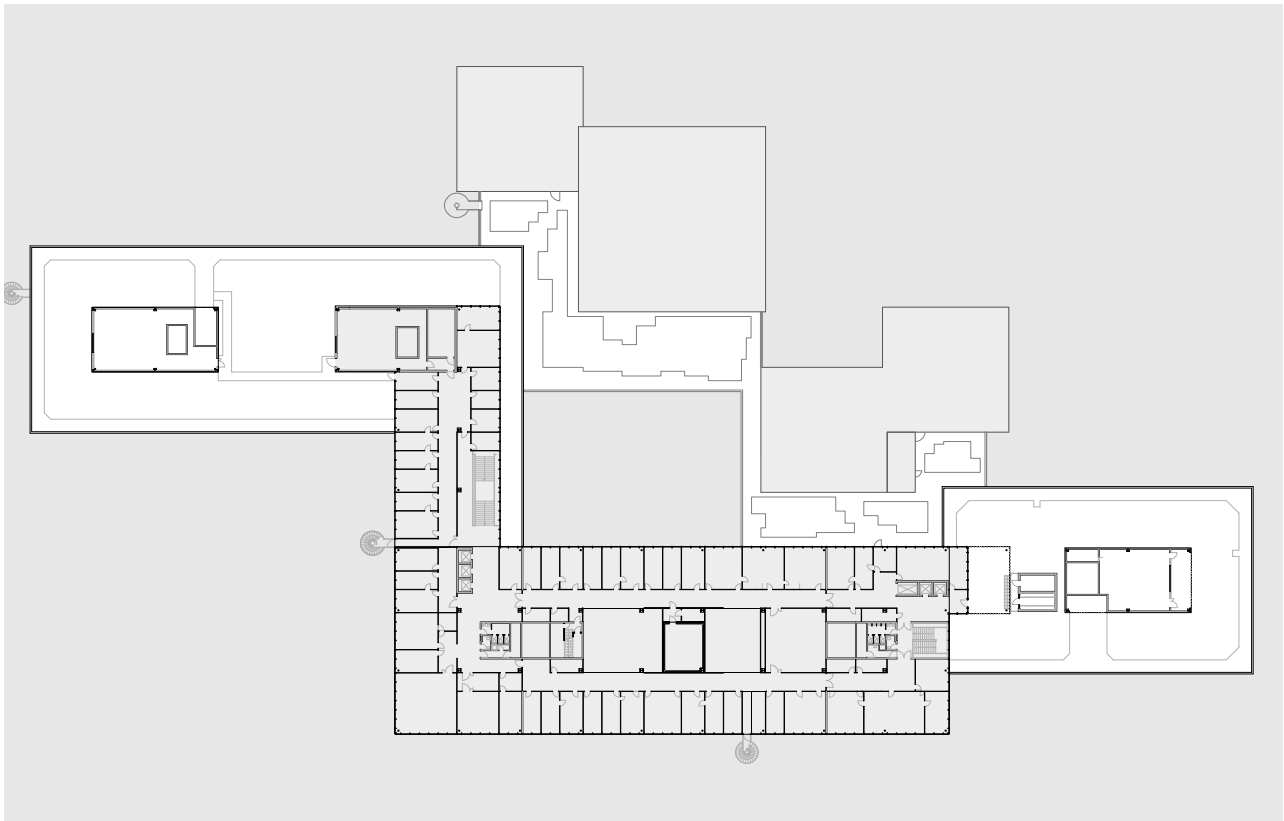
Electrical installations on school rooftops should comply with strict safety regulations to prevent electrical hazards. Proper grounding, wiring, and safety measures are typically mandated to protect the well-being of students and staff.

Materials and Furnishings:

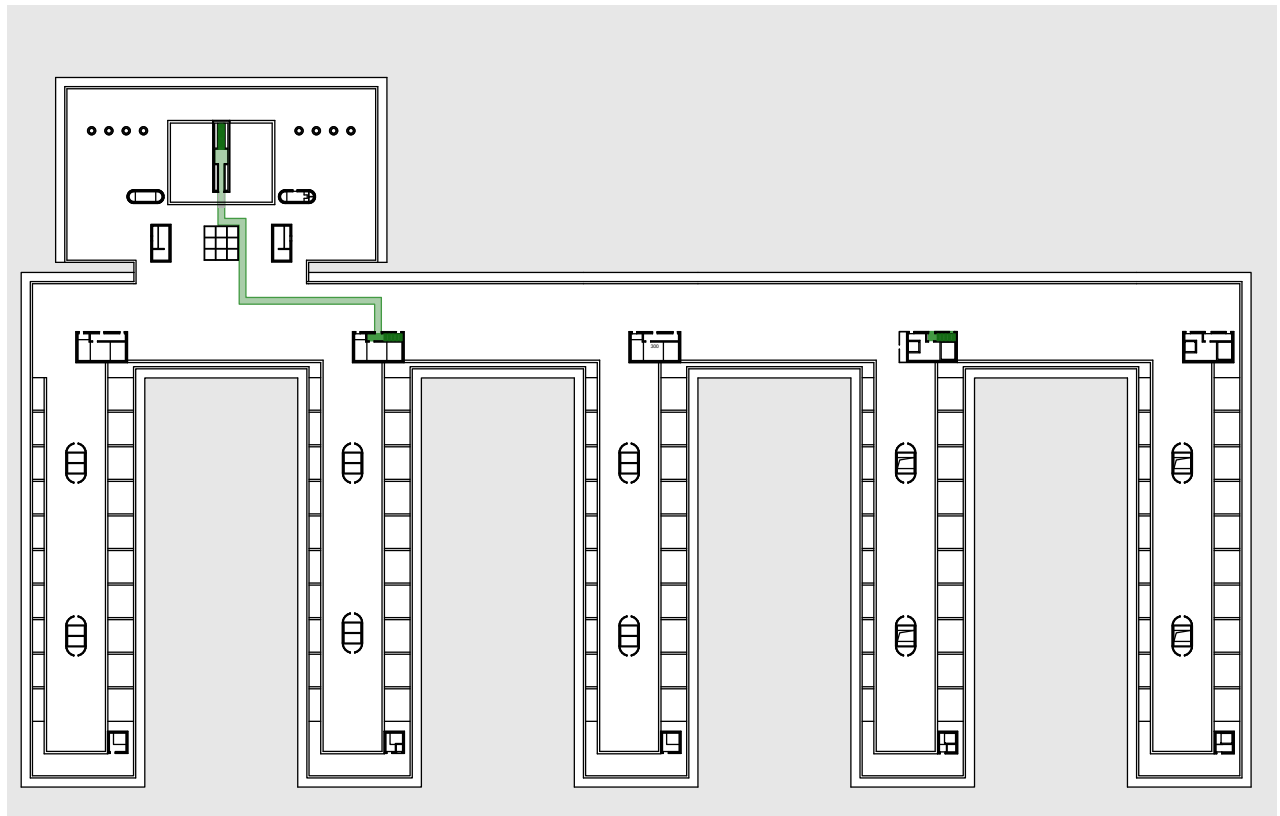
Regulations may restrict the types of materials and furnishings allowed on school rooftops to minimize fire risks and ensure the safety of occupants.

From a student perspective, there is a lack of sitting opportunities on the rooftops of HIL. Though they are a popular place to have lunch or to get fresh air, there is nowhere to sit except on the floor. Giving the space more program and organization may create a space of more quality and maximize its usage.

HIL Rooftops F- and G-Floor



HCI Rooftop



HCI Rooftop

1 Space Description

The rooftop of HPH covers a huge amount of space but at the same time, it is not easily accessible unless one knows how to. It is accessible through either the laboratories or through one single staircase located in the main body. On the rooftop itself, there is no guardrail nor safety barriers since the space was not designed for flexible usage from the get-go. By installing the necessary safety instruments one may be able to give the space a new meaning and a connection to other building rooftops can be made on an urban design level.

After talking to students who work in the laboratories of HCI it is concluded that the rooftop does get used for small gatherings or small-scale grilling events. In order to bring out more quality and potential of the rooftop area as a space for student gatherings and social interaction, safety measures need to be pushed further.

2 Current Organization

Guardrails and Safety Barriers:

To ensure the safety of students and staff, regulations require the installation of secure guardrails and safety barriers along rooftop edges to prevent falls. These safety measures must meet height and design standards to minimize the risk of accidents.

Access and Egress:

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Materials and Furnishings:

Regulations may restrict the types of materials and furnishings allowed on school rooftops to minimize fire risks and ensure the safety of occupants.

The rooftop of HCI seems rather underexplored and disregarded though it could be an amazing student space. The already happening interventions by students on that rooftop prove that the space could be turned into a valuable place for ETH members and its' building occupants or visitors.

By implementing safety measurements and creating a sense of ownership among students and staff, the rooftop of HPH can be transformed into a dynamic and safe student space. This transformation not only benefits the ETH community but also contributes to the vibrant urban fabric of the surrounding area.



HIL777 was a bottom-up project with the intention to capture the hard-to-use space in the foyer of HIL into a usable and open event area. The idea was brought up by the two students and the 777 in the name stands for the ID of the official permanent permit given by ETH fire authority for events. A lecture series and other events should be able to take place in a room that is openly accessible and can serve as a stage. The two-story room in the main entrance area of HIL was the perfect place for it. In order to receive the permit, all elements within the space had to be fireproofed. The inspector of the safety department personally checked whether the curtains were fire retardant, by trying to light them on fire with a matchstick.... Sadly, the event only happened twice in HS 2017 and FS 2018 and was not continued due to complex approval procedures by the fire safety department and spacial conflicts due to the Master's Theses exhibition. The creation of the space led their makers to the idea of the 777Budget, which has continued since then as part of architektura, each semester bringing lectures and events to members of the D-ARCH.

Case Study: HIL777

The case of HIL777 stands as an approach to use the atrium space at the entrance of HIL in order to create a safe space where provoking discussions between students and teaching members can be held. This event tried to manifest itself in that space without disturbing the presence of other ongoing exhibitions on the other side of the foyer. It proved itself to be a creative and attractive way to create a space for exchange and connection between buildings, students and other actors. Sadly the reason why this event was unable to be continued at this location lies behind fire regulations and the inability to find an alternative way to work around it.

In summary, HIL777 offers valuable insights into the intersection of spatial intervention and fire regulation. It underscores the need for a holistic approach that considers safety, regulatory compliance, and the transformative potential of underutilized spaces. By learning from the experiences of such projects, we can navigate the complexities of our own research angle



Top to Bottom:
Lehrcanape event in action
Nachtwache
Students arriving at Raumdiskussion

Case Study: Leutschenbach School / Christian Kerez

Though mainly known for its structural features, the Leutschenbach school by Christian Kerez is the precedent that informs our research by offering the techniques to efficiently use spaces within regulatory compliance.

In the Leutschenbach school, corridors serving solely as access zones are absent. This is unlike the traditional school model in Zurich where one main corridor connects all the classrooms and is also used as an evacuation path. Thus the corridor's main purpose and function is only reduced to circulation. In Kerez's design, the flexibility of the classroom and common spaces allow social exchange to take place. The rooms can be opened up to a large central hall, fully furnished and usable for educational, social and recreational purposes. The hall can be flexibly subdivided or segmented using curtains, screens, or furniture.

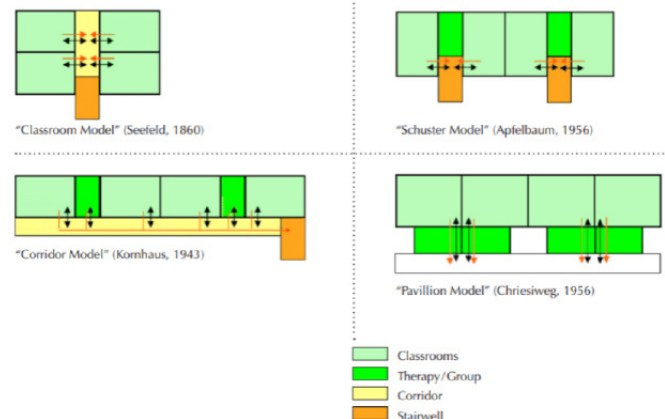
The balconies surrounding the school levels serve multiple functions as well: they can be used as escape routes, provide shading, and serve as recreational areas, thereby further enhancing the flexibility of space utilization. The arrangement of functional areas are one of the unique quality of the design.

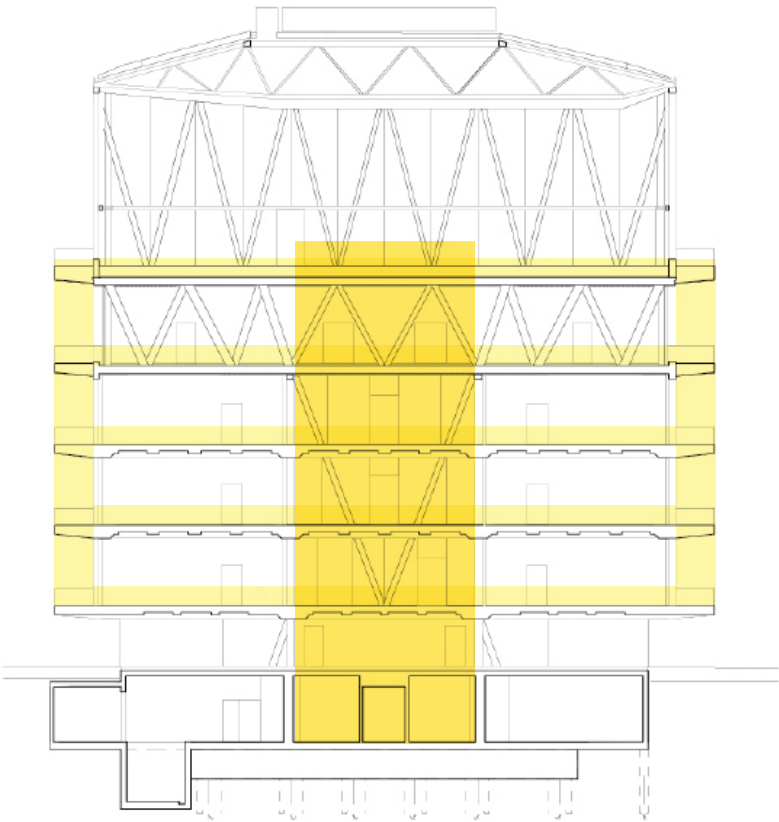
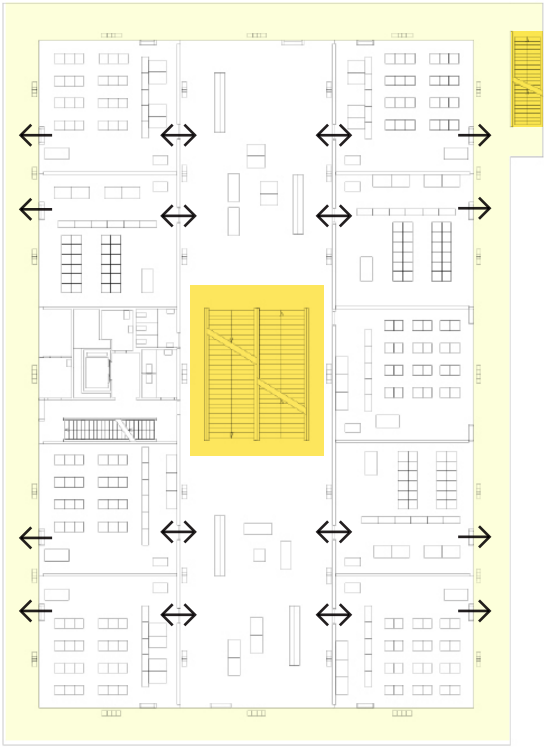
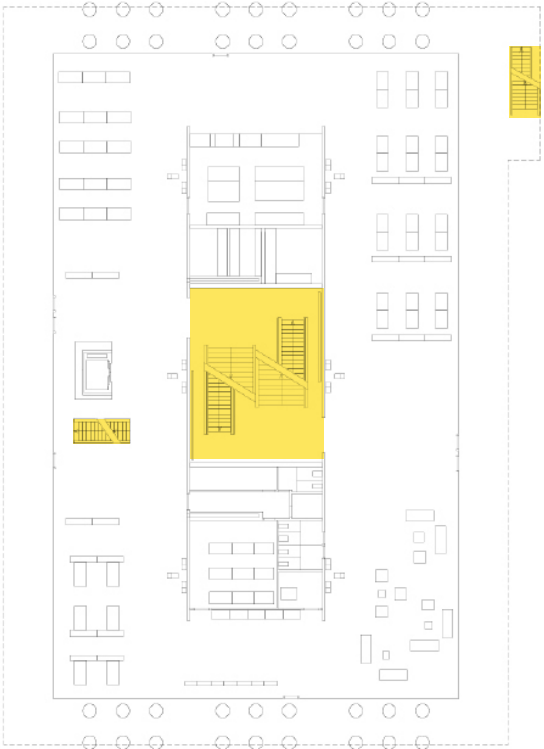
By ensuring that the fire escape routes are distinct from common spaces, the design can maximize the school's usability for the benefit of the students and faculty.

Learning points:

- The idea is to transform the traditionally utilitarian corridors, which are typically used for walking from one place to another, into functional and usable spaces.
- By separating the daily accessible area such as common hall in this case, with the fire evacuation path, furnitures can be placed and interactions can happen.
- Different fire safety codes and regulations can effect the design but with innovative planning, the space can be designed efficiently.

Traditional school model:





Takeaways



TAKEAWAYS FROM OUR FINDINGS

Our exploration into the intersection of spatial interventions and fire regulations has revealed crucial insights that guide our understanding of underutilized spaces at ETH. By focusing on three key typologies—entrance lobbies, hallways, and rooftops—we have assessed the regulations that are in place and the transformative potential within these areas.

The entrance lobby, as the gateway to our academic institution, holds promise for fostering engagement and community. The hallway, often overlooked as a mere corridor, stands as a space with potential for social interactions. The rooftop, which is usually inaccessible, has potentials as elevated vibrant hubs. Our conclusion underscores the need to reimagine these spaces beyond their conventional roles despite the strict regulations limiting the design. Through flexible planning and design interventions, as we learned from the built precedent, the redefinition of underutilized spaces is possible. The escape route can be separated from daily circulation. It is crucial to create environments that not only adhere to regulations but also cultivate dynamic and purposeful engagements between stakeholders within the ETH campus.

FURTHER QUESTIONS

We questioned how we can redefine the narrative of underutilized spaces to create an engaging environment that adheres to regulation. How can we optimize the space we have instead of constructing more buildings? The research does not only answer our initial inquiries but also unfolds new layers of complexity and additional questions. How can we use the data we gained from the research to inform future design decisions? Do we redefine the regu-

lations to eliminate the conflict between spatial intervention and fire safety regulation? What role can the participation and collaboration of the users play in successfully implementing spatial interventions? Perhaps it's time to challenge the established norms, inviting a collaborative reimagining of our spaces that transcends the boundaries of tradition and conformity.

LEARNING FROM OTHER DEPARTMENTS

Our research angle correlates to the Department of Future. Their department exposes the disparity between intended building usage and actual energy consumption. Minergy buildings were said to consume 200 percent more energy than predicted. This is due to the occupants using the building differently than planned. Our exploration into spatial interventions tries to find the transformative potential of spaces when shaped by the people that inhabit them. In a similar manner, the Department of Future also dove into the vacancy and underutilization of offices during holidays and after-hours. This mirrors our investigation into dormant spaces on campus. We question if we need to build more buildings when existing buildings are empty most of the time.

Our inquiry into the need for more physical space led to the conclusion that participation and co-creation are the keys to better spaces. If people who inhabit the spaces are part of the change, if students were to have a voice in the design, spaces would be better planned to be utilized efficiently. Our studies create a collective dialogue that places users at the forefront, as the agents of the design process. Together, we advocate for a paradigm shift where users are not passive occupants but active contributors to the design and planning of the space.

This research paper extends beyond a mere acknowledgment of emptiness; it heralds a collective endeavor to redefine spaces through a lens of inclusivity, functionality, compliance with regulations, and the profound influence of the occupants.

RECOMMENDATIONS

The reason for the spaces being underused is not because of the architecture itself but the governance of the system. The strict safety regulations limit the design and influence the affective space. Perhaps we need to work together with the users to reinterpret the safety regulations, one that balan-

ces the imperative of safety with the potential for creative and effective space utilization. By this, we do not mean to compromise on security. But rather, come up with an improved governance system by acknowledging the accessibility and agency of the users.

We would like to recommend broader research on vacancies and the regulations that our two departments tackled. If the additional space is necessary, it would be more efficient spatially and financially to optimize the already existing space rather than a third campus.

With further research, increased expertise, and time to delve deeper into these complexities, we could reinforce the need for a comprehensive strategy. This could involve collaborating with experts in safety regulations, architects, real estate, and users to find innovative solutions that optimize space utilization within safety standards.



Conclusion

For all of our actions, the central question was to approximate alternative experiences and subjectivities and to apprehend the experience of the other as a possibility of knowledge. Having developed different strategies, the Dept. of Affective and Spatial Experience would now like to reflect together on its actions.

We physically visited the campus and sought out, met and observed different users. We collected observations, sensory experiences and accounts of realities on campus. We encountered limits and understood the complexity of such a vast space, with its infinite variety of uses. The question now is the knowledge value of such an approach and the relevance of our department within the overall economy of the Competence Center for ETH Spatial Politics.

Looking back at our introduction, we were quite optimistic and our first thought was that such an approach, putting users and their experiences first, would enable us to develop a more sensitive and comprehensive design process. Naturally, as we got together with the other departments and compared our findings, discussed our approaches and familiarised ourselves with all the various topics covered by the Competence Centre, we realised that we were navigating through something much more complex than we thought. So the idea that it would be possible to extract rigid principles and guidelines from our data collected on-site became ludicrous.

Yet there is one notion that transcends all three of our strategies and resists this somewhat despondent stance, and that is method. Framework, protocols, rules of the game: these are all concepts that have proved central to our research : by defining a precise methodology for selecting and approaching different campus users and following them over a set period of time / by defining the rules and implementation of interventions in specific, rigorously selected locations / by creating a protocol to make the act of following

people on campus fruitful. These methods can be exported and transformed. These protocols have a potential that needs to be appropriated, activated and implemented with appropriate thought and consideration in order to better grasp a given complex spatial situation.

Although our data are diverse and seem to speak different tongues, all it takes is to immerse oneself in it to understand a fundamental notion on which this Dept. is based and for which it operates: usership holds a unique sense of spatial intelligence. Users have the nuances and subtleties that the spatial project must be able to convey. Opening up the possibilities of attentive communication becomes a powerful tool.

Of course, it is all about participation. Our three strategies are calls for collaboration, for curating personal experiences and for developing collective thinking capable of embodying a range of opinions, criticisms and observations on our campus. We have rejected traditional, lazy methods such as impersonal surveys, evaluation grids and customer feedback, which are becoming increasingly popular and are commonly used by institutions. For there is always a tension in these tools, something that they are by definition incapable of grasping because they are systematically deployed within an operational and productive aim. They fail to allow for unanticipated words. So methods that are capable of iteration, that claim to be random and that operate in different configurations are proving highly valuable. ■

Recommendations

1. DEFINING THE TERMS:

After numerous comparisons with brochures and reflections on the concept of 'Flexibility', we wondered about its specific definition. After integrating this concept into the 'umbrella terms', we attributed a number of meanings, considering the different personal interpretations related to individual intelligence and spatial experience.

The concept of Flexibility can encompass several meanings:

Modularity: The structure or arrangement of space can be modified by adding or removing parts.

Multipurpose: The space can be used for multiple activities while maintaining the same configuration.

Adaptability: The structure of the space conforms to the needs of its direct users.

When discussing the future of ETH in relation to flexible spaces, we realised that this term does not exhaustively define the objectives to be achieved. It encompasses multiple nuances and meanings, leaving room for varied interpretations and open to future speculation.

For this reason, we believe it is essential to clarify the concept of flexibility in such a way as to establish defined and unequivocal criteria for future projects.

HOW?

By understanding the spatial and emotional experiences related to and around the buildings at ETH, involving all those who interact with the upcoming changes.

By clearly defining the meaning of flexibility, in order to precisely orient space planning and simplify understanding even for non-architectural users.

Involving users in defining the type of flexibility needed in a space and in the testing phase.

BENEFITS:

Clearly defining the concept of flexibility for each project in detail will allow us to avoid ambiguity and ensure a clear understanding of the objectives, leading to greater satisfaction and effectiveness in the implementation of future spaces. In addition, this will minimise external influences, such as economic motivations, that could lead to unwanted changes. Finally, this will also lead to a greater sense of user involvement and satisfaction.

2. WE are ETH

After exploring affective spatial qualities at ETH, we as a department concluded that a strategic shift in our approach to space utilization is necessary. The spaces at ETH could benefit significantly from participatory programs and co-design initiatives. Users of ETH, including students, professors, non-academic staff, and cleaners will become part of shaping the design, and functionality of ETH.

HOW?

Establishing multidisciplinary teams consisting of representatives from different user groups and having an open discussion with architects, real estate experts, and regulation departments

Foster an inclusive approach by setting up an intervention or event and collecting surveys/feedback in the end. (e.g. Furniture Feedback Exhibit - several pieces of furniture are displayed to be tested and rated. The most favorable pieces are then considered to be used in a new communal space.)

BENEFITS: By actively involving users and

acknowledging their voices, the spaces would be better utilized and tailored to meet their actual needs. The potential of existing spaces will be maximized, thus we may find that the creation of a third campus becomes unnecessary, resulting in substantial cost savings. As we leverage the collective intelligence of our community, we can gain a profound understanding of user needs, preferences, and challenges. After we learn how the building will be used, the spaces can perhaps be planned to align with effective Minergie building standards, contributing to energy efficiency and environmental sustainability. In essence, achieving optimal space efficiency hinges on the fundamental recognition of users' pivotal role in the design process.

LEARNING BY DOING

By exploring a multitude of research approaches, we have assimilated many principles and drawn many conclusions. Through our protocols, we have gained an understanding of the spatial and affective experience of users on the ETH campus. We would like to encourage the real estate department, as well as anyone involved in the creation or renovation of a building, to proactively consider who is currently or will be present on the premises. We believe that users are the best-informed individuals about their environment, and therefore in the best position to identify problems and propose potential solutions. Graphical representations of plans are no longer sufficient; the spatial dimension can no longer be apprehended in this way.

Indeed, our research methods have revealed that each user plays a distinct role, possesses a particular vision and has a unique personal spatial experience. Although varied in their characteristics, all have manifested forms of intelligence that they have developed to increase their efficiency and speed, establish closer connections with others, entertain themselves during repetitive working hours, pursue the enrichment of their knowledge, and much more.

Among the many examples we have uncovered through the various facets of our research, one of the most striking might be that of Merita, a cleaning lady employed by Vebege's service department at ETH. She takes a short break, even though she's not officially allowed to, to smoke a cigarette or go to the toilet. It's the only moment of respite in her working day, and although she takes it in an unauthorized way, she persists despite everything - it's a form of resistance.

We are convinced that a more analytical and anthropological approach is essential to instigate significant change in the construction industry.

HOW?

By introducing a new profession dedicated to direct engagement with users in diverse environments, inspired by the investigative approach of "A day as..." research.

By fostering a continuous connection with users, and establishing a collaborative hub of knowledge and intelligence, we aim to cultivate projects that align closely with the realities of our user community.

BENEFITS:

For all the reasons listed above, we are convinced that the real estate department or any architect could learn from users and therefore from our research methods. We would like to include in our recommendations the steps to be taken to promote the consideration of users prior to the construction or adaptation of a building or any location. ■

ETH Zürich

Chair of Affective Architectures

IEA, D-ARCH, ETH Zürich

www.fonteyne.arch.ethz.ch

ONA - G23

Neunbrunnenstrasse 50 CH-8050 Zürich