

MASTER

Video Games Theatre

the future of leisure in the context of Akihabara : press start

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Video Games Theatre

THE FUTURE OF LEISURE IN THE CONTEXT OF AKIHABARA

PRESS START

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THE FUTURE OF LEISURE IN THE CONTEXT OF AKIHABARA

PRESS START

Graduation Studio
"The Future of Leisure"

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Abstract

Leisure is a practice of exploring the world and what it offers. This search and development is implemented through experiences based on passions one has. The memories collected through the course of life during leisure time shape identity and unique personality. In this all, leisure can become a tool, which can influence the process of self-development. Thus, leisure is a practice devoted for the search and development of 'self' based on personal experiences, strongly dependent on own passions and system of values. Therefore, it is not a fixed time but rather a process, which enriches life with diverse experiences and unfolds through its course, making leisure a journey and a medium for exploration of the world. Furthermore, the importance of leisure lies in a feeling of freedom it gives, offering more than a mere living. It helps to escape the profane and realize passions for which there is no time in a daily routine. The same time, leisure should give the sense of community, and most importantly be available for everyone daily and simply fun.

Now, the future of leisure lies between real and virtual spaces. Even though, the concept of virtual and real is popularly connected to the expectation for beyond body and matter, in fact they are not detached but exist along each other and interrelate. Hence, architecture can become a mediator between the two and decide on how they will be used and inhabited in the future. The idea of virtuality in architecture is especially interesting as it can bring the intangible into design, but also enormous fun without exposing to danger. The virtual offers a possibility of creating one's own world, same as in a book or a drawing, which can be shared with others and entered or left at will.

Coming back to leisure, the activity which can be practiced every day and is accessible for everyone is a concept of play. Play should be perceived as a series of connected events, a process that unfolds in time at varying rates. What is more, it can be practiced through immersion into a fantasy and dream - the intangible, virtual components. Nevertheless, for play to occur a medium is needed. Thus, the decision was made to select the complex and highly engaging medium of the 21st century - a video game - a cultural artefact which evaluates players' performance, gives an illusion of immaterial behaviour, and which provides fun.

Turning to architecture, to fulfil the needs of the future of leisure the design must be an immersive, dynamic space, which would involve both the actor and the spectator. Therefore, the choice was made to design a Video Games Theatre, and a following question was stated: *How can a video games centre become a theatre of the future, and a medium for the future of leisure in 2030?* To go a step further in the discussion another question was asked: *How can a building become a video game itself?*

In this thesis, the study of video games heritage and its future directions helped to shape the design and choose a perfect location - Akihabara in Tokyo. The analysis of the future of Japanese gaming market revealed the necessities a building must offer to its future users, who then can contribute to the development of gaming industry in Japan and globally. Thus, the design derives from the context of Akihabara by using the idea of virtual communities settling in a physical space, the architectural elements in the district, and hardware and software which can be purchased in Akihabara's shops. This

is completed by the idea of Japanese 'kawaii', where a city is perceived as a series of fluctuant, always evolving and ever-changing events, and where the importance of streets is highlighted as a vivid component which enhances life in the city. Furthermore, the design uses a model for creative industries popular in Akihabara, where both users and makers influence the process of game development. Thus, the building is based on creativity and initiatives of individuals, making it personal and possible to develop with the needs of gaming industry in the future.

For the Video Games Centre to become a theatre of the future and a medium for the future of leisure in 2030, and for it to become a video game itself, few elements need to be incorporated in the design. First, the theatre was considered as a dynamic path, engaging both actors and spectators who become one entity. The combination of transparency and isolation introduces the idea of openness of the gaming community in the plinth of the building, while diffusing materials add the element of curiosity and anticipation in other parts. Thus, the building as a video game and a theatre of the future is a highly immersive environment, which users can explore by engaging in an adventure. To continue, a building is composed of three dynamic game elements, seen as future trends in the industry: MMO game (Massively Multiplayer Online), Immersive game (VR) and Independent game development. Those elements intertwine with each other in the building, by a complex system of gaming paths and variety of visual connections in the core of the theatre. The game paths serve as game mechanics, which players need to understand and follow to shift around a game. Moreover, to become a theatre of the future of leisure

the building was designed to host different types of events. A flexible Lan Arena can host all sorts of events, from MMO and E-sport competitions, to game shows and conventions, while a game development auditorium can be dedicated to smaller conferences. Also, in the building there are spaces purposely left unprogrammed for the users to rediscover and redefine. In this way the building can fulfil the needs of the theatre of the future, keep up to the quickly developing technologies in the gaming industry, and thus become a domain of virtuality.

To embed the building in the context of gaming even more, the materials were inspired by the game design. By using a soft light and diffusion the building is given an intangible character, which reflects the leisure activities hosted inside. This measure, with the avatar display in the façade, transforms a building into a peculiar fantasy, where the reality merges with virtual worlds. Therefore, in the design of the Video Games Theatre the real and virtual spaces are equally attractive to its users. As a result, the spaces inside the theatre offer the same level of immersion and complexity when the game is on as well as when it is off.



Preface

One snowy, January evening, a girl unwraps a birthday present, packed in a colourful, rustling paper:

- *What is it?* - she asked
- *It's a video game console* - her mom answered
- *Do you want to try it?*

No need to ask twice. For a 6-year-old it was an amazing experience to play a video game for the first time. The whole new world and adventure never seen before ready for the taking. The game console I got as a birthday present in January 1997 was Pegasus, a clone of Japanese Famicom, except assembled by two Polish developers in the beginning of '90s, after the transformation of the country. This 8-bit console was something completely new and breathtaking, even though today it may seem silly or incredibly basic, as it could not even save a gameplay. Nevertheless, what this device offered was a new type of interaction, were instead of being a passive observer as in a movie or a book, a player could really become one with a character and decide on each move it takes. In fact, I bet many people born around '70s, '80s and '90s grew up on amazing worlds and stories offered by video games, and no matter if coming from the west or the east side of the Iron Curtain can share similar experiences.

Yet, the memories I cherish most from the time I played a video game for the first time was the moment I spent with my friends and family, solving the mysteries and stories trapped in every cartridge. You see, for me video games were a lot more than sitting in front of a screen. I remember it as a time playing together or even competing, a certain kind of a dialogue and memories frozen in those short moments of leisure time.

Thus, when I think of the future of leisure I reach to the experiences and memories I have from those beautiful moments. As I see it, the most important leisure concepts are the ones we can practice each day and share with others. Thus, leisure is a kind of journey, where one can collect experiences, explore the world and the self. Here, a video game becomes one of the most complex medium of the 21st century, where together a player and a maker can create whole new fascinating worlds, reflect their emotions and passions, and share it with others who become actively engaged with it - the attributes no other medium can offer. Hence, in the end of the day if someone can immerse into a dream for a short moment of leisure, then I think it is beautiful.

Hanna Jurkowska

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1.1. About leisure

This journey begins with an experience. In a world we live, leisure acts as a springboard for a daily routine, creates distinct experiences one can call his own. Honestly, every individual feels a need to create own identity and shape unique personality. Experiences function as a personal source of information for the establishment of 'self' and help to position it within the society. Hence, individual experiences enable the communication with the context and make each life unique. Thus, leisure is a practice devoted for the search and development of 'self' based on personal experiences, strongly dependent on own passions and system of values. Therefore, it is not a fixed time but rather a process, which enriches life with diverse experiences and continuously unfolds through its course.

According to Pine & Gilmore, experiences are *'the events that engage individual in a personal way'* (Mehmetoglu & Engen, 2011). As follows, Pine & Gilmore established four main experience dimensions: entertainment, education, esthetic, escapism. In short, the authors state that entertainment experience is about *'feeling'*, educational experience about *'learning'*, esthetic experience about *'being'*, and escapist experience about *'doing'*, all classified according to the level of participation they require (Mehmetoglu & Engen, 2011). Yet, the scheme of Pine & Gilmore does not show the complexity of experiencing and the process of leisure practice. Hence, the scheme could be redefined as an ever-evolving development, whereas all the experiences are intertwined in varied ways and where the rhythm of experiencing is volatile.

Figure 1. The Experience Economy Realms scheme of Pine & Gilmore

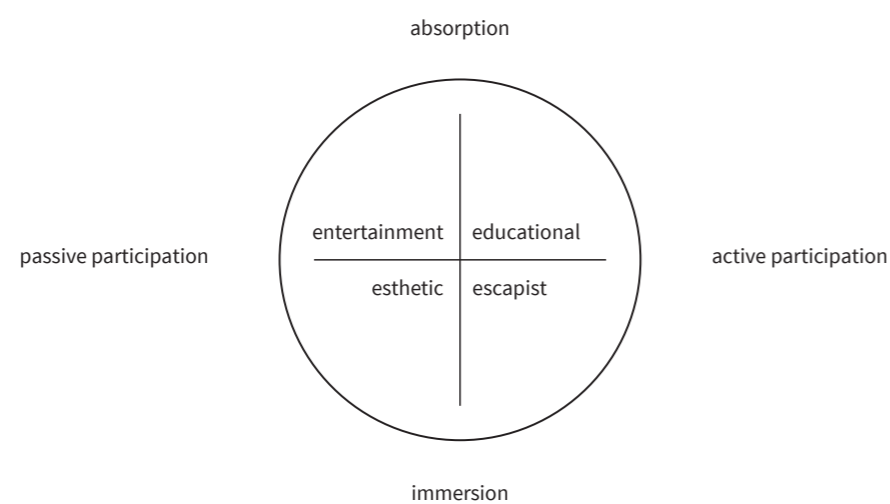
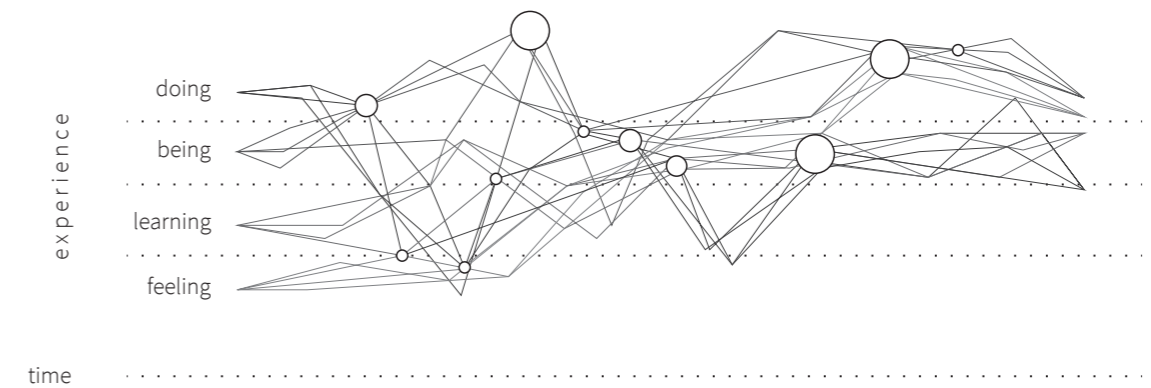


Figure 2. The multi-layered process of leisure practice - redefinition of The Experience Economy Realms



1.2. The future of leisure: real, virtual and mixed world

Now, in a consumptive world focused on productivity and labour many look for a feeling of being alive. Henceforth, the feeling of freedom is a key for the thorough understanding of leisure. What is more, leisure is a practice by which one can explore the world and what it offers. Therefore, leisure is a search for more than a mere living. It is a practice of realizing passions for which there is no time in a daily routine. Consequently, the search for the 'unknown' and the 'self' through experiences leads to the escape from a profane (Tresidder, 1999). Thus, nowadays the most important leisure concept is the one that can be practiced on a daily basis and the same time can be available for everyone.

On the other hand, leisure is also a search for purpose, aim of becoming a part of something bigger. It includes the strong emphasis on relations with other people. Many try to find a greater community sense in their leisure time, home-like feeling, a company, a place that gives a direction in life – a contradictory approach to an anonymous character of contemporary life. To continue, through leisure one can find his true 'self' but also establish a relation with a context and space around (Tresidder, 1999). Accordingly, leisure becomes a medium by which people can justify their own existence. It

includes testing the boundaries of varied sorts, for instance geographical, physical and cultural. Leisure allows the freedom of testing the limits set by things we are familiar with and allows to overcome them. As a result, one can develop and improve.

Let's turn now to the fringe between the real and virtual world. Today, the concept of virtual spaces merged so much with our everyday live that we have not even noticed the change (Yoon, Kim, Han, Han, & Preda, 2015). The space of virtuality is inhabited by an enormous amount of virtual communities and probably all of us are part of at least one of them. Elizabeth Grosz, in her book 'Architecture from the Outside: Essays on Virtual and Real Spaces', admits she does not know a lot about computers but she truly likes them because (Grosz, 2001):

'the computer and the world it generates reveal that the world in which we live, the real world, has always been a space of virtuality.'

Following this argument, it could be noted that the concept of virtuality exists for a significantly long time. Indeed, the virtual reality inside a computer is not different than the virtual reality of a book, drawing or even thoughts. According to Grosz (Grosz, 2001):

'the virtual is the space of emergence of the new, the unthought, the unrealized, which at every moment loads the presence of the present with supplementarity, redoubling a world through parallel universes, universes that might have been.'

Undeniably, we did not need a computer network, internet or a cinematography to access the virtual space.

The computer and simulation it offers can be understood as virtual realm linked with vision, yet the boundary between the virtual and other senses may not be as clear. Thus, vision, sound, hearing, smell and touch cannot be marked as virtual but rather the objects and spaces they appear in – the medium. It is because, virtual reality works on an assumption that the senses function in the same modalities they had previously, even if the medium changes.

Yet, the term virtual reality is an expectation for 'beyond body or matter' (Grosz, 2001). Nowadays, in the time of growing number of virtual communities the physical space is challenged by a virtual space. In the real space, a body is necessary to prevail, while in the virtual space only the mind needs to act. Thus, the common understanding of the real and virtual is a questionable separation of body and mind. This relation between real – virtual and body – mind has consequences everywhere around us, from public spaces (a space in the city or a broadcast transmission in virtuality) to individual spaces (inhabitation or a personal avatar). Now, it is

the task of architecture to mediate how those spaces will work and influence one another, and how people will inhabit them in the future.

To continue, there are few assumptions made about virtual reality these days. One is the separation of virtual from matter as a simulation of the original, where VR is dematerialized rather than remodelled (Grosz, 2001). Second is linking the city with the body and the cyberspace with the pure mind deprived of matter. Third assumption is to see the virtual space as a technological development that would replace the real space. Last, is the certainty that the technological improvement of virtual reality outcompetes and replaces the body, identity and community as it presently exists. Certainly, these assumptions are distinctive for the current view on virtual reality space, imagined as disconnected from the matter and of unlimited possibilities, intended for an unrestricted exploration or as a displacement of the body and mind in space. Yet, dividing body and matter does not show the potential of virtual reality space but contradictory exposes its limits.

As an example, looking at a player preparing to a hard-core gaming session by putting the VR glasses and a haptic suit on or drinking a coffee it may seem unclear how the body and matter could be disconnected from one another. In fact, player never leaves his body while playing a game, does not abandon the real space. Thus, it is important to understand that the two spaces – real and virtual – are not detached, oppositional entities but rather interrelate and exist along one another.

What seems the most interesting in VR technologies is the possibility of creating one's own world, which can be shared with others and one that can be entered or left at will, where all the processes can be controlled and

measured, and which brings fun and pleasure without exposing to danger. VR has a lot to offer to architecture as well. Surely, it gives the idea of immaterial, intangible aspect of design and augmentation of the senses. Also, computer plays a distinctive role in architecture as a place of simulation, calculation, data storage and exchange. However, computer technologies are more and more incorporated into building design itself, becoming one of its crucial aspects. Thus, according to Grosz virtuality can be merged with the architecture in two ways: as a new technology implemented using computers, that is incorporated in the way building works (electrical systems, security, programmable tasks) or as an entirely new way of designing and perceiving a space (Grosz, 2001). The first view on virtuality in architecture implies that one can freely enter it, input the code into the system and leave the virtual space. However, the second implies that the virtual space is embedded in the real space, hence inseparable. The third hypothesis Grosz makes is:

'we can only live in the real insofar as it is continually (re)inhabited, reinvestigated, and reinvented by virtuality.'

Thus, the virtual space should not be perceived as a threat to the real space, because it enhances and creates the real. Physical space comes to life through augmentation, transformation and alteration of what was first virtual in for instance thoughts, drawings or writing. Hence, virtual space is not only limited to the domain of technological innovations, but can be projected on other aspects of architecture like the way spaces work outside their predicted functions or the possibility of being else in the future. Hence giving the unlimited possibilities, the real, virtual and mixed worlds can become an ideal medium for the future of leisure.

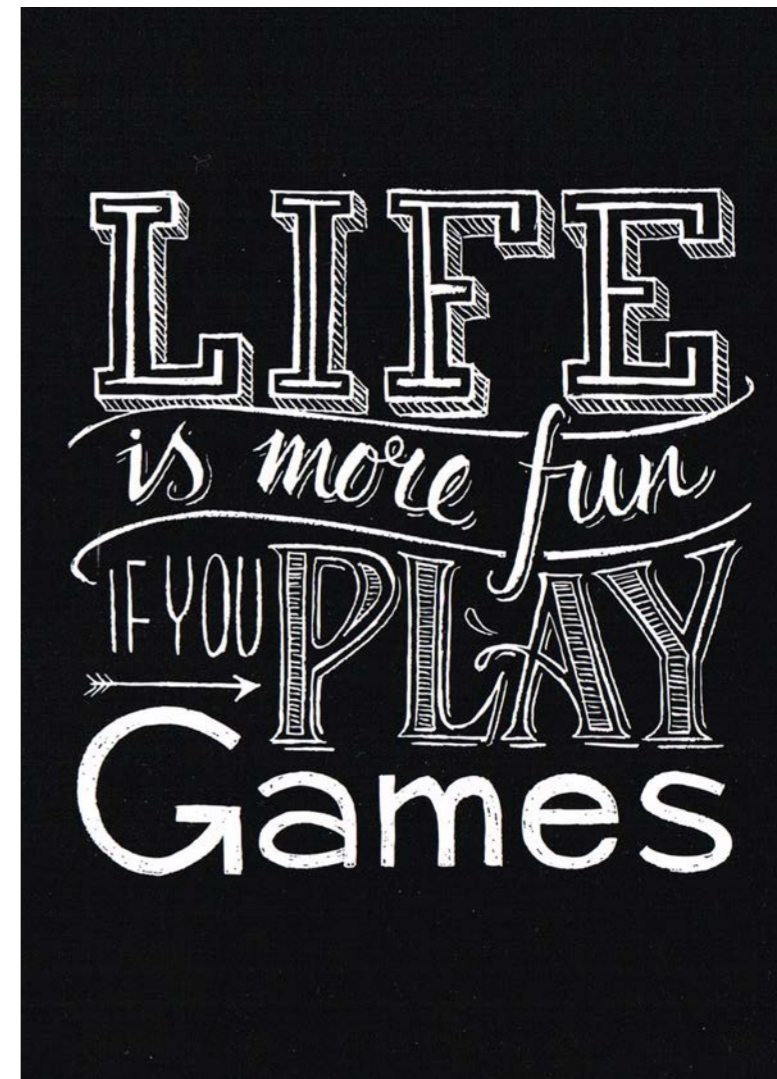


Figure 3. A postcard found in Spellenwinkel Subcultures, Utrecht

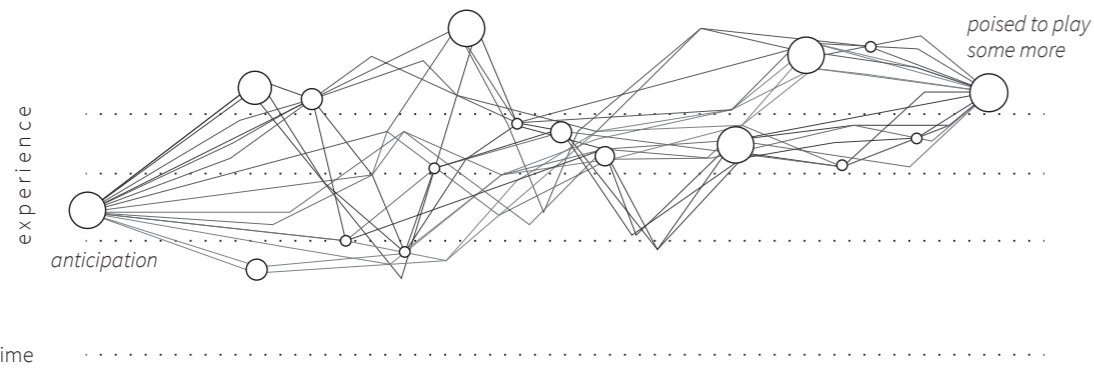


Figure 4. The scheme of play - a process and an aspect of human development

1.3. Play as a leisure concept: 'to play' and video games

Now, let me come back to the concept of leisure. As it was previously stated, leisure is rich in personal experiences, it is an exploration, a process that unfolds in time, a tool for testing the boundaries, a practice which gives the feeling of freedom and helps to escape the profane. Thus, leisure should be an everyday activity available for everyone and should help to establish the relation with the context and space around. The element that seems to fulfil all those aspects is the idea of play. Nevertheless, as leisure also play is a very broad subject. It is rich in human experiences, varies over time and place, can be free or restricted by rules. Play is an activity which can be practiced every day, and which is accessible and understandable for everyone no matter the age. Play in culture may define activities which are distinctive from 'ordinary' life (Huizinga, 2016). Hereafter, it helps to 'blow off steam', thus becoming the tool for escaping a daily routine. The utmost characteristic of play is that it is active, it involves the actor and the spectator in a way that they cannot be distinguished from one another and become one entity. Another aspect of play is that it appears in so called virtual – being practiced through immersion using intangible elements like fantasy and dream. Finally, the most crucial characteristic of play is that it simply needs to be

fun. As a result, the general definition of play can be as follows (Eberle, 2014):

'Play is an ancient, voluntary, ongoing process driven by pleasure that strengthens our muscles, instructs our social skills, tempers and deepens our positive emotions, and enables a state of balance that leaves us poised to play some more.'

Hence, play should not be regarded as 'a thing' but rather a series of connected events, a process that unfolds and moves in time at varying rates (Eberle, 2014). Thus, it can be stated that play is an aspect of human development, inherent for their health. However, for play to occur the medium is needed.

Shall we then go back again to the future of leisure? As was discussed previously it lies on the fringe between the real and virtual space and allows the unlimited possibilities for exploring the world by immersing into the intangible, while staying in relation to the real domain. If leisure is a journey, then it needs an active, deeply engaging tool, that would allow the exploration of the world and self by creating unique experiences. The medium for the future of leisure needs to bring the feeling of freedom, a bit of time in a daily routine for oneself, while giving the sense of community, and it needs to be fun. Hence,

the dynamic, complex and deeply engaging medium of the 21st century seems to be a perfect choice – and that is a video game.

Video games are often referred to as 'digital games', 'electronic games', and 'computer games', which in colloquial usage might be understood as its alternatives (Karhulahti, 2015). It could be said that video games are 'ludic objects that offer visual output'. However, the word and its meaning evolved so much in the culture, that now it is not limited to the vision but can also incorporate other senses. Instead, video games can be defined as cultural artefacts, which evaluate players' performance (with countless potential criteria), give an illusion of immaterial behaviour, and which provide fun.

Even though, video games as a leisure concept were marginalized for a very long time in a field of science, its influence on culture and economy grew rapidly. Only around the turn of millennium games received attention in the academic world and more research was conducted (Fromme & Unger, 2012). Comparing the first successful video game 'Pong' to the latest ones, a spectacular development of the industry cannot be denied. Constant evolution of hardware and software, but also growing experience in video games

design, resulted in a strong influence of games on economy and turned them into an important part of media culture in modern societies (Fromme & Unger, 2012).

Moreover, the media and culture studies show that technologies and their effects are socially driven (Williams, 1990), which new media like video games seems to confirm. Without a doubt, contemporary technologies helped to create 'a richness of social and cultural phenomena' (Fromme & Unger, 2012). This leads to a complex and multi-layered relation between media technologies, society and culture, that incorporates 'socially driven' perspective with 'technologically driven' view of McLuhan in 'Medium is the message'. Therefore, a leisure concept of video games became a part of our everyday media culture and thus a product in which cultural meanings and knowledge are engraved (Feige, 2012).

Figure 5. The concept scheme of the video games theatre



1.4. Shortcuts: What?

Now, to answer the questions of the future of leisure in 2030 we should first look back to the leisure concepts of the past. Clearly, a great example of video game centres were arcade game hubs, popularised in the '70s and '80s by companies like Atari. Arcades paved the way for gaming as a leisure concept, and placed it between real and virtual spaces. Vivid and buzzy centres were spaces for fun, for meeting with people but also stages for competition and discussion. Arcades were tools for immersion into the fantasy and dream, therefore the real and virtual aspects of the video game leisure concept were clearly visible in those special places. In the West, arcades came to the past, however in the Eastern cultures they remain very popular and persist next to new, quickly developing technologies. However, nowadays a new trend can be observed – namely the growing demand and popularisation of virtual reality centres, which appears to be based on the typology of spaces for arcade games. This trend and interest in video game centres is predicted to grow in the near future.

Nevertheless, whatever the future of video games is, if placed in real or virtual world it will always need the common ground to occur in – architectural space.

According to Lonsway (Lonsway, 2009):

'architecture is a scientific mechanism for producing social effects.'

Such understanding of architecture may emphasize a strong connection between the architectural space and personal experiences, in creation of which leisure plays a great role. To continue, the architecture for the future of leisure should be a stage for social interactions, where playful activities and discussion can take place. Hence, in this project I would like to answer the following questions:

HOW CAN A VIDEO GAMES CENTRE BECOME A THEATRE OF THE FUTURE AND A MEDIUM FOR THE FUTURE OF LEISURE IN 2030?

and going a step further in the discussion:

HOW CAN A BUILDING BECOME A VIDEO GAME ITSELF?

Shortcuts: Why?

There are plenty of reasons why people set their leisure on playing video games but the main is that gaming is active, fun, pleasurable and can be practiced daily. According to Scott Eberle, the pleasure begins even before the game starts - in an anticipation before the play. It is a moment one looks forward to play and prepares for it. Thus, it can be said that *'play begins with a disposition to play'* (Eberle, 2014). On the other hand, for many gaming offers also a true liberation and the feeling of freedom. According to Stuart Brown, playing causes a deep immersion and the feeling of being outside time, where the emotional state is no different than the one of a mountain climber or a tennis player (Discovering the Importance of Play through Personal Histories and Brain Images: An Interview with Stuart Brown, 2009). This shows, that gaming session can be much more than sitting submissively in front of the screen. In fact, playing games can have a lot more advantages for health and human development, than for example passive television watching. Video games can have a positive influence on brain functions of players by developing cognitive skills, coordination, exercising memory, improving learning and decision making. In that case, gaming could be seen equally positive for human as other types of leisure.

As stated before, video games are a new, complex medium of the 21st century, which offers a true immersion in the leisure activity. What is more, gaming industry offers tools for the creation of new worlds and experiences, which can be directly shared with the community. Hence, the relation between player and maker is crucial for the video games leisure concept, and gives the community sense involving both the actors and the spectators, who become active participants in the process.

Last, playing video games brings a bit of fantasy and dream to daily life, thus allowing players to immerse in the virtual world, by which one can feel an immense freedom and limitless possibilities. The same time, the real and virtual spaces are inseparably connected with each other, making the quality of a virtual world as important as of architectural space it is embedded in. Accordingly, leisure experiences would be equally engaging when the game is on as well as when it is off.

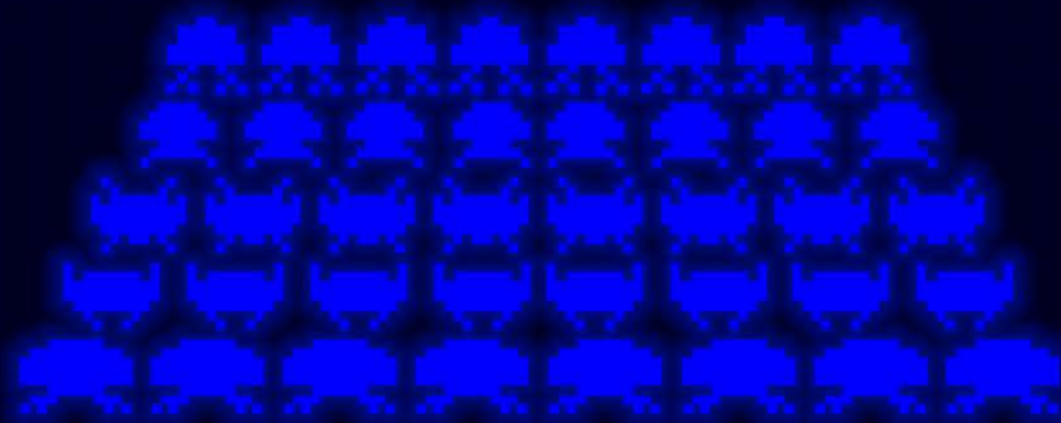
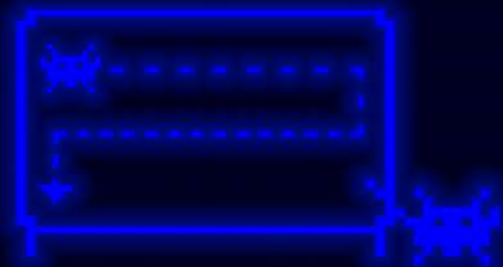
Shortcuts: How?

To answer the questions: *'How can a video games centre become a theatre of the future and a medium for the future of leisure in 2030?'* and *'How can a building become a video game itself?'*, I will immerse into the idea of play and the domain of video games. The search for an answer will be divided into 6 levels, where all will feature a different part of a gameplay. After the extensive research of the concept of play and the history of video games, trends for the future of the industry will be revealed and carefully selected for the design. Also, the importance of Japanese games market will be exposed, and its future direction defined. Next, to understand the design context the research will be supplemented with an analysis of characteristics of a Japanese city, with the emphasis on Tokyo, as one of the most influential technological centres of the world. Next, from the complex *'patchwork'* of Tokyo one district will be selected, a centre of Japanese popular culture and a creative heart of Tokyo – Akihabara. The design of the Video Games Theatre will derive from the context of virtual communities and physical spaces of Akihabara, by using the characteristics of its urban tissue, architecture of existing old and new buildings, and incorporating the initiatives of its users. To that, the design will be conceptually embedded in the location

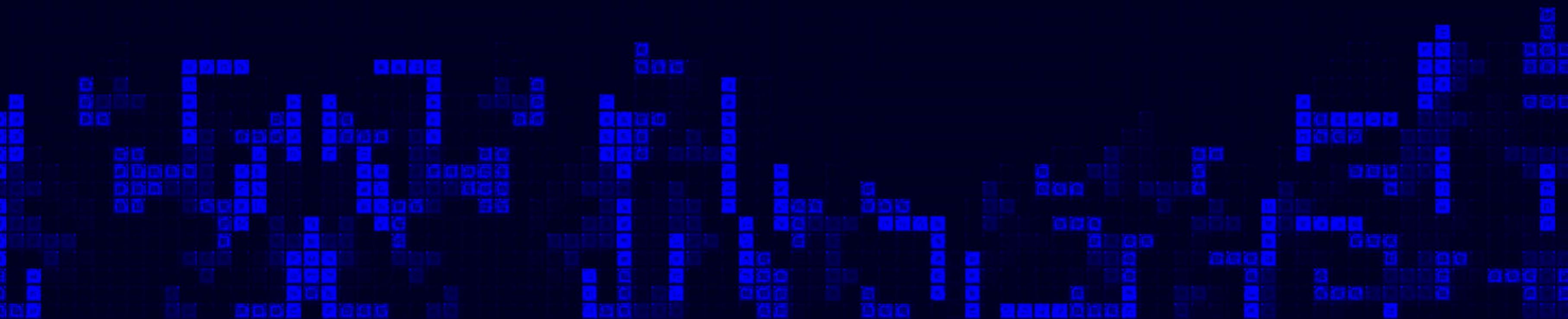
by using the elements which are in stock in Akihabara, making the architecture inspired by hardware (architecture of a motherboard) and software (an old retro game).

However, for a building to become a game it needs to be converted into a complex and immersive journey, where players would engage in leisure activities of real and virtual spaces. Thus, the design will be based on 3 dynamic gaming environments: game development, MMO (Massively Multiplayer Online) public game and immersive, active game, which would be design as intertwining paths, evolving around a CPU (Central Processing Unit of a motherboard) core – a point from which all the processes inside the building can be observed and comprehended.

Moreover, the Video Games Theatre of the future needs to be placed between real and virtual spaces, which would be equally engaging for its users. Thus, both spaces need to complete each other and allow the constant rethinking and revaluation of spaces following the developments of video games industry, making it possible to become else in the future. In this way the building could be influenced by the initiatives of players and game developers, and thus become more immersive and dynamic.



LEVEL 2 ... STORYTELLING



2.1. Ludology: the study of play

The concept of play occurred in nature before humans. It existed before culture and cannot be associated with any specific phase of civilization. Animals knew the idea of play without human influence. According to Johan Huizinga it can be stated that human did not add any key feature to the general idea of play (Huizinga, 2016). To understand play, one can look at young dogs, how they invite each other to play by certain signs, how they obey the rules while playing, like not to bite too hard etc., and in this all they experience enormous fun and delight. Hence, the activity of play is more than a physical or biological necessity. Following Huizinga (Huizinga, 2016):

'It is a significant function – that is to say, there is some sense to it. In play, there is something 'at play' which transcends the immediate needs of life and imparts meaning to the action.'

According to Huizinga, naming play as an action led by instinct does not really explain it, while ascribing it to mind or will would imply too much. Psychologists and physiologists conducted plenty of research on the topic and what is surprising is the variety of definitions of play, like an *'imitative instinct'*, *'a need for relaxation'*, *'abreaction'* or *'a wish fulfilment'*. All those assumptions start with a thought that play has a sort of biological drive, but it serves something that is not play. Thus, the activity of play in nature is not limited to the stress-relief or relaxing, as it includes an important element – fun – which cannot be narrowed down to a mental category and which describes the essence of play.

Figure 6. The definition of video games



Figure 7. The positive influence of video games on brain functions

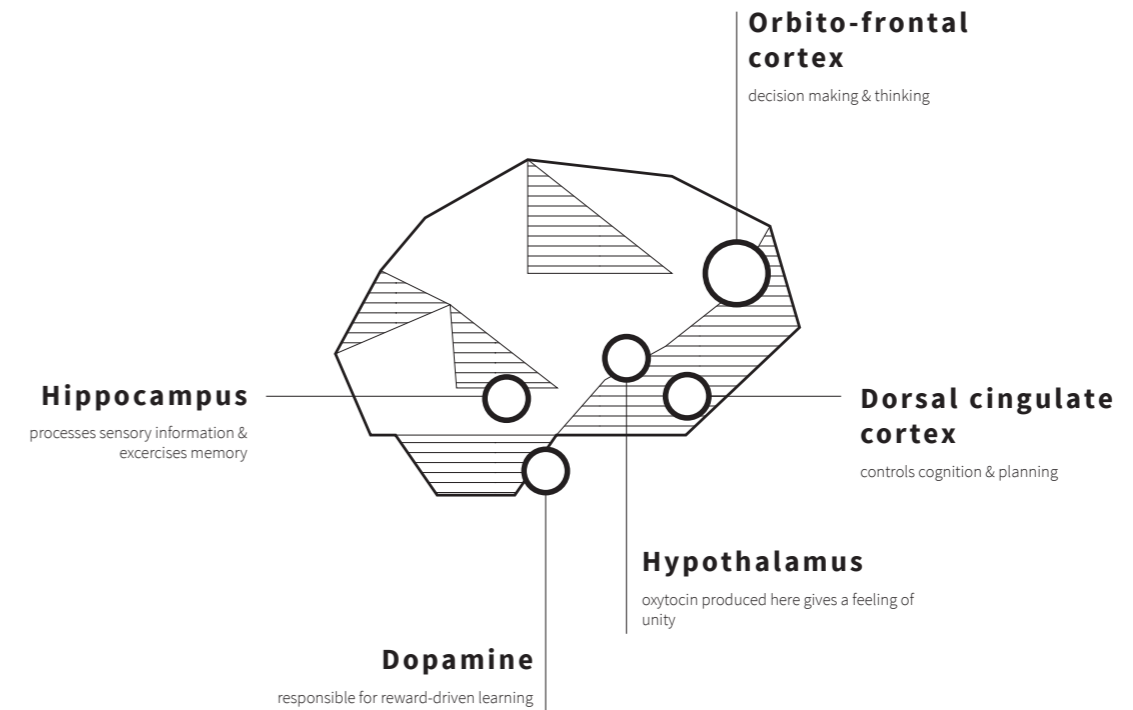


Figure 8. Next page: Video games experience

Indeed, play is very difficult to utterly define. In the Oxford English Dictionary, the words describing play are for instance: ‘activity for enjoyment and recreation’, ‘not intended seriously’, ‘the state of being active’, ‘scope of freedom to act’, ‘amuse oneself by engaging in imaginative pretence’ (Oxford English Dictionary, n.d.). Play can be defined as a verb, noun or adjective, it can describe an action, a lack of action or an attitude, where meanings express both cause and effect (Eberle, 2014).

Henceforth, it can be stated that play is an extensive and an ambiguous matter. Scott Eberle described play as an ever-evolving process in worlds (Eberle, 2014):

‘Picturing play as an emergent self-feeding process where causes and effects are linked shows how anticipation leads to the kind of surprise that gives rise to pleasure which enlarges understanding, which in turn builds strength (of mind, body, or character), which contributes to the poise that again enables our anticipation.’

For Eberle events of play spin around an axis through time continuously. Hence, play can be perceived as a process, that enhances itself through time, and becomes an aspect of human development. To continue, people play through the entire cycle of life, which is special among mammals (Brown, 2010). Many animals stop playing after juvenile phase; however, humans have the ability to create new neurons through

entire life, therefore keeping the nervous system flexible and with it the ability to play till death. In everyday life, play helps us blow off steam and adjust better in the society. Therefore, play offers physical, intellectual, social and emotional benefits at any phase of life. Certainly, play is unique in its ability to occur in an imagined world that is in its essence framed as playful, pleasurable and fun, and which extends to a bigger cultural and social framework. Accordingly, play should be referred to as a series of connected events, a dynamic process that unfolds in time at fluctuating rates.

Scott Eberle claims, that play consists of 6 basic elements: anticipation, surprise, pleasure, understanding, strength and poise (Eberle, 2014). As he explains, play starts with an anticipation, which is a disposition to play, when we look forward to and prepare for it. Surprise is another aspect of play, triggered by curiosity and adventurous spirit. It makes play so interesting and unpredictable. Pleasure, as described previously, is the very essence of play. Understanding would refer to a capacity to better fit in the society by developing empathy, and sensitivity. Play also builds strength of body and mind. Finally, it leaves us poised to play more.

Yet, a concept of play needs a medium to occur, one of which can be a video game. Looking back at the very first games and the latest ones, it is astonishing how the medium developed in

such a short time. Continuous improvements of hardware and software resulted in upgrading of the games design, assets, mechanics, user network etc., making video games development one of the most influential domains in present leisure concepts. Now, video games are a significant economic factor but also a vital element of the convergent media culture in contemporary societies (Fromme & Unger, 2012).

In other words, 21st century marked by interactive media like video games, is led by convergence of media over culture, economy and technological developments (Jenkins, 2006). The discourse drives through the old and new media, connects its meanings by developing new models of consumption and production of leisure. This erosion leads to what is called a ‘casual revolution’, where video games gain more and more interest of the wide public across all stages of life (Juul, 2009). Today, the relation between players and game developers becomes more dynamic, which results in establishing more player-driven gaming activities, like cosplay or massively multiplayer online games.

Yet, for decades the distinction between work and leisure formed a core of value systems in societies (Nichols, Farrand, Rowley, & Avery, 2006). Work and virtue were inseparable, leading to a reward in money, status or religion. Paid work was the main aspect of life and ‘not to work was to deny the purpose of existence’ (Nichols,

Farrand, Rowley, & Avery, 2006). Thus, leisure was strongly marginalized and so games were trivialized and perceived as an activity reserved for kids. However, this paradigm has shifted, blurring the boundary between work and leisure. Today, the average gamer is 35 years old and almost half of them are female (Entertainment Software Association, 2016). Nowadays, gaming can be seen as a determinant for how societies are being developed and if used correctly can become even an instrument in this process.

However, the success of video games, its increasing popularity and the cultural impact forerun any academic debate or study by more than 10 years (Raczkowski, 2012). Hence, as mentioned before video games were not the result of scientific investigation but rather a popular rhetoric – cultural artefact. Only after the turn of millennium the research on video games became acknowledged within the field of academic research, which resulted in an increasing amount of publications and conferences. This formed the basis for the study of games and gaming called ludology, which derives from Latin word ‘ludere’ – to play (Oxford English Dictionary, n.d.). A substantial step in creating a framework for ludology was indicated by the first edition of Game Studies International Online Journal in 2001, and foundation of DiGRA (International Association for Digital Games Research) in 2002 (Fromme & Unger, 2012).

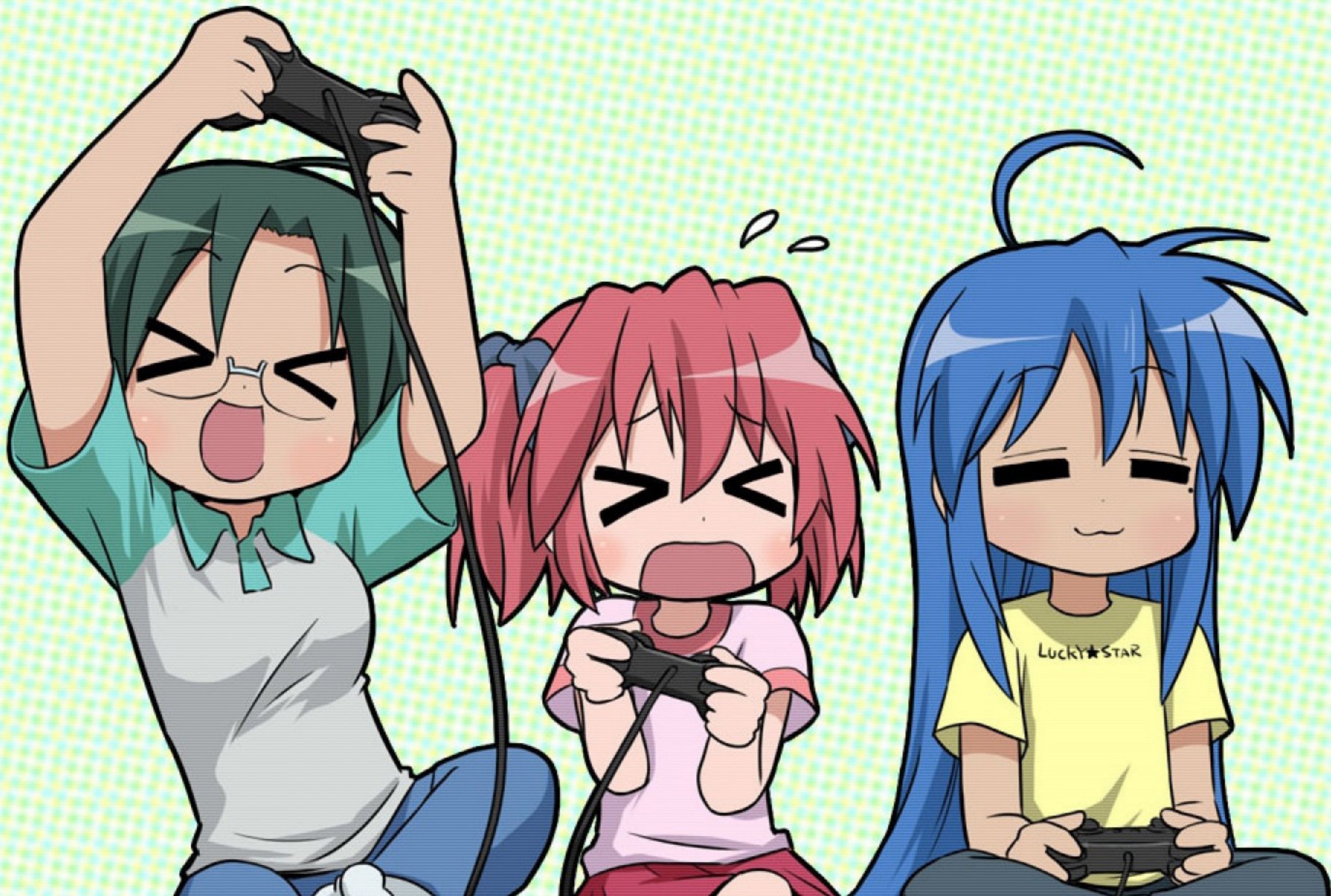




Figure 9. Left page: Retro games collage

2.2. History of video games

The history of video games started in '50s, and was initiated by the activities of hackers, the preoccupation of computer scientists and hobbyists interested in exploring the possibilities of new technologies (Haddon, 1999). At first, game development was a leisure activity of scientists and enthusiasts, and initial games were created after-hours at universities or in a private space. Thus, first games were tools for testing the possibilities of a computer and a means for explaining it to a wider public. Accordingly, the origin of the first video games can be linked to an establishment of computer science as a field of study in the '50s at MIT, subsidized by the US army (Hjorth, 2011). With the founding of MIT's computer science lab, in 1962 a student Steve Russell was given a chance of developing the first computer-based game – *Spacewar*. Later, after the establishment of *BASIC* programming language in the '60s video games became instantly popular.

The evolution of gaming industry can be characterized by seven generations, which went through numerous alterations between hardware and software, game development and academic research. The first generation started in 1971 with the establishment of arcade and console gaming (*Magnavox Odyssey*). The creation of university and home computers ensured the progress of gaming market at that time. Also, in 1971 Nolan Bushnell acquired *Spacewar* and transformed it into one of the first arcade games – *Computer Space*, which later led to Bushnell's and Alcorn's creation of *Pong* in 1972 and foundation of Atari – the top games company in the '70s. At that time, the arcade games took over the games market. Back then, many arcade games hubs have been created and quickly became a huge success as a modern leisure concept.

Figure 10. Donkey Kong

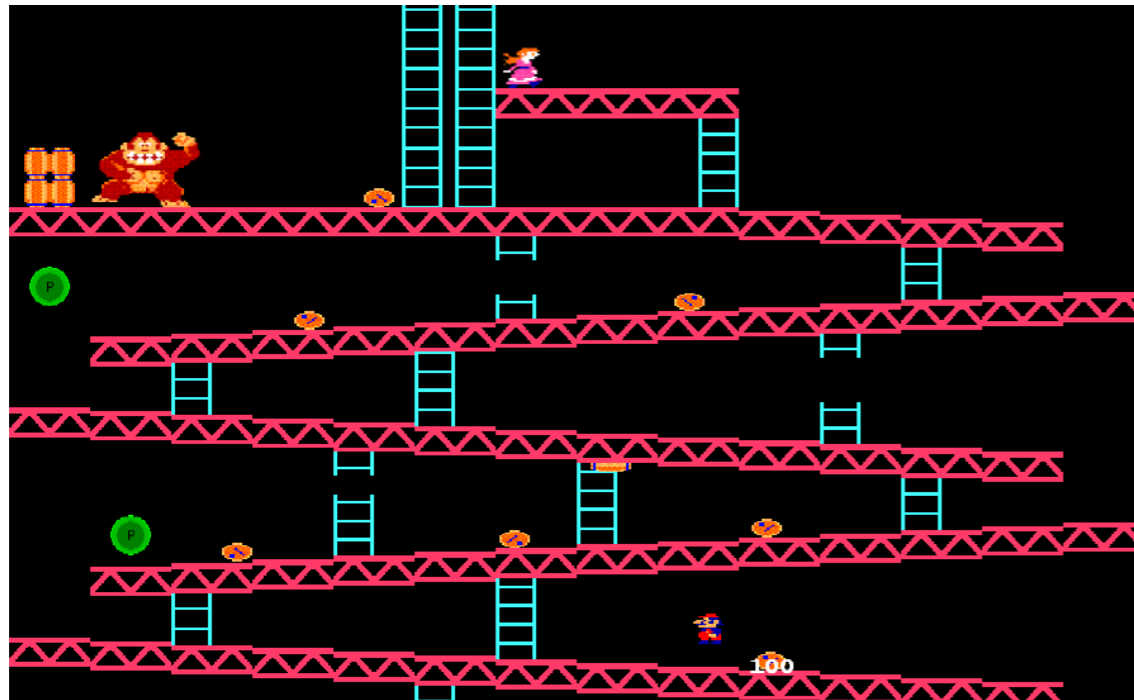
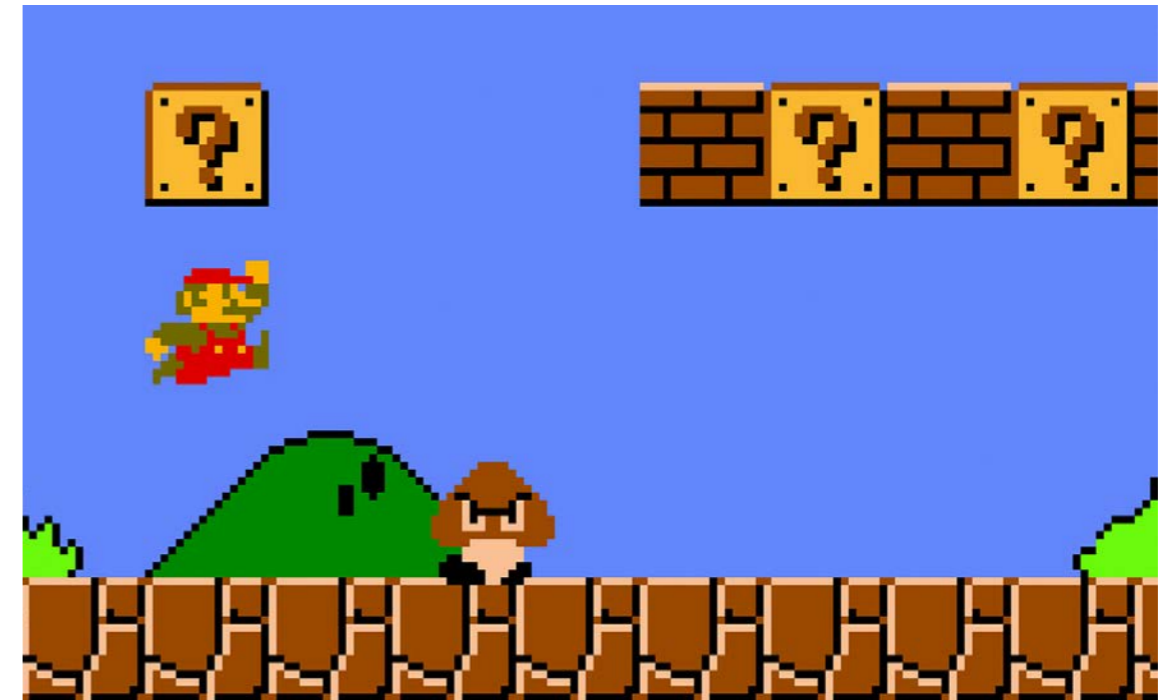


Figure 11. Super Mario Bros gameplay



In 1972, the first home console *Magnavox Odyssey* was created by the US defence company Sanders Electronics. The Odyssey featured 12 games, one of which was Ralph Baer's *Tennis for Two*, later modified by Atari and published as *Pong*. By 1977 (the release of *Atari 2600*) home consoles featured microprocessors, allowing the separation of hardware and software, and thus the possibility of using cartridges and collecting games, saving them and changing difficulty level. In 1978 Taito released an internationally successful game *Space Invaders*, first in Japan and later in the United States. The game released first as an arcade game led to the 100-yen coins shortage in Japan.

The second generation of gaming was initiated in 1976 by the introduction of ROM cartridge format (*Atari 2600*). This period till early '80s is often called the 'Golden Age of Arcade Games', and was also characterized by the rise of two highly influential directions in the industry: online and mobile gaming, the predecessors of MMORG (massively multiplayer online role-playing games) and portable devices (Nintendo DS, smartphones but also Wii and VR games). In the '80s, companies like Atari, Nintendo, Sega, Microsoft and Sony, competed in home console releases, which could display more colours,

feature more games and process more data. At the same time, the personal home computer market came to the front, with devices as Commodore 64, Apple II and Sinclair Spectrum, allowing players to create their own games and hack existing ones. What is more, at that time the first mobile games device was released by Nintendo, namely Game Boy, which became a huge success worldwide. However, after 1983 the gaming boom was over and production declined. At that point, the market was flooded by consoles and bad games (Caruso, 2011), which led to the North American Video Game Crash. Some companies, like Atari, irrevocably lost their influence in the global games market. After about two years, part of the gaming industry was revived forming the third generation of gaming in 1985, featured by the release of Nintendo 8-bit console *Famicom*, later called *NES* (Nintendo Entertainment System).

The fourth generation started in 1989, and was characterized by the creation of CD-ROM drives and memory developments, allowing more immersive and complex gameplay. Simultaneously, the design of games highly improved, thanks to the release of software like SGI's Maya for the 3D modelling or Nvidia's

GeForce 256, the first GPU (Graphics Processing Unit) that could increase graphical performance. What is more, in the '90s first-person-shooters gained more attention. Soon after, game developers were forced by the concerned public to formulate the Entertainment Software Rating Board.

The fifth generation in 1994, saw the decline of Japanese gaming companies influence in the global market. This period was defined by Nintendo's shift from CD-ROM to cheaper cartridges (*Nintendo 64*), a decision that resulted in the decline of company's revenue. With the increasing graphics and thus memory demand of produced games also a better hardware was needed, a requirement that simple cartridge could not fulfil anymore. As a result, companies like Square Soft (*Final Fantasy* series) decided to shift from Nintendo to PlayStation platforms, which used CD-ROMs. In the end, PlayStation became the leading party in the global games market, while Nintendo's success was limited to Japan.

The start of sixth generation was in 1999, when Sega's influence declined and Microsoft entered the games market. During this period, the demand for online gaming and portable game

systems grew, supported by the shift from mobile phones perceived as a simple communication device to a gear for mobile media.

From 2004 on, the seventh generation of gaming was established. This is the time of online playing, where many gaming communities were formed, as well as active gaming, where players were forced to get up of their couches. From that point on, gaming became increasingly more casual, inviting as wide and diverse audience as never before, supported by media convergence and incorporation of social media like YouTube. Also, the huge expansion of mobile games was initiated by the launch of App Store, not to mention the improvements in game design. However, 2000 was not only a time of popularity of games in culture but it was also defined by the rise of game studies as an academic discipline - ludology. Still, games are being analysed from various perspectives: as an art form, design, social and community network, culture, play, new media. Through games studies the concept of play was revised, making it a complex term separated from the previous, not serious implications.

Figure 12. Next page: The timeline of video games from the Pre-console period to current trends

PRE-CONSOLE

THE '70s

THE '80s

THE '90s

THE '00s

THE PRESENT DAY

VIDEO GAMES timeline

PRE-CONSOLE



Fusajiro Yamauchi founds Nintendo Co. in Japan
company doesn't produce video games yet

1889



A.S. Douglas creates the first documented computer game
Noughts & Crosses, Cambridge University

1952



Hutspiel, NATO agains USSR
The US military creates a computer-based war simulation game

1955



Tennis for Two
William Higinbotham creates the first interactive game

1958



Spacewars
MIT researchers create the first computer-based video game

1962

BASIC

First computer programming language
John Kemeny co-develops the BASIC computer programming language that enables the creation of video games

1964

THE '70s



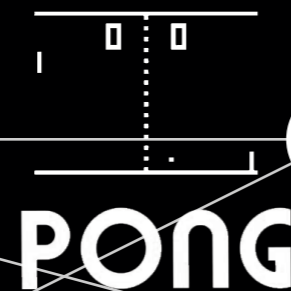
The first commercial arcade game
Nolan Bushnell and Ted Dabney (founders of Atari) create Computer Space, an arcade game which is the first commercially sold video game.

1971



The Oregon Trail
Four University of Minnesota students design the game to teach school children about the realities of 19th-century pioneer life

1971



ATARI
Nolan Bushnell and Allan Alcorn from Atari develop Pong, which becomes the first commercially successful arcade game. Pong leads the way for other video game developments.

1972

ODYSSEY

Magnavox Odyssey
The first video game console that plugs into a television, based on Ralph Baer's Brown Box design. The console features 12 games.

1972



Gran Trak 10
The first racing arcade game

1974



Maze Wars

Considered to be the earliest first-person shooter

1974



The Atari 2600
Atari releases its first multi-game home console. The system has cartridges that can save game information, a joystick, color, a growing game library and the ability to change difficulty levels.

1977



Activision
Four former Atari employees found Activision, the first stand-alone game manufacturer.

1979



The first video games controversy
In the arcade game Death Race players kill zombies by hitting them with cars. The National Safety Council calls the game "gross." Only 1000 units are sold.

1976

Pizza Time Theatre
Atari opens the first video arcade pizzeria (later Chuck E. Cheese's)

1977



Space Invaders!
Released by Taito, the game becomes an international success, first in Japan, and later in the US. Released first in arcade format, Space Invaders leads to a shortage of 100-yen coins in Japan.

1978



PRE-CONSOLE

THE '70s

THE '80s

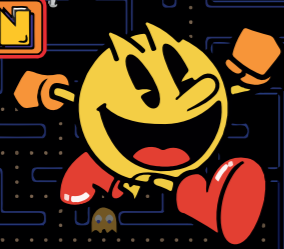
THE '90s

THE '00s

THE PRESENT DAY

THE '80s

PAC-MAN

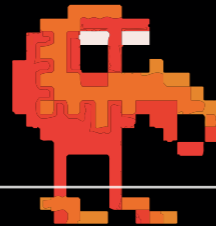


namco

Pac-Man

First developed by a Japanese game company Namco as Puck-Man. The game becomes a mega-hit. 100,000 arcade units are sold generating \$1bn in revenue in its first 15 months. It becomes the first arcade game adapted to Atari and the first game to have an animated and eponymous main character.

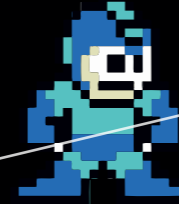
1980



Tetris

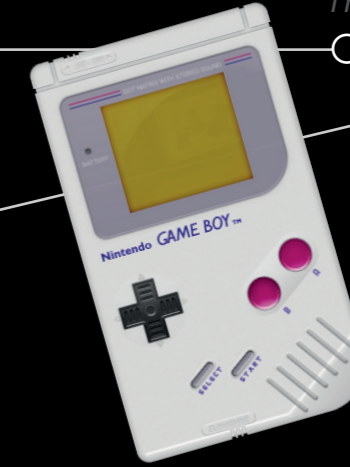
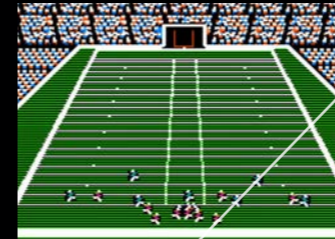
Russian Alexey Pajitnov creates Tetris in USSR. In 1988, Henk Rogers purchases Tetris from the Russian government and brings it to Japan, where he convinces Nintendo executives to buy the game and release it for Game Boy. Tetris sells in 35mln copies on Game Boy.

1984



John Madden brings football to NES

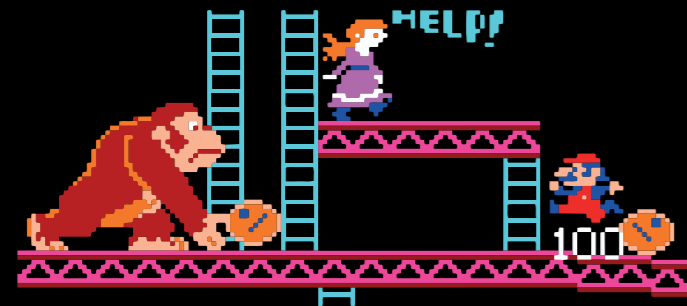
1988



Game Boy Nintendo

Nintendo's iconic 8-bit, hand-held Game Boy comes to the market, already packaged with Tetris. To date, Nintendo has sold more than 400 mln portables.

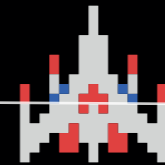
1989



Donkey Kong Nintendo in the game

Shigeru Miyamoto creates Donkey Kong for Nintendo, a predecessor of Mario

1981



NES

The 8-bit gaming console Nintendo Entertainment System (NES) is released for American consumers at CES (Consumer Electronics Show).

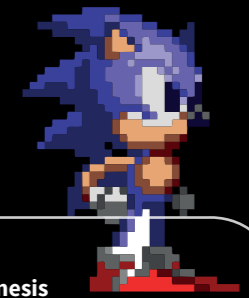
1985



Sega Genesis

Sega releases its 16-bit Genesis console in the US and chooses Sonic the Hedgehog for its flagship character.

1989



SimCity

SimCity releases for computers

1989



THE '90s

Super Nintendo vs. Sega Genesis

Nintendo releases the 16-bit Super NES to compete with Sega's Genesis and wins out thanks to popular games like Mario, The Legend of Zelda and Donkey Kong.

1991



Doom popularizes first-person shooters

Game raises concern among parents and regulators about video game violence. The next year, Nintendo, Sega and Electronic Arts, band together to form the Entertainment Software Ratings Board to provide video game ratings.

1993



Warcraft

Blizzard releases Warcraft: Orcs & Humans, one of the first strategy games with a detailed mission. Later The Warcraft series become the most popular massively multiplayer online game (MMO).

1994



Entertainment Software Rating Board

1994



Sega Saturn vs. Sony Playstation

Sega introduces Saturn, the first system with 32-bit graphics and a built-in modem. The same year, Sony releases the PlayStation, which is comparable to Saturn and sells for \$100 less.

1995



The Nintendo 64

Nintendo 64 has 64-bit graphics and 3-D games like new installations in the Mario and Zelda series, as well as the debut title in the James Bond series. 64 is the last cartridge-based system.

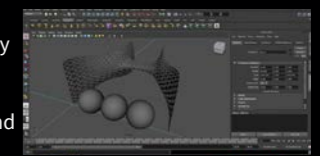
1996



SGI releases Maya

Silicon Graphics Incorporated (SGI) initially develops Maya as a next generation 3D animation tool, basing it on code from previous systems created by Wavefront and Alias.

1998



Sega's Dreamcast

Dreamcast is the first console capable of online play and the company's last console.

1999



Nvidia releases GeForce 256

The GeForce 256, the first consumer GPU (a "Graphics Processing Unit"), was created to meet the demand for increased graphical performance. The GeForce 256 was designed to relieve the pressure on the central processing unit (CPU) by handling graphics calculations, while the CPU processed non-graphics intensive tasks.

1999



PRE-CONSOLE

THE '70s

THE '80s

THE '90s

THE '00s

THE PRESENT DAY

THE '00s



PlayStation 2

Sony releases the PlayStation 2. At 128 bits, it has better graphics than a computer, as well as DVD technology. Grand Theft Auto is native to the PS2.

2000



Microsoft's Xbox

The device features PC technology, an Ethernet port, an 8 GB hard drive and the ability to play DVDs. Its Halo: Combat Evolved becomes Xbox's flagship game. The next year, Xbox introduces Xbox Live, which allows gamers to compete with users around the world.

2001



World of Warcraft comes online

2004

Xbox 360

Microsoft unveils the Xbox 360. It will later excel the competition (Nintendo Wii and the Playstation 3) thanks to Halo 3's commercial success. Xbox receives also numerous games that were originally prepared for a Playstation 3.

2005



Nintendo Wii

The Nintendo Wii markets itself as a way for gamers to get more involved with their games. The console is intended for active people who don't normally describe themselves as gamers. The Wii becomes a worldwide hit. By 2009, it has sold almost two times the number of consoles as Sony with the PS3.

2006



Sony vs Microsoft

Sony releases the Playstation 3, which allows users to play Blu-Rays and stream movies and music to their system. The PS3 also connects to gamers' Playstation Portable consoles and, most notably to many users, offers free online gameplay without a subscription.

2006



Nvidia releases CUDA GPU

Computer Unified Device Architecture (CUDA) allowed for GPUs to do some of the functions usually reserved for the Central Processing Unit (CPU), allowing devices and software to take advantage of the multi-threaded processing techniques and scalability of GPUs

2007



Apple opens App Store

The launch of Apple's app store opens up many opportunities in mobile gaming for both developers and consumers. The next year games like Angry Birds for the iPhone and FarmVille for Facebook gain more importance.

2008



THE PRESENT DAY



Oculus Rift started

Oculus Rift enters the Kickstarter and collects \$2mln from 9,522 supporters

2012



Xbox One

Xbox releases Xbox One with cloud integration and ability to overlay live TV. The console also has voice integration and an improved Kinect sensor.

2013



PS4

Sony releases the Playstation 4 with an emphasis on social game-play using a new share button and second-screen gaming with smartphone connectivity.

2013



Tetris is back

Tetris becomes the best selling mobile game

2013



Facebook buys Oculus

Facebook acquires Oculus VR, a virtual reality headset company, for \$2 billion.

2014



TRENDS

Mobile Games Market is expanding

37% of the global market in 2016

Embracement of Esports by Media Companies



VR receives the attention of gaming industry



The desire of consumers to play, collect, trade & earn

#1 consumer

87% of console gamers play games also on PC



Figure 13. The importance of video games market comparing to other leisure industries

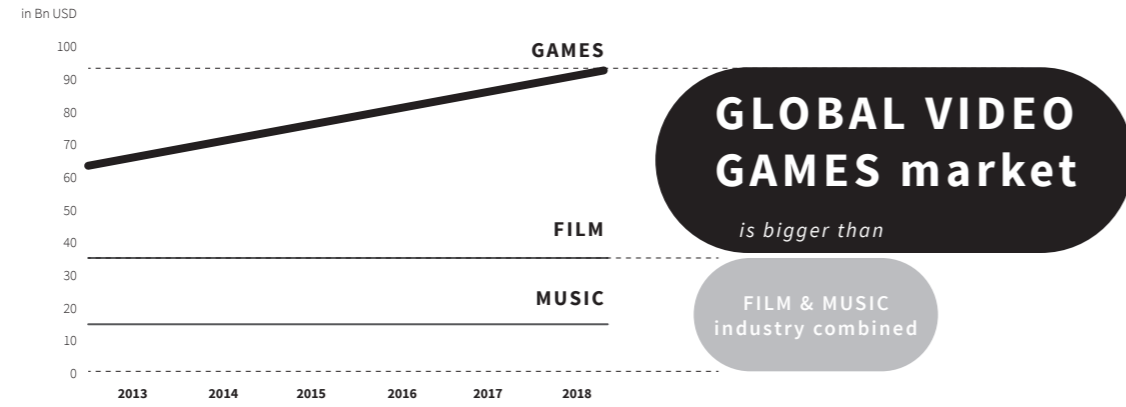
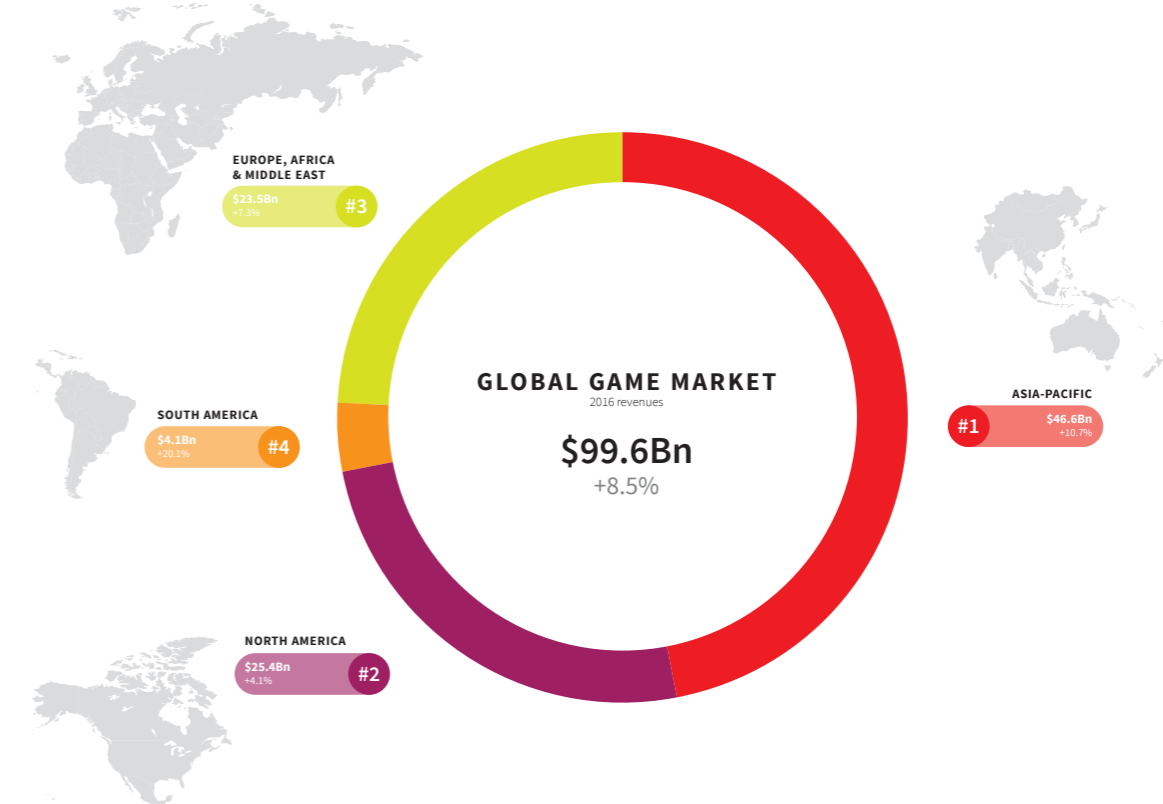


Figure 14. The revenue of the global game market in 2016



2.3. Trends for the future

Starting from playful initiatives of scientists and enthusiasts of new technologies in '50s and '60s, and later the arcade games, video game's influence continues to grow rapidly. In 2016, global game market gained \$99.6 Bn revenue, which is 8.5% more comparing with 2015 (Newzoo Games, 2016). Today, the game market became bigger than music and film industry together, hence a huge potential of the video games development cannot be denied (Rogers, 2016). To continue, 47% of global game market revenues comes from Asia-Pacific – mainly China and Japan, which take part in the progress of the industry since its first years of existence (Newzoo Games, 2016).

Gaming is no longer reserved for young males, but is an inseparable part of global leisure culture, practiced by young, old, male and female (Hjorth, 2011). According to Hjorth, if TV was perceived as a leisure experience of the late 20th century, an initiator of the debates around new media and creator of new models of receiving and making, then game studies are the new media models of the 21st century, where new leisure practices and possibilities are being stretched to their limits.

Thus, it can be stated that nowadays we can witness the rise of the eighth generation of

gaming, where the possibilities of the industry are limitless and where the real and virtual worlds merge, leading the way for a new type of leisure. According to Newzoo, there are five main trends for the future of gaming: mobile games, embracement of E-sports and online gaming, VR technologies, the growing influence of players on games market and an importance of PCs architecture (Newzoo Games, 2016). What can be observed, no matter the hardware, is the changing relation between players and game developers. These days, gamers want to create, share and communicate with other player but also with individual, favourite game designers. The same time, many game developers decide to leave big corporation and create very original and personal games, which would express their imagination and be appreciated by a limited group of people. Hence, the relations between the user and the maker tightens.

Accordingly, as the gaming industry moves towards mainstream and becomes a fundamental part of popular culture, the increasing influence of indie games and art games can be seen. This reminds of the early years of gaming and the importance of hackers, hobbyists and enthusiasts initiatives. Thus, the importance of players in the game

development has always been crucial and today forms the core of the conversational media models, where a boundary between the user and maker dissolve. The impact of this relation is explicitly visible in the online gaming communities and mobile gaming. Massively multiplayer online, once perceived as a hardcore gaming domain, is now receiving also the attention of casual gamers, while mobile gaming, once seen as more casual, gains the attention of serious gaming communities. The convergence of media, the input of social media and modification tools for game space customization allow the creation of extensive online gaming communities and highlight players' influence. Therefore, today players are a substantial part of the game development

process, a trend more and more reinforced by the industry, which in result leads to the popularisation of gaming culture (Hjorth, 2011). As McLuhan notes in 'Understanding Media' (McLuhan, 1964):

'Games as popular art forms offer to all an immediate means of participation in the full life of a society, such as no single role or job can offer to any man.'

Accordingly, the virtual world of gaming communities is a very important source of information for cultural studies, where no one can enter without joining the act, and as a result the audience and actors become one body (Pearce, 2009).

rank	country	population	internet population	total revenues in USD
#1	China	1 388 233 000	801 643 000	27 547 039 000
#2	United States of America	326 475 000	261 177 000	25 059 883 000
#3	Japan	126 046 000	119 829 000	12 545 659 000

Figure 15. Countries rank in the global games market

Figure 16. Next page: The timeline of video games divided into generations

VIDEO GAMES timeline

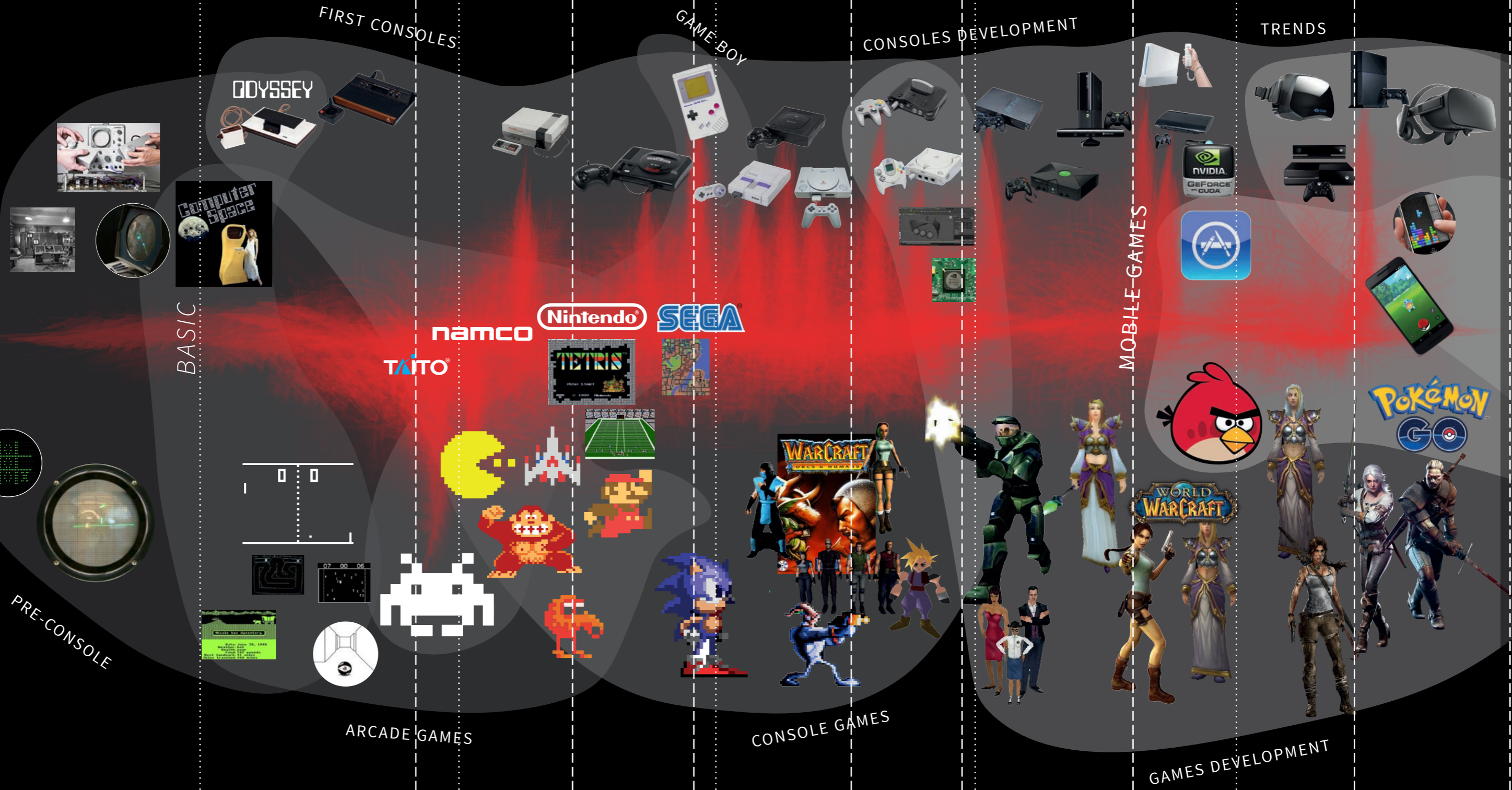
PRE-CONSOLE THE '70s THE '80s THE '90s THE '00s THE PRESENT DAY

1st generation 2nd generation 3rd generation 4th generation 5th generation 6th generation 7th generation 8th generation

DEVICES hardware

JAPAN

GAME DESIGN software



FIRST CONSOLES

GAME BOY

CONSOLES DEVELOPMENT

TRENDS

BASIC

ARCADE GAMES

CONSOLE GAMES

MOBILE-GAMES

GAMES DEVELOPMENT

The Future of Leisure



Figure 17. Left page: Final Fantasy XV poster

2.4. Video games in Japan

In the beginning of the 21st century, Asia Pacific became one of the leading parties in the gaming industry (Hjorth, 2011). In particular, the market focused on the world capital of technological innovations - Japan. From the very beginning, the influence of Japan on the development of games was immense. Surely, all the changes in the market up till the fifth generation of gaming could be observed from Japanese perspective alone, when the country played a leading role in the development of hardware as well as software.

First Japanese video games, like Taito's *Space Invaders* or *Donkey Kong* designed by Shigeru Miyamoto, were simple games with no relevant dialogue, hence without any difficulties they could be quickly released in the West, where they gained an enormous popularity. However, as the content of video games grew more complex, the localization and translation of games were necessary. To release the games like *The Legend of Zelda* or *Dragon Quest*, publishers needed to estimate the costs and profits, and plan to which extend the game would be modified to respond to the needs of a foreign culture. Thus again, as in the origin of video games industry also then enthusiasts of Japanese games, who did not want to wait for the official release of the game or its highly modified version, started 'ludic

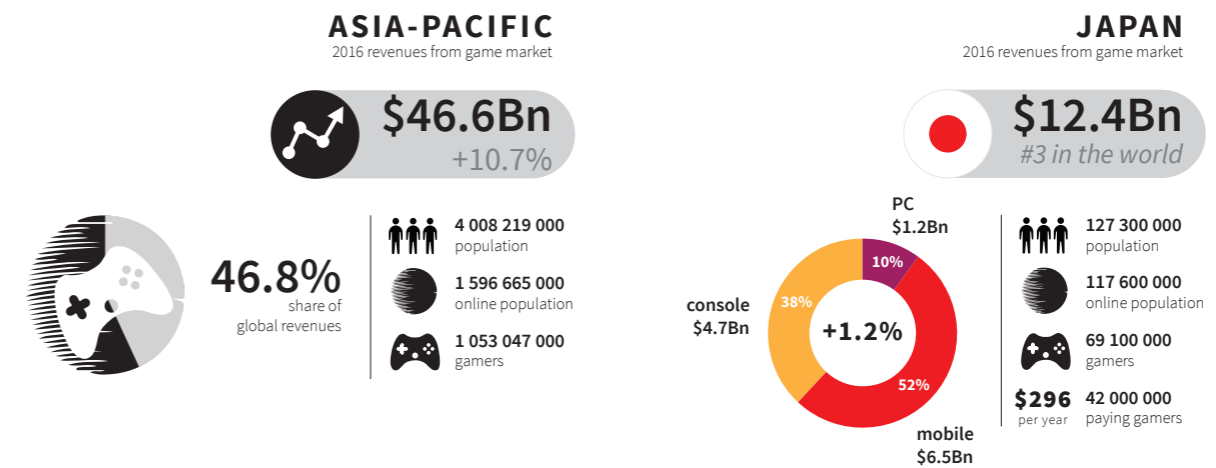
hacking' – creating communities of players who would translate and hack games on their own and share them online. Still, with the hardware and software constantly improved, there are hobbyists who hack Japanese video games. This engagement of fans in translating and manipulating technology and language shows a huge value of Japanese games even today. Also, because of the above-mentioned language barrier Japanese games were a bit left behind by the game studies, mainly focused on the English-speaking countries (Hjorth, 2011). Thus, even though Japan is perceived as one of the pioneers in the games industry, it is often omitted in the game studies because of language and cultural differences, which make Japanese games difficult to analyse. Nonetheless, this gap has been recently recognized and Japanese gaming starts to be addressed in the literature, there is still a lot of space for improvement.

In 2009 during the *Tokyo Game Show*, Keiji Inafune, creator of *Mega Man*, said: 'Japan is over. We're done. Our game industry is finished' (Byford, 2014). Nevertheless, the Japanese games industry was highly influential in the past, nowadays its importance in the global market declines. This drop can be narrowed down to few reasons, one of which was a switch from

Figure 18. The rank of game market in Asia-Pacific



Figure 19. The game market in Asia-Pacific and a contribution of Japan



arcades to PC hardware. Western market, used to the PC technology, dominated the market leaving Japan one step behind. Another reason is the global tendency towards realism in games, an attitude contradictory to Japanese original aesthetics. Hence, because of the difference of interest Japanese publishers focused on serving the domestic market, which resulted in a decline of Japan's influence globally. Yet, for the first time in the history of Japanese video games, game developers do not need big publishing companies to succeed in the business. New possibilities were unlocked thanks to platforms like Steam, independent from corporations, where individual developers can publish their games. New possibilities and the high quality of new Japanese independent games recently resulted in a growing interest in the Japanese indie scene outside the country.

Clearly, Japanese video games are unique and unlike any other produced in the West. The main characteristic of Japanese video games is the emphasis of the story behind the game and less on the gameplay itself. In some of them the initial storytelling may take hours before the actual game starts. Hence, the background of the video games becomes very immersive, characters more complex and loopholes in

the stories fascinating. As one of the Japanese players explains in Mia Consalvo's book *'Atari to Zelda: Japan's Videogames in Global Contexts'*, in Japanese games there is 'a strong sense of hope and fantasy' (Consalvo, 2016). A firm tradition of a noble, 'protagonist' main character, who fights against the 'bad guys' is clearly still visible in the local games market. In this, Japanese games take a lot of inspiration from the 'hero journey', 'loyalty to family' and 'wars between realms' themes.

Also, what is emphasised as distinctive for Japanese video games is their unique design (Consalvo, 2016). Many of them are made as extraordinary artworks, based on Japanese element like 'sumie' (black ink brush) in case of indie game *Okami* or beautifully crafted paper in *Tengami*. Fantastic elements in the games are often highlighted by Japanese mythology or traditions, creating even more beautiful and special medium. Taking all of this into consideration, Japanese games market is one of the most interesting to analyse, seen as a series of processes video games development went through from early '70s towards the future of the industry.

Figure 20. Next page: Nintendo all stars



2.5. The future of video games in Japan: indie and doujin

Every year the independent game development becomes more and more influential in Japan (Ferrero, 2016). The platforms like Steam, independent from big companies, allow individuals to release their work, making it popular in Japan and overseas. In this way, the borders disappear and once the game is online anyone can play it. However, the growing popularisation of indies in Japan was not only possible thanks to publishing platforms but mostly because of the initiatives of people and organisation of events which would promote indies.

As an example, Bitsummit, first held in Kyoto in 2013, is an event entirely devoted for indie games scene in Japan. The event first organized for 108 participants, nowadays hosts 7000 people and is predicted to grow every year (Ferrero, 2016). According to Katsuhiko Hayashi, editor in chief for *Weekly Famitsu*, Bitsummit highly contributed to the revitalization and popularisation of indie scene in Japan. The same year the first Bitsummit was organised, indie made their first appear in the biggest gaming event in Japan – Tokyo Game Show. The event previously focused on major companies, now allows small teams and individuals to participate. The same time, big companies like Sony, Microsoft or Nintendo

became supporters for indie developers, creating platforms similar to the one offered by Steam.

However, in Japan there is still a strong belief in the primacy of an office job which gives a steady income, contrary to instability of having own company. A monthly salary in a big corporation equals a success and happiness. Because of that belief and the difficulties in affording a living from indie game development, many decide to work for a major company and create their own games after-hours, more as a leisure activity or hobby. However, as Takashi Nakamura (teacher of game design at Kanagawa Institute of Technology) marks, the potential for indie developers to succeed in gaming industry has grown massively comparing to even three or two years ago (Ferrero, 2016). Thus, nowadays some young developers dare to start with their own projects, but also experienced developers set up their own studio's, like for instance Keiji Inafune (creator of *Mega Man*) who recently founded *Comcept*.

Often, what indie developers see as the most important vote in favour of staying independent is the possibility of making own decisions. What many of them say, is that in big companies in Japan employees are not given that much choice in the creation of games and later do not acquire



Figure 21. A frame from the movie 'Branching Paths: A journey in Japan's independent game scene'

any right to the design they made (Ferrero, 2016). As Takayuki Yanagihara (game developer at *FullPowerSideAttack* notices, people who work for big corporations need to create a game which will sell, thus he sees a huge value in a possibility of making own decisions and having options.

Another aspect of Japanese independent games scene is doujin. Doujin refers to a work created by an amateur or a fan, and includes manga, anime and also video games. How then indies and doujin are different from each other? Makoto Goto (director of *Bishamon*) claims they are the same at their core, because both indie and doujin developers intend to make a game that would be truly their own, personal creation. However, Takashi Nakamura reveals a small difference, that is doujin developers create a game out of pure pleasure, more as a hobby which does not necessarily give any profit in money. They make a game simply because they enjoy it, thus the process of game development becomes their leisure and is not expected to give any financial benefit. Hence, the game becomes a means of self-expression, a medium which mirrors personality, tastes or even emotion of its creator. Thus, it can be said that doujin space is where people can really express themselves, and which is based on the idea of freedom and

pleasure. In this, doujin in its very core is not different from indie.

The biggest doujin event in Japan - Comiket - hosts 1 Million visitors yearly. As with Bitsummit and other indie events, Comiket is a stage for doujin community to meet, show their work to a wider public, a place for discussion and also a possibility to sell their product. In those special places, the usually virtual community meets in a physical space, thus merging the two worlds with each other.

All in all, indie and doujin scene can be perceived as a complementary aspect of the future of leisure, whereas the creator of the game translates his experiences and identity into a complex medium – a video game. In this way, the maker is able to show his personality but also emotions and feelings. Thus, the video game becomes a means for expression by using new, immersive, dynamic and playful medium. Hence, indie games become very personal, completely different from for example commercial first-person shooters. Indie and doujin game designers follow their dreams, do what they love and enjoy, and simply do the games they want. Thus, thanks to the appealing possibility of creating own worlds and sharing it with other enthusiasts we will



Figure 22. Left page: Image of a character from Touhou game design (successful doujin developer) created by a fan



Figure 23. Right page: A frame from the movie 'Branching Paths: A journey in Japan's independent game scene'

probably see more and more Japanese indie game developers in the future, even though it still might not be the most profitable job. Nevertheless, as Ojiro Fumoto, a young game developer, honestly said: *'I think doing something I love and being poor is far more appealing'* (Ferrero, 2016).

Yet, the problem Japanese indies still struggle with, is the difficulty to reach out to the player beside publishing platforms and yearly events. The individual developer does not get the attention of the media as it is in a case of big companies. As Takumi Naramura (game designer at *Nigoro*) states, the events like Bitsummit, Tokyo Game Show, Tokyo Indie Fest or Comiket are crucial for the indie scene, because the designer can reach to a wider audience and talk with people about their games in person (Ferrero, 2016). Thus, an architectural space could be a possibility for indie and doujin to connect. In this space developers and players could have the opportunity to meet on a daily basis, trigger

discussions, use the newest technological inventions and influence game development in countless ways. Hence the virtual community would meet in a physical space, where the actor and the spectator become one entity and the place they can call their own.



LEVEL 3 ... SELECT A GAMEPLAY REGION

3.1. Tokyo, Japan

Tokyo, the capital of the economic superpower – Japan – is one of the world's most significant centres of finance, science, information, industry and commerce (Bognar, Tokyo, 1997). Tokyo ranks as one of the first in terms of an immense concentration of banks and business companies but also scientific, educational and cultural organisations. This dynamic capital is also a place of contemporary architecture, and just as Paris was designated the “capital of the 19th century”, and New York the “city of the 20th century”, Tokyo is “destined to be the metropolis of the 21st century”(Bognar, Tokyo, 1997). Despite the level of destruction during the Great Kanto Earthquake in 1923 and the devastations of the Second World War, Tokyo very quickly became a foremost metropolitan area of the world. Today, approximately 127 Million people live in Japan, from which 25% live in Tokyo Urban Area, which makes it the most populated urban area in the world (Demographia World Urban Areas, 2017). Botond Bognar in his book *World Cities: Tokyo* accurately described the spirit of Tokyo (Bognar, Tokyo, 1997):

'The 'essence' of Tokyo lies hidden and is represented by the urban land – its scarcity, distribution and high value – and by chaos, rather than by the permanence of individual buildings. The city is better defined by its events, human activities, quick and continuous change, and its penchant for novelty, than by its built fabric. In the final analysis, Tokyo is a city of processes (rather than a monument or artefact), a huge 'theatre' (as opposed to a 'museum'), and remains an indefinite city, a 'dream machine', where urban reality and fiction form an inseparable entity.'

Figure 24. Population of Japanese cities

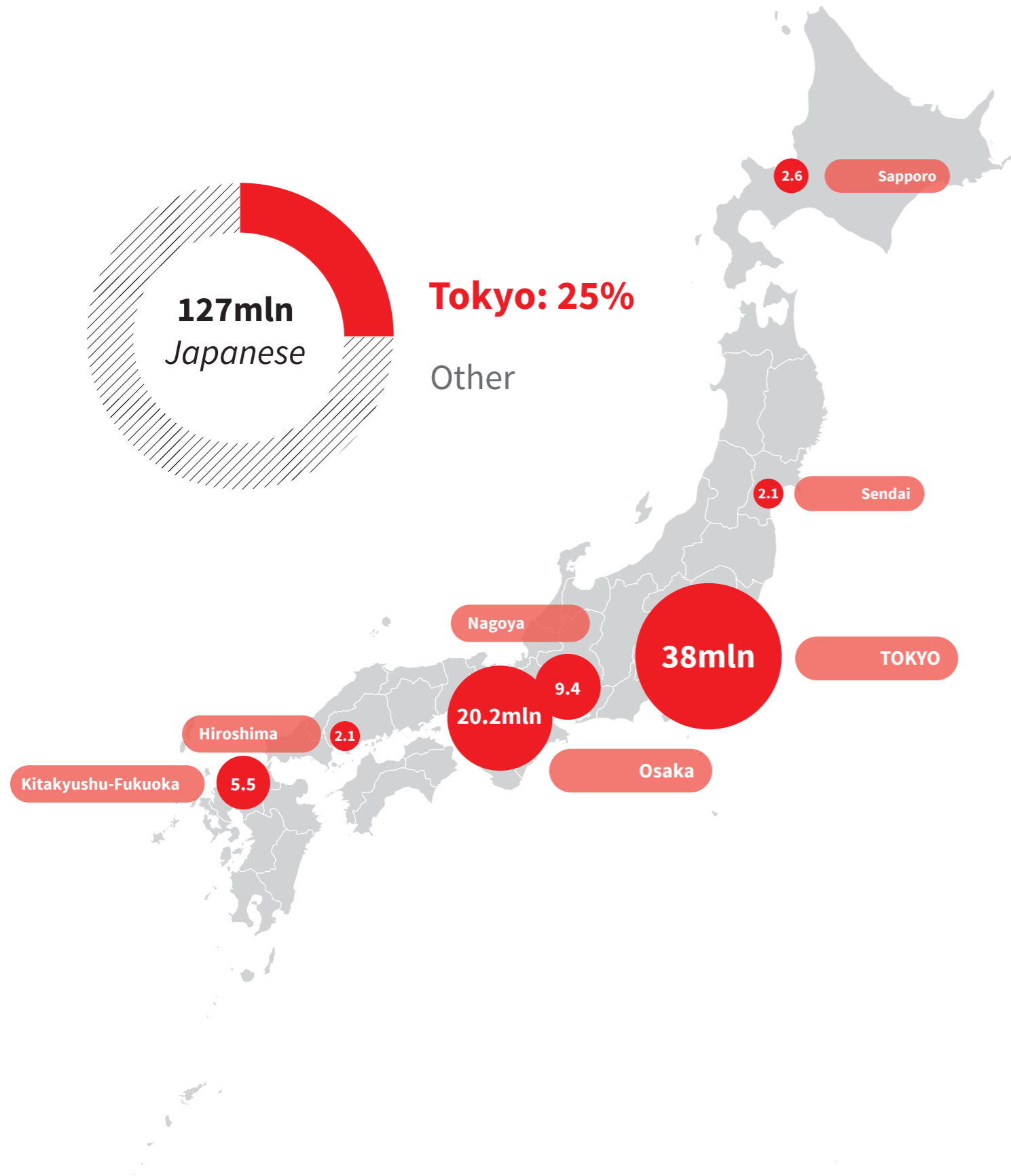


Figure 25. Comparison of Tokyo Urban Area to London and New York



Tokyo urban area

London urban area

New York urban area

Accordingly, Tokyo should be perceived as a theatre influenced by the endless processes which comprise one body. Tokyo is a 'patchwork', a city composed of many sub-units, villages, centres, where suitable programmatic patches are constantly added (Wadwekar, 2008). This way functions in the city are flexible to accommodate customized requirements of space and its use. Thanks to that, Tokyo is a city of many different faces, and as Italo Calvino notes in 'Invisible Cities' is cherished by fantasy, layered memories and rituals of everyday life. The secrets of the city can be revealed through the individual experiences of discovering its mazes and surprises (Wadwekar, 2008).

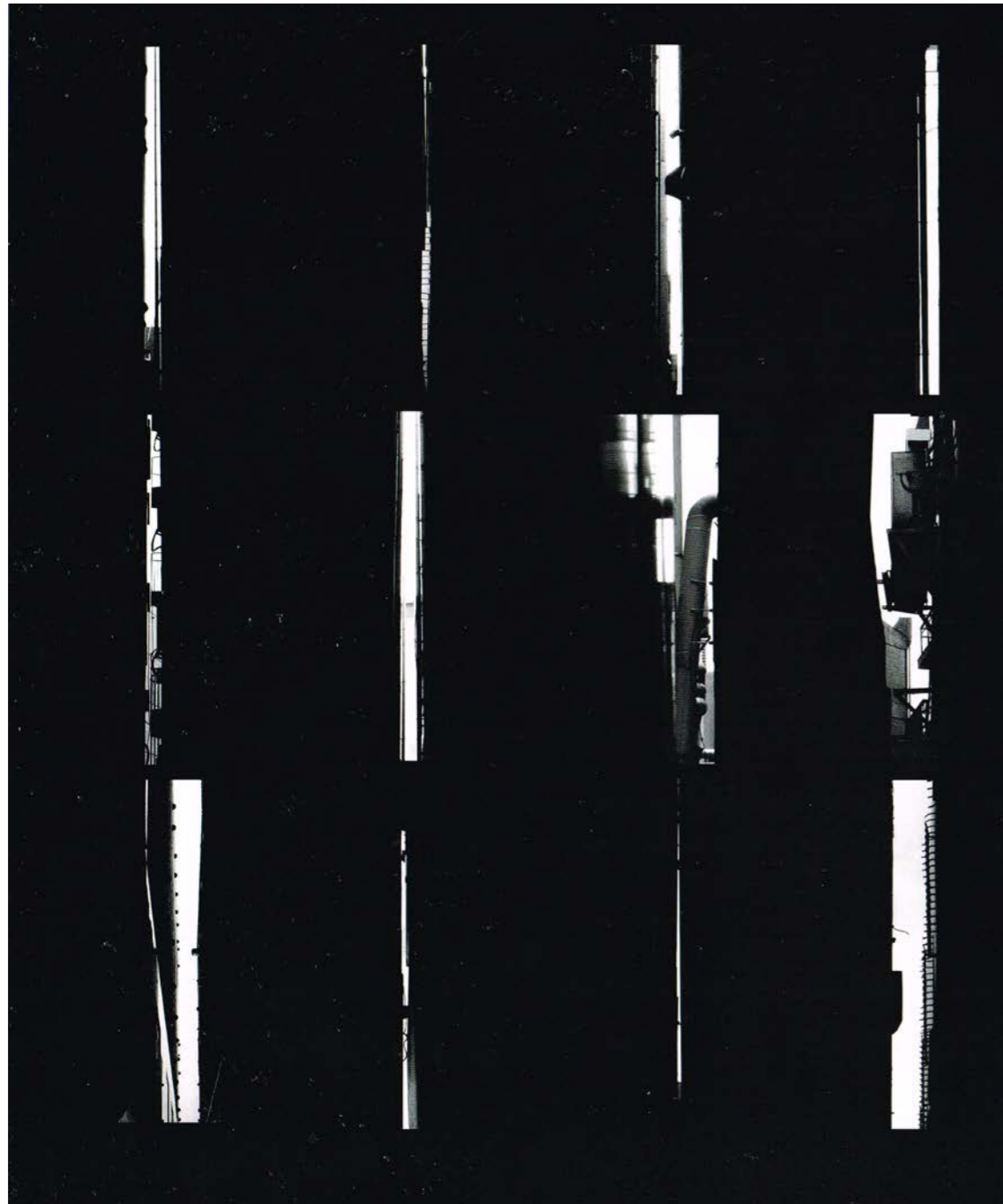
At first, Tokyo may seem as a chaotic net, with no explicit centre and spatial hierarchy, which is contrary to the Western cities. Here, the old and new entangle, the street unfold in all directions creating a maze of images and identities. Each part of this extensive collage forms its own individualities, while maintaining the feeling of subjection to one body of the city. Another characteristic of Tokyo and Japanese cities in general, is the tradition of, contradictory to Western public piazzas, highlighting the importance of the street as a vivid component which enhances the city's life (Bognar, The Japan

Guide, 1995). As Arata Isozaki describes in his book 'Japan-ness in Architecture' (Isozaki, 2006):

'In Japanese cities, the territorial extension of communal events 'tsuji', in street markets, or in festivals and rituals held in temple precincts and shrine approaches is never fixed, but is instead temporary and amorphous (...) Such ambiguous demarcation is called 'kaiwai'. It is impossible to mark the spots clearly on any map; they are just vague areas. That is to say, Japanese cities did not have plazas - but rather kaiwai.'

As Bognar notes, Japanese are inclined to perceive things as events rather than solids (Bognar, Tokyo, 1997). Thus, Japanese urban space is volatile, fluctuant, always evolving and ever-changing. In the past, public happenings in Japan were held in shrines and on the streets. The streets are places of public events, festivals, leisure, and thus are the most vivid component of a Japanese city. Those characteristics can be observed in Tokyo. Yet, as Isozaki notices, this ephemeral space can also appear inside the building, as a sheltered indoor space in passages, atria and interior circulation spaces, which is a counterpart to the plaza, or in private houses, often extremely small and narrow, creating a maze of streets which are a continuation of the living spaces.

Figure 26. 'Linear aura' effect in the streets of Tokyo (Bognar, Tokyo, 1997)



Another characteristic specific for Tokyo is its bright ornament of neon signs, where the city becomes 'a gigantic advertising machine', which Bognar describes as follows (Bognar, Tokyo, 1997):

'Tokyo appears to be run on a complex computer programme that ceaselessly adds new sub-routines.'

Accordingly, Tokyo becomes a complex hardware, where the buildings are dematerialised and the urban space converts into a realm of simulation. Hence, the urban space turns into a diagram of light, where the important elements of districts and nodes become clear and the city transform into a peculiar fantasy.

On the contrary to the lights created by neon signs, a strange phenomenon can be observed while walking along the streets of Tokyo – a 'linear aura effect' (Bognar, Tokyo, 1997). On a sunny day, for a short moment a stream of light peeps into the street from the shadows of the in-between space of crammed buildings. The light shows on the street and then immediately hides away, leaving the street back in the shadow. The cause of this phenomenon is the thin gap, always left between the buildings and the boundary of a plot, origin of which was

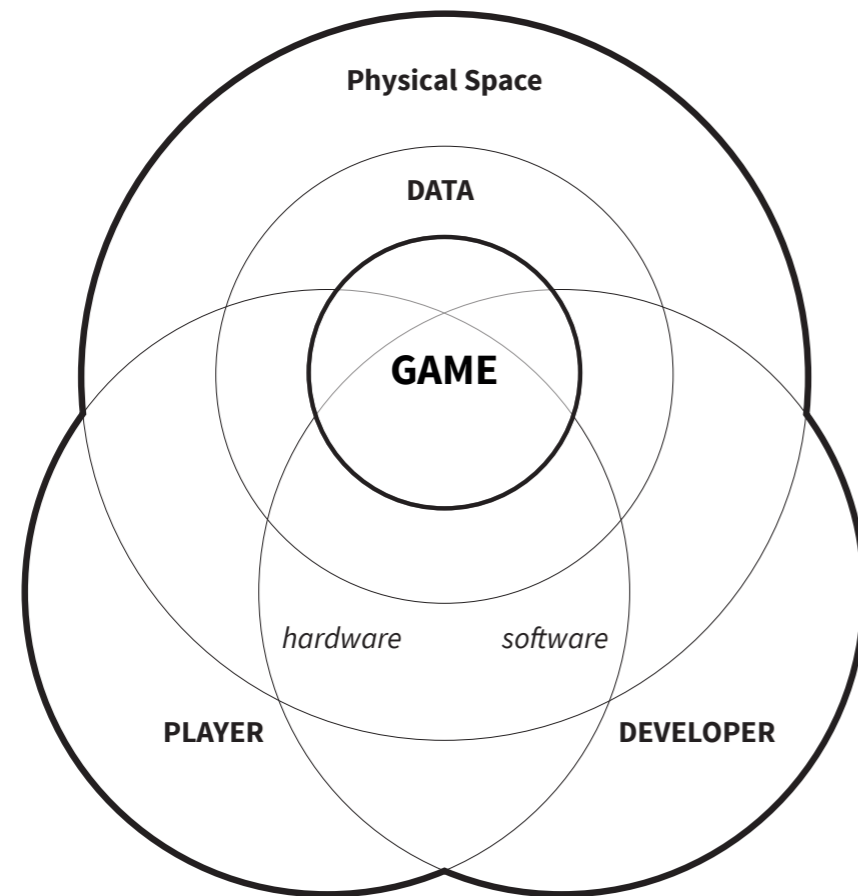
extensively described by Bognar in 'World Cities: Tokyo'. Because of the high value of land in Tokyo the buildings are being built to their full capacity, leaving as little space in-between as possible, which in result cannot be used. Yet, those gaps are what creates a unique substance of the city and its urban pattern, and emphasise the fluctuant and changing character of the city.

Overall, Tokyo is made of chaotically assembled elements, which form one body while preserving their own, unique character. After the extensive development of Tokyo in 1960s the wide transportation network was created to connect all the 'patches' in the city and make it easier to move from one to another. The expressways and train tracks were built above existing roads, avenues, rivers and in any left blanks. In this complex patchwork, there is especially one interesting element which quickly developed after the railway was built and which immersed in the leisure of new, convergent media of the 21st century, becoming known globally as a mecca of video games and Japanese popular culture – the district called Akihabara.

Figure 27. Next page:
Faces of Tokyo



Figure 28. Relation scheme in the video games industry in the context of Akihabara



3.2. Akihabara: a physical space for a virtual society

The history of Akihabara starts when the area was burned down in 1869 (Morikawa, 2003). Edo (transformed to Tokyo) was a densely populated area, endangered by the possibility of spreading fire from the surrounding districts. Thus, it was decided that destroyed by fire Akihabara may serve as a fire-proof area, which would stop the possibility of fire spread to the city. The next year a small Shinto shrine was erected near the old Edo Castle, as a watch against fire. However, locals assumed that the area is devoted to Akiba – a fire-extinguishing deity. Thus, the zone around the shrine started to be called 'Akiba no Hara', which means 'The Land of Akiba'. Later, the name of the district was altered because of the simple, repeated mistake, which transformed it from Akibahara (あきはばら) to Akihabara (あきはばら).

Soon, the area altered from Tokyo's doorstep into an important trading place for international cargo, thanks to the opening of the elevated Sobu railway lines in 1890. This prime place for trade was officially assigned as a fruit and vegetable market in 1935. During that time, the technology fetched first otaku to the district – trains enthusiasts. Electric railways were a technological sensation, gaining even more attention from 'pre-otaku' in 1936, when the Tokyo Transport Museum was opened. As technology developed, fruit and vegetable stalls were pushed away by electronic parts. After the Second World War selling electronic parts became a lucrative business, as for instance a cost of a vacuum tube was ten times less than the entire radio could be sold for, which allowed people to recover after the destructions of war. In 1962 Radio Kaikan was built and quickly became an icon of its times, exposing the changing trends in electronics, floor by

Figure 29. Location of Akihabara in Tokyo



Akihabara
秋葉原
in Japanese official addressing system

Akihabara New Town base area in Tokyo
秋葉原新拠点
urban redevelopment master plan 2014 revised edition (commercial and residential buildings)

Akihabara Electric Town
秋葉原電気街
by membership of Akihabara Shopping District Promotion Cooperative (mainly electronic shops)

Chuo-dori
中央通り
the most common image of Akihabara.

Figure 30. Different understanding of Akihabara's boundaries

Figure 31. Next page: The timeline of Akihabara

AKIHABARA timeline

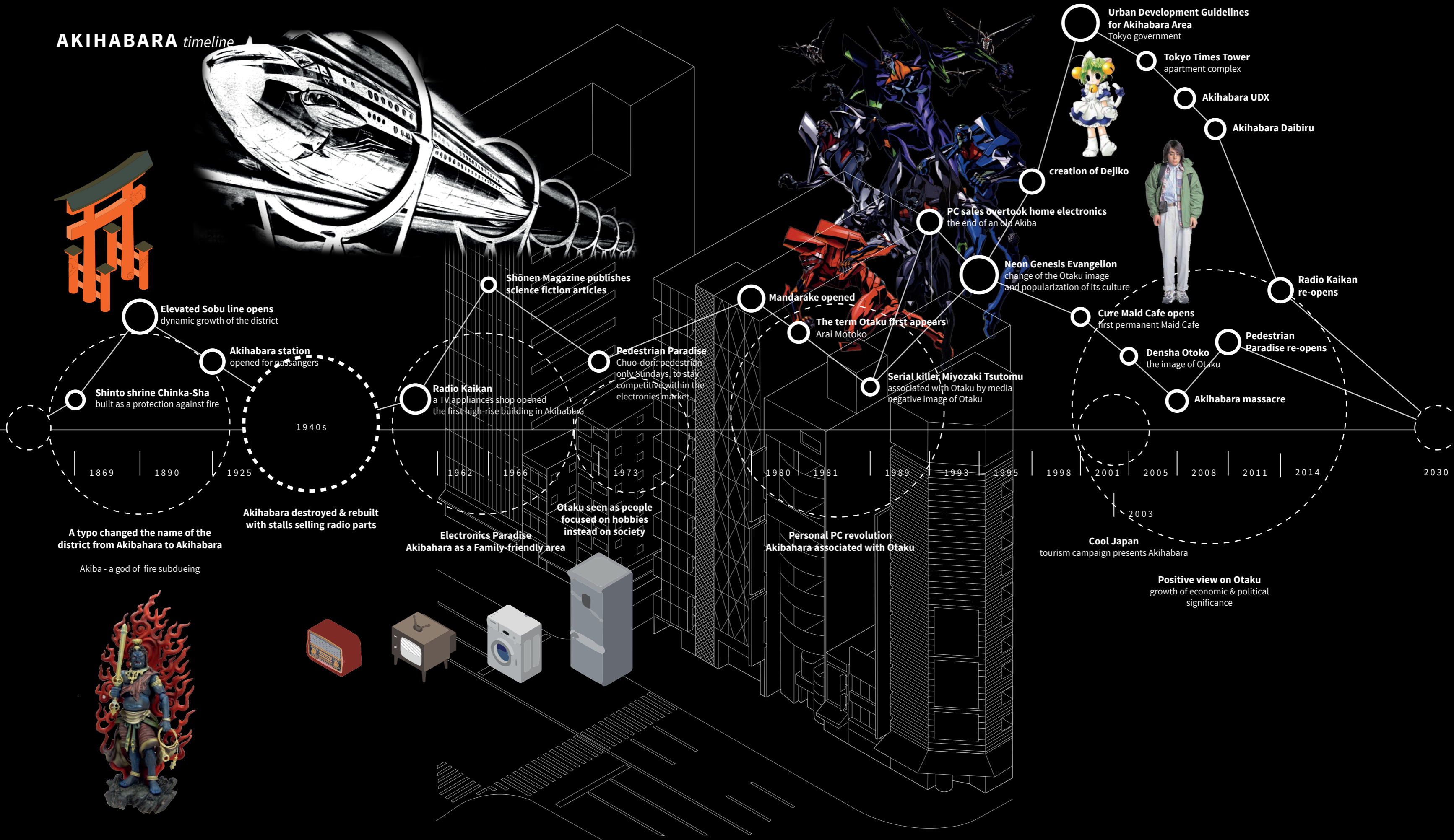
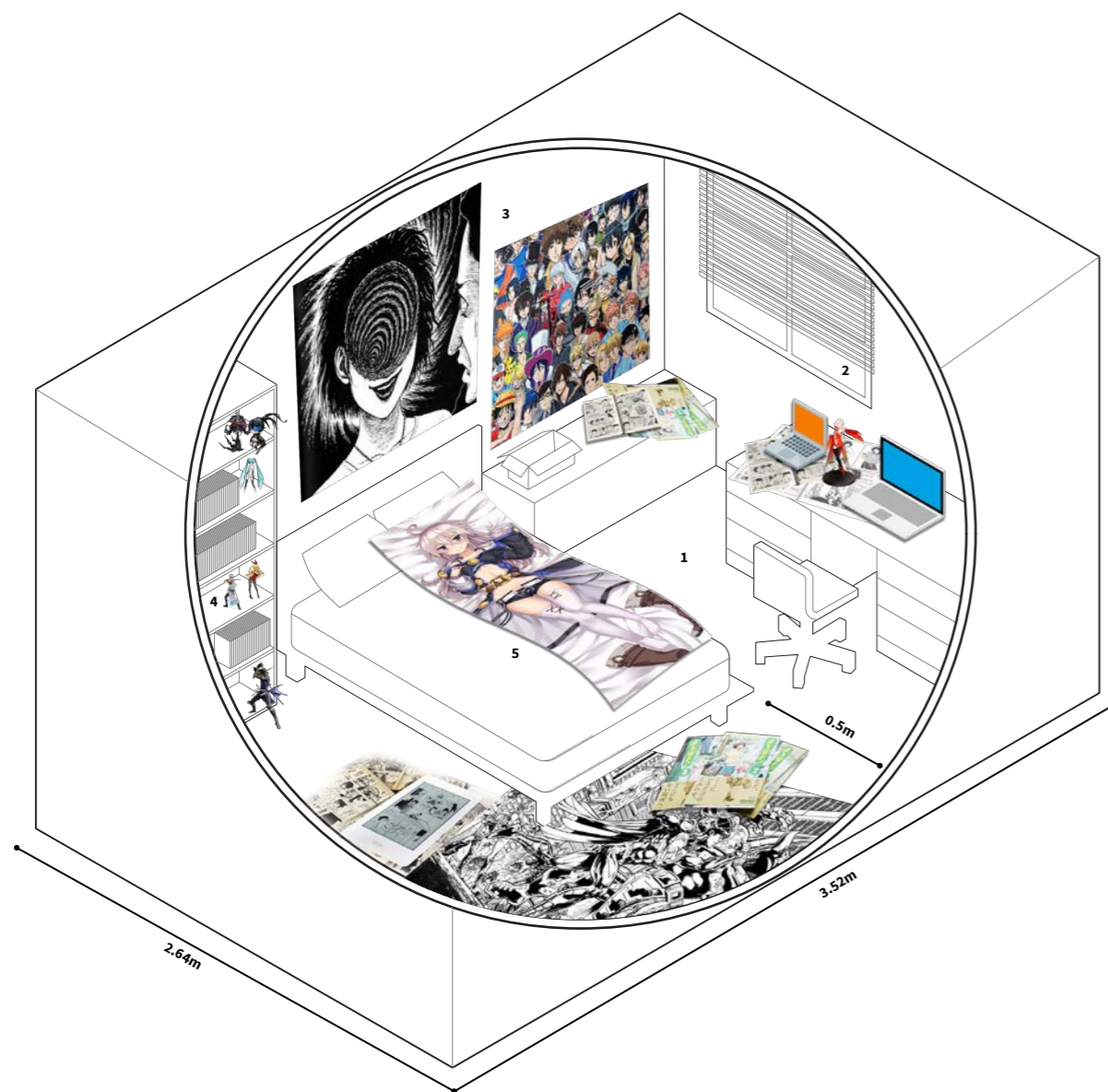


Figure 32. Otaku bedroom

Otaku room

- 1 Size of the room based on 6-tatami mats dimensions
- 2 The inside isolated from the outside by curtains or shades
- 3 Walls usually covered with posters
- 4 Crammed, small space filled with collectible figures
- 5 Body pillow
- 6 The functionality of the apartment is reduced to one room



floor up till the seventh level. As a result, during the '60s radios and other goods like washing machines and fridges transformed Akihabara into the 'home electronics paradise' and a family-friendly area. This was emphasised even more by opening the Pedestrian Paradise on Chuo-dori (Akihabara's main street) in 1973, where every Sunday a street would be opened exclusively for pedestrians, and make Akihabara competitive with other electronics markets. At that time, many young people, the first Otaku, became interested in science fiction magazines and new technologies, which became a way of escaping the ordinary life. Thus, at that time Otaku were perceived as a group of people immersed in leisure activities and their personal hobbies instead of adding to the society, and as a result seen as immature.

The term Otaku was first introduced in 1980 by Nakamori Akio in *Manga Burikko* magazine (Galbraith, Kam, & Kamm, *Debating Otaku in Contemporary Japan: Historical Perspectives and New Horizons*, 2015). Otaku were perceived then as individuals isolated from the society and devoted entirely to leisure. Later, the term received an extremely negative connotation after the crimes of Tsutomu Miyazaki were exposed in 1989. Otaku were seen as people obsessed with manga, anime and video games, detached from reality, which lead to stigmatization of

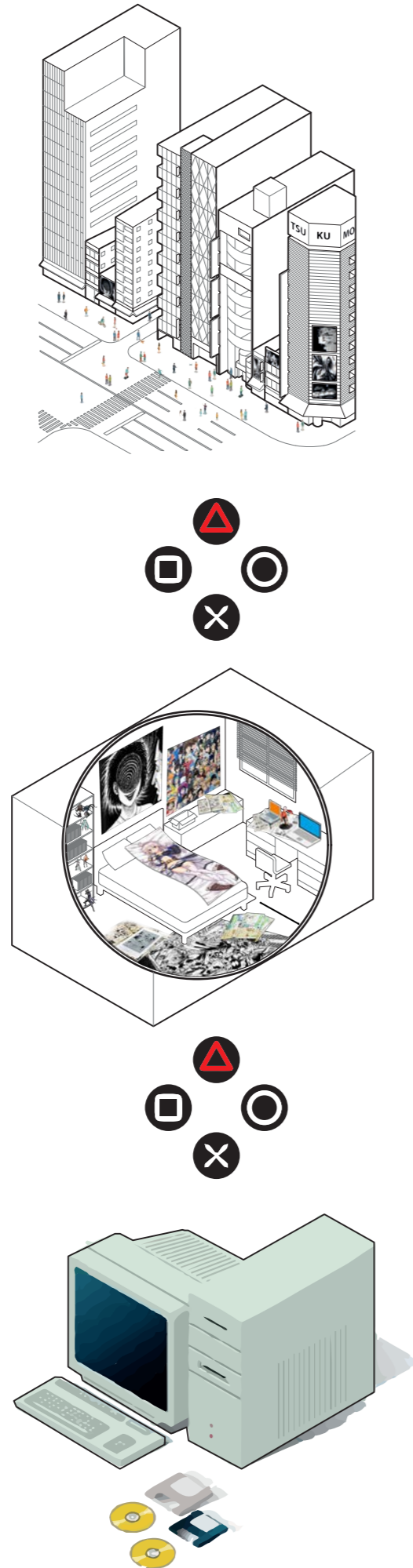
the subculture. Nevertheless, researchers like Azuma, Saito, Morikawa, Okada, Murakami and others worked on the rehabilitation of otaku image, leading to the growing number of studies and popularization of the term around the world.

Still, the term otaku cannot be utterly simplified. An attempt to define it would lead to the origin of the word, which in Japanese means 'your home' or formally 'you', and was later used to describe anime and manga fans and collectors, whereas they addressed each other saying 'please, show me your home (your collection)' (Zhang, 2014). However, the most adequate definition was made by Toshio Okada in 'Introduction to Otakuology', where he defined otaku as (Okada T., 1996):

'People who have strong ability to adapt to the information exploration age and to do relevant studies and researches by collecting huge amount of rapidly-updating information; who is very sensitive to the visual and textual information and has the ability to analyse and criticize what the author is trying to say in their work; and who possess perseverance, always ready to improve oneself and has the desire to show his collections and knowledge.'

Thus, otaku are people devoted to something and use carefully collected data to develop their knowledge of it, which they do for fun or sometimes for a benefit. Hence, otaku are a lot

Figure 33. The evolution of Akihabara from a virtual domain into a physical space: from a screen - to Otaku bedroom - into the urban scale



more than anime and manga fans – they keep track on technological developments and are proficient in understanding complex media. In that all, using the collected data they act creatively to produce new things. Hence, they are not passive consumers but they actively participate in the development process.

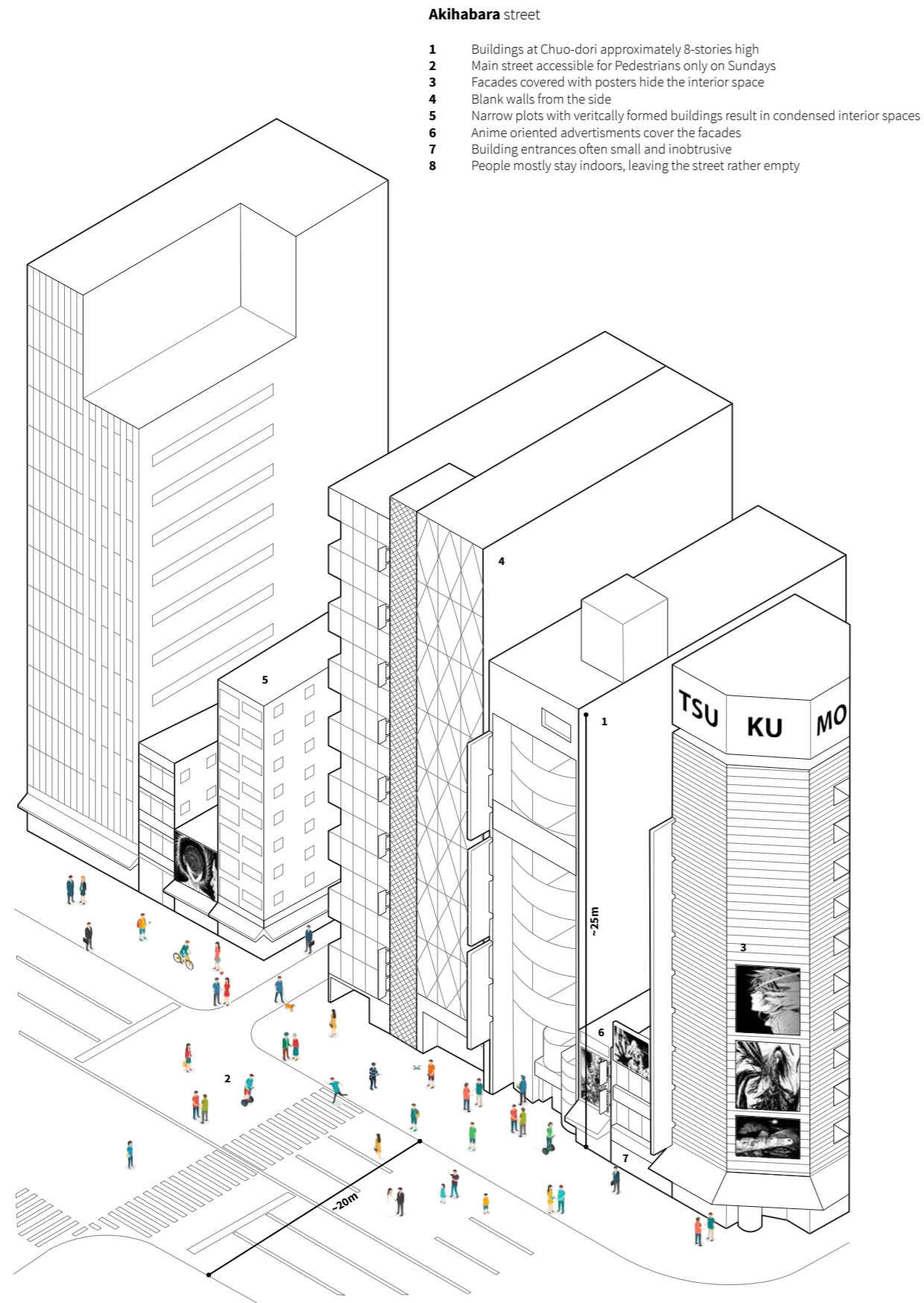
From architectural point of view, the first generation of otaku was limited to their own bedroom (Morikawa, 2003). The inside was secluded from the outside by curtains or shades, while walls would be all covered with posters, showing the images from the virtual world. The small space would be filled with collectibles, carefully selected elements from Japanese popular culture, which would not simply fill the space but characterize personal fondness. Hence, the collection of beloved pieces was a way of understanding the self. What is more, otaku were immersed into leisure activities of different kinds, some mastering programming languages and the architecture of a personal computer, others by making doujin manga or video games.

In the late '70s and early '80s, Akihabara shifted from 'home electronics paradise' into 'personal PC and Otaku paradise', becoming the prime retail district of Japanese popular culture. In 1993 PC sales overtook home electronics and Akiba entered a new chapter by becoming a 'sacred

land' of otaku, where the hardcore PC users met video games and manga fans. Thus, the fusion of hardware and software resulted in the creation of new leisure concepts, which Japan would become a pioneer of.

Consequently, first otaku were a virtual community, which would use the internet and computer architecture as their medium for communication and data exchange. However, otaku from virtual world started to transcend to a physical space – Akihabara. Thus, the virtual community transformed into a physical one, and the space they inhabited formed according to their tastes and interests. Following Morikawa, this can be clearly seen in Akihabara, as more and more doujinshi and computer stores were opened and as a result slowly transformed the district into an extension of an otaku bedroom (Morikawa, 2003). Morikawa states, that Akihabara's driving force was transferred from the government, to the public and then to the individuals. Hence, unlike Nishi Shinjuku skyscrapers area or Omotesando and Shibuya formed by private corporations, Akihabara was redefined by the personal tastes of Otaku, who somehow managed to keep being independent from the government but also a private sector (Chen, 2008). Henceforth, Akihabara can be seen as a playground of Otaku, which does not consist of any distinctive typology of architecture, but

Figure 34. Characteristics of Akihabara: view on the street



Akihabara street

- 1 Buildings at Chuo-dori approximately 8-stories high
- 2 Main street accessible for Pedestrians only on Sundays
- 3 Facades covered with posters hide the interior space
- 4 Blank walls from the side
- 5 Narrow plots with vertically formed buildings result in condensed interior spaces
- 6 Anime oriented advertisements cover the facades
- 7 Building entrances often small and inobtrusive
- 8 People mostly stay indoors, leaving the street rather empty

is rather a collection of souvenirs on the 'otaku shelf'. Hereafter, the transformation of the community came in stages: from a screen – to a room – and extended to a public space. Yet, this change was not directed in any way, but occurred because of individuals acting towards one end, resulting in a naturally shaped public space or a leisure city. Thus, the substance of the district is based on creativity and initiatives of individuals (Nobuoka, 2010).

To continue, seeing the potential of the area retailers started massively settle in Akihabara, attracting even more otaku. Today, the stores range from electronic parts, electric appliances, computers and peripherals to pop culture stores, stores selling train models, mini-cars, robots and to video game rooms. Also, a common image is a rental showcase shop, where people can rent a box, display their collectibles, doujin manga, devices etc., and possibly sell them. This business model is typical for Akihabara, where individual initiatives come to the front. Other elements characteristic for the area are arcade gaming centres – a reminiscent of the 'Arcade Golden Age', where the boundary between the fantasy and reality blurs in dim, cramped spaces.

In means of architecture, there are few characteristic elements in the urban space of

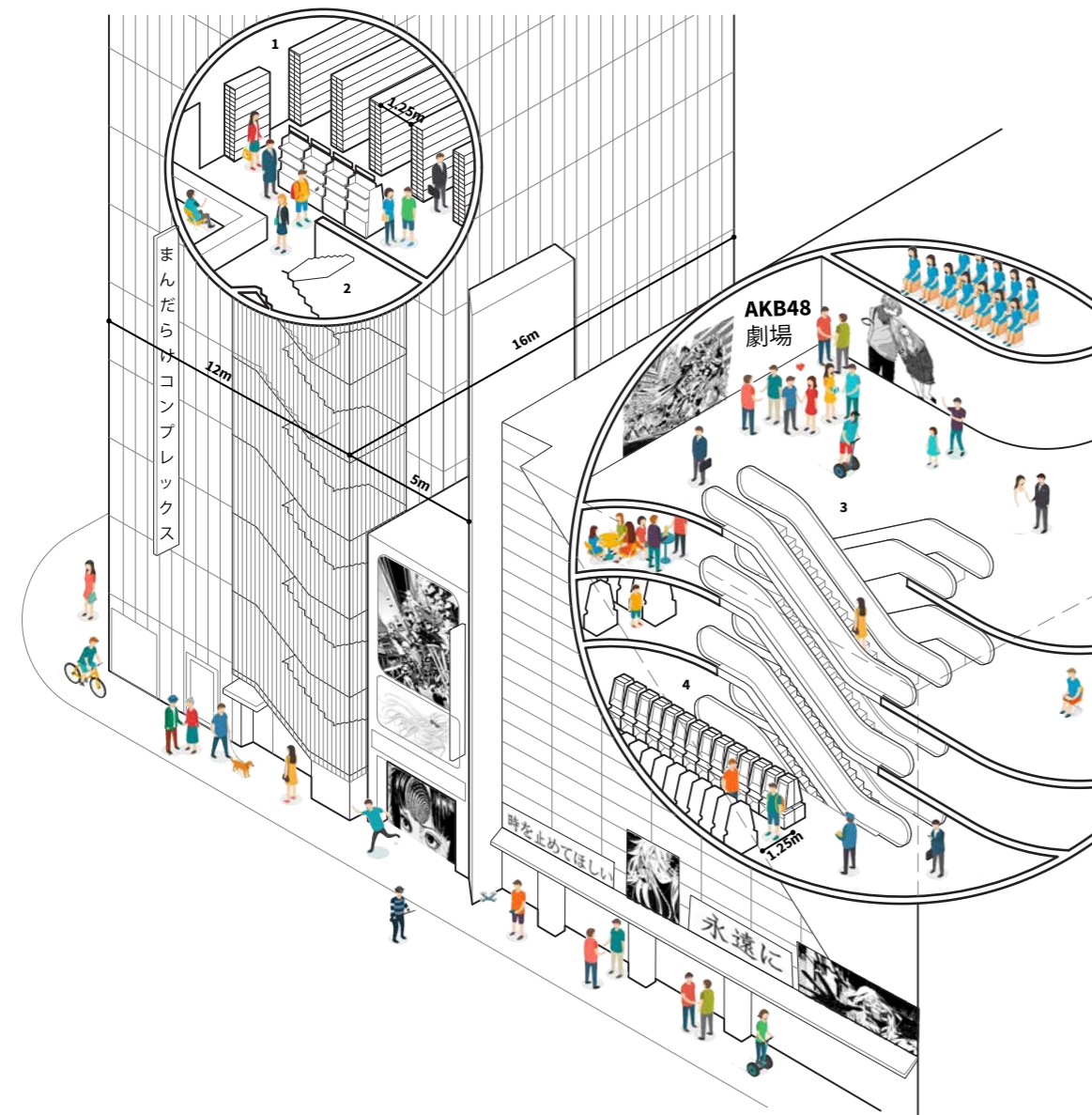
Akihabara. Seen from the perspective of Chuo-dori, all the buildings are approximately seven to eight-stories high. Narrow footprints, similarly to other parts of Tokyo, form an extremely dense urban tissue, which results in vertically formed buildings. Consequently, the spaces inside are cramped and placed deep into the plot. Entrances, often small and modest, are placed in front of the plot and include a vertical circulation module, which is the only link between the floors. The functions and atmospheres inside the building change remarkably from floor to floor. It is common that one level hosts a maid café, other otaku merchandise while the next is a noisy and fummy arcade gaming space. However, this image of the complex interior is completely disconnected from the outside façade, covered with anime-oriented advertisements and ornaments of neon signs. Thus, looking from the street it is impossible to understand the distribution of levels and their changing character inside the building. All those elements in Akihabara contribute to the feeling of a blurry boundary between the fantasy and reality in the urban space, and make this location so appealing for the analysis of intermingled character of real and virtual.

As far as otaku are concerned, many of them claim they can feel well in Akihabara and do not need to be embarrassed, because this is the place

Figure 35. Characteristics of Akihabara: view into the buildings

Akihabara inside the buildings

- 1 Small footprint and tall buildings form cramped interior spaces, placed deep into the plot
- 2 Staircases mostly located in front, separate interior spaces from the street
- 3 Vertical circulation module is the only link between the floors
- 4 Functions and atmospheres inside the building differ remarkably from floor to floor - noisy and fume arcade spaces, maid cafes, theatres to otaku merchandise



Mandarake まんだらけコンプレックス
Japonia, 〒101-0021 Tōkyō-to, Chiyōda-ku, Sotokanda,
3 Chōme-11-12

AKB48 劇場
Japonia, 〒101-0021 Tōkyō-to, Chiyōda-ku,
Sotokanda, 4 Chōme-3-3 ドン・キホーテ秋葉原

where they are truly accepted. When going to other parts of Tokyo, they are aware of not being publicly welcomed. However, in Akihabara they feel unashamed, because they are surrounded by people with similar tastes and interests (Okada & Morikawa, 2004). Yet, in 2001 Tokyo Metropolitan Government established 'Urban Development Guidelines for the Akihabara Area', which would give the district back under governments control and change its character (Metropolis, 2011). The new plan would transform the area into the 'global centre for the IT industry', which as a result would push otaku to the back. Few years later, a group of glass skyscrapers devoted for IT was built near the Akihabara train station, splitting the area in half and intending to create a more widely accepted image of the district. Nevertheless, the construction of massive office buildings can be called harmful for otaku communities, it also shows the dynamic of the district and the necessity for the redevelopment and redefinition. As the history of Akihabara has shown, this unique area with its drive for technology was successful in merging the history with the future. Hence, also now the layers of Akihabara can be merged and architecture can become a mediator in this process. Nowadays, the old understanding of otaku is fading away. Even Toshio Okada declared he quits otaku studies, as there are no longer any true otaku (Okada & Morikawa, 2004). However,

looking at Akihabara as an ever-evolving process of development, it feels natural that people coming here would also change. Hence, Akihabara needs to be rethought to remain a foremost centre of creative and innovative leisure concepts of the 21st Century.

In brief, important features of Akihabara are variety of forms of expression and a vivid atmosphere, where the product of a hobbyist can be shown next to a newest Sony development. The example of Akihabara demonstrates how layers of memories are entangled together in Tokyo and that the future is an outcome of the past developments. As Jakob Nobuoka states in his article 'User Innovation and Creative Consumption in Japanese Culture Industries: The Case of Akihabara, Tokyo' (Nobuoka, 2010):

'Here firms test products on people and people test prototypes that might become products. The area is an advanced market place or a market laboratory and there is an ongoing mix of culture and new media. The combination of distinctive market conditions and openness towards creative and cultural manifestations leads to an innovative milieu where users play an important role.'

Thus, Akihabara is perceived as a new creative centre of Tokyo, driven by leisure concepts in which the user plays a main role, and where fantasy blurs with reality.

Figure 36. The plan of Akihabara and distribution of functions

- | | |
|--|---|
| <p>1 Akihabara Daibiru
 2 Akihabara UDX
 3 Yodobashi Camera Multimedia Akiba
 4 LaOX Main Store
 5 LaOX Duty Free Akihabara
 6 Radio Centre
 a collection of stalls under the elevated track of the JR Sobu Line, developed with Akihabara over the years since the end of the World War II
 7 Radio Garden
 has been selling electric components since around 1948
 8 Akiba Palette Town
 second-hand
 9 LaOX Asobit Game City
 video games store, possibility to try out the latest products and games before they are released on the market
 10 Kaiyodo Hobby Lobby Tokyo
 the oldest Akihabara store specializing in figurines of animé and manga characters
 11 Toranoana
 Dojin-shi: magazines created by amateurs not yet able to get their work onto the regular retail market, popular manga, homemade animé productions and game software + space to meet
 12 Gamers Akiba Guide Office
 13 @home cafe
 about 40 maid cafes in Akiba
 14 Candy Fruit Strawberry
 15 Don Quijote Akihabara
 costumes
 16 Kyosho Akihabara
 wireless racetrack speeding + cafe (rajikon circuit cafe)
 17 Popondetta Akihabara
 train models
 18 Tsukumo Robot Kingdom
 the first store to specialize in make-it-yourself robots, a lot more customers in their 50s and 60s and keen on rajikon (radio-wave-controlled) cars
 19 Sega Akihabara
 video games
 20 Akihabara GiGO
 video games
 21 TAITO Station Akihabara
 22 Club SEGA
 23 Super Potato
 24 Sofmap
 reuse store
 25 Book-off
 26 Game Hollywood
 perfect for expats
 27 G-Front
 sells arcade games
 28 Mandarake
 manga and anime shop</p> | <ul style="list-style-type: none"> ● Electric appliances, electronic goods, etc. ● Electronic parts ● Computers and peripherals ● Maid cafés ● Pop culture stores (video games, manga, animé) ● Stores selling mini-cars, train sets, robots ● Video game room ● Karaoke ● Pachinko ● Temple ▨ Park ▭ Project location |
|--|---|

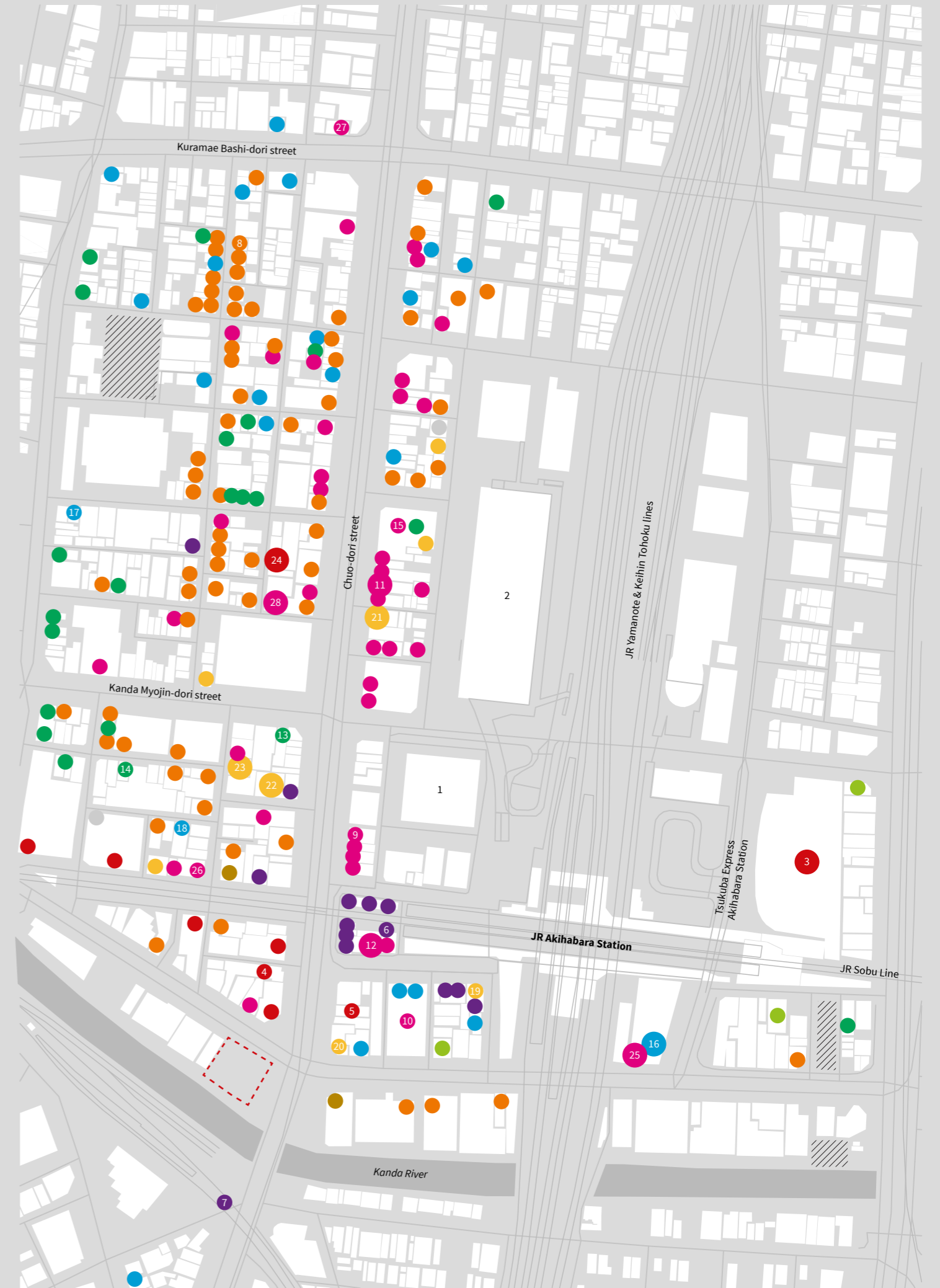
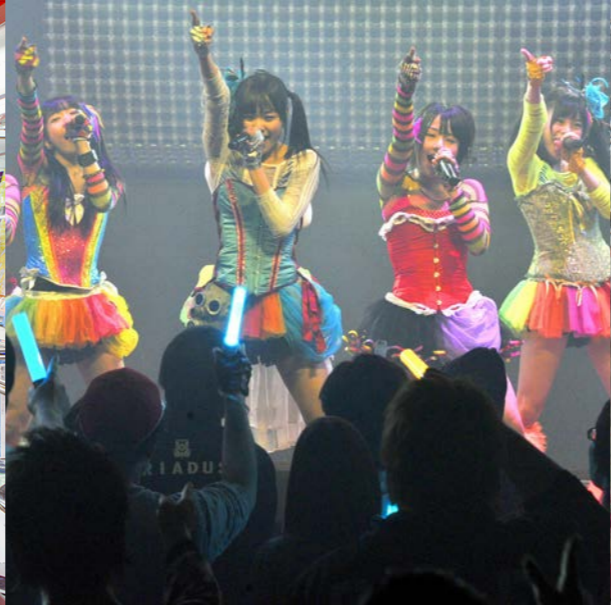
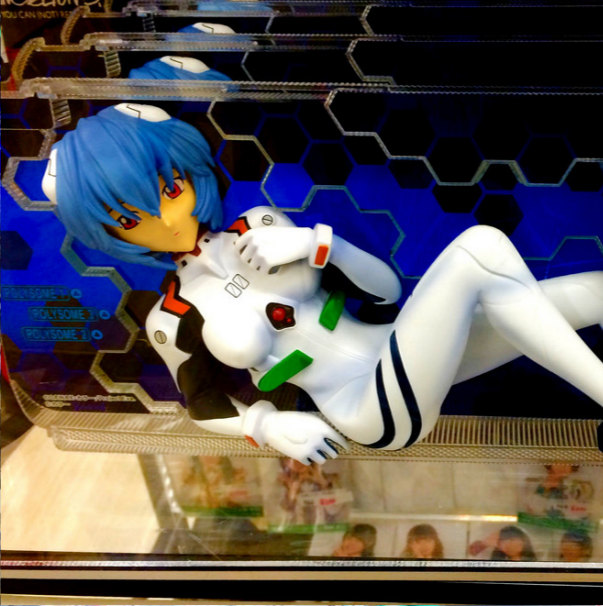


Figure 37. Next page: Faces of Akihabara



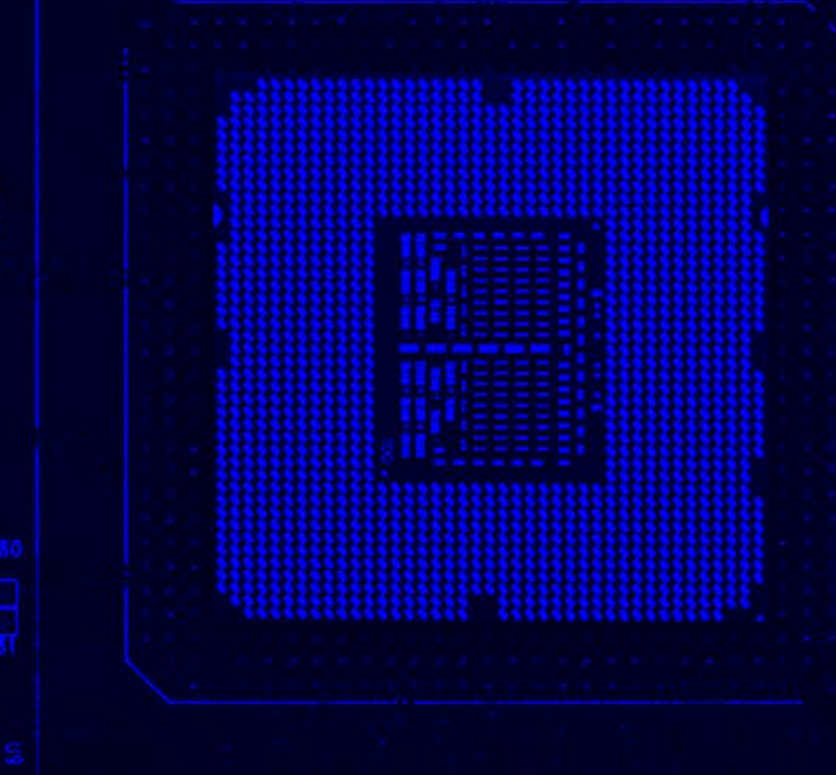


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J35 SHORT 1-2 FOR FRONT USB
 J35 SHORT 4-5 FOR BACK USB



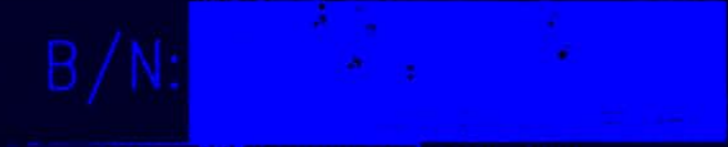
SEC-IDE



LEVEL 4 ... THEATRE OF THE FUTURE:
 embedment of the elements in the system

BUS RATIO	JP1	JP2	JP3
X1.5/3.3	OFF	OFF	OFF
X2.0	ON	OFF	OFF
X2.5	ON	OFF	ON
X3.0	OFF	OFF	OFF
X4.0	ON	ON	OFF
X4.5	ON	ON	ON
X5.0	OFF	ON	ON
X5.5	OFF	ON	OFF

JP4 1-2 = DISABLE INT VGA
 JP4 2-3 = ENABLE INT VGA



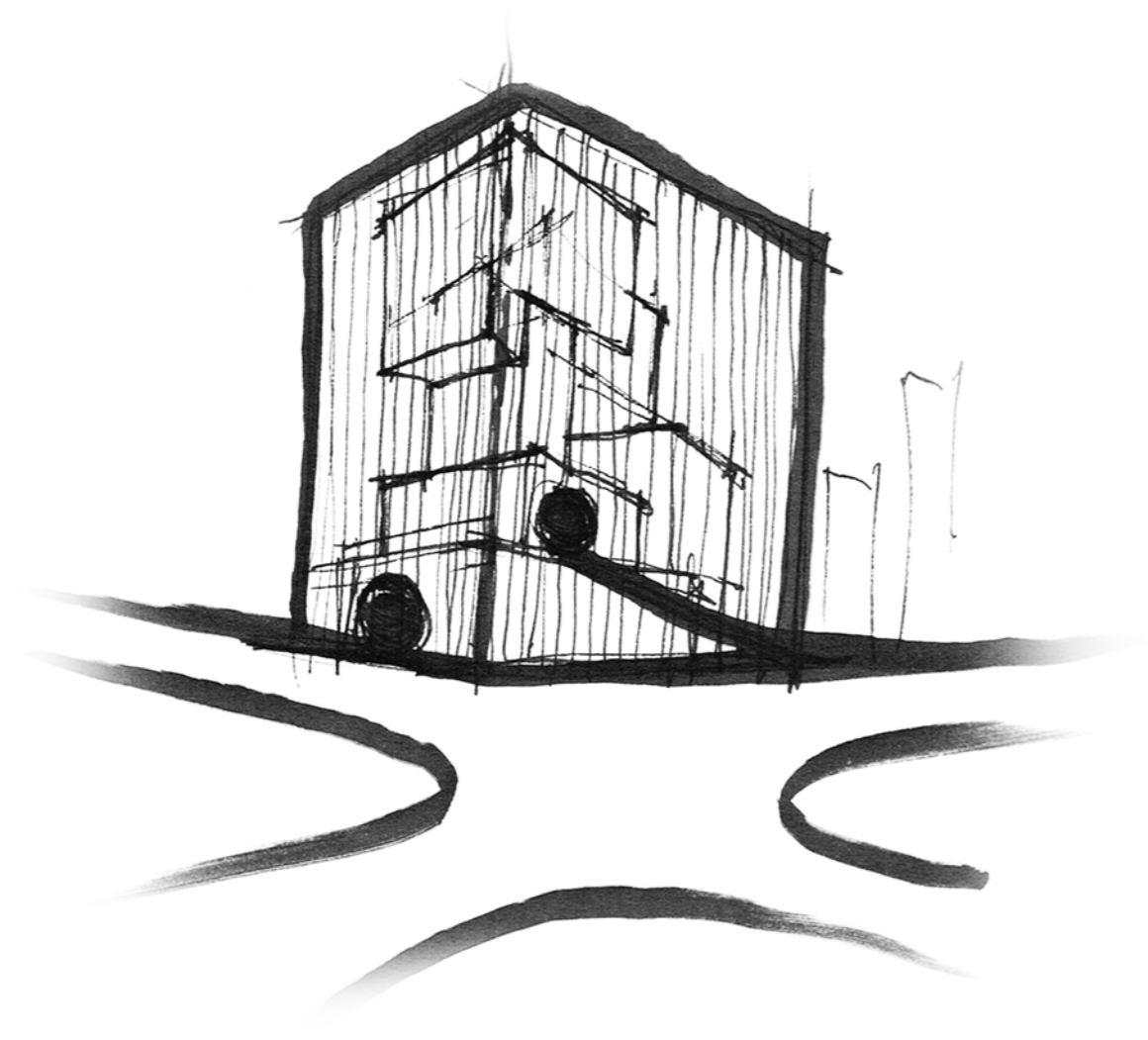
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PBSRAM

32KX8

LEVEL 4 ... THEATRE OF THE FUTURE:
 embedment of the elements in the system

Figure 38. Left page: First sketch of the Video Games Theatre



4.1. Video games centre as a theatre of the future

After the extensive research of leisure, the concept of play, video games and their future, we can now switch to the design of the video games theatre. The project is located in the south part of Akihabara and on its main street Chuo-dori. It sets the beginning of the district and acts like a gate to it. Also, the location is placed next to Mansei Bridge – the former entrance to Tokyo in Edo period, which emphasises its welcoming character.

In order to answer the questions stated in the very beginning: *'How can a video games centre become a theatre of the future and a medium for the future of leisure in 2030?'*, and: *'How can a building become a video game itself?'*, few elements need to be embedded in the system of the building. The preliminary determinants were set by the context of Akihabara, its architecture, leisure concepts, products which can be found in the area and the relation between the users and the makers. As a result, the key principles were formed: a relation between physical and virtual spaces in the context of Akihabara and its previous experiences, a discussion between players and game developers, and the link between hardware and software – the elements which can be found in the district. Now, what could possibly make a video games centre a theatre of the future?

The foremost characteristic of the video games theatre is dynamism. The building needs to act as a game itself, thus it needs to be playful, fun, sometimes surprising. Hence, the complexity of spaces inside the building allow the player to explore the game and architectural space. The transitions between spaces, many frictions and thresholds result in diverse experiences and view

Figure 39. Sketches of the design

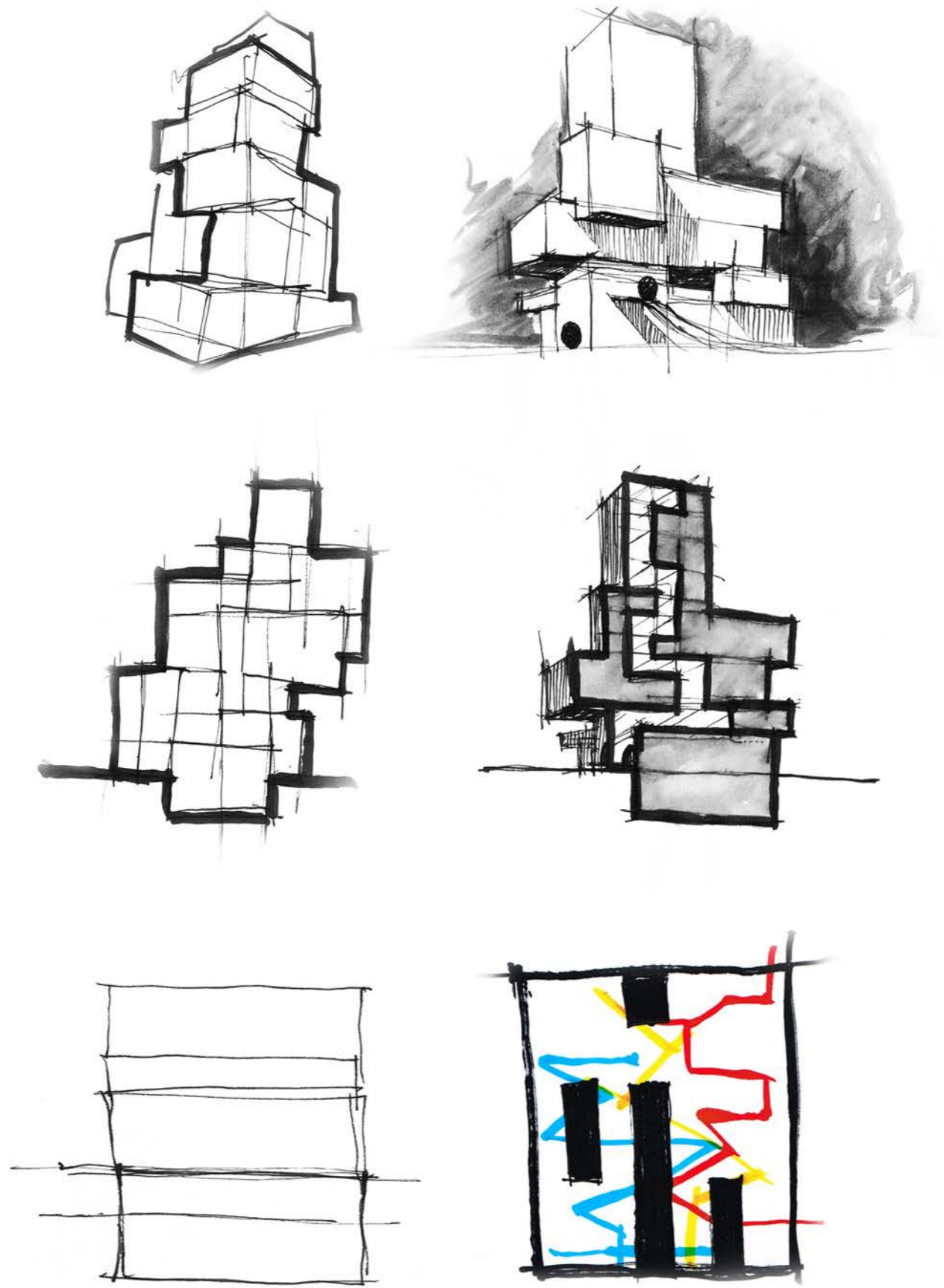
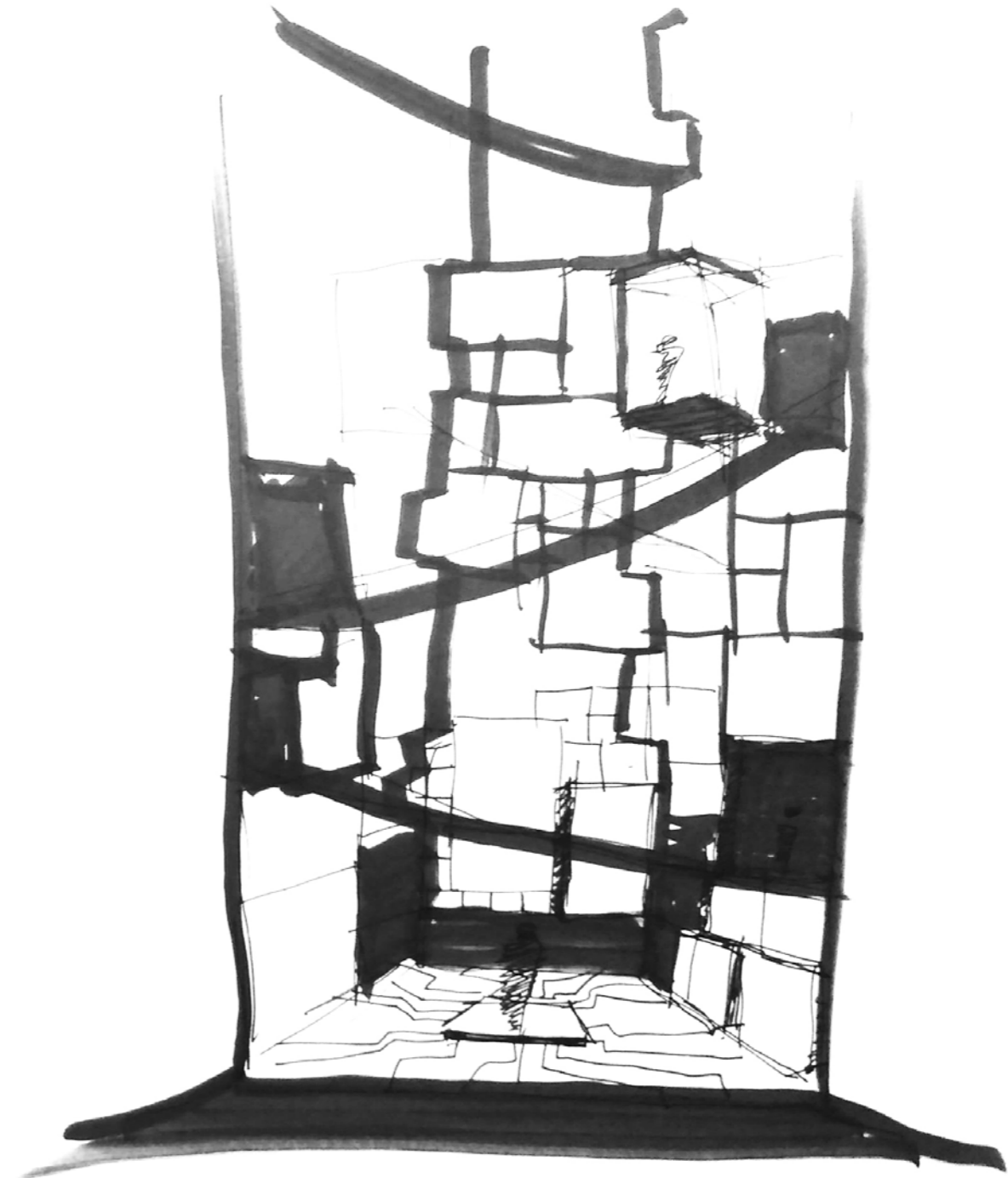


Figure 40. Sketch of the core



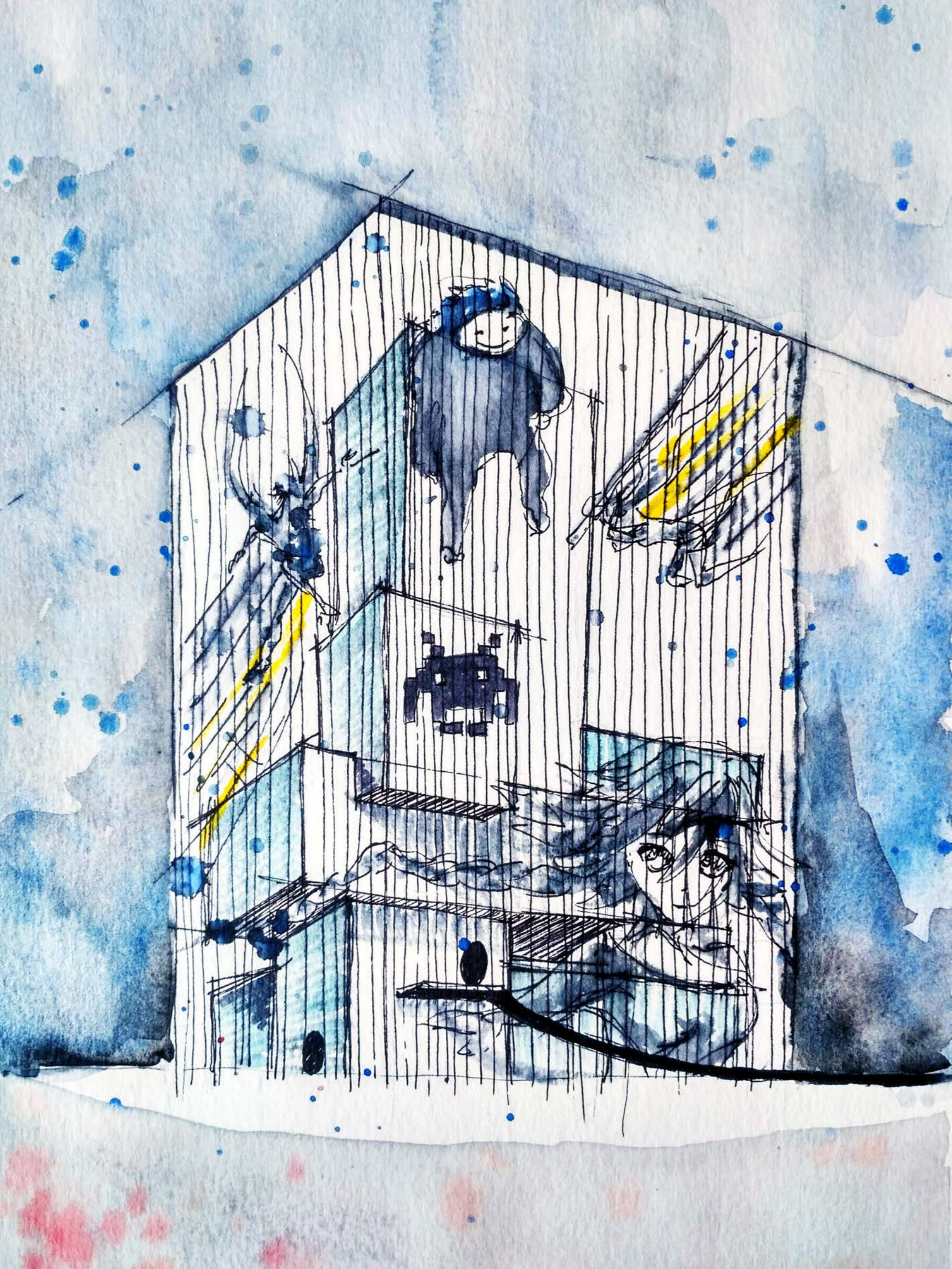
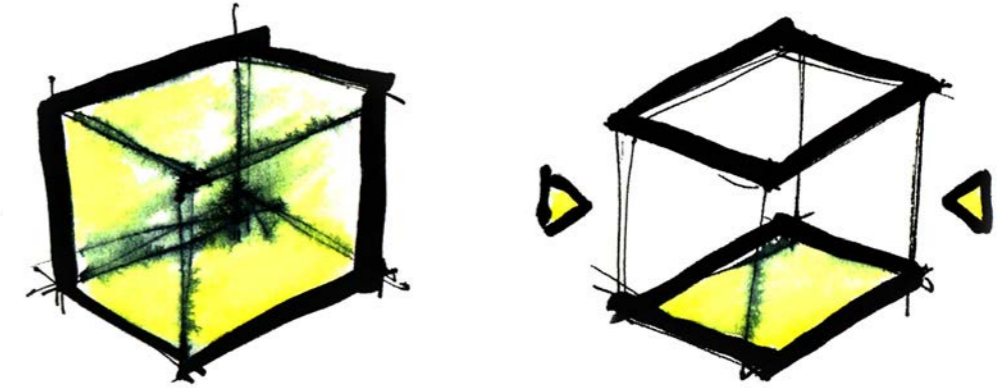


Figure 41. Left page: Initial sketch of the design

Figure 42. Right page: First scheme of the Lan Arena



connections, making the building a peculiar journey. In this way the design forces a player to become an active participator. Inside the game the actor and spectator become one entity and cannot be distinguished anymore.

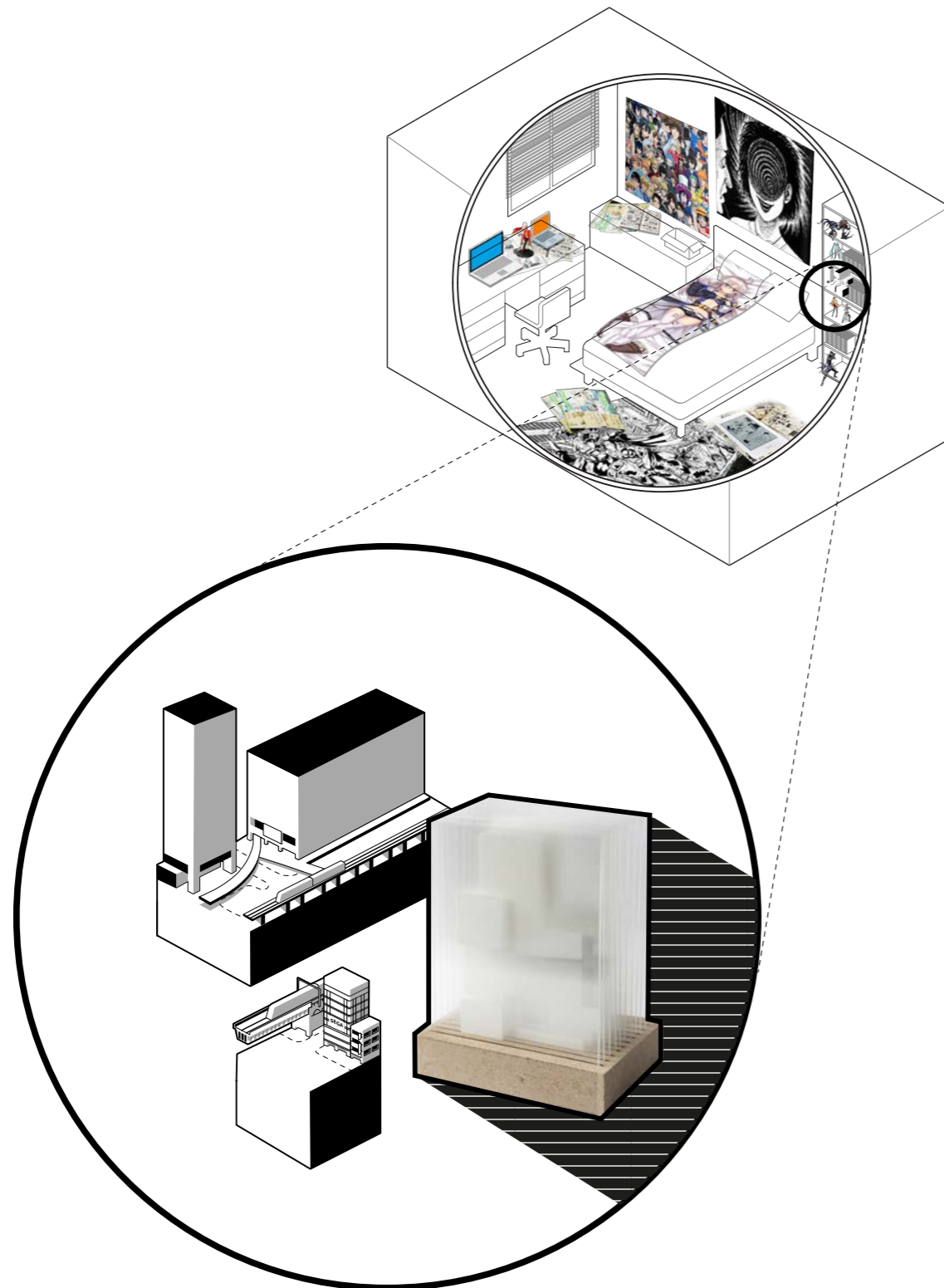
The same happens in case of virtual and real spaces, which merge and intertwine creating a blurry boundary between the fantasy and reality. As was previously stated architecture can become a mediator between real and virtual spaces, and can help to mediate how they will work and influence one another, and how people will inhabit them in the future. Thus, in the video games theatre the gaming rooms are mixed with the in-between and unprogrammed spaces, which can be rethought and reinvented by the community and game developers. As with previous experiences of Akihabara, also here the initiative of video games enthusiasts would be a crucial aspect of shaping the future of the building.

As many stereotypes show, gaming communities are perceived as enclosed and separated from the outside world. Thus, gamers are considered socially isolated. However, gaming communities gather huge number of participants whose social relations in the game within one day can exceed the relations people normally have within a week. Hence, to challenge this stereotype of enclosure

in gaming communities the ground floor of the building is left fully transparent, allowing passer-by to pick into the game and activities inside. The building opens in three directions – Akihabara, Mansei Bridge, and the waterfront, hence it can be perceived as having three different stages. The Akihabara stage has the entrance which leads through the stairs to the first floor of the building, its core and the start of the game, located 8,84 meters above the ground. The stage from Mansei Bridge opens to the entrance on the ground floor, leads to the creation of a personal avatar and to the Lan Arena. The last stage, located from Kanda River extends the Lan Arena making the connection to the waterfront.

Nevertheless, in the context of Japan and the strong emphasis on personalization, which was in depth analysed by Mia Consalvo in 'Atari to Zelda: Japan's Videogames in Global Contexts', some of the elements need to be isolated and converted to a personal experience (Consalvo, 2016). As a result, the upper, semi-transparent part of the building is visibly detached from its translucent plinth and needs to be explored from the inside. This combination of transparency and isolation welcomes a passer-by and triggers his curiosity to start a journey in the building, and grasp an understanding of its mechanics as within a game.

Figure 43. Buildings in Akihabara perceived as souvenirs on a shelf of Otaku



4.2. Relation with Akihabara: physical and virtual space

The physical aspect of the Video Games Theatre is a fusion of elements encountered in Akiba. The building becomes a mediator between the old and new – the Otaku heart located in the western part of the district and IT office buildings next to the railway station. As a result, the outer shell of the project reflects the large-scale components, glass offices with their rigidity and a modular rhythm. The same time, inside the shell the small-scale components relate to the urban tissue of the old Akiba, their interchanging character and diversity of heights. Also, the system of the streets – Japanese ‘*kawaii*’, so important in the urban context – is translated inside the building, creating the diversity of in-between spaces. All of it results in a disconnected character of the inside and the outside, which as was described before is a typical characteristic of the buildings in Akihabara. This image is emphasised by the dynamic, displayable surface on the outer shell, where the avatars of players are shown. The display relates to the advertisements of manga and anime, and an ornament of neon signs in Akihabara which cover the buildings and converts the urban space into the realm of simulation. Hence, the building becomes a peculiar fantasy, which narrates the context it is in and translates it to the framework of the future.

The buildings placed on three other corners of the crossroad are approximately 45 meters, which is slightly higher than the rest of the old Akihabara and smaller than the IT buildings. Nevertheless, the video games theatre is designed to align and level with the surrounding buildings. Thus, the project with three other structures around the crossroads next to Mansei Bridge creates a gate to the district and becomes an intermediate element distinguished from the small-scale and large-scale components, emphasising the discussion between the two.

As previously said, the vertical circulation is one of the characteristic elements of Akihabara and is mostly enclosed in the module located in front of the plot. Nevertheless, in the Video Games Theatre the circulation breaks out of its former constrain and evolves inside the building making it a journey through real and virtual spaces. Two main paths – public game and immersive game – lead the player through gaming spaces. The paths flow inside, come close to each other and then wander off again. This circulation produces a characteristic rhythm in the building and allows its exploration.

The virtual aspect of the building is also reflected in the intangible elements, the flexible

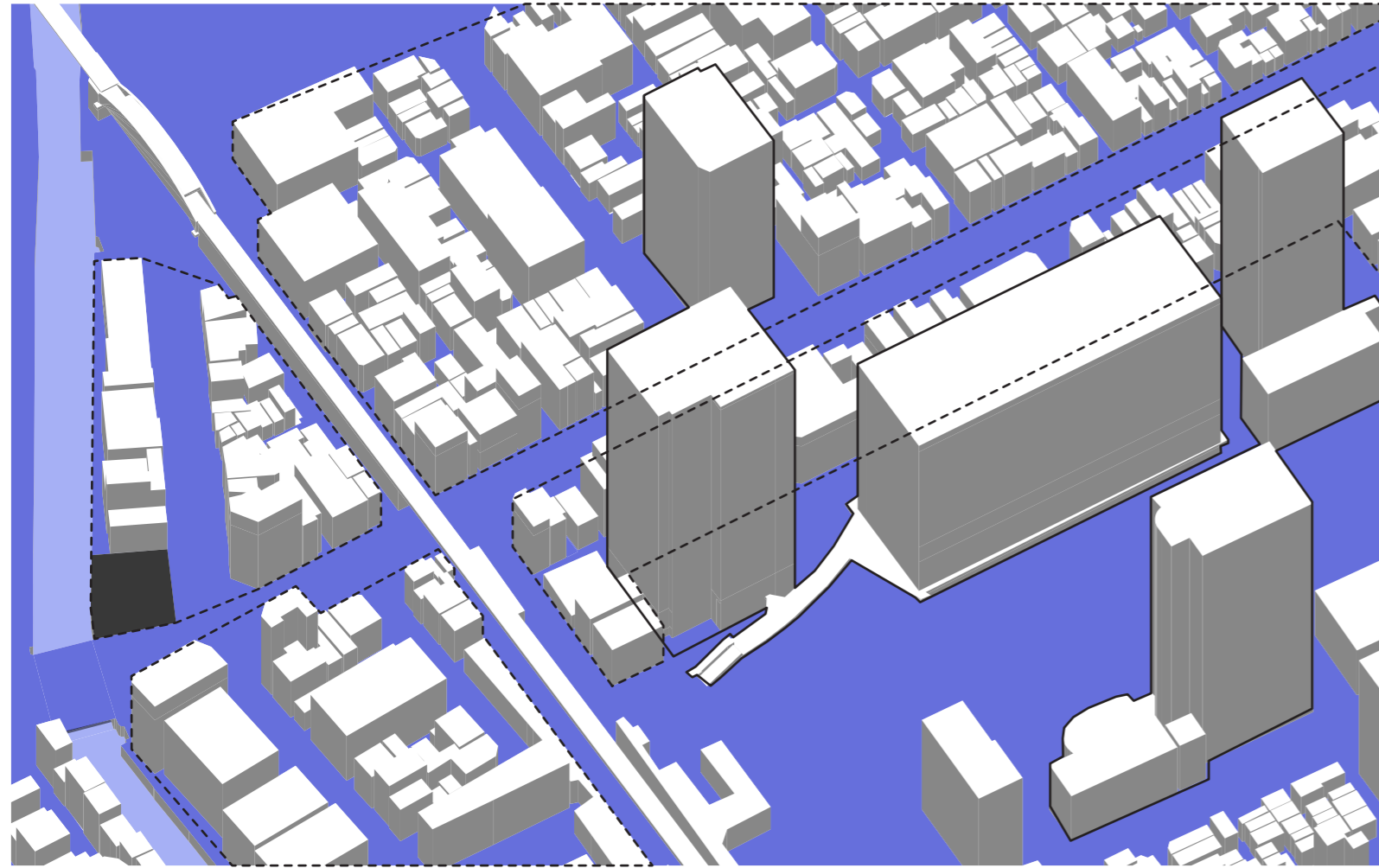


Figure 44. Left page:
Fusion of elements
from the urban space of
Akihabara

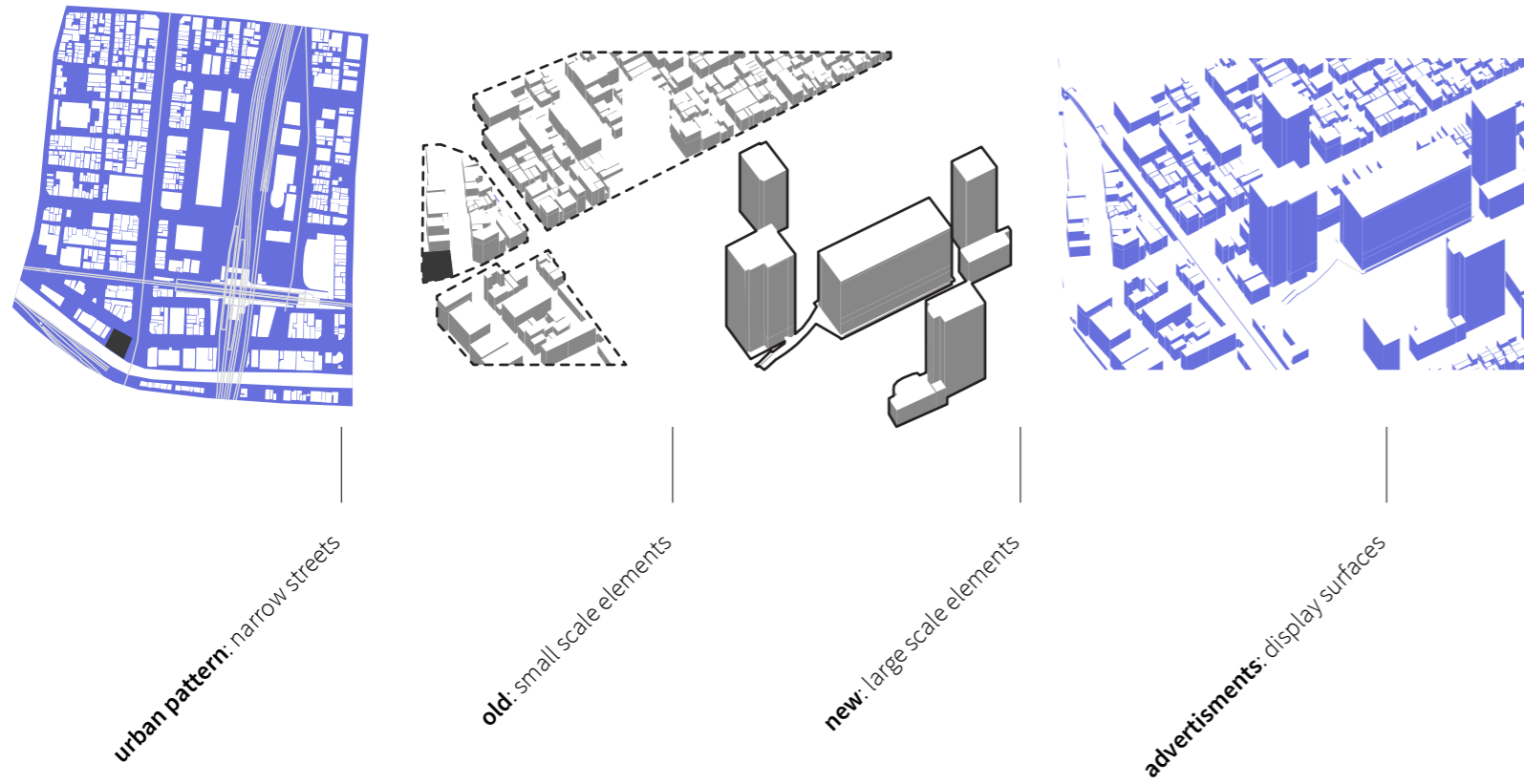
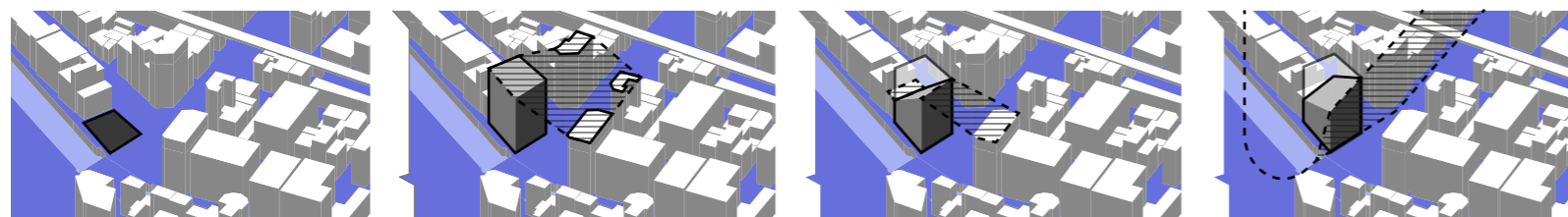
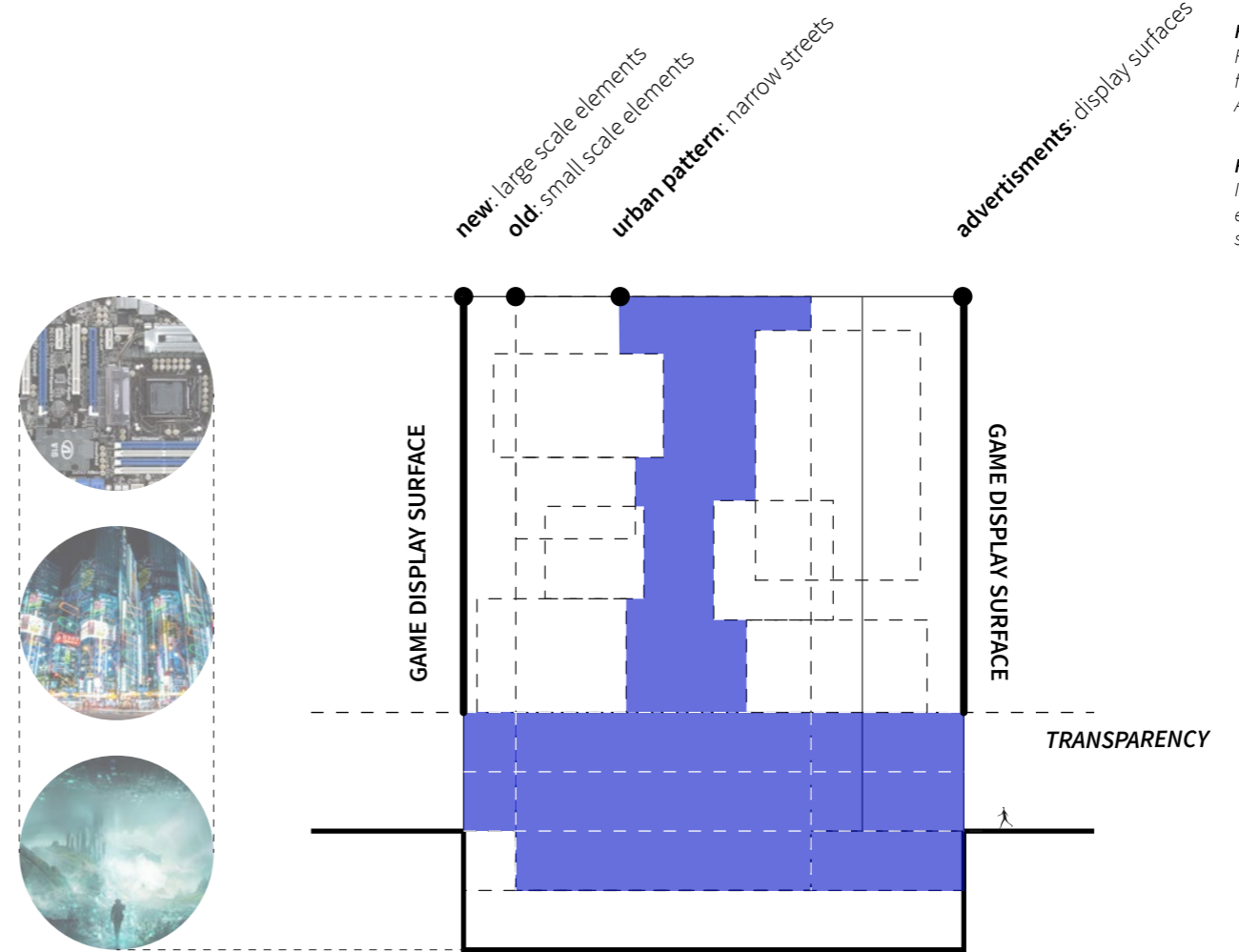


Figure 45. Right page:
Implementation of
elements from the urban
space in the design



use of spaces, the use of natural and artificial light, and in the materiality of the design. First, the changing character of natural light coming into the building through scattered slits in the core is inspired by a linear aura effect, described by Botond Bogner in *'The World Cities: Tokyo'*. The dynamic light pattern is moving throughout the day and influences the inside. Nevertheless, this pattern is juxtaposed with the artificial light inside gaming spaces and creates a strange, seemingly contradictory feeling. The semi-transparent character of the upper façade of the building gives the idea of immaterial from both the outside and inside and softens the light which comes through. Contradictory, the transparent façade of the plinth gives a clear connection between the inside and the outside and invites a passer-by to come in.

To add, the use of spaces can also be perceived a domain of virtuality, as not all of them are programmed. Some spaces are left to be discovered by virtuality and inhabited by the community. This allows the negotiation between real and virtual by the initiatives of individuals, as can be observed in the rest of Akihabara. In this way the character of the Video Games Theatre can change in time with the technological developments and needs of the industry, and the physical and virtual spaces go hand in hand.

The future of leisure

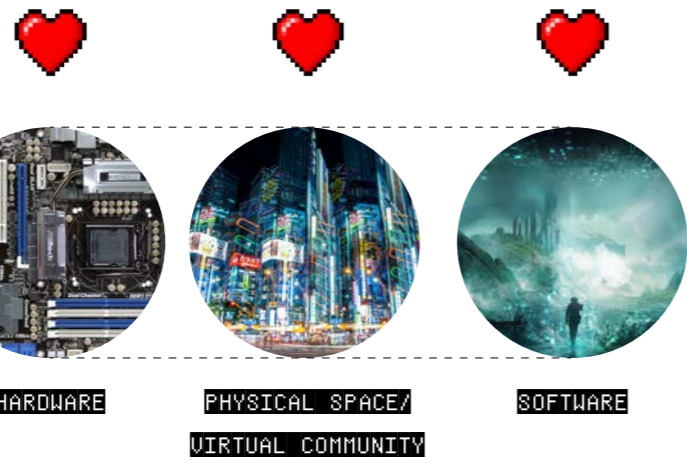


Figure 46. Leisure concepts and activities in Akihabara

- Video games
- Doujinshi/indie
- Game development
- Cosplay
- Maid cafes
- Manga
- Anime
- Arcades
- Train models
- Sci-fi magazines
- Computers and peripherals
- Consignment shops
- Robots
- Electronic parts
- Electronic appliances

Figure 47. Three characteristic elements from Akihabara used in the design

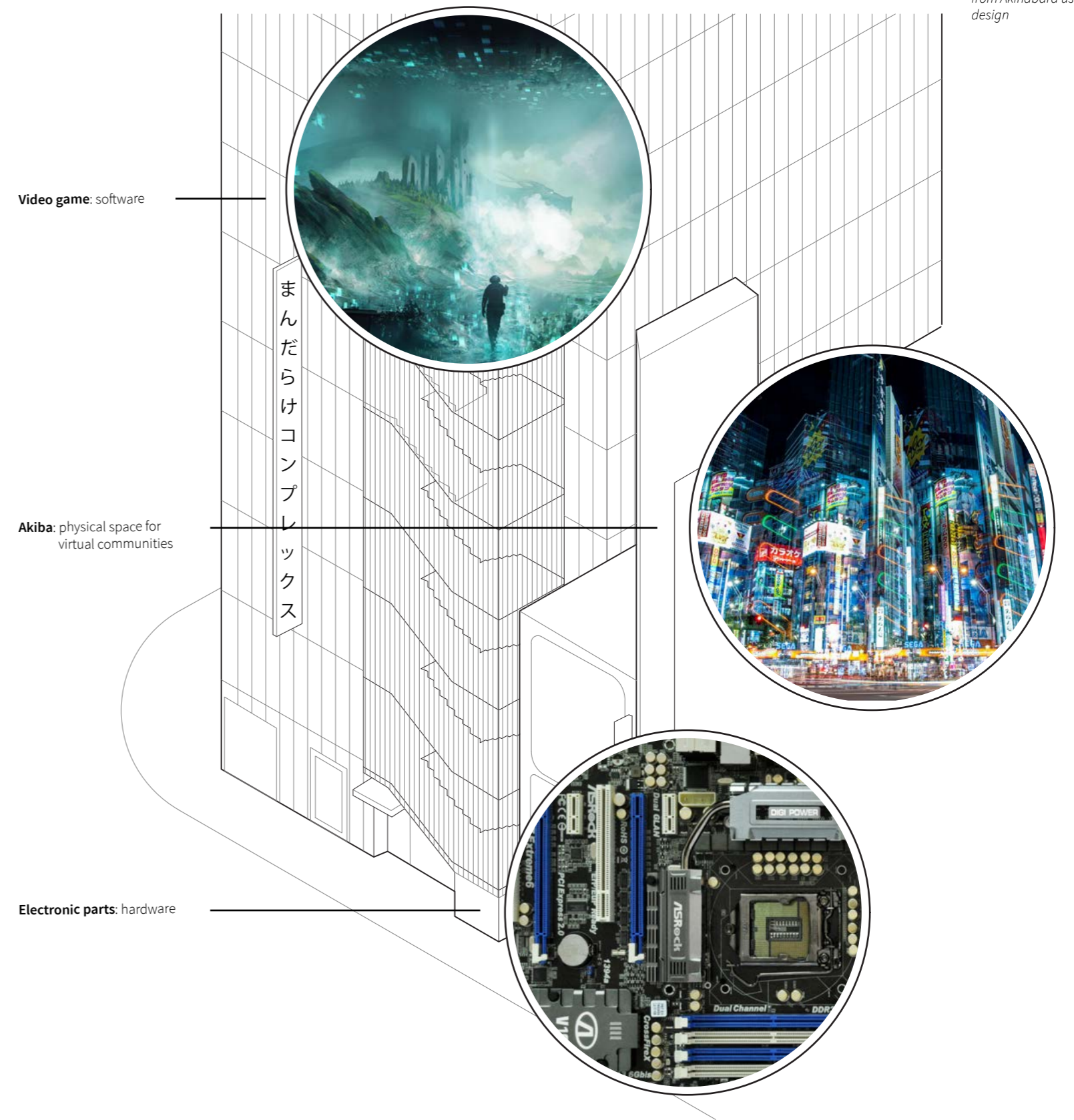
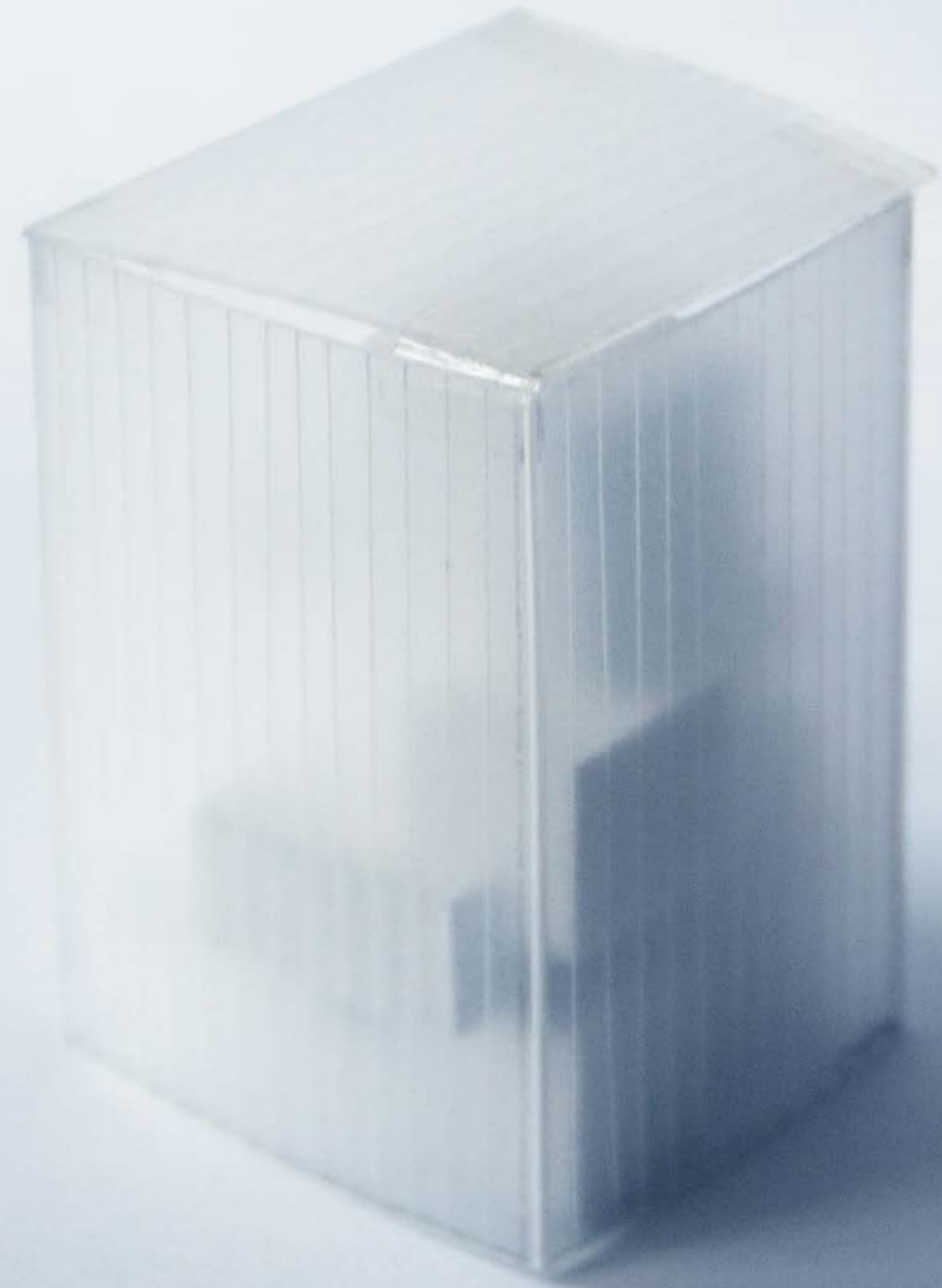


Figure 48. The initial model of the Video Games Theatre - inside volume



Figure 49. The initial model of the Video Games Theatre - outside volume



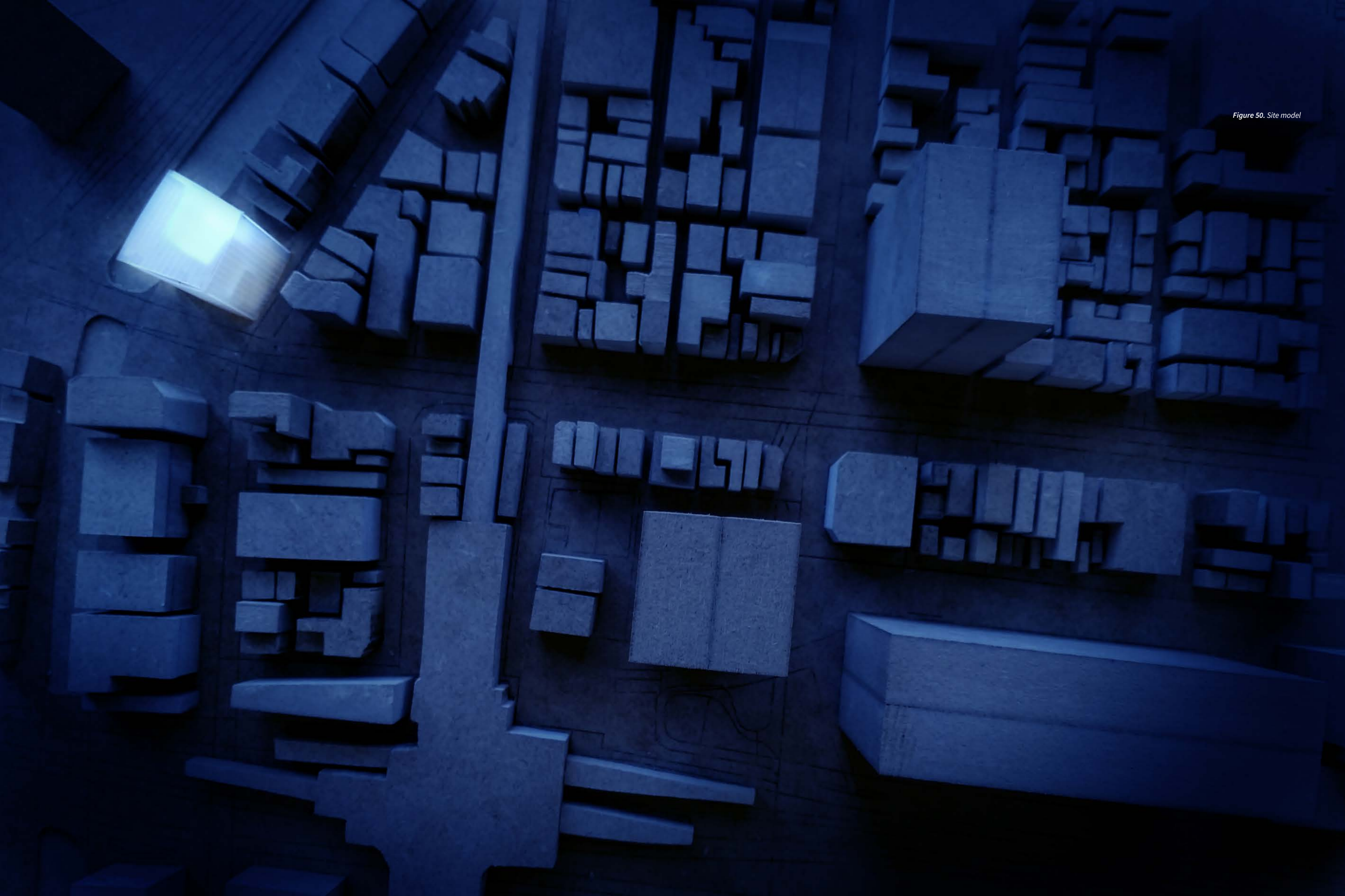


Figure 50. Site model

4.3. Relation with Akihabara: hardware and software

The next component in the design of the Video Games Theatre is the use of the elements which can be found in shops in Akihabara – hardware and software. The shops which sell those products are scattered in multiple places in the district. Hardware can be found in one of Akihabara's part shops, junk shops or computer shops. The offer varies from small, home electronics parts to computer parts. Taking into consideration the history of video games, its beginning set by hackers and computer enthusiasts and necessity of technological developments for a better gameplay, the importance of hardware in the industry cannot be denied. Now, one of the most important computer parts would be a motherboard – the main circuit board inside a computer, which connects all the elements of it. It generally has a slot for CPU (Central Processing Unit), RAM (Random Access Memory), ROM (Read Only Memory), USB ports and expansion cards like GPU (Graphics Processing Unit), sound card, network card etc (Christensson, TechTerms, 2008). Basically, a motherboard is what makes all the elements in a computer work together.

Accordingly, the Video Games Theatre can be seen as a huge motherboard, where all the elements cooperate and where processes are engraved. In this way, the foundation of

the building can be perceived as a huge slot where the main element of the computer system is placed – CPU – a processor and a primary control device, which manages all the activities and other components, and performs basic operations of the system like processing data (Merriam-Webster, n.d.). Hence, in the Video Games Theatre the core acts like a CPU, where all the processes inside the building are visible. Thus, the core is a huge light well to which other elements of the building come or pass it through. In here, the player can see different aspects of the building – gameplay routes, game development, servers etc. The core makes the distribution of elements inside easier to understand by introducing viewing connections with all the part of the theatre and by placing the gaming rooms and other facilities around the core. Hence, all the circulation elements are designed as busses – the connectors or wires that provide transportation for data from and to CPU (Technopedia, n.d.).

Another element is a GPU – a processor designed to handle graphics operations (Christensson, TechTerms, 2016). In the building GPU is a Lan Arena, the main stage for gaming events located under the CPU core. The Arena is designed to be fully flexible, thus its setting can be changed

according to the hosted event. In this way, the main scene can become a typical South Korean scenery for MMO (Massively Multiplayer Online) or E-sports, a characteristic Japanese Noh Theatre or a simple set for a conference. For that reason, the Lan Arena is designed as GPU in a motherboard, both of which need to be constantly overclocked and upgraded for the system to fulfil the needs and for a better, more immersive gameplay.

Next component of the system is RAM – a computer memory accessible for the user for temporary data storage and manipulation (Dictionary, n.d.). In the Video Games Theatre RAM reflects the last part of the gaming experience, a score room. Placed in the highest part of the building the score room is where achievements are randomly shown on glass panels around. This allows players to check their rate, sum up the gameplay and possibly anticipate a new one.

Also, a motherboard always consists of two basic components – input and output for other devices and peripherals. In the Video Games Theatre there are two entrances which can be perceived as above mentioned. Few other connectors are placed in the upper part of the façade as transparent elements which allow the visual

connection with the outside.

The last important element in the system is a Clock generator – a circuit which creates a regular and stable electrical signal for timing functions (Tech-Faq, 2016). This means that the clock gives the proper rhythm for everything that happens inside the motherboard and the system, the same way game development influences the gaming industry. That is why, this component is translated to the development part in the building.

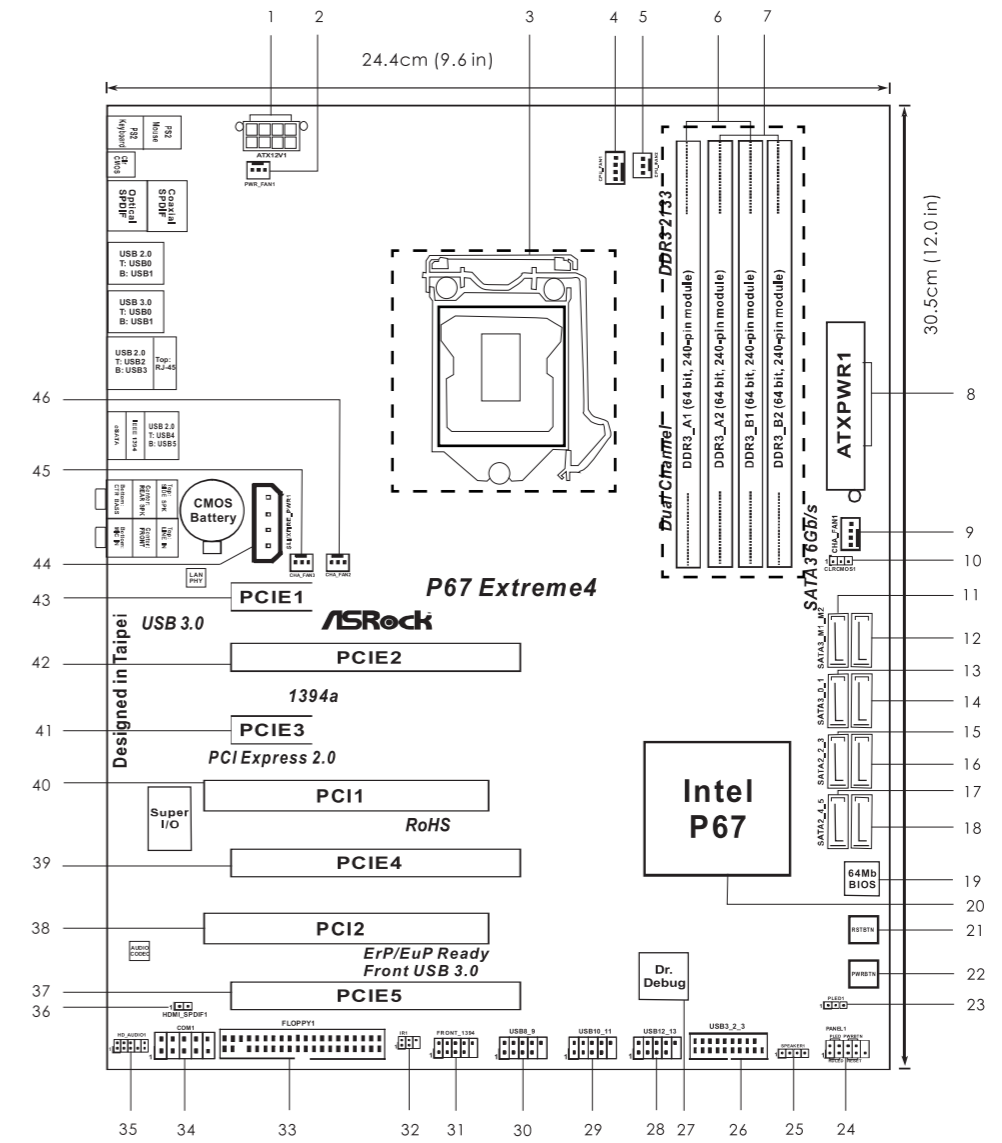
As for all the basic elements of hardware were analysed and reflected in the design, it is important now to turn to software. Software can be bought in one of Akihabara's doujin shops and otaku merchandise shops. One of the most popular shops with vintage games is *Super Potato*, located in one of the narrow streets in the west side of the district. This special shop offers a variety of old games, which cannot be found anywhere else anymore. One of those games is *Donkey Kong*, created by Shigeru Miyamoto and Gunpei Yokoi in Nintendo, and released in 1981.

Donkey Kong is one of the earliest examples of the platform game genres. The mechanics of

Figure 51. The architecture of a motherboard



Figure 52. Elements of a motherboard



1	ATX 12V Power Connector	17	SATA3 Connector	33	Floppy Connector
2	Power Fan Connector	18	SATA3 Connector	34	COM Port Header
3	1155-Pin CPU Socket	19	64Mb SPI Flash	35	Front Panel Audio Header
4	CPU Fan Connector	20	Intel P67 Chipset	36	HDMI_SPDIF Header
5	CPU Fan Connector	21	Reset Switch	37	PCI Express 2.0 x16 Slot
6	2x240-pin DDR3 DIMM Slots	22	Power Switch	38	PCI Slot
7	2x240-pin DDR3 DIMM Slots	23	Power LED Header	39	PCI Express 2.0 x16 Slot
8	ATM Power Connector	24	System Panel Header	40	PCI Slot
9	Chassis Fan Connector	25	Chassis Speaker Header	41	PCI Express 2.0 x1 Slot
10	Clear CMOS Jumper	26	USB 3.0 Header	42	PCI Express 2.0 x16 Slot
11	SATA3 Connector	27	Dr. Debug	43	PCI Express 2.0 x1 Slot
12	SATA3 Connector	28	USB 2.0 Header	44	SLI/XFIRE Power Connector
13	SATA3 Connector	29	USB 2.0 Header	45	Chassis Fan Connector
14	SATA3 Connector	30	USB 2.0 Header	46	Chassis Fan Connector
15	SATA3 Connector	31	Front Panel IEEE 1394 Header		
16	SATA3 Connector	32	Infrared Module Header		

Figure 53. Donkey Kong gameplay



the game is focused on directing the main character across the set of ramps and ladders while jumping over the obstacles. A goal of the game is for Mario (first Mr Video and then Jumpman) to pass the difficulties thrown from the top by a giant monkey named Donkey Kong, and to rescue a damsel in distress (first called Lady and later Pauline).

This simple game mechanics is translated in the Video Games Theatre. The elements of the game become even more obvious after applying two distinctive colours – red and blue – to two types of circulation inside the building, as it was done in *Donkey Kong* in the design of ramps and ladders. This also helps to make the mechanics of the theatre more understandable in the first grasp, and allows the player immediately start a game. Besides, as in the original game the paths inside lead to the final, highest platform, which in the design is a score room and the end of the game.

Moreover, using the game mechanics in the building allows to create a feeling of dynamism and playfulness as within a gameplay itself. The exploration of the Video Games Theatre through gaming paths implements the feeling of adventure and transforms a building into

a journey. The display boxes along the way are parts of the reward, which can be accessed after collecting bonus points. Also, the boxes present games developed by doujin and independent game developers, making it possible for players to test their work and give feedback. Last, the introduction of gaming paths in the building directly relates to the idea of Japanese 'kawaii' and the emphasis on the vividness of Japanese street where all the events take place

Figure 54. The motherboard elements (hardware) implemented in the design

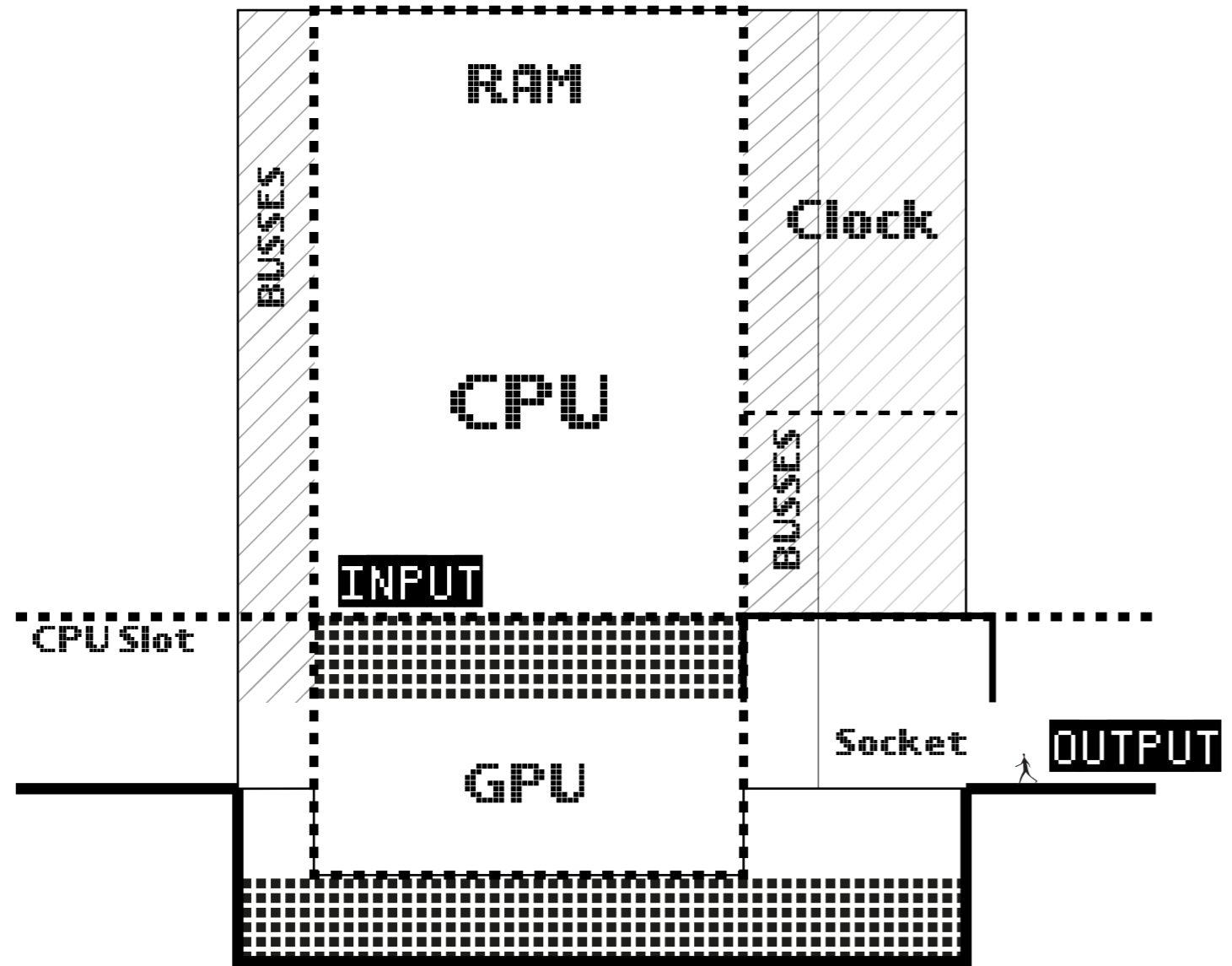


Figure 55. The video game (software) elements implemented in the design

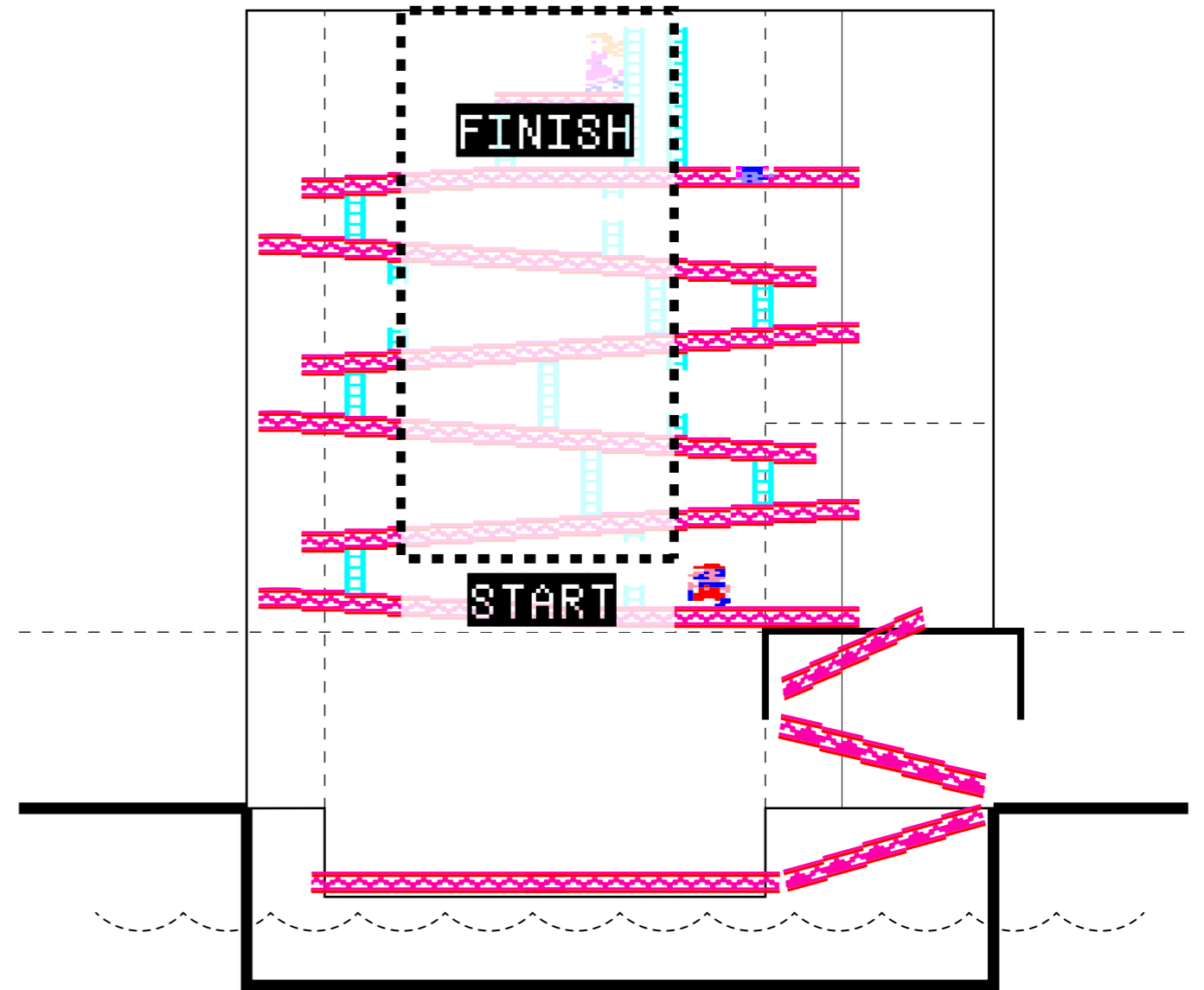
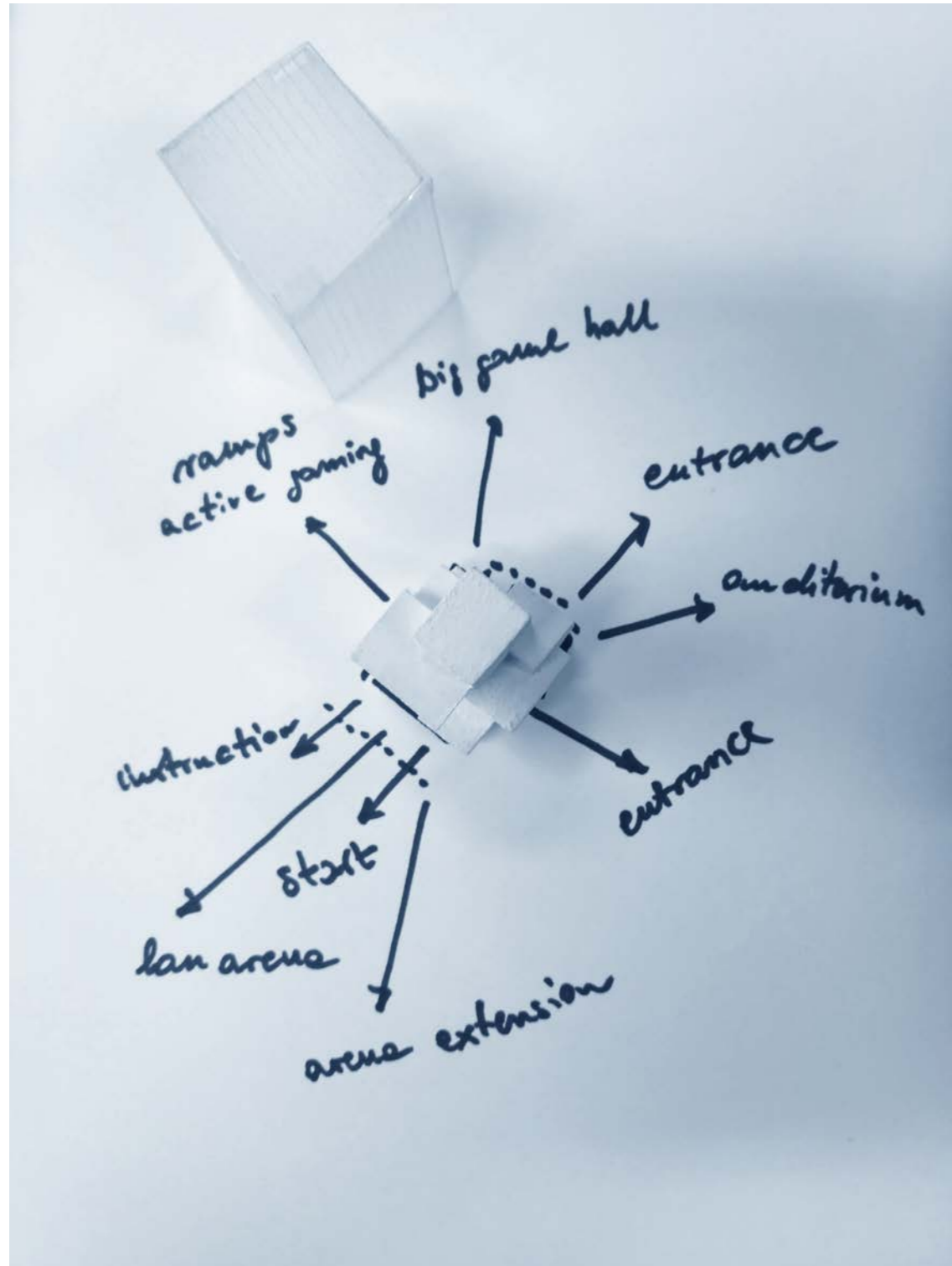


Figure 56. Conceptual distribution of elements in the design



4.4. Program: three aspects of gaming

In gaming, there are few important elements to be distinguished – the community sense and ability to become any imagined character (personal avatar), the possibility of immersion into fantastic worlds, creation of those world and tools for their exploration. Following that and the history of video games extensively analysed in the previous chapter, 3 most important elements of the future of gaming can be distinguished: massively multiplayer online (MMO), immersive, active gaming (VR) and independent game development. So, for the theatre of video games to fulfil the need of the future of leisure in 2030, those elements need to be implemented in the program of the design.

MMO GAME

With the recent growth of interest in social media the importance of online gaming gains more attention (Hjorth, 2011). The concept of hard work and reward in video games is particularly visible in massively multiplayer online games, which focus on determined gameplay, relying more on players persistence to advance and less on the skills they have (Consalvo, 2016). In this way, MMO and RPG (role playing games) emphasise the advancement of a created character (personal avatar) by the slow and firm growth of skills and

powers. What is special and distinctive from other media like films or television, is that MMO and MMORPG games do not cut the story short, but players can experience the entire process the avatar goes through. Hence, a long game session, sometimes even boring and repetitive is driven by the promise of advancing the level and improvement of a character.

Hereby, the MMO part in the building is more firm. The path starts in the hall on the ground floor, where a player can receive more data about the building and its mechanics through the information display on the right side of the entrance. More to the left are chambers for avatar creation, where gamers can make their own character, which will later reflect their actions in the game. The chosen avatar would be shown on a dynamic display around the upper part of the façade, mirroring the activities hosted in the Video Games Theatre and showing them to Akihabara. On the ground floor, a player has the possibility to walk around the Lan Arena and see it from different perspectives. The same time, a transparent plinth allows the connection of the inside to the outside and invites a passer-by to come into the building. Through the stairs located on the left side of the ground floor entrance, a player can go to the foyer of

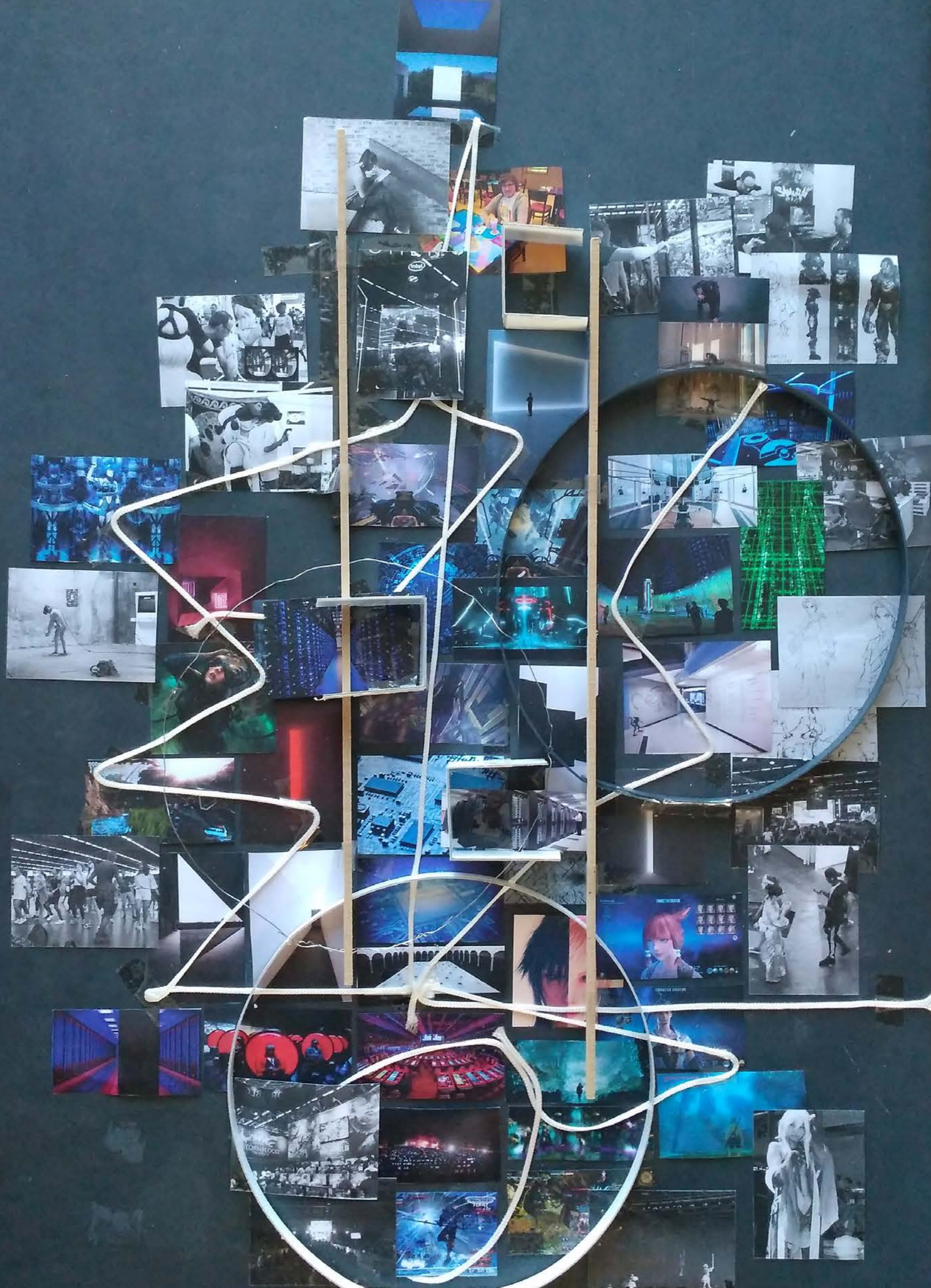


Figure 57. Left page: collage of elements in the building

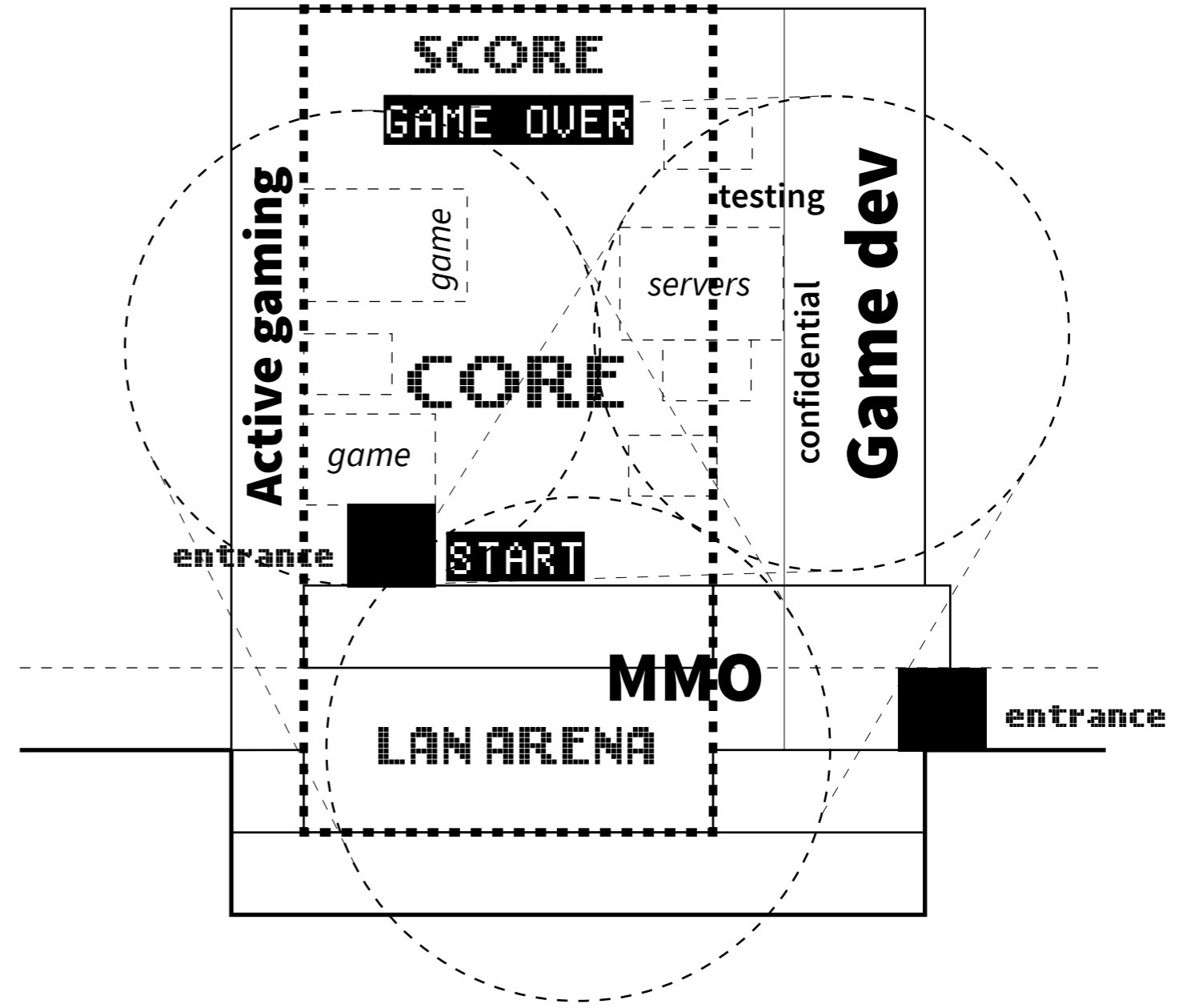


Figure 58. Right page: Program scheme of the design

Figure 59. View from the top to the core of the building - designing through a working model

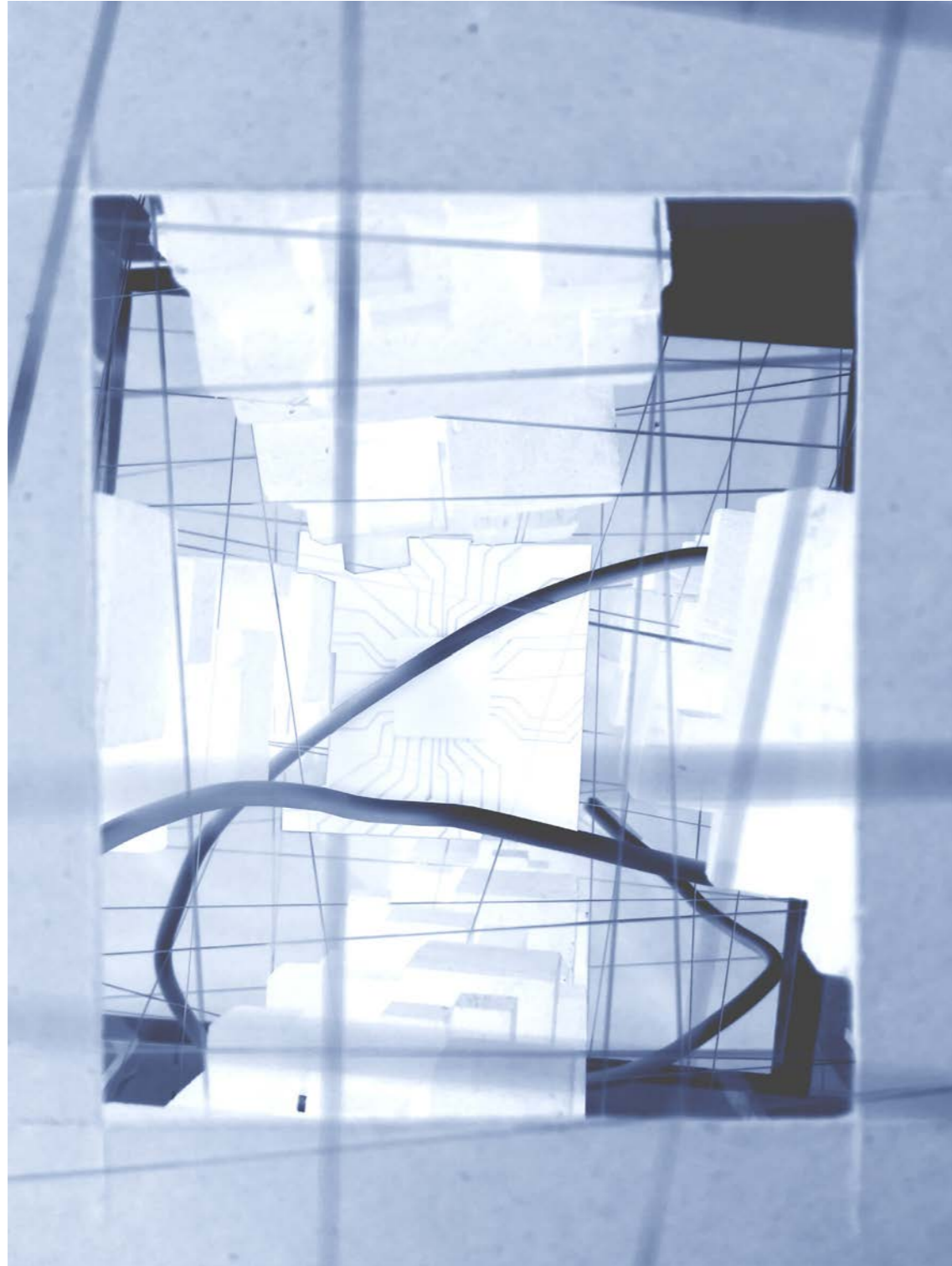
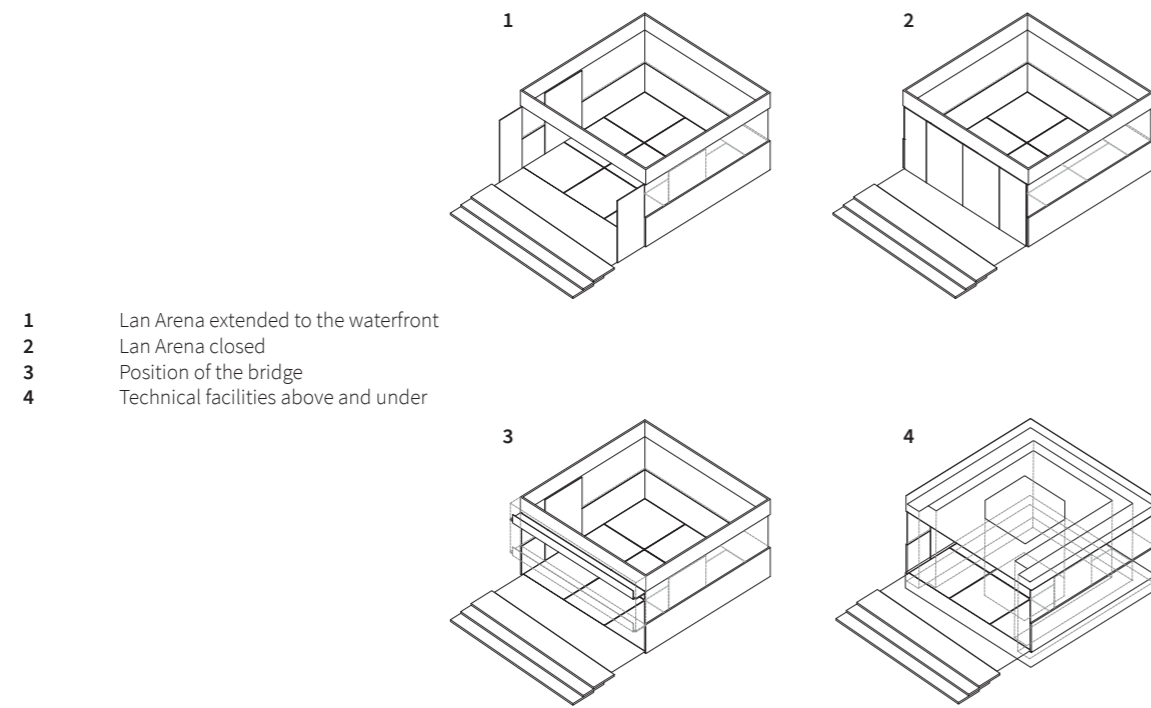


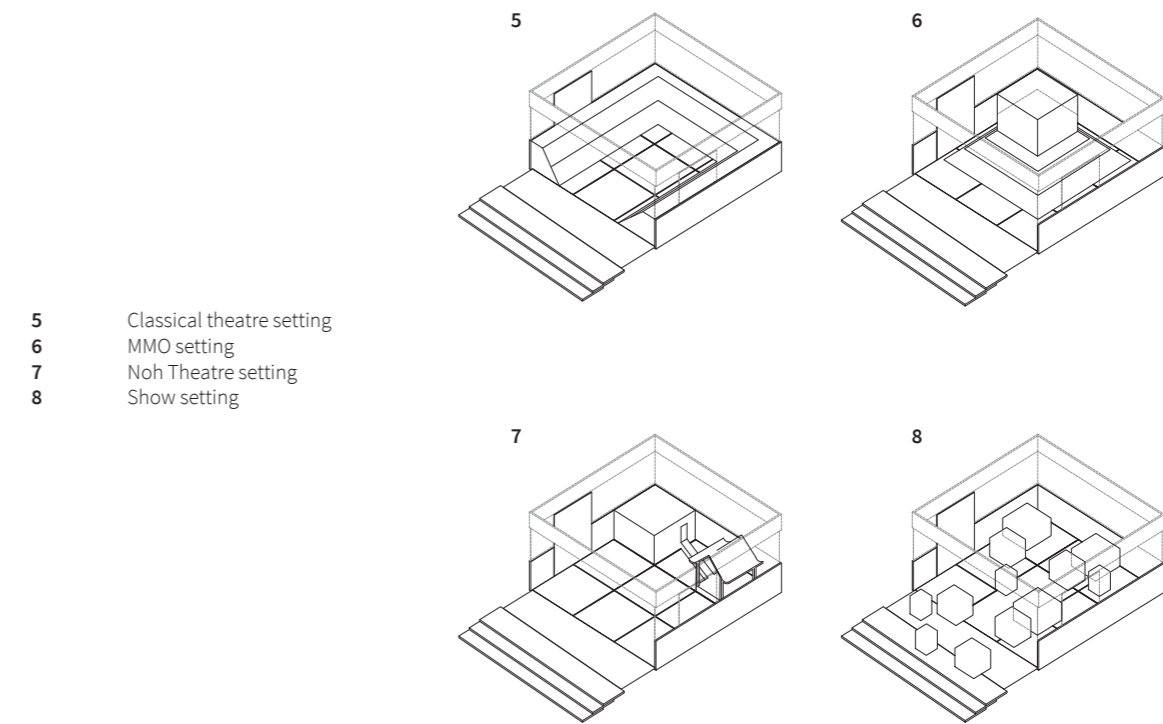
Figure 60. Openings in the core - designing through a working model



Figure 61. Lan Arena setting scheme



- 1 Lan Arena extended to the waterfront
- 2 Lan Arena closed
- 3 Position of the bridge
- 4 Technical facilities above and under



- 5 Classical theatre setting
- 6 MMO setting
- 7 Noh Theatre setting
- 8 Show setting

the Lan Arena (GPU) – a main stage for gaming events in the Video Games Theatre. As described before, the Arena is a fully adjustable stage, thanks to the technical facilities located above and under it. To continue, the audience seats located in the technical part can be placed in the main stage by the complex system of machines, which would lift or lower them through the opening slabs in the ceiling and floor. Thanks to that, the Arena can be adjusted overnight to the needs of a hosted event. Moreover, the 571 m² main stage, which would host approximately 100 players (depending to the type of event) can be extended by additional 127 m² to the glass façade of the plinth, which makes 698 m² scene. What is more, the Arena opens to the waterfront of Kanda River, resulting in possible 221 m² extra space for gaming events.

However, the MMO experience does not end here but leads through the blue staircase and elevator in the south-east corner of the building, and through the outside stairs in the northern part, to the core on the first floor (CPU). From this point the MMO public game path continues to the top of the building. The public route starts on the west side of the CPU, purposely hidden away from the main hall behind a core wall. Thus, from the beginning the stairs need to be discovered by a curious player. The same time the blue staircase of the public route peep through openings in the core wall and an artificial light indirectly

guides the player to its start. The staircase leads to the in-between and unprogrammed spaces in the building up to the café terrace above. Many openings allow the player to look into other parts of the theatre, peek to the immersive game spaces, the core but also to the outside world of Akihabara.

Hereby, the MMO game bases on a steady movement and visual connections with many aspects of the building. The unprogrammed and in-between spaces can be redefined by players and developers who use the theatre, creating a personal world, virtual galleries, game testing spaces and many more. The same time, the Lan Arena, avatar creation and MMO routes would be more focused on augmented reality technologies – which integrate virtual world (digital data) with the players environment in real time – making the experience and fusion of real and virtual even more transparent (Merriam-Webster, n.d.).

IMMERSIVE GAME

Immersive game is an active and dynamic path through the building, which connects real and virtual worlds. The experience is mostly focused on virtual reality technologies, which allow players to fully immerse in the leisure experience.

The path is marked by the system of red, accessible ramps. The immersive game begins

in the room located beside the south wall of the CPU, named Start. Here, a player can buy his ticket for a game, borrow or buy the necessary equipment, and look to the small shop. From this point, the path leads through the small, in-between space (where a user can peek into the core on the right or to the waterfront on the left), to the introduction room. The dark, small room with the circular skylight in the ceiling, is the place where one can prepare for the gameplay and become acquainted with the storyline and rules of the chosen game. Next, the system of ramps naturally guides the user to the first game space (101 m²), located 15,77 meters above the ground. Following, the player is directed to the second game space (123 m²), 17,17 meters above the ground. Here, the immersive and MMO game meet, and a user can decide to pause a game for a while to join other experience. Later, the third (105 m²) and fourth (163 m²) game spaces follow, located 19,89 and 22,10 meters above the ground. Those two spaces are places on the top of previous ones, thus they create a feeling of openness. The fourth and biggest game space is equipped with multiple display boxes for doujin and independent game developers, allowing them to expose there their work. The boxes are based on the typology of consignment shops in Akihabara, where anyone can rent a case and display their product. The player can access the box after gaining bonus points, test the game and give his feedback.

This reward model becomes beneficial for a user and a maker, who then both can influence the development of the game. Besides, a player can pause a game in the fourth space and visit one of the most important game development spaces in the building – the workshop – and join the discussion about the industry, a game he played or just tested. Last, the route leads to the fifth game space (106 m²) and the end of the game (88 m²), 24,31 and 26,52 meters above the ground. The fifth game space is again equipped with game display boxes but differs in a character from the rest of game rooms. The dark inside is lighten up by the artificial light, creating the feeling of unreal. Following, in the end of the game a player sees the closure of the story and can decide to go through a ramp to the café terrace above. There, 30,94 meters above the ground, the MMO and immersive game finally meet in a common, in-between space, which opens in many directions – the core, the immersive game elements and to Akihabara. Also, the auditorium for gaming conferences and small events is placed on this level.

However, the gaming experience does not end here but leads to the score room (RAM) through the single, evolving ramp. There, on the glass walls scores and rates are randomly displayed, as it would be in a case of a Random-Access Memory in a computer motherboard. Here, a player can find his score and sum up

Figure 62. The program distribution and comparison (m²)

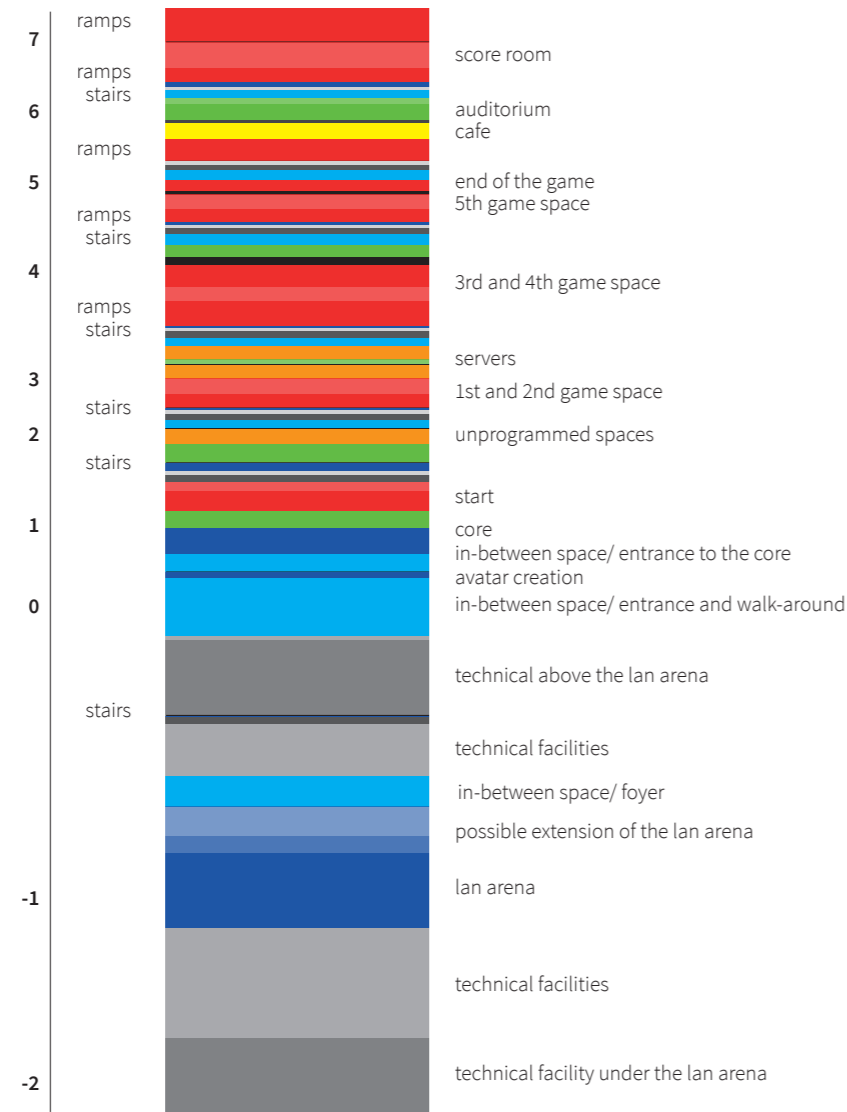


Figure 63. The program overview divided in levels

Level	Program Space	level (m)	area (m ²)	stairs (m ²)	ramps (m ²)
7	score room	40,08	196	0	253
6	café	30,94	118	37	106
6	kitchen module	30,94	19		
6	auditorium	30,94	95		
6	auditorium balcony	35,36	23		
6	auditorium foyer	30,94	51		
6	in-between space		58		
6	evacuation staircase		25		
5	5th game space	24,31	106	0	171
5	game display boxes		23,4		
5	end of the game	26,52	88		
5	in-between space		72		
5	toilets		41		
5	evacuation staircase		25		
4	4th game space	22,10	163	19	104
4	3rd game space	19,89	105		
4	game display boxes		62,8		
4	game development workshop	22,10	89		
4	in-between space		88		
4	toilets		41		
4	evacuation staircase		25		
3	2nd game space	17,17	123	18	186
3	1st game space	15,77	101		
3	unprogrammed space	17,17	100		
3	game display boxes		3		
3	extendable servers room	17,68	41		
3	unprogrammed game development space	17,68	102		
3	in-between space		58		
3	toilets		48		
3	evacuation staircase		25		
2	game development	13,26	140	20	0
2	unprogrammed space above the introduction	13,77	45		
2	unprogrammed space above the start	12,96	72		
2	game display boxes		4,2		
2	in-between space		58		
2	toilets		48		
2	evacuation staircase		25		
1	in-between/entrance to the core	8,48	136	65	0
1	core	8,48	195		
1	game development	8,48	133		
1	game start	8,48	147		
1	introduction	8,48	70		
1	toilets		47		
1	evacuation staircase		31		
0	technical above lan	5,84	571	0	0
0	technical entrance	0,00	30		
0	in-between/entrance area and walk around	0,00	431		
0	avatar creation		46,4		
-1	lan arena	-5,10	571	15	0
-1	extension of the lan arena		+127		
-1	extension of the arena to the waterfront		+221		
-1	in-between/ foyer	-5,10	231		
-1	storage	-5,10	389		
-1	toilets	-5,10	49		
-2	technical facility under the lan arena	-9,17	571		
-2	technical facilities	-9,17	823		

Figure 64. Game spaces around the core

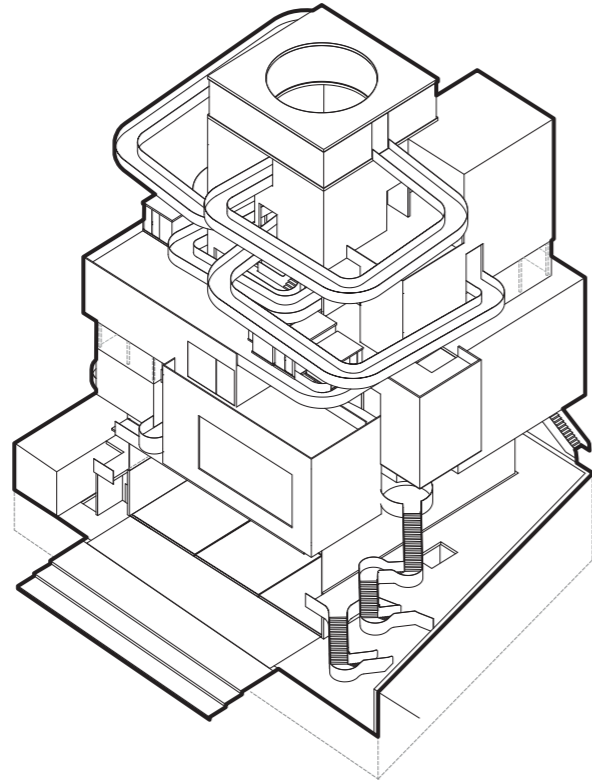
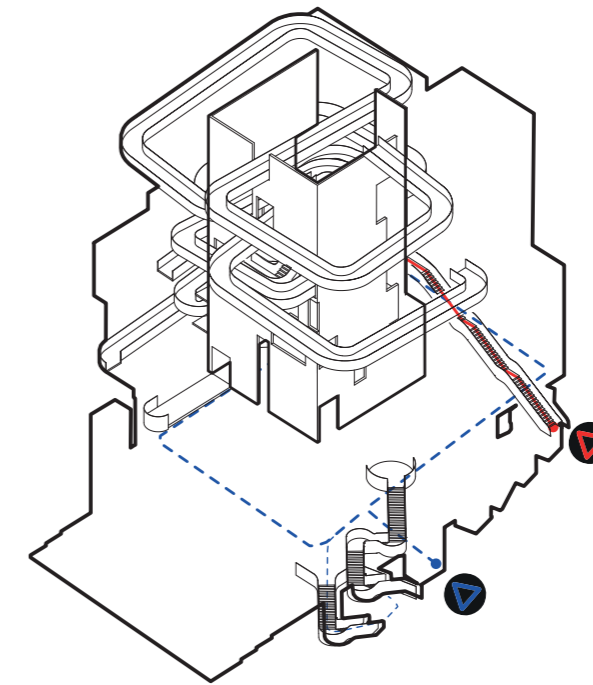


Figure 65. CPU core in the design



the game. The score room and the path leading to it are silencing elements among the chaotic and complex character of the video games theatre.

GAME DEVELOPMENT

Game development is what makes the entire building work. Like a clock generator in a motherboard it gives a certain rhythm to the system. To continue, the creation of games consists of many necessary steps: creation of a concept, early prototypes, storytelling and game mechanics, art assets (visual, audio and copyright), code assets (source code and custom tools) and the assembly of all those elements. However, the above-mentioned part of game development is mostly confidential. That is why in the building the first three floors of the game creation are enclosed, and a player can look into them only through few openings in the core, which expose a controlled environment. In this way the curiosity of gamers is triggered while developers show only the work they want to. The last steps of the game development are play testing and polishing, both of which encourage users in the building to engage in the process – using display boxes and joining the discussion in the workshop and in other spaces. Last step of the game development in the building is the auditorium located next to the café, preceded by a small foyer. This space is devoted for conferences, and smaller gaming events and

can host approximately 50 guests, depending on the event.

In the end, game development part is the playground for game creation, where the maker and the user are involved in the process – a model typical for creative industries in Akihabara. Thus, the developments of games and tools for their experiencing will highly influence the way building will work in the future. As the research of indie and doujin game developers in Japan has shown, most of them struggle to show their work to players. The possibility to do that is mostly on the events like Comiket, Bitsummit, Tokyo Indie Fest and recently Tokyo Game Show. Thus, the Video Games Theatre gives them a possibility to show their work and talk about it with users on a daily basis, making them less dependent on events organised only few times a year. The building gives them also a possibility to exchange experiences with other developers and use the newest technological innovations to meet the needs of the future of leisure.

CPU

The core of the building organizes above mentioned elements of the game and makes them more readable for a player. This stabilizing and unifying component is where all the gaming paths can be seen. The CPU coped with the score

room acts like a huge lightwell in the middle of the building, where all the functions and gaming rooms levitate around. Thus, the gaming spaces and paths act like busses which go through the core, evolve and flow freely in the building, filling it with leisure activities. Hence, the core becomes a peculiar CPU in which the processes of the video games theatre can be observed, and through which data pass by.

To make the building even more readable only few colours were used. The basic elements of walls and floors are neutral – white or black. This is to make all the surfaces displayable and possible to influence by light. Instead, the gaming elements use basic RGB colours – blue for firm components of MMO, its public staircases and elevator cabins, red for the dynamic character of the immersive gaming ramps, and finally green for the game development entrances. Also, the auditorium for the game development can be transformed into a huge green room and used as a tool for the creation of games by game developers. Those three basic RGB colours are applied because of their importance in the video games design. To continue, red and blue are always juxtaposed to emphasise the contrast between the 'bad guys' (red) and 'protagonists' (blue). This effect can be observed on many gaming events, like E-sports or MMORPG shows. On the other hand, green is used in gaming to highlight hard-core gaming and computing. As a result, the use of colours

makes the routing in the building clear for players and developers.

Furthermore, the building is maintained thanks to the extensive technical area. The technical entrance is located on the west side of the building, where the supply cars can arrive. The staircases and an elevator lead to the lowest parts of the building where a necessary equipment and server rooms are located, and which is a foundation base (CPU slot) for the entire building.

All in all, in the video games theatre the real and virtual worlds go hand in hand. Thus, the virtual worlds and architectural, physical space bring distinctive experiences, both immersive and memorable. Hence, the space can be equally interesting when the game is on, as when it is off. The variety of offered experiences make a player feel freely in the space, not restricted by its boundaries – the sensation users have in limited and poor-quality gaming centres nowadays. This feeling is emphasised even more by bright, opened spaces, covered with softened, natural light complemented by dim, enclosed and more intimate rooms.

Figure 66. Factorisation of the program

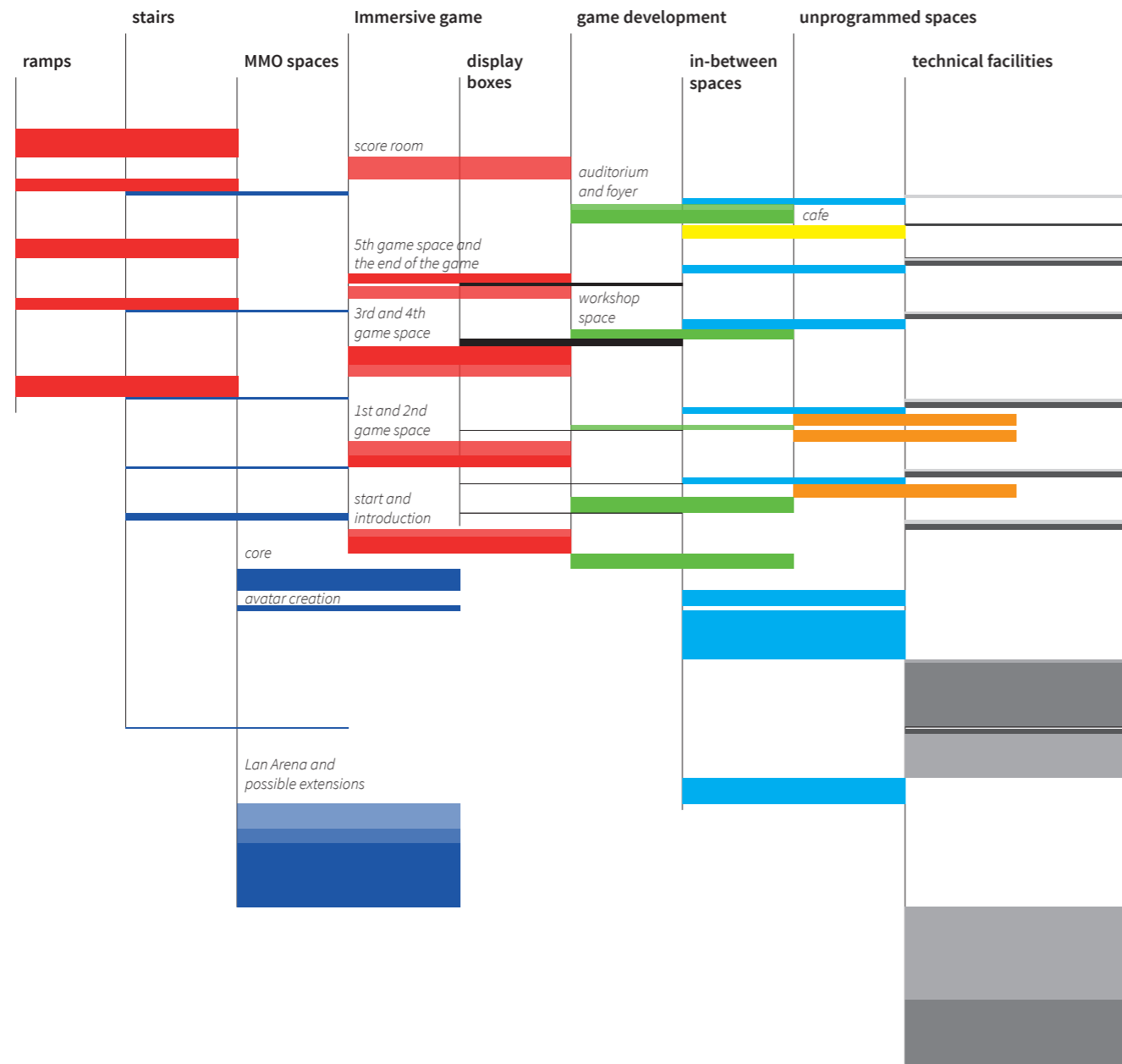
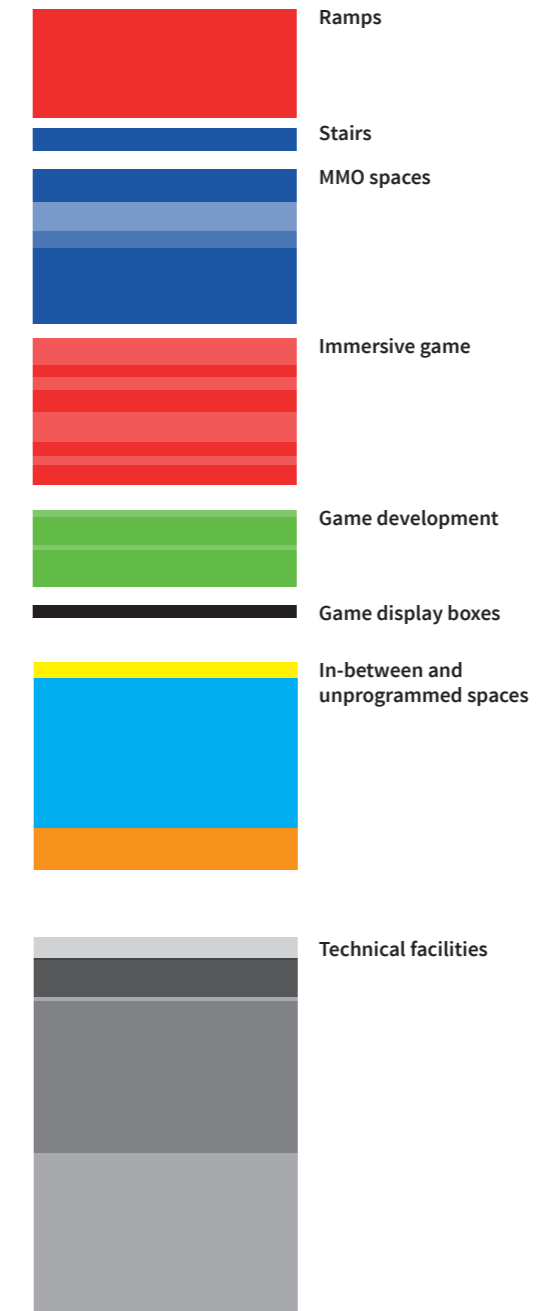


Figure 67. Clustering of functions in the building (comparison in m²)



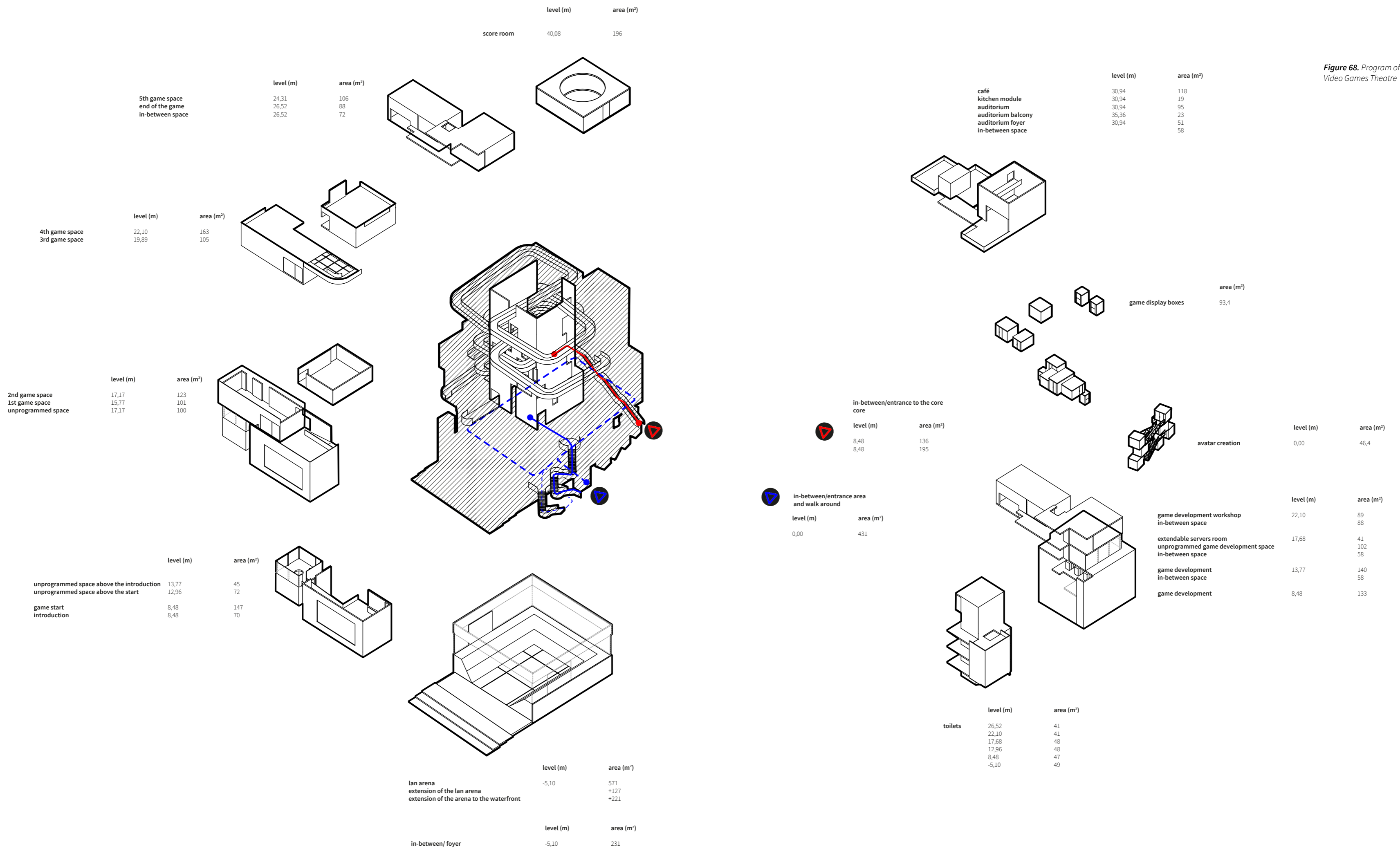


Figure 68. Program of the Video Games Theatre



LEVEL 5 ... DESIGN

5.1. The Video Games Theatre: final design

In this chapter the elements of the Video Games Theatre design will be shown in few steps:

- by looking into the rhythm of plans
- showing the design in sections
- exposing a walk through the building with the analysis of circulation
- uncovering the materials inventory in the design
- the relation between inside and outside mediated by the elevations
- and last through a look into structure of the building.

In the masterplan of Akihabara, the theatre fits in the context by aligning with the surrounding buildings on the crossroads. This position on the fringe of Akihabara and the rest of Tokyo emphasises the welcoming character of the Video Games Theatre. In this way, the building acts as an entering gate to the district and a starting point of its main street - Chuo-dori. Additionally, the theatre opens on the other side to the waterfront by the extendable Lan Arena. Thus, the building can be perceived as having three different stages facing Akihabara, Kanda River and Mansei bridge at the cross-roads. What is more, the structure of the building derives from the architecture of Akihabara and negotiates

between its old and new parts. The shell of the building reflects new, glass IT offices, while the inside gaming spaces mirror the changing volumes of old, Otaku buildings. The gaming paths in-between the spaces highlight the importance of streets in Japanese cities and their evolving character, being the most vivid component of the design.

Moreover, the building consists of 5 layers - Lan Arena for main gaming events, CPU core structure, the outer shell structure and game spaces with paths connecting them. All those elements contribute to the complex system of the Video Games Theatre, with its layered character further described in this chapter.

Figure 69. The Video Games Theatre in the context of Akihabara



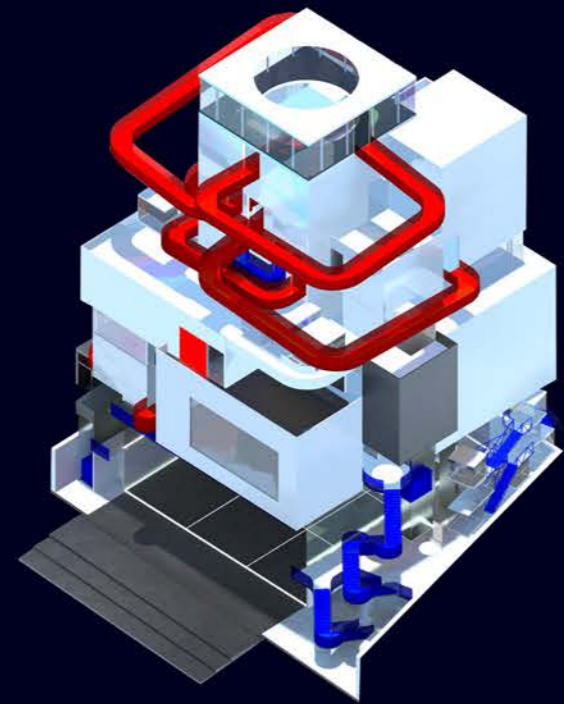
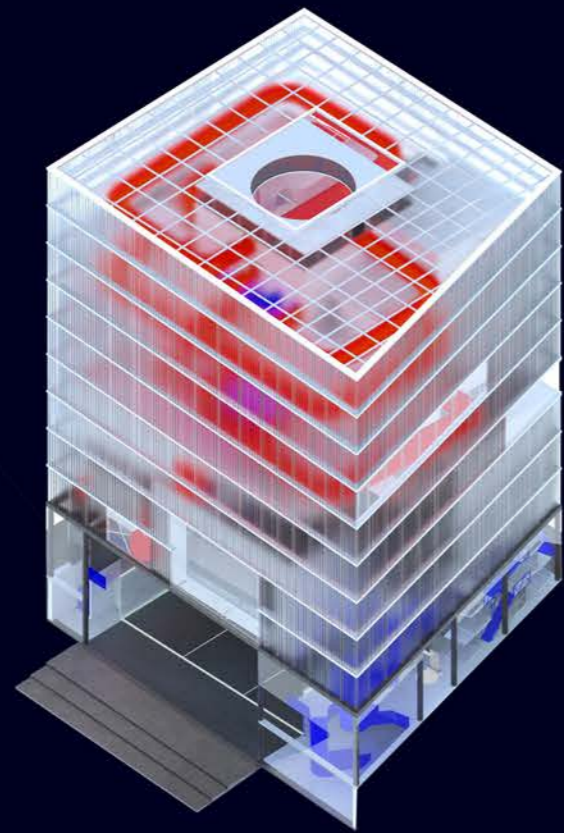
Figure 70. Masterplan

The future of leisure
2030
35°41'51.2"N
139°46'14.8"E

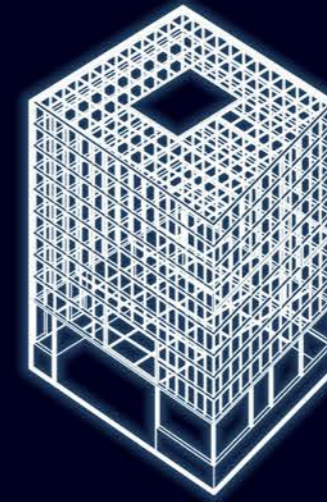
Akihabara
masterplan



Figure 71. Isometric view on the design, inside and outside



structure



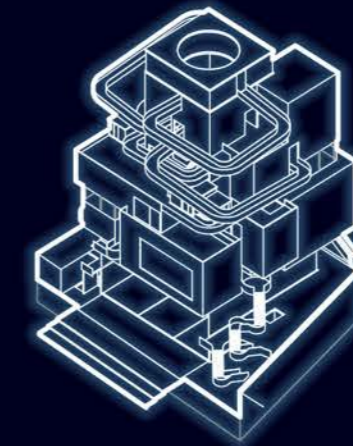
core



score room



game spaces



Lan Arena

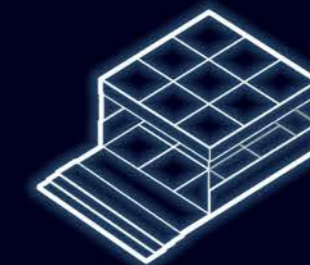
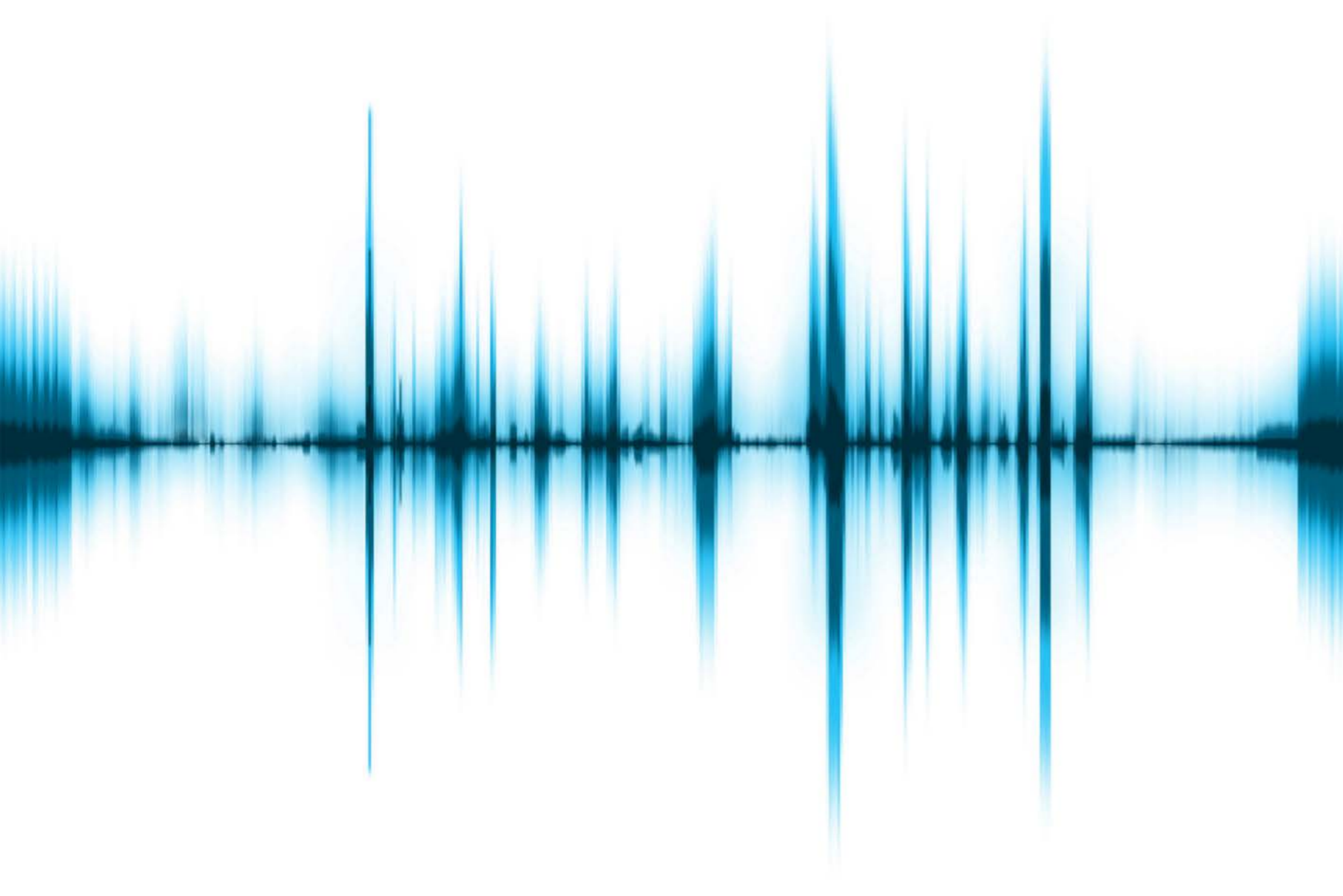


Figure 72. Components of the design

Figure 73. Left page:
Scheme of the gameplay
rhythm in the design

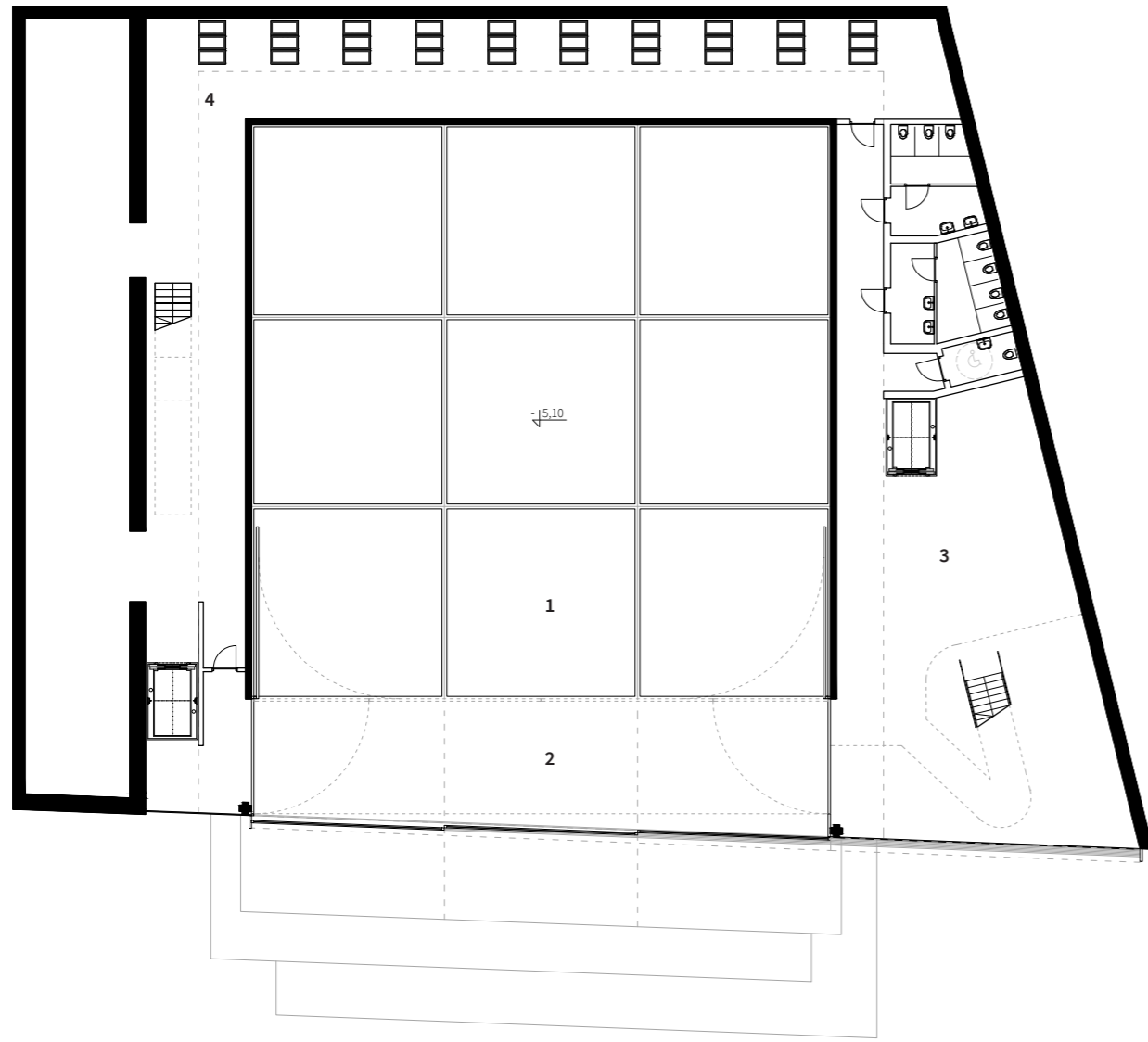


5.2. Plans

What can be observed in the plans of Video Games Theatre is a rhythm of the gameplay. The MMO and Immersive game start slowly on the groundfloor and below, where the Lan Arena is placed. Later, on the first floor the paths start to slowly evolve upwards, making their ways to first game spaces. Then suddenly the paths break into the core and lead the player inside it, exposing all the activities which take place in the building. A culmination appears around the fourth game space, from where a chaotic maze of elements leads to the café and auditorium. From that point, the circulation simplifies and only a single ramp guide to the score room in the highest part of the building.

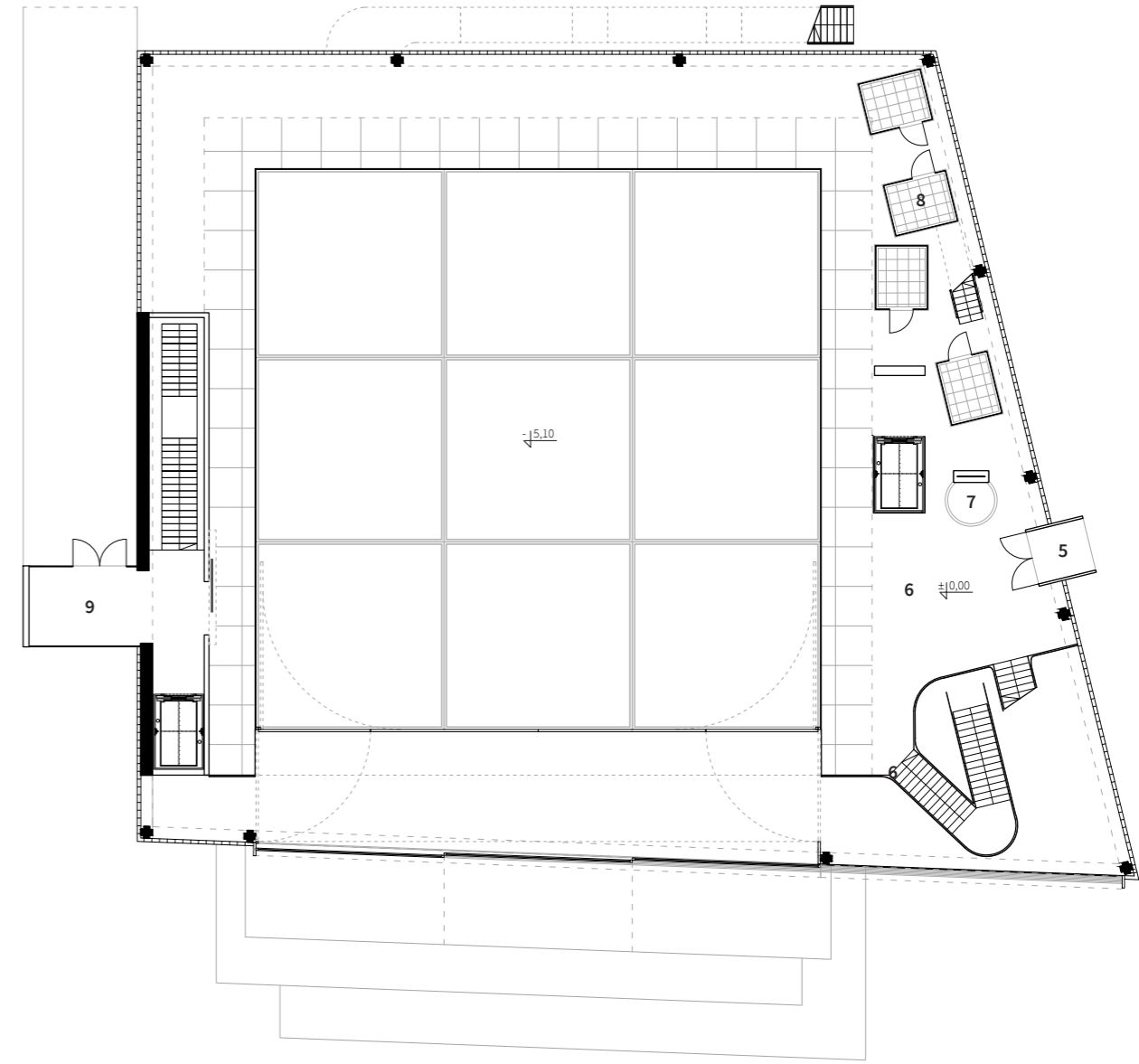
By creating the tension in the theatre, a player can experience a dynamic character of the design and its game-like characteristics. Thus, culminations in the building and silencing of elements are parts of the journey one undertakes, making a building a leisure experience in itself.

Figure 74. Plan of the -1 level



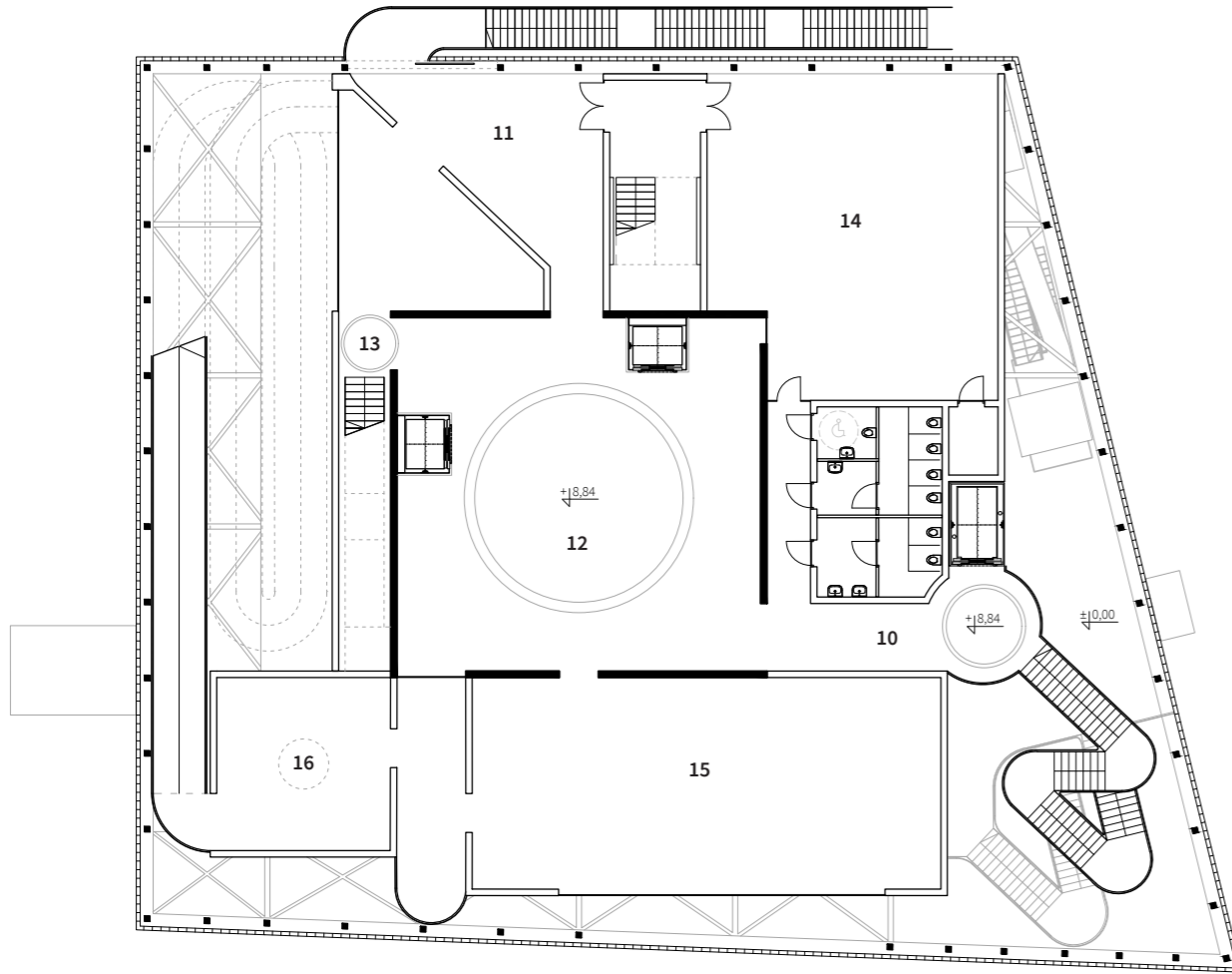
- 1 Lan Arena
- 2 Extensions of the Arena
- 3 Foyer
- 4 Technical facilities and server rooms

Figure 75. Plan of the ground floor level



- 5 Entrance on the ground floor
- 6 Entrance hall
- 7 Information
- 8 Avatar creation
- 9 Technical entrance

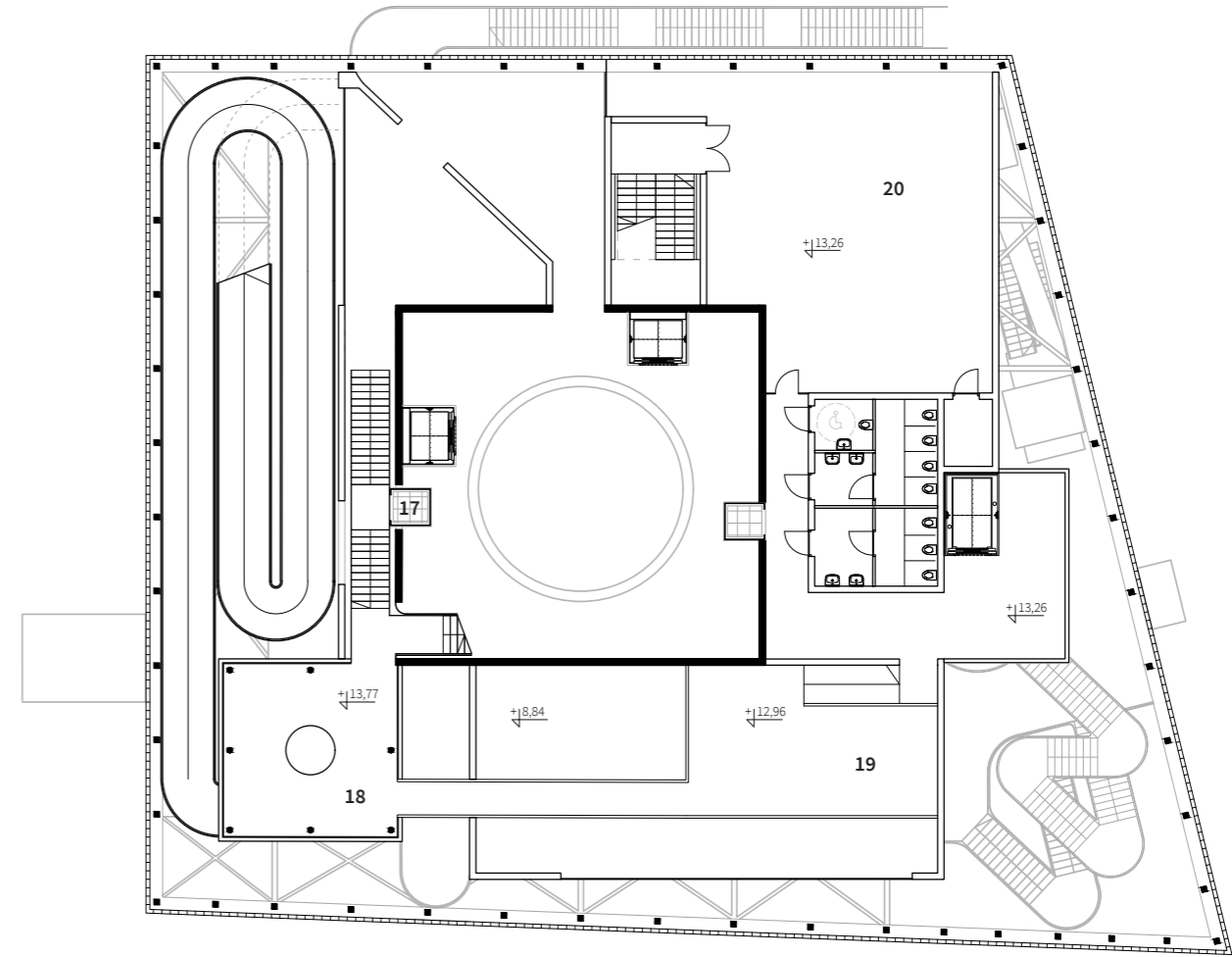
Figure 76. Plan of the 1st level - CPU core



- 10 Entrance to the core from the Lan Arena
- 11 Entrance to the core
- 12 Core
- 13 MMO game public staircase
- 14 Game development
- 15 Start
- 16 Introduction



Figure 77. Plan of the 2nd level



- 17 Game display boxes
- 18 Unprogrammed space above the Introduction
- 19 Unprogrammed space above the Start
- 20 Game development



Figure 78. Plan of the 3rd level

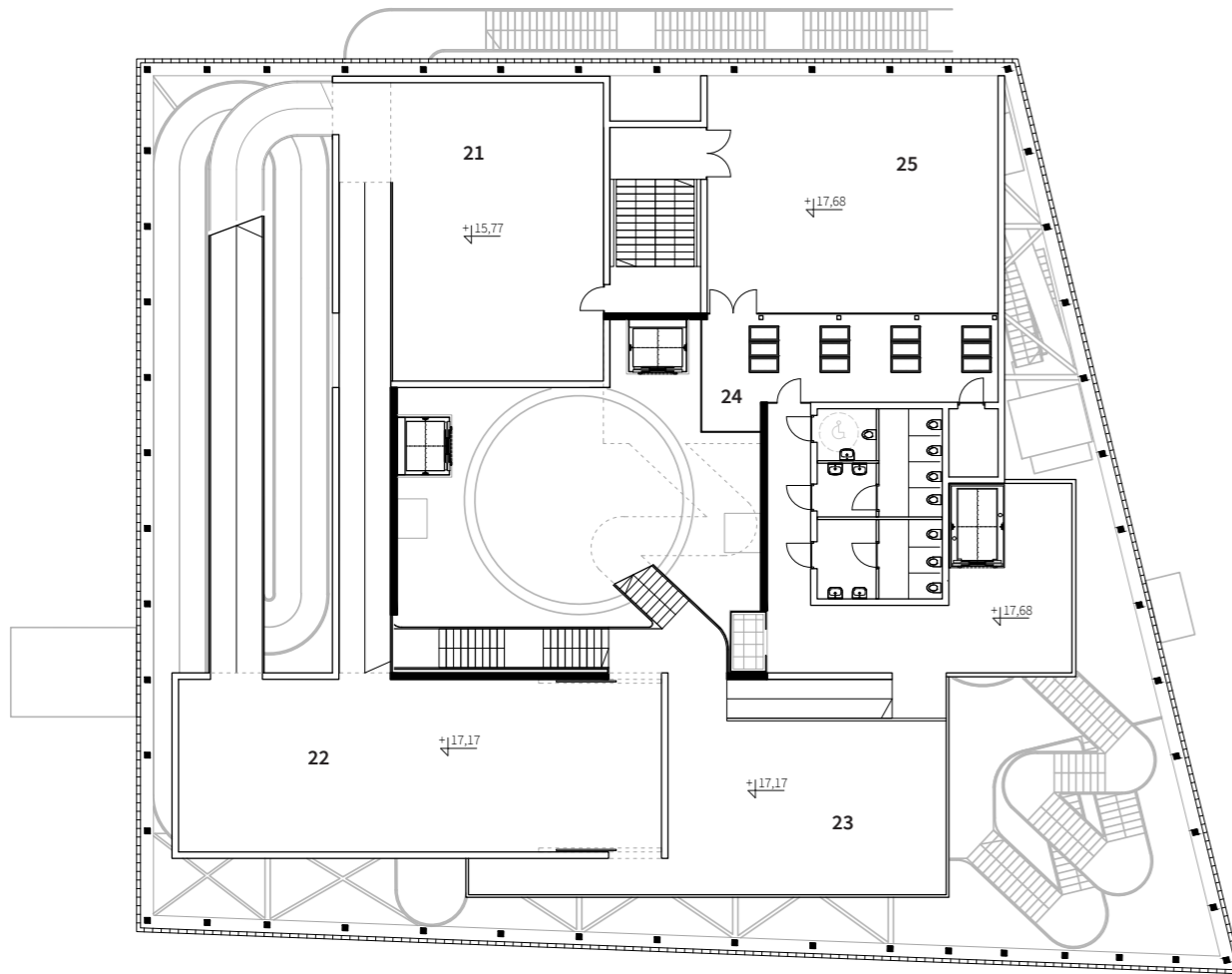
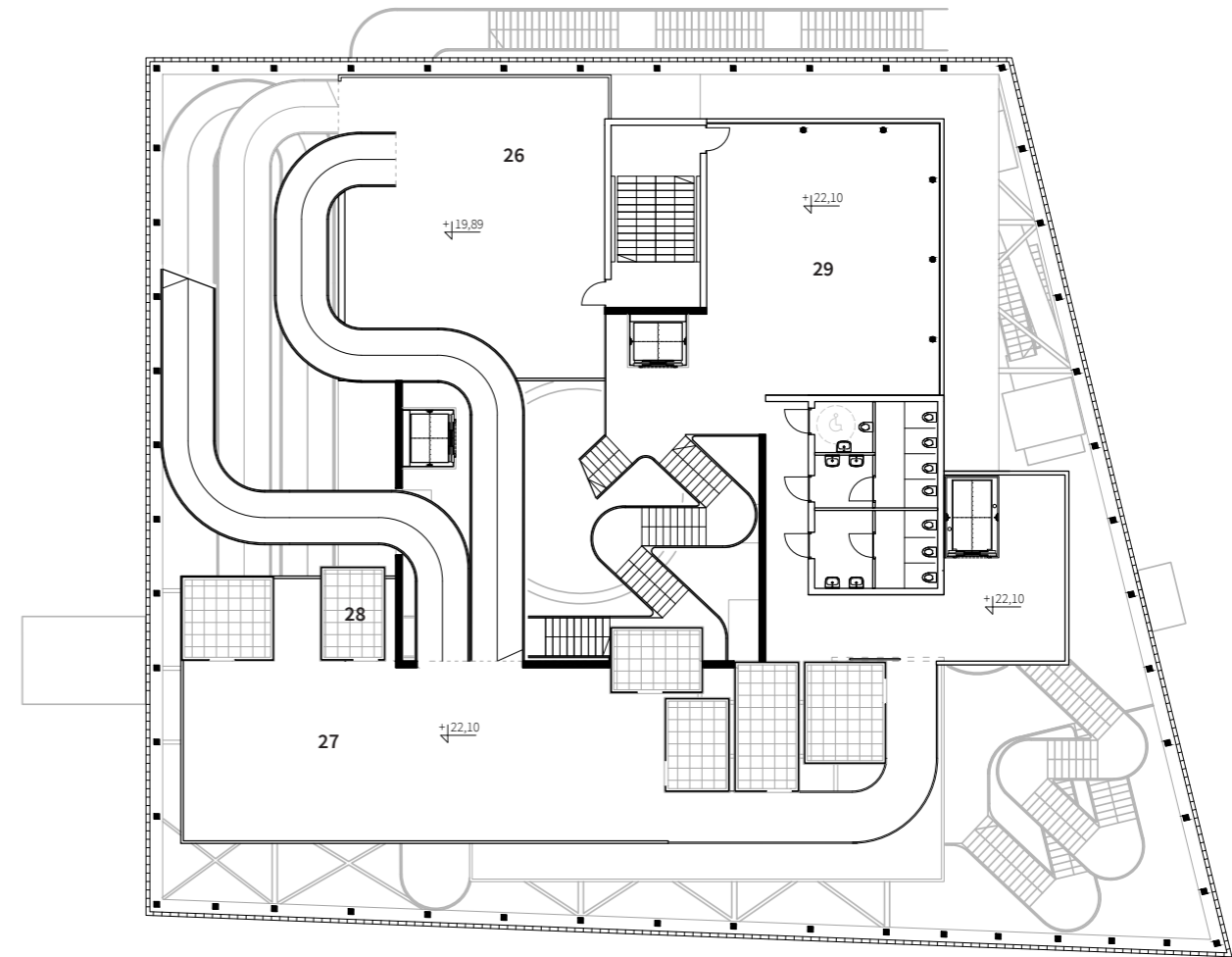


Figure 79. Plan of the 4th level



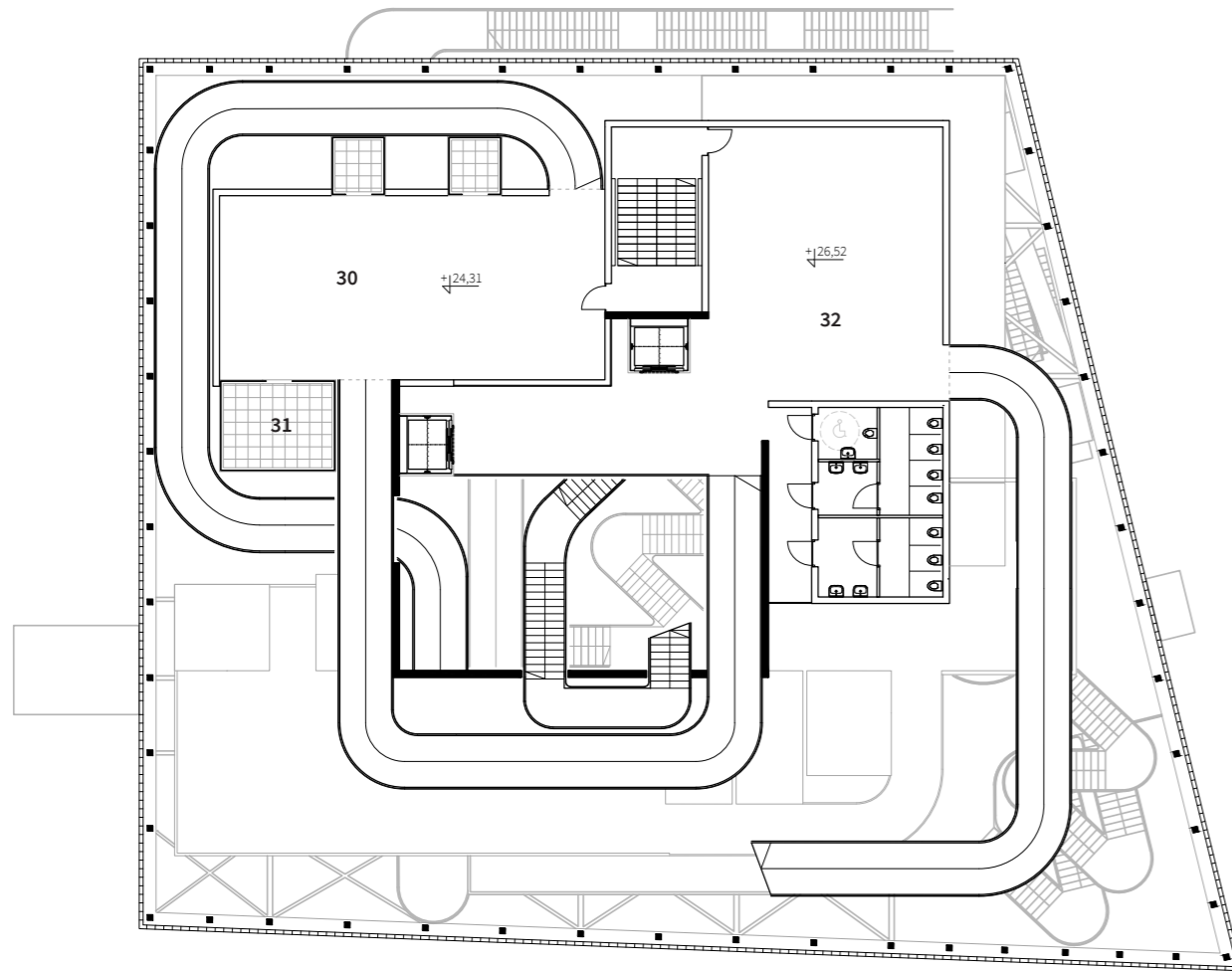
- 21 1st game space
- 22 2nd game space
- 23 Unprogrammed space
- 24 Extendable servers room
- 25 Unprogrammed game development space



- 26 3rd game space
- 27 4th game space
- 28 Game display boxes
- 29 Game development workshop



Figure 80. Plan of the 5th level



- 30 5th game space
- 31 Game display boxes
- 32 End of the game

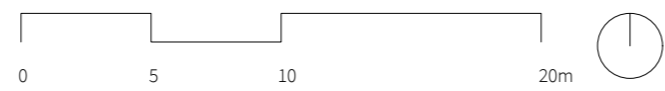
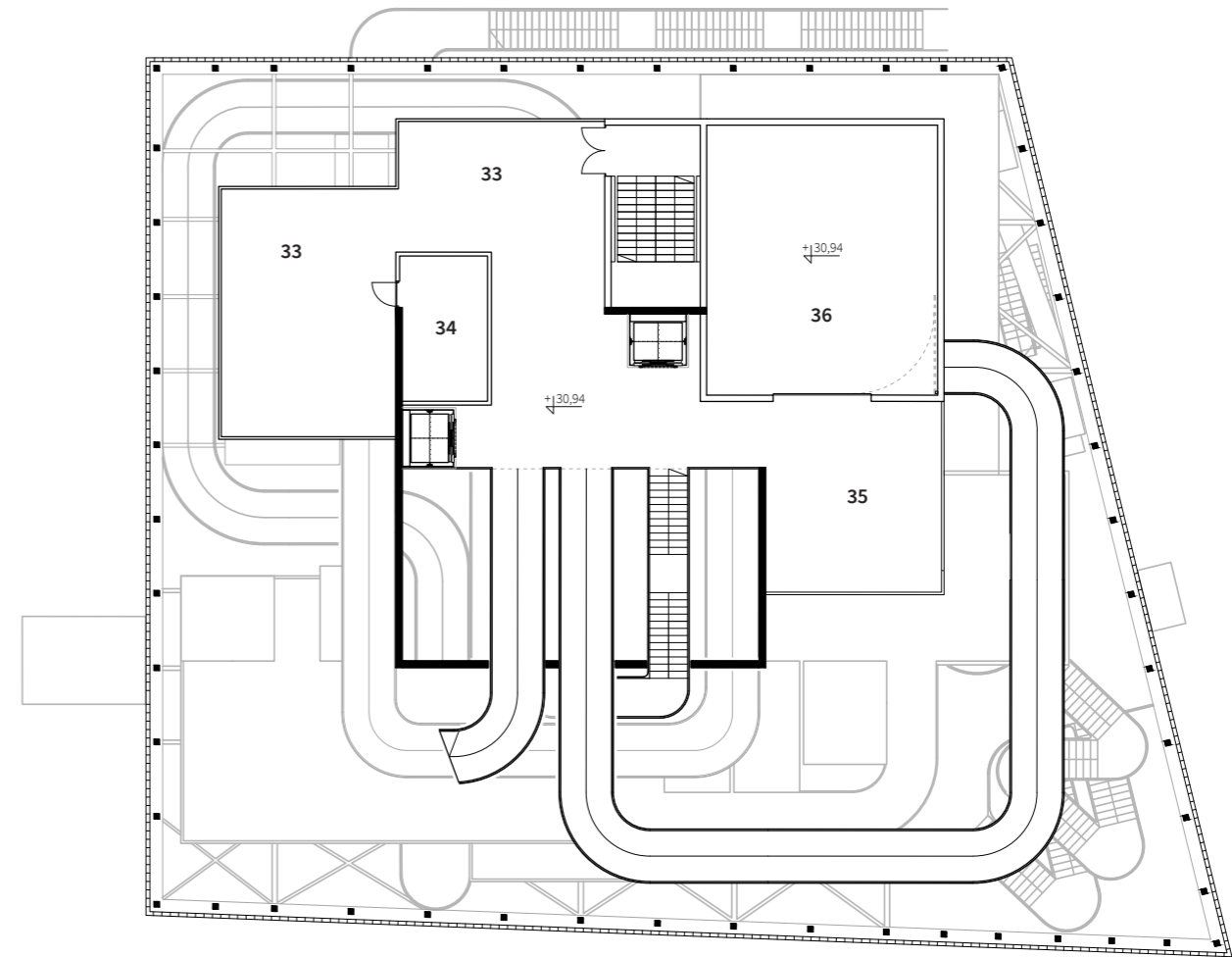


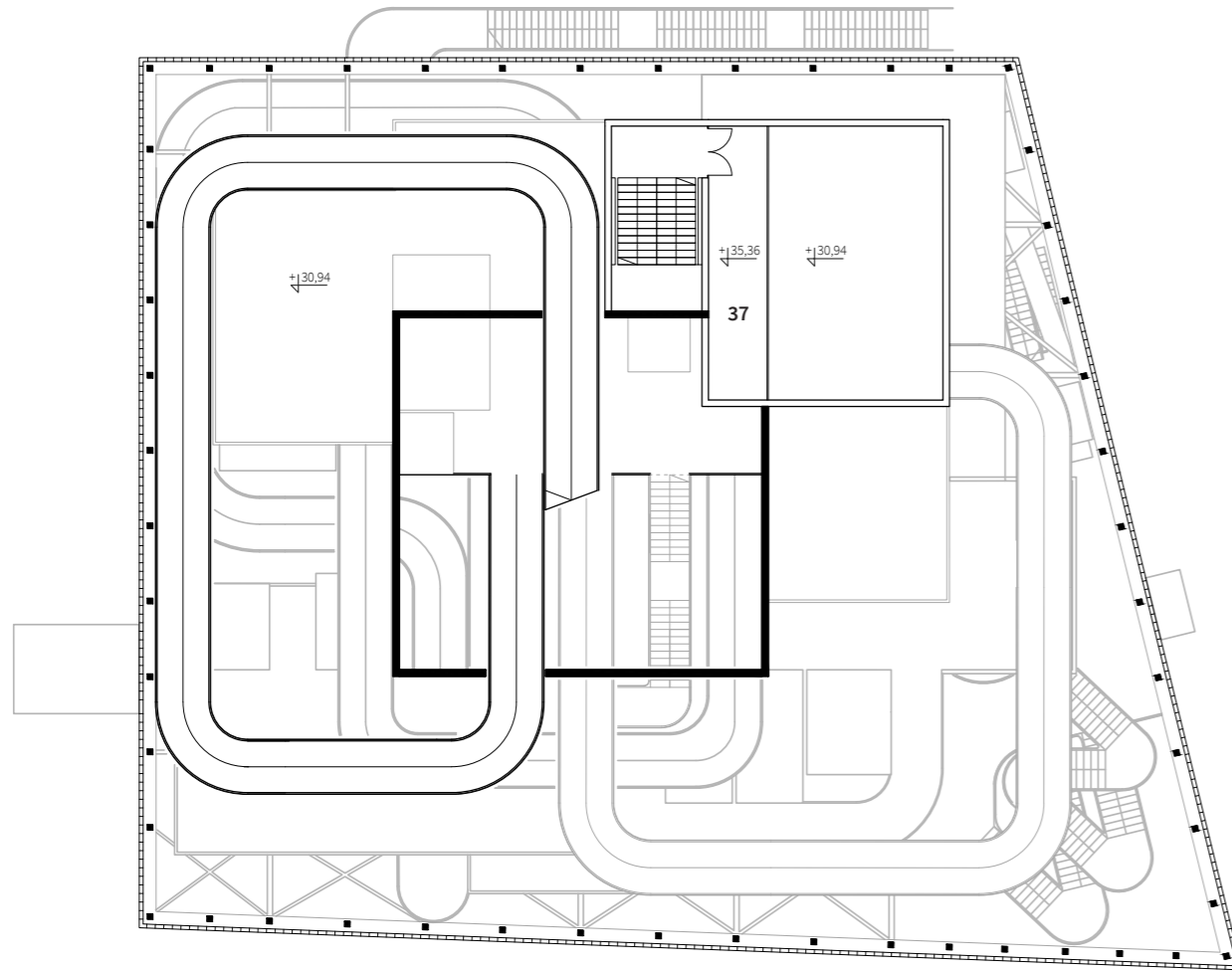
Figure 81. Plan of the 6th level



- 33 Cafe terrace
- 34 Kitchen module
- 35 Foyer
- 36 Auditorium (possibly a green room)



Figure 82. Plan of the 7th level



37 Auditorium balcony

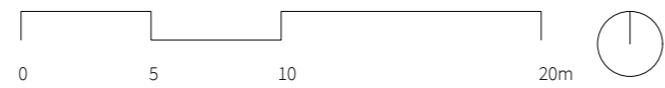
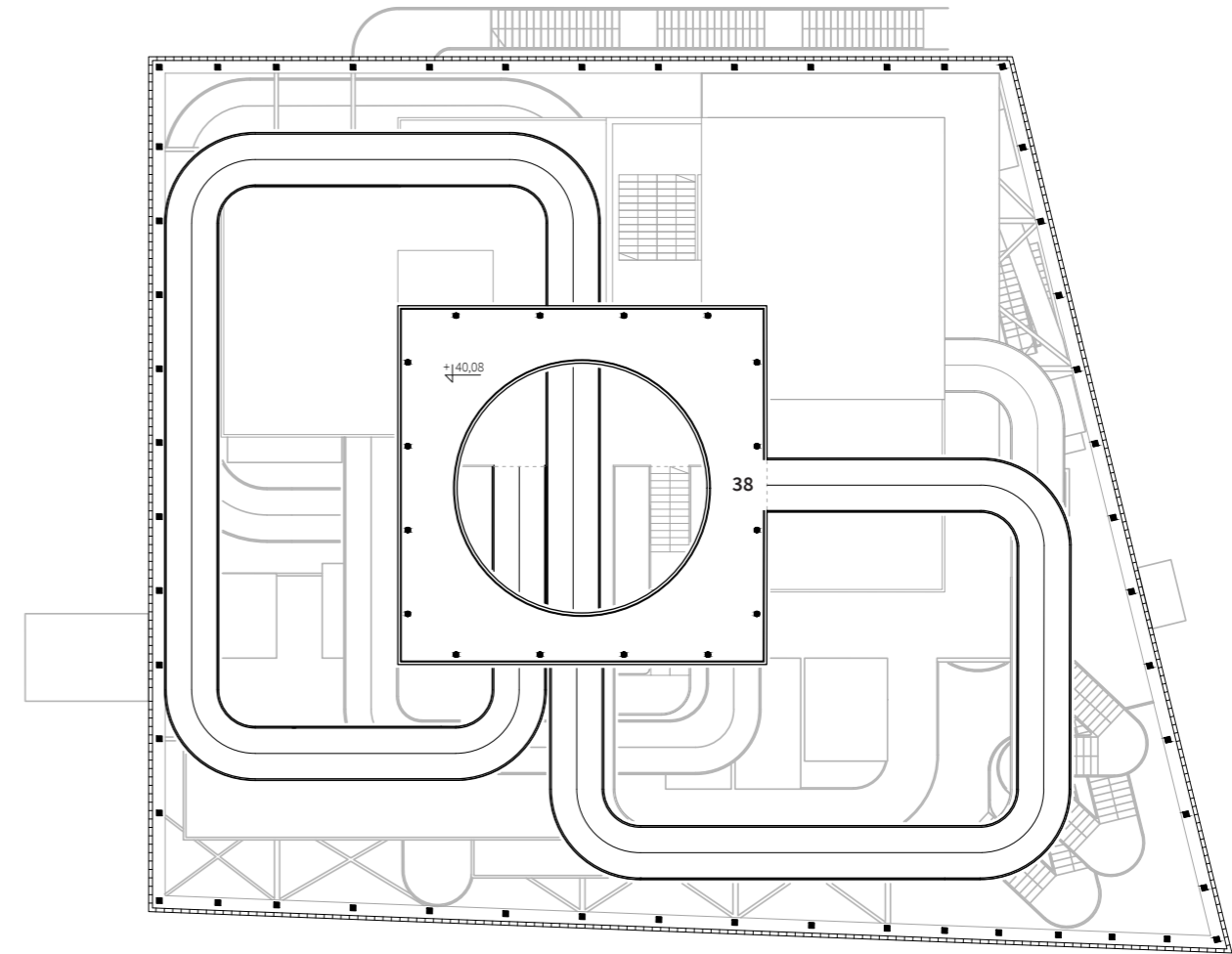


Figure 83. Plan of the 8th level



38 Score room



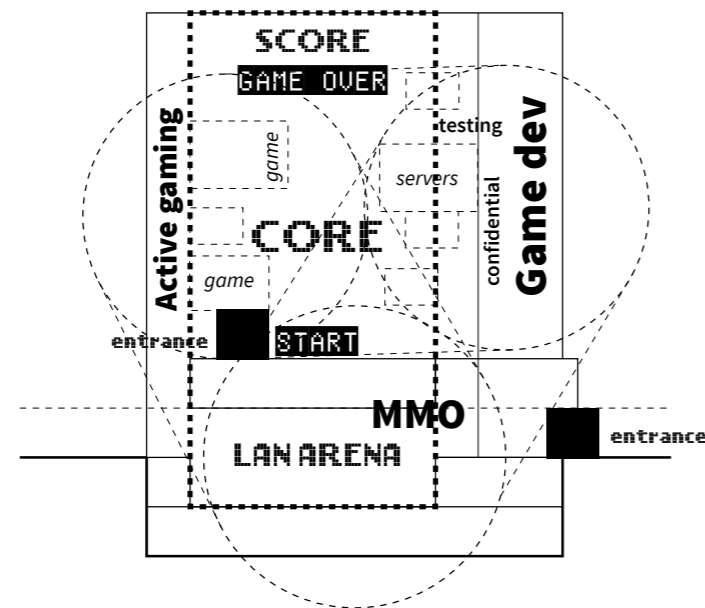
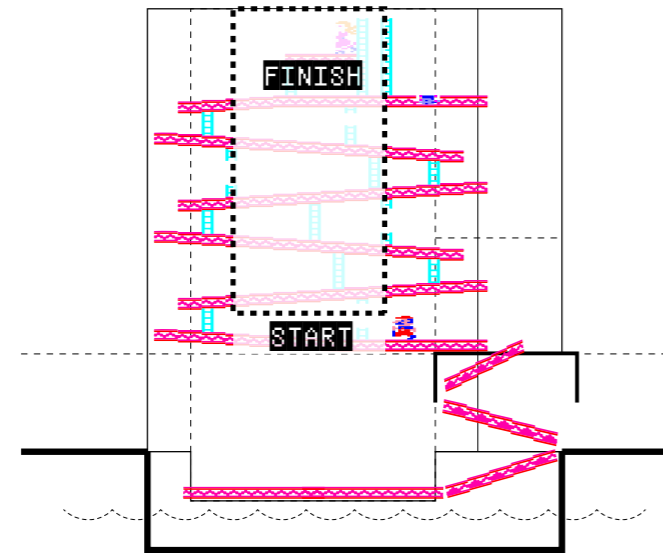
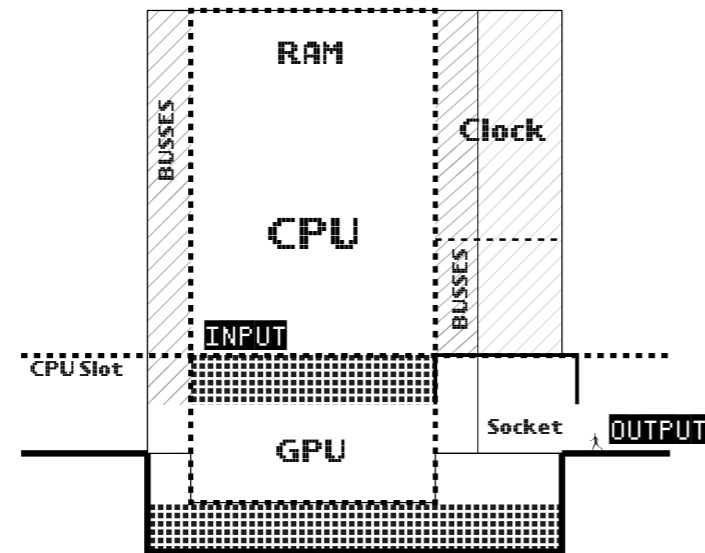


Figure 84. Left page:
Conceptual sections of
the design - hardware,
software and program
distribution

5.3. Sections

From the very beginning the design was conceptualized in sections. Starting from the hardware and software elements and leading to program distribution, the design was conducted through cuts facing north. As a result, the complex system of layers was created, where typical levels interchange with bonus levels inside the building.

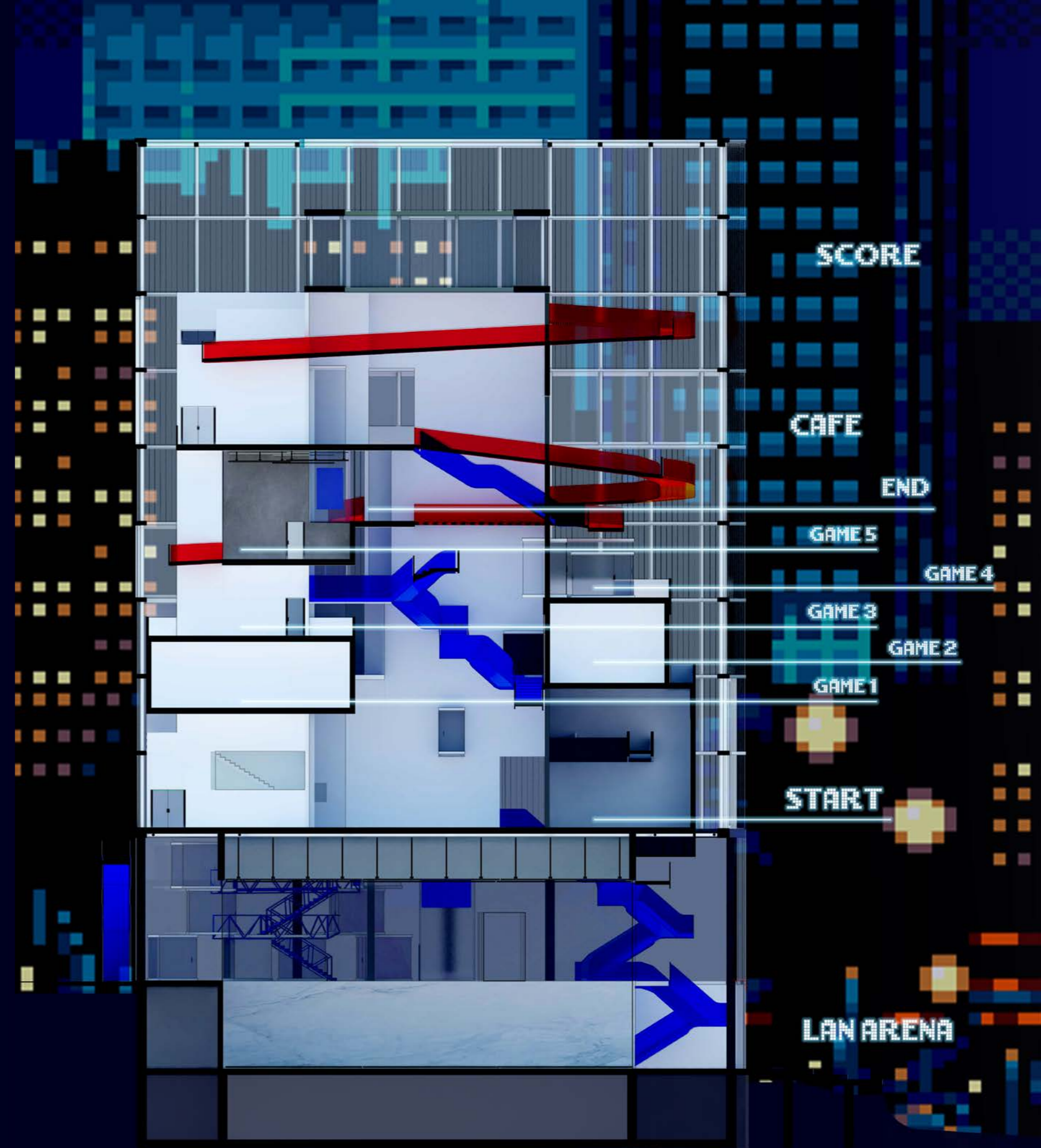
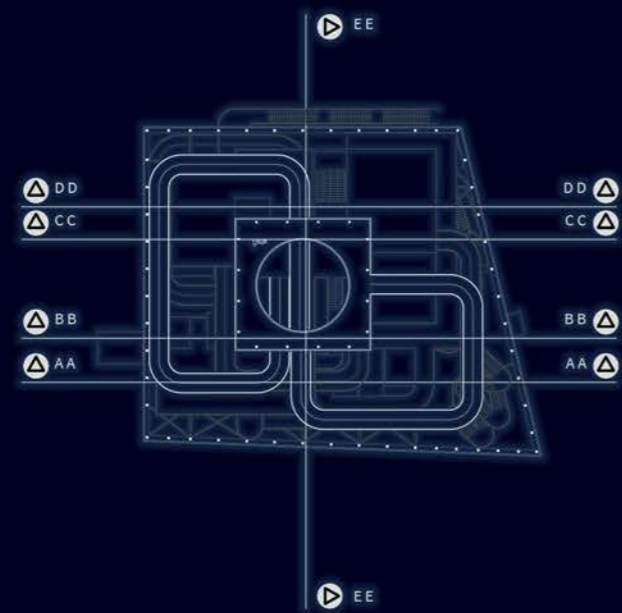
The approach of sectional designs made it possible to show the variety of spaces inside the theatre and their changing character. Here, some spaces are left opened while others are preserved dark and isolated. Also, many sections exposed the variety of openings and connections between different types of game spaces, and the diversity of experiences a player can perceive while walking through the theatre.

Seen from the outside, a very rigid structure of the Video Games Theatre shows only a blurred contour of the game spaces inside. Nevertheless, this unclear appearance does not completely reflect what is happening indoors. To understand the inside space, a player needs to come into the core of the building and immerse into one of the gaming paths. Thus, only in the game one can comprehend the space and many experiences and leisure activities it offers. This

way of designing was inspired by the architecture of Akihabara, where the relation between inside and outside is sharply separated, and where the inside spaces and distribution of levels cannot be perceived externally. Yet in the theatre, the staircase module, which is normally enclosed in other buildings in Akihabara and placed in front of the plot, is here fluctuating in the building and connecting all the spaces inside the core to make the program distribution comprehensible and a journey through game spaces more engaging.

In the end, the sectional approach in the design was reflected in two models, where the first shows the blurred contour of inside spaces, while the second exposes eleven sections of the building. Yet, both create an intangible feeling of the inside, intertwining spaces and the sense of virtual leisure activities embedded in architectural spaces. What can be immediately understood in both models, is the position of the Lan Arena and the upper part of the core with a score room, while other spaces merge with each other creating one, blurred contour, where all the separate elements can be understood through study of each section cut separately – through a close look inside.

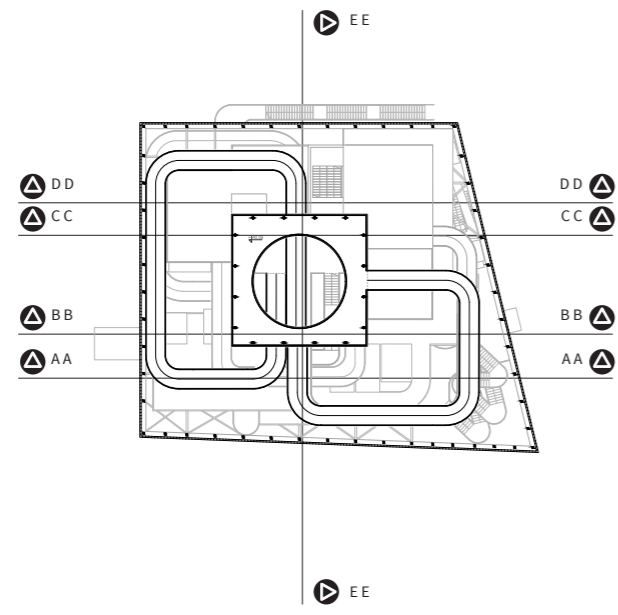
Figure 85. Section E-E of the Video Games Theatre



section E E



Figure 86. Section A-A of the Video Games Theatre



- | | |
|--|--|
| 1 Lan Arena | 20 Game development |
| 2 Extensions of the Arena | 21 1st game space |
| 3 Foyer | 22 2nd game space |
| 4 Technical facilities and server rooms | 23 Unprogrammed space |
| 5 Entrance on the ground floor | 24 Extendable servers room |
| 6 Entrance hall | 25 Unprogrammed game development space |
| 7 Information | 26 3rd game space |
| 8 Avatar creation | 27 4th game space |
| 9 Technical entrance | 28 Game display boxes |
| 10 Entrance to the core from the Lan Arena | 29 Game development workshop |
| 11 Entrance to the core | 30 5th game space |
| 12 Core | 31 Game display boxes |
| 13 MMO game public staircase | 32 End of the game |
| 14 Game development | 33 Cafe terrace |
| 15 Start | 34 Kitchen module |
| 16 Introduction | 35 Foyer |
| 17 Game display boxes | 36 Auditorium (possibly a green room) |
| 18 Unprogrammed space above the Introduction | 37 Auditorium balcony |
| 19 Unprogrammed space above the Start | 38 Score room |



section A A

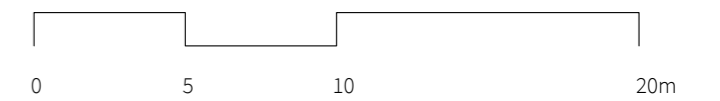
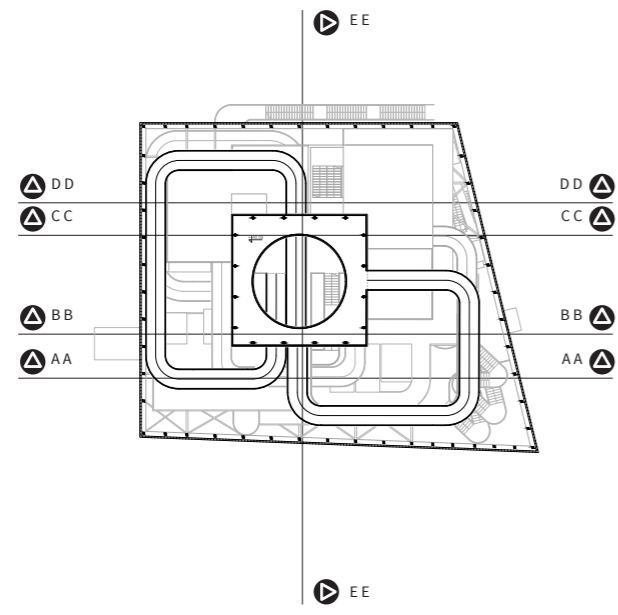
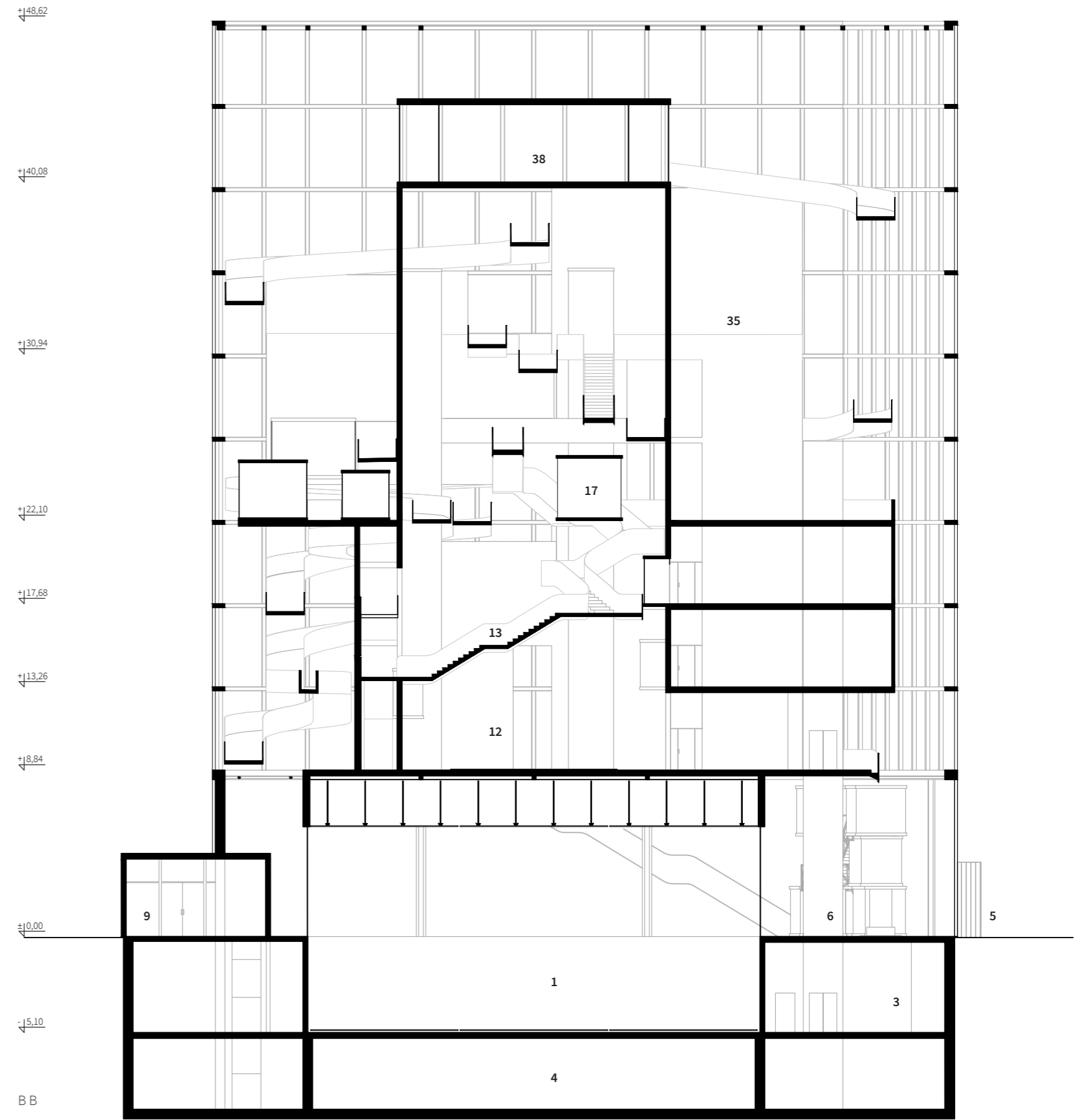


Figure 87. Section B-B of the Video Games Theatre



- | | | | |
|----|---|----|-------------------------------------|
| 1 | Lan Arena | 20 | Game development |
| 2 | Extensions of the Arena | 21 | 1st game space |
| 3 | Foyer | 22 | 2nd game space |
| 4 | Technical facilities and server rooms | 23 | Unprogrammed space |
| 5 | Entrance on the ground floor | 24 | Extendable servers room |
| 6 | Entrance hall | 25 | Unprogrammed game development space |
| 7 | Information | 26 | 3rd game space |
| 8 | Avatar creation | 27 | 4th game space |
| 9 | Technical entrance | 28 | Game display boxes |
| 10 | Entrance to the core from the Lan Arena | 29 | Game development workshop |
| 11 | Entrance to the core | 30 | 5th game space |
| 12 | Core | 31 | Game display boxes |
| 13 | MMO game public staircase | 32 | End of the game |
| 14 | Game development | 33 | Cafe terrace |
| 15 | Start | 34 | Kitchen module |
| 16 | Introduction | 35 | Foyer |
| 17 | Game display boxes | 36 | Auditorium (possibly a green room) |
| 18 | Unprogrammed space above the Introduction | 37 | Auditorium balcony |
| 19 | Unprogrammed space above the Start | 38 | Score room |



section B B

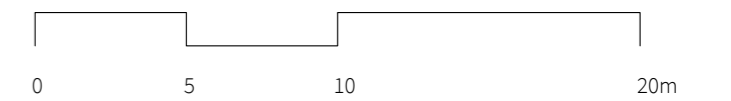
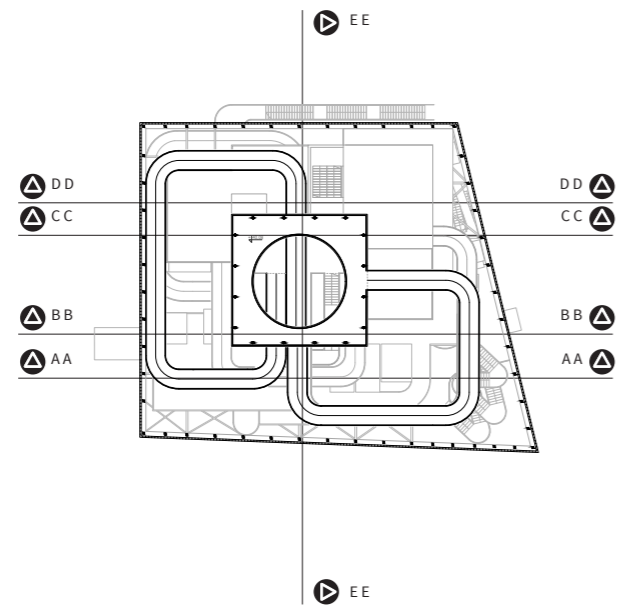


Figure 88. Section C-C of the Video Games Theatre



- | | | | |
|----|---|----|-------------------------------------|
| 1 | Lan Arena | 20 | Game development |
| 2 | Extensions of the Arena | 21 | 1st game space |
| 3 | Foyer | 22 | 2nd game space |
| 4 | Technical facilities and server rooms | 23 | Unprogrammed space |
| 5 | Entrance on the ground floor | 24 | Extendable servers room |
| 6 | Entrance hall | 25 | Unprogrammed game development space |
| 7 | Information | 26 | 3rd game space |
| 8 | Avatar creation | 27 | 4th game space |
| 9 | Technical entrance | 28 | Game display boxes |
| 10 | Entrance to the core from the Lan Arena | 29 | Game development workshop |
| 11 | Entrance to the core | 30 | 5th game space |
| 12 | Core | 31 | Game display boxes |
| 13 | MMO game public staircase | 32 | End of the game |
| 14 | Game development | 33 | Cafe terrace |
| 15 | Start | 34 | Kitchen module |
| 16 | Introduction | 35 | Foyer |
| 17 | Game display boxes | 36 | Auditorium (possibly a green room) |
| 18 | Unprogrammed space above the Introduction | 37 | Auditorium balcony |
| 19 | Unprogrammed space above the Start | 38 | Score room |

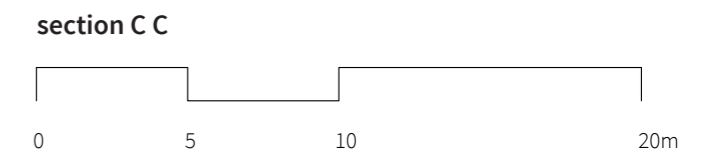
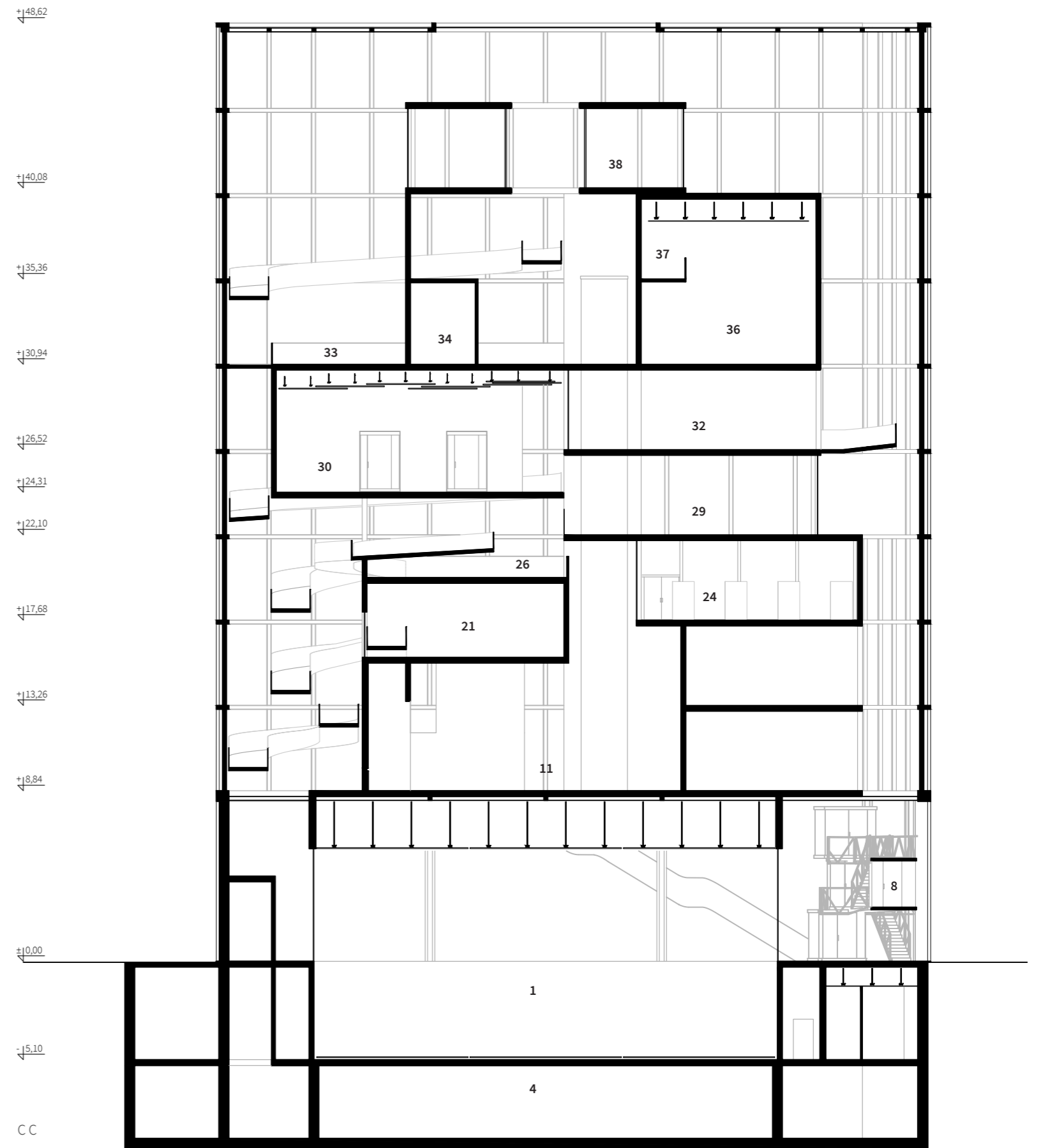
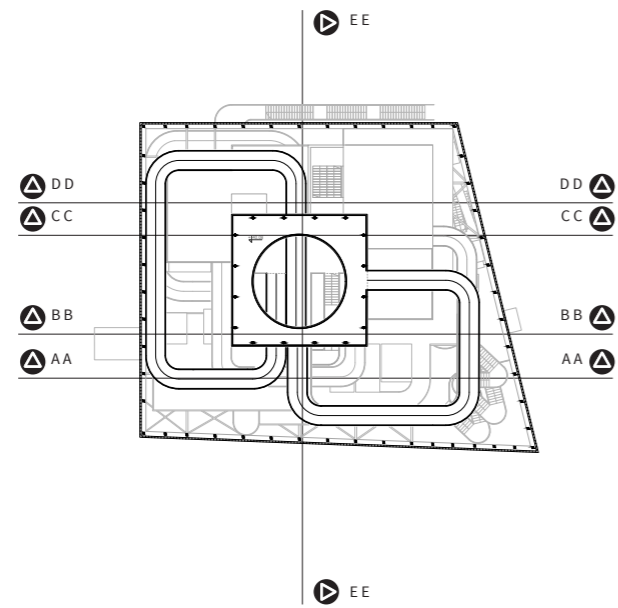
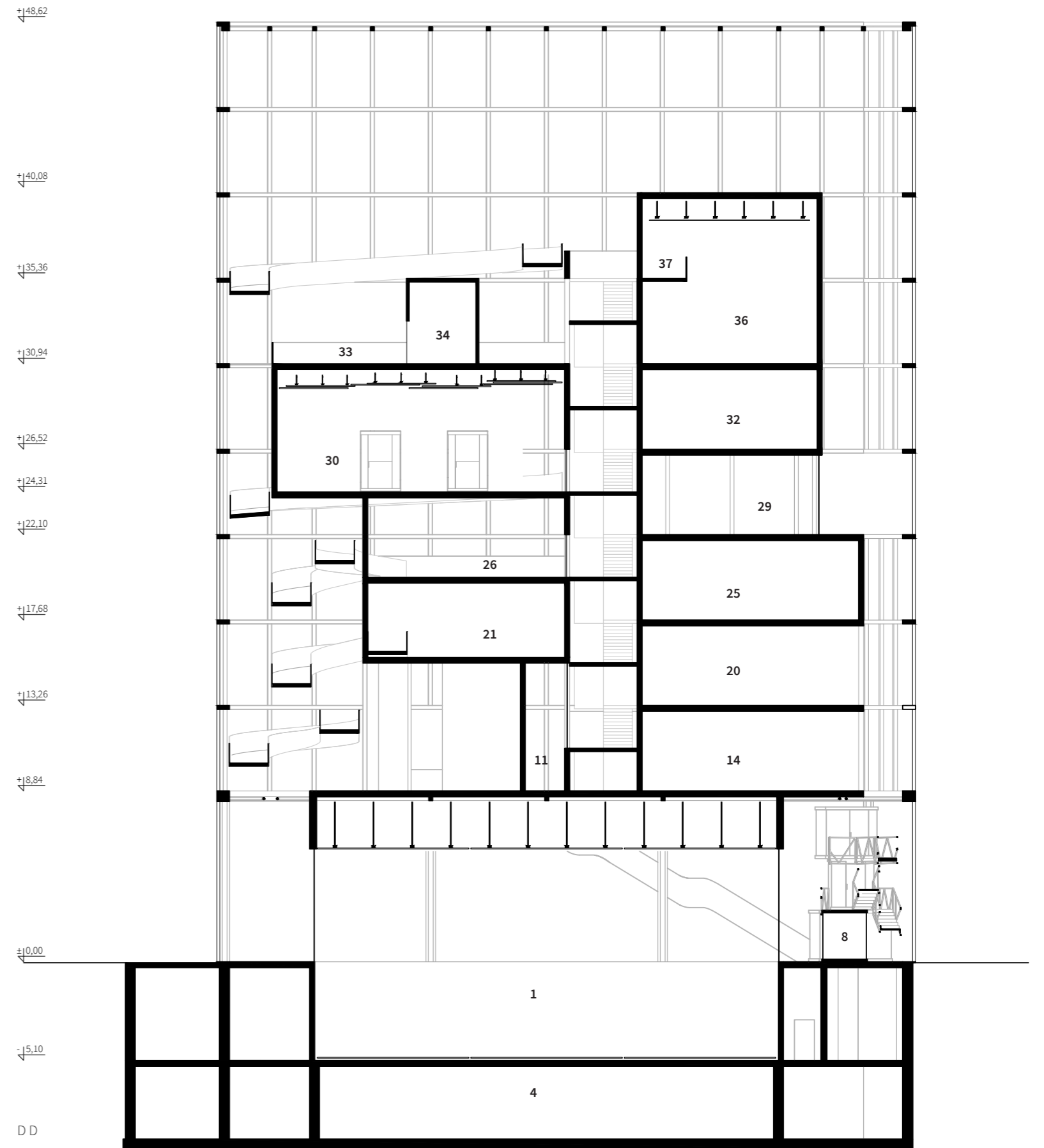


Figure 89. Section D-D of the Video Games Theatre



- | | | | |
|----|---|----|-------------------------------------|
| 1 | Lan Arena | 20 | Game development |
| 2 | Extensions of the Arena | 21 | 1st game space |
| 3 | Foyer | 22 | 2nd game space |
| 4 | Technical facilities and server rooms | 23 | Unprogrammed space |
| 5 | Entrance on the ground floor | 24 | Extendable servers room |
| 6 | Entrance hall | 25 | Unprogrammed game development space |
| 7 | Information | 26 | 3rd game space |
| 8 | Avatar creation | 27 | 4th game space |
| 9 | Technical entrance | 28 | Game display boxes |
| 10 | Entrance to the core from the Lan Arena | 29 | Game development workshop |
| 11 | Entrance to the core | 30 | 5th game space |
| 12 | Core | 31 | Game display boxes |
| 13 | MMO game public staircase | 32 | End of the game |
| 14 | Game development | 33 | Cafe terrace |
| 15 | Start | 34 | Kitchen module |
| 16 | Introduction | 35 | Foyer |
| 17 | Game display boxes | 36 | Auditorium (possibly a green room) |
| 18 | Unprogrammed space above the Introduction | 37 | Auditorium balcony |
| 19 | Unprogrammed space above the Start | 38 | Score room |



section D D

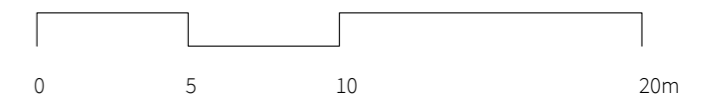


Figure 90. Left page:
Preliminary model of the
design

Figure 91. Right page:
Model of the design
composed of eleven
sections

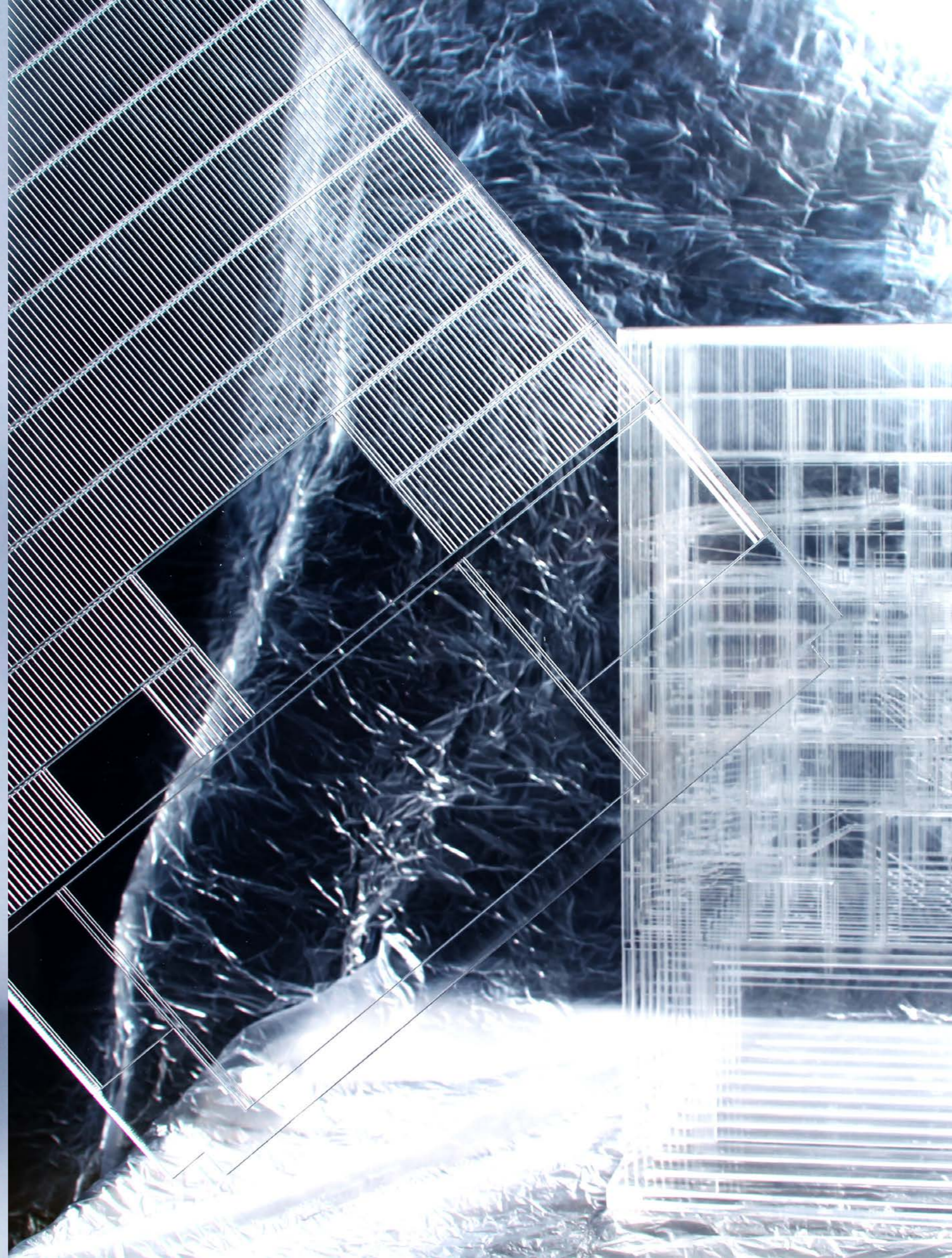
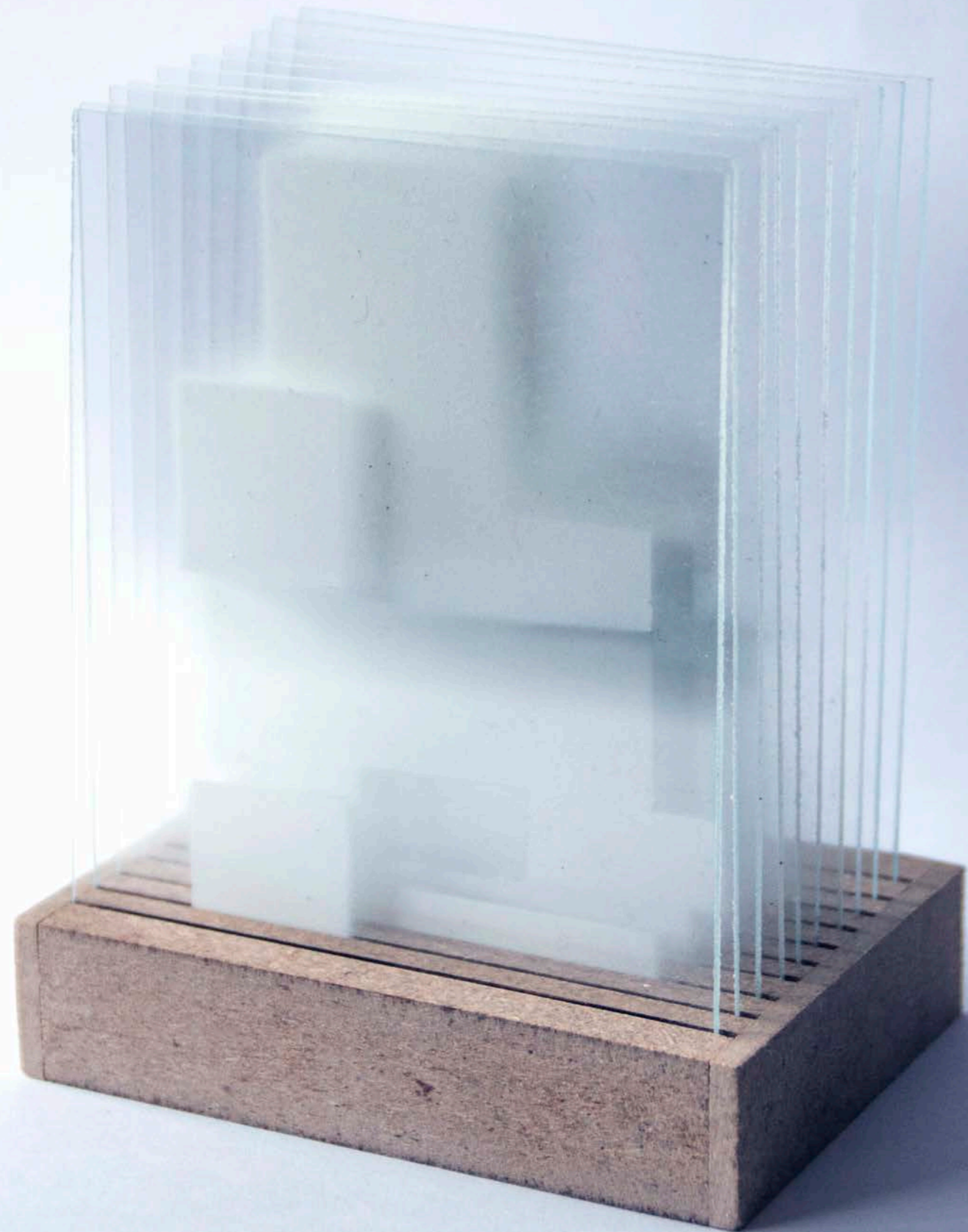
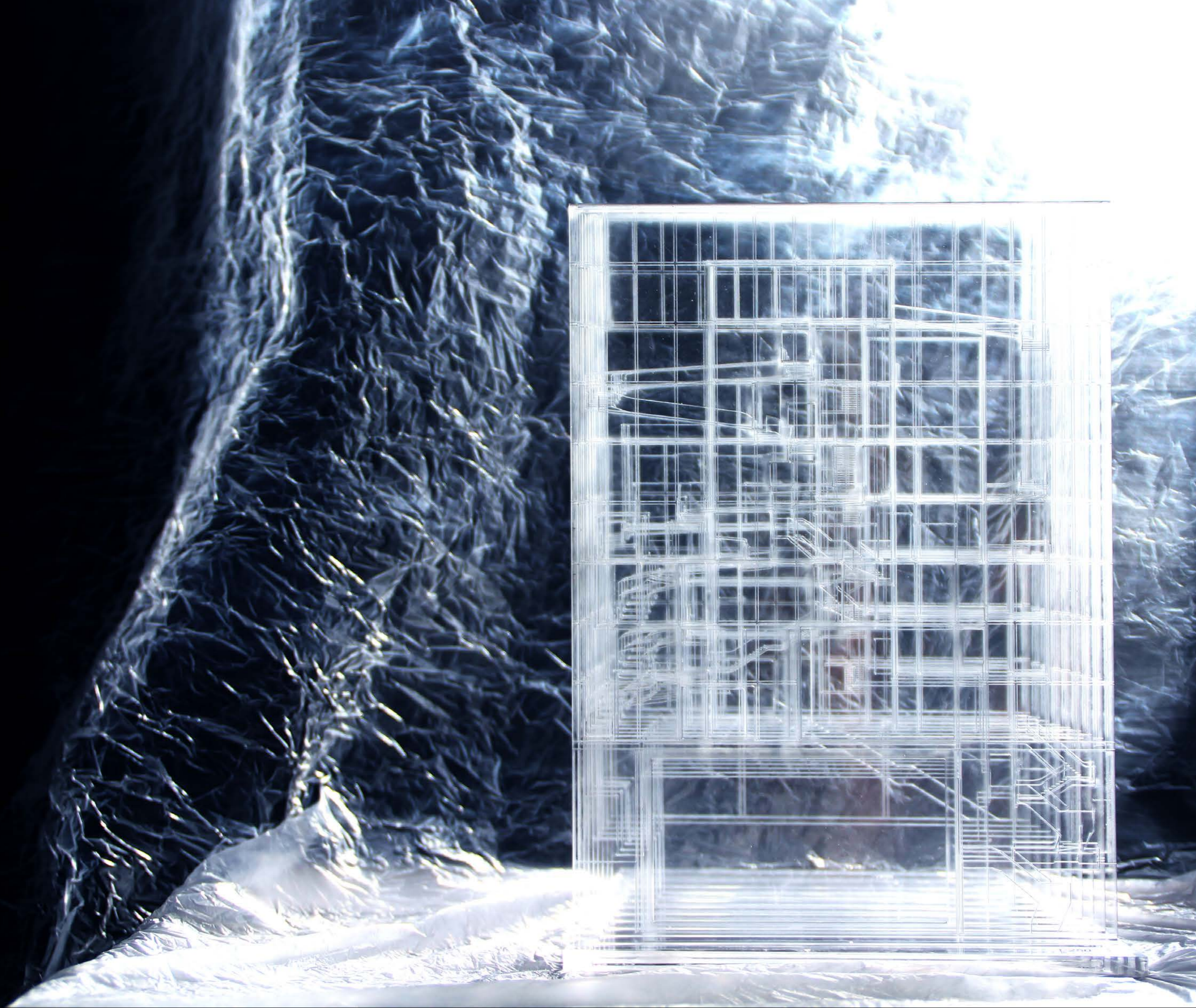
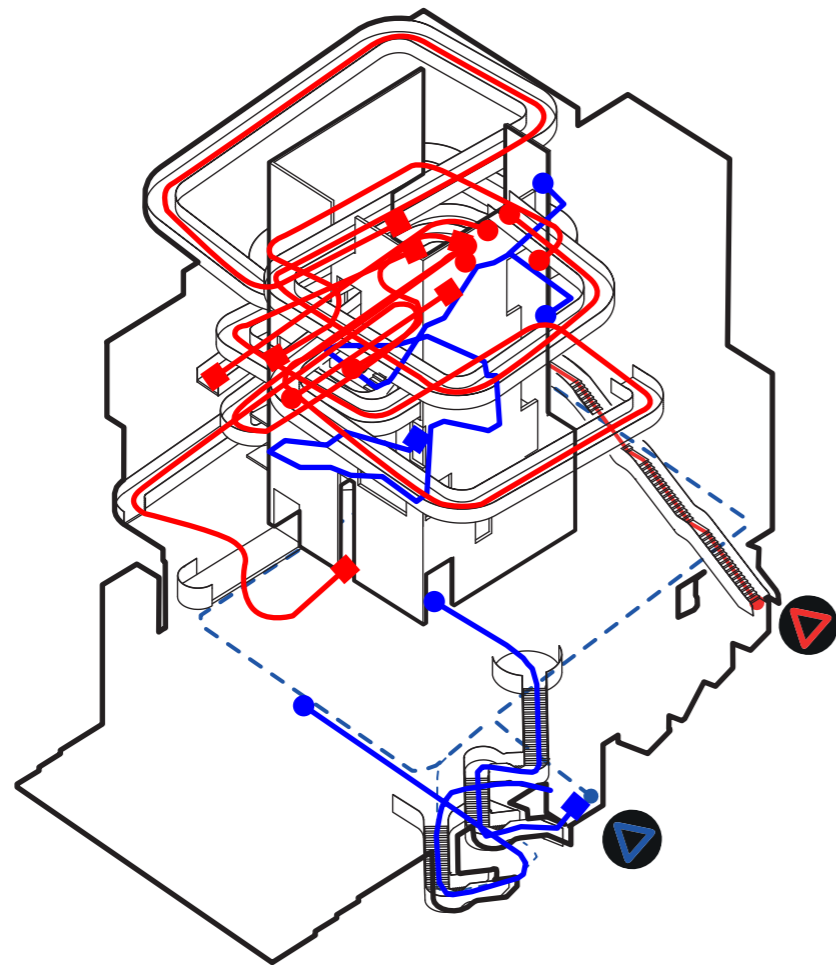


Figure 92. Model of the
Video Games Theatre





5.4. Circulation: a walk through the building

Let's see the building from a perspective of a player. As was previously said, there are two gaming paths players can choose from: MMO game and Immersive game.

MMO path is a publicly accessible part of the building, meaning anyone can play games exposed in this part of the theatre. MMO path includes also event spaces: Lan Arena located in the down part of the building and auditorium placed in the upper part. MMO experience can start in two ways - in the ground floor entrance with the avatar creation, the element which later reflects players actions on the facade of the building, or on the first floor in the core. The MMO staircase in the core of the building is purposely hidden behind the wall, encouraging the player to discover the building and its curiosities. The user is indirectly guided to the start of this path by the light peeking to the core, and openings in the core walls, which expose parts of the blue staircase. The MMO game leads through unprogrammed spaces left for the initiatives of users, to the game development workshop, where game creators and fans can meet, exchange their knowledge or advertise their newest game. In this way, video games enthusiasts would have the possibility to meet in a physical space outside organised occasionally gaming events.

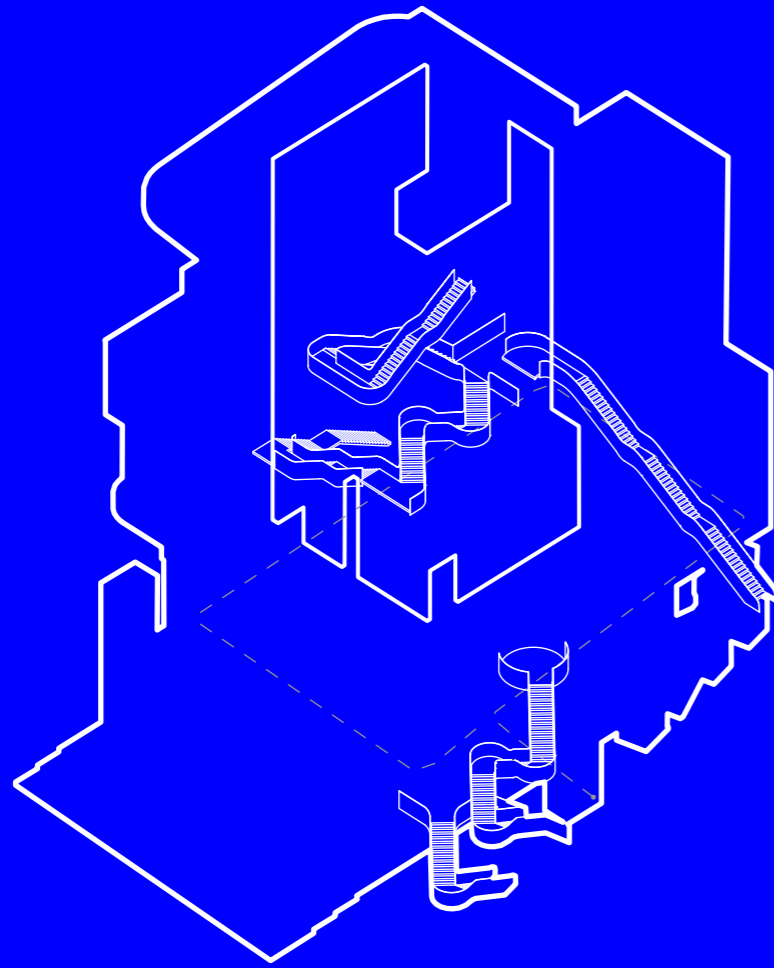
Immersive game path starts in the room on the first floor. This is where a player can purchase

necessary equipment, choose a game and pay for his ticket. After a small introduction a game unveils through the system of red ramps leading to five different types of game spaces. In the end, the experience is summarised in the last room, from which a path guides a player to the terrace above.

Last step, where both paths finally meet is the level of cafeteria and auditorium. The light and opened space reveals the leisure activities beneath, as well as opens views to Akihabara in the façade. Moreover, from this point, only a single ramp leads a player to the score room at the top, the last gaming experience.

Besides the MMO and Immersive paths, circulation is supplied with the evacuation staircase in the north part of the core, from which game development offices can be accessed. Also, the building is equipped with three elevators, two in the core and one in the east part of the building. Elevators in the core cut through MMO and Immersive game spaces, and together with the evacuation staircase and a bigger elevator in the east side make it possible to quickly access different levels of the building. Last, a staircase and an elevator to technical facilities next to and under the theatre are placed in the west side of the building with a separate entrance, which is accessible for the delivery cars without interfering with the rest of the building.

Figure 94. MMO game path



MMO game

Figure 95. Visualisation of the main hall on the ground floor; view on the information display and avatar creation

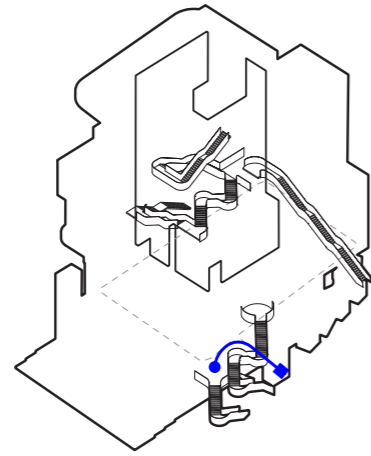


Figure 96. Left side of the page: View from the street to the entrance on the first floor

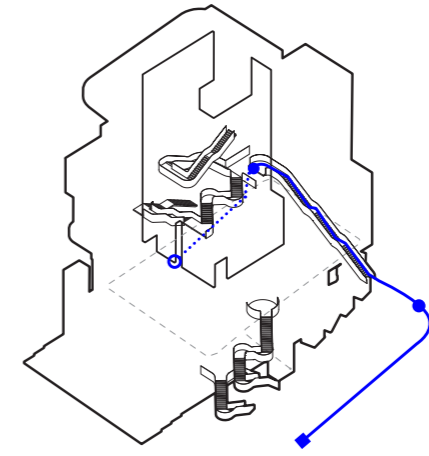
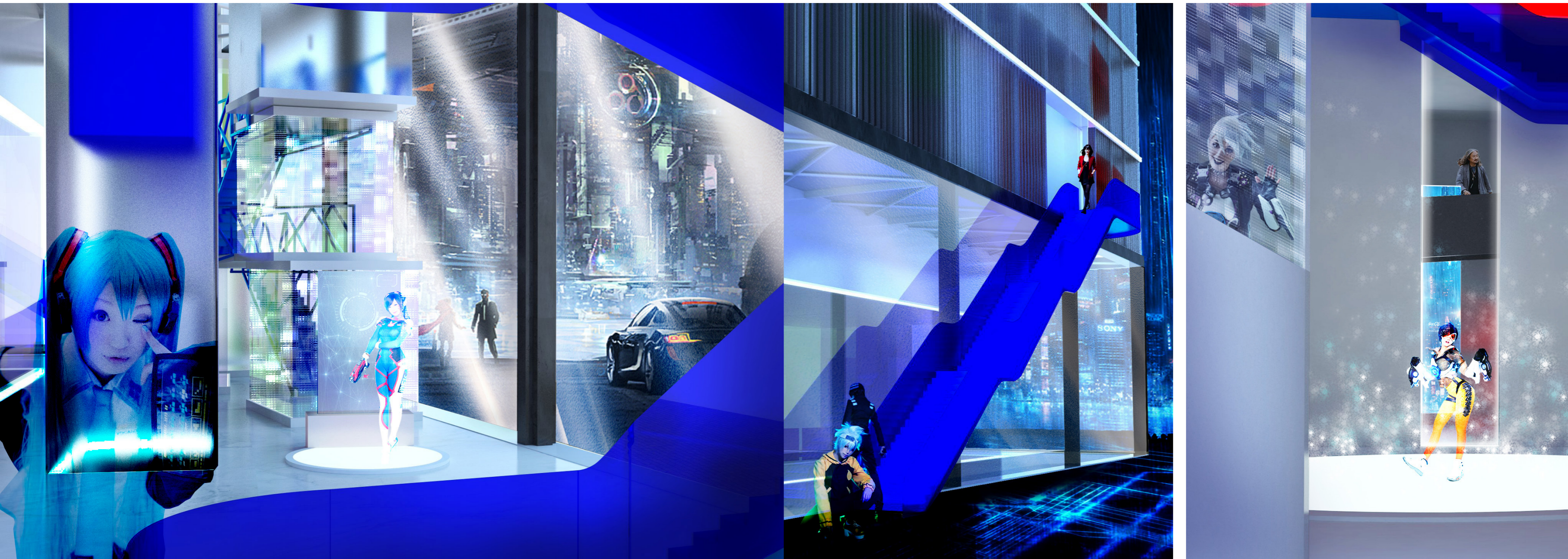


Figure 97. Right side of the page: The entrance to the core from the outside staircase

Figure 98. Next page: View to the Lan Arena from the waterfront



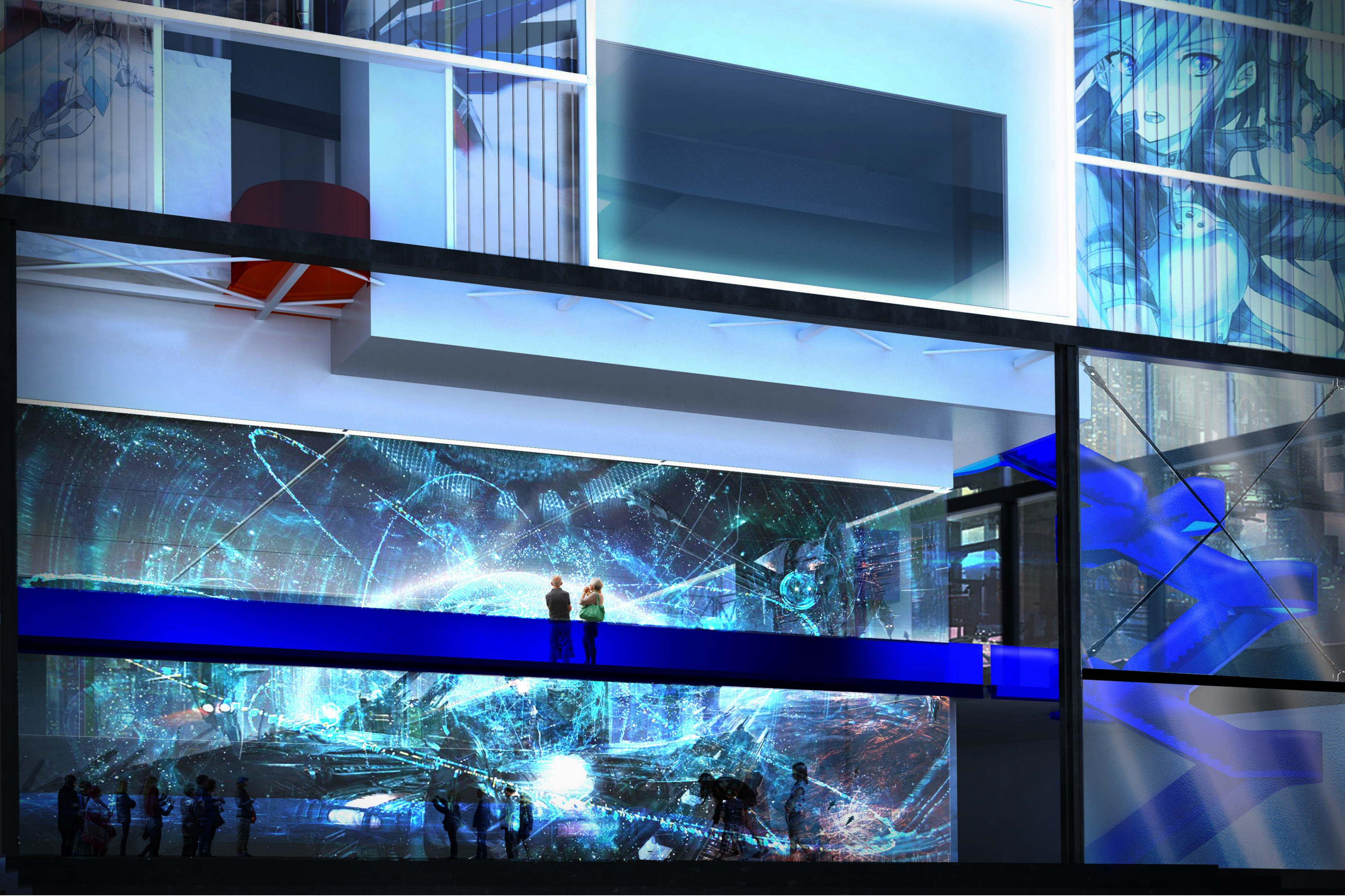


Figure 99. Entrance to the core from the ground floor hall

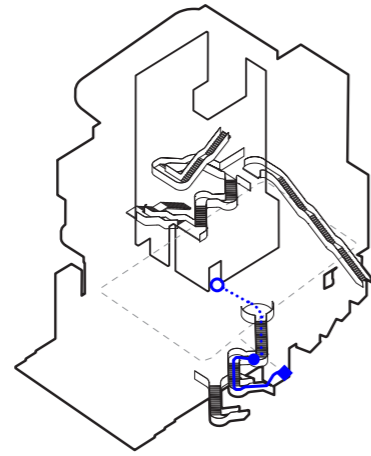


Figure 100. Start of the MMO game in the core

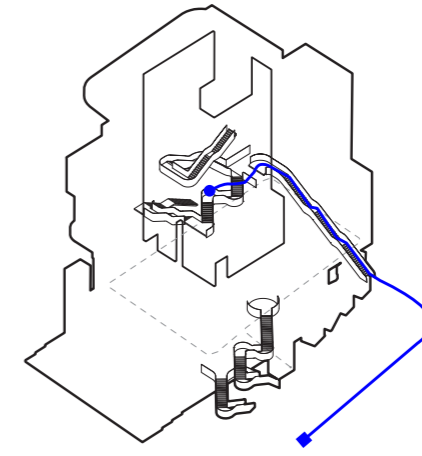


Figure 101. View to the unprogrammed space above the introduction room

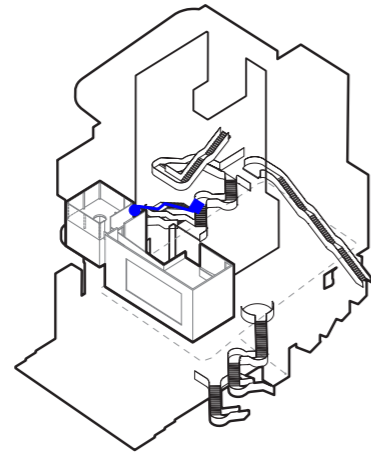


Figure 102. MMO game staircase inside the core; view to game display boxes and server room

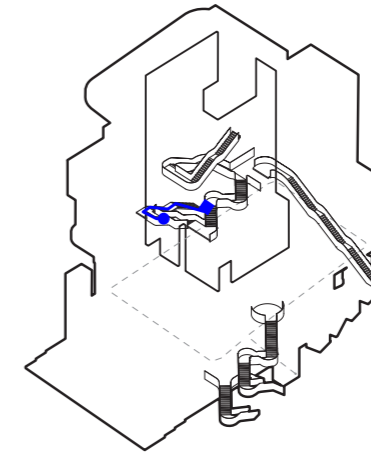


Figure 103. Fringe between Immersive and MMO game; view to the unprogrammed space on the right and 2nd game space on the left

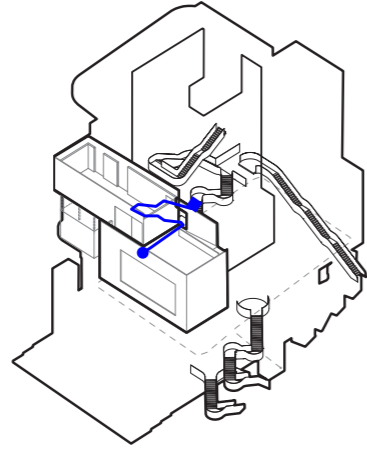


Figure 104. View to the game development workshop

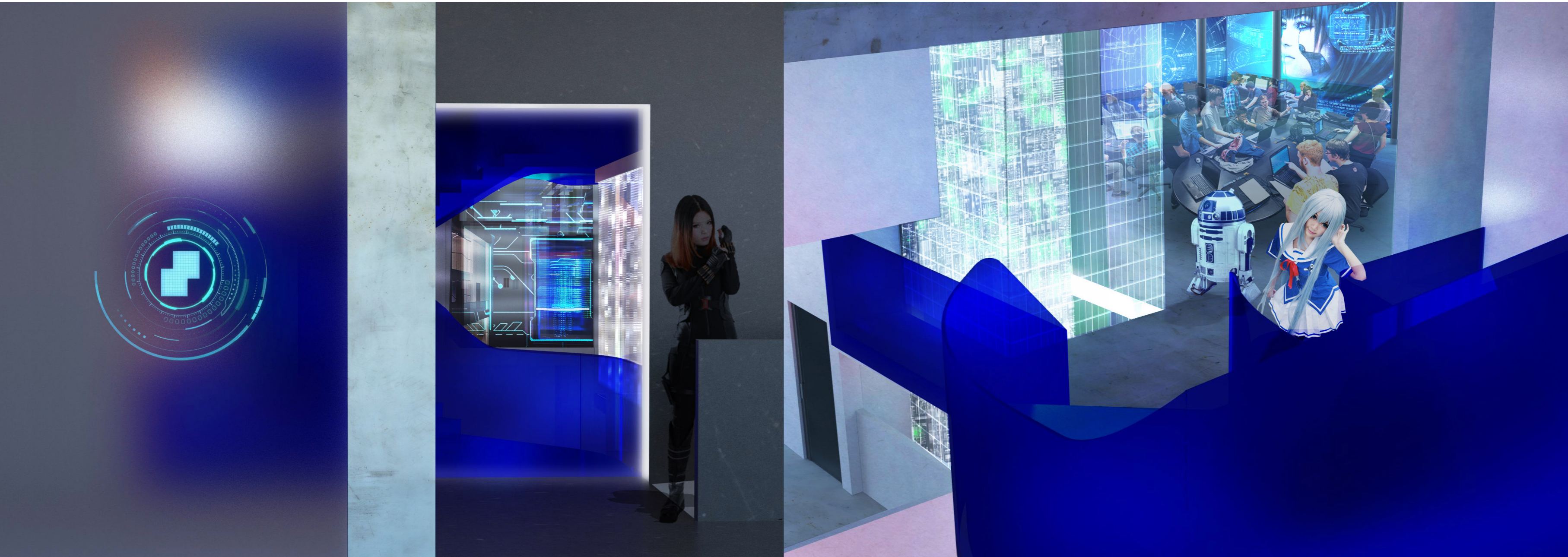
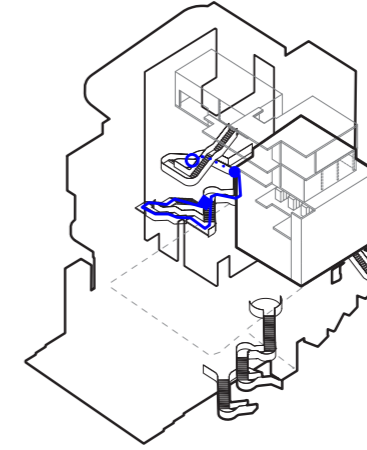


Figure 105. View to the west part of the cafeteria terrace

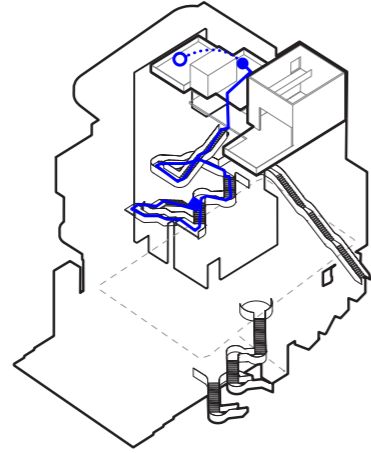


Figure 107. View to the auditorium, foyer, and to the end of the Immersive game

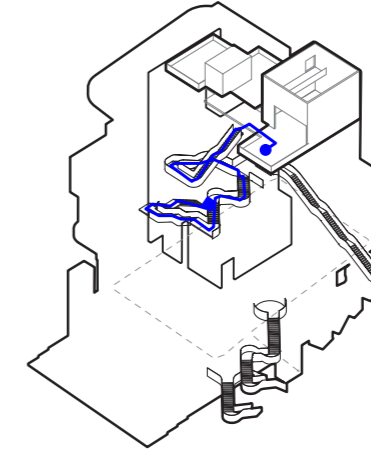
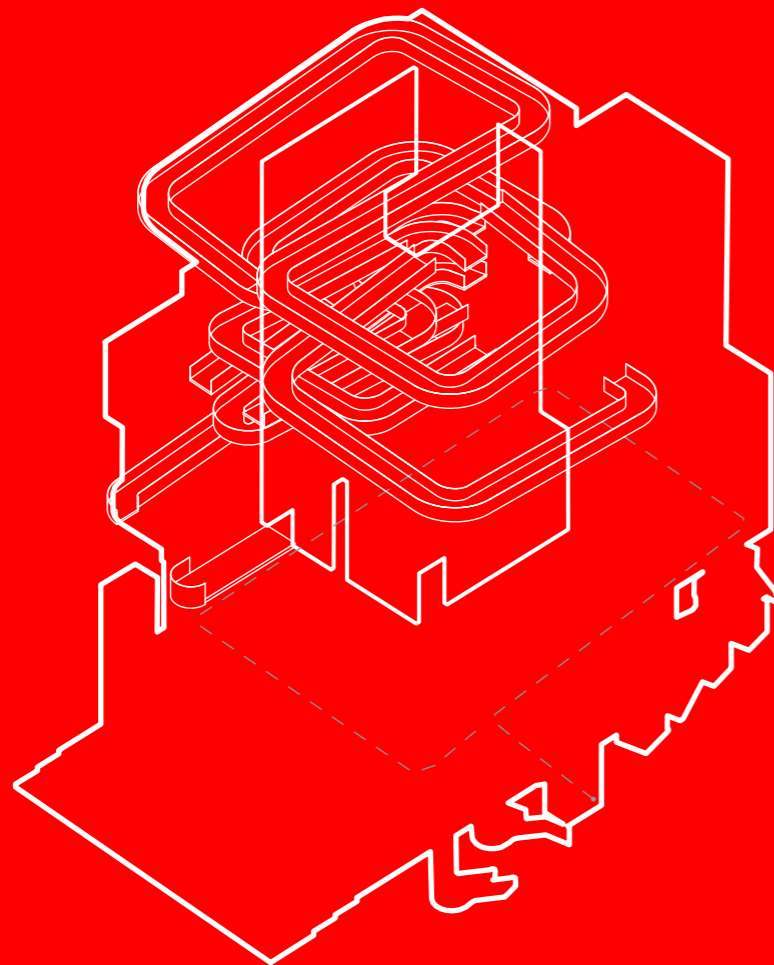


Figure 106. Next page: Intertwining paths of MMO and Immersive game





Figure 108. Immersive game path



IMMERSIVE GAME

Figure 109. Next page:
South, inside facade of
gaming spaces and start

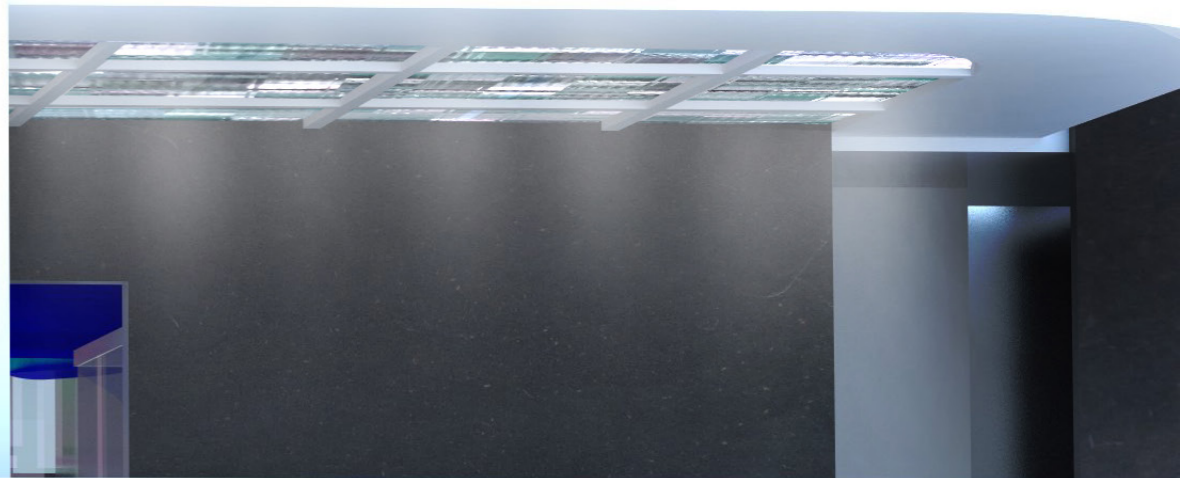


Figure 110. Visualisation of the immersive game path; view from introduction room to game spaces

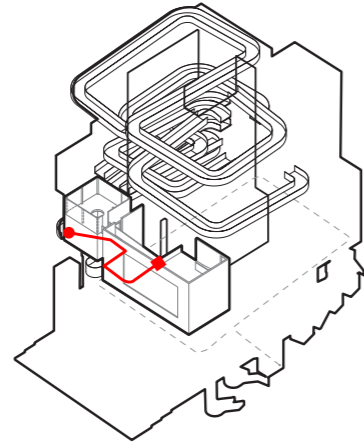


Figure 111. Visualisation of the 1st game space and a ramp to the 2nd one

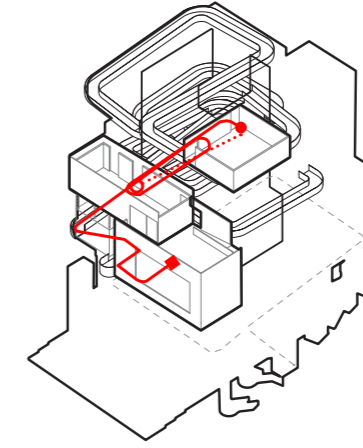


Figure 112. Visualisation of the 2nd game space

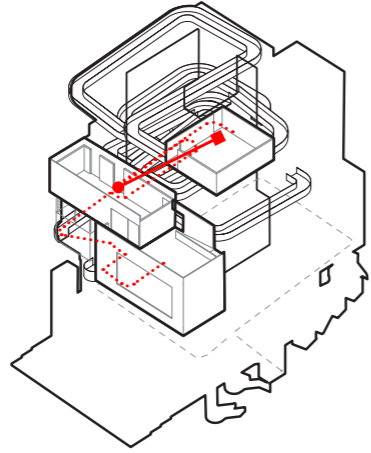


Figure 113. View to the path from the 2nd to the 3rd game space

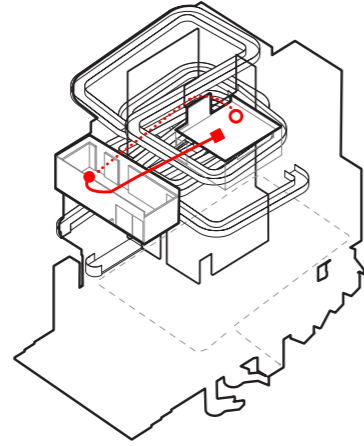


Figure 114. Visualisation of the 3rd game space; view to the core

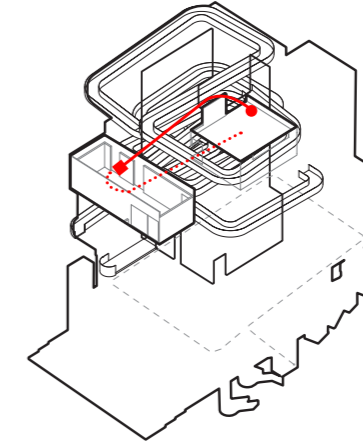


Figure 115. Visualisation of the 4th game space

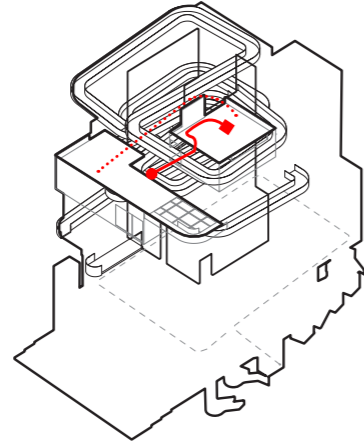


Figure 116. View from the core into the 5th game space

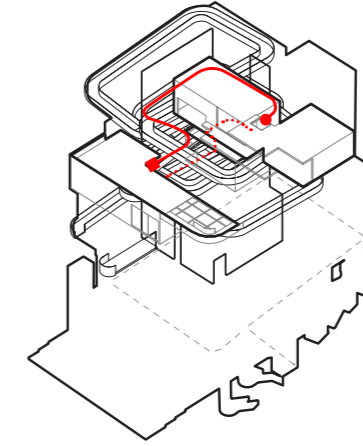


Figure 117. View on the end of the game and a ramp leading to the upper terrace

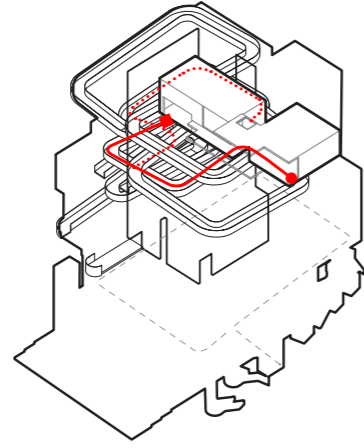
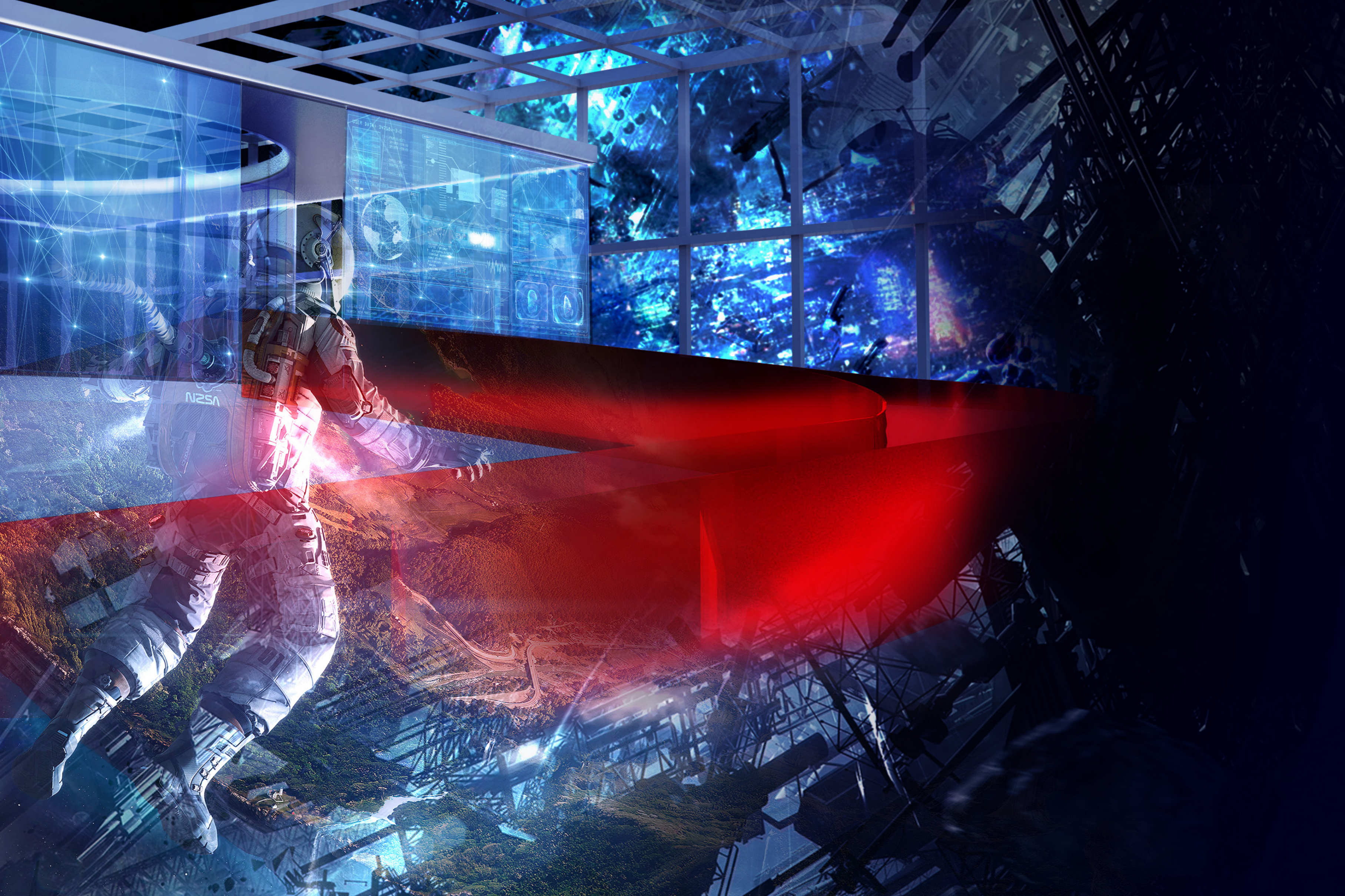


Figure 118. Next page:
View on the score room





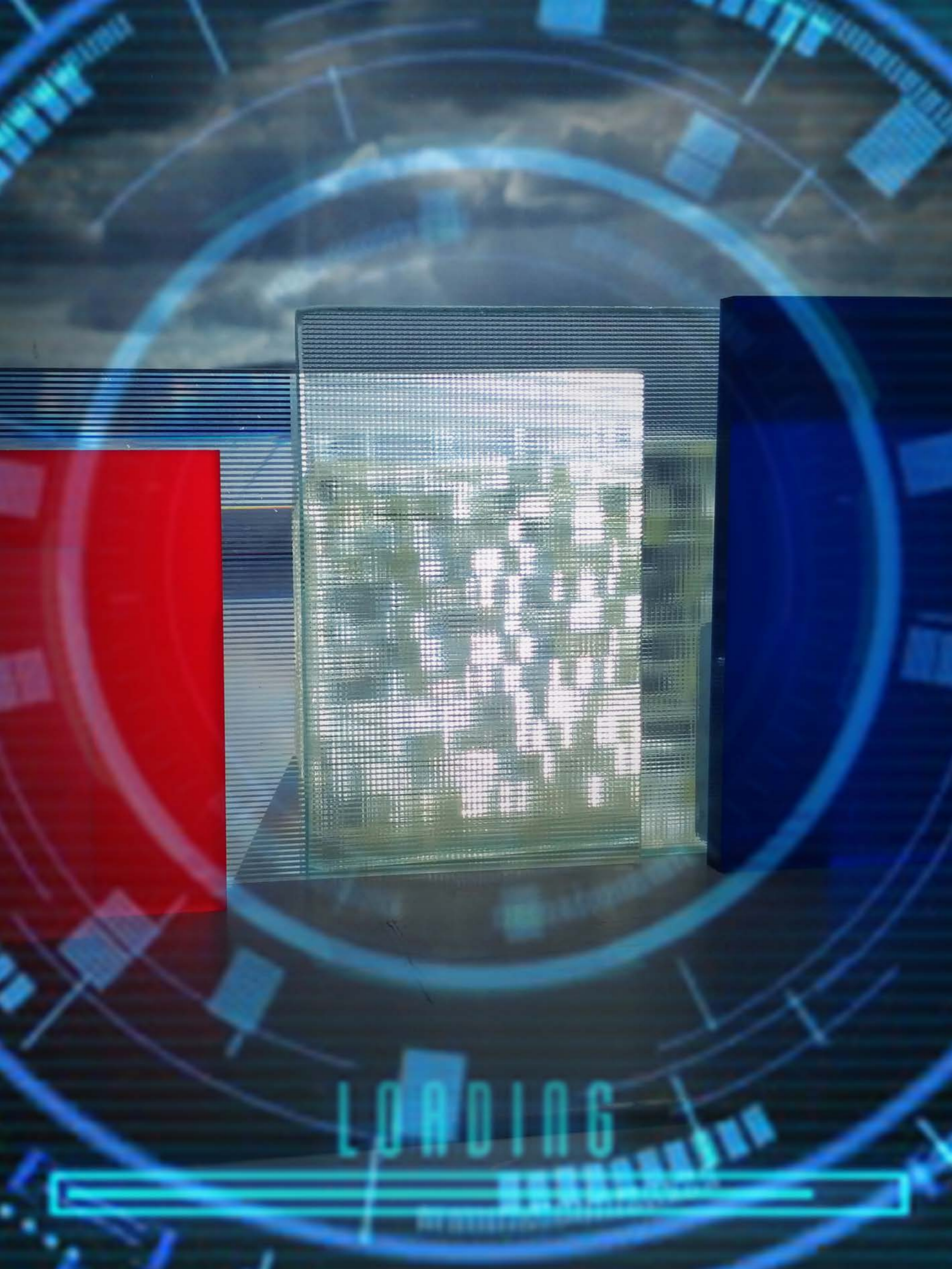


Figure 119. Left gage:
Photograph of the
materials chosen for the
design

5.5. Material overview

Materials used inside and outside the building emphasise the idea of intangible activities which take place in the Video Games Theatre. Thus, semi-transparent and diffusing elements complement gaming spaces with the concept of virtuality, and transmit more or less light inside depending on a type of gameplay.

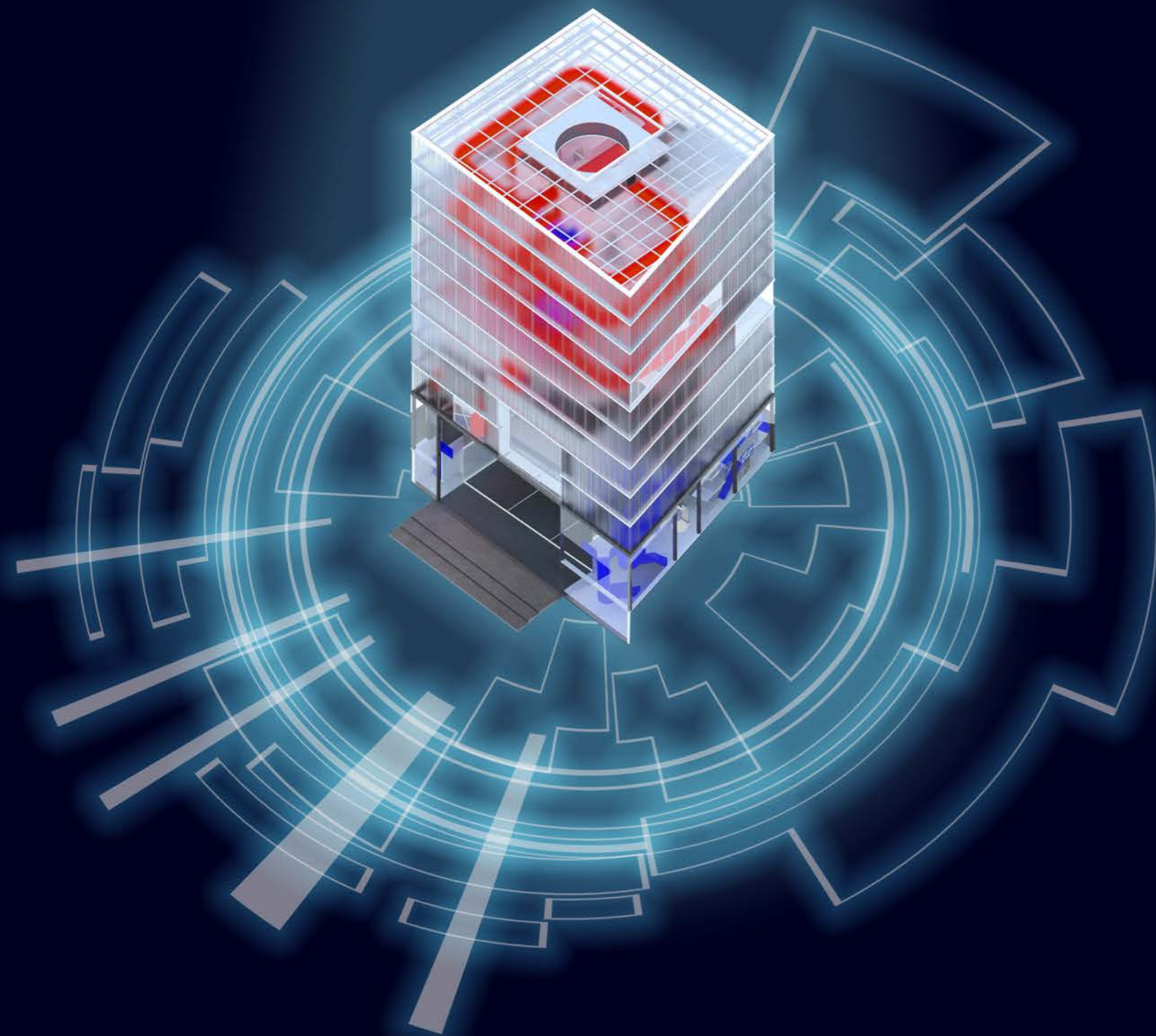
Basic materials which cover walls and floors of the building are kept smooth and neutral - black and white. In this way all the surfaces are displayable for gaming activities hosted in the theatre, and made possible to change or become else in the future. The material used to cover concrete walls of the core is white Corian, which completed with white resin floors create an almost seamless appearance of the main space in the Video Games Theatre. The walk around Lan Arena is covered with white marble, to distinguish the plinth from upper parts of the building. In the design, some gaming spaces are covered with white Corian, while other rooms are purposely more dim and dark thanks to the use of Black MDF and black resin floor. Also, to emphasise the volume of Lan Arena, concrete, movable floor slabs of the scene are overlaid with black resin, which is also reflected in the portable pieces of the ceiling covered with black MDF.

Materials used in the main structure of the building are - prefabricate concrete plinth, white painted, light steel structure in the upper part and Solar Channel Glass (Bendheim). For isolation purposes Channel Glass can be partly filled with Aerogel facing inside of the building and leaving the space for programmable led system of avatar displays towards Akihabara.

Moreover, different types of glass inside allow full transparency or isolation of spaces where it is needed. Blurry effects used in thresholds between spaces introduce the element of curiosity to the gameplay and encourage players to discover the building.

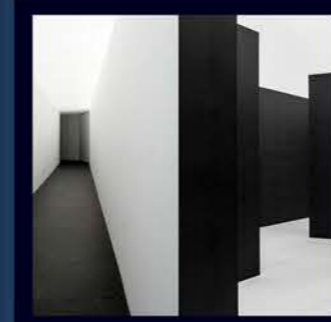
The use of basic RGB colours inside the Video Games Theatre is inspired by colours used in gaming industry, where green, red and blue are often used in game design as well as during bigger gaming events. Mostly, green reflects hard core gaming or programming, while red and blue expose 'bad guys' vs 'protagonist' concept. Thus, in the building green is assigned to game development, red perceived as more active colour mirrors a dynamic character of Immersive game path, while blue, more static, shows MMO route.

Figure 120. Inventory of materials, base attributes - structure and glass



INVENTORY

base attributes



structure



Prefabricated concrete structure



Steel structure painted white



Bendheim
Solar™ Channel Glass
(Ultra-Brilliant Low-Iron or Regular)

Programmable led system integrated inside the channel

glass



Sensitile
Jali Panel, Cascata Resin Cladding

Covered with

Mistlite Glass
Pattern no. 2

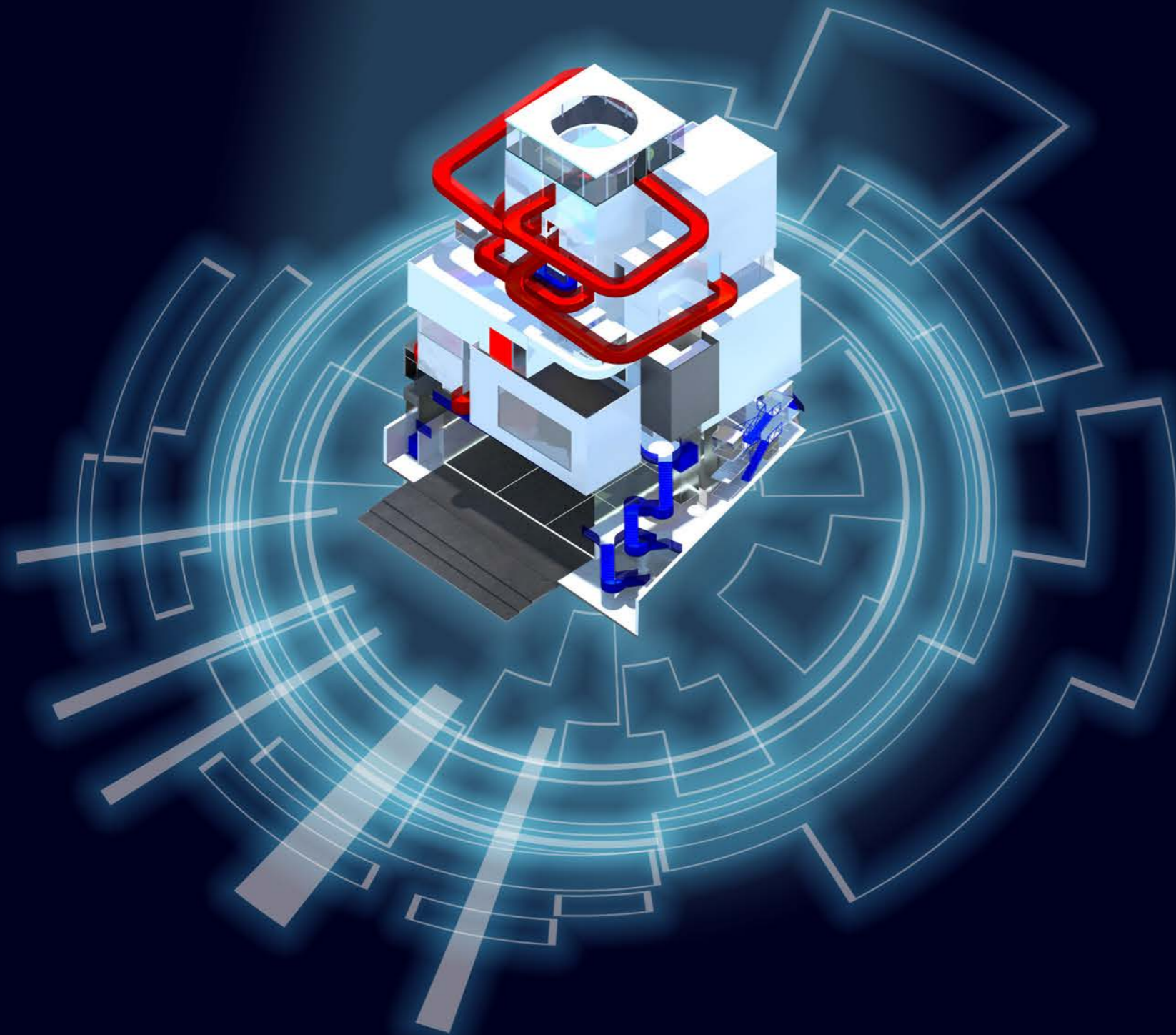


Clear Architectural Glass



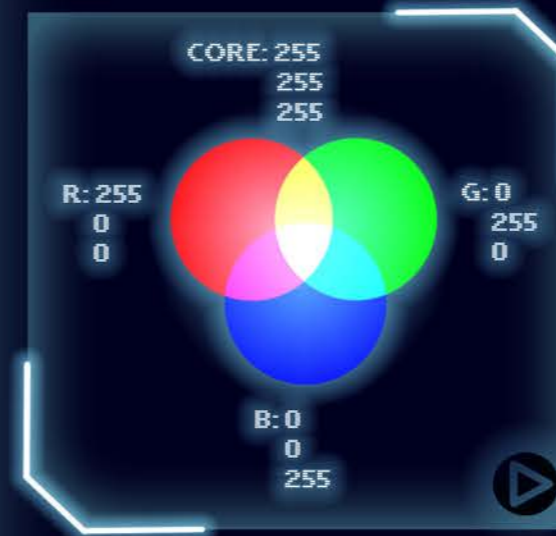
Bendheim
Low-Iron "Soft Fluted" Textured Architectural Glass

Figure 121. Inventory of materials, RGB based materials



INVENTORY

RGB colours used in gaming industry



RGB based materials



game elements



Plexiglas Satinice
Strawberry 3C04 DC



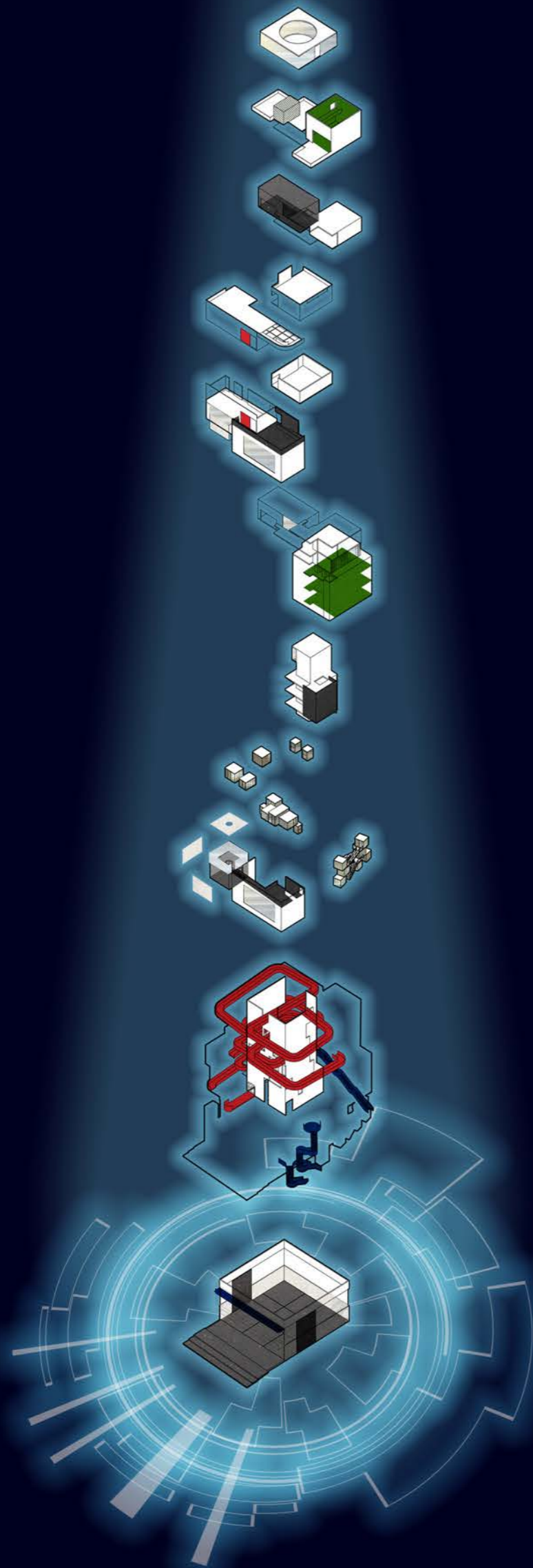
Plastic Vitra
68 light green

+ Textiles



Plexiglas Satinice
Sky Blue 5C01 DC

Figure 122. Inventory of materials, base attributes - walls and floors

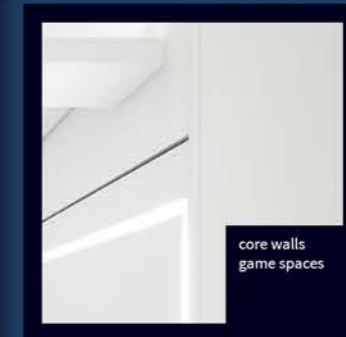


INVENTORY

base attributes



floor and walls



White corian



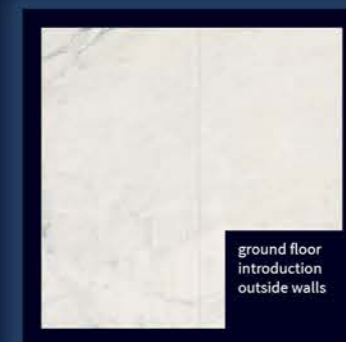
Black resin floor



White resin floor



Black MDF



White marble

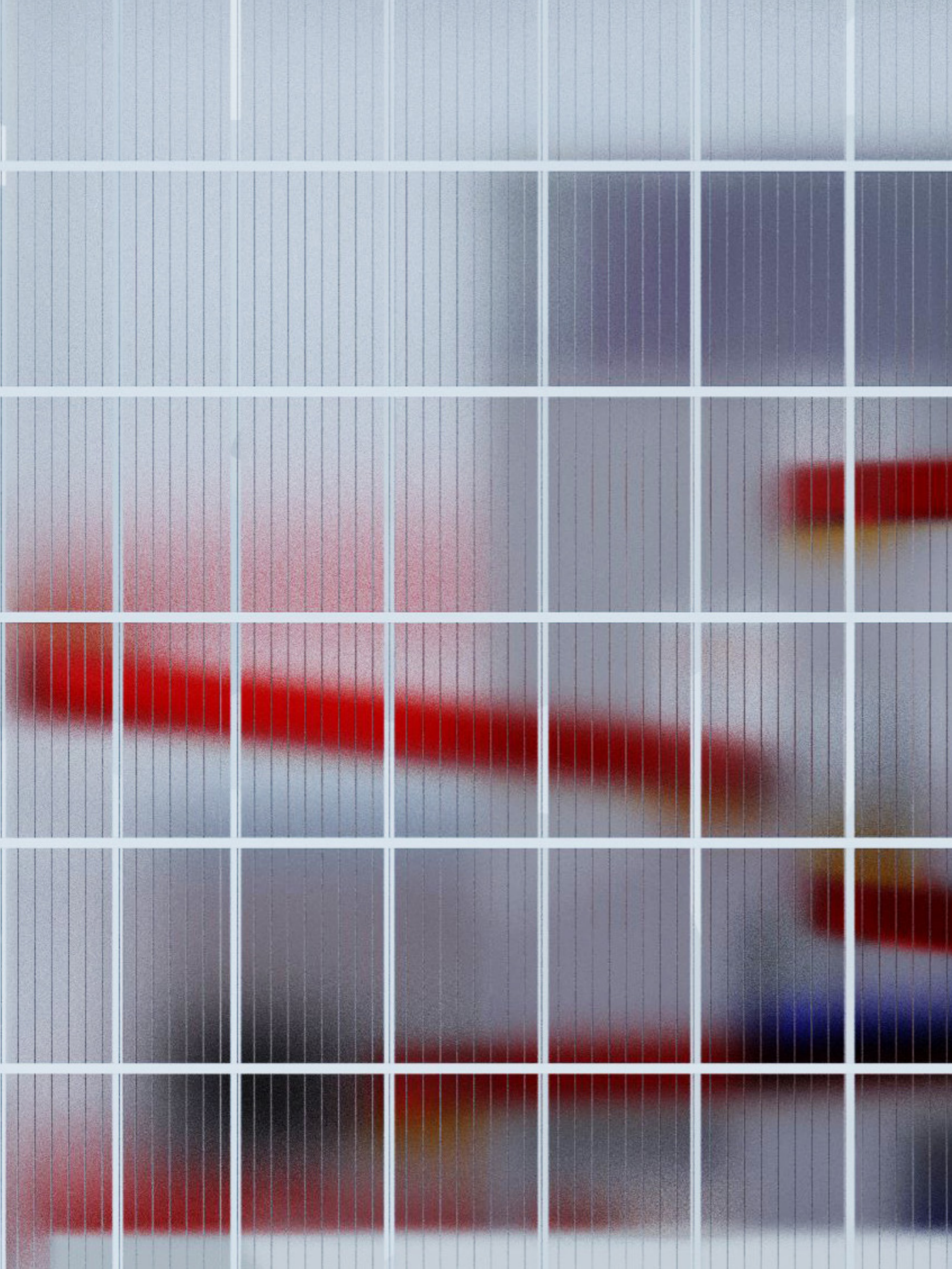


Figure 123. Left page: Part of the south elevation

5.6. Elevations

The facades of the building can be divided into two distinctive parts - transparent plinth and semi-transparent top. The plinth is left fully translucent from the ground floor up to 8 meters above. This is done to create a visual connection between the inside of the theatre and the rest of Akihabara, where a passer-by can look into the building and the activities hosted inside. By this, the architecture confronts stereotypes concerning an enclosure of gaming communities. Accordingly, clear architectural glass is attached to the prefabricated concrete structure of massive pillars and beams, which even more divide two parts of the building.

Nevertheless, for a building to become a game an element of curiosity and adventure is needed. Thus, the upper part of the theatre is covered with channel glass structure, giving more sensitive and isolated feeling, making a passer-by to curiously look into the core of the building and start an adventure. This feeling is emphasised even more by diverse volumes of game spaces and paths inside, which were described before. Yet, some parts of the upper facade are covered with clear architectural glass, to create visual connections with Akihabara in specific points of the building - start of the game, game development workshop, foyer of the auditorium

and cafeteria terrace. The rest of spaces are blurred by the diffused texture of channel glass, where only smooth light marks the contours of game spaces and where gaming paths appear as delicate veins under a skin.

Thus, elevations play a very important role in the Video Games Theatre. They act as mediators between Akihabara and leisure activities hosted inside. This dialogue is implemented by the viewing connections between the inside and the outside, an avatar display showing leisure activities in the building to the rest of Akihabara, but also by relating to architectural elements of the area - old Otaku buildings and new IT offices.

Figure 124. Left page:
South elevation

Figure 125. Right page:
East elevation

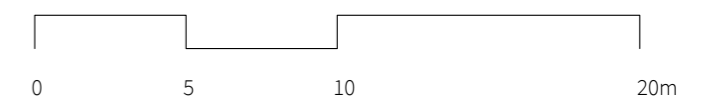
Figure 126. Next page:
North elevation



South elevation



East elevation





North elevation



5.7. Structure and details

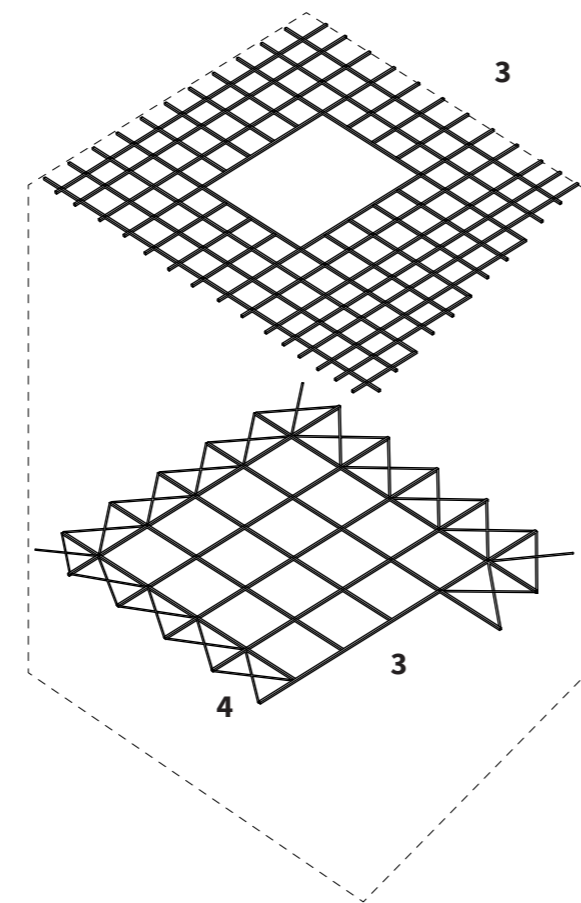
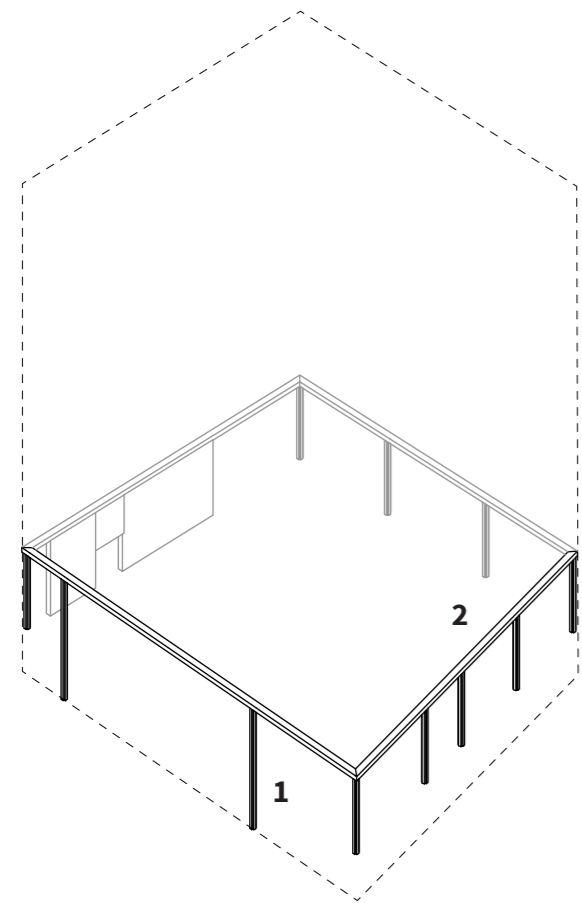
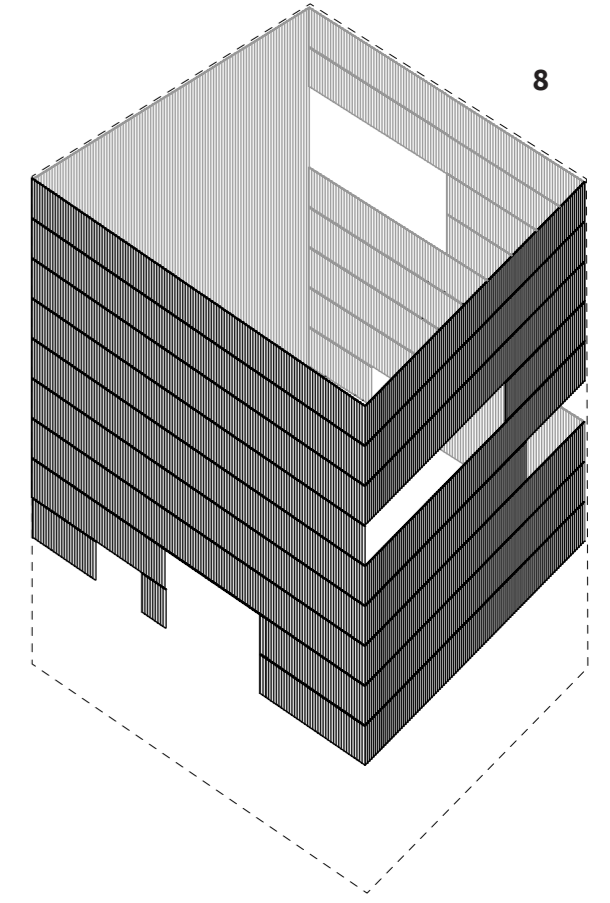
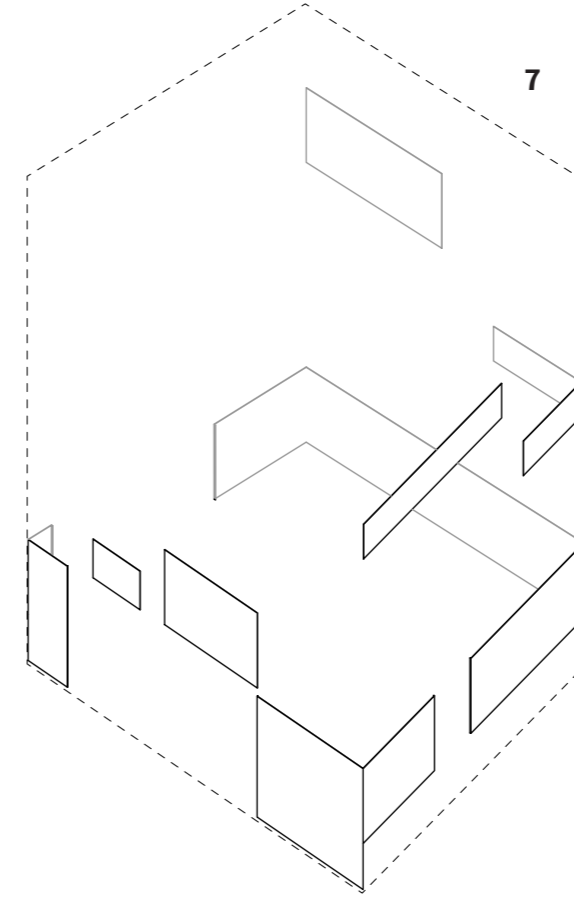
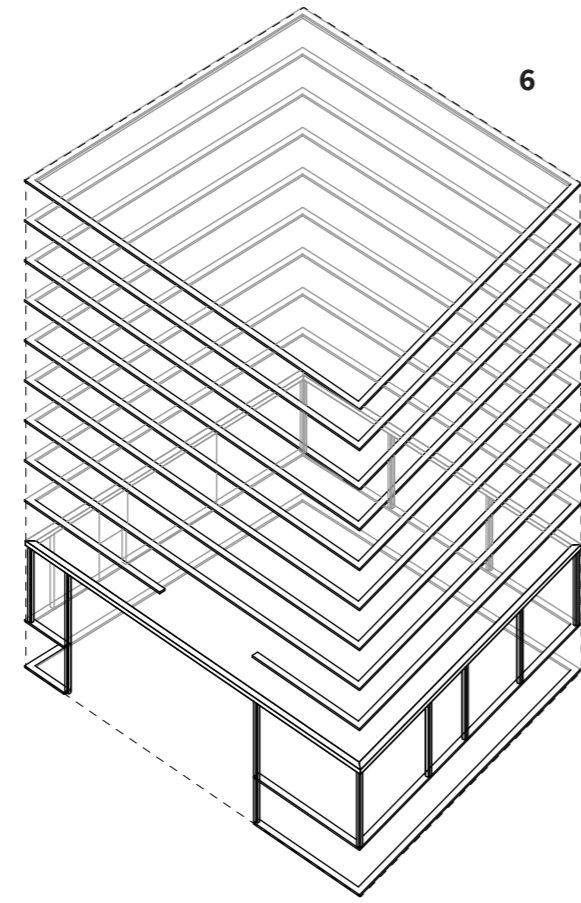
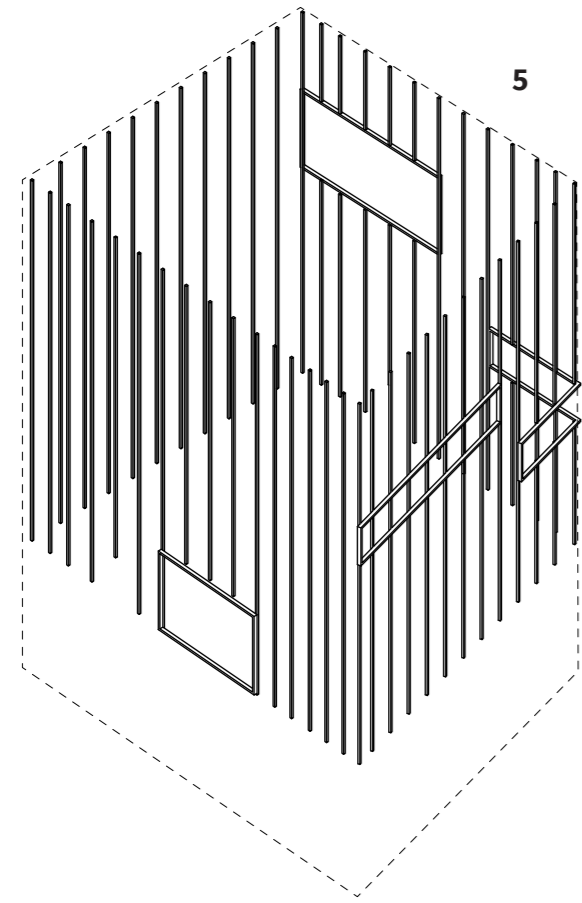
The structure of the building is divided into two parts: prefabricate concrete plinth and steel structure above. The concrete plinth serves as a foundation of the building, a socket in which CPU core and Lan Arena are inserted. The steel structure above consists of SHS 200 pillars, SHS 200 and double UPN 200 beams, connected with steel ribs and plates for stability. Also, for fire protection steel will be painted white.

The fringe between the upper part of the structure and the plinth is where the structural elements merge. The component which connects the CPU core with the outside structure is a grid of steel HEB 180 beams, placed on top of each other in the east-west and the south-north direction. The beams carry the load to the prefabricate concrete beam of 55x55 centimetres and 50x50 centimetres. Thus, this part of the building visually and structurally divides the theatre into two distinctive parts.

The concrete plinth emphasises the bottom of the building. The entrances are highlighted by the 50x50 centimetres concrete pillars, designed on the plan of a cross for a slenderer appearance. The technical area above the Lan Arena is made of steel grid structure using SHS 200 beams and pillars stabilized with bracing, and suspended

on the main steel grid structure. The immersive game ramps are made of steel grid structure and suspended on steel cables, attached to the core and outer shell of the building.

*Figure 127. Next page:
Elements of the structure*



Elements of the structure

- 1 Prefabricate concrete pillar 50x50cm
- 2 Prefabricate concrete beam 55x55cm
- 3 Steel beams HEB 180
- 4 Bracing
- 5 Vertical steel structure 20x20cm
- 6 Horizontal steel structure, double UPN 200
- 7 Clear Architectural Glass
- 8 Channel glass, dimension of a channel 33,10x4,10cm, with programmable led system integrated
- 9 Concrete foundation

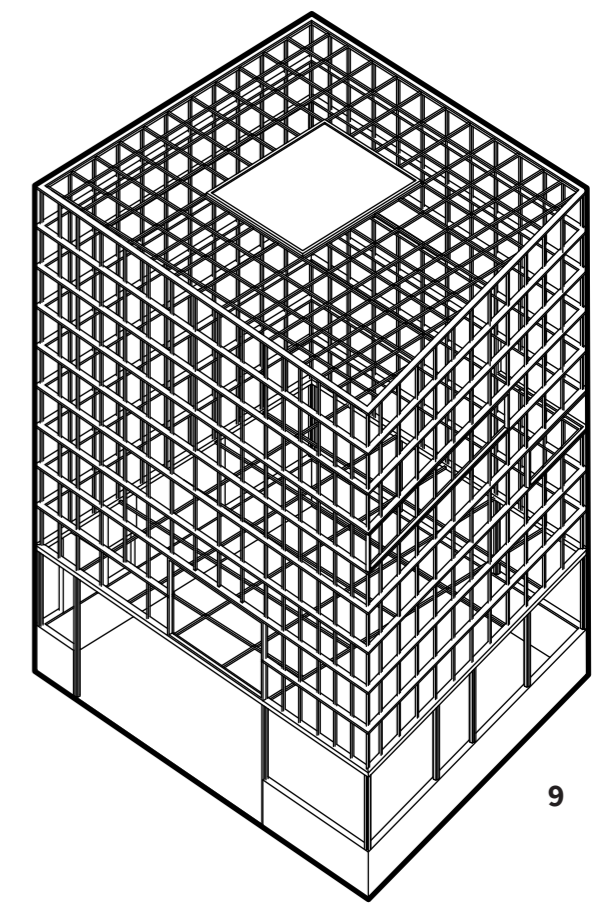
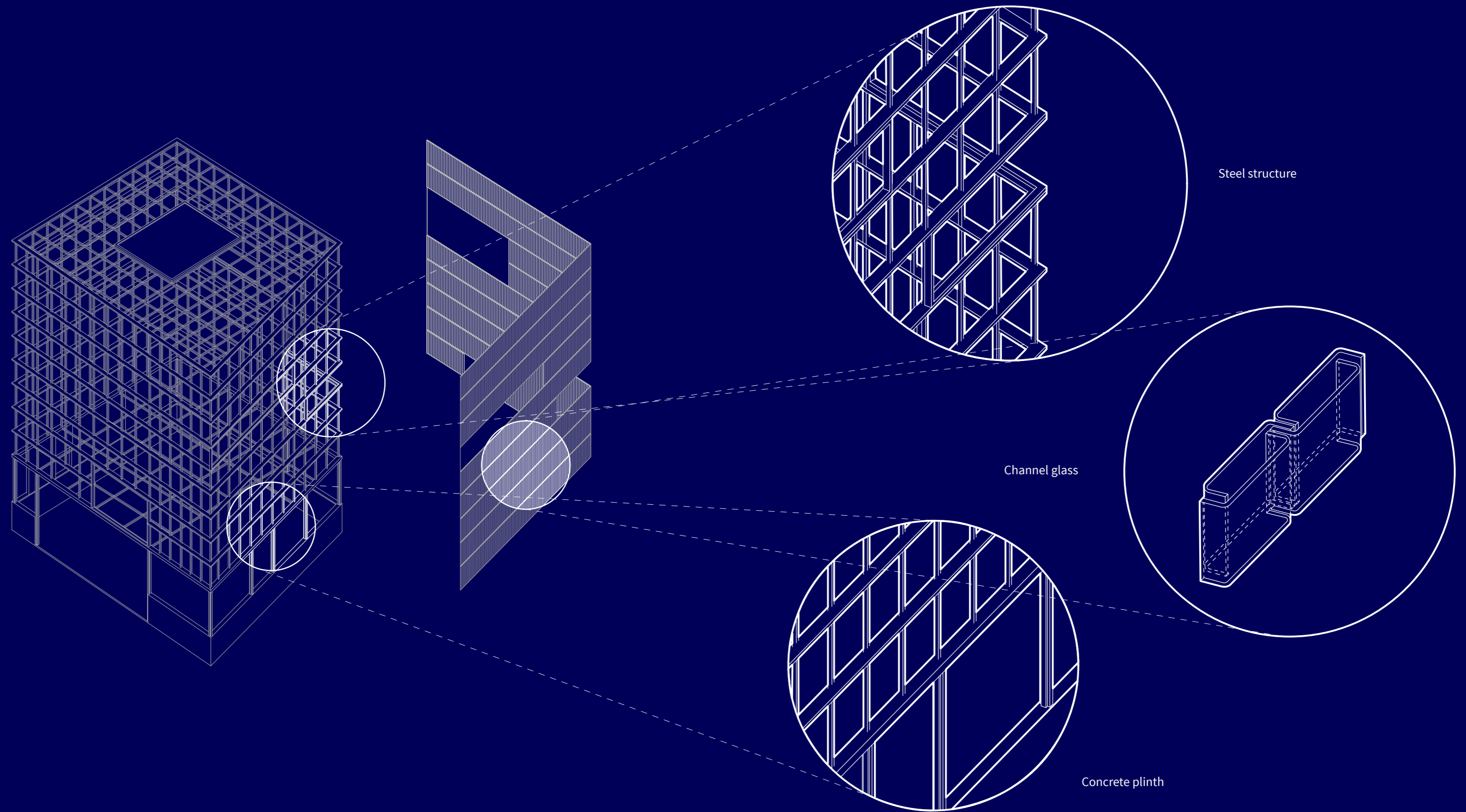
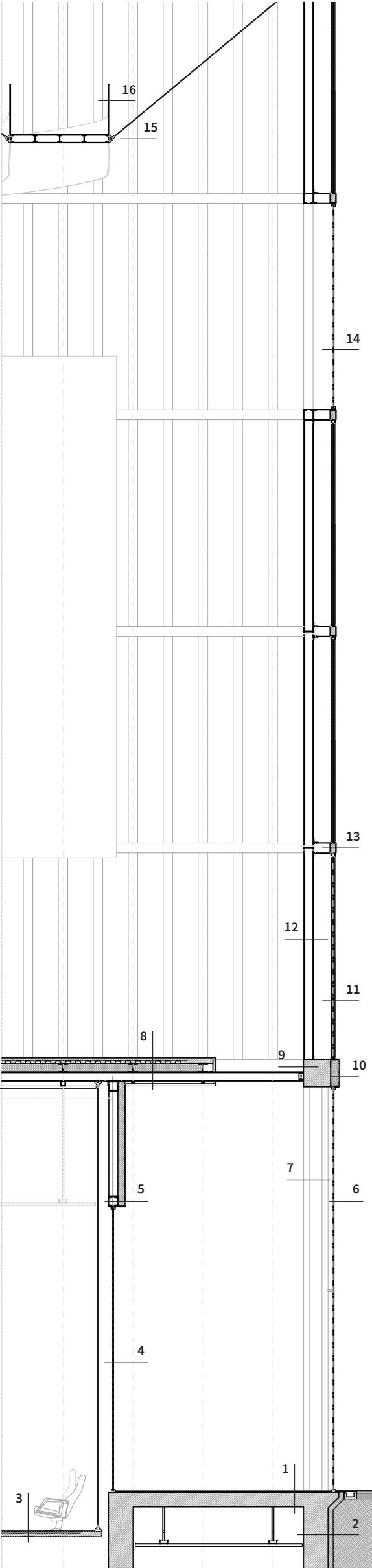


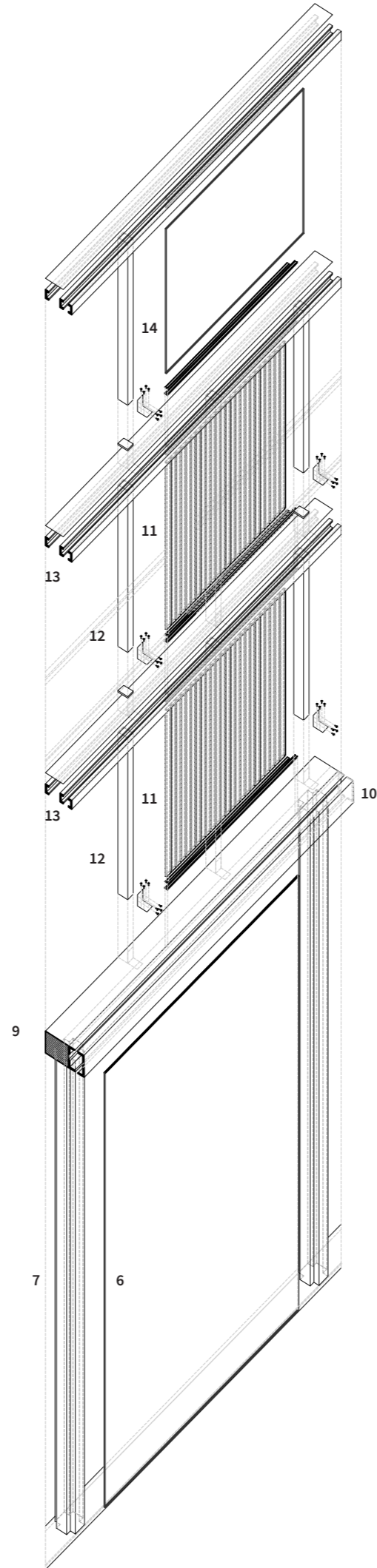
Figure 128. Zoom into chosen elements of the structure





Steel structure, channel glass and concrete plinth, 1:100

- 1 Concrete floor 30 cm (CPU slot), covered with white marble plates 2,5 cm
- 2 Foundation of the building, reinforced concrete 50 cm
- 3 Adjustable concrete slabs of the Lan Arena audience, 10 cm reinforced concrete plate on steel cables
- 4 PDLC Smart Glass system, changing opacity of the glass
- 5 Steel structure around technical space above the Lan Arena: double UPN 180 with space left for Smart Glass installation, steel pillars SHS 200 with bracing, connected to SHS 200 beam and hanged to HEB 180 beam
- 6 Clear architectural glass
- 7 Reinforced concrete pillar 50 cm on a plan of a cross
- 8 Floor of the core, attached to the outside structure with HEB 180 beams
- 9 Prefabricate concrete beam 55x55 cm
- 10 Steel equal angle profiles 15 cm, support for channel glass attached to the prefabricate concrete beam, steel profile covering
- 11 Channel glass 33,10x4,10 cm with programmable led system integrated inside
- 12 Steel pillar 200 SHS
- 13 Double UPN 200 attached to 200 SHS pillar with a steel plate
- 14 Clear glass
- 15 Steel grid structure covered with fiber cement boards and hanged on cables to the outside and core structure
- 16 Acrylic glass modules 120x120 cm



Connection of channel glass to steel structure, 1:20

- 1 Double UPN 200 steel beam
- 2 Insulation
- 3 Channel glass 33,10x4,10 cm
- 4 Programmable led system
- 5 Steel rib
- 6 Steel plate for attachment of pillars
- 7 Steel pillars SHS 200

Connection between transparent glass and channel glass, 1:20

- 1 Double UPN 200 steel beam
- 2 Insulation
- 3 Channel glass 33,10x4,10 cm
- 4 Programmable led system
- 5 Clear glass
- 6 Steel rib
- 7 Steel plate covering
- 8 Steel beams UPN 200
- 9 Steel pillars SHS 200

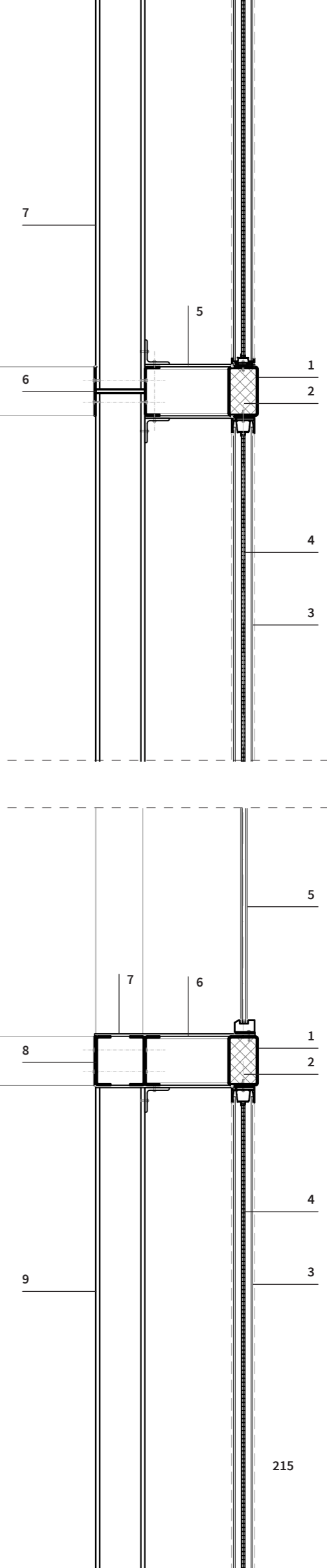
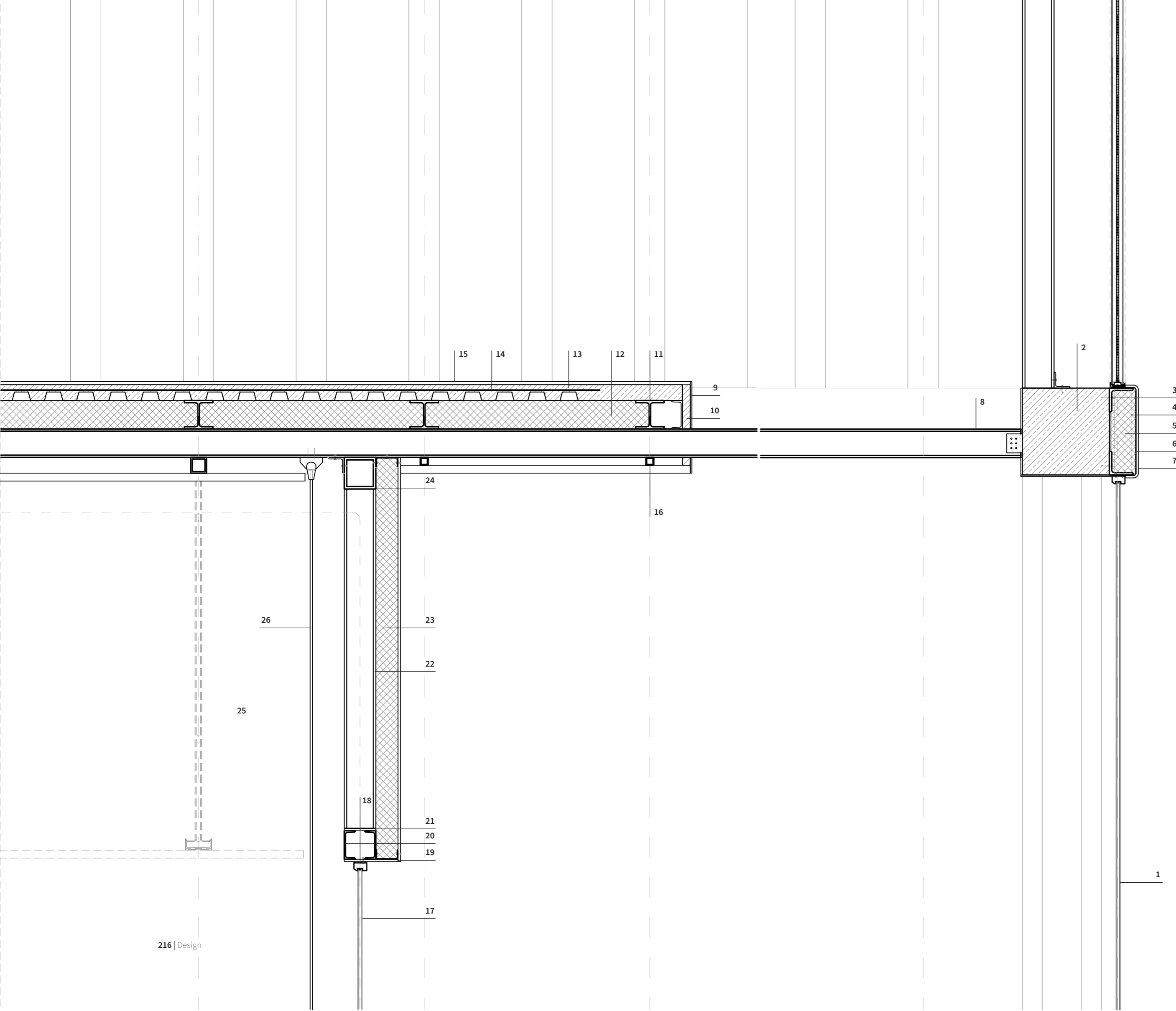


Figure 129. Left page: Facade detail, 1:100

Figure 130. Right page: Connection details, 1:20

Figure 131. Connection detail between the core and the outer structure, 1:20



Connection between the core and the outer structure, 1:20

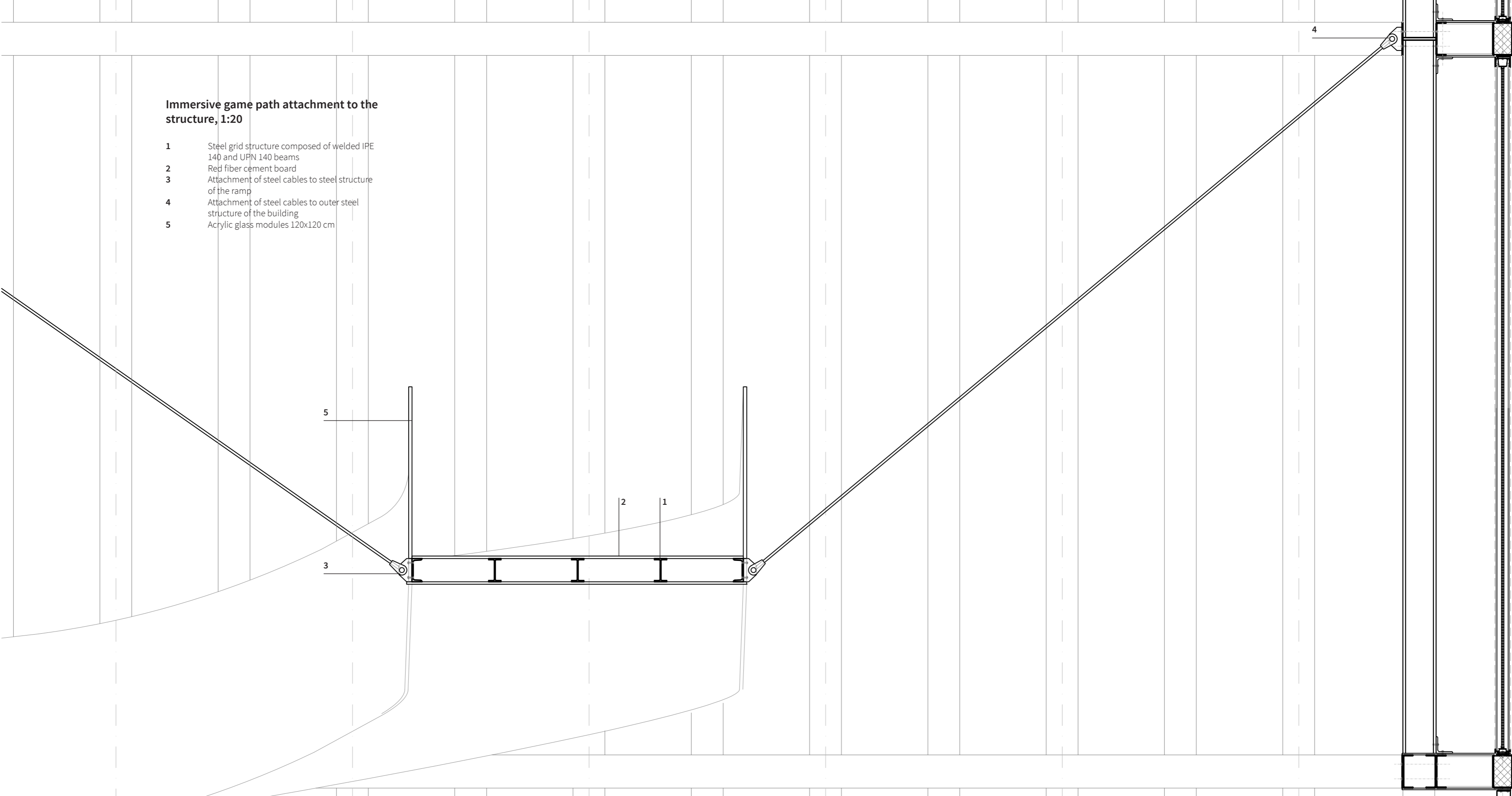
- 1 Clear architectural glass
- 2 Prefabricate concrete beam 55x55 cm
- 3 Steel equal angle profile 15 cm, attached to the prefabricate concrete beam
- 4 Steel rib every 1,5 m
- 5 Insulation
- 6 Waterproof membrane
- 7 Steel profile covering
- 8 Steel beam HEB 180
- 9 Steel plate fixing 1,2 cm
- 10 Dilatation
- 11 Steel beam HEB 180
- 12 Insulation for accoustic purposes
- 13 Prefabricated concrete floor slabs
- 14 Reinforcing grid
- 15 Resin floor finishing
- 16 Suspended ceiling
- 17 PDLC Smart Glass system, changing opacity of the glass
- 18 Space for Smart Glass instalation
- 19 Steel plate 16mm
- 20 Double UPN 180 steel beam
- 21 Steel plate 16 mm
- 22 Steel pillar SHS 200 with bracing
- 23 Insulation for accoustic purposes
- 24 Steel beam SHS 200
- 25 Technical area above the Lan Arena
- 26 Steel cables attached to Lan Arena movable slabs

1

Figure 132. Detail of the ramp, 1:20

Immersive game path attachment to the structure, 1:20

- 1 Steel grid structure composed of welded IPE 140 and UPN 140 beams
- 2 Red fiber cement board
- 3 Attachment of steel cables to steel structure of the ramp
- 4 Attachment of steel cables to outer steel structure of the building
- 5 Acrylic glass modules 120x120 cm



A pixelated cityscape at night, rendered in a retro, low-resolution style. The scene is dominated by dark blue and black tones, with bright yellow and white highlights from the buildings and the game's text. The city features several tall skyscrapers with glowing windows, and a street with a few cars and streetlights. The overall aesthetic is reminiscent of early computer graphics.

GAME OVER

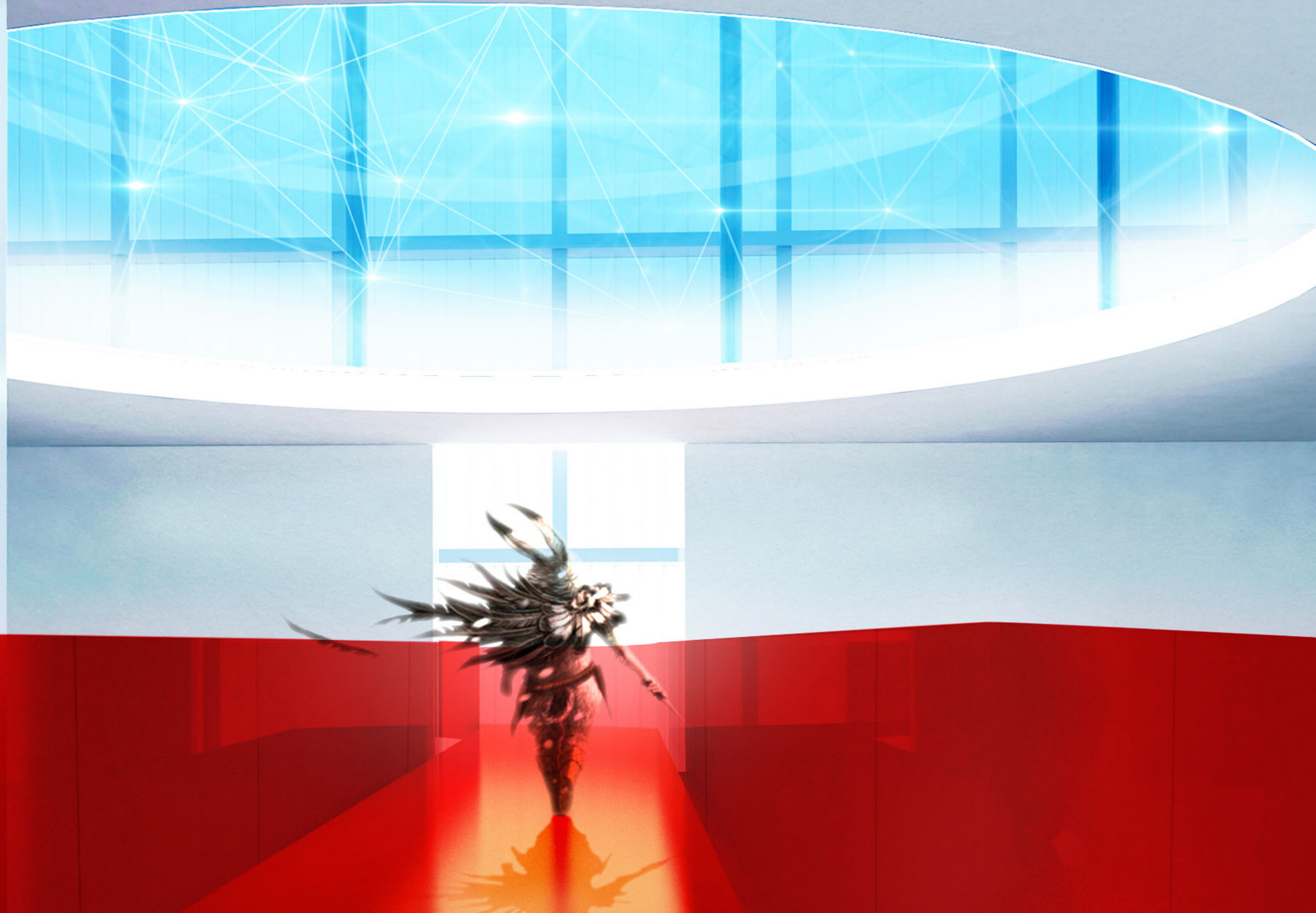
DO YOU WANT TO CONTINUE ?

▶ YES

NO

Level 6 ... THE END

Figure 133. Path to the score room



Conclusions

In the end, leisure should be perceived as a practice of exploring the world and what it offers by collecting unique experiences. Thus, leisure is a search for more than a mere living, a development of 'self' based on passions, by which one can shape own identity and personality. Leisure is a tool which can influence this process; therefore, the most important leisure concepts are the ones we can practice daily, and which give us the feeling of freedom and being alive in a consumptive world. Besides, leisure brings the sense of community and being a part of something bigger, which is contrary to an anonymous character of contemporary living. Last, leisure, being an escape from a daily routine, should be simply fun.

To continue, the future of leisure lies in-between the real and virtual spaces. A transition to the virtual domain in leisure happened so quickly, that many have not even noticed the change. The number of virtual communities is expanding rapidly and today almost everyone is a member of at least one of them. Now, the concept of virtual is associated with an expectation for 'beyond body and matter', where one can completely detach from reality. Nevertheless, the two are strongly connected, they exist along each other and interrelate. For instance, before a gaming session a player drinks a coffee, puts on VR headset, places a snack next to a computer, which means he never leaves the real space while immersing into the virtual world of a game. Having this in mind, virtual and real spaces should be understood as inseparable, where a mediator between them is an architectural space. To continue, the idea of architecture in

virtuality can be defined in three ways. First, as an inseparable element of a building's design, where one can enter the code into the system and leave the virtual space at will. Second, as a new way of designing and perceiving a space, the idea of intangible, immaterial aspect of a design and augmentation of senses. Third, it can be perceived as a way of constant redefining and rediscovering of the spaces.

Taking those elements into account, a leisure concept which fulfils all those characteristics is a concept of play. Play is an activity which can be practiced daily, is accessible for everyone, and is experienced through immersion into fantasy and dream – the intangible, virtual elements. Also, play is an activity which involves both the actor and the spectator, helps to 'blow off steam', escape a daily routine, and last – is fun. Yet, play should be perceived as a process which unfolds in time, not as a solid but a series of connected events. Nonetheless, the concept of play is a very broad subject which needs a medium to take place. Thus, a highly engaging and complex medium of the 21st century, which lies in-between the real and virtual spaces is a video game. As the history of video games has shown, video games are cultural artefacts in which emotions, passions and trills of player are engraved, and which were started by enthusiasts of computers and Japanese popular culture. Hence, from their very beginning in the '60s and the '70s video games were developed as a pure leisure concept both for its users as for its creators, and given a scientific attention only after the turn of millennium.

Taking all the above-mentioned elements into account, a new concept of leisure was defined: A Video Games Theatre of the future. Thus, the research question stated in this thesis was: 'How can a video games centre become a theatre of the future and a medium for the future of leisure in 2030?', and going a step further in the discussion: 'How can a building become a video game itself?'. To answer those questions, first the perfect location for the design needed to be chosen. The extensive research of video games history has shown the importance of Japanese gaming industry and its influence globally. Therefore, the location chosen for the design is a special district in Tokyo (a global capital of new technologies), which was created by personal tastes of virtual communities who settled in this place and influenced its development according to their specific preferences – and that is Akihabara – a leisure city.

After the research of Akihabara's history, a specific place for the design was chosen and its position in the future of the district defined. Hence, the Video Games Theatre is located in the south part of the area, and designed as a gate to it. Aligned with three other building at the crossing near Mansei Bridge, the design acts as a welcoming element at the start of Akihabara's main street – Chuo-dori. The building uses the elements encountered in the location – the architecture of old Otaku buildings combined with the new IT offices, and hardware and software elements which can be bought in Akihabara's shops. As a result, the building mediates with the large and small-scale components, uses the architecture of a motherboard for a distribution of the program

and in the design of gaming paths is inspired by a retro game *Donkey Kong*. To embed the design even more in its context, the typical elements of Japanese cities were incorporated. First, the ornament of neon signs covering the building in Tokyo is reflected as an avatar display in the façade of the theatre, which converts a building into the realm of simulation, and thus a peculiar fantasy. Second, is the emphasis on the street and perception of a city as a series of connected events. Thus, the inside of the theatre is designed as an evolving, fluctuant space, where the gaming paths act as Japanese streets – vivid components which enhance the city's life.

To become a theatre of the future and a medium for the future of leisure in 2030, the building needs to follow the coming expectations of the video games market. The trends of the future of gaming industry revealed three necessary aspects of gaming for the future of leisure: MMO (Massively Multiplayer Online), Immersive game (VR) and Independent game development. Hence, those fundamentals were incorporated in the design of the building and embedded in the program. The above-mentioned act as the elements of a journey, thanks to which a player is deeply involved in a game while staying in contact with a changing character of architectural spaces. Moreover, after the analysis of the future trends in Japanese gaming industry, the necessary elements were defined for the design and its possible influence on the gaming scene in Japan and globally. Thus, the model of creative industries typical for Akihabara was used, where a player and a maker cooperate in the design process. As a result, the Video Games Theatre is

based on the needs of Japanese indie and doujin gaming scene, allowing the developers to show their work and involve in the discussion about video games outside the occasional gaming events and virtual means.

Now, for the theatre to become a video game itself the building was designed as a highly immersive and dynamic space, which involves both the actors and spectators in a way they cannot be distinguished anymore. Moreover, the circulation in the building acts as game mechanics, which players need to follow to shift around a game. The combination of transparency and isolation opens the gaming community to the outside in the plinth of the building, while maintaining the element of curiosity in gaming spaces which needs to be discovered and experienced from the inside. Moreover, some spaces in the building are unprogrammed, left to be redefined by the gaming community, thus becoming a domain of virtuality. As a result, the building becomes a peculiar journey, an adventure where real and virtual spaces merge creating an engaging leisure experience.

In conclusion, leisure is an important aspect of life and human development. In the future of leisure video games will play a crucial role, as they offer ways of interaction which were not possible before. What can be often heard is the cruelty and addictiveness of games, which narrow them down to a harmful medium. However, the same could be said about for instance the movie industry, if it would be perceived from a perspective of one brutal film, without seeing how much more it can offer. Therefore, in the end what video games can give is the creativity, immersion and the feeling of connection to the community like no other medium can do. To continue, the architecture can influence how the real and virtual spaces will be inhabited in the future, making them equally engaging when the game is on as when it is off. Thus, if in the end of the day one can escape a daily routine and immerse for a moment of leisure into the blurry boundary between the real and virtual domain, then I think it is beautiful.



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