



BLOCK R

ROTTERDAM



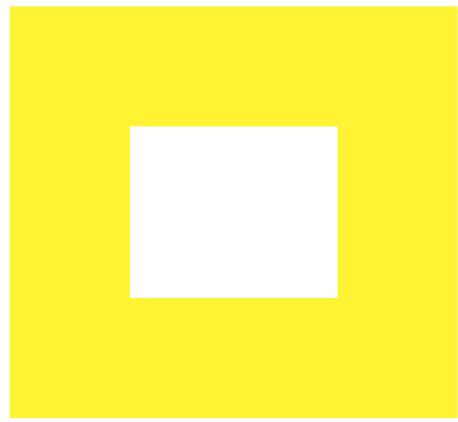
TEUN PRINS
MASTER OF ARCHITECTURE - TILBURG
GRADUATION PROJECT
2022-2023



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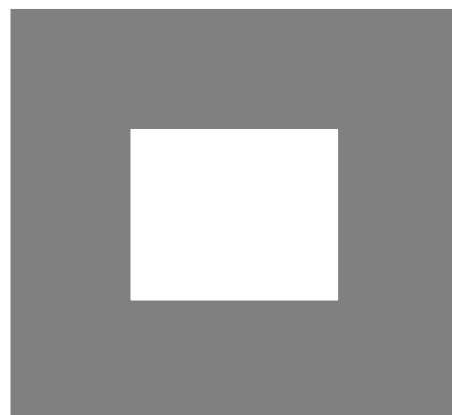
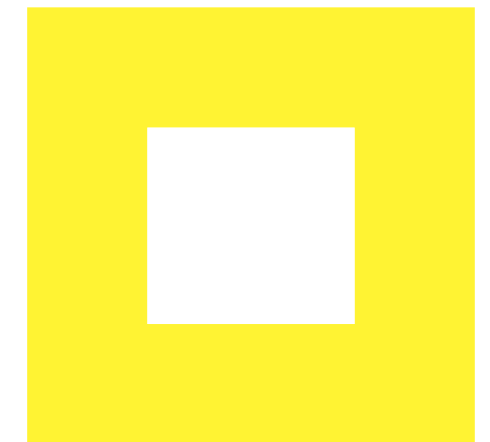


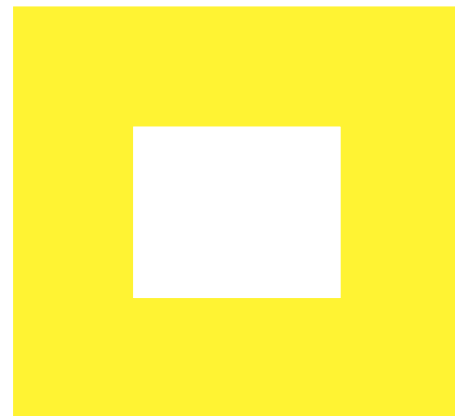


INTRODUCTION

FUTURE GENERATIONS OF CITY INHABITANTS ARE FACING SEVERAL PROBLEMS SOON, DUE TO SEVERE AGEING AND DIGITALISATION, THERE WILL BE A LACK OF SOCIAL INTERACTIONS WHICH CAUSES (DIGITAL)ISOLATION. CENTRALISATION IN THE NETHERLANDS WILL PROVIDE A NEED FOR URBAN DENSIFICATION WITHIN URBAN TISSUES. AGEING WILL SHIFT THE MAIN USER IN URBAN AREAS, AND THIS IN ITS TURN CREATES NEW DEMANDS FOR INNER-CITY INHABITANTS. THE NEW CITY BLOCK IS A REACTION IN ARCHITECTURE TO SERVE THE NEEDS OF THE FUTURE INNER CITY AREAS AND THEIR INHABITANTS. DESIGNING FROM THE VOIDS WILL PROVIDE A BASE FOR SOCIAL NETWORKS TO FORM, AND THE LEVEL OF SOCIAL INTERACTION WILL CREATE A SENSE OF COMMUNITY WITHIN THE BLOCK. THE VOID WILL ACT AS A FLUENT SPACE THAT FORMS THE CONNECTING ELEMENT BETWEEN THE DIFFERENT FUNCTIONS AND THE INNER CITY OF ROTTERDAM. CREATING A CARRIER OF THE DYNAMIC NEEDS OF THE FUTURE CITY IS SOMETHING THAT WILL BE CHALLENGING AND THEREFORE REALLY INTERESTING. LOOKING FORWARD TO THE FUTURE !

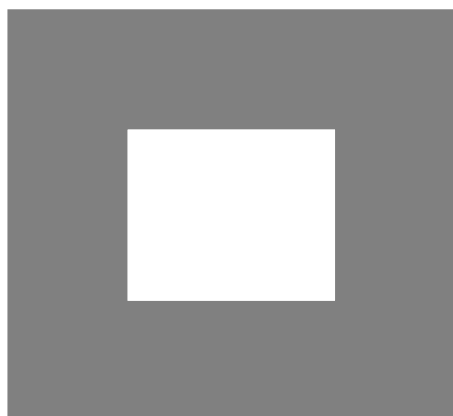
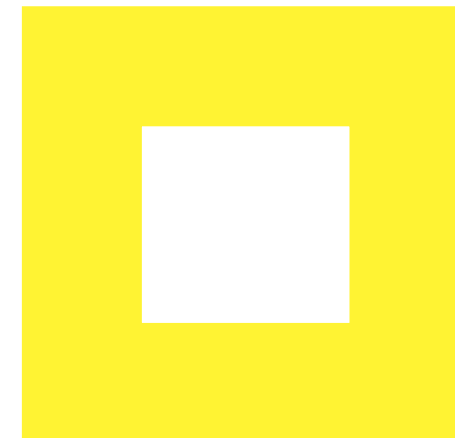
WHILST LOOKING INTO THE FUTURE AND DECIDING ON THE NEEDS FOR FUTURE URBAN AREAS, RESEARCH REVEALED SOME PROBLEMS THAT THE NEXT GENERATION WILL BE FACING. CREATING A PLACE FOR PEOPLE TO LIVE IN AN EXTREMELY URBAN AREA CREATES SOME ISSUES BUT ALSO SOME EXCELLENT OPPORTUNITIES. THE DRIVERS FOR THE DESIGN ARE DIRECTLY LINKED TO RESEARCH AND THE MAIN DRIVERS FOR DESIGN ARE THE NEED FOR DENSIFICATION AND DWELLINGS IN THE CENTRAL AREAS OF THE CITY, THE DIGITALISATION AND INCREASED ANONYMITY WILL CREATE A NEED FOR MORE SOCIAL INTERACTION IN THE PUBLIC SPACES. DESIGNING IN A DENSE CITY BLOCK TYPOLOGY CREATES CHALLENGES FOR DESIGN WHEN THINKING ABOUT A MIX OF LIVING, ECONOMY AND PUBLIC SPACE. THE VOID IN THE CITY BLOCK CAN BE PERCEIVED AS THE NEGATIVE SPACE THAT IS CONNECTING THE OTHER ELEMENTS OF THE CITY BLOCK, THEREFORE THIS VOID SPACE CAN BE THE CONNECTING ELEMENT IN DESIGN.

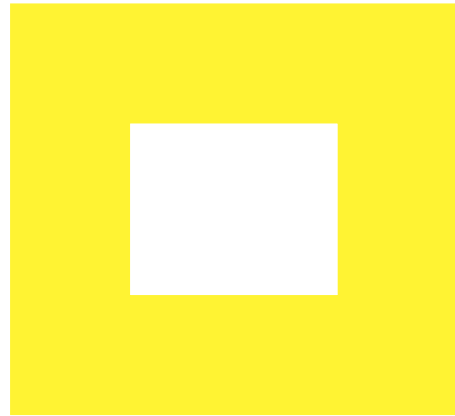




THESIS

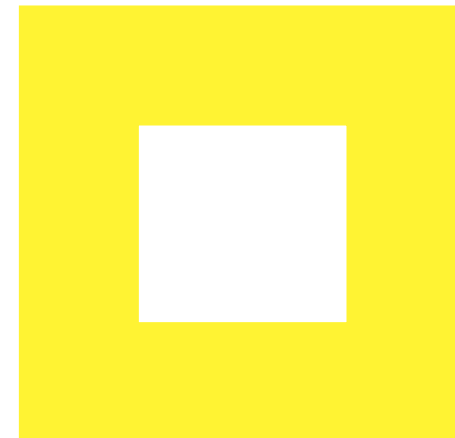
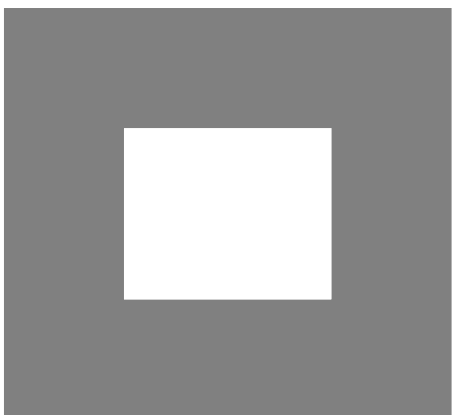
THE NEXT GENERATION OF INNER-CITY INHABITANTS WILL FACE SEVERAL CHALLENGES, THE NEED FOR HOUSING WILL INCREASE AND CENTRALISATION WILL PRESSURE THE SUPPLY OF DWELLINGS IN THE INNER CITY. AGEING SOCIETY WILL CREATE AN INCREASED NEED FOR HUMAN INTERACTION AND SOCIAL SPACES. THESE DWELLINGS SHOULD THEREFORE BE COMPACT TO CREATE MORE DENSE AND QUALITATIVE LIVING SURROUNDINGS FOR THE NEXT GENERATION OF PEOPLE LIVING IN THE CITIES. THE PROGRAM WITHIN THE CITY BLOCK SHOULD COMPLEMENT EACH OTHER AND REPRESENT THE NEEDS OF A DYNAMIC SOCIETY, THIS DYNAMIC SOCIETY IS LOOKING FOR FLEXIBLE SOLUTIONS FOR THE FUTURE. THE RELATIONSHIP BETWEEN THE CITY BLOCK AND THE INHABITANTS WILL SHAPE THE NEW STANDARD FOR NEW BUILDING BLOCK TYPOLOGIES.





ESSAY

THIS ESSAY IS PURPOSED AS A REFLECTION AND EXPLORATION OF THE THESIS AND THE LINK THIS CREATES BETWEEN THE SUBJECTS AND ARCHITECTURAL LANGUAGE. THE EXPLORATION OF THESE SUBJECTS SHOULD CREATE A IN DEPTH REFLECTION BETWEEN THE THESIS AND THE GRADUATION PROJECT.



REFLECTIVE NARRATIVE

DESIGNING FOR THE FUTURE

THIS GRADUATION PROJECT HAS FORCED ME TO EXPLORE DIFFERENT SPECTRUMS IN THE FIELD OF ARCHITECTURE, THE RESEARCH PHASE I FELT WAS CONTINUOUS AND THEREFORE THE RESEARCH HAS PLAYED A BIG PART THROUGHOUT THE WHOLE DESIGN PROCESS. EXPLORING THE THESIS HAS SHED LIGHT ON DIFFERENT ASPECTS OF THE TOPIC BUT HAS ALSO REVEALED SOME TOPICS THAT WOULD OTHERWISE HAVE BEEN DISMISSED. RESEARCH IS NOT LINEAR BUT IS RE-OCCURRING IN EVERY PART OF THE GRADUATION PROJECT, DESIGN CANNOT BE DONE WITHOUT A BASE OF INFORMATION THAT FORMS A SET OF NEEDS AND PROGRAMS TO INFORM THE DESIGN. GOING BACK AND REFLECTING ON THE PROCESS IS IMPORTANT TO UNDERSTAND THE NATURE OF THE SUBJECTS, THIS REFLECTION HELPS TO UNDERSTAND THE VITAL ELEMENTS OF THE THESIS. SUBJECTS THAT ARE EXPLORED IN THE THESIS ARE BASED ON ARCHITECTURAL INTERVENTIONS, FUTURE SOCIETY, SOCIAL RELATIONS AND UNDERSTANDING THE FLUENT VOID SPACE THAT CREATES THE “GLUE” TO THE CITY BLOCK THAT MAKES THE SPARK HAPPEN IN THE DESIGN.

RELEVANCE

DURING THE RESEARCH PHASE AND THE PROJECT SPECIFICATIONS, A LOT OF ATTENTION WAS PUT ON THE NEEDS OF THE NETHERLANDS AND THE INCLUSIVE ASPECT OF DUTCH SOCIETY. HOW WILL THE NETHERLANDS FUNCTION IN 2050? AND WHAT DOES THIS “FUTURE SOCIETY ” NEED? THESE ARE THE CORE QUESTIONS TO STARTING EXPLORING THE THESIS, EXPLORING THE THESIS WILL REQUIRE A BROAD PERSPECTIVE AT FIRST AND THEN START NARROWING THE RESEARCH DOWN TO INFORM THE DESIGN IN THE BEST POSSIBLE WAY. THIS NARROWING SHARPENS THE SUBJECT AND CREATES A BASE FROM WHERE THE DESIGN BECOMES MORE CLEAR AND UNDERSTANDABLE, THIS MEANS THE DESIGN BECOMES NATURAL AND SIMPLE TO UNDERSTAND. THE NETHERLANDS CAN BE SEEN AS A DYNAMIC WHOLE THAT INTERACTS WITH THE BUILT ENVIRONMENT, THIS BUILT ENVIRONMENT IS PRESSURED BY THE GROWING NUMBER OF PEOPLE THAT CALL THE CITY THEIR HOME. THIS CENTRALIZATION TREND CREATES PRESSURE ON THE NUMBER OF HOUSES THAT SHOULD BE AVAILABLE IN THE NETHERLANDS AND ESPECIALLY IN CITIES. URBAN DENSITY IS A LARGE PART OF THE ESSENCE THAT CREATES THE NEED FOR THIS NEW WAY OF THINKING ABOUT HOUSING TYPOLOGIES. THE NEW CITY BLOCK CAN, THEREFORE, BE THE SOLUTION AS A REACTION TO THE NEEDS OF THE FUTURE SOCIETY. THE SITE AND CONTEXT CAN INFORM THE NEEDS OF THE PROGRAM THAT CAN BE INCORPORATED INTO THE CITY BLOCK AND ADJUST ITSELF TO THE SPECIFIC NEEDS OF THE TIME. THE SEVERE AGEING IN DUTCH SOCIETY WILL CHANGE THE USERS AND THEREFORE WILL AFFECT THE PROGRAM OF THE NEW CITY BLOCK. THE MAIN USERS OF THE CITY BLOCK WILL CHANGE AND THEREFORE THE NEED FOR SOCIAL INTERACTION WILL BE SEVERELY INCREASING, ARCHITECTURE CAN STIMULATE INTERACTION AND EVOLVE THE SOCIAL DOMAIN OF PUBLIC SPACES.

CONTEXT : INTERACTING WITH THE EXISTING SURROUNDINGS

THE INNER CITY AREA OF ROTTERDAM IS A PLACE MAINLY FOCUSED ON THE ECONOMIC ASPECT AND THE INHABITANTS THAT CALL THIS PLACE HOME ARE MAINLY ADDED WITHOUT TAKING THEIR INTEREST INTO ACCOUNT. THE INHABITANTS OF THE CITY SHOULD BE ABLE TO CO-EXIST AND GAIN A QUALITY OF LIFE BY BEING IN THIS CENTRAL SPOT WITHIN THE INNER CITY. THEREFORE THE SITE SHOULD BECOME A VITAL INFORMER OF DESIGN INTERVENTIONS. THE DESIGN INTERVENTIONS CAN BE SHAPED BY THE DESIGN CONCEPT, AND CONTEXT AND INFORMED BY RESEARCH. THIS RESEARCH AND THE URBAN AND ARCHITECTURAL SET OF RULES” ARE THE MAIN DRIVER FOR DESIGN INTERVENTIONS AND SHAPE THE ARCHITECTURAL LANGUAGE. THIS SET OF RULES WILL EVENTUALLY CREATE CLARITY IN THE DESIGN AND KEEPS THE PROJECT PURE.

DOING AN ARCHITECTURAL INTERVENTION REQUIRES A CUSTOM-MADE DESIGN THAT SUITS THE NEEDS OF THE SITE. CAPTURING THE ESSENCE OF THE SITE WILL HELP TO TRANSLATE THE DESIGN TO SEAMLESSLY FIT INTO THE CONTEXT. ROTTERDAM CAN BE PERCEIVED AS A DYNAMIC CITY WITH A TURBULENT HISTORY THAT REQUIRED THE NEED TO BE REBUILT, THESE ACTS OF URBAN RENEWAL ARE VISIBLE IN THE URBAN TISSUE OF THE INNER CITY. SOME HISTORICAL INTERVENTIONS OF URBAN RENEWAL HAVE BEEN MORE SUCCESSFUL THAN OTHERS AND THIS OF COURSE WAS CAUSED BY DIFFERENT FACTORS SUCH AS CHANGING NEEDS OF SOCIETY, DRAMATIC EVENTS AND THE GENERAL SENSE OF THE TIME THAT KEPT EVOLVING. BY LEARNING FROM THE PAST THE ANSWER LIES IN THE FLEXIBILITY OF THE CITY BLOCK. THE BODY OF THE CITY BLOCK CAN BE PERCEIVED AS THE BASE THAT ALLOWS DYNAMIC CHANGES THROUGHOUT THE LIFESPAN OF THE BUILDING. THE RELEVANCE OF THE BUILDING FOR THE NEXT GENERATIONS IS DIRECTLY LINKED TO THE FLEXIBILITY ASPECT OF CHANGE. THE KEY SUCCESS FACTOR OF THE DESIGN IS FOCUSED ON FORMING BASES FOR INTERACTION THAT ARE FILLED IN WITH PROGRAMS THAT SUPPORT THE NEEDS OF THE TIME. THE CHANGING OF FUNCTIONS MEANS THAT THE BUILDING CAN BE USED IN MULTIPLE WAYS THAT ARE REQUESTED BY THE CITY AND ITS INHABITANTS.

THE NEXT STEP IS TO THINK ABOUT SHAPING THIS NEW PART OF ROTTERDAM AND LINKING THE FOUNDATIONS INTO THE HEART OF THE CITY. THE FOUNDATIONS SHOULD BE ROOTED IN THE CITY AND THEREFORE THE FUNDAMENTAL CONNECTIONS ARE MADE TO BECOME PART OF THE URBAN TISSUE. THIS SPACE OF TRANSITION IS KEY TO ACTIVATING THE CITY BLOCK AND CREATING A PUBLIC DOMAIN THAT VISITORS AND INHABITANTS ARE NATURALLY DRAWN TOWARDS. THESE INTERVENTIONS THESE NEW CONNECTIONS ARE TRANSITIONAL SPACES THAT LET PEOPLE VISIT AND EXPERIENCE THIS VOID EASILY AND NATURALLY. THESE WERE COMPLETED BY CREATING A TWO-DIMENSIONAL URBAN CONNECTION THAT ON THE ONE HAND PROVIDES HORIZONTAL TRANSPORT AND ON THE OTHER HAND, CREATES THE START OF THE ADVENTURE ROUTE THAT NATURALLY MOVES PEOPLE TOWARDS THE UPPER LEVELS OF THE CITY BLOCK AND EVENTUALLY THE ROOF PARK ON THE TOP FLOOR.

WHEN DESIGNING IN INNER CITY AREAS THERE ARE LOTS OF STAKES AND CONDITIONS TO TAKE INTO ACCOUNT AND THIS CREATES THIS EXTRA LEVEL OF DEPTH TO THE NARRATIVE. THESE CONDITIONS REQUIRE A DELICATE INTERVENTION THAT BECOMES PART OF THE NEW CONTEXT, THIS NEW CONTEXT PROVIDES VALUABLE NEW RELATIONS IN THE SOCIAL DOMAIN, BUILT ENVIRONMENT AND THE CITY LEVEL. THIS IS THE OPPORTUNITY TO BECOME A VALUABLE PART OF THE NEW INNER CITY OF ROTTERDAM. SHAPING THIS NARRATIVE CONCERNING THE ARCHITECTURE AND THE NEEDS OF THE SITE WILL INTERACT TO INFORM THE URBAN RELEVANCE OF THE CITY BLOCK.

DESIGN CONCEPT

AFTER THE RESEARCH PHASE, THE GENERAL DESIGN CONCEPT OF THE CITY BLOCK BECAME MORE CLEAR AND AFTER TESTING DIFFERENT CONCEPTS THE RIGHT MIX WAS FORMED TO MOVE FURTHER INTO PRE-DESIGN AND DEF-DESIGN. THE DESIGN CONCEPT IS MAINLY FOCUSING ON HIGH-DENSITY LIVING CONCERNING THE SOCIAL STIMULATION OF INTERACTION IN A MULTI-FUNCTIONAL CITY BLOCK. THIS QUESTION PROVOKES US TO THINK ABOUT THE SOCIAL DOMAIN AND THE IMPACT ON THE ARCHITECTURAL LANGUAGE AND VICE VERSA.

ALL PHASES OF THE DESIGN PROCESS HAVE INFLUENCED THE DESIGN IN A PARTICULAR WAY AND THE INFLUENCE OF THE FIRST THOUGHTS IS STILL VISIBLE. ADJUSTING ACCORDING TO FINDINGS AND SHAPING A NARRATIVE HELPED ME TO GAIN INSIGHTS INTO THE DIRECTION OF THE PROJECT AND HELPED ME TO SHAPE A POSITION FOR MYSELF. DURING THE CONCEPT PHASE, THE EXPLORATION OF THREE VERY EXTREME OPTIONS HELPED ME TO GET THE BENEFITS AND DROP THE NEGATIVES OF EACH CONCEPT. COMBINING THE SUCCESSFUL ASPECTS SHAPED THE BROAD CONCEPT OF THE DESIGN THAT IS STILL USED IN THE FINAL DESIGN. BY TESTING AND ADJUSTING THE DESIGN THE EVENTUAL PROJECT STARTED TO COME ALIVE AND THEREFORE THE PROCESS WAS KEY DURING THE GRADUATION PROJECT.

THE BIG CHALLENGE IS TO CREATE PUBLIC SPACES THAT FEEL LIKE AN EXTENSION OF THE QUITE COMPACT HOUSING UNITS IN THE CITY BLOCK. IN THIS WAY THE PRIVATE DOMAIN GETS AN EXTENDED DIMENSION WITHIN THE PUBLIC SPACES THROUGHOUT THE CITY BLOCK, THEREFORE THE SHARED SPACE CAN BE USED BY EVERY USER OF THE BLOCK. FOR THE LARGER UNITS WITH TWO OR THREE STORIES, A BALCONY IS PROVIDED TO ENLARGE THE OUTDOOR SPACE OF THE DWELLING AND PROVIDE MORE ACTIVITY IN THE FACADE. THIS ACTIVITY WILL CREATE ROOM FOR SOCIAL ENCOUNTERS AND PROVIDE A SENSE OF SOCIAL SECURITY, DUE TO THE MIX OF FUNCTIONS THE BLOCK WILL BE ACTIVELY USED 24/7.

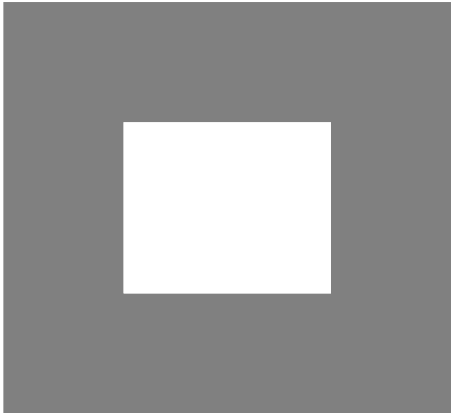
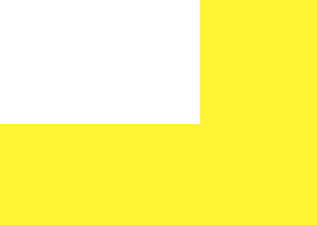
THE THESIS CAN BE FORESEEN AS THE LINKING ELEMENT BETWEEN THE CORE OF DESIGN AND THE CONCEPT OF DESIGN, THE TWO SHOULD INTERACT AND RESONATE IN A WAY THAT THE TRANSLATION TOWARDS DESIGN BECOMES LOGICAL. THE THESIS IS BUILT UP ON THE NEEDS OF SOCIETY, THE DEMOGRAPHY OF SOCIETY, ARCHITECTURAL LANGUAGE AND CAPTURING THAT SPECIAL ELEMENT THAT WILL MAKE THE DESIGN STAND OUT. THE ROOTS OF THE DESIGN ARE DERIVED FROM THE RESEARCH THAT DEFINES THE NEEDS OF THE NEXT GENERATION AND THE CONTEXT THAT IS INVOLVED IN THIS PROJECT.

THE BUILDING IS INTERACTING WITH THE PUBLIC DOMAIN WHILST FADING THE BOUNDARIES AND STILL PROVIDING A LOGICAL TRANSLATION FOR THE PROGRAM TO BE HOUSED IN THE CITY BLOCK. THE VOID IS THE ARCHITECTURAL INSTRUMENT THAT IS BEING USED AND THEREFORE ALL ACTIVITIES CAN TAKE PLACE IN THIS CURATABLE SPACE. THE PROJECT SHOULD CAPTURE THE ESSENCE OF THE THESIS BUT STILL BE DEVELOPED IN A WAY THAT THE ARCHITECTURAL CONCEPTS AND INTERVENTIONS ARE CLEAR TO USERS AND VISITORS OF THE BUILDING. THE EVENTUAL BUILDING BLOCK CAN INTERACT WITH EVERY LAYER OF THE CITY AND THEREFORE THIS CONCEPT IS VITAL FOR CREATING THE NEW CITY BLOCK. CREATING NEW LAYERS AND STRENGTHENING THE EXISTING ONES WILL INFORM THE DESIGN AND CREATE A BASE FOR FURTHER DEVELOPMENT, NEVER LOSING SIGHT OF THE CONCEPT IS SOMETHING VITAL FOR THE RESULT OF THIS DESIGN PROCESS.

REFLECTING ON THE THESIS

REFLECTING ON THE THESIS AND CHANGING IT WHEN NEW FINDINGS ARE DONE IS ESSENTIAL TO CREATE A RELEVANT GRADUATION PROJECT. THE CORE OF THE THESIS SHOULD REMAIN INTACT BUT THE NARRATIVE SHOULD BE ABLE TO CHANGE, THE NARRATIVE CAN BE LINKED TO THE MOST RECENT FINDINGS THAT THE DESIGN REQUIRES. THESE NEW INSIGHTS WILL HELP TO CREATE A BETTER RESULT. THE THESIS IF FOCUSING ON RELATIONS AND CONNECTIONS BETWEEN SOCIETY AND ARCHITECTURE, THE COMMUNAL ASPECTS OF ARCHITECTURE ARE CAPTURED IN AN ARCHITECTURAL FORM. THIS ARCHITECTURAL FORM IS INTERACTING WITH THE CONTEXT AND THE BUILT ENVIRONMENT, THIS INTERACTION WILL DEFINE THE SUCCESS FACTOR OF THE EVENTUAL PROJECT. THE SOCIETAL IMPACT OF THE CITY BLOCK IS AIMING TO PROVIDE THE BEST POSSIBLE CIRCUMSTANCES FOR THE INHABITANTS OF THE NEXT-GENERATION CITY. THEREFORE THE AIM WAS TO EXTRAPOLATE INTO THE FUTURE AND DEAL WITH MATTERS THAT WILL OCCUR BUT ALSO CONSIDER THE UNCERTAINTIES THAT THE FUTURE HOLDS. THE USER OF THE CITY BLOCK HAS ALWAYS BEEN THE CENTRAL APPROACH WHEN MAKING DESIGN DECISIONS AND THEREFORE THE SOCIAL(PUBLIC) DOMAIN IS WELL THOUGHT OF AND CONSIDERS EVERY VISITOR OF THE CITY BLOCK.

FINDING THE TRUE ESSENCE OF THE DESIGN IS CAPTURED IN THE THESIS, THIS THESIS INTERACTS WITH THE NEEDS OF SOCIETY AND THE CONTEXT OF THE SITE, THIS INTERACTION IS THE PLACE WHERE THE MAGIC CAN HAPPEN. THIS MAGIC TOUCH WILL ENSURE THE PROJECT IS A SUCCESS AND BE RELEVANT, THIS RELEVANCE CAN BE FOUND IN THE ARCHITECTURE AND SOCIETAL IMPACT OF THE PROJECT. THIS COMBINATION CREATES THE NEED TO FIND THE RIGHT SOLUTION FOR THE SPECIFIC SITE AND THE NEEDS OF THE SITE. THE RESEARCH FINDINGS ARE FEEDING DESIGN AND THE DESIGN IS FEEDING THE RESEARCH AND THIS EXCHANGE OF IDEAS IS CREATING THE CORE OF THE PROJECT. THE CORE OF THE PROJECT IS THE VOID SPACE THAT CONNECTS FUNCTIONS, AND PEOPLE AND IS CAREFULLY WRAPPED IN AN ARCHITECTURAL FACADE. THE KEY DESIGN FACTOR IS THE BLENDING OF THE PUBLIC AND PRIVATE DOMAIN WHICH IS HIERARCHICALLY FITTED INTO THE PROJECT. THE EXPERIENCE OF VISITING THE CITY BLOCK WILL HELP TO ENSURE THAT VISITORS WILL COME BACK AND THIS IS ESSENTIAL TO THE ECONOMIC FEASIBILITY OF THE PROJECT. THE SUCCESS FACTOR OF THE PROJECT HAS BEEN THE EXCHANGING OF INFORMATION BETWEEN EXPERTS, TEACHERS AND MY EXTERNAL TUTOR AND CURATING THIS INFORMATION TO ADD MY PERSONAL TOUCH AND OBTAIN A POSITION WITHIN THE FIELD OF ARCHITECTURE FOR THE REST OF MY PROFESSIONAL CAREER.



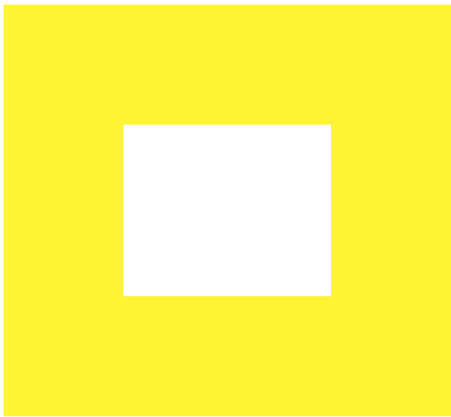
COURTYARDS

CENTRALIZATION

RESEARCH

PUBLIC SPACE

SOCIAL INTERACTION



AGEING SOCIETY

CITY BLOCK TYPOLOGY

URBAN-DENSITY



CONNECTIVE VOID

PUBLIC DOMAIN

CITYSCAPES

CONTEXT

ARCHITECTURE

HOUSING

SOCIETY IS ASKING FOR MORE DWELLINGS TO BE COMPLETED IN THE NETHERLANDS BUT HISTORY HAS TAUGHT US THAT RUSHING CAN COMPROMISE THE QUALITY OF THE DWELLINGS AND THE BUILT ENVIRONMENT. MANAGING THIS QUALITY IS SOMETHING THAT IS VITAL FOR CREATING BETTER CITIES AND BUILDING BLOCKS FOR THE FUTURE GENERATIONS. THE CITY OF ROTTERDAM HAS ALWAYS REACTED TO THE DIRECT NEEDS OF THE TIMES, AND THEREFORE THIS NEW DWELLINGS SHOULD BE ABLE TO REACT TO THE NEED OF THE FUTURE GENERATIONS.

CENTRALIZATION

CENTRALIZATION IN THE NETHERLANDS IS A PHENOMENON THAT HAS BEEN AROUND IN DIFFERENT ERAS OF ITS HISTORY. CENTRALISATION ATTRACTS PEOPLE TO CITIES FROM ALL OVER THE COUNTRY, THE CITIES THAT ARE CURRENTLY MOST POPULAR ARE FOUND IN THE RANDSTAD REGION, NOORD-BRABANT AND OTHERS SCATTERED IN THE COUNTRY. THIS CENTRALISATION HAS CALLED FOR MASS HOUSING PROJECTS IN THE PAST, ONE OF THESE STRATEGIES FORMED THE DYNAMIC CITY BLOCK. THE CITY BLOCK IS A WAY OF DEALING WITH HIGH-DENSITY URBAN HOUSING, THIS HOUSING STRATEGY CAN NOW BE APPLIED AGAIN TO TACKLE THE HOUSING SHORTAGE AS “ THE NEW CITY BLOCK”.

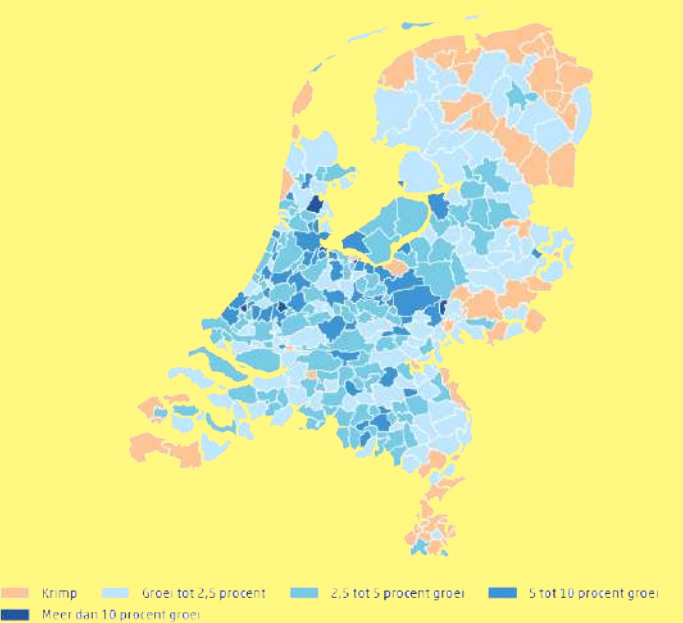


IMAGE 1

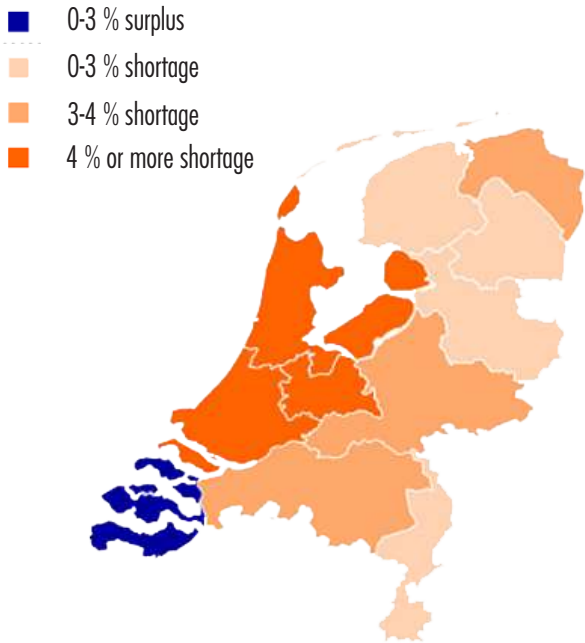


IMAGE 2

NEED FOR HOUSING

THE PRESSING HOUSING SHORTAGE IN MOST DUTCH CITIES HAS BEEN FUELED BY THE GAP BETWEEN SUPPLY AND DEMAND. THE DEMAND FOR NEARLY EVERY TYPE OF HOUSING IN THE NETHERLANDS SURPASSES THE OFFER ON THE MARKET. THIS HOUSING SHORTAGE CAN BE EXPLAINED BY DIFFERENT TYPES OF CAUSES, INVESTORS, LACK OF BUILDING PROJECTS AND THE CURRENT INTEREST RATE. ALL THESE FACTORS CREATE A POLLUTED HOUSING OFFER IN THE NETHERLANDS. INVESTORS IN REAL ESTATE CREATE MORE HIGHLY RENTED PROPERTIES AND THIS MAKES IT HARDER AND MORE EXPENSIVE FOR PEOPLE TO OWN PROPERTY. THE LACK OF BUILDING PROJECTS IS ALSO CAUSED BY STRICTER CLIMATE POLICIES FROM THE DUTCH GOVERNMENT. THE WAY TO MAKE HOUSING MORE AFFORDABLE AND CREATE MORE HOMES IN URBAN AREAS IS TO WORK TOGETHER WITH INVESTORS, AND POLICY TO ADD ARCHITECTURAL QUALITY AND CLIMATE-ADAPTABLE ARCHITECTURE TO THE EXISTING CITIES.

TARGET GROUPS

SOCIETY IS ASKING FOR MORE DWELLINGS TO BE COMPLETED IN THE NETHERLANDS BUT HISTORY HAS TAUGHT US THAT RUSHING CAN COMPROMISE THE QUALITY OF THE DWELLINGS AND THE BUILT ENVIRONMENT. MANAGING THIS QUALITY IS SOMETHING THAT IS VITAL FOR CREATING BETTER CITIES AND BUILDING BLOCKS FOR THE FUTURE GENERATIONS. THE CITY OF ROTTERDAM HAS ALWAYS REACTED TO THE DIRECT NEEDS OF THE TIMES, AND THEREFORE THIS NEW DWELLINGS SHOULD BE ABLE TO REACT TO THE NEED OF THE FUTURE GENERATIONS.

AGEING SOCIETY

CITY BLOCKS IN THE FUTURE WILL FACE DIFFERENT CHALLENGES THAN THE CONTEMPORARY ONES, AGEING POPULATION IN COMBINATION WITH THE RISE OF DIGITAL GENERATION WILL EVENTUALLY MAKE MORE PEOPLE FEEL LONELY AND INDIVIDUALISTIC. IN THE YEAR 2050 AROUND 48 % OF THE POPULATION IN THE NETHERLANDS WILL BE 65 YEARS OR OLDER, THIS WILL CHANGE URBAN DYNAMICS AND NEEDS (CBS, SD). THIS MEANS DESIGNING THE NEW CITY BLOCK WILL HAVE A DIFFERENT MIX OF STAKEHOLDERS WHICH OBVIOUSLY WILL THRIVE IN SPECIFIC ARCHITECTURAL FORMS. THESE ARCHITECTURAL INTERVENTIONS WILL BE DIFFERENT FROM CONTEMPORARY SOLUTIONS DUE TO THE FACT THAT THE TARGET GROUP IS CHANGING AND THIS MEANS DESIGNING A CITY BLOCK FOR THE FUTURE INHABITANTS.

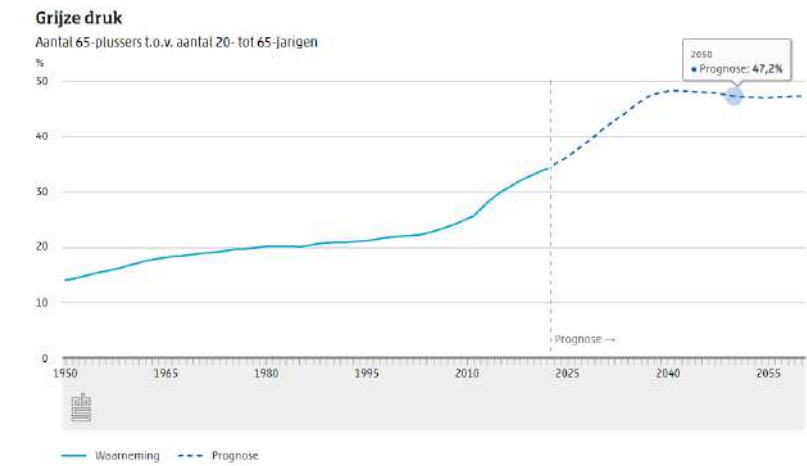


IMAGE 3

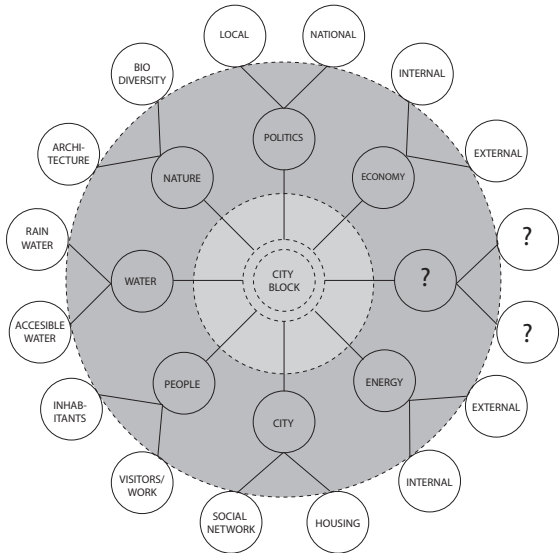


DIAGRAM :PROSPECTED STAKEHOLDERS

STAKEHOLDERS

STAKEHOLDERS ARE HIGHLY IMPORTANT WHEN OPERATING WITHIN INNER CITY AREAS BECAUSE LOTS OF PEOPLE RELY ON THE INNER CITY FOR THEIR WELL-BEING AND INCOME. THEREFORE THE CHALLENGE IS TO CREATE A MIDDLE WAY THAT KEEPS THE DIFFERENT STAKEHOLDERS CONTENT AND CREATES VALUE FOR THE PERSONAL INTEREST OF THE STAKEHOLDERS. URBAN ECONOMICS IS VERY DYNAMIC, WHICH MEANS OWNERSHIP AND INTEREST ARE SHIFTING A LOT. MAPPING THE DIRECT SURROUNDING, THE CITY LEVEL AND THE NATIONAL LEVEL WILL CREATE A FRAMEWORK OF INTEREST AND CREATES A WAY OF RANKING THE IMPORTANCE OF EACH STAKEHOLDER.

CITY BLOCK

THE PRESSING HOUSING SHORTAGE IN MOST DUTCH CITIES HAS BEEN FUELED BY THE GAP BETWEEN SUPPLY AND DEMAND. THE DEMAND FOR NEARLY EVERY TYPE OF HOUSING IN THE NETHERLANDS SURPASSES THE OFFER ON THE MARKET. THIS HOUSING SHORTAGE CAN BE EXPLAINED BY DIFFERENT TYPES OF CAUSES, INVESTORS, LACK OF BUILDING PROJECTS AND THE CURRENT INTEREST RATE. ALL THESE FACTORS CREATE A POLLUTED HOUSING OFFER IN THE NETHERLANDS. INVESTORS IN REAL ESTATE CREATE MORE HIGHLY RENTED PROPERTIES AND THIS MAKES IT HARDER AND MORE EXPENSIVE FOR PEOPLE TO OWN PROPERTY. THE LACK OF BUILDING PROJECTS IS ALSO CAUSED BY STRICTER CLIMATE POLICIES FROM THE DUTCH GOVERNMENT. THE WAY TO MAKE HOUSING MORE AFFORDABLE AND CREATE MORE HOMES IN URBAN AREAS IS TO WORK TOGETHER WITH INVESTORS, AND POLICY TO ADD ARCHITECTURAL QUALITY AND CLIMATE-ADAPTABLE ARCHITECTURE TO THE EXISTING CITIES.

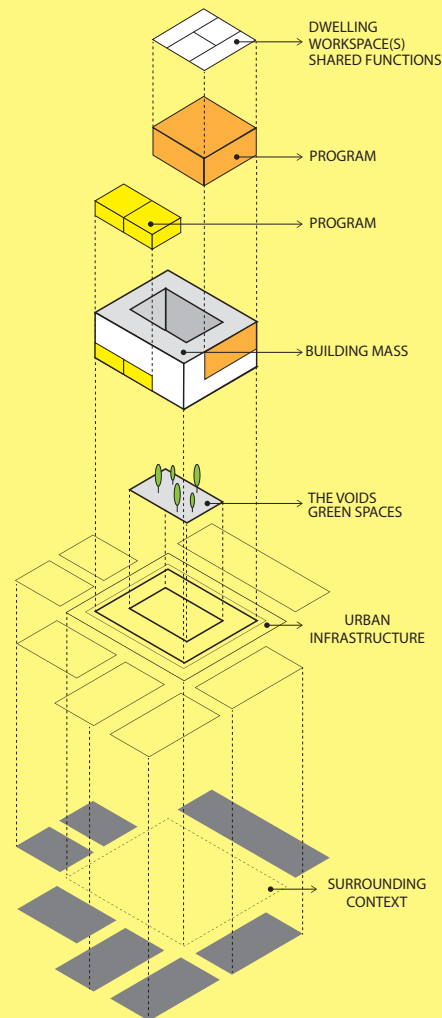


DIAGRAM : COMPONENTS OF A CITY BLOCK

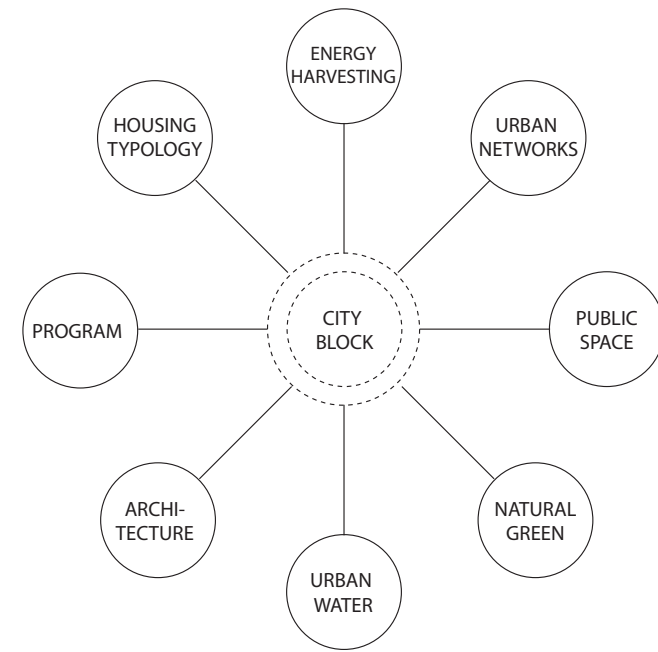


DIAGRAM :ASPECTS OF THE CITY BLOCK

NEED FOR HOUSING

THE FLOOR PLANS ARE CUTOUT FROM THE CENTRAL PART IN AN ORGANIC WAY THAT ENSURES A SENSE OF FLUENCY WHEN VISITING THE BUILDING. THE OUTER FACADE OF THE BUILDING IS DETERMINING THE BORDER BETWEEN THE CITY BLOCK AND THE CITY. THE FACADE CONCEPTS PLAY WITH LAYERS AND VERTICALITY, THE FLOOR REPRESENTS THE HORIZONTAL ELEMENT AND THE FACADE REPRESENTS THE VERTICAL ELEMENT.

COMBINING THEM CREATES A GRID-LIKE STRUCTURE THAT SEEMS UNIFORM AND THEREFORE CAN PROVIDE FOR THE DYNAMIC MIX OF FUNCTIONS BEHIND THIS FACADE. THE PICTURE FRAMES THAT ARE ATTACHED TO THE FACADE ARE HIGHLIGHTS FROM EITHER ITS SURROUNDINGS OR INTERIOR FOR VISITORS AND PEOPLE TO ENJOY WHEN PASSING THROUGH THE BUILDING, THEREFORE THE OFFICE SPACES AT THE CORNER ONLY HAVE LONG VERTICAL ELEMENTS THAT SHOW A DIFFERENT FUNCTION.

TRENDS

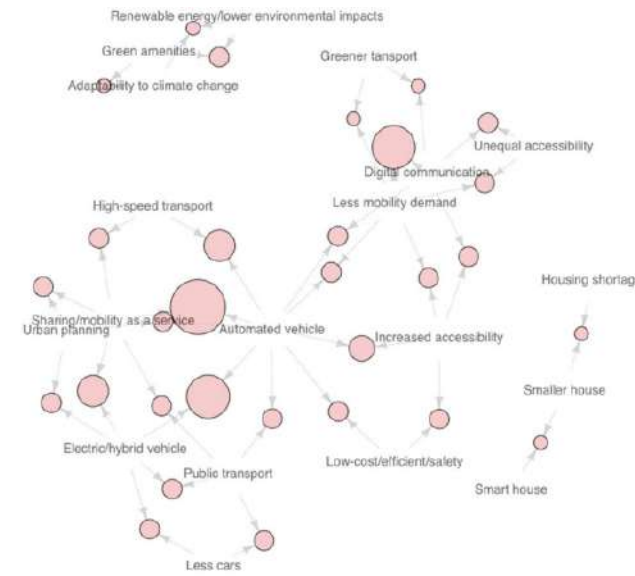


IMAGE 4 : PROSPECTED HEALTH TRENDS 2050

HEALTH

AN AGEING SOCIETY REQUIRES EXCELLENT CARE FOR THE INHABITANTS OF FUTURE CITY. THE TRENDS ON HEALTHCARE ARE EVER EVOLVING AND IS BASED ON INOVATION AND TECHNNOLOGY. THESE HEALTHCARE TRENDS WIL MAKE SURE THAT THE AGEING SOCIETY OF THE NETHERLANDS WILL REMAIN HEALTHY AND LIVE A MORE VITAL LIFE. THE FOLLOWING TRENDS ARE THE MOST INTERESTING FOR THE PROJECT :

- Risk of isolation
- Mental health problems
- Preventive healthcare
- Individualized leisure
- VR / AI innovations

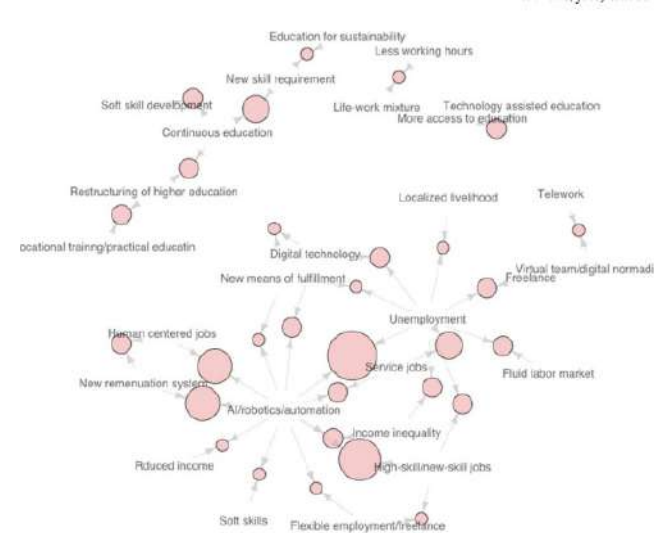


IMAGE 5: PROSPECTED TECHNOLOGY TRENDS

TECHNOLOGY

DIGITALISATION WILL HAVE A SEVERE IMPACT ON THE FUTRURE GENERATION, THEREFORE THIS TREND RAPPORT SHEDS A LIGHT ON THE CLOSE FUTURE. TECHNOLOGY IS SOMETHING THAT IS SHAPING SOCIETY AND HAS A GREAT IMPACT ON THE NEEDS OF URBAN COMMUNITIES.THE TRENDS THAT ARE IMPORTANT FOR THE FUTURE CITIES AND THE CITY BLOCK ARE THE FOLLOWING :

- Shared economy
- Smart houses
- Automated transportation
- Digitalisation

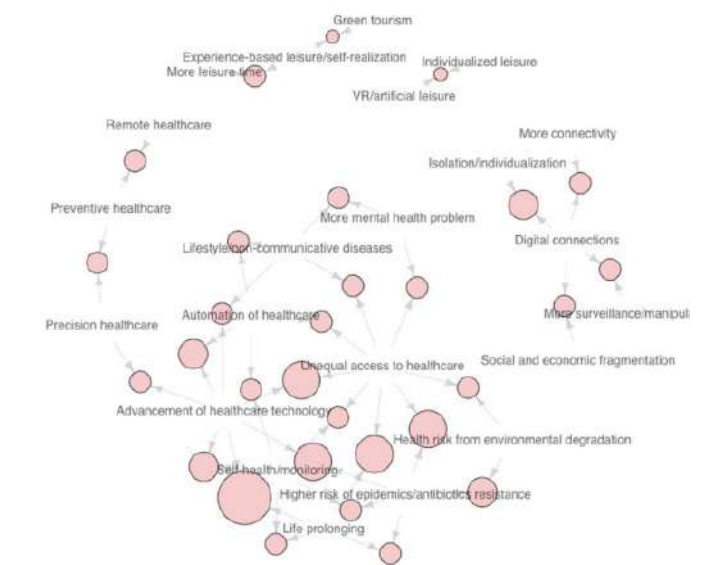


IMAGE 6 : PROSPECTED DAILY LIFE TRENDS

DAILY LIFE

THE DAILY LIFE IN THE CITY WILL ALSO CHANGE AND THEREFORE THE PROGRAM IS GOING TO ADAPT. PEOPLE IN THE NEXT GENERATION WILL FIND NEW WAYS OF WORK, LIVE AND LEISURE AND THIS IS GOING TO HAVE DIRECT IMPACT ON THE CITY BLOCK OF THE FUTURE. FLEXIBILITY IS GOING TO BE A LARGE PART DUE TO THE DYNAMIC NEEDS OF SOCIETY AND THE BUILT ENVIRONMENT. SOME TRENDS ARE :

- Expanding shared facilities
- New means of fullfilment
- Continuous education
- Digital nomadsim
- Life-work mixture

COURTYARD TYPOLOGYS

“LEARNING FROM THE PAST”

ANCIENT DWELLINGS

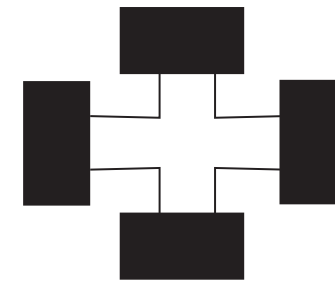
THE FIRST COURTYARD HOUSING TYPOLOGIES DATE BACK TO THE DYNASTIES OF HISTORIC CHINA AND THE DESERTS OF THE MEDIEVAL MIDDLE EAST. THIS HOUSING TYPOLOGY HAD SEVERAL POSITIVES THAT SERVED THE NEED OF THE PEOPLE IN THIS TIMEFRAME, THE MODERN-DAY SHARED TYPOLOGIES SERVE THE NEEDS OF THE MORE MODERN URBAN INHABITANTS OF THE CITY. THE HISTORIC DWELLING TYPOLOGIES WERE INITIALLY DESIGNED TO PROVIDE SECURITY, THERMAL COMFORT AND EARLY FORMS OF MULTI-GENERATIONAL HOUSING. THE LATER COURTYARDS WERE SHARED BY MORE THAN ONE FAMILY AND PROVIDED AN ANSWER FOR THE HOUSING SHORTAGES IN SPRAWLING URBAN ENVIRONMENTS.

DESIGN LESSONS

THE CHARACTERISTICS OF THE COURTYARDS HOUSING ENABLED MULTIPLE INHABITANTS TO SHARE COMMON FACILITIES AND STILL ENJOY THE BENEFITS OF LIVING IN AN URBAN ENVIRONMENT. THE SENSE OF COMMUNITY AND SOCIAL COHESION BEGAN TO GROW WHEN PEOPLE START TO INHABIT A COURTYARD HOUSING TYPOLOGY. THE CENTRAL INNER VOID IS OFTEN USED FOR COMUNAL ACTIVITIES AND THE MORE PRIVATE ACTIVITIES TOOK PLACE IN THE OUTER VOLUME BORDERING THE COURTYARD. MORE MODERN COURTYARDS USE THE CENTRAL VOID FOR PRACTICAL USES SUCH AS TRANSPORT AND STORAGE. THE COURTYARD SHOULD FORM THE HEART OF THE BUILDING AND ENABLE THE USERS TO SHARE THIS SPACE.



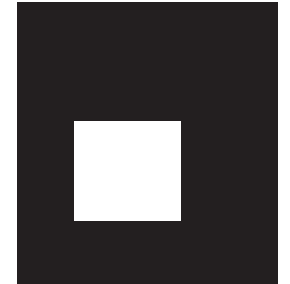
CORDOBA
COURTYARD



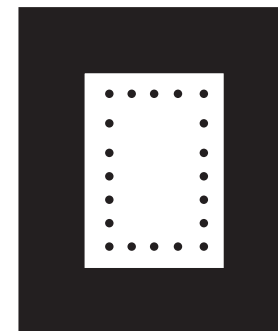
BEIJING
COURTYARD



INDIAN
COURTYARD



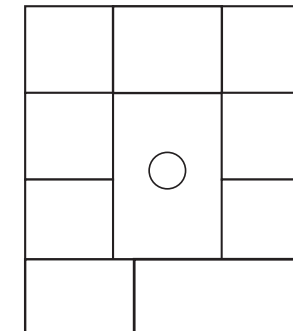
BAGDAD
COURTYARD



GREEK
PERISTOLE



ROMAN
ATRIUM



L.A.
PATIO



NORTHERN
EUROPEAN
COURTYARD

DIAGRAM :HISTORIC COURTYARD DWELLING TYPOLOGYS



IMAGE 7 ANCIENT COURTYARD DWELLING TYPOLOGY



IMAGE 8 MIDDLE EASTERN COURTYARD TYPOLOGY



IMAGE 9 CORDOBA COURTYARD TYPOLOGY

CITY BLOCK TYPOLOGYS

“LEARNING FROM THE PAST”

ADJUSTING TO THE NEEDS

THE CITY BLOCK STARTED AS A WAY OF COPING WITH THE CENTRALISATION TRENDS IN THE MORE RECENT PAST OF DUTCH HISTORY. THE CITY BLOCK CAN BE PERCEIVED AS A REACTION TO THE NEEDS OF THE TIME, THEREFORE THIS ENTITY IN ARCHITECTURE IS SOMETHING DYNAMIC. LEARNING FROM OUR PAST IS VITAL FOR DESIGNERS SINCE LESSONS CAN BE LEARNED AND MISTAKES CAN BE PREVENTED. THE CITY BLOCK HAS ALWAYS BEEN A CARRIER OF IDEOLOGY AND IS STRICTLY INTERTWINED WITH POLITICS, THIS CAN BE DIRECTLY LINKED TO THE STRUGGLES AND FLOURISHES OF THE TIME. THE MAIN CHANGE IN THE WAY WE SHAPE OUR CITIES WAS MADE DUE TO THE CENTRALISATION TREND THAT WAS CAUSED BY THE INDUSTRIAL REVOLUTION. THIS REVOLUTION MEANT THAT A RAPID URBAN SPRAWL WAS PASSING DOWN IN URBAN ENVIRONMENTS IN THE NETHERLANDS. THINKING ABOUT HOUSING, FACILITIES AND SOCIAL LIFE THE LESSONS FROM EARLY CITIES AND COURTYARD BLOCKS SHAPED THE IDEOLOGY OF SHARING A LARGE BUILDING WITH MULTIPLE FAMILIES.

THE SHARING OF SPACES WAS SOMETHING THAT WAS NOT VERY COMMON IN DUTCH CULTURE BUT THE DENSITY THAT WAS DIRECTLY LINKED WITH THE INDUSTRIAL REVOLUTION WAS SOMETHING THAT THE DUTCH MASTERED. IN HISTORIC CITY CENTRES, THIS TREND OF DENSITY AND CENTRALISATION WAS SOMETHING THAT HAS CAUSED CITIES TO GROW EXPONENTIALLY. FROM 1900 ONWARD THE INNOVATION WAS TESTED AGAIN AND THE FOCUS WAS PUT MORE AND MORE ON EFFECTIVE HOUSING FOR THE GROWING POPULATION THIS WAS CALLED “VOLKSHUISVESTING”. THE FOCUS IN THE NETHERLANDS WAS NOW PURELY ON EFFECTIVELY HOUSING LOTS OF FAMILIES IN A SMALL AREA.

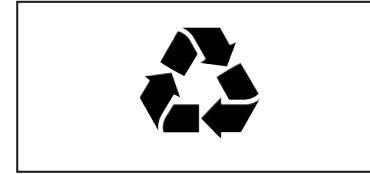
SOCIAL COLLECTIVITY

AFTER THE CITY BLOCK HAS MAINLY SOLVED THE HOUSING SHORTAGE THAT THE CENTRALISATION IN THE NETHERLANDS HAS CAUSED THE SOCIAL ISSUES STARTED TO SURFACE. THESE URBAN UTOPIAS WEREN'T ALWAYS FUNCTIONING IN THE WAY THAT THE DESIGNERS WERE EXPECTING, THEREFORE THE FOCUS ON COLLECTIVITY AND THE PUBLIC DOMAIN BECAME MORE IMPORTANT. THE WAY THE EARLY CITY BLOCKS WERE FUNCTIONING LACKED A SOCIAL DIMENSION AND THE INHABITANTS WEREN'T AS HAPPY AND SOCIAL STRUGGLES AROSE. A NEW WAY OF THINKING WAS NEEDED TO SOLVE THIS HOUSING NEED IN DUTCH CITIES, DURING THE TWENTIETH CENTURY, A LOT OF EXPERIMENTS STARTED TO SHAPE THIS NEW IDEOLOGY. SOME OF THESE INNOVATIVE WAYS OF THINKING ABOUT THE CITY BLOCK HAD SUCCESSFUL ELEMENTS BUT THE TIMEFRAME AND INNOVATION MOSTLY CAUGHT UP WITH THESE PRINCIPLES. THESE PRINCIPLES FOR DESIGN WERE MOSTLY OUTDATED BEFORE THE BUILDING WAS REALISED. THE MAIN PRINCIPLES WERE FOCUSING ON PROVIDING BETTER LIVING CONDITIONS FOR THE URBAN INHABITANTS AND STIMULATING A SENSE OF COLLECTIVITY AND SOCIAL INCLUSION.

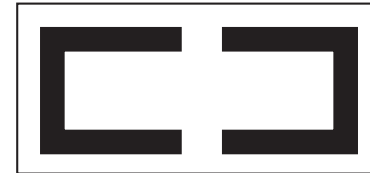
SOCIAL STREETS AND LARGE PARKS THAT THE VOLUMES WERE SITUATED IN CREATED AN URBAN UTOPIA IN A WAY BUT THESE PRINCIPLES ALSO HAD SOME DOWNSIDES. CRIMINAL BEHAVIOUR AND DEMOGRAPHIC ISSUES STARTED TO ARISE WHEN LARGE-SCALE BUILDING BLOCKS BECAME MONOFUNCTIONAL AND USED IN A DIFFERENT WAY THAN WAS FORESEEN. THE CHALLENGE FOR THIS GRADUATION PROJECT IS TO LEARN FROM THE SUCCESSFUL ELEMENTS AND TRANSLATE THEM INTO A CONTEMPORARY ARCHITECTURAL LANGUAGE FOR THE FUTURE GENERATIONS TO COME.

BLOCK R

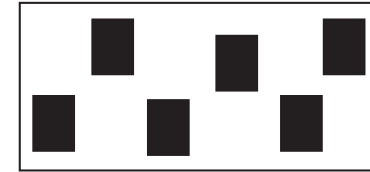
shaping the new generations of city blocks



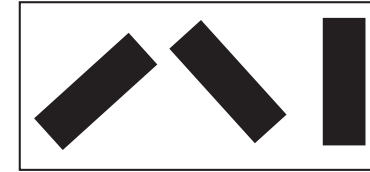
returning towards the more classical form of the block



collectivity is key and shared facilities become more important



collectivity and public domain are central



opening up the block focusing on new principles of urban development



more collectivity adjusted to the urban context



closed of block uniform city dwellings



future

present

2005

1998

1995

1975

1900

1700

urban renewal and transformation efforts

shared facilities and social inclusivity

urban villa concept focussed on collectivity

fragmenting the block volumes

opening up the city block

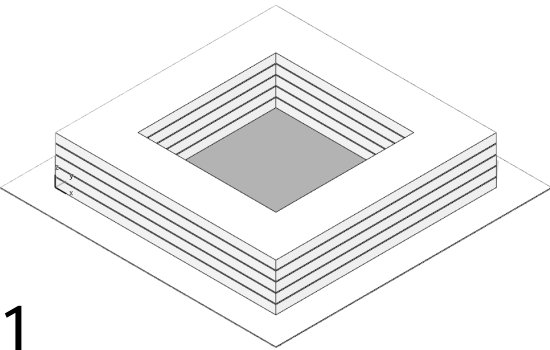
adjusting the closed city block

classical courtyard typology

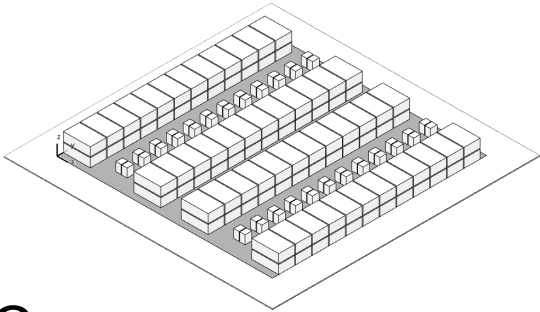
DIAGRAM : TIMELINE ON THE EVOLUTION OF THE DUTCH CITY BLOCK

CITY BLOCK ANALYSIS

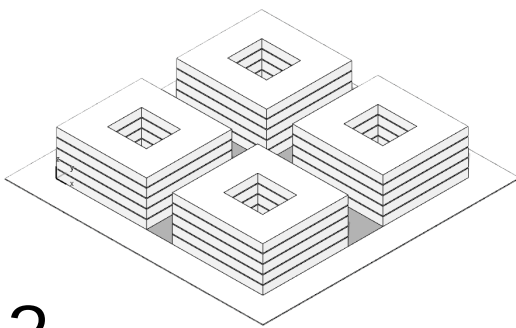
“ THE NUMBERS GAME ”



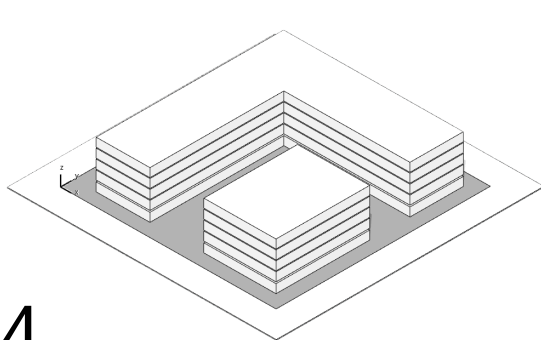
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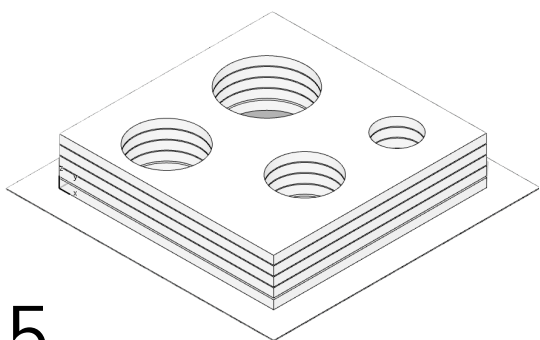
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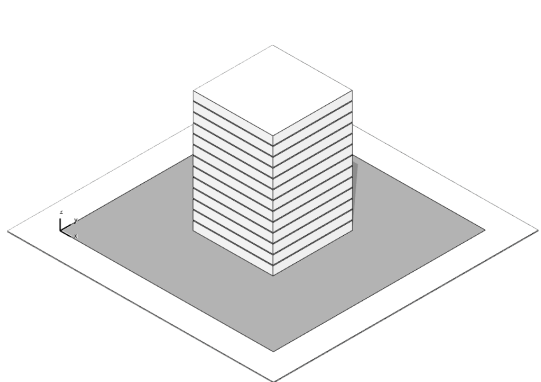


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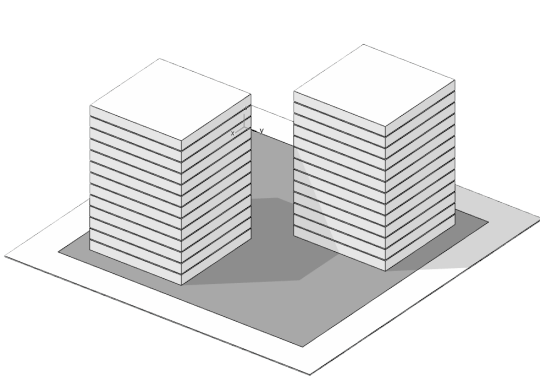


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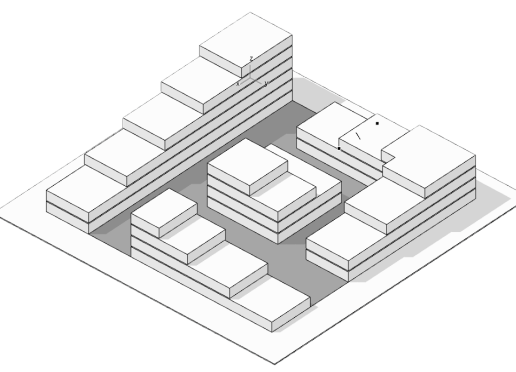
TYPE	block 1	block 2	block 3	block 4	block 5	block 6	block 7	block 8	block 9	block 10
site area	6.400 m ²	6.400 m ²	6.400 m ²	6.400 m ²	6.400 m ²	6.400 m ²	6.400 m ²	6.400 m ²	6.400 m ²	6.400 m ²
covered area	3.900 m ²	3.120 m ²	3.860 m ²	3.270 m ²	4.700 m ²	900 m ²	1.800 m ²	3.850 m ²	3.900 m ²	4.750 m ²
floor area	19.500 m ²	5.600 m ²	19.300 m ²	16.350 m ²	23.500 m ²	11.700 m ²	23.400 m ²	12.275 m ²	15.000 m ²	16.400 m ²
buidling mass	68.250 m ³	19.600 m ³	67.550 m ³	57.225 m ³	82.250 m ³	40.950 m ³	81.900 m ³	42.960 m ³	52.500 m ³	57.400 m ³
coverage %	61%	49%	60%	51%	73%	14%	28%	60%	61%	74%
floors (max)	5	2	5	5	5	13	13	6	6	5
floors (min)	5	2	5	5	5	13	13	1	1	1
public space	2.500 m ²	900 m ²	2.540 m ²	3.130 m ²	1.700 m ²	5.500 m ²	4.600 m ²	2.550 m ²	2.500 m ²	1.650 m ²
program	mixed	single: living	mixed	mixed	mixed	mixed	mixed	mixed	mixed	mixed



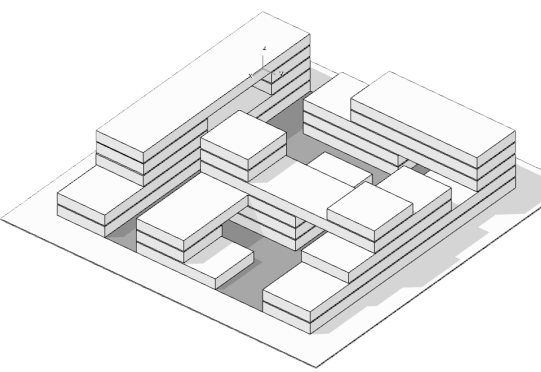
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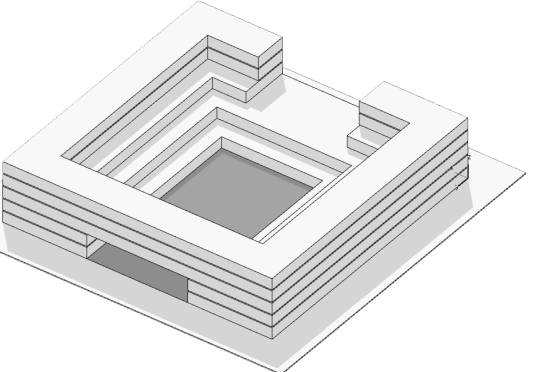
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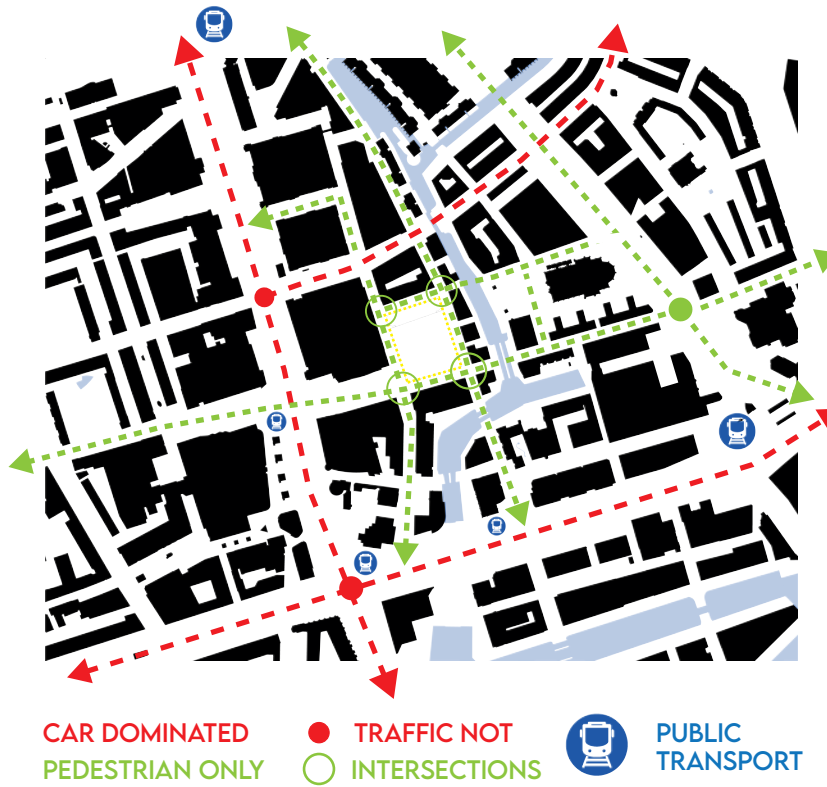


10

EXPLORING THE SITE

“ EXPLORING THE OPPERTUNITES ”

INNER CITY OF ROTTERDAM



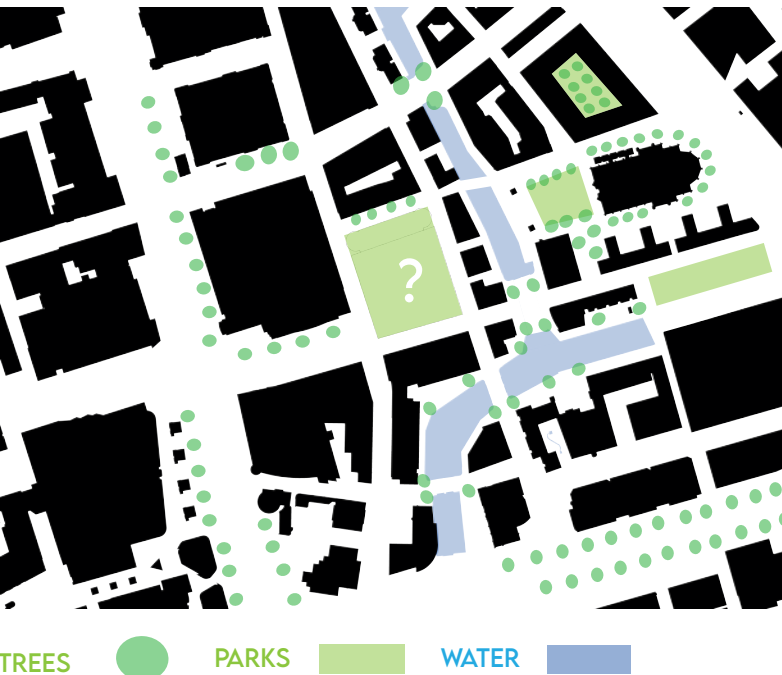
CENTRAL CONNECTOR



FUNCTIONS



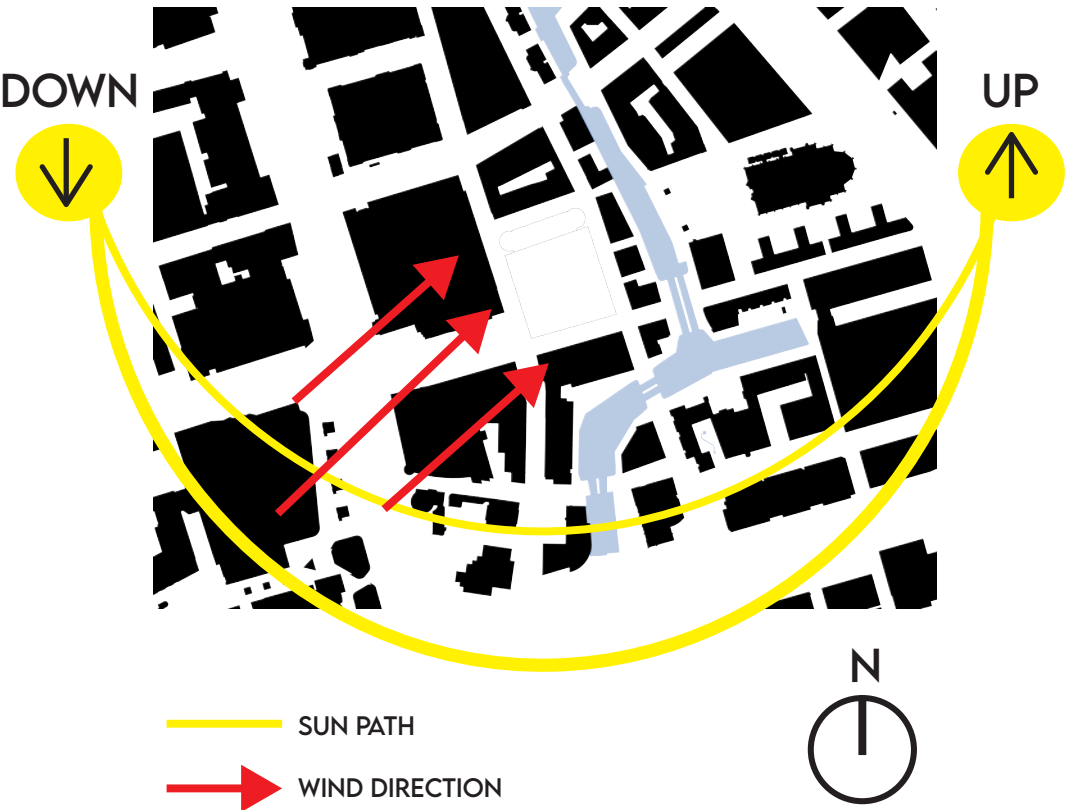
GREEN & BLUE NETWORKS



ARCHITECTURAL HIGHLIGHTS



NATURAL INFLUENCES



CURRENT SITUATION

CURRENT SITUATION

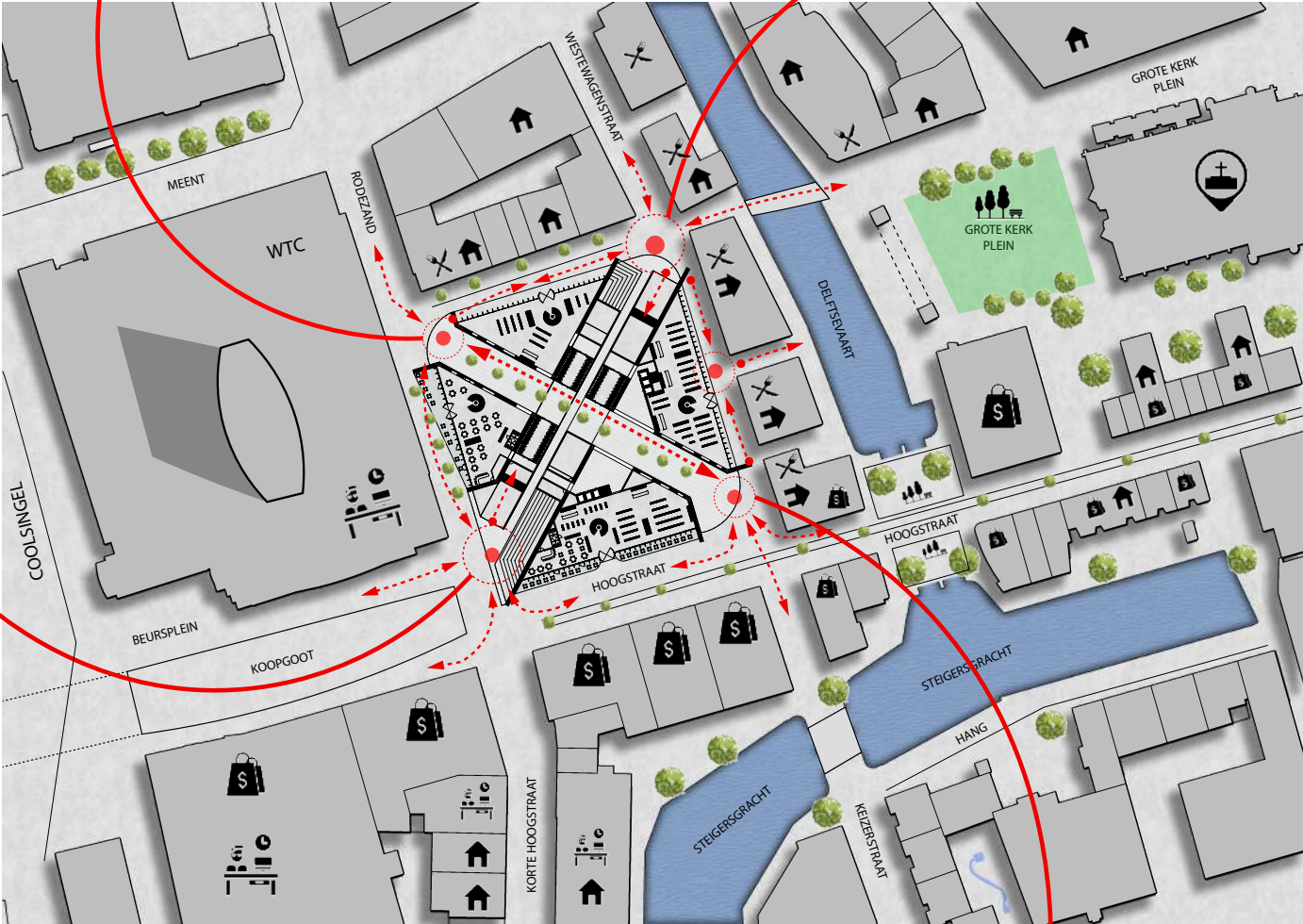


- DOWNSIDES :
- ALMOST ZERO ACTIVITY
 - LACKS SOCIAL SAFETY (ALLEY FEELING)
 - MOSTLY USED FOR PARKING AND CARS
- INTERVENTIONS :
- CREATING NEW URBAN CONNECTIONS (DIAGONAL)
 - ACTIVATING THIS PART OF THE INNER CITY
 - REPLACING PARKING WITH MIXED USE LIVING
 - CREATING LINKS WITH THE CHURCH SQUARE & WATER
 - CREATING MORE GREEN SPACES IN THE CITY CENTRE
 - MORE SOCIAL SECURITY BY ADDING FUNCTIONS

CURRENT SITUATION



- UPSIDES :
- BUZZLING INNER CITY AREA
 - LOTS OF SOCIAL ACTIVIY & STREET LIFE
 - PRIME LOCATION WHITIN ROTTERDAM
 - CAR FREE & USED BY PEDESTRIANS ONLY
- INTERVENTIONS :
- DIAGONAL FACING ENTRANCE TO THE CITY BLOCK
 - PROVIDING PUBLIC SPACE AT CITY LEVEL
 - PROVIDING A NATURAL TRANSITION TO THE BLOCK
 - PROVIDING SOCIAL SAFETY BY ADDING FUNCTIONS
 - ADDING GREEN & PUBLIC SPACES IN THE STREETS
 - VERTICAL ELEMENTS PROVIDE A CONTEXTUAL FIT
 - GUIDING ELEMENTS IN THE STREET PAVEMENT



CURRENT SITUATION



- DOWNSIDES :
- NOT ACTIVATED BY CURRENT FUNCTIONS
 - LACKS SOCIAL SAFETY AND ACTIVITY
 - MAINLY USED FOR TRAFFIC & PARKING
 - NOT CAPATALIZING ON THE PRIME LOCATION
- INTERVENTIONS :
- DIAGONAL FACING ENTRANCE TO THE CITY BLOCK
 - PROVIDING PUBLIC SPACE AT CITY LEVEL
 - CONNECTING WITH THE CHURCH SQUARE & WATER
 - PROVIDING SOCIAL SAFETY BY ADDING FUNCTIONS
 - REPLACING THE CAR BY PEDESTRIANS & CYCLIST
 - ADDING GREEN IN THE URBAN ENVIRONEMENT
 - GUIDING ELEMENTS IN THE STREET PAVEMENT

CURRENT SITUATION



- UPSIDES :
- BUZZLING INNER CITY AREA
 - LOTS OF SOCIAL ACTIVIY & STREET LIFE
 - PRIME LOCATION WHITIN ROTTERDAM
 - CAR FREE & USED BY PEDESTRIANS ONLY
- INTERVENTIONS :
- CREATING NEW URBAN CONNECTIONS (DIAGONAL)
 - PROVIDING A NATURAL TRANSITION INTO THE CITY BLOCK
 - PROVIDING A NEW SENSE OF SOCIAL SECURITY
 - ACTIVATING THE WESTEWAGENSTRAAT & CHURCH SQUARE
 - CREATING MORE GREEN SPACES IN THE CITY CENTRE
 - GUIDING A NEW EXPERIENCE FOR THE USERS OF THE CITY

DIAGRAM : SITE ANALYSIS POSITIVES VS NEGATIVES & PROSPECTED INTERVENTIONS

URBAN NETWORKS

"CREATING VITAL LINKS"

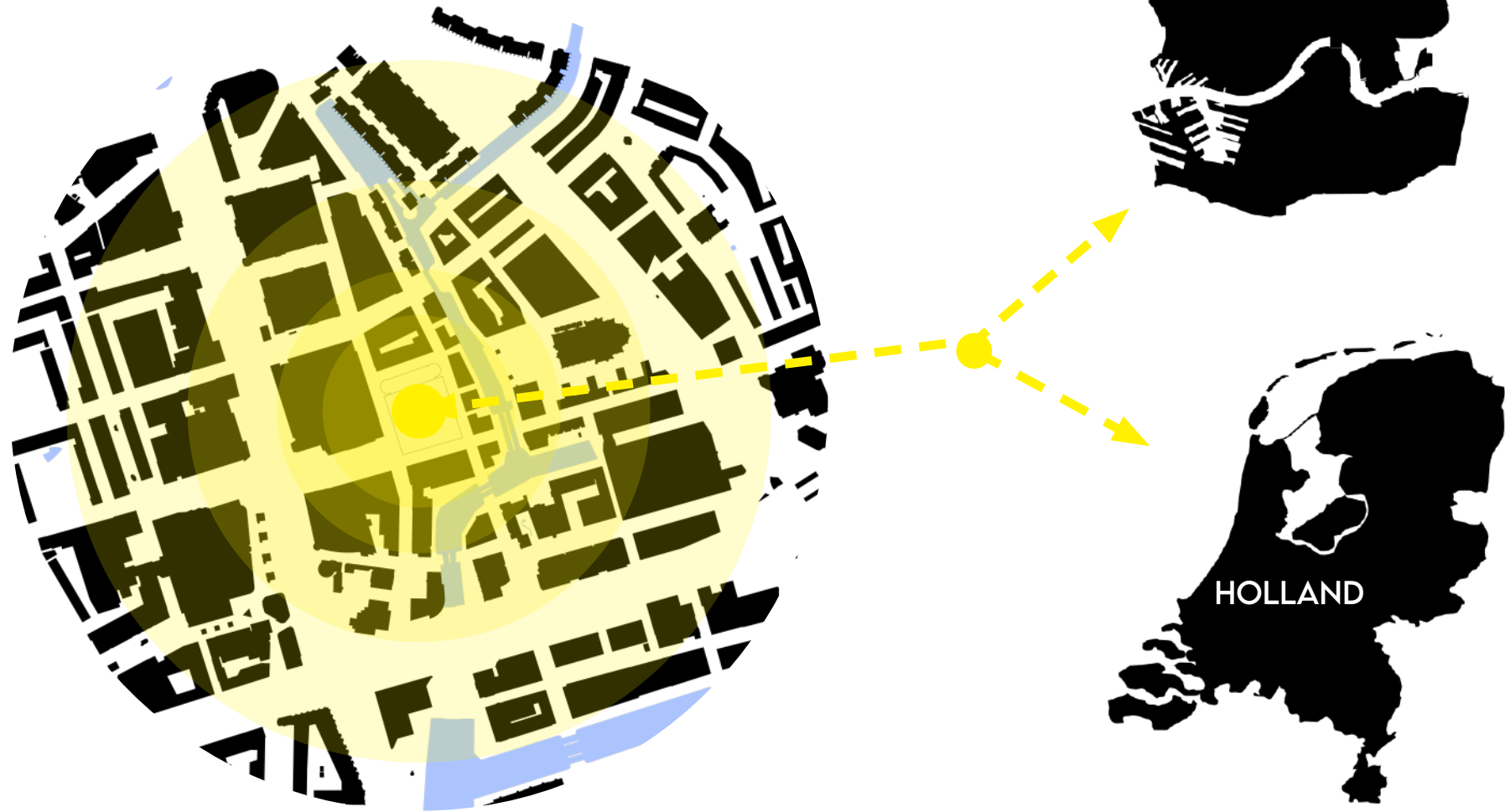


DIAGRAM : EXPANDING THE INTERACTION SPHERE

EXCHANGING

EVERY DEVELOPMENT HAS A SPECIFIC IMPACT ON THE SITE THAT IS SITUATED ON, BUT THERE IS ALSO AN IMPACT ON THE BROADER CONTEXT. THE CITY BLOCK IS GOING TO SERVE AS AN EXAMPLE FOR NEW DEVELOPMENTS WITHIN THE NETHERLANDS AND MAYBE BEYOND, THEREFORE THE PRINCIPLES SHOULD NOT ONLY BE TAKEN FROM THE CONTEXT. THE PROBLEMS FOR THE NEXT GENERATIONS WILL IMPACT ALL CITIES IN THE NETHERLANDS AND THEREFORE THE CORE OF THE PROJECT CAN BE PROJECTED ON SITES THROUGHOUT THE NETHERLANDS. FURTHER DEVELOPMENT OF THE DESIGN CONCEPT CAN HAVE A POSITIVE IMPACT ON INNER CITY DEVELOPMENT AND THIS IS SOMETHING THAT HAS ALWAYS BEEN THE PURPOSE. THE CITY OF ROTTERDAM CAN VISIT THE NEW CITY BLOCK AND PEOPLE FROM THE CITY BLOCK CAN VISIT ROTTERDAM, THIS EXCHANGE OF CULTURE, KNOWLEDGE AND SOCIAL RELATIONS WILL EVENTUALLY SERVE SOCIETY IN A BROADER SENSE THAN THE CITY BLOCK.

MUTUAL INTEREST

THE NEW URBAN CONNECTIONS WILL HELP TO FORM NEW CONNECTIONS WITHIN THE INNER CITY AND PROVIDE NEW HOTSPOTS BOTH INTERNAL AND EXTERNAL OF THE CITY BLOCK. THE BUILDING IS DESIGNED TO ALLOW PEOPLE TO WANDER INTO THE CITY BLOCK BUT ALSO PROVIDES PASSAGE FOR PEOPLE PASSING BY, THIS TWO-SIDED APPROACH HELPED TO ACTIVATE THE CURRENTLY UNUSED SIDES OF THE SITE. BY ACTIVATING THEM AND PROVIDING NEW CONNECTIONS WITHIN THE INNER CITY THE QUALITY OF THE INNER CITY WILL IMPROVE AND THE ATTRACTIVENESS OF THE CITY BLOCK WILL BECOME EVEN BETTER. THESE ARE MUTUAL INTERESTS AND PROVIDE A NEW BASE FOR INTERACTION, ECONOMY AND URBAN LIVING. THIS EXCHANGING OF SOCIAL ACTIVITY, CULTURE AND ACTIVITIES ENSURES THAT THE CITY BLOCK WILL EVENTUALLY BECOME AN ADDED VALUE TO THE CITY OF ROTTERDAM.

URBAN SYMBIOSE

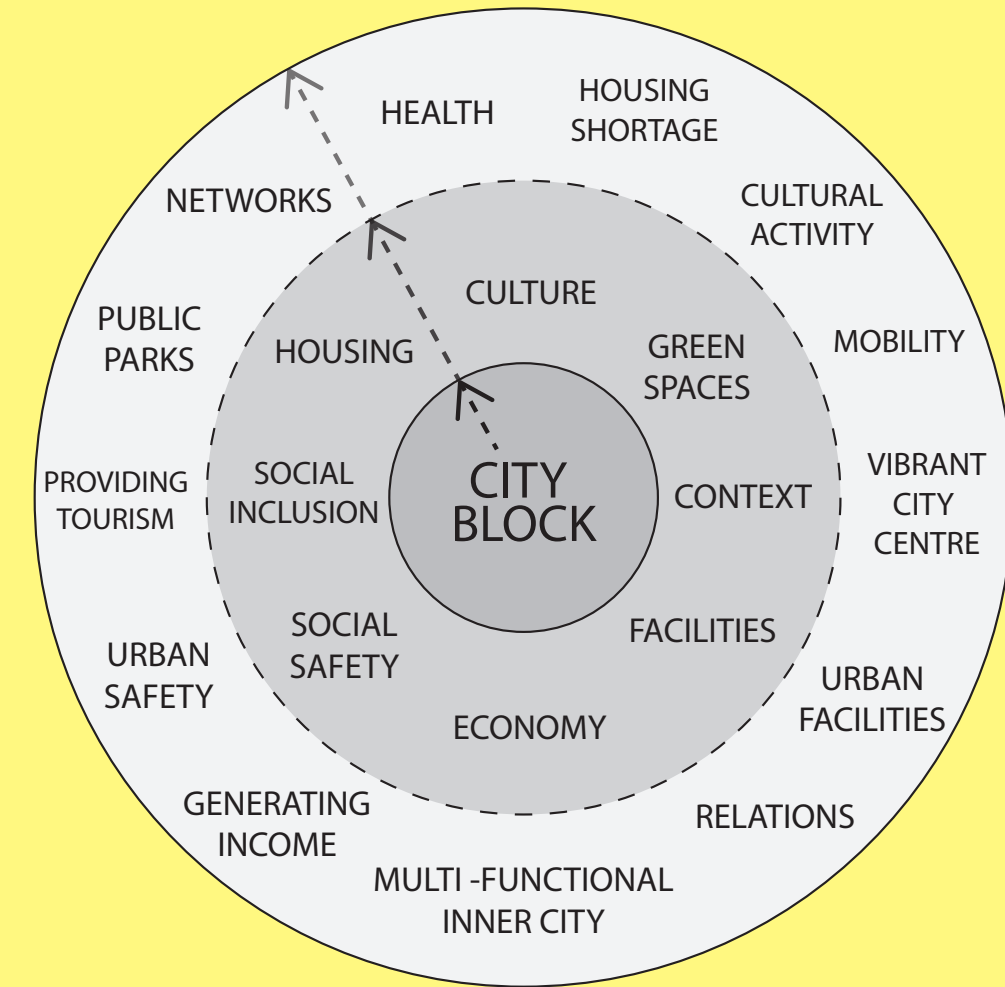


DIAGRAM : URBAN SYMBIOTIC LINKS

THE RELATIONSHIP BETWEEN THE CITY BLOCK AND THE CITY ITSELF CAN BE PERCEIVED AS SYMBIOTIC, THIS MEANS THAT BOTH PARTIES BENEFIT FROM EACH OTHER PRESENCE AND PUSH EACH OTHER FORWARD. IN NATURE, THIS RELATIONSHIP IS FORMED BETWEEN ORGANISMS THAT THRIVE UNDER THE PRESENCE OF ANOTHER SPECIES. THIS TYPE OF RELATIONSHIP IS ALSO INTENDED FOR THE CITY BLOCK AND THE CITY, THE PRESENCE OF THE CITY BLOCK WILL STIMULATE THE CITY AND VICE VERSA. THE INNER CITY OF ROTTERDAM IS VERY DIVERSE IN FUNCTION AND ACTIVITIES AND THEREFORE THE CITY BLOCK HOUSES MULTIPLE FUNCTIONS TO REACT SUCCESSFULLY TO ITS CONTEXT. THE END GOAL IS TO STIMULATE THE EXCHANGE OF ANY KIND IN THE PUBLIC DOMAIN THAT STRETCHES FROM THE CITY INTO THE VOID SPACES OF THE CITY BLOCK. THIS EXCHANGE WILL ENRICH THE USER EXPERIENCE AND WILL SECURE THE RELEVANCE OF THE CITY BLOCK FOR GENERATIONS TO COME.

URBAN DENSITY

“ A CITY IN A BLOCK ”

INCREASING DENSITY

URBAN DENSITY IS A TREND THAT WILL INFLUENCE THE WAY PEOPLE LIVE IN CITIES SHORTLY, WHILST CREATING MORE LIVING UNITS THE CHALLENGE IS TO IMPROVE THE QUALITY OF LIVING. URBAN DENSITY ALSO HAS A POSITIVE IMPACT ON THE ENVIRONMENT SINCE THE INCREASED AMOUNT OF PEOPLE HAS THE POTENTIAL TO ENRICH THE AREA WITH CULTURE, FUNCTIONS AND ARCHITECTURE. THE INFLUENCE ON THE CITY BLOCK CAN BE PERCEIVED ON DIFFERENT SCALE LEVELS, THE MACRO AFFECTS THE WHOLE CITY WHILST THE MICRO HAS A SPECIFIC IMPACT ON THE BLOCK. THESE MACRO AND MICRO LEVELS CAN AND SHOULD BE CAREFULLY DESIGNED AND THEREFORE GUIDED IN THIS DESIGN PROCESS IN SPECIFIC WAYS. STRENGTHENING THE POSITIVE ASPECTS AND USING THEM TO SERVE BOTH THE CITY AND THE CITY BLOCK BECAME THE NUMBER ONE CHALLENGE IN THIS PROJECT.

MIXING FUNCTIONS

MIXING FUNCTIONS WITHIN THE CITY BLOCK CREATES A HIGHER DENSITY OF FUNCTIONS AS WELL, THEREFORE THE POSSIBILITIES FOR THE INHABITANTS ALSO RISE. THE SMALL PROXIMITY ALLOWS PEOPLE TO WALK AND MEET ON ONE OF THE CITY FLOORS, THIS AMOUNT OF ACTIVITY STIMULATES AND ACTIVATES THE WHOLE CITY BLOCK. WORKING PEOPLE, VISITORS AND INHABITANTS CAN ALL INTERACT WITHIN THE PUBLIC SPACE THAT IS OFFERED WITHIN THE BLOCK. THIS PUBLIC SPACE CREATES A FLUENT FEEL THAT EFFORTLESSLY CONNECTS THE ENTIRE CITY BLOCK. PEOPLE CAN WANDER AND HAVE A COFFEE AND TRAVEL TOWARDS THE ROOF PARK TO ENJOY THE COFFEE AND PEOPLE WHO WORK WITHIN THE CITY BLOCK CAN HAVE LUNCH WITH COLLEAGUES AND ENJOY A WALK ALL WITHIN THE SAME BLOCK.

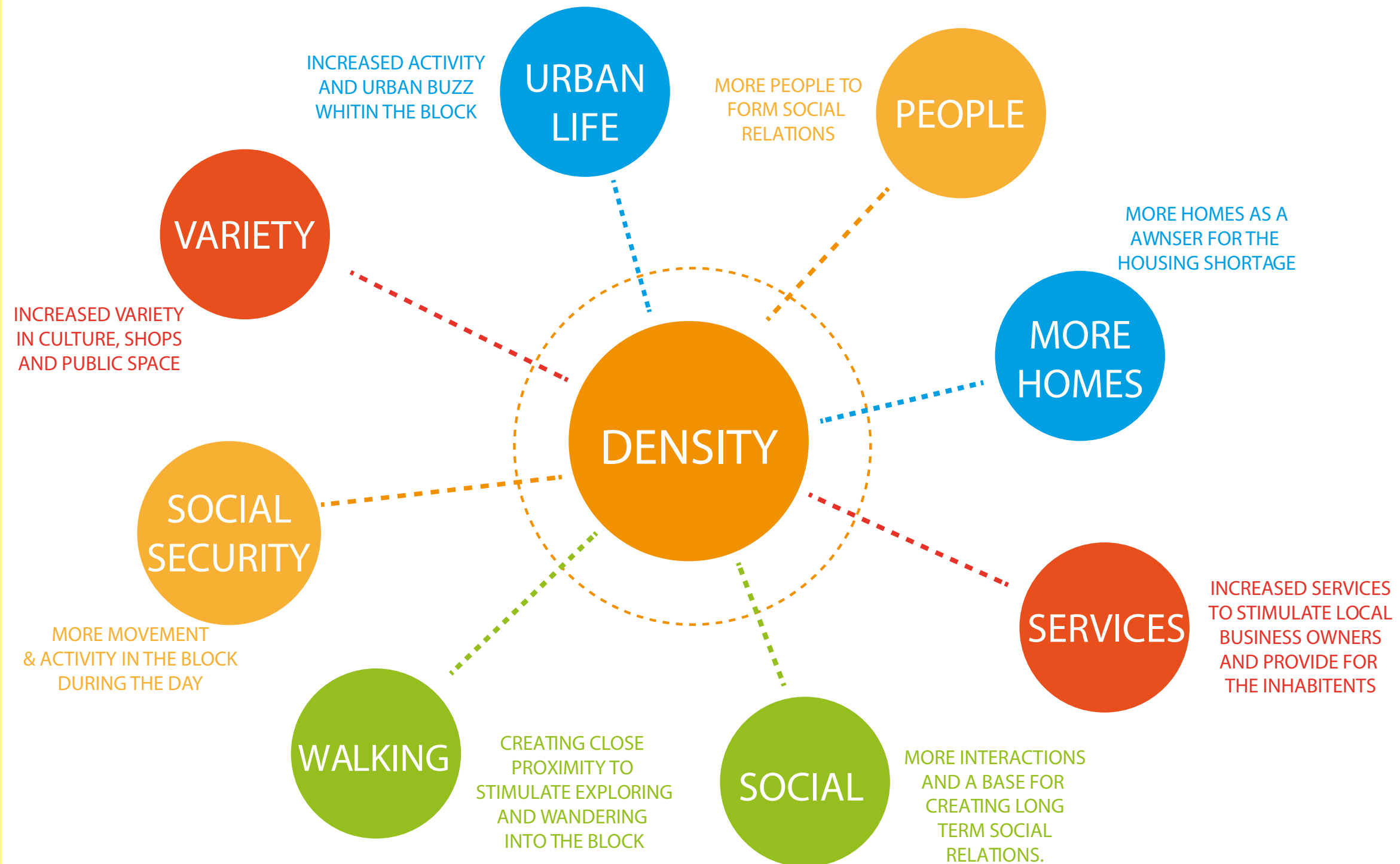


DIAGRAM :POSTIVE ASPECTS OF INCREASED DENSITY

SOCIAL INTERACTION

“CREATING A BASE FOR ENCOUNTERS”

TARGET GROUPS

THE VIBRANT CITY BLOCK PROVIDES EXCELLENT URBAN LIVING ENVIRONMENTS FOR A MIX OF INHABITANTS THAT RESEMBLES THE FUTURE URBAN DEMOGRAPHY. BY CREATING A MIX OF DWELLINGS THE TARGET GROUPS CAN SPREAD AND THIS HAS A DIRECT POSITIVE INFLUENCE ON THE SOCIAL FUNCTIONING OF THE CITY BLOCK. THE MAIN USER OF THE BUILDING WILL CONSIST OF ONE TO TWO PEOPLE HOUSEHOLDS MIXED WITH 2-4 PERSON HOUSEHOLDS THAT ALL HAVE PRIVATE DOMAINS AND THE VOID DOMAIN WHICH WILL BE SHARED BY THE OTHER INHABITANTS OF THE CITY BLOCK. THE DEMOGRAPHIC MIX OF PEOPLE WILL VARY FROM ELDERLY WIDOWS TO SINGLE STARTERS AND PROVIDE A HOME FOR EVERY MIX OF PEOPLE IN BETWEEN. MIXING GENERATIONS WILL ALSO DYNAMICALY SPREAD THE FUNCTIONAL ABILITIES BECAUSE THE NEEDS OF THE PEOPLE ARE WIDESPREAD AND THIS MEANS THE ECONOMIC POSSIBILITIES ARE BETTER. THE CITY FLOORS CAN BE PERCEIVED AS THE BREEDING GROUND FOR LIVING WORKING AND LEISURE WITHIN THIS INNOVATIVE CITY BLOCK. THE CHANGE FOR SOCIAL INCLUSION IS VERY LARGE WHEN THE PUBLIC DOMAIN WILL PROVOKE SOCIAL INTERACTION AND SPONTANEOUS INTERACTIONS.

SHARED SPACE

PROVIDING A BASE FOR PEOPLE TO ENCOUNTER EACH OTHER WITHIN THE CITY BLOCK IS ESSENTIAL FOR THE SUCCESS FACTOR OF THE PROJECT. THE ONLY WAY TO SUCCESSFULLY STIMULATE SOCIAL ENCOUNTERS IS TO PROVIDE SHARED SPACES WITHIN THE BUILDING VOLUME, THESE SHARED FUNCTIONS CAN VARY PER DWELLING TYPE AND DIFFER IN SIZE. DUE TO THE COMPACT NATURE OF THE DWELLING TYPOLOGIES, THIS MEANS THAT THE EXTENDED SPACE THAT PEOPLE LACK IN THE PRIVATE DOMAIN CAN BE SITUATED IN THE PUBLIC SPACE OF THE CITY BLOCK. THE MIX OF FUNCTIONS CREATES A NECESSITY FOR USERS TO SHARE AND USE THE SAME FACILITIES WITHIN THE BLOCK. THESE COMMON FUNCTIONS CAN CONSIST OF A LAUNDRY ROOM, OUTDOOR SPACES, LIBRARIES AND LIVING ROOMS FOR EVERYDAY USE. THIS QUEST FOR COMPACT LIVING WILL PROVIDE A BASE FOR WILLINGNESS AND WILL STIMULATE PEOPLE TO SHARE MORE FACILITIES AND SPACE. THIS MEANS THAT IF PEOPLE PAY FOR THEIR APARTMENT THEY PAY 80% FOR THEIR PRIVATE DOMAIN AND THE OTHER 20% PROVIDES MORE SPACE THAT IS CO-FUNDED AND THEREFORE HAS A LARGER IMPACT ON EVERY INHABITANT.

AGE DIVERSITY

HOUSING THAT PROVIDES SPACE FOR DIFFERENT AGE AND SOCIAL GROUPS TO CREATE A HEALTHY MIXTURE OF INHABITANTS. DESIGN FOCUSING ON THE NEEDS OF SOCIETY IN 2050 AND TAKING INTO ACCOUNT THAT ACCESSIBILITY AND AUTARKIC ENERGY SYSTEMS WILL BE THE STANDARD. THE OLDER GENERATIONS WILL OCCUPY MOST OF THESE DWELLINGS AND THEREFORE THE ROUTING AND THE PUBLIC SPACES SHOULD BE INTEGRAL TO THE COURTYARD TO CREATE A FEELING OF OWNERSHIP AND ENSURE THAT THE HUMAN SCALE WILL NOT BE LOST. THE NEED FOR HIGH DENSITY CAN THEN BE USED TO CREATE A PLEASANT LIVING ENVIRONMENT THAT SUITS THE CONTEMPORARY NEEDS OF PEOPLE LIVING IN THE INNER CITY.

SOCIAL NETWORKS

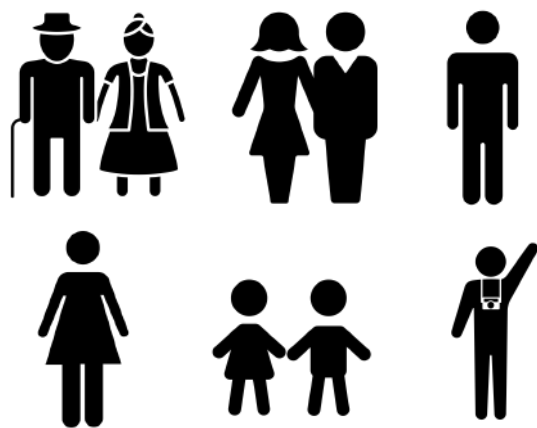
THE NEED FOR HUMAN INTERACTIONS AND THE FEELING OF COMMUNITY IS SOMETHING ESSENTIAL TO THE MENTAL HEALTH AND WELL-BEING OF HUMAN BEINGS. THE SOCIAL ASPECT OF CITY BLOCKS IS SOMETHING THAT IS CURRENTLY BEING SEEN AS ESSENTIAL SINCE LARGE-SCALE HOUSING DEVELOPMENTS CAN ALSO CREATE A FEELING OF ALIENATION BETWEEN THE RESIDENTS AND THEIR SURROUNDINGS. THE CONCEPT OF LOW-RISE HIGH DENSITY CREATES A SMALLER-SCALE INTERACTION BETWEEN THE PEOPLE AND THEIR SURROUNDINGS. CREATING A SMALLER-SCALE ROUTING THAT STIMULATES INTERACTION AND FORMS NETWORKS WITHIN THE CITY BLOCK BUT ALSO OUTWARDS CAN SHAPE THE WAY WE DESIGN THE NEW CITY BLOCKS.



SOCIAL INTERACTION SEMI-PUBLIC DOMAIN



SOCIAL INTERACTION INTERIOR



TARGET GROUPS

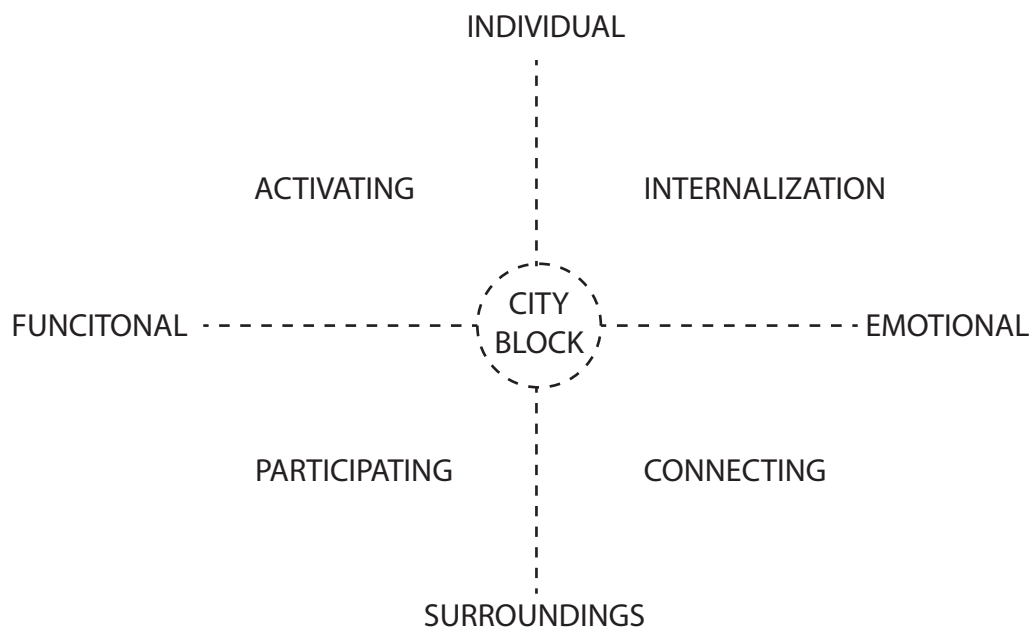


DIAGRAM :SOCIAL IMPACT OF THE CITY BLOCK

RELATION BETWEEN SCALE AND SOCIAL INCLUSION

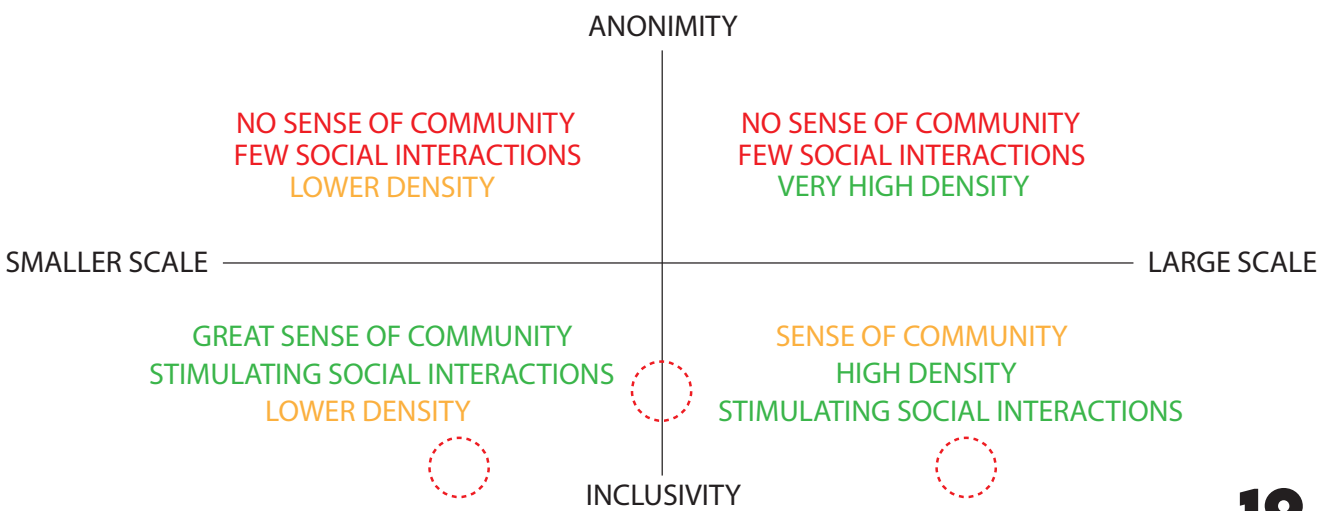
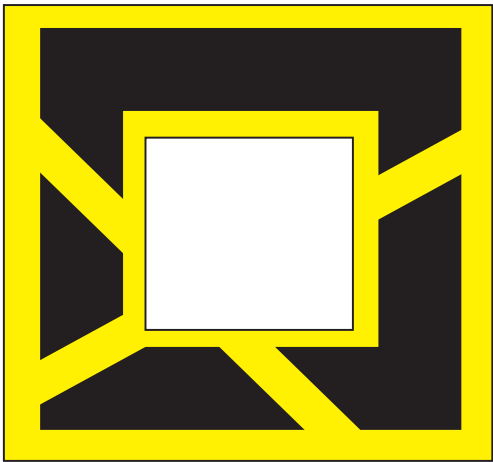


DIAGRAM :SCALE IN RELATION TO SOCIAL INCLUSION

SOCIAL INTERACTION

“UTILISING THE VOIDS”

CURATING THE PUBLIC SPACE



■ FUNCTIONS ■ VOID SPACES

DIAGRAM : PUBLIC VOID SPACES

THE VIBRANT CITY BLOCK PROVIDES EXCELLENT URBAN LIVING ENVIRONMENTS FOR A MIX OF INHABITANTS THAT RESEMBLES THE FUTURE URBAN DEMOGRAPHY. BY CREATING A MIX OF DWELLINGS THE TARGET GROUPS CAN SPREAD AND THIS HAS A DIRECT POSITIVE INFLUENCE ON THE SOCIAL FUNCTIONING OF THE CITY BLOCK. THE MAIN USER OF THE BUILDING WILL CONSIST OF ONE TO TWO PEOPLE HOUSEHOLDS MIXED WITH 2-4 PERSON HOUSEHOLDS THAT ALL HAVE PRIVATE DOMAINS AND THE VOID DOMAIN WHICH WILL BE SHARED BY THE OTHER INHABITANTS OF THE CITY BLOCK. THE DEMOGRAPHIC MIX OF PEOPLE WILL VARY FROM ELDERLY WIDOWS TO SINGLE STARTERS AND PROVIDE A HOME FOR EVERY MIX OF PEOPLE IN BETWEEN. MIXING GENERATIONS WILL ALSO DYNAMICALLY SPREAD THE FUNCTIONAL ABILITIES BECAUSE THE NEEDS OF THE PEOPLE ARE WIDESPREAD AND THIS MEANS THE ECONOMIC POSSIBILITIES ARE BETTER. THE CITY FLOORS CAN BE PERCEIVED AS THE BREEDING GROUND FOR LIVING WORKING AND LEISURE WITHIN THIS INNOVATIVE CITY BLOCK. THE CHANGE FOR SOCIAL INCLUSION IS VERY LARGE WHEN THE PUBLIC DOMAIN WILL PROVOKE SOCIAL INTERACTION AND SPONTANEOUS INTERACTIONS.

COMMUNITY **CONNECTER** **PUBLIC**
VOID **VOID** **VOID**
GREEN **VOID**
ECONOMIC **VOID**

INNER CITY PUBLIC SPACE
GREEN SPACES & NETWORKS
COMMERCIAL SPACES
TRANSPORTATION
PHYSICAL EXERCISE AND SPORTS
ACTIVITIES AND LEISURE

INTERNAL ROUTING
EXTERNAL ROUTING
CROS FUNCTIONAL CONNECTIONS
ACCESABILITY
GALLERY AND HALLWAYS
SOCIAL ENCOUNTER SPACES

SHARED FUNCTIONS
PLEASANT ENCOUNTERS
PRODUCTIVE SPACES
SHARED LEISURE FUNCTIONS
EXTERNAL CONNECTIONS
COMMUNITY EVENT SPACE

OUTDOOR GREEN SPACE
GREEN LIVING SPACES (PATIO)
SHARED GREEN SPACES
URBAN PLAYGROUNDS FOR ALL AGE GROUPS
PASSIVE COOLING & SHADING
PLEASANT SOCIAL ENCOUNTERS

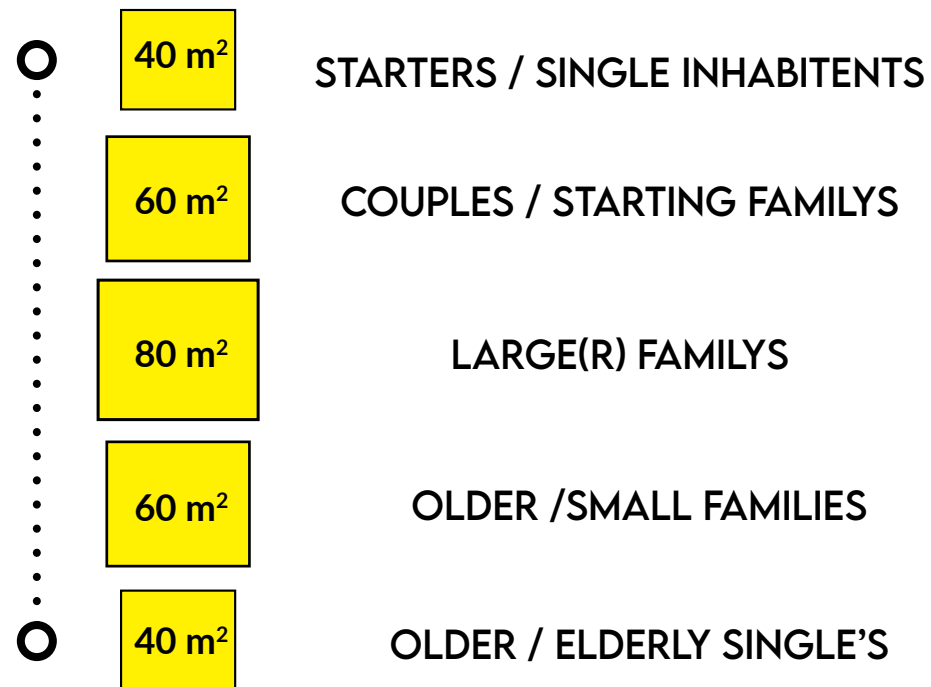
FLEXIBLE WORKSPACES
RESTAURANTS AND BARS
LOCAL STARTUP COMPANIES
SHARED MOBILITY NETWORKS
EXTERNAL VISITORS AND CLIENTS
URBAN FARMING / PRODUCTIVE LANDSCAPE



COMPACT LIVING

“UTILISING THE VOIDS”

WHAT ARE THE DIFFERENCES BETWEEN HOUSING TYPOLOGIES WHITIN THE CITY BLOCK CONCERNING SPACE ?



WHAT COULD BE THE ADDED VALUE FOR COMPACT APPARTMENTS IN THE FORM OF A VOID ?

OUTDOOR SPACE, RELAXATION (GREEN)

SOCIAL GALERIES AND HALLWAYS

MIXED AGE INTERACTIONS (AGE FRIENDLY)

EXTENSION OF INTERIOR SPACE

OPPURTUNITIES (FROM RESEARCH)

COMPACT APPARTMENTS PROVIDES EXTRA SPACE FOR OTHER FUNCTIONS WITH A SOCIAL/COMMUNITY ASPECT

older people spend the most time whitin the city block

shared facilities provide more social interactions



IMAGE 19



IMAGE 20

WHAT ASPECTS OF A HOUSE COULD BE SHARED ?

NEED FOR HOSTING FUNCTIONS

LIVING ROOM (RELAXATION AND INTERACTION)

GREEN SPACE (GARDEN AND NATURE)

DINING ROOM (SPACE FOR SHARING MEALS)

SPARE BEDROOMS (HOSTING GUESTS)

POSSIBILITIES FOR SHARED FUNCTIONS

NEED FOR TRANQUIL GREEN SPACES INCREASES

MORE NEED FOR SHARED FUNCTIONS DUE TO SOCIAL AND INDEPENDENCY FACTORS

OLDER PEOPLE USE PROGRESSIVELY LESS FUNCTIONS WITHIN THE HOUSE WHEN AGING

WHAT IS THE INFLUENCE OF AGE ON THE NEEDS OF FUNCTIONS WITHIN THE DWELLING ?



IMAGE 21



IMAGE 22

SOCIAL INCLUSION

“CREATING COMMUNITIES”

WALKABLE CITY (NO CARS)

LOCAL FACILITIES

PLEASANT GREEN SPACE

GOOD MOBILITY

STRONG COMMUNITY SENSE

24/7 ACTIVITY

MIXED AGE GROUPS

**PRODUCTIVE MEMBERS
OF SOCIETY**

COMMUNITY SENSE

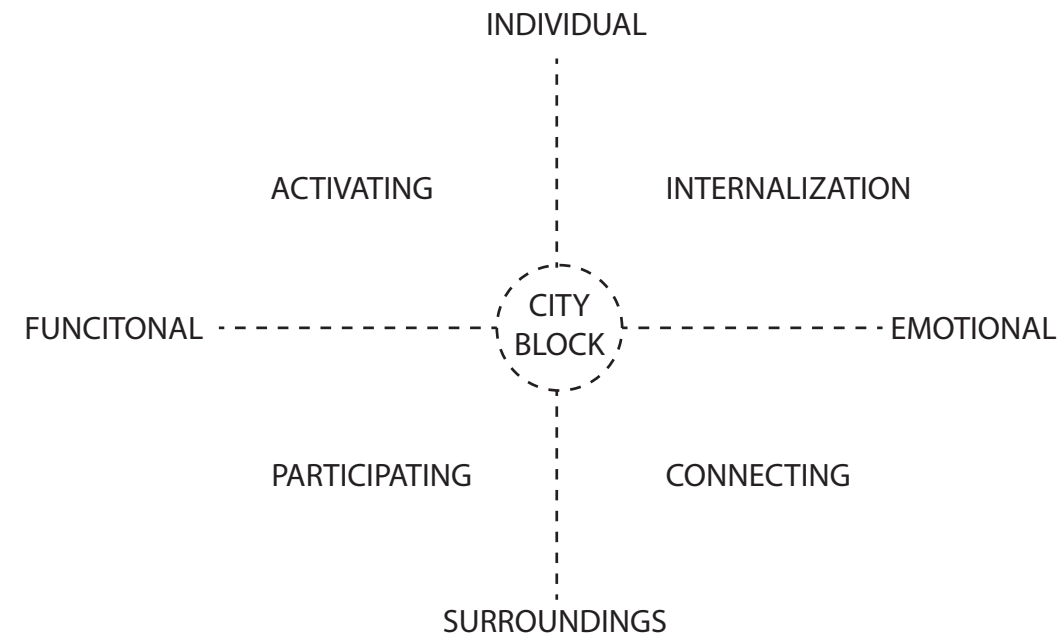


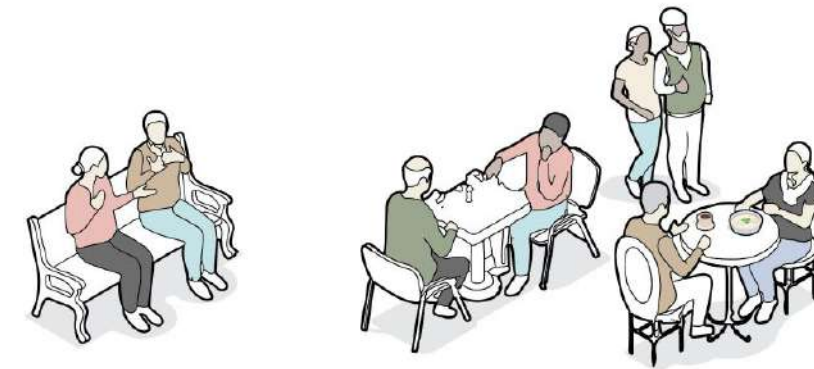
DIAGRAM : SOCIAL PARTICIPATING IN THE CITY BLOCK

PROVIDING SOCIAL INCLUSION WITHIN THE CITY BLOCK
NEEDS TO THINK ABOUT DIFFERENT ASPECTS OF THE DOMAIN



A STRONG SENSE OF BELONGING AND PURPOSE
CREATES A MULTIGENERATIONAL SUCCESS STORY

**STIMULATING ACTIVE
PARTICIPATION IN THE CITY BLOCK**



social space

- Social circulation space
- Distributed sun rooms
- Events space
- Exercise / gym facilities
- Gardening space

community space

- Community cafe
- Outdoor eating and drinking
- Community events
- Retail and other amenities on the doorstep
- Access to transport networks
- Access to local green space

IMAGE 24



AGE-FRIENDLY LIVING

“PREVENTING LONELINESS”

NEED FOR MOBILITY

ACCESABILITY

HEALTHY AGEING

SOCIAL INCLUSION

COMMUNITY SENSE

ACTIVITIES

CENTRALIZED URBAN LOCATION

STIMULATING PHYSICAL ACTIVITY

AGE FRIENDLY LIVING

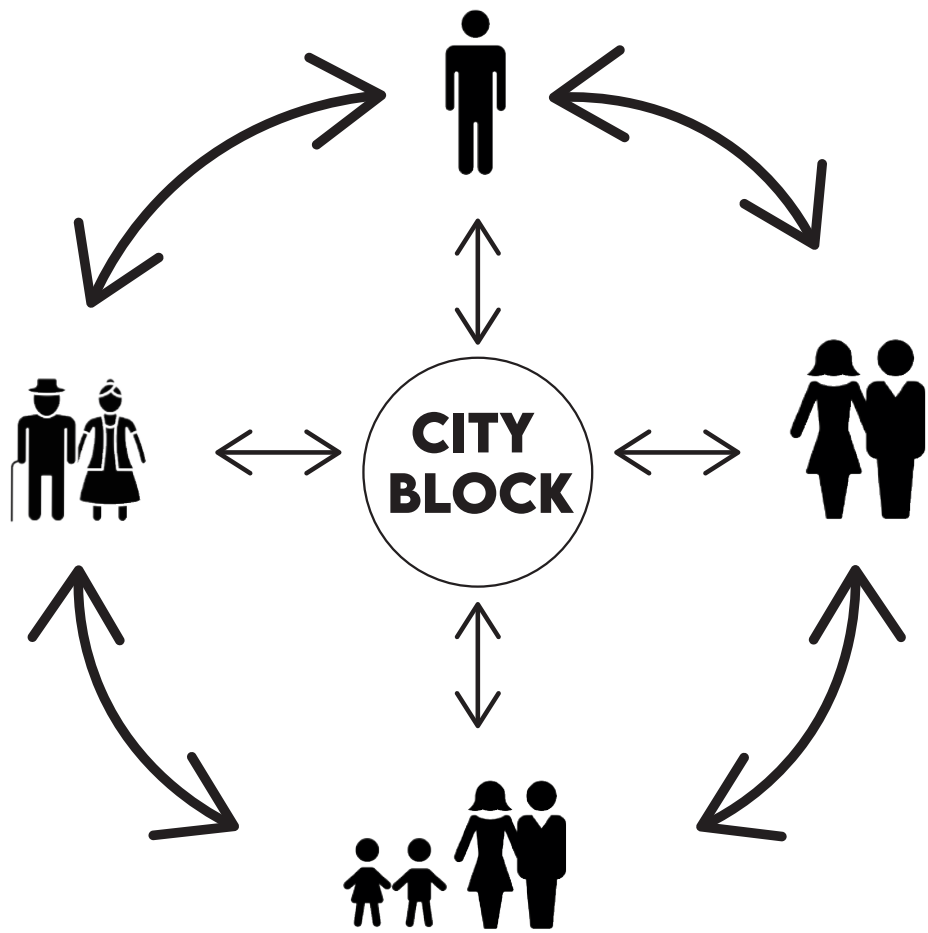


DIAGRAM : AGE FRIENDLY LIVING IN THE CITY BLOCK

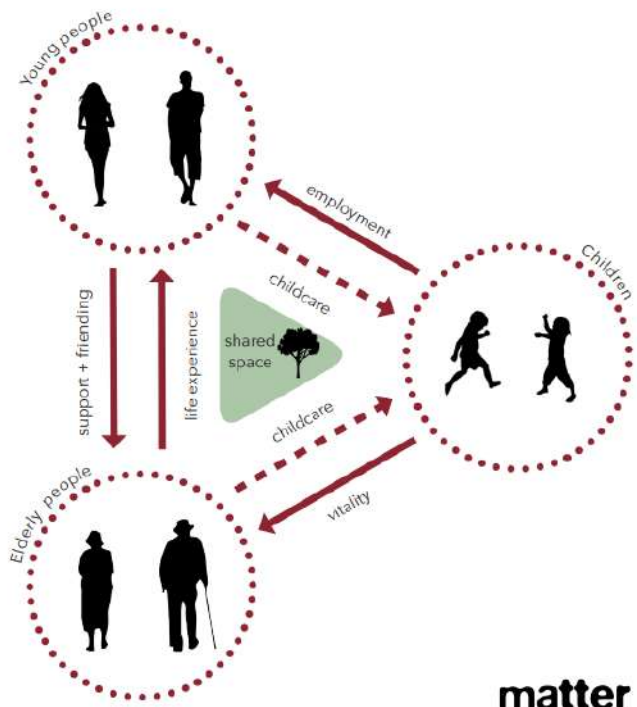


IMAGE 27

PROVIDING A MIXED AGE LIVING AREA CREATES A FEELING OF LIVING IN THE MIDDLE OF SOCIETY



IMAGE 28



IMAGE 29



IMAGE 30

SOCIAL NETWORKS

“STIMULATING THE SOCIAL DOMAIN”

“from brief contacts to social networks”

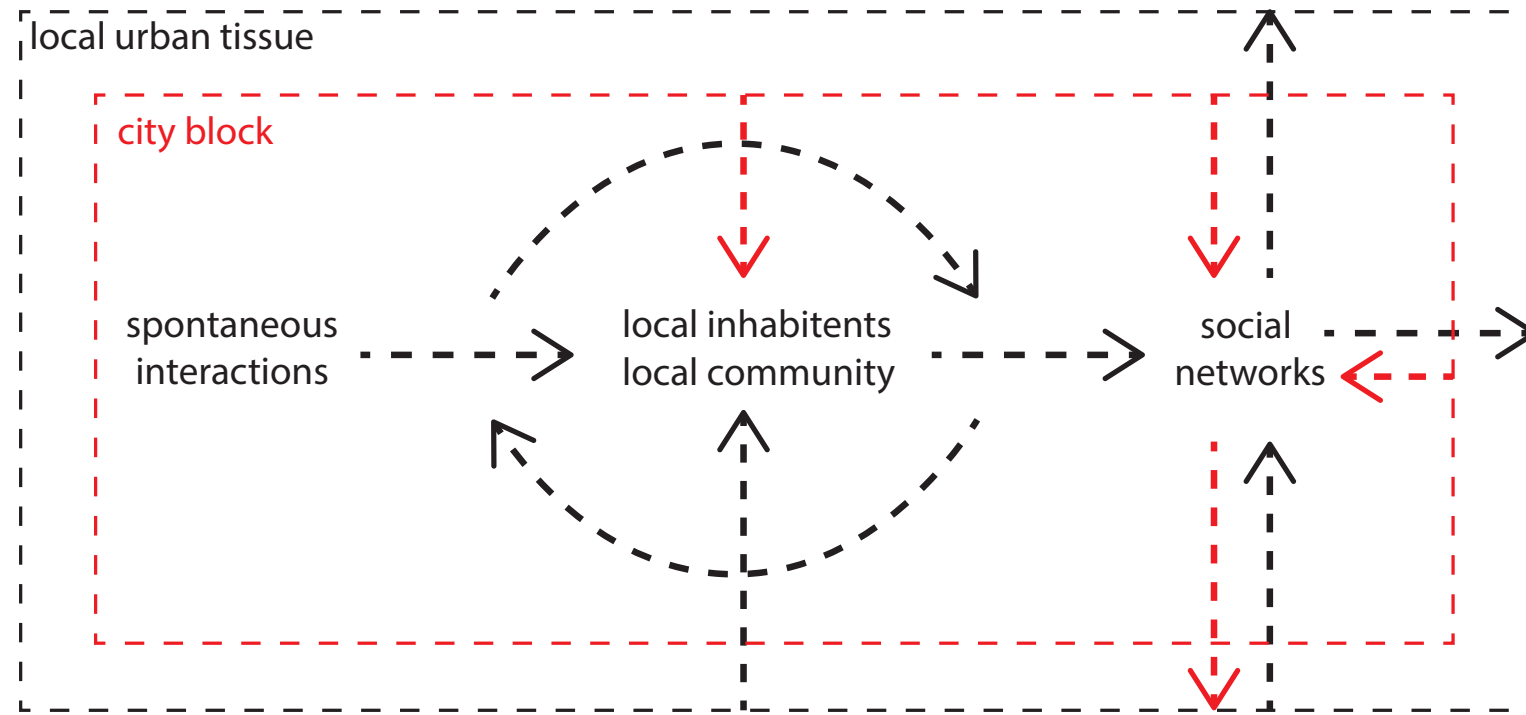
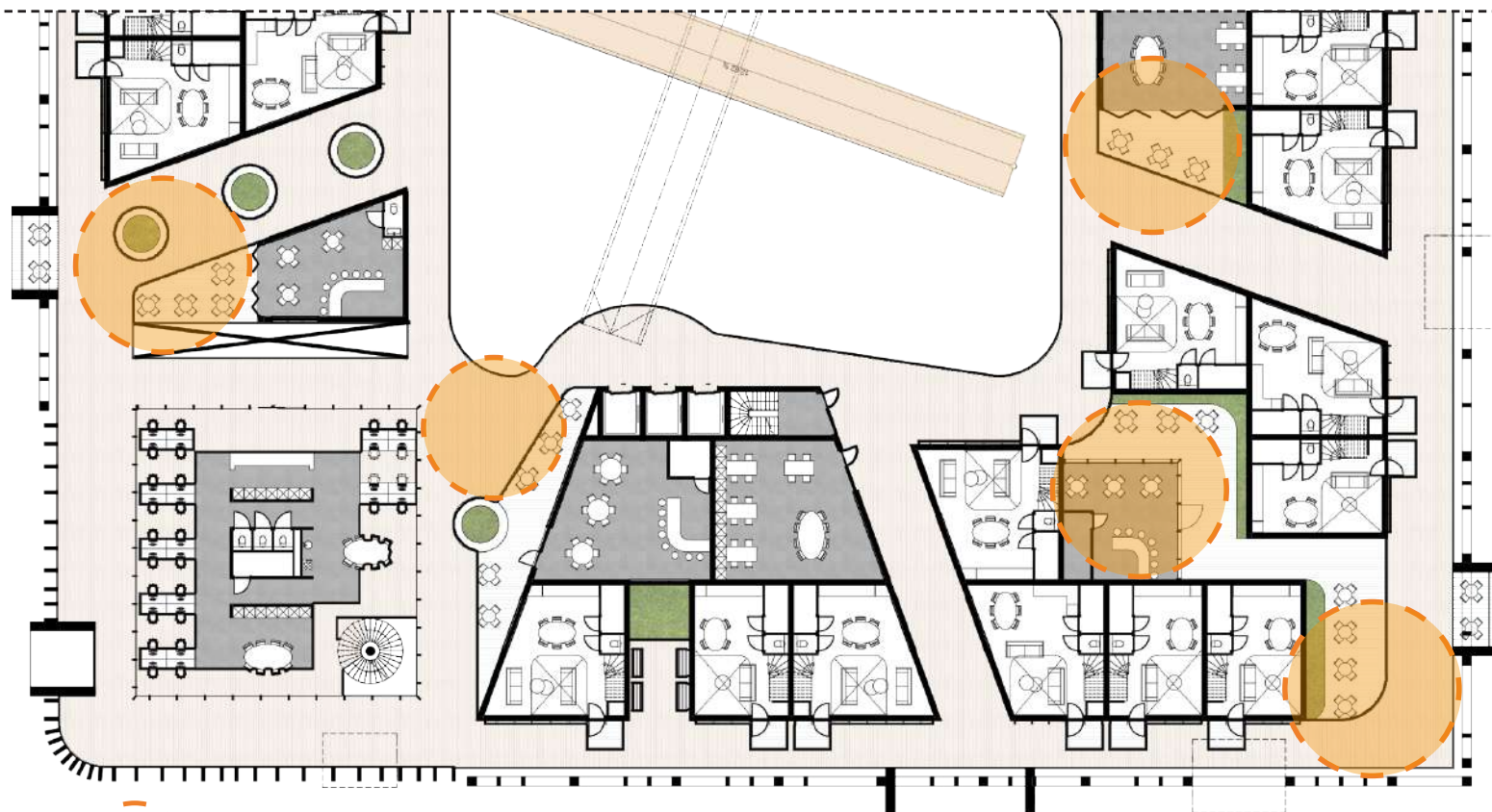


DIAGRAM : FROM BRIEF CONTACTS TO SOCIAL NETWORKS



SPACES FOR SOCIAL INTERACTIONS

A BLOCK IN THE HEART IN THE CITY

THE MIXING OF COMMUNITIES IN THE CASE OF THE CITY BLOCK IS AIMED TO TAKE PLACE IN THE VOID SPACES AROUND THE PUBLIC DOMAIN OF THE CITY BLOCK. PROVIDING SPACES TO MEET CAN HELP TO FORM SOCIAL RELATIONS AND HELP TO CREATE A FOUNDATION FOR THE CITY BLOCK TO FUNCTION ON A SOCIAL ASPECT. THE STAKEHOLDERS IN THE CITY BLOCK VARY FROM VISITORS, INHABITANTS AND PROFESSIONALS THAT WORK IN THE CITY BLOCK. THIS VARIETY OF STAKEHOLDERS WILL CREATE A DEEPER CONNECTION THAT WILL RESEMBLE THE SOCIAL RELATIONS THAT CAN BE SEEN IN A NORMAL CITY CENTRE. THIS DEEPER CONNECTION WILL RESEMBLE NORMAL SOCIAL RELATIONS AND THEREFORE THE SOCIAL DOMAIN OF THE BLOCK WILL SPREAD FURTHER THAN THE BOUNDARIES OF THE CITY BLOCK.

THE THEORY OF “FROM BRIEF CONTACTS TO SOCIAL RELATIONS” (NICOLA DEMPSEY) STATES THAT THE SOCIAL DOMAIN OF ONE'S SURROUNDINGS, EITHER WORK OR DOMESTICALLY RELATED FORMS A LARGE PART OF THE SOCIAL CONTACTS OF THESE INDIVIDUALS. THEREFORE PROVIDING A BASE FOR SOCIAL INTERACTION WITHIN THE PUBLIC SPACE CAN HELP TO IMPROVE SOCIAL INCLUSION WITHIN THE CITY BLOCK. THE FAMILIARITIES THAT BRIEF CONTACTS CREATE CAN FORM A BASE FOR FUTURE RELATIONSHIPS AND THIS POSITIVE DRIVE WILL HELP TO PUSH THE CITY BLOCK TO A NEW LEVEL.

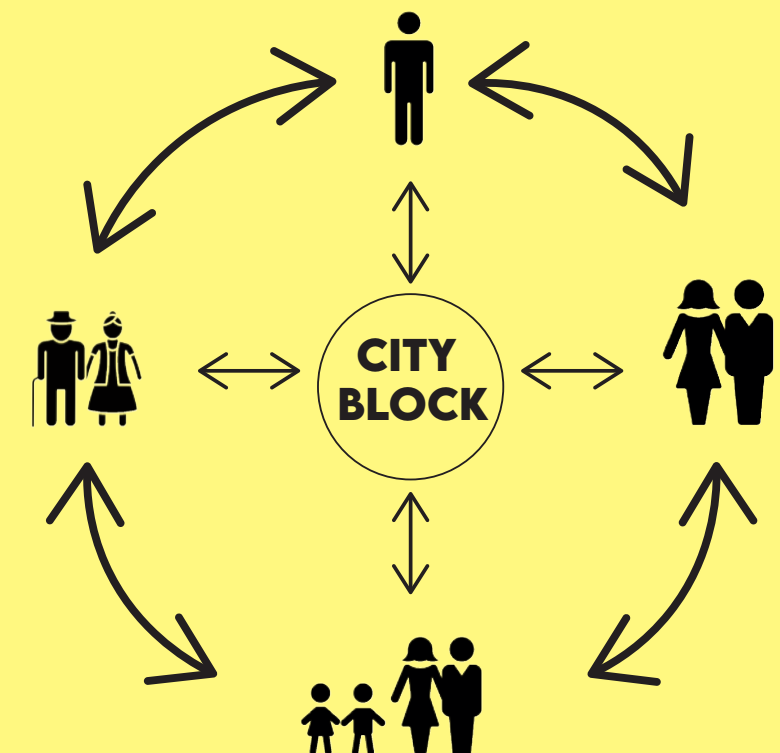
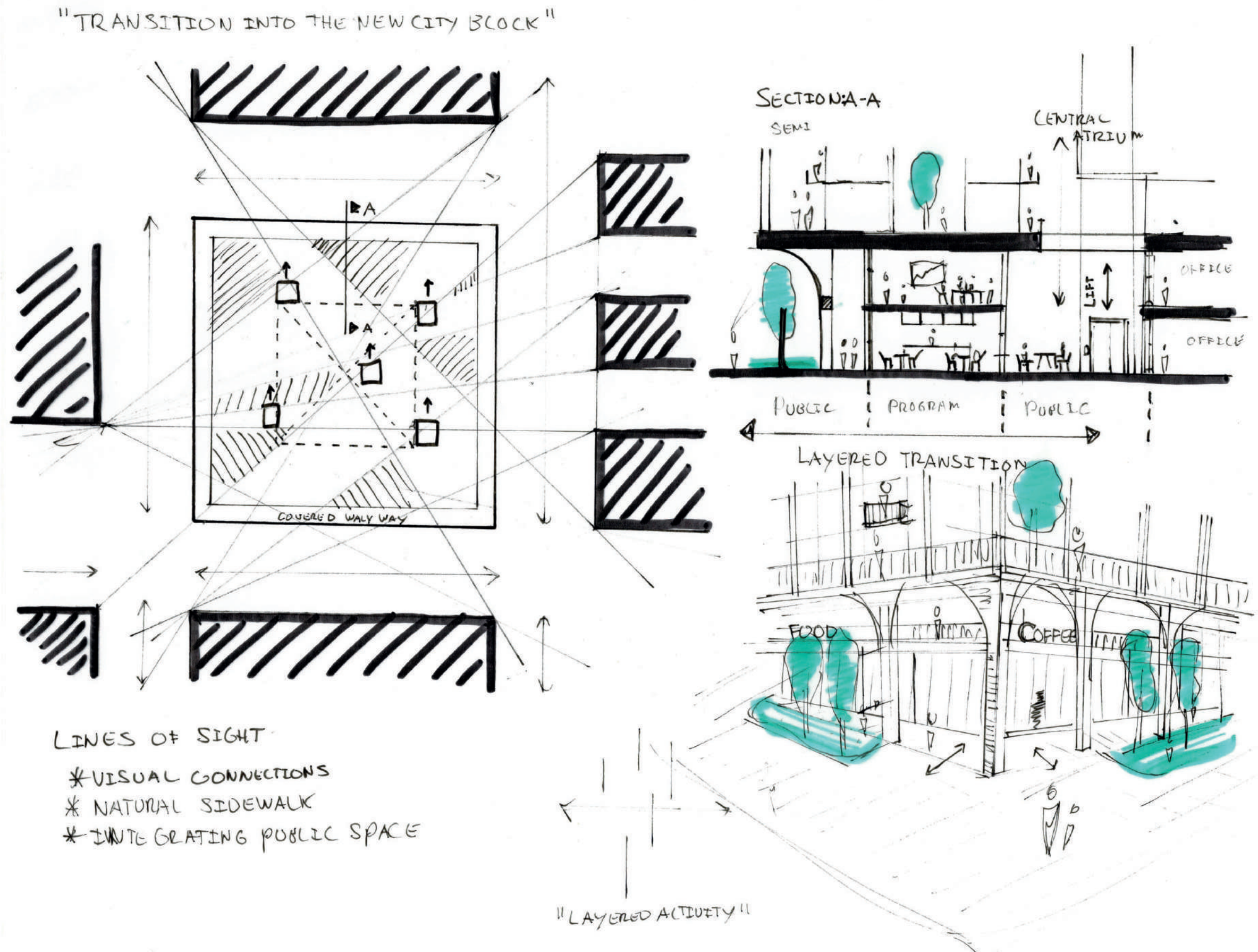


DIAGRAM : FORMING VITAL SOCIAL CONNECTIONS

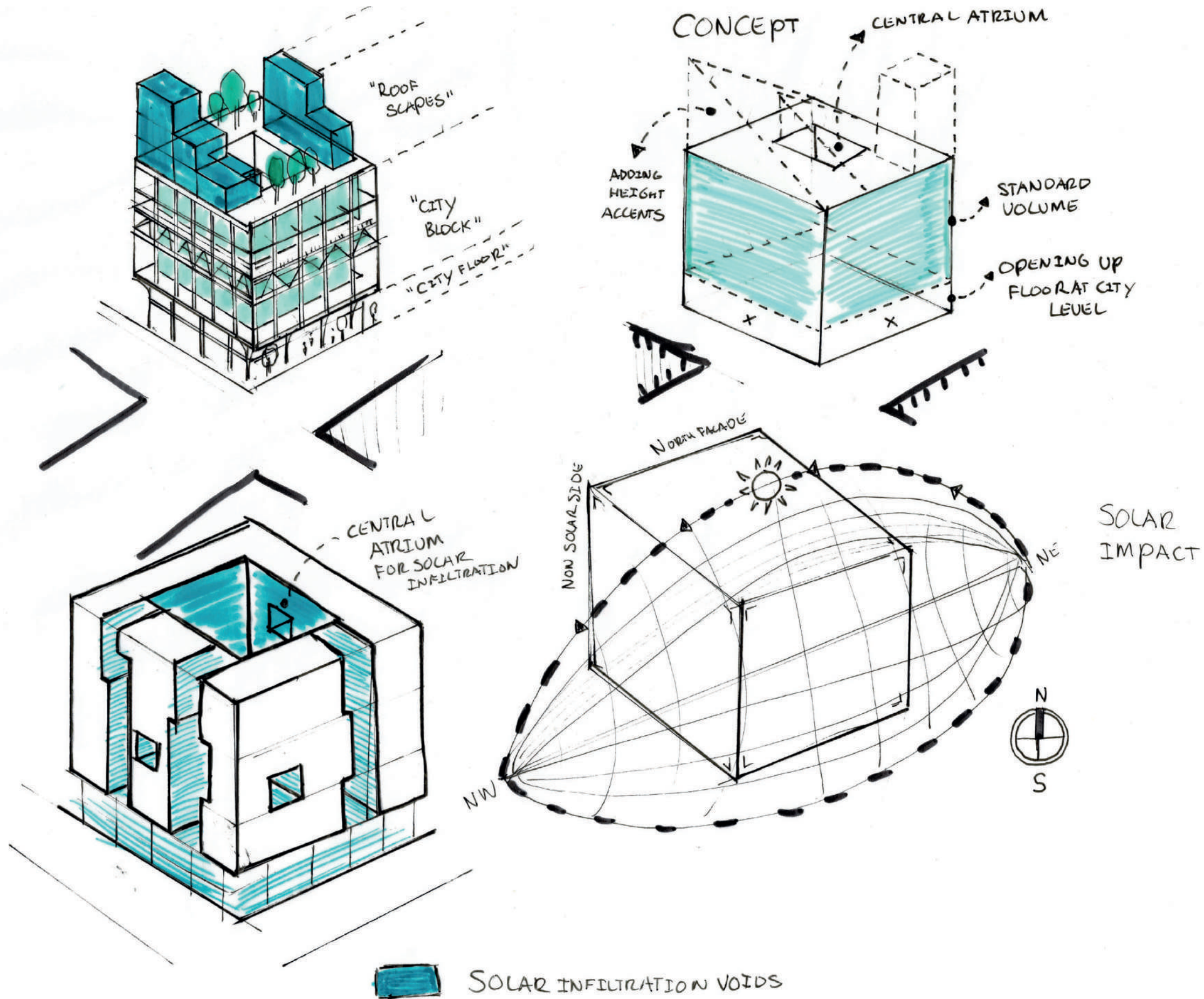
SKETCH DESIGN

"TRANSITION SPACE"



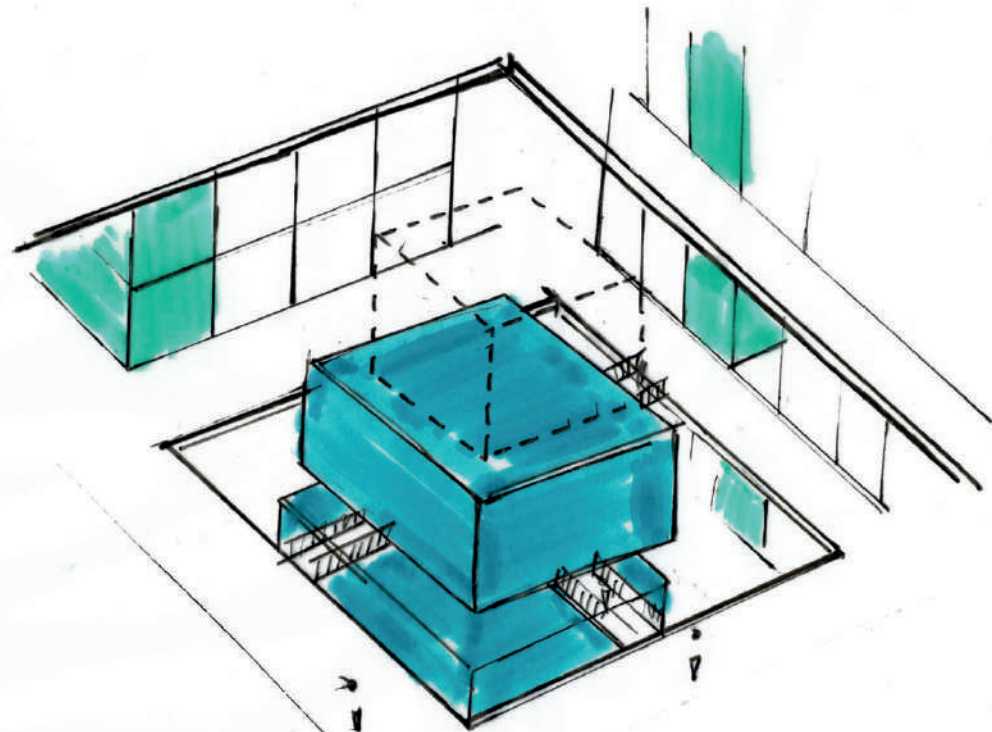
SKETCH DESIGN

"SCULPTING THE VOID FOR SOLAR PENETRATION"

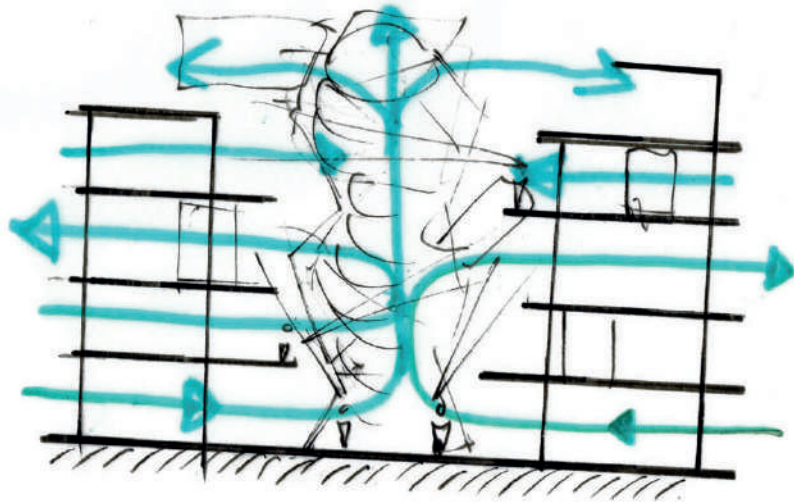


SKETCH DESIGN

"SOCIAL ATRIUM, VISUAL CONNECTIONS AND INTERACTION"

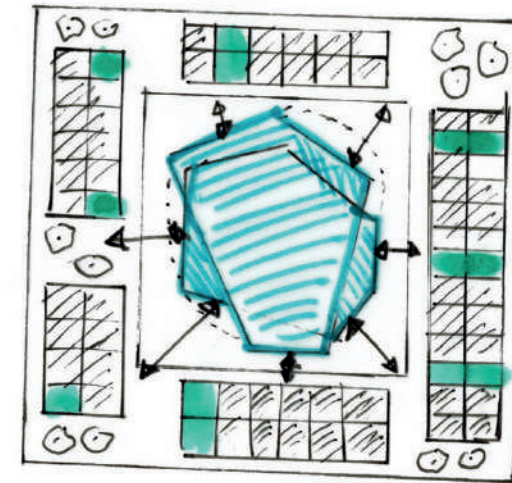


SECTION
CENTRAL VOID

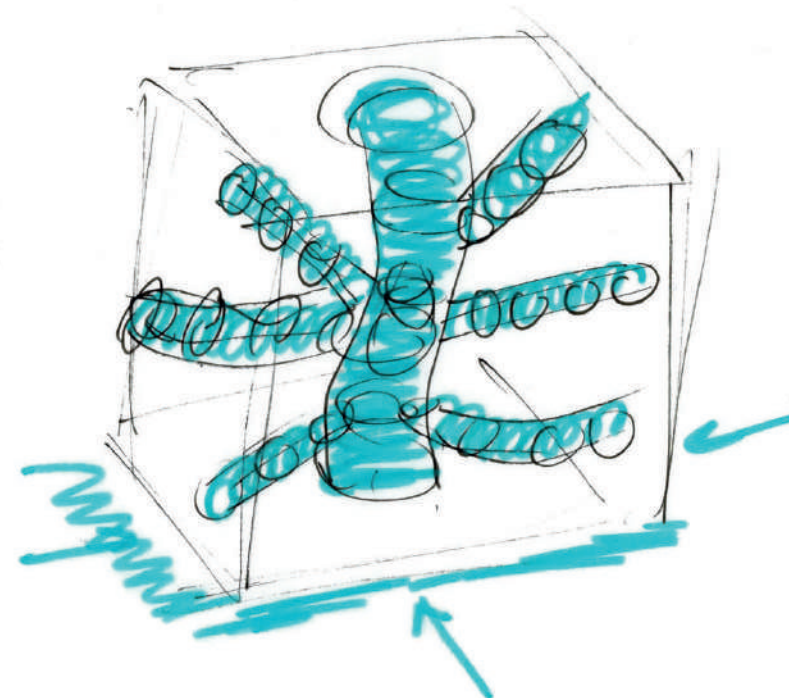


- * CONNECTING VOID
- * CENTRAL CORE
- * VISUAL CONNECTIONS
- * ALL DAY USE

FLOOR PLAN

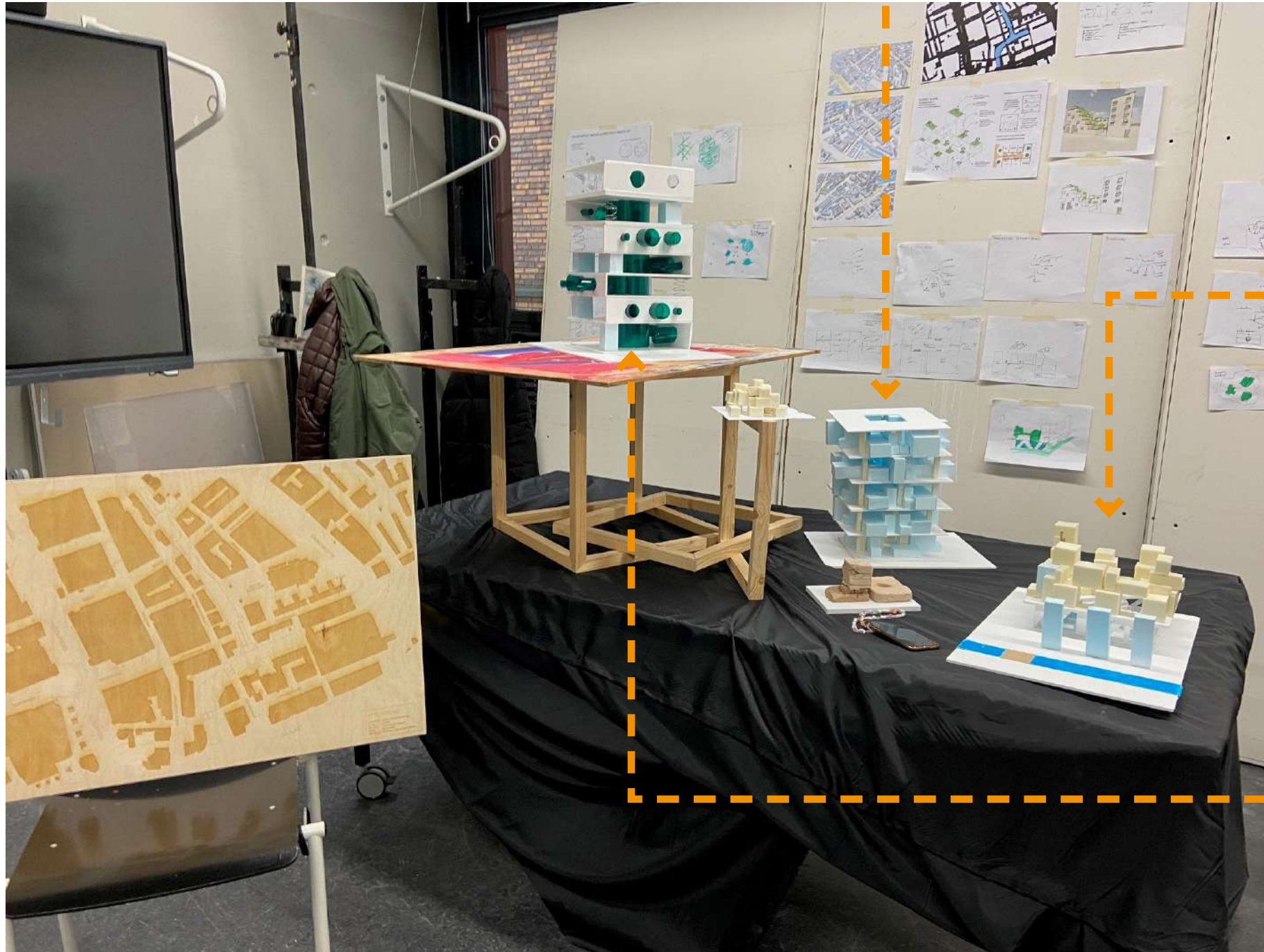


- LIVING [green hatching]
- CENTRAL ATRIUM PROGRAM [blue hatching]
- SMALLER INTEGRATED PROGRAM [light green hatching]
- TREES [circle with cross]



DESIGN BY MODELS

"WINTER SCHOOL BRAINSTORM"



EXPLORATION OF CONCEPTS WITH FELLOW STUDENTS, MAIN THEME : EXPLORING THE VOID POSSIBILITIES

EXTREME DENSITY MODEL



ELDERLY BLOCK MODEL

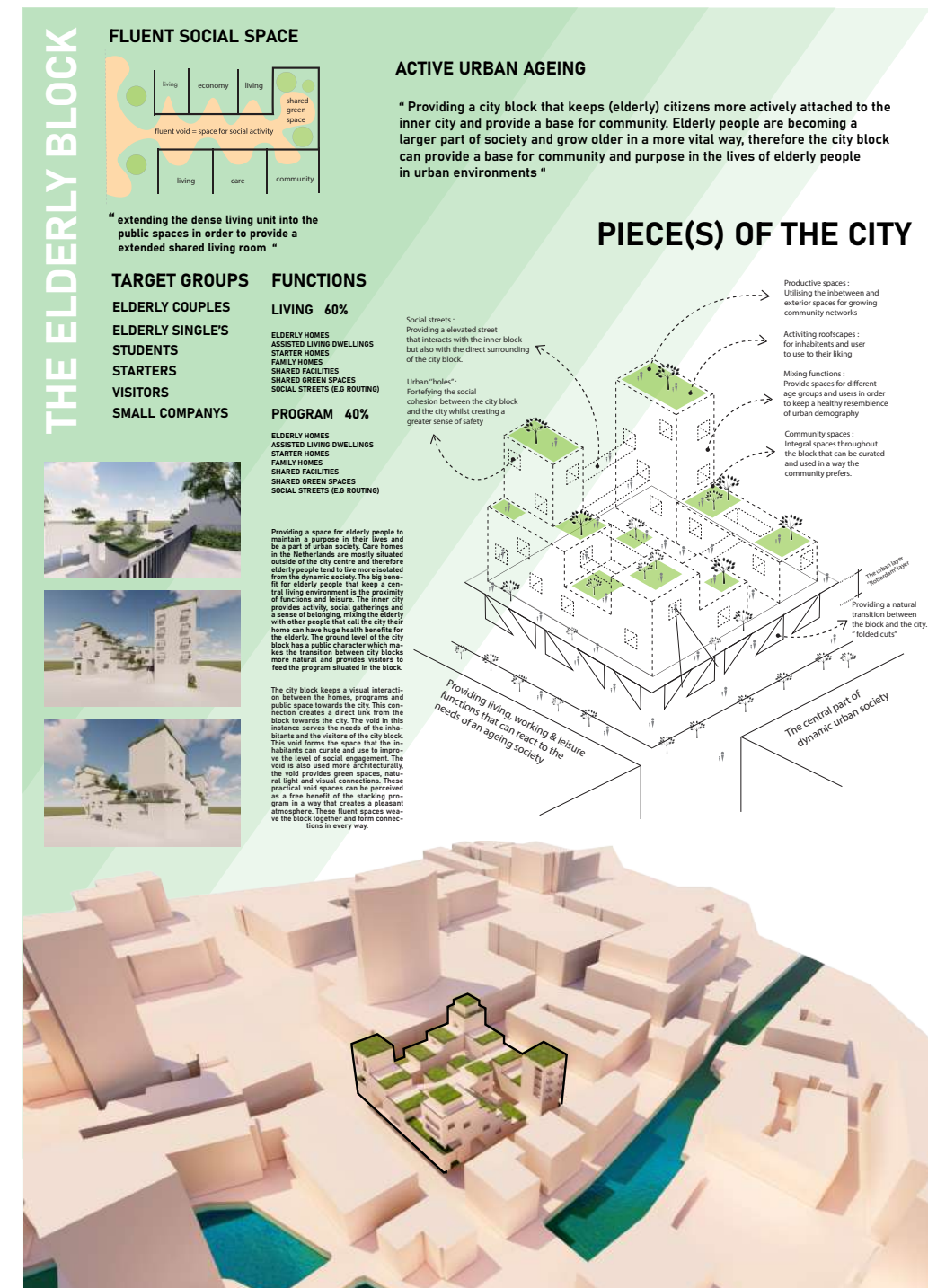
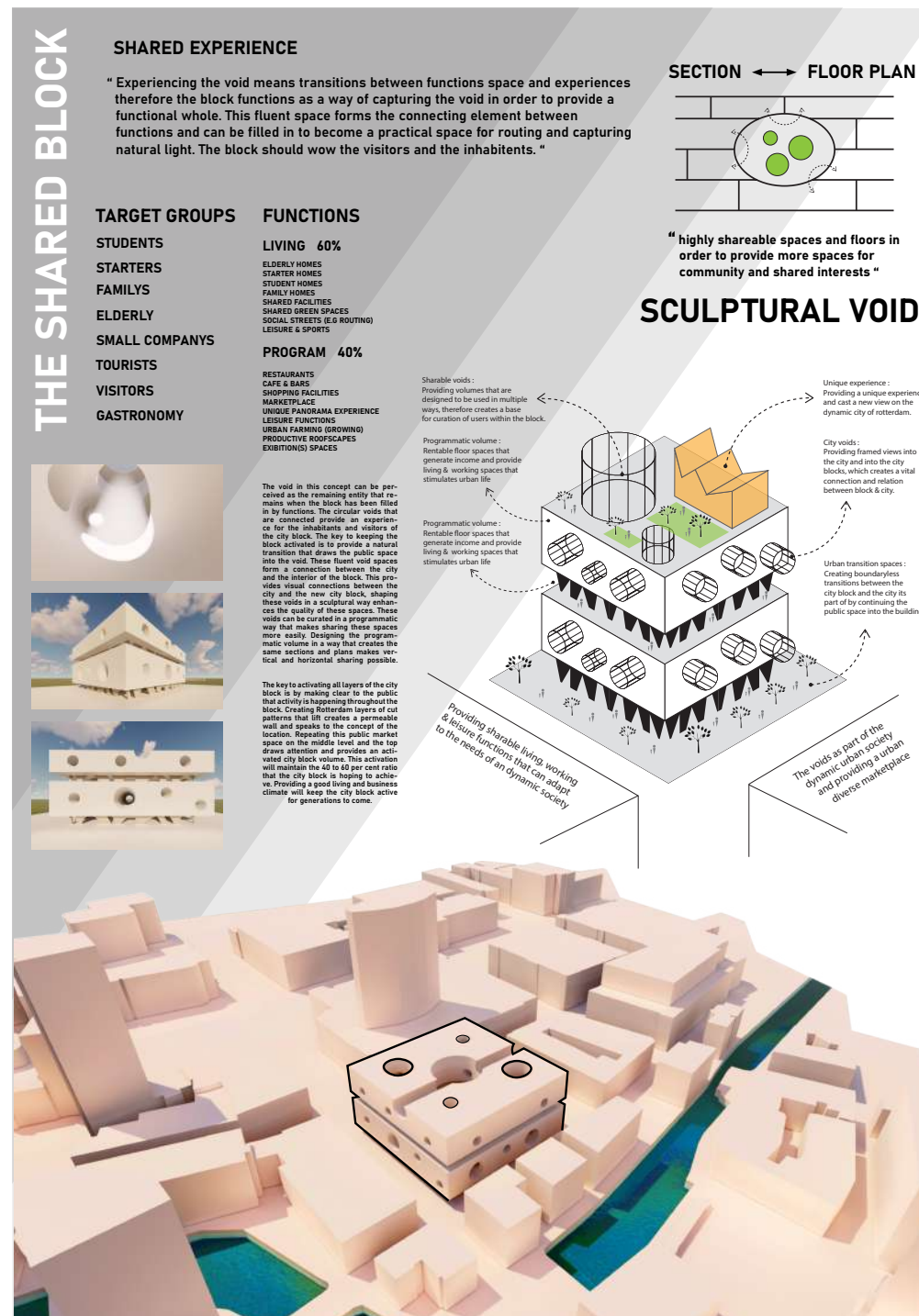
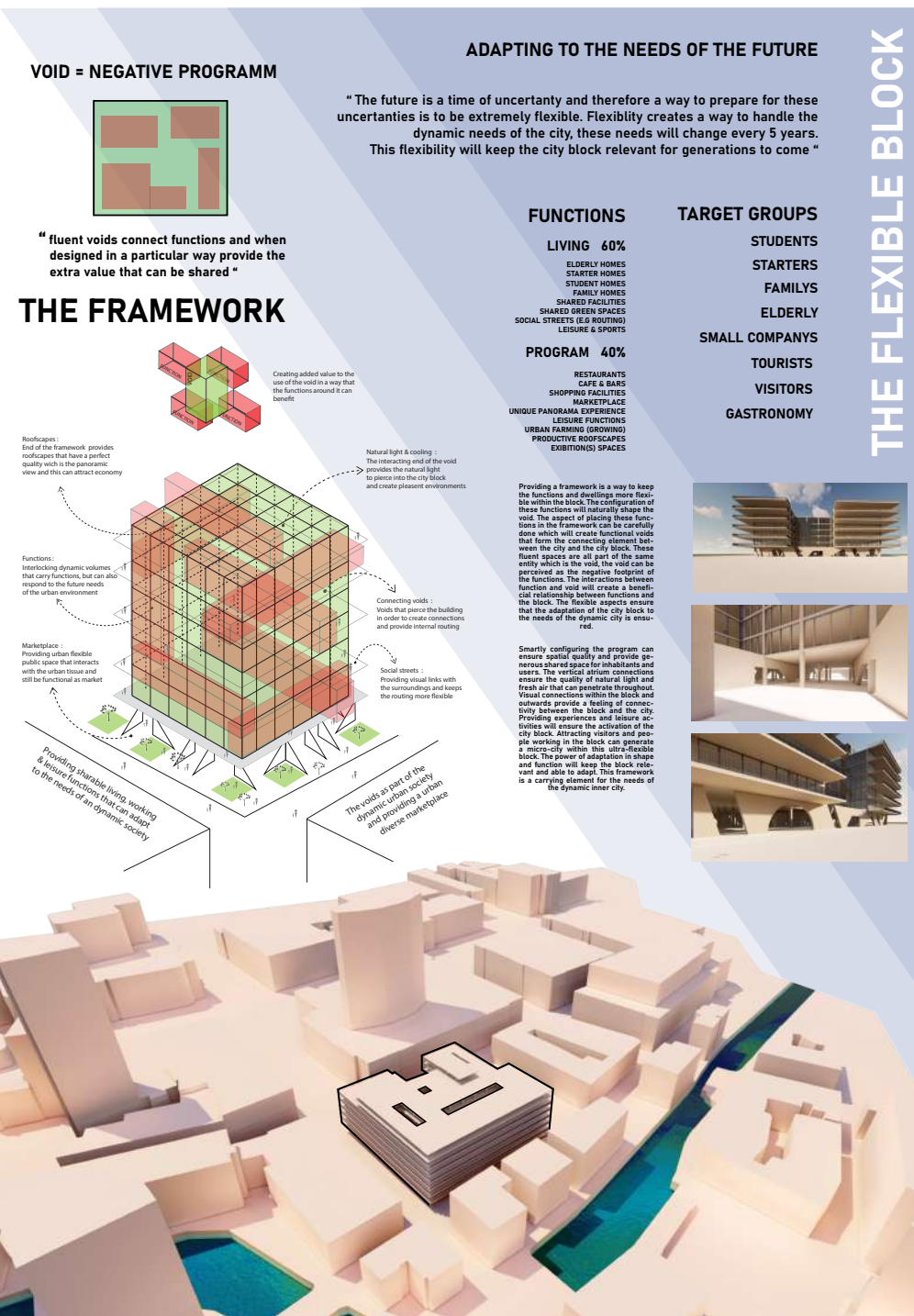


VOID EXPERIENCE MODEL



DESIGN BY MODELS

“TRANSLATION INTO DESIGN CONECEPTS”



THE FLEXIBLE CITY BLOCK

- + FOCUS ON FLEXIBILITY IN FUNCTION
- + PROVIDING ADAPTABILITY
- + FRAMEWORK TO SUPPORT THE VOID

THE SHARED CITY BLOCK

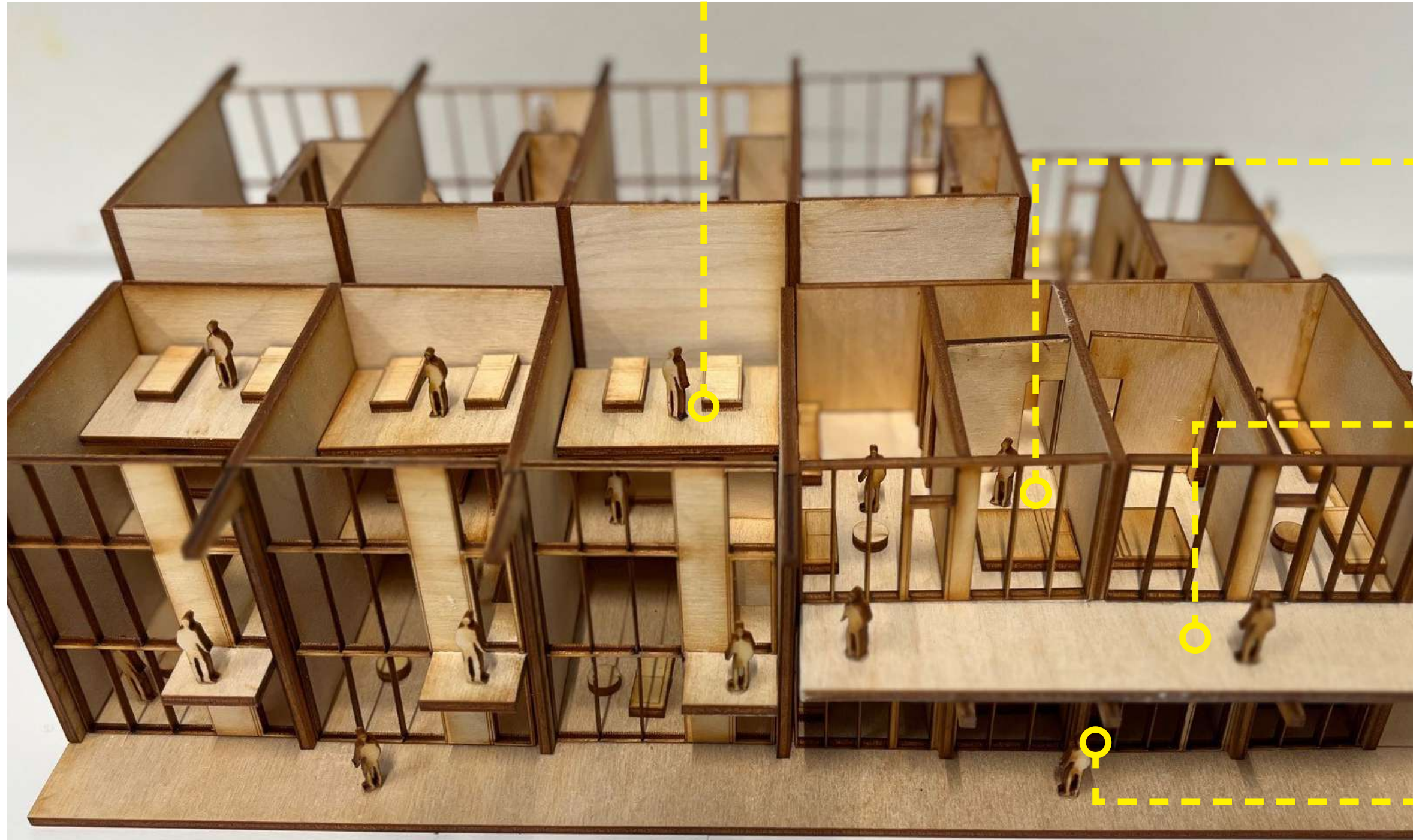
- + FOCUS ON EXPERIENCING THE VOID
- + SHARABLE SPACES AND FUNCTIONS
- + SCULPTURAL ASPECT TO THE CITY BLOCK

THE ELDERLY CITY BLOCK

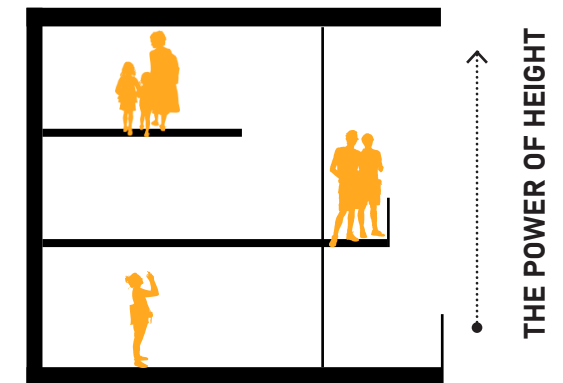
- + FOCUS ON SOCIAL PUBLIC SPACES
- + CENTRAL SPACE FOR ELDERLY IN SOCIETY
- + GREEN VOID SPACES

DESIGN BY MODELS

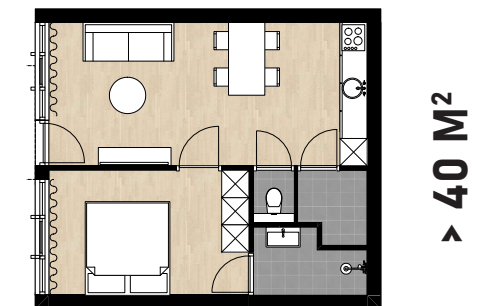
“TESTING DESIGN CONCEPTS IN REAL LIFE”



FAMILY DWELLINGS



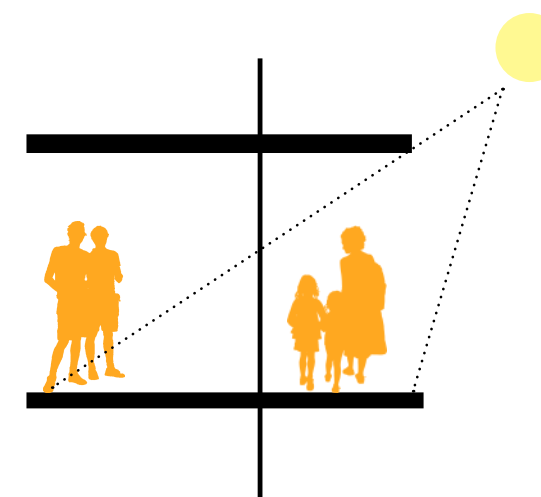
COMPACT DWELLINGS



SOCIAL STREETS

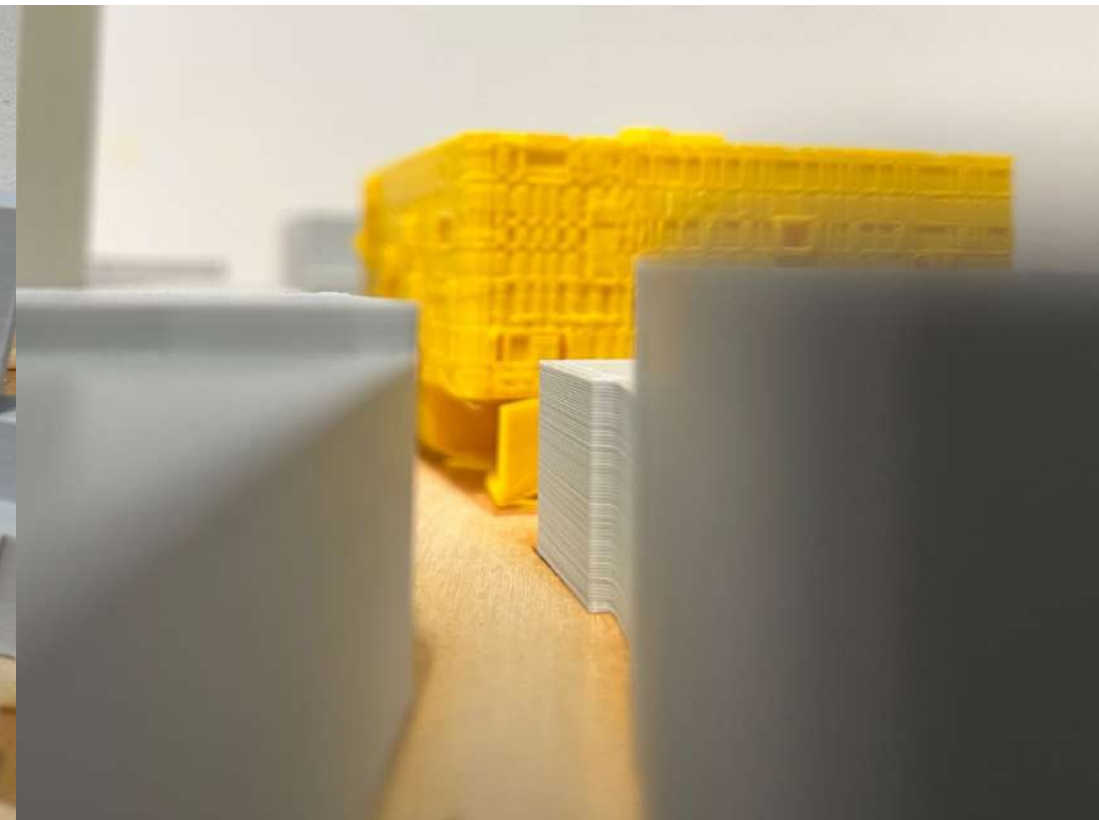


SOLAR PENETRATION



DESIGN BY MODELS

“EXPLORING THE SITE BY HAND ”



HANDS ON TESTING

HANDS ON TESTING

HELPFUL TO TEST INTERVENTIONS ON DIFFERENT SCALE LEVELS.

WHAT IS THE IMPACT ON THE DIRECT SURROUNDING?

ARE THE PROPORTIONS RIGHT?

WHAT CAN BE IMPROVED?

THESE QUESTIONS HELPED TO DEVELOP THE DESIGN FURTHER.

VOID TYPOLOGY

“PROVIDING CURATABLE SPACE FOR THE USERS”

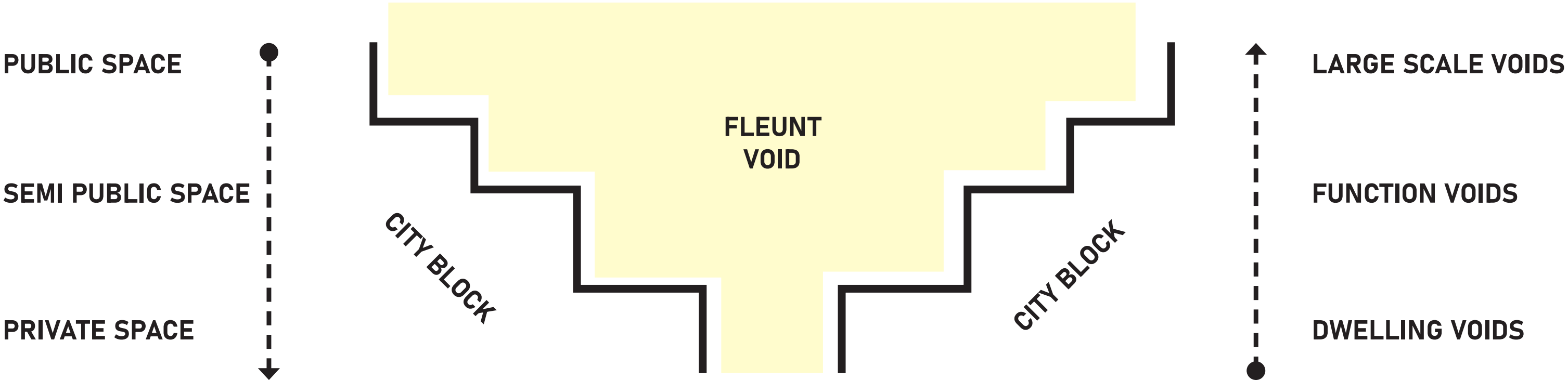


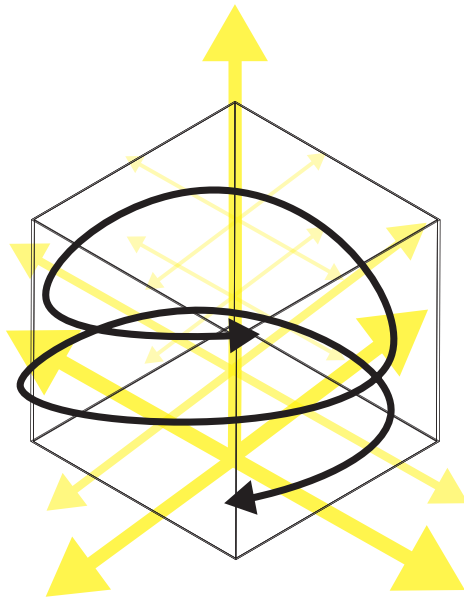
DIAGRAM : FLUENT VOID SPACES THAT CONNECT FUNCTIONS

THE VOID

THE VOID WILL FUNCTION AS THE GENERAL CONNECTOR BETWEEN THE PEOPLE IN THE CITY BLOCK, THE FUNCTIONS AND THE SURROUNDING CITY. THE QUALITY OF THE ARCHITECTURE CONTRIBUTES TO THE QUALITY OF THE VOID AND VICE VERSA. THEREFORE THE VOID IS NOT CONFINED TO BORDERS BUT IS GUIDED BY ARCHITECTURE IN A WAY THAT SHAPES THIS FLUENT CONNECTIVE SPACE THAT CREATES THIS EXTRA QUALITY FOR INHABITANTS AND VISITORS OF THE CITY BLOCK. THE VOID HAS MULTIPLE SHAPES AND APPEARANCES THROUGHOUT THE CITY BLOCK, THE LARGER SCALE VOID SPACES CAN BE PERCEIVED AS PUBLIC SPACES SUCH AS PARKS AND THE SMALLER VOID CAN BE SHARED SPACES INBETWEEN FUNCTIONS.

“THE QUALITY OF THE VOID SHOULD SERVE THE PROGRAM AND PEOPLE IN THE BEST POSSIBLE WAY ”

LEGEND
scaled voids :
 void space
 external routing



FUNCTION FOLLOWS VOID

“FUNCTION FOLLOWS VOID ” MEANS THAT THE ARCHITECTURE THAT IS SHAPED BY FUNCTIONAL DEMANDS WILL LEAVE THESE “EXTRA” SPACES THAT CAN BE FILLED IN BY LOOKING INTO THE SHAPE OF THIS SPACE AND THEN FINDING A FUNCTION WHICH IS SUITABLE FOR THIS PARTICULAR SPACE. THE CITY BLOCK IS FOCUSING ON DENSE LIVING WITH MIXED-USE FUNCTIONS THAT ALSO WILL CREATE PLEASANT PUBLIC SPACES THAT CAN BE USED AND SHARED BY THE USERS ACCORDING TO THEIR NEEDS. THE USERS AND INHABITANTS WILL BE ABLE TO CURATE THE SMALLER SPACES THAT ARE SITUATED THROUGHOUT THE BLOCK. THE LARGER SPACES WILL BE CURATED BY THE NEEDS OF THE CITY AT THE TIME AND THEREFORE THE FLEXIBLE ASPECTS OF THE VOID WILL HELP TO FIT IN MULTIPLE FUNCTIONS OR USES FOR THESE VOIDS SPACES.

FUNCTION FOLLOWS VOID

“ VOID SERVES THE NEEDS OF USERS ”

PRIVATE < > PUBLIC

COMMUNITY SPACES

FUNCTION FOLLOWS FORM IS SOMETHING THAT THE CITY BLOCK HAS EMBRACED, THE CHANNEL-LIKE SHAPE OF THE CENTRAL VOID FORCES THE CHANGING QUALITIES TO BE UTILIZED BY SUITING FUNCTIONS. THE LOWER PART OF THE ATRIUM HAS LESS NATURAL LIGHT AND THEREFORE THIS PART OF THE BUILDING HOUSES MORE FUNCTIONS THAT DON'T NEED AS MUCH NATURAL LIGHT. THE TOP PART OF THE ATRIUM ENJOYS MORE SUNLIGHT AND THEREFORE THIS PART OF THE CITY BLOCK WILL HOUSE MORE DWELLINGS THAN OTHER FUNCTIONS.

THE CENTRAL PART WHERE PEOPLE ASCEND INTO THE CITY BLOCK OPENS UP TOWARDS THE SECOND STORY WHICH PROVIDES A MARKETSPACE ATMOSPHERE BECAUSE THE PUBLIC DOMAIN IS MORE STRONGLY REPRESENTED IN THIS PARTICULAR PART. MOVING UP TOWARDS THE HIGHER LEVELS WITHIN THE CITY BLOCK THE PRIVATE DOMAIN BECOMES MORE STRONGLY PRESENT IN THE ATRIUM PART. EXCHANGING DOMAINS AND INTERTWINING DOMAINS WILL FORM THE CHARACTER OF THE CITY BLOCK AND HELP TO STRENGTHEN THE ARCHITECTURAL LANGUAGE OF THE CITY BLOCK.

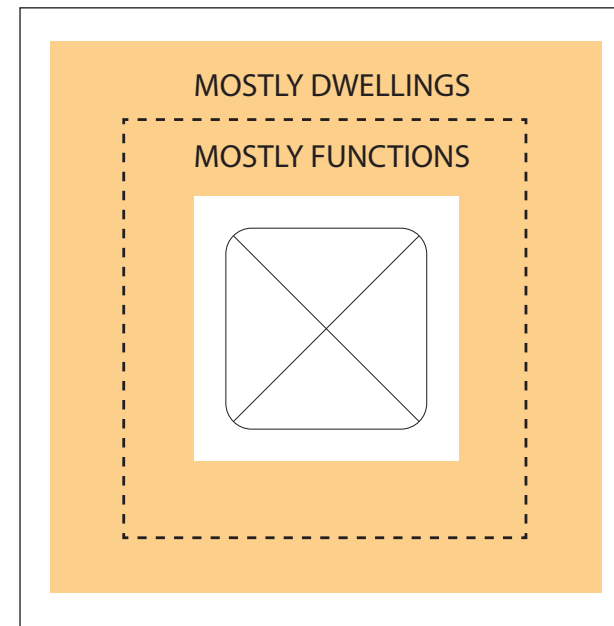
THE SIMPLICITY IN ARCHITECTURAL FORM AND FUNCTION WILL HELP TO CREATE A SENSE OF NATURAL WANDERING AND PROVIDE AN EASY SENSE OF ROUTING. THIS ROUTING IS CRUCIAL FOR STIMULATING THE SOCIAL DOMAIN WHILST STILL BEING HIGHLY FUNCTIONAL FOR INHABITANTS AND DAILY USERS. THIS FUNCTIONING OF THE BLOCK IS DIRECTLY LINKED TO THE ARCHITECTURAL SHAPE AND LANGUAGE, THEREFORE THE ARCHITECTURAL CONCEPTS WILL BE ABLE TO STIMULATE THE SOCIAL AND PRIVATE DOMAINS.

COMMUNITY SPACES MANIFEST THEMSELVES IN THE CITY BLOCK IN DIFFERENT SHAPES AND FORMS, THE COMMUNITY SPACES ARE ROOTED WITHIN THE BUILDING ENVELOPE BUT ALSO ON THE PUBLIC OUTDOOR SPACE. THE CITY FLOORS ARE EXCELLENT CARRIERS OF THE PUBLIC DOMAIN, THE PRIVATE DOMAIN AND THE COMMUNITY DOMAIN. THIS COMMUNITY DOMAIN IS ESSENTIAL FOR THE SOCIAL GLUE THAT CONNECTS FUNCTIONS AND PEOPLE WITHIN THE BLOCK. THIS COMMUNITY ASPECT CAN HELP TO CREATE AN INCLUSIVE ATMOSPHERE AND PROVIDE A NICE LIVING AND BUSINESS CLIMATE FOR ALL. THE COMMUNITY FUNCTIONS THAT ARE HOUSED WITHIN THE BLOCK CONSIST OF EXTENDED LIVING FACILITIES THAT CAN BE SHARED. THIS NECESSITY FOR SHARING HIGHLIGHTS THE POSSIBILITY OF EXTENDING THE SPACE THAT PEOPLE CAN USE FOR THEIR LIVING NEEDS.

THE SHARING OF FACILITIES CREATES MORE POSSIBILITIES FOR USERS TO HAVE A PLEASANT LIVING AND WORKING ENVIRONMENT. ACCESSIBILITY IS SOMETHING THAT CONNECTS THE PUBLIC DOMAIN WITH THE PRIVATE DOMAIN, THE PRIVATE DOMAIN CAN THEREFORE BE EXTENDED INTO THE CITY BLOCK. THIS SHARING IS SOMETHING THAT WILL BECOME INEVITABLE IN THE FUTURE DUE TO DENSIFICATION AND CENTRALISATION SHORTLY. THE NEXT GENERATION WILL THEREFORE BECOME MORE EXPOSED TO THE NECESSITY OF SHARING FACILITIES AND FUNCTIONS.

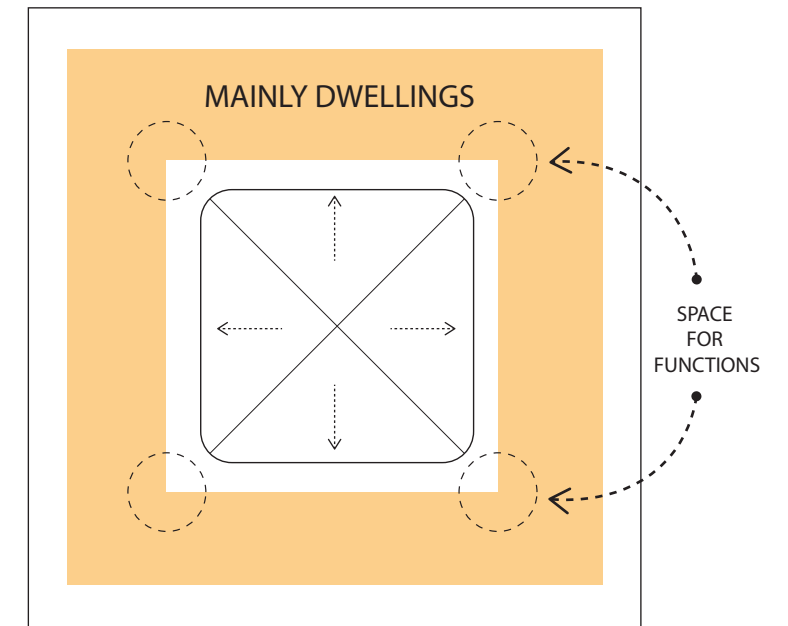
FUNCTION < > LEVELS

LOWER LEVELS OF THE CITY BLOCK



STRONGER REPRESENTATION OF THE PUBLIC DOMAIN

HIGHER LEVELS OF THE CITY BLOCK



STRONGER REPRESENTATION OF THE PRIVATE DOMAIN

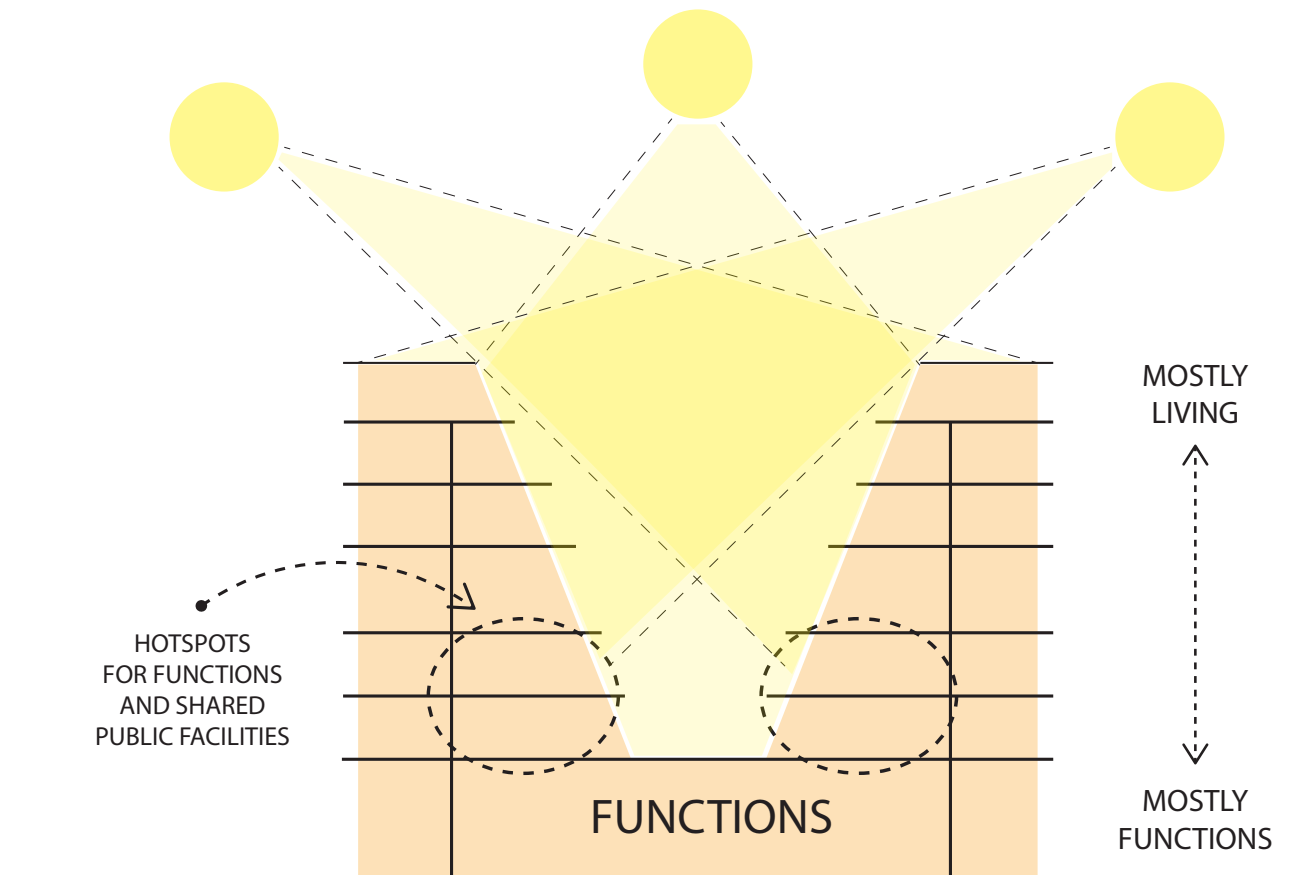


DIAGRAM : LOCATION DETERMINED FUNCTIONS IN THE CITY BLOCK

TRANSITIONAL SPACE

“ PROVIDING NATURAL TRANSITION TO ACTIVATE THE BLOCK ”

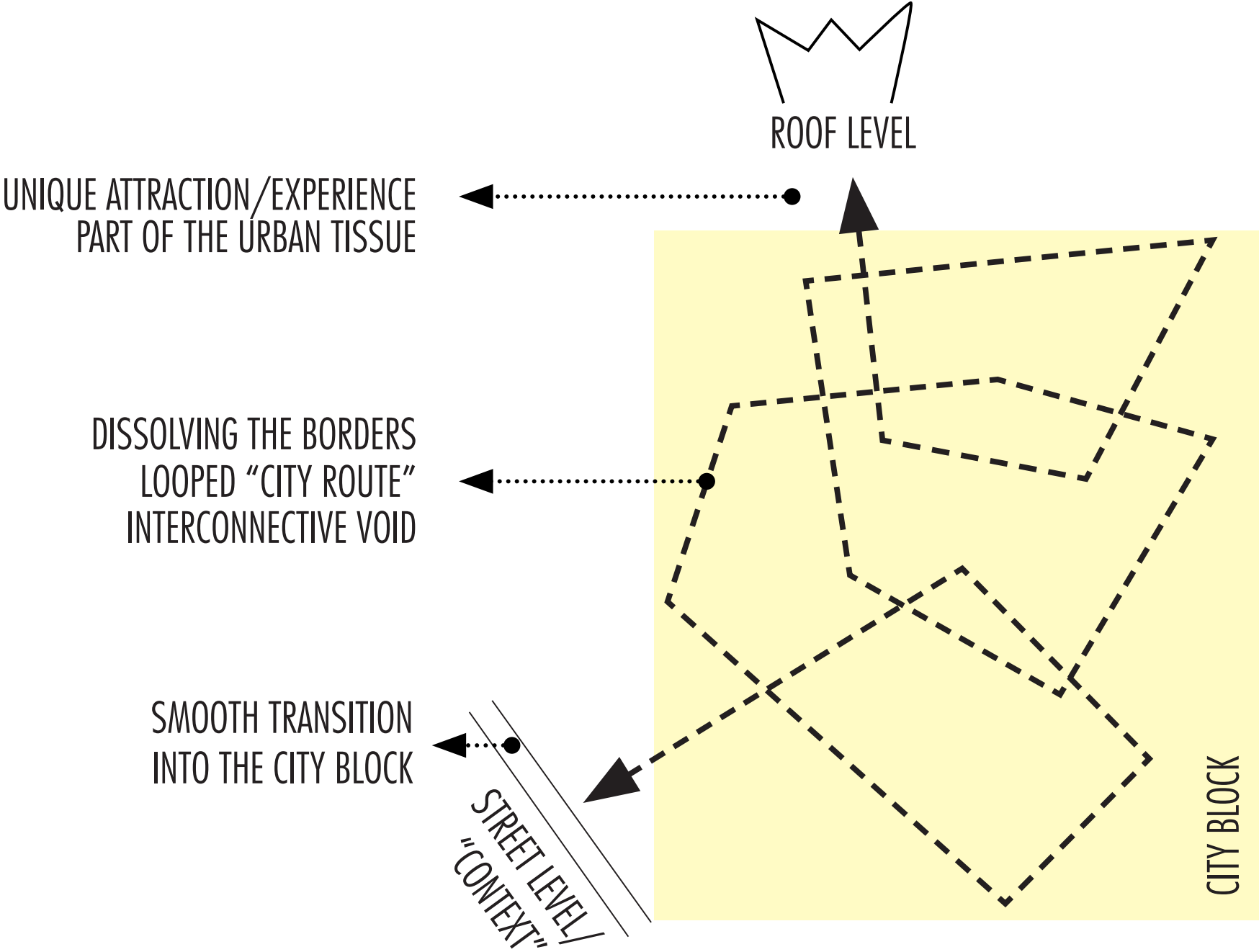
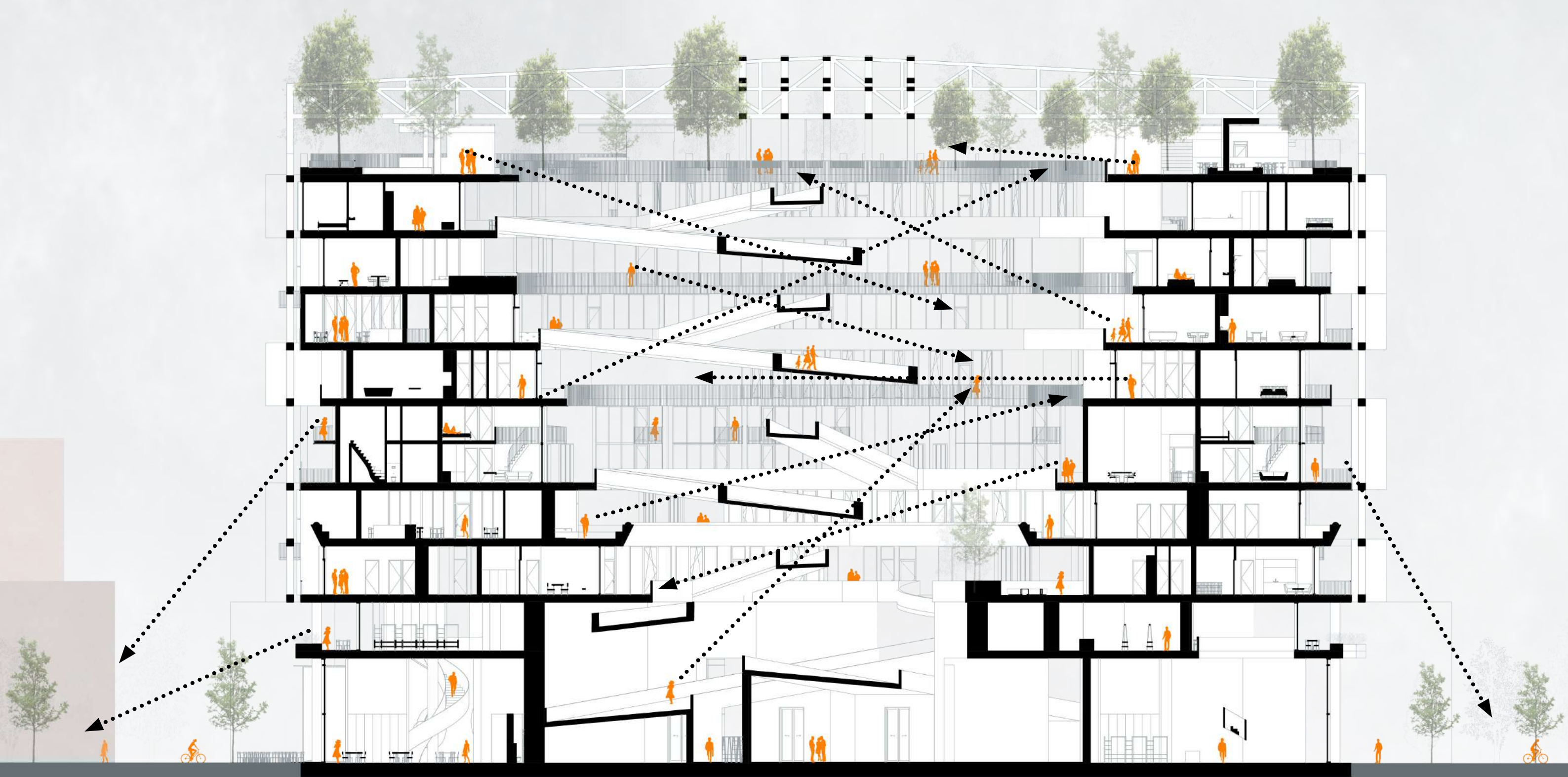


DIAGRAM : ACTIVATING THE CITY BLOCK



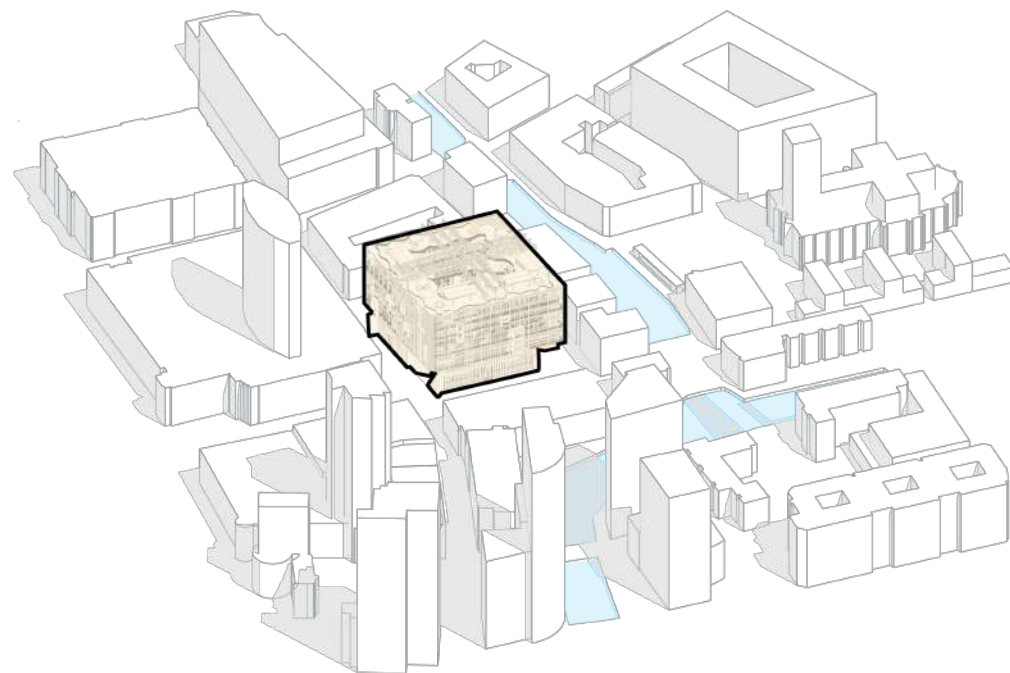
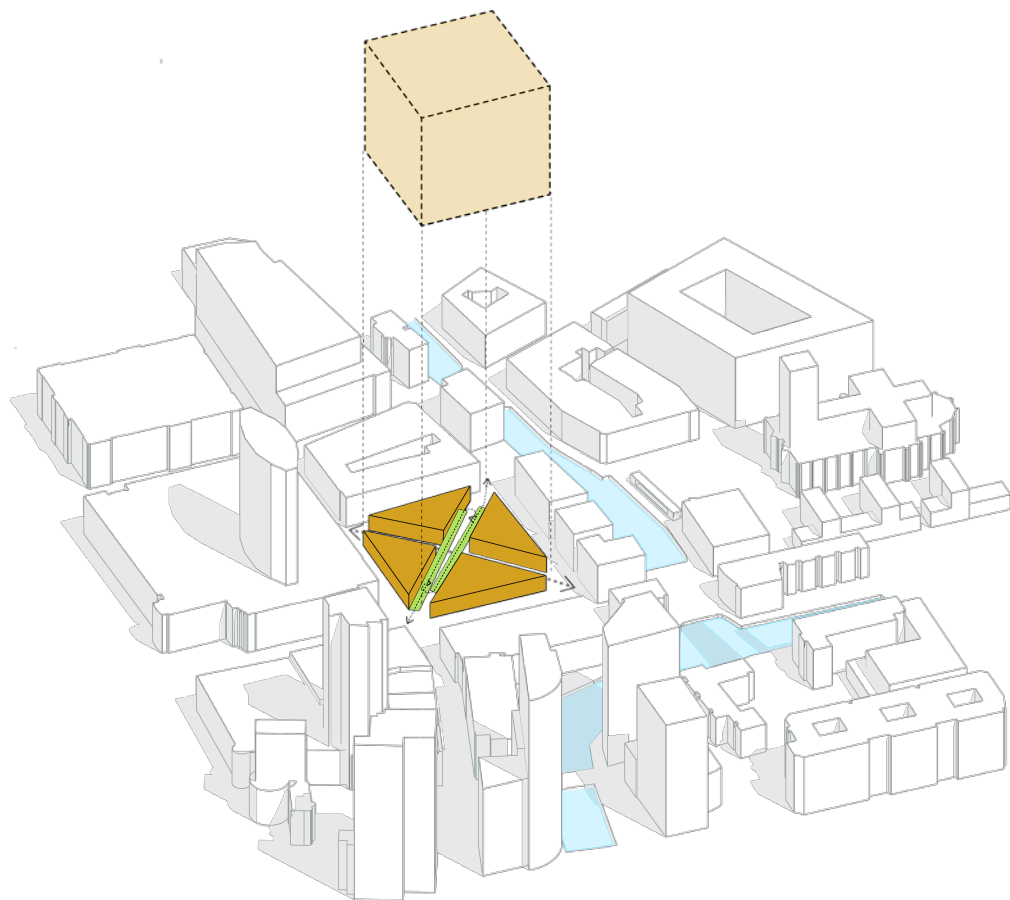
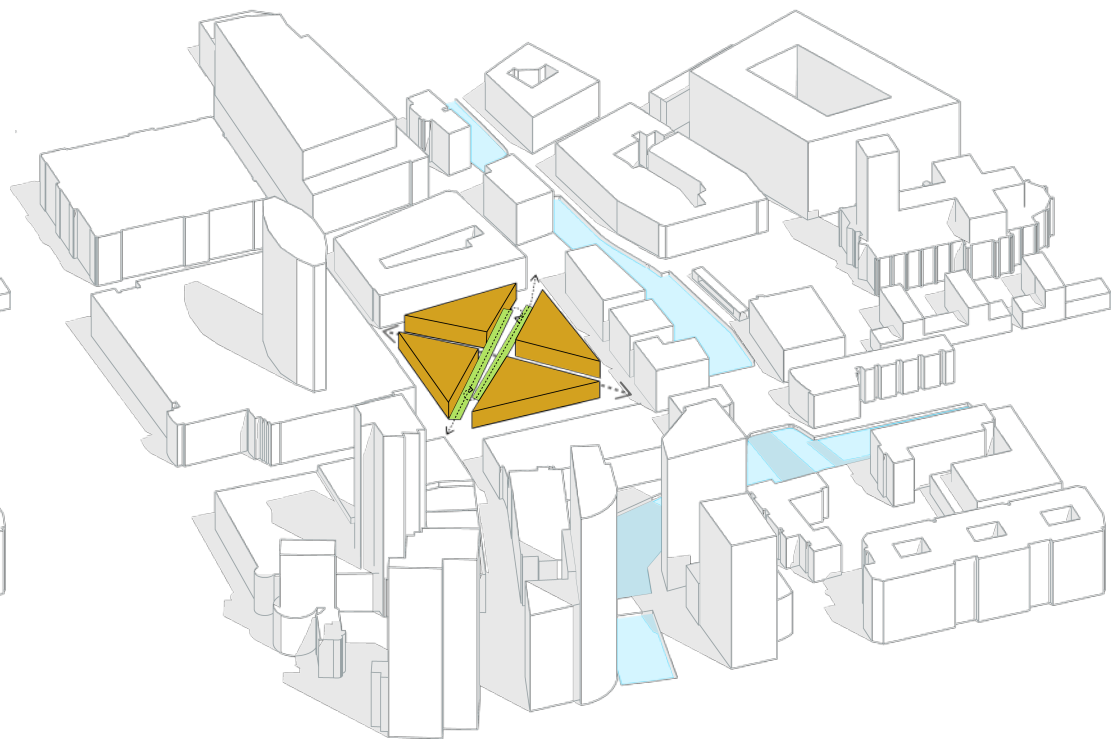
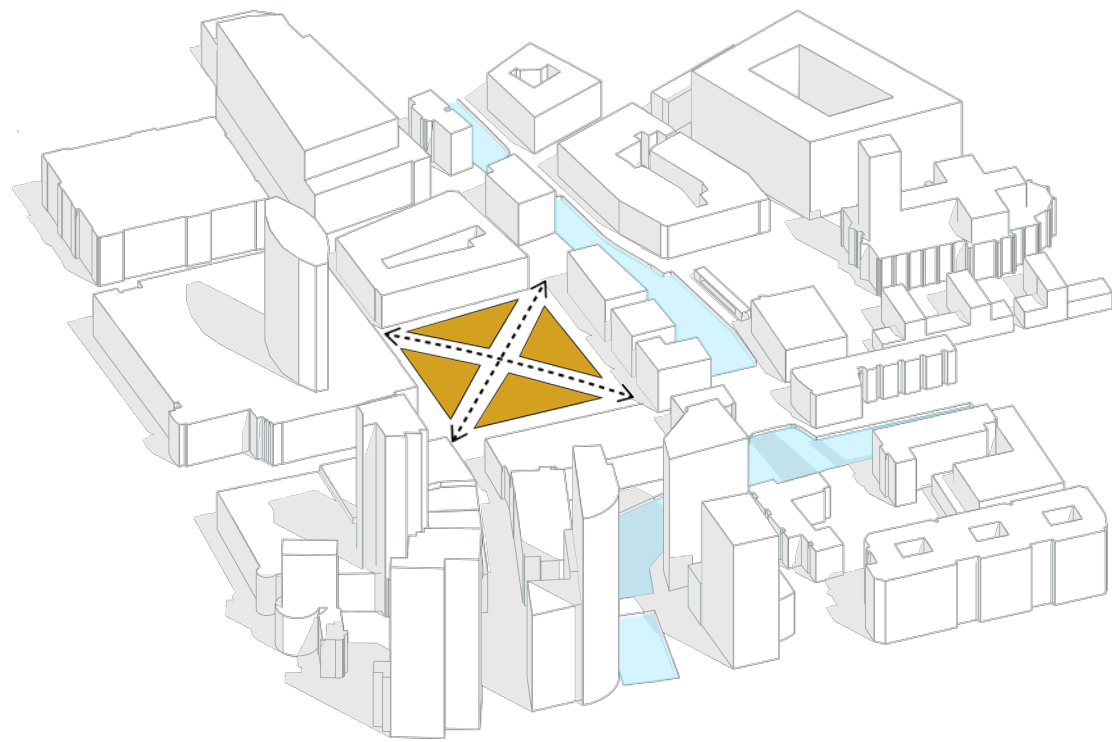
VOID TYPOLOGY

VISUAL CONNECTIONS



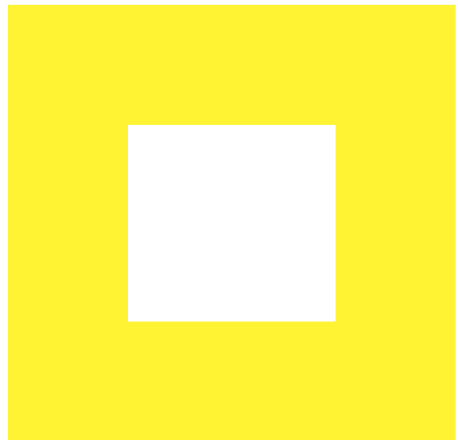
URBAN CONNECTION

“TRANSITIONING INTO THE CITY BLOCK”



SOCIAL VOID

FINAL DESIGN PHASE



BLICK R



URBAN GREEN

“NATURAL CITY BLOCK”

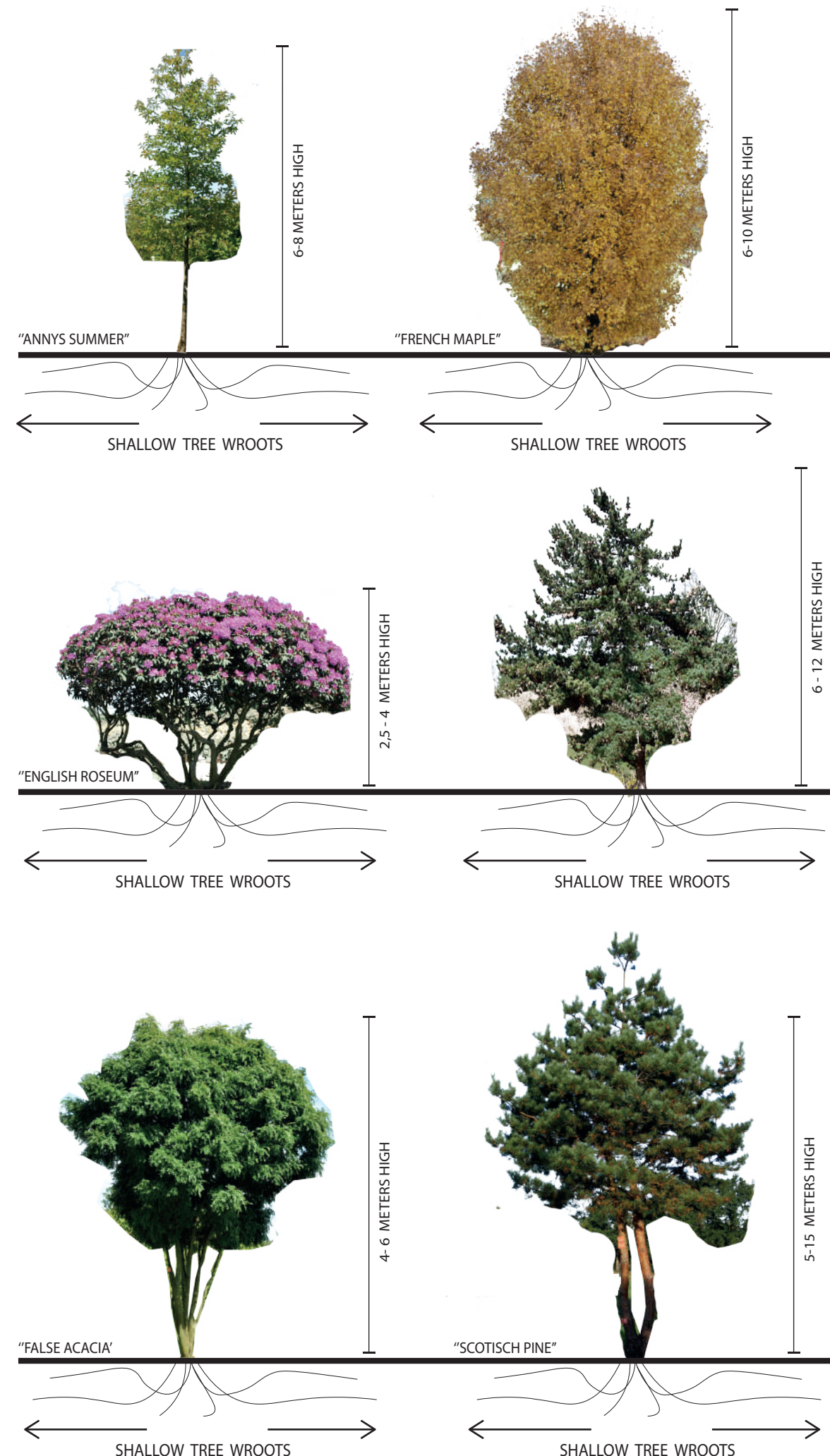
STIMULATING FLORA & FAUNA

THE GREEN CHARACTER OF THE CITY BLOCK IS EMPHASISED BY THE ROOF PARK ON THE ROOF. CITIES OF THE FUTURE WILL START TO BECOME GREENER AND THEREFORE THE URBAN CLIMATE WILL BECOME MORE RESILIENT TO EXTREME HEATHS AND EXTREME RAINFALL. GREENERY CAN HELP TO CREATE A BUFFER FOR BOTH ENDS OF THE EXTREMES AND PROVIDE MORE PLEASANT AND NATURAL PUBLIC SPACES. URBAN BIODIVERSITY IS SOMETHING VITAL FOR FUTURE CITIES AND IS SOMETHING THAT HAS TO BE KEPT IN MIND FOR THE NEXT GENERATIONAL DEVELOPMENT. RESEARCH HAS SHOWN THAT SOME TREES FLOURISH ON TOP OF BUILDINGS AND OTHERS NEED MORE SPACE TO THRIVE, THEREFORE A LIST OF TREES IS ASSEMBLED TO FORM THE GREENERY OF THE ROOF PARK. ABOUT 10% OF ANIMAL AND PLANT SPECIES CALL THE CITY THEIR HOME AND THIS COMES DOWN TO ABOUT 3.700 DIFFERENT SPECIES. ALL SPECIES ARE INTERTWINED WITH HUMAN LIFE AND CONTRIBUTE IN THEIR WAY TO THE URBAN BIOTOPE (HOP, 2021).

URBAN GREEN PARKS IN DIFFERENT SHAPES AND FORMS CAN CONTRIBUTE TO THE IMPROVEMENT OF URBAN ENVIRONMENTS IN A NATURAL WAY, THINKING ABOUT THE SPECIES TO PLANT AND FORMING COMBINATIONS WILL ENSURE THE SUCCESS FACTOR OF THE ROOF PARK. THE BENEFITS FOR THE USERS ARE THE NATURAL SHADE, PLEASANT GREEN PUBLIC SPACES AND THE NATURAL WATER BUFFER, THESE ASPECTS WILL BECOME INCREASINGLY MORE IMPORTANT DUE TO CLIMATE CHANGE SHORTLY.

THE TREES THAT ARE CHOSEN ARE TOUGH TREES THAT CAN SURVIVE HARSH ENVIRONMENTS AND ALSO HAVE A SHALLOW ROOT SYSTEM THAT IS SUITABLE FOR GROWING ON ROOF PARKS. THE SHALLOW ROOTS MEAN THAT THE TREES DON'T NEED DEEP LAYERS OF THE SUBSTRATE TO STAY ALIVE BUT WILL GROW CONSISTENTLY IN ROOF-PARK ENVIRONMENTS (HOP, 2021). THE OTHER BENEFIT OF THE SELECTED TREES IS THAT THEY ARE NOT CAPABLE OF GROWING TO HUGE HEIGHTS AND ARE WIND RESISTANT, THIS RESISTANCE TO THE WIND IS CRUCIAL IN AN URBAN SETTING LIKE THE INNER CITY OF ROTTERDAM. THE INSECT AND BIRD RESIDENCES WILL ALSO HELP TO STIMULATE BIODIVERSITY BY OFFERING A HOME IN OTHERWISE TOUGH CONDITIONS FOR SEVERAL SPECIES.

SUITABLE TREES



STIMULATING BIODIVERSITY



IMAGE 31

BIRD HOUSES



IMAGE 32

INSECT HOTEL



IMAGE 33

FAUNAPOLE

WATER MANAGMENT

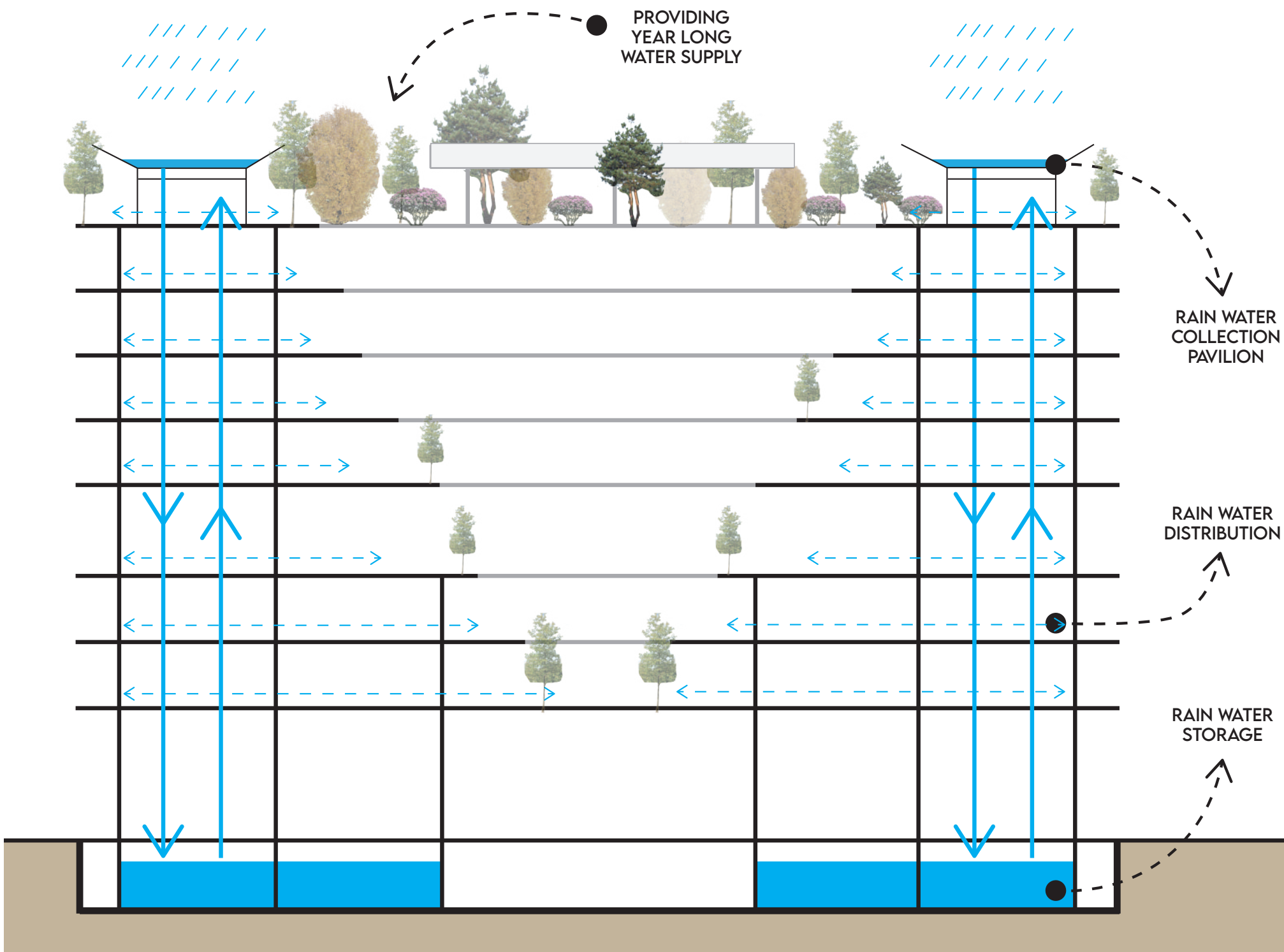


DIAGRAM :WATER MANAGMENT IN THE CITY BLOCK

URBAN GREEN

“ALL YEAR WATER SUPPLY”

CREATING BUFFERS

DUE TO RAPID URBANIZATION, THE NEED FOR URBAN WATER BUFFERS BECOMES INCREASINGLY IMPORTANT AS A SOLUTION FOR HEAT ISLANDS THAT START TO FORM AND WILL BECOME EVEN STRONGER SOON. COLLECTING WATER AND EFFECTIVELY USING IT FOR DIFFERENT PURPOSES WILL HELP TO STIMULATE THE RESILIENCE OF THE CITY BLOCK AND PREPARES THE BUILDING FOR EXTREMELY WET TIMES BUT ALSO FOR EXTREME DRAUGHTS. THE NATURAL LANDSCAPE WITHIN THE URBAN AREAS AS WELL AS THE BORDERING AREAS ARE VITAL FOR THE WATER MANAGEMENT OF THE CITY. CREATING A PLACE FOR STORAGE AND DRAINAGE WILL BECOME INCREASINGLY IMPORTANT FOR FUTURE CITIES (SUN, 2012).

THE UNPREDICTABILITY OF THE CLIMATE CREATES A NEED FOR PREPARING FOR THE MOST EXTREME CIRCUMSTANCES AND THEREFORE THE WATER MANAGEMENT SHOULD BE PARTLY BASED ON THE CAPACITY OF THE SEWER SYSTEM BUT SHOULD ALSO CONSIST OF NATURAL WATER BUFFERS SUCH AS URBAN GREENERY AND PARKS. THE POSITIVE ASPECT IS THAT THE URBAN GREEN BUFFERS ALSO HAVE A POSITIVE INFLUENCE ON THE WELL-BEING OF THE POPULATION AND STIMULATE THE MENTAL HEALTH OF THE INHABITANTS (SUN, 2012).

THE ROOF PARK OFFERS A BIG OPPORTUNITY TO TACKLE THESE PROBLEMS AND ALSO CONTRIBUTE TO THE ARCHITECTURAL QUALITY OF THE CITY BLOCK. THE MAIN CHALLENGE IS TO BE PREPARED FOR THE EXTREMES AND KEEP THE NEWLY FORMED BIOTOPE INTACT, THEREFORE A HYBRID SYSTEM IS DESIGNED THAT STORES WATER DURING THE WET TIMES AND CAN FEED THIS BACK INTO THE SYSTEM WHEN THERE ARE TIMES OF EXTREME DROUGHT. THE ROOF PARK WILL BE ABLE TO SURVIVE DURING THE HARSH TIMES AND FLOURISH THROUGHOUT THE REST OF THE YEAR. THE MAIN BODY OF WATER STORAGE WILL BE HOUSED IN THE BASEMENT AND CAN PROVIDE ENOUGH WATER FOR THE SUMMERS IN THE NETHERLANDS. THE EXCESS WATER CAN BE FED TO THE SEWAGE SYSTEM IN CASE OF EXTREME RAINFALL. ALSO, GREY WATER FROM THE RESIDENTS CAN BE STORED AND USED FOR MAINTAINING THE ROOF PARK IF NECESSARY.

ROOF PARK PAVILION

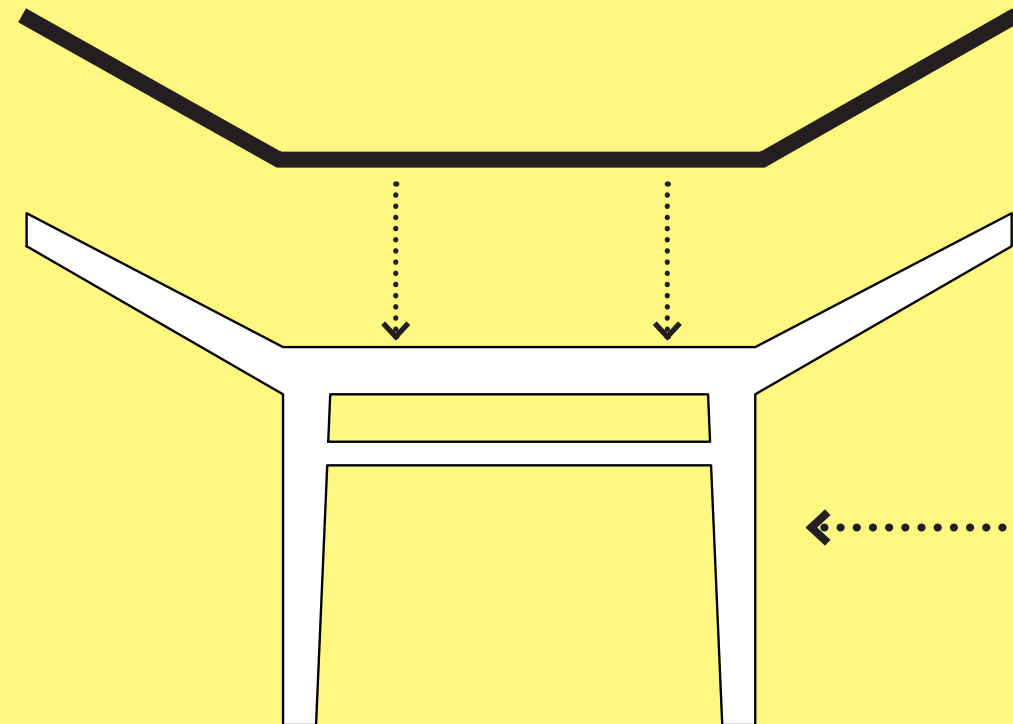
“GENERATING WATER & ENERGY”

DESIGN PRINCIPLES

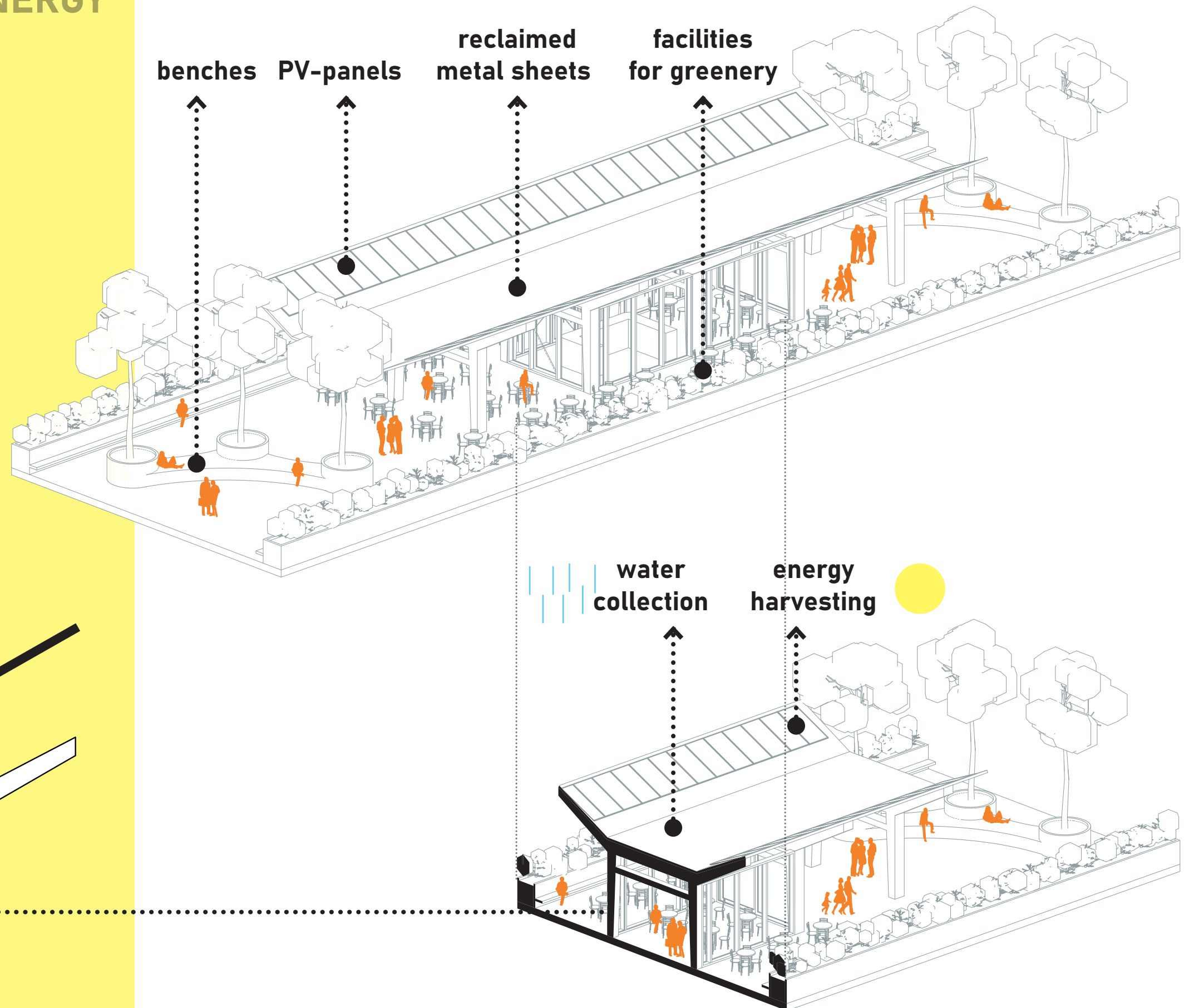
THE ROOF PARK HOSTS SEVERAL PAVILIONS THAT ARE DESIGNED IN A WAY THAT THEY CAN HOUSE FUNCTIONS AND PROVIDE WATER AND ELECTRICITY AT THE SAME TIME. THE SIMPLE PAVILION CREATES COVER FROM THE ELEMENTS, BENEFITS FROM THE ELEMENTS AND GENERATES POWER. THIS PARTICULAR STYLE OF ARCHITECTURE MEANS THAT THE LEAST IMPACT IS MADE DURING THE LIFESPAN OF THE BUILDING, THE BUILDING NEEDS LITTLE TO NO COOLING AND GENERATES ENERGY FOR THE FUNCTIONS WITHIN AND ALSO PROVIDES EXTRA TO THE CITY BLOCK.

THE DESIGN MAGIC LIES WITHIN THE SHAPE OF THE ROOF BECAUSE THE DESIGN GRANTS DAY-ROUND POWER FOR THE SOLAR PANELS TO HARVEST AND AT THE SAME TIME DOES AN EXCELLENT JOB COLLECTING RAINWATER FOR THE CITY BLOCK. THIS NATURAL APPROACH SUITS THE NARRATIVE OF THE ROOF PARK AND THEREFORE THE ARCHITECTURAL LANGUAGE IS SUITABLE FOR THE APPEARANCE OF THE PARK.

RECLAIMED METAL SHEETS



WOODEN STRUCTURAL ELEMENT



TESTING DESIGN PRINCEPLES

“EVOLUTION OF THE BLOCK”

OVER TIME THE DESIGN HAS EVOLVED AND HAS TAKEN SHAPE, THESE EARLIER MODELS REVEAL CONCEPTS AND DESIGN ELEMENTS THAT HAVE HAD AN INFLUENCE ON THE CITY BLOCK. THE HORIZONTAL LINES OF THE CONCEPTUAL DESIGN, THE SOCIAL DIMENSION OF THE RESEARCH PHASE. THESE EFFORTS ARE MADE TO TRANSLATE THE KNOWLEDGE INTO A 3D DESIGN. SOME ELEMENTS WERE SUCCESFULL AND MADE IT INTO THE FINAL DESIGN.



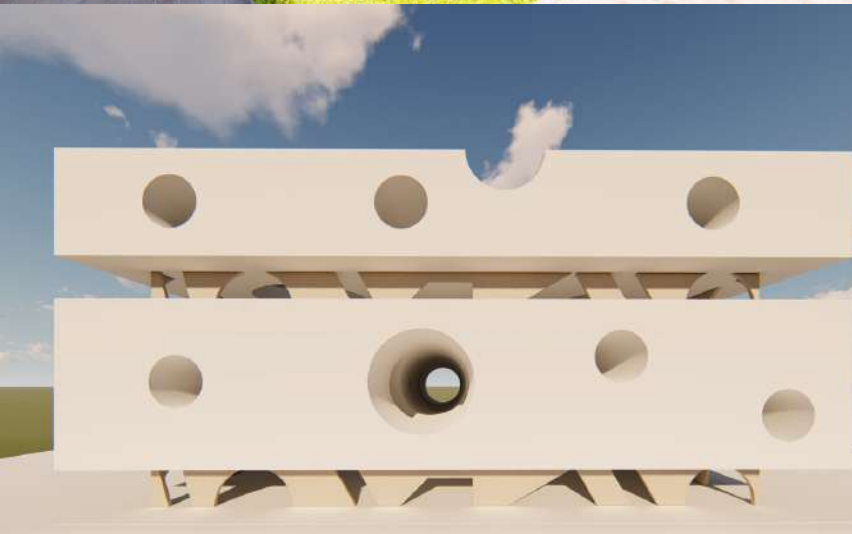
RESEARCH PHASE



RESEARCH PHASE



CONECPTUAL DESIGN



CONECPTUAL DESIGN



CONECPTUAL DESIGN



PRE-DESIGN



PRE-DESIGN

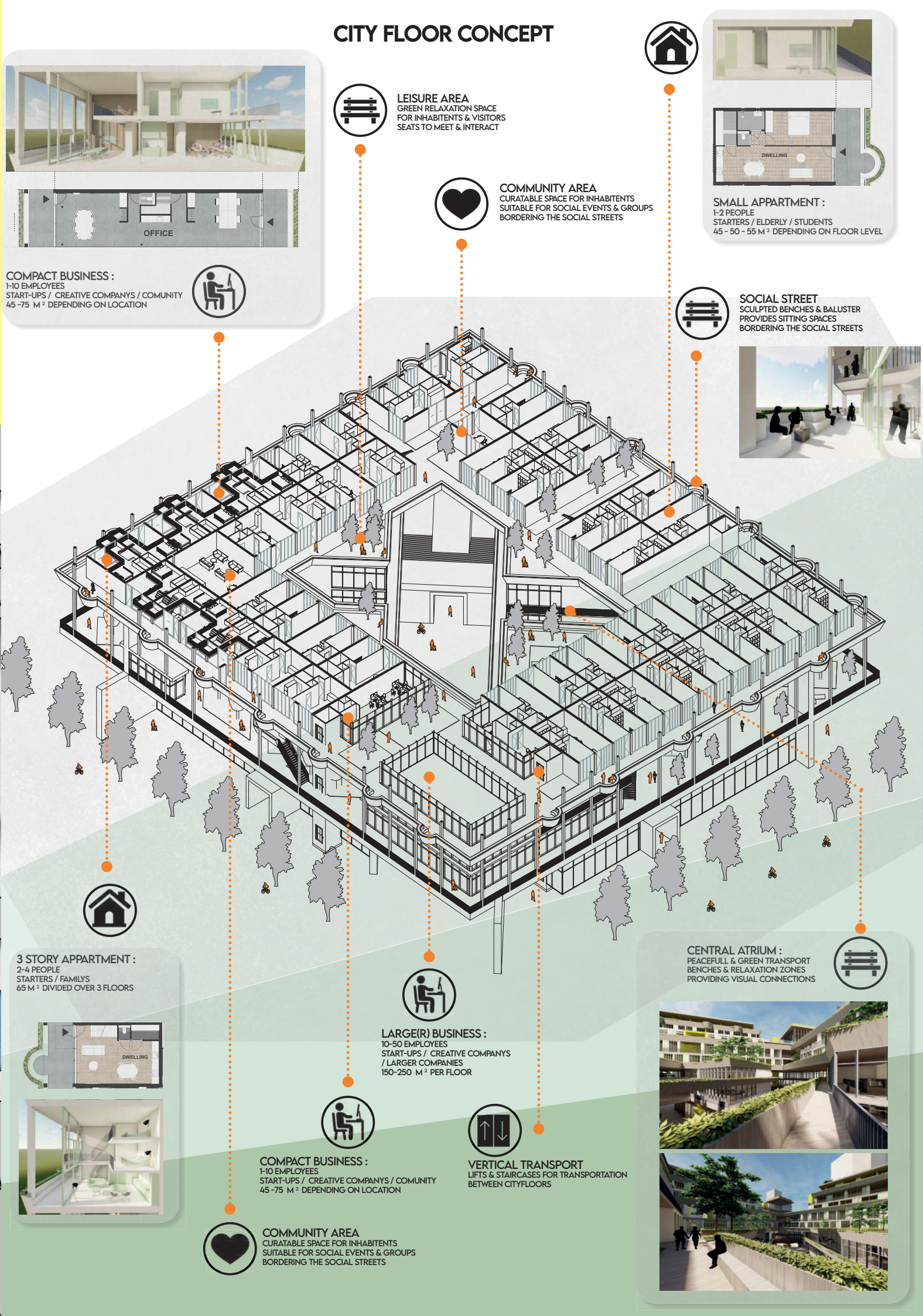


PRE-DESIGN

TESTING DESIGN PRINCEPLES

“FIRST GLANCE OF BLOCK-R”

THE FIRST ATTEMPT WAS MADE TO CONNECT THE CIT FLOOR TO THE CITY BLOCK AND THE TWO-AXES SYSTEM WAS BORN. THIS INTERACTION ACTIVATES THE CITY BLOCK AND PROVIDE A PLEASANT TRANSITION THROUGH AND INTO THE CITY BLOCK. ALSO THE GRID LIKE FACADE BEGAN TO TAKE SHAPE. THIS FACADE CONCEPT DEVELOPED FURTHER INTO THE FINAL DESIGN.



DWELLING TYPOLOGY STUDY

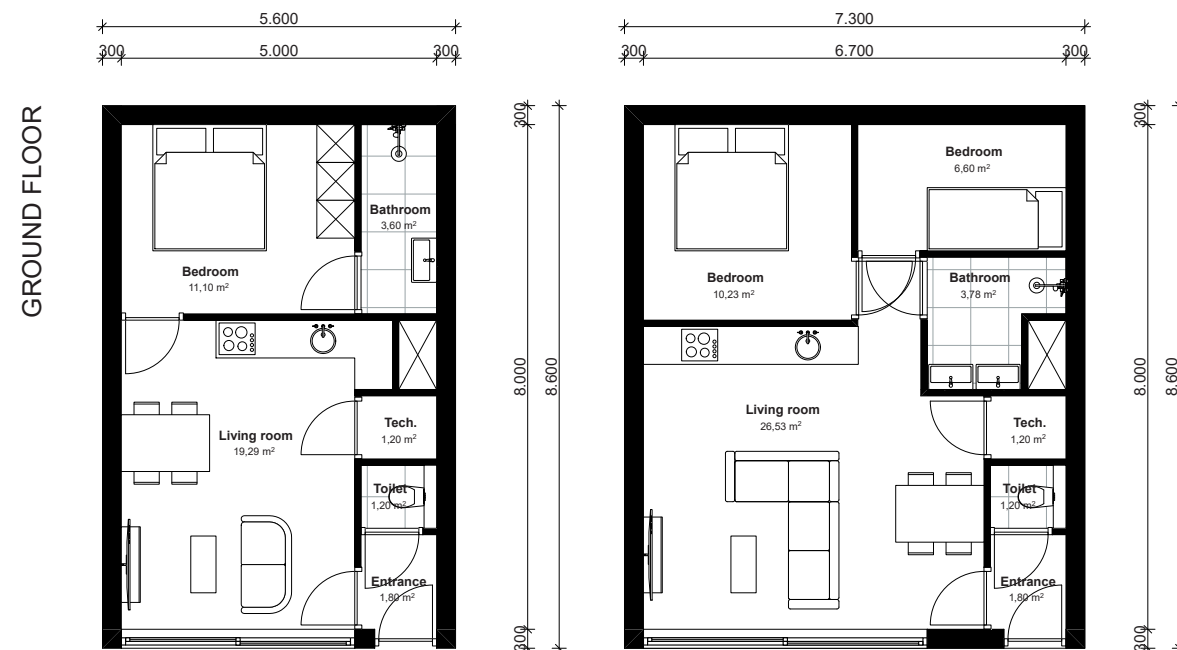
“PRE-DESIGN”

HIGH DENSITY

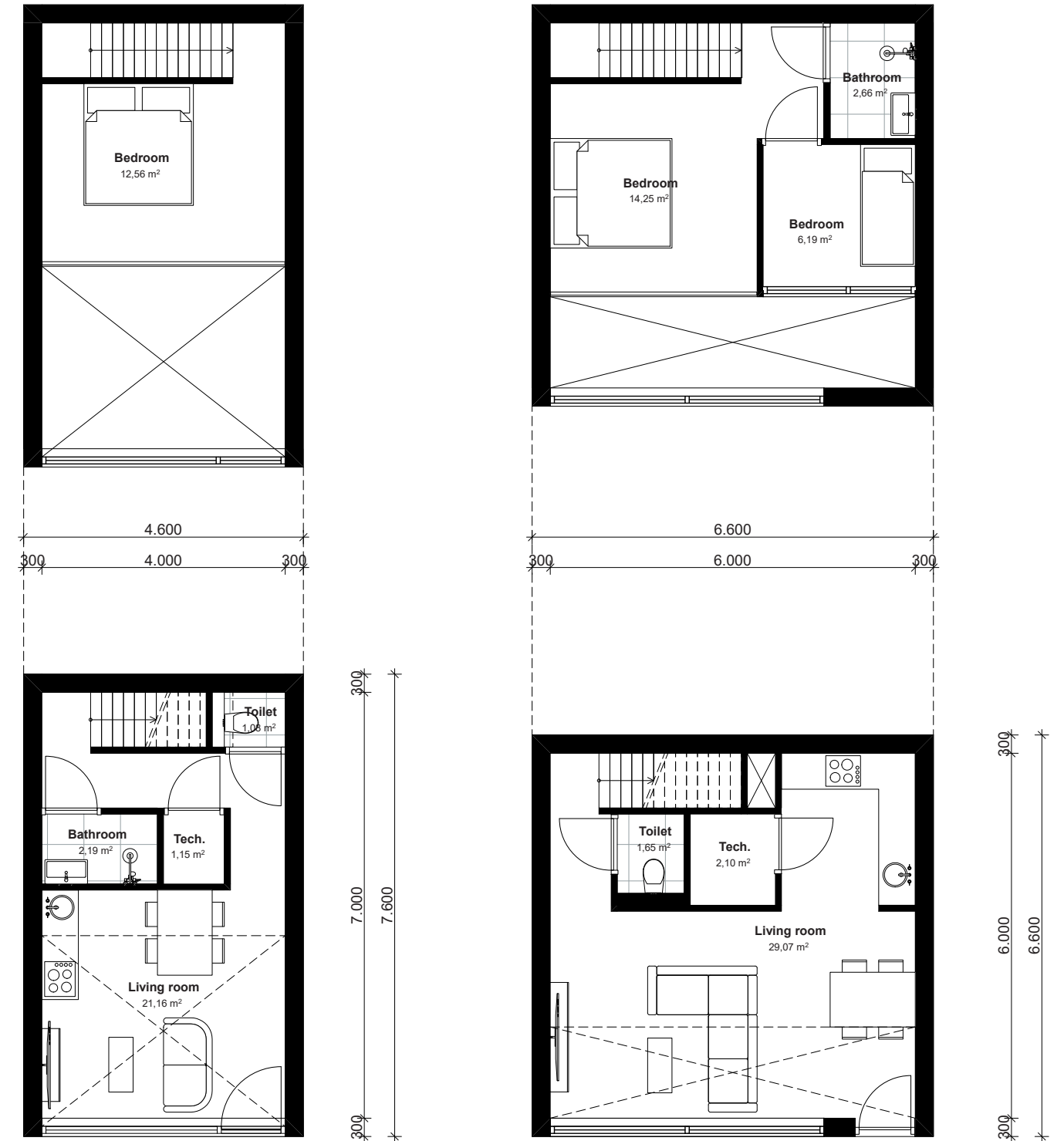
THE RISING TREND OF CENTRALIZATION WILL CAUSE A NEED FOR MORE DWELLINGS WITHIN THE INNER CITIES OF THE NETHERLANDS. THEREFORE THE DWELLINGS THAT ARE GOING TO BE CREATED WILL BECOME MORE COMPACT AND SMARTLY DESIGNED. CENTRALIZATION IN COMBINATION WITH THE GROWING POPULATION WILL STIMULATE URBAN AREAS AND PUT PRESSURE ON THE GROWING DEMAND FOR HOUSING. THE NEXT GENERATIONS OF URBAN INHABITANTS WILL THEREFORE BE MORE CONTENT WITH SMALLER HOUSING UNITS THAT OFFER QUALITY IN THE DIRECT SURROUNDING, WHICH CREATES OPPORTUNITIES FOR SOCIAL INTERACTIONS AND NETWORKS TO FLOURISH. THIS QUALITY THAT PEOPLE SHARE IN THE CITY BLOCK CAN BE PERCEIVED AS THE SOCIAL SPOTS FOR INTERACTION THAT CAN FIT INTO THE VOID SYSTEM THAT IS CONNECTING THE WHOLE BLOCK. EXTENDING THE LIVING SPACES INTO THE PUBLIC DOMAIN IS SOMETHING THAT MAKES A LARGER NUMBER OF PEOPLE CAN USE THE SAME SPACE WHICH MAKES IT SHAREABLE.

COMPACT LIVING

COMPACT LIVING IS SOMETHING INEVITABLE FOR THE NEXT GENERATIONS BECAUSE SPACE IS RUNNING OUT WITHIN THE URBAN AREAS. COMPACT LIVING IS SOMETHING THAT IS NOT NECESSARILY A NEGATIVE THING, COMPACT LIVING CAN ALSO BE A WAY FOR PEOPLE TO RETHINK THEIR WAY OF LIVING AND ADJUST THEIR BEHAVIOUR IN THE AVAILABLE SPACE. COMPACT LIVING CREATES THE NEED TO UTILISE SHARED SPACES MORE AND ACTIVATE THE EXTENDED LIVING SPACES FOR THE INHABITANTS. THE ACTIVATION OF THESE SHARED SPACES WILL ALSO BENEFIT SOCIAL INTERACTION AND PROVIDE MORE ATTRACTIVE AND USED PUBLIC SPACES. THE SPACES THAT PEOPLE LACK SUCH AS GREEN SPACES CAN BE FOUND IN THE DIRECT SURROUNDINGS AND THESE SPOTS ARE MORE ACTIVELY USED BECAUSE THE NUMBER OF USERS IS LARGER.



FIRST FLOOR



PRE-DESIGN

“MIXING OF FUNCTIONS”

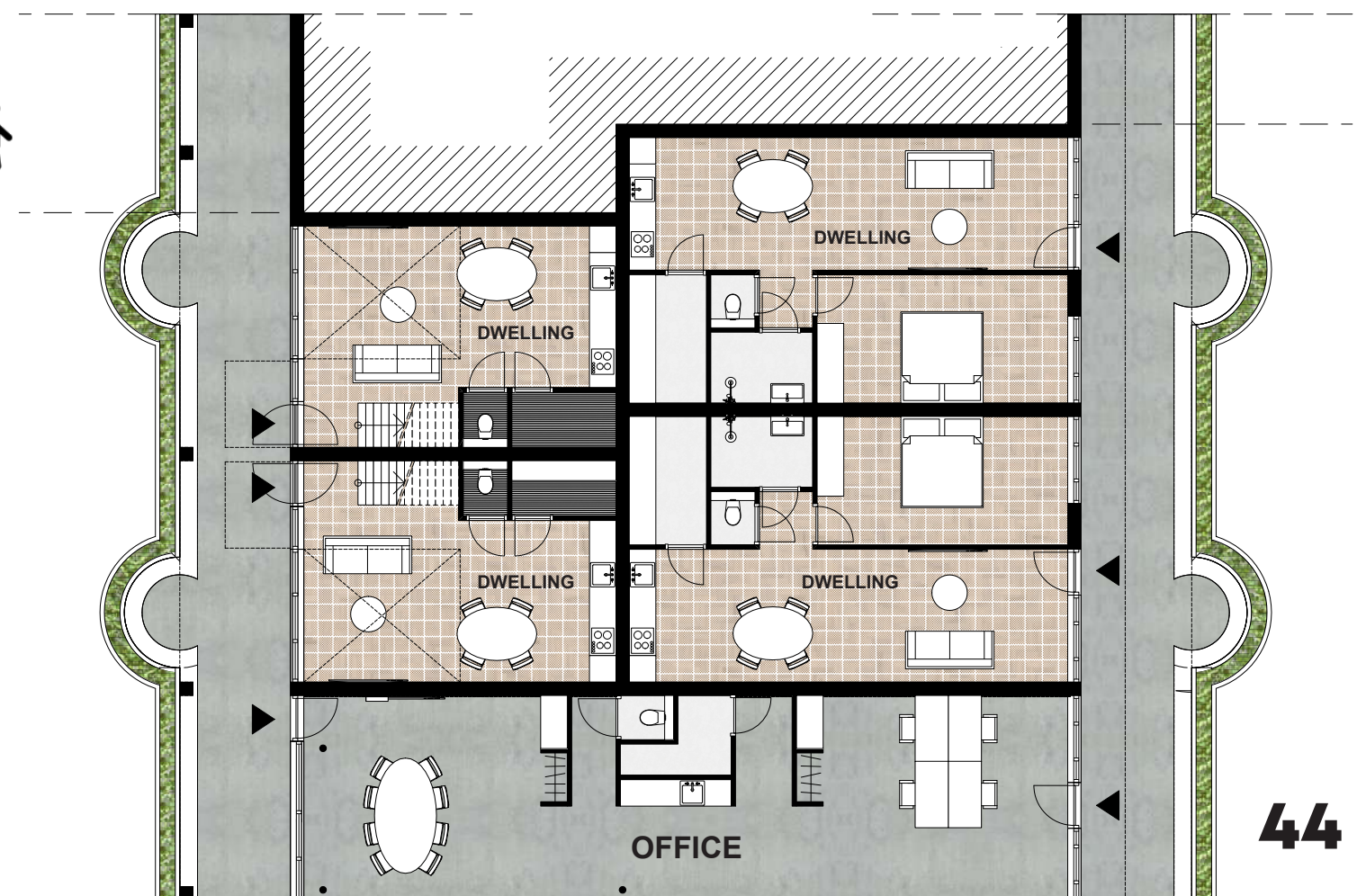
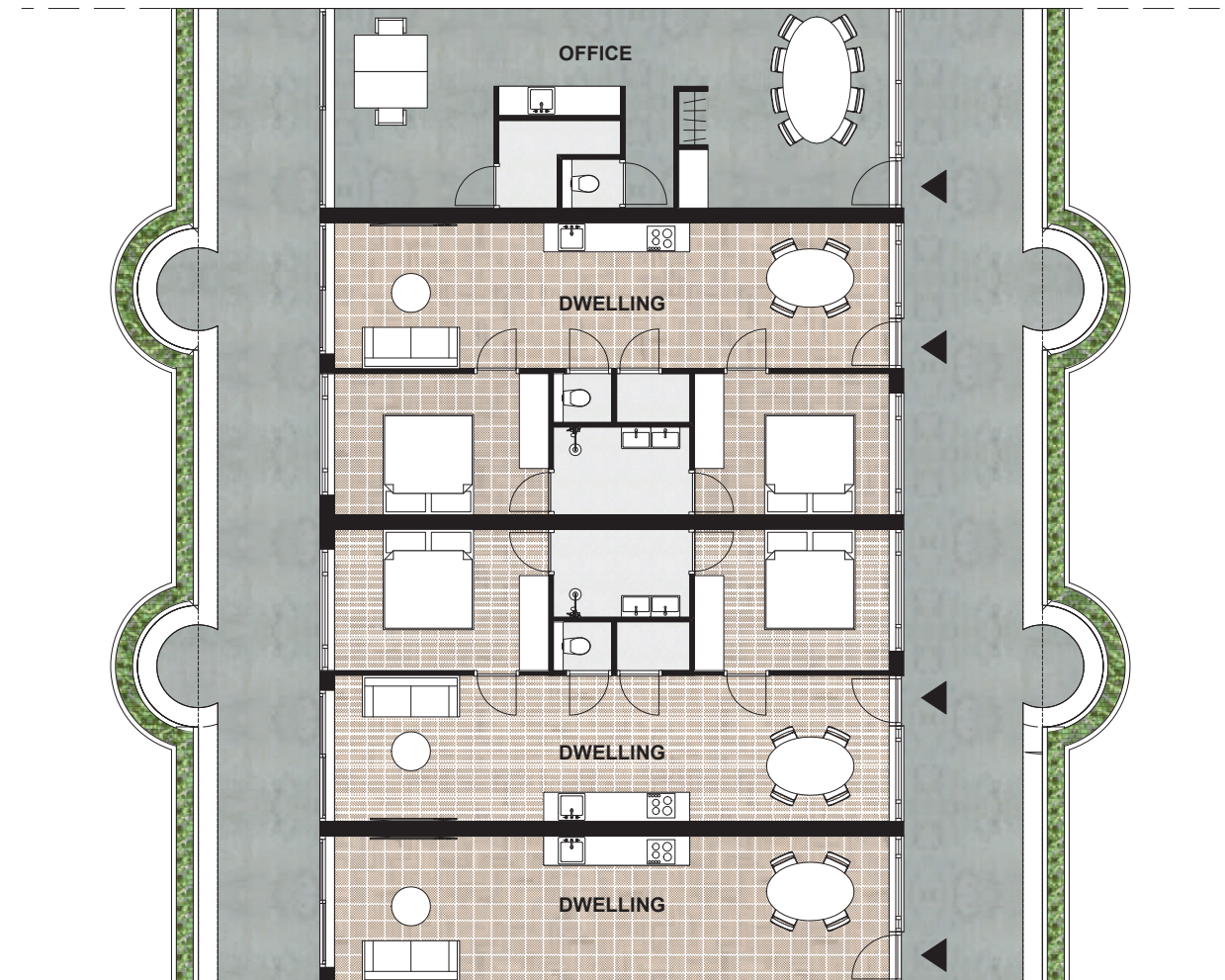
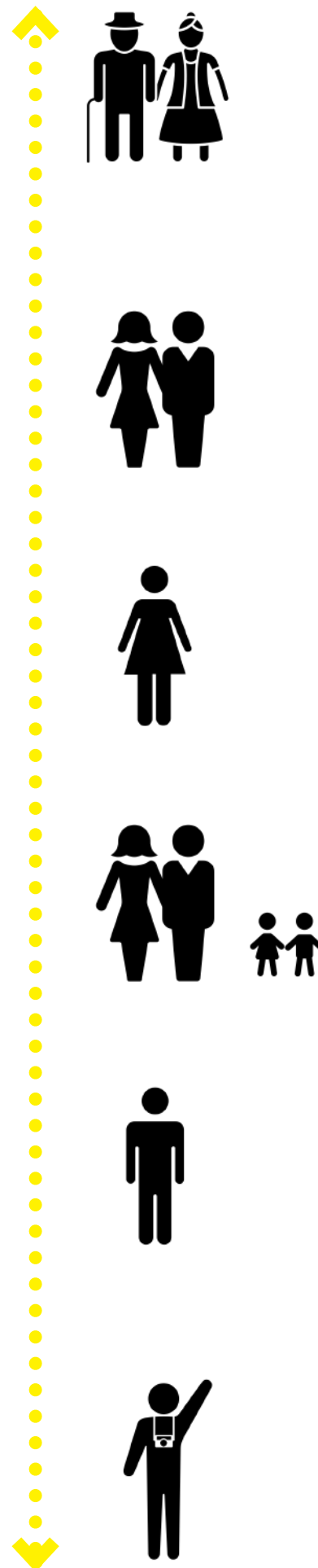
HIGH DENSITY / HIGH VARIATION

CONFIGURING THE FLOOR PLANS GOES HAND IN HAND WITH THE SCULPTING OF THE VOID, THE FUNCTION IS PLACED IN THE MOST SUITABLE SPOT. THIS CREATES A NATURAL CITYSCAPE THAT FEELS NATURAL, THE DWELLINGS AND FUNCTIONS CREATE THE BUFFER ZONE BETWEEN THE PUBLIC DOMAIN, THE SEMI-PUBLIC DOMAIN AND THE PRIVATE DOMAIN. THE CITYSCAPES ARE CONFIGURED IN A WAY THAT GETS THE MOST NATURAL DAYLIGHT, THE BALANCE BETWEEN PUBLIC AND PRIVATE AND OVERALL FUNCTIONALITY. THE SPACES IN THE CITY BLOCK THAT ARE NOT SUITABLE FOR LIVING WILL FORM THE SITES FOR FUNCTIONS AND SHARED FACILITIES. THE OVERALL POWER OF THE CITY BLOCK IS THE CAPACITY TO FACILITATE LIVING FUNCTIONS AND PUBLIC FUNCTIONS IN A SYMBIOTIC WAY THAT LIFTS THE OVERALL QUALITY OF THE CITY BLOCK. THE SAME GRID THAT FACILITATES LIVING ENVIRONMENTS IS ALSO SUITABLE FOR SMALL BUSINESSES AND OTHER FUNCTIONS TO THRIVE IN, THIS FACTOR OF FLEXIBILITY HELPS TO CREATE A STABLE INCOME FOR THE LANDLORD AND INVESTORS.

THE CITYSCAPES CAN BE CHANGED IN A DYNAMIC WAY THAT SHIFTS BETWEEN THE SPECIFIC NEEDS OF ITS TIMEFRAME. THE DWELLINGS HAVE A SPECIFIC MEASUREMENT BETWEEN THE CLT LOAD-BEARING ELEMENTS THAT ENABLE THE PRACTICAL USE OF THE LIVING ACTIVITIES, THIS SAME MEASUREMENT CAN BE ADOPTED FOR DIFFERENT FUNCTIONS, ALSO THE COMBINATION OF MULTIPLE DWELLINGS CAN BE ADOPTED TO CREATE MORE SPACE WHEN DEMANDS REQUIRE IT.

ALL THE CITYSCAPES ENJOY THE LUXURY OF BEING DIRECTLY LINKED TO A SOCIAL STREET THAT HAS A MINIMUM DIMENSION OF 2,5 METERS THAT FORMS THE EXTENSION FOR THE OUTDOOR LIVING SPACES. LARGER DWELLINGS WITH MULTIPLE STORIES HAVE A BALCONY THAT UTILISES ALL THE SPACE AVAILABLE. THESE BALCONIES CREATE A DEEPER SENSE OF INTERACTION AND SOCIAL SECURITY ALONG THE WHOLE CITY SCAPES.

MIX BETWEEN LIVING, WORKING LEISURE



PRE-DESIGN

“MIXING OF FUNCTIONS”



ONE STOREY STUDIO

“FINAL DESIGN”

TARGET GROUP :



DETAILS :

FLOOR AREA : 40 M²
VOLUME : 140 M³
BEDROOMS : 1
HEIGHT : 3,5 M

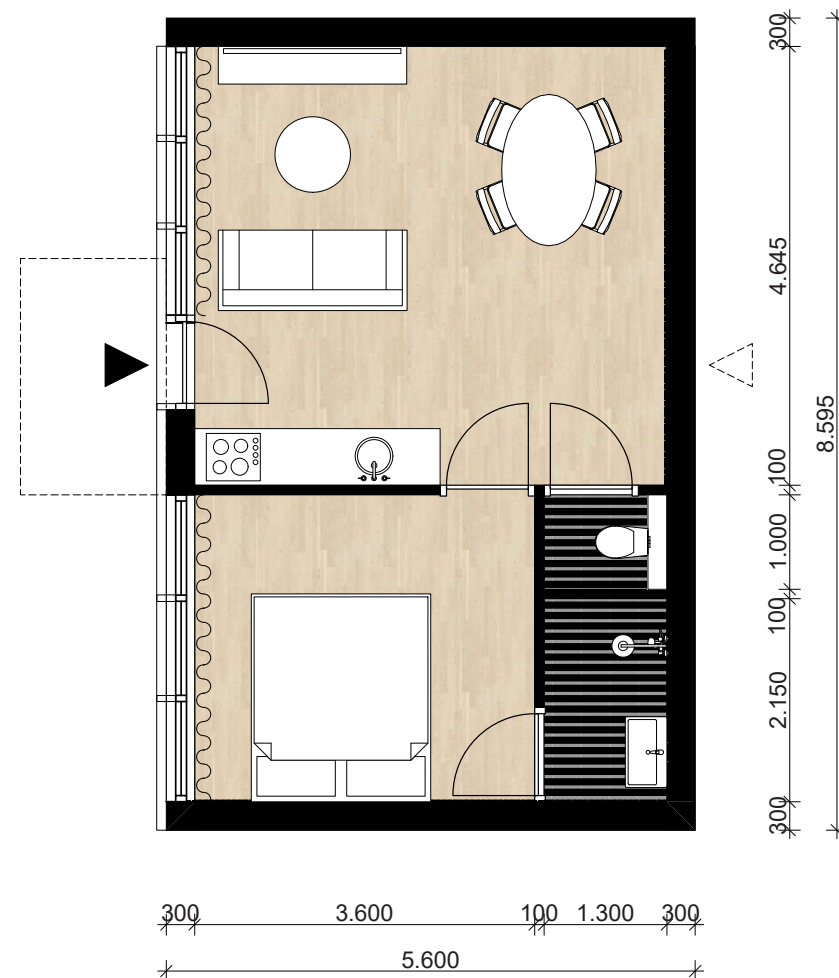
SPECIAL FEATURES :

- COMPACT HOUSING
- INTERNAL HEIGHT
- POSSIBILITY FOR ENTRANCE AT THE BACK & BALCONY

SPECIFICS:

THIS COMPACT APARTMENT CAN BE PERCEIVED AS A BASIC-LEVEL APARTMENT THAT IS SUITABLE FOR ONE OR TWO PERSONS. THIS APARTMENT IS COMPACT YET FUNCTIONAL. THE LIVING QUALITY IS IMPROVED BY ADDING LARGE WINDOWS THAT ALLOW DAYLIGHT INTO THE DWELLING AND PROVIDE PLEASANT VIEWS. THE APARTMENT HOUSES A SEPARATE BATHROOM, TOILET, LIVING ROOM AND BEDROOM. THE APARTMENT IS FLEXIBLE SINCE ACCORDING TO THE LOCATION ON THE CITY FLOOR A BALCONY CAN BE ADDED AND THE ENTRANCE CAN BE PLACED ON THE OTHER SIDE.

FLOOR PLANS



AXO DRAWINGS



ONE STOREY STUDIO

TARGET GROUP :



DETAILS :

FLOOR AREA	: 42	M ²
VOLUME	: 147	M ³
BEDROOMS	: 1	
HEIGHT	: 3,5	M

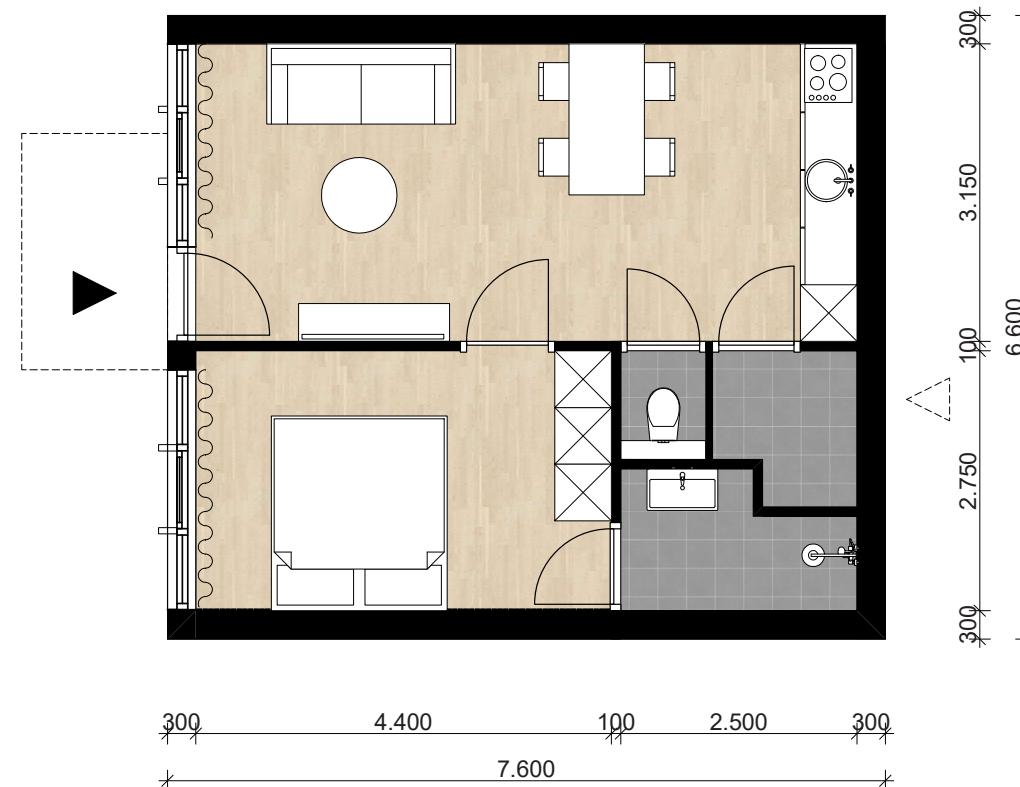
SPECIAL FEATURES :

- ADDED STORAGE SPACE
- INTERNAL HEIGHT
- POSSIBILITY FOR ENTRANCE AT THE BACK & BALCONY

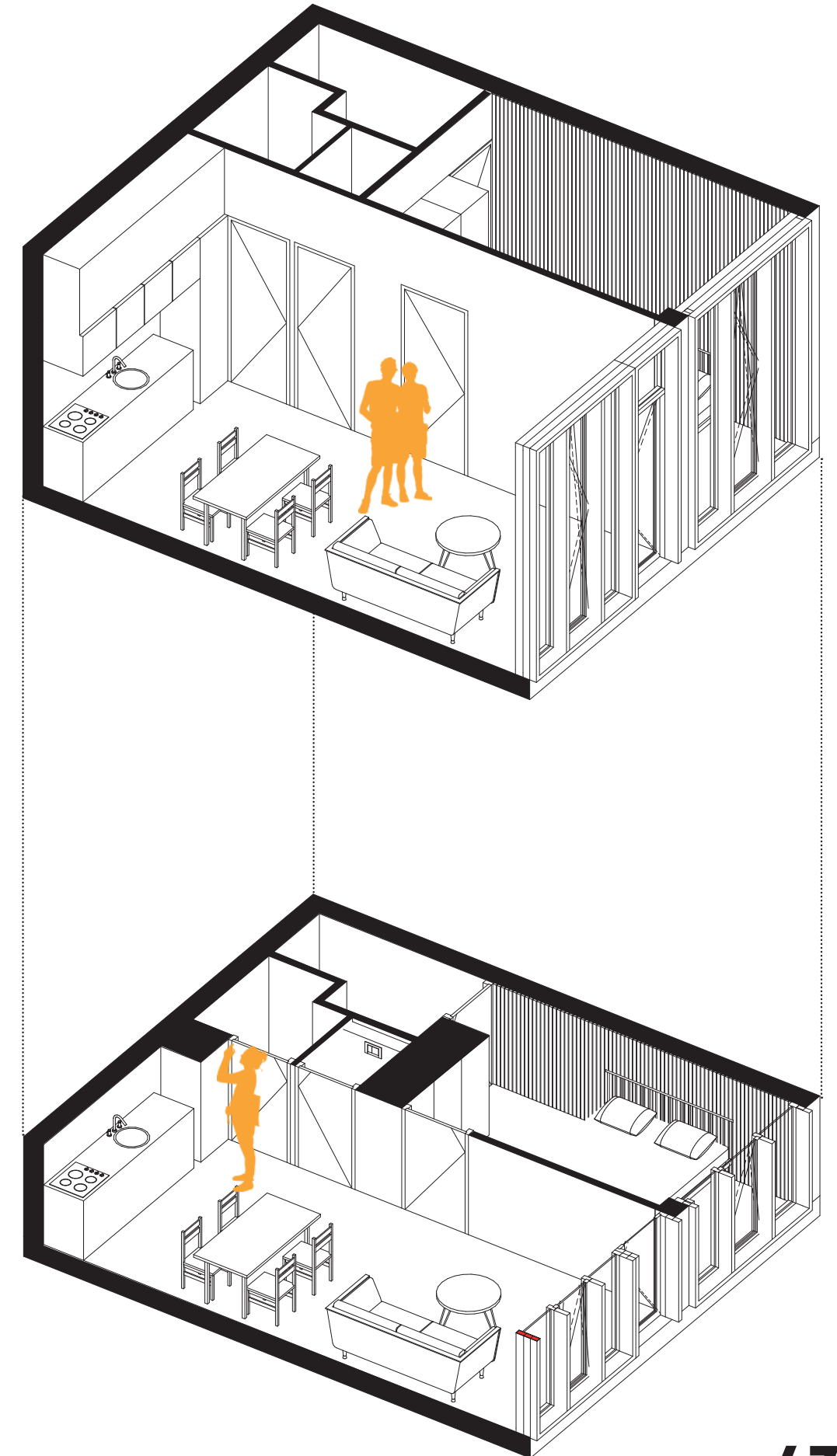
SPECIFICS:

THIS COMPACT APARTMENT CAN BE PERCEIVED AS A BASIC-LEVEL APARTMENT THAT IS SUITABLE FOR ONE OR TWO PERSONS. THIS APARTMENT IS COMPACT YET FUNCTIONAL. THE LIVING QUALITY IS IMPROVED BY ADDING LARGE WINDOWS THAT ALLOW DAYLIGHT INTO THE DWELLING AND PROVIDE PLEASANT VIEWS. THE APARTMENT HOUSES A SEPARATE BATHROOM, TOILET, LIVING ROOM AND BEDROOM. THE APARTMENT IS FLEXIBLE SINCE ACCORDING TO THE LOCATION ON THE CITY FLOOR A BALCONY CAN BE ADDED AND THE ENTRANCE CAN BE PLACED ON THE OTHER SIDE.

FLOOR PLANS

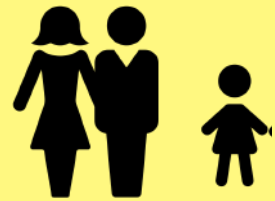


AXO DRAWINGS



ONE STOREY STUDIO

TARGET GROUP :



DETAILS :

FLOOR AREA	: 51	M ²
VOLUME	: 179	M ³
BEDROOMS	: 2	
HEIGHT	: 3,5 M	

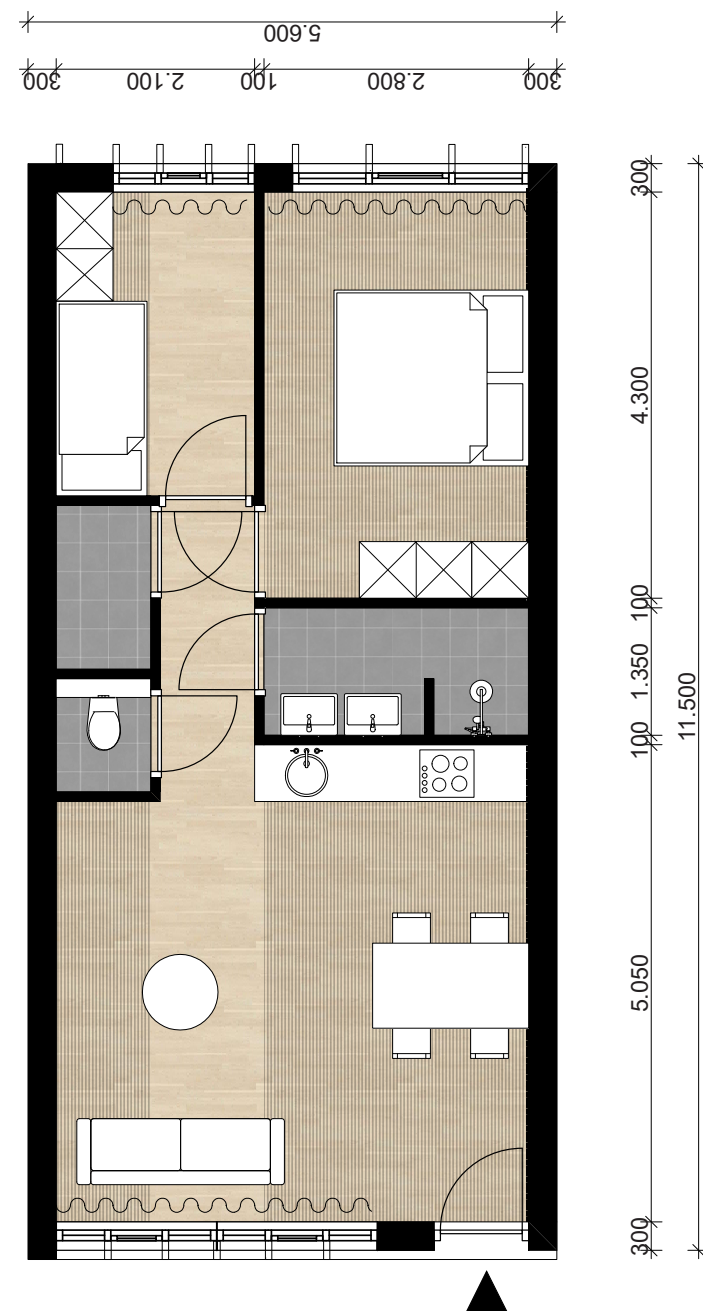
SPECIAL FEATURES :

- SPACIOUS TWO BEDROOMS
- INTERNAL STORAGE SPACE
- INTERNAL HEIGHT

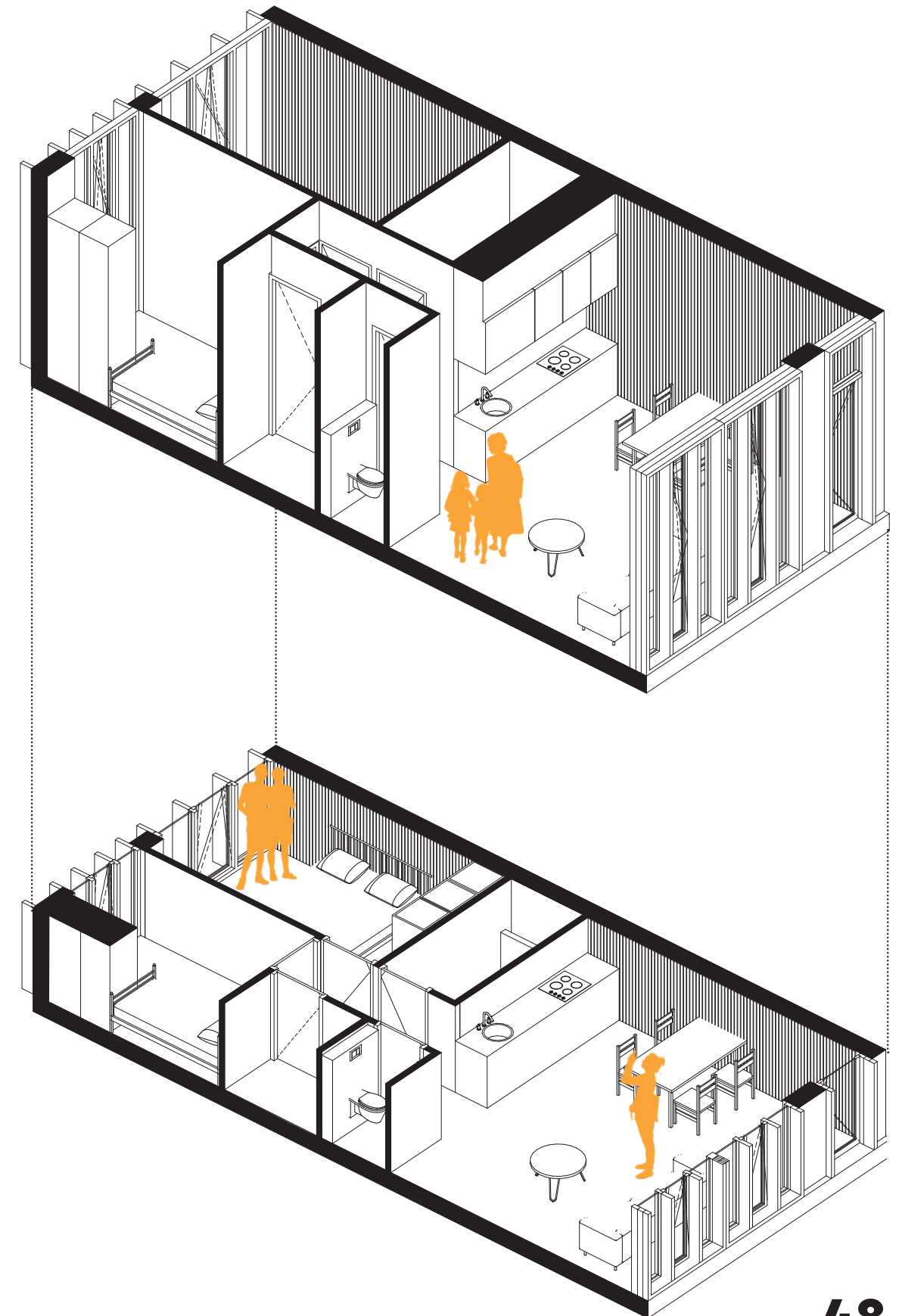
SPECIFICS:

THIS COMPACT APARTMENT CAN HOUSE A STARTING FAMILY, THERE IS ONE ADDED BEDROOM AND THEREFORE PROVIDES SPACE FOR A SINGLE BED OR A BUNK BED. THESE APARTMENTS ARE EFFECTIVE WITH SPACE USE AND THEREFORE THE LARGE WINDOWS PROVIDE PLEASANT LIVING ENVIRONMENTS AND THE EXTENDED SOCIAL STREETS PROVIDE THE POSSIBILITY TO ENJOY OUTDOOR SPACE AT THE DOORSTEP. THE APARTMENT CONSIST OF TWO BEDROOMS, A BATHROOM, A TOILET, STORAGE AND A LIVING ROOM.

FLOOR PLANS



AXO DRAWINGS



TWO STOREY STUDIO

TARGET GROUP :



DETAILS :

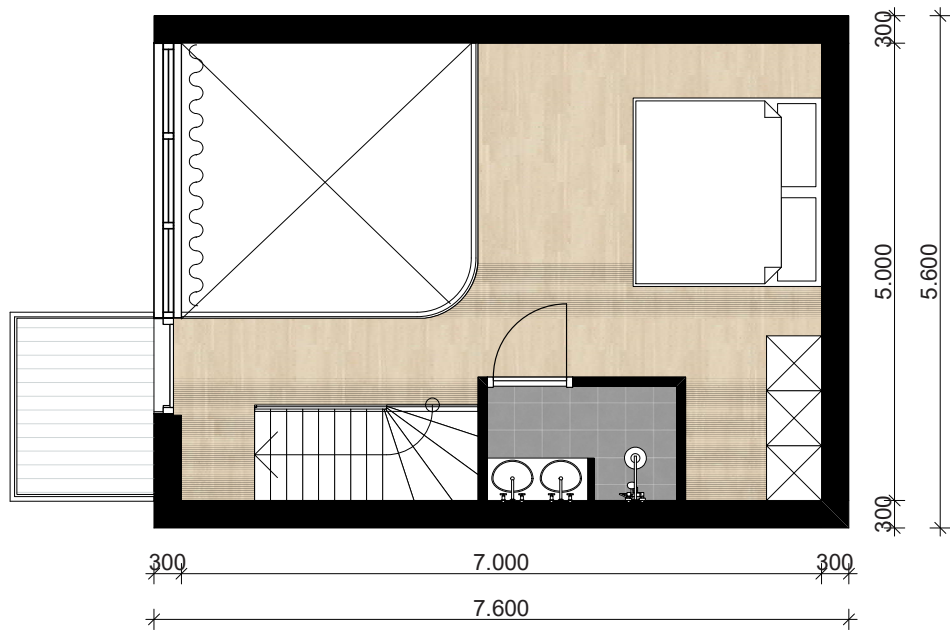
FLOOR AREA	: 60	M ²
VOLUME	: 210	M ³
BEDROOMS	: 1	
HEIGHT	: 6	M

SPECIAL FEATURES :

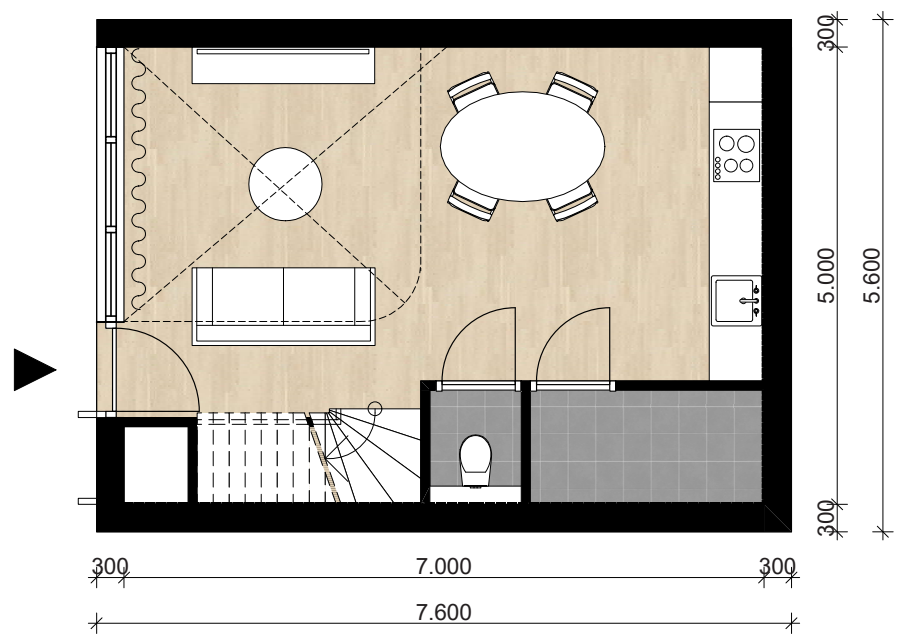
- BALCONY
- INTERNAL HEIGHT
- 2 FLOORS
- INTERNAL STORAGE

THIS TWO STOREY APPARTMENT OFFERS MORE INTERNAL HEIGHT AND THE ADDED FLOOR OFFERS A PRIVATE OUTDOOR SPACE. THE BEDROOM ON THE FIRST FLOOR CAN PROVIDE PANORAMIC VIEWS WHEN STARTING THE DAY. THE DOUBLE STOREY ALSO PROVIDES OPPERTUNITY FOR OTHER FUNCTIONS. THE CORNER APPARTEMENT HOUSE EXTRA SPACE TO BE CURATED BY THE USER. THE BALCONY PROVIDES EXCELENT VIEWS AND PLEASENT SEMI-PUBLIC SPACE.

FLOOR PLANS

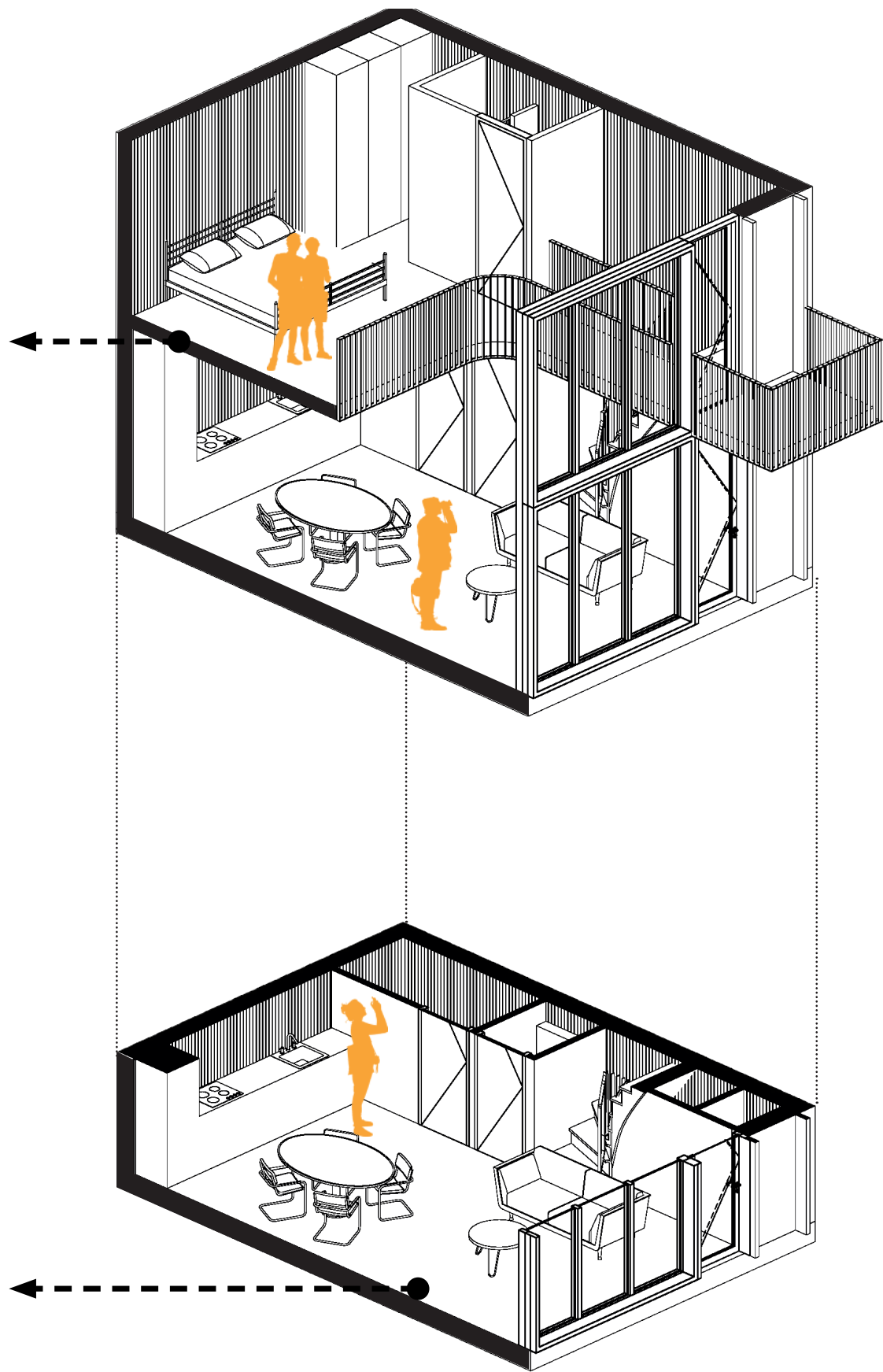


FIRST FLOOR



GROUND FLOOR

AXO DRAWINGS



THREE STOREY STUDIO

TARGET GROUP :



DETAILS :

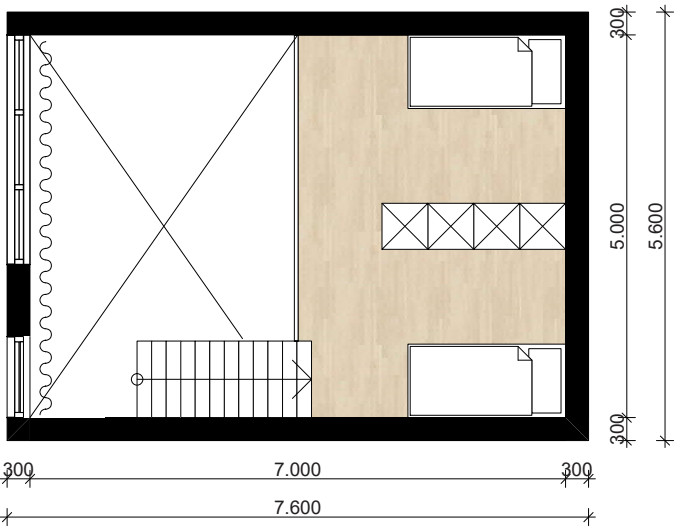
FLOOR AREA	: 75	M ²
VOLUME	: 263	M ³
BEDROOMS	: 3	
HEIGHT	: 7,5	M

SPECIAL FEATURES :

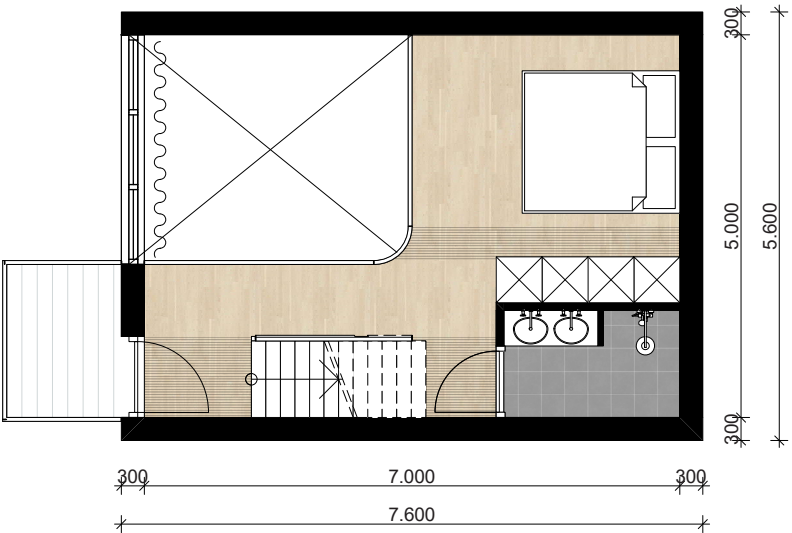
- BALCONY
- INTERNAL HEIGHT
- THREE STOREYS
- THREE BEDROOMS
- INTERNAL STORAGE

THE LARGEST APPARTMENT IN THE CITY BLOCK OFFERS A NICE PLACE FOR FAMILIES THAT VALUE A CENTRAL LOCATION TO LIVE. THE APARTMENT OFFERS THREE BEDROOMS AND THEREFORE A FAMILY OF FOUR CAN LIVE THEIR BEST LIFE. THE INTERNAL HEIGHT AND GLASS FACADE PROVIDE GREAT VIEWS AND LETS DAYLIGHT PENETRATE INTO THE DWELLING. THIS APARTMENT ALSO HAS A PRIVATE BALCONY THAT PROVIDES A UNIQUE VIEW INTO THE CITY CENTRE OF ROTTERDAM.

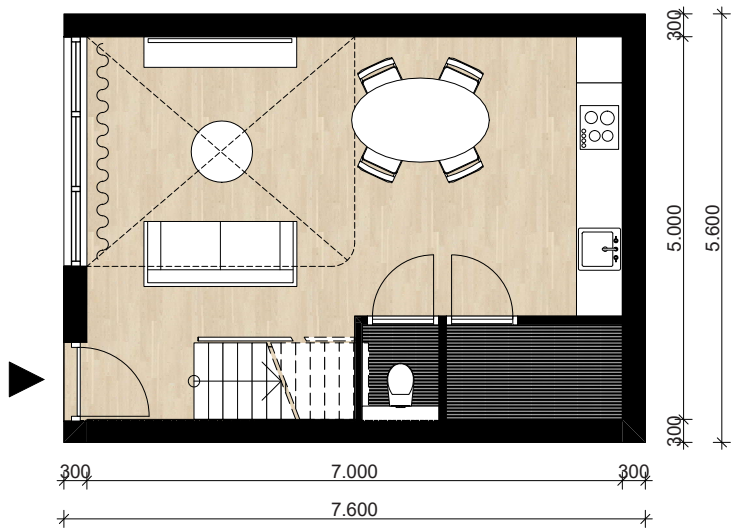
FLOOR PLANS



SECOND FLOOR

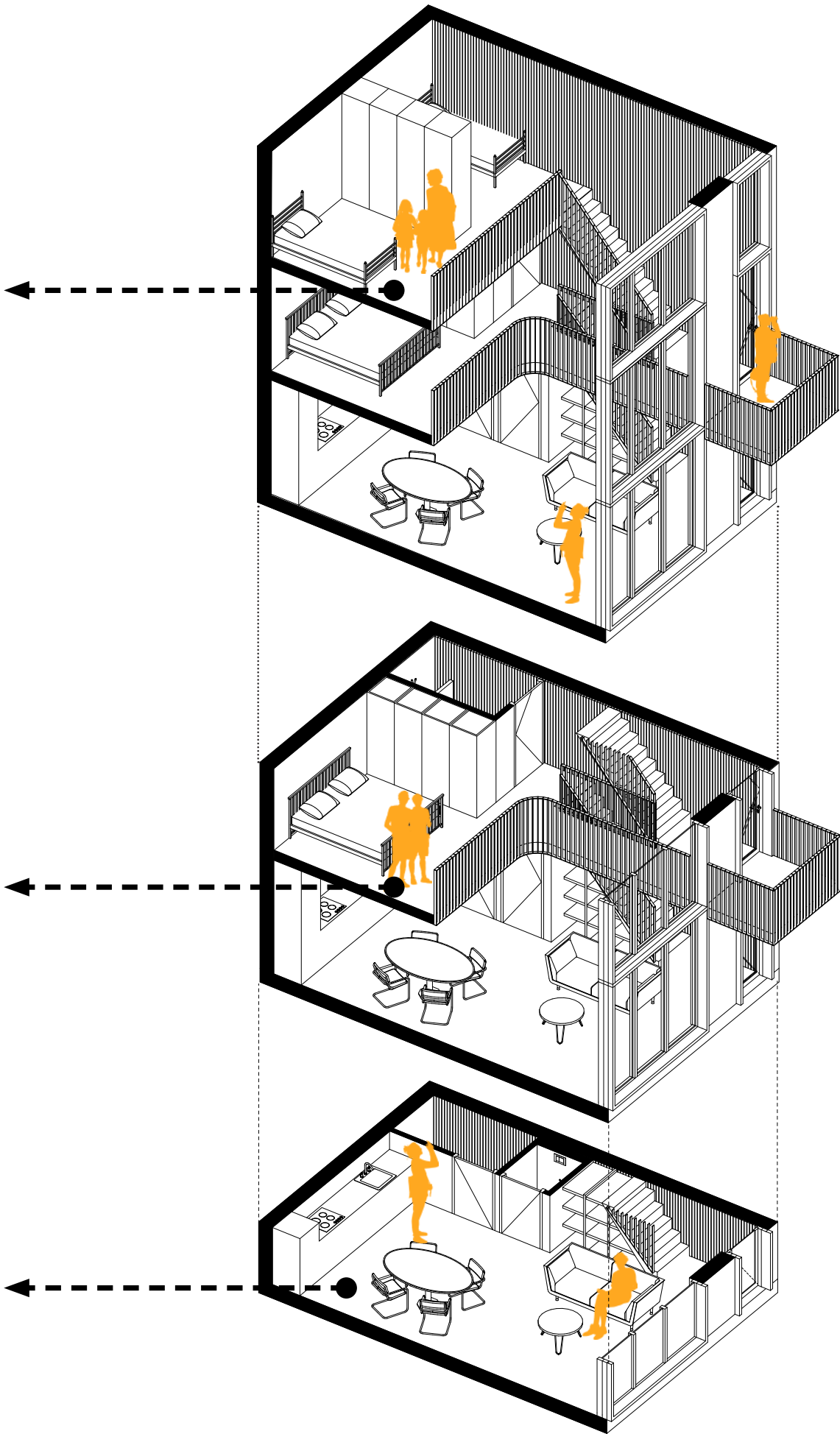


FIRST FLOOR



GROUND FLOOR

AXO DRAWINGS



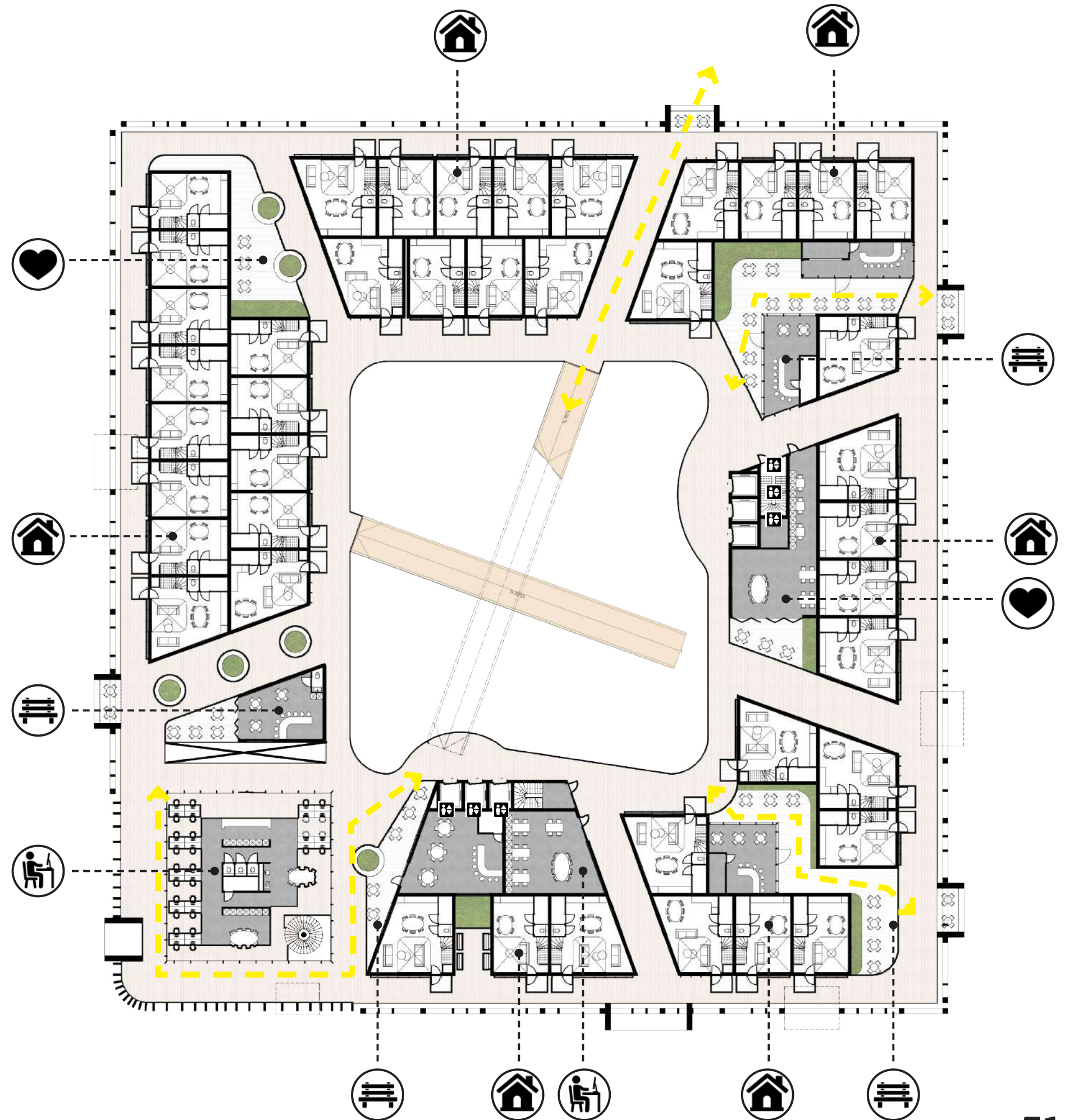
CITY SCAPES

"URBAN SOCIAL FLOORS"

HIGH DENSITY URBAN LIVING

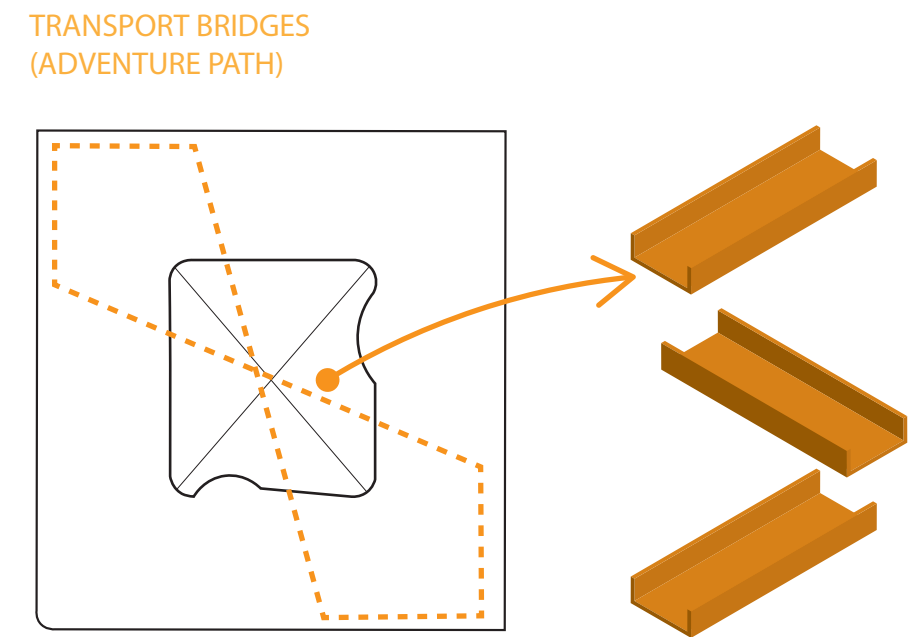
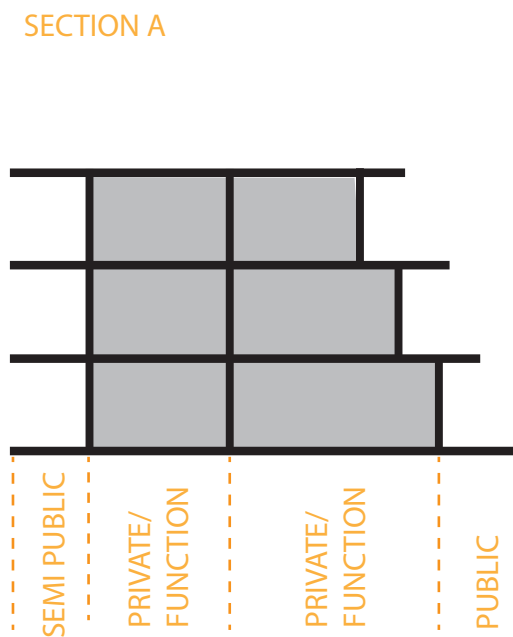
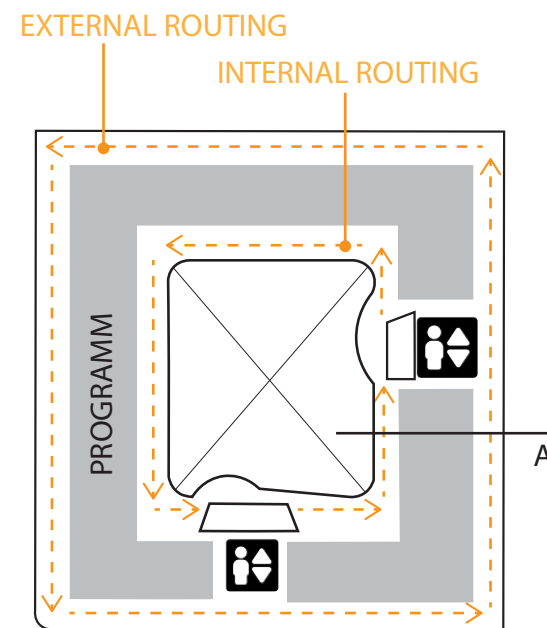
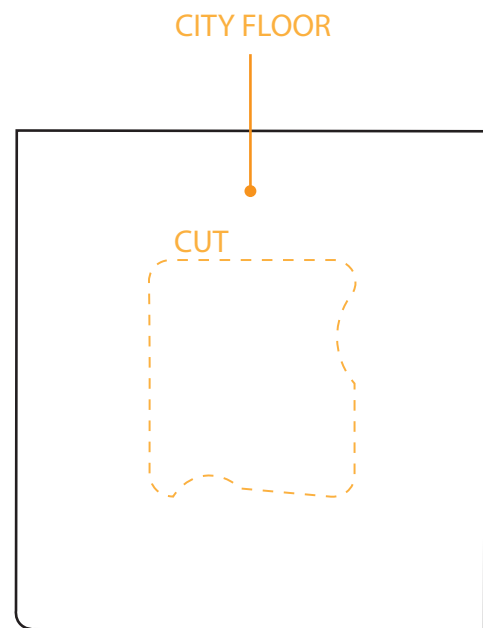
THE FLOOR PLANS OF THE CITY BLOCK HOUSE DIFFER CHARACTERISTICS ON EVERY FLOOR. THE PUBLIC DOMAIN OF THE SOCIAL BOULEVARDS AND STREETS, THE DWELLINGS AND THE WORKING AND PUBLIC FUNCTIONS. THESE MIXES ARE CURLED AROUND THE CENTRAL ATRIUM AND THE BORDER OF THE BUILDING ON THE OUTSIDE. THE DIAGONAL CUTS CONNECT THE VIEW LINES OF THE PATHWAY TOWARDS THE URBAN ENVIRONMENT. THE DWELLINGS ARE SITUATED ON BOTH ENDS OF THE FLOOR AND PROVIDE DIFFERENT USES THAT ACTIVATE THE WHOLE FLOORScape.

ALL CITY FLOORS CONSIST OF FUNCTIONS, DWELLINGS AND PUBLIC SPACES. THE FUNCTIONS AND THE PUBLIC DOMAIN CONTRIBUTE TO FACILITATING THE GROWTH OF COMMUNITIES WITHIN THE CITY BLOCK. THE SOCIAL STREETS AND ALLEYS WILL ENSURE THE PROVOKING OF ENCOUNTERS WITHIN THE CITY BLOCK. THE EXTENDED INDOOR AND OUTDOOR SPACES CAN BE CURATED BY THE USERS AND WILL BE USED TO HELP TO SHAPE A COMMUNITY. EXCHANGING AND INTERACTION BETWEEN DIFFERENT USERS OF THE CITY BLOCK CREATES A DYNAMIC RELATION THAT IS SIMILAR TO A NORMAL CITY CENTRE. FACILITIES WITHIN THE BLOCK CAN SUPPORT THE DAILY NEEDS OF INHABITANTS, THE NEEDS MAY VARY BUT THE CONCEPT OF SHARED FUNCTIONS AND FACILITIES HELPS TO CREATE THE RIGHT BALANCE.

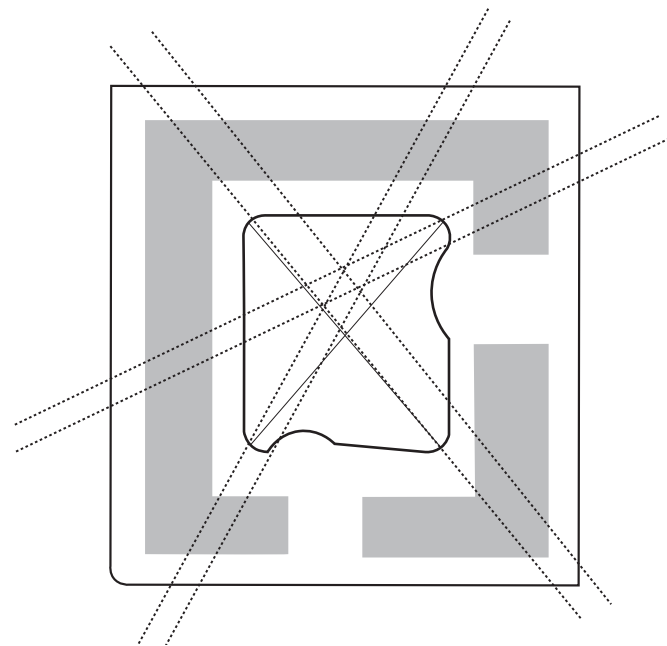


CITY SCAPES

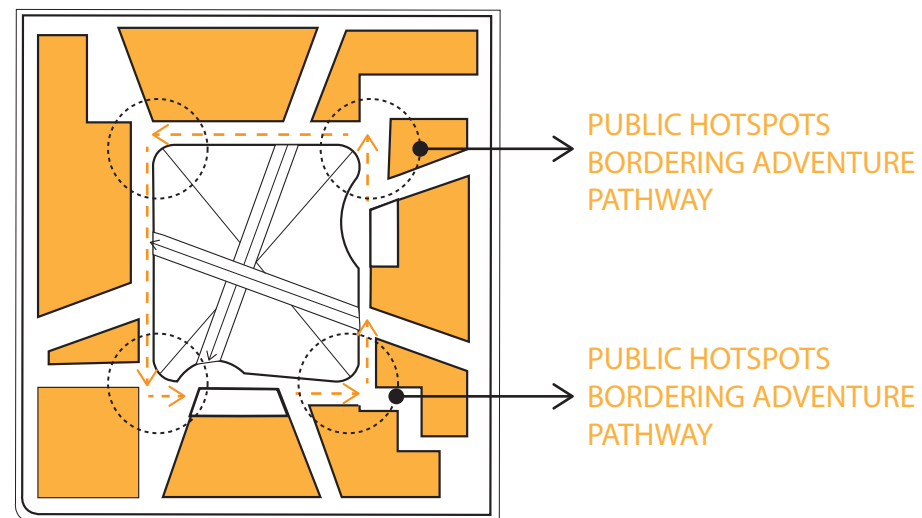
“PUBLIC VS PRIVATE DOMAIN ”



DIAGONAL CUTS IN VOLUME



FLOOR PLAN PRINCIPLES



RESULT



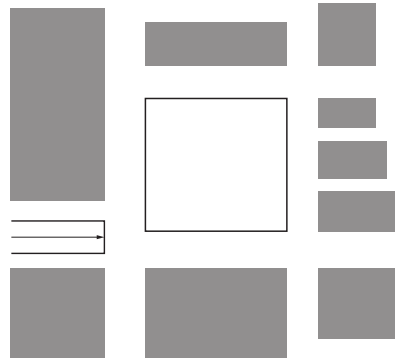
ARCHITECTURE

- LINES OF SIGHT IN FLOOR PLAN
- BORDERING FUNCTIONS
- DENSE & PLEASANT LIVING
- ACTIVATING THE PUBLIC SPACE
- FLOOR SCAPES GIVE IDENTITY
- HIERARCHY BETWEEN BOULEVARD/STREETS
- HIGHLY URBAN ENVIRONMENT

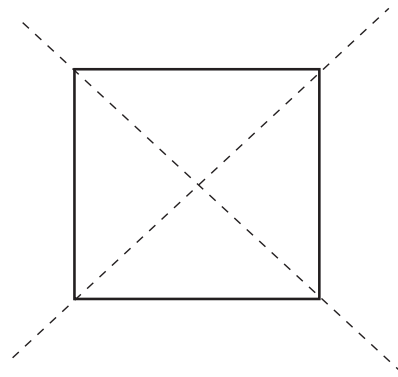
CITY BLOCK

“BEHIND THE MASS ”

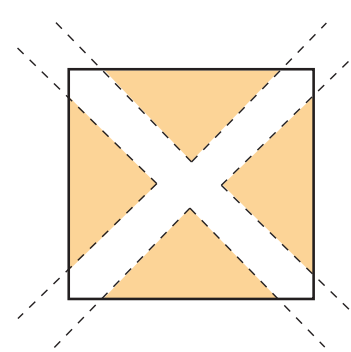
URBAN CONTEXT



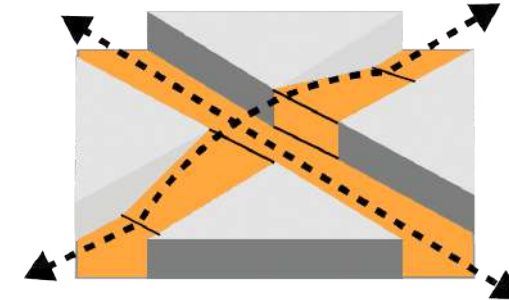
SUBTRACTION



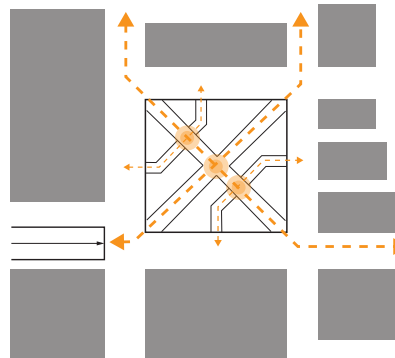
CITY FLOOR



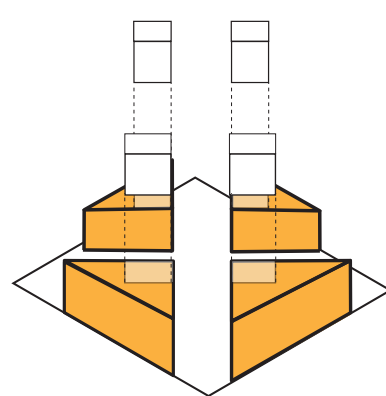
2 WAY CONNECTION



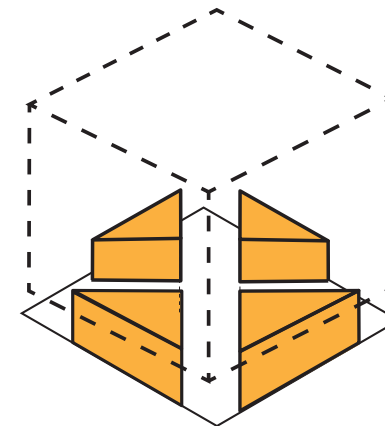
NEW CONECTIONS



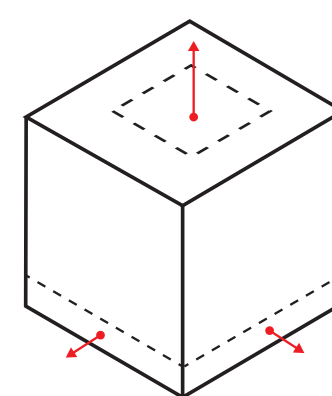
ADDING VOLUME



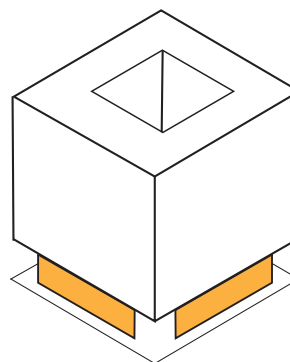
STACKED VOLUME



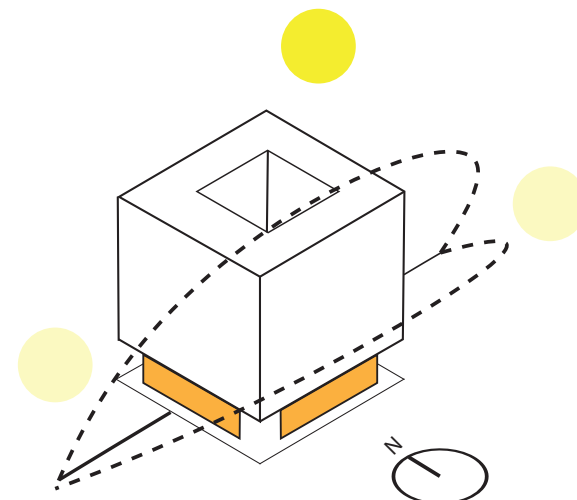
BASIC VOLUME



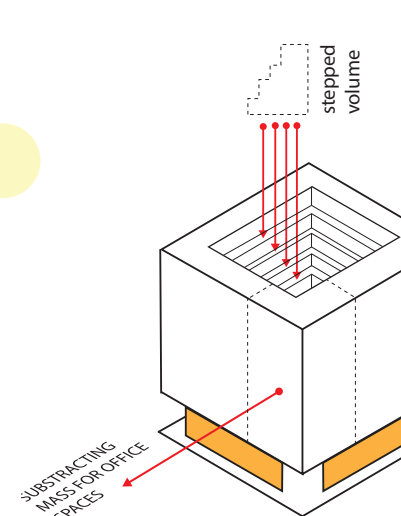
ELEVATED MASS



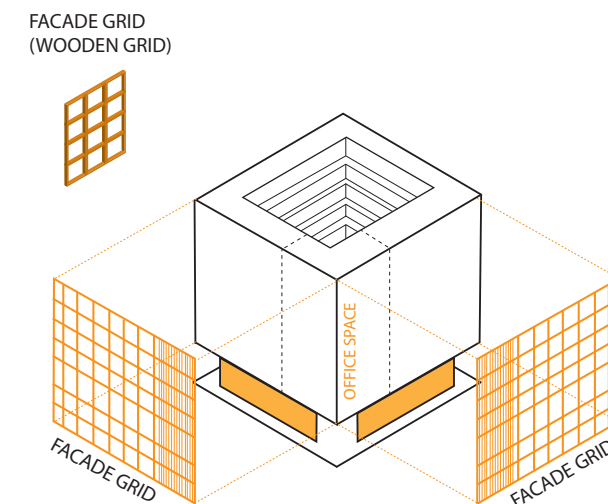
SOLAR IMPACT



CUTTING VOLUME



FACADE GRID

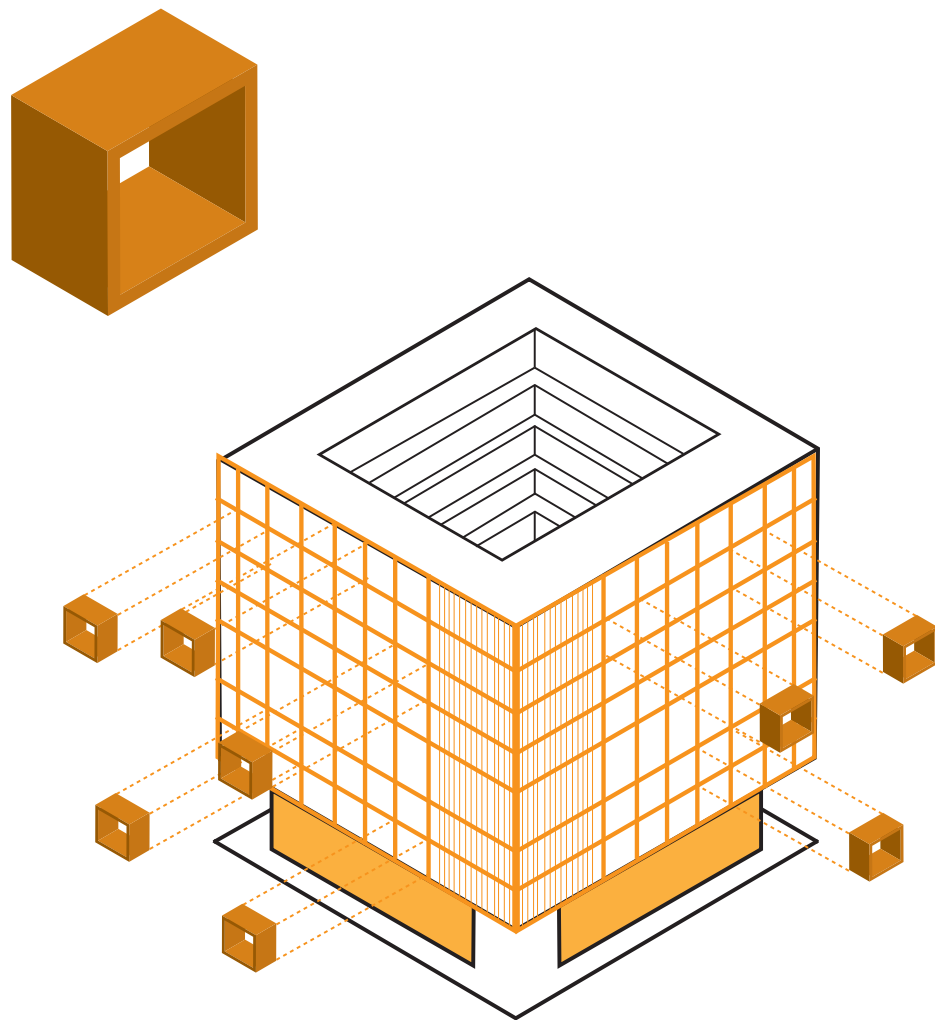


CITY BLOCK

“FACADE CONFIGURATION AND ROOF PARK ”

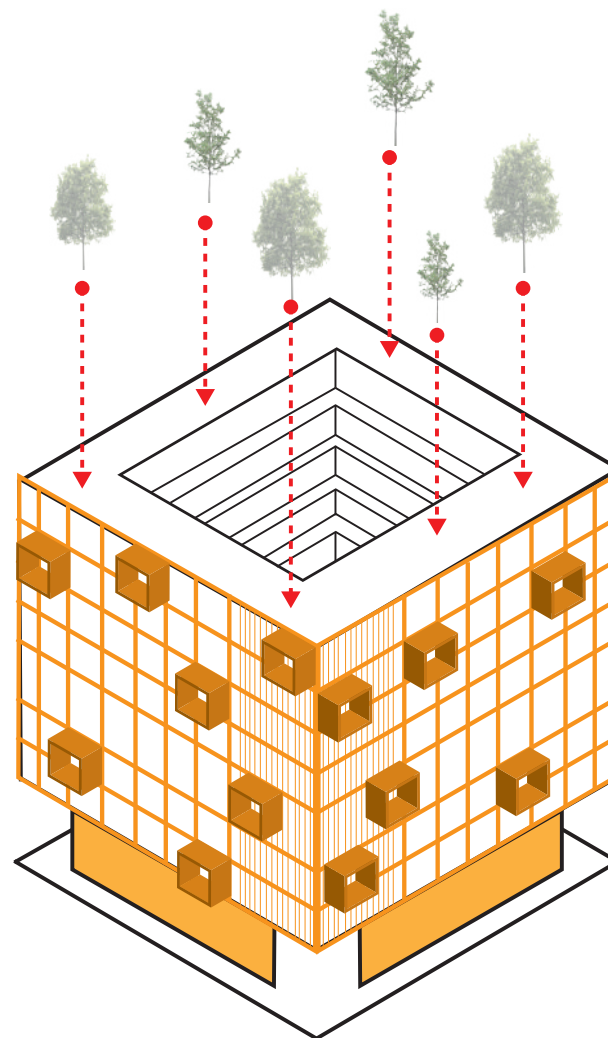
PICTURE FRAMES

FACADE ELEMENTS
(PICTURE FRAMES)

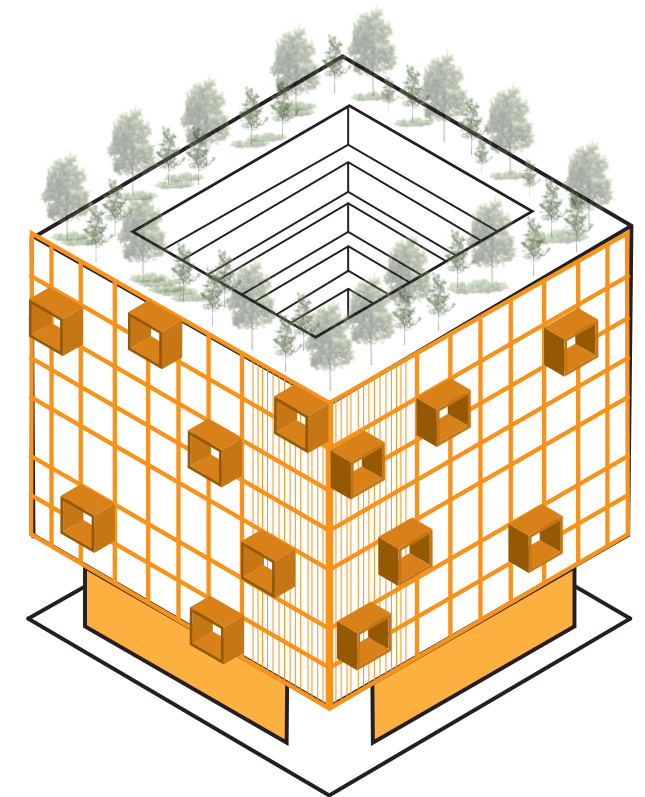


ROOF PARK

ROOF PARK
(URBAN GREEN)



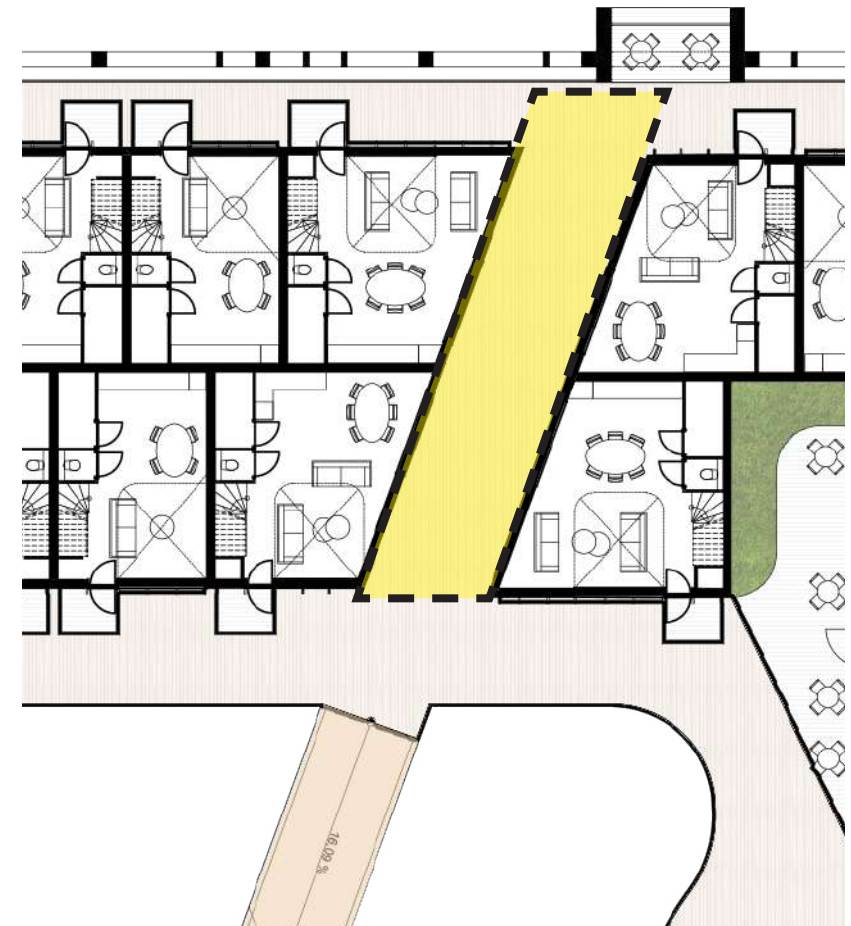
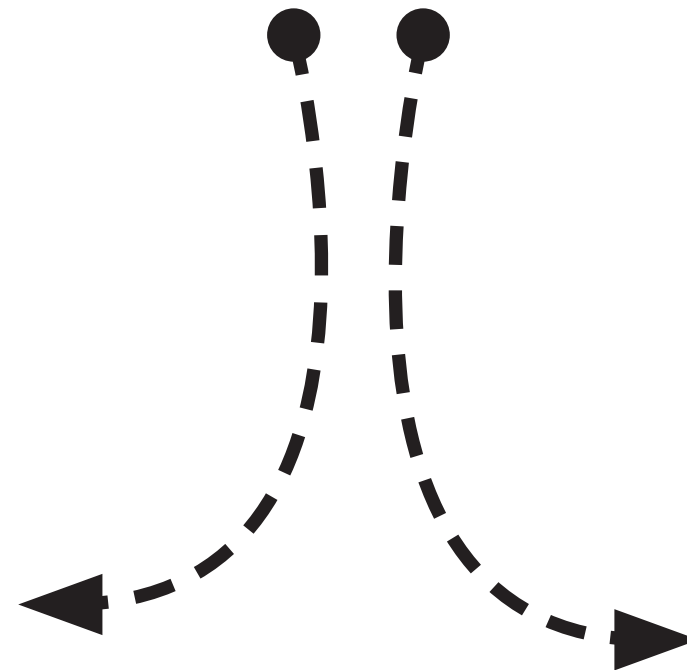
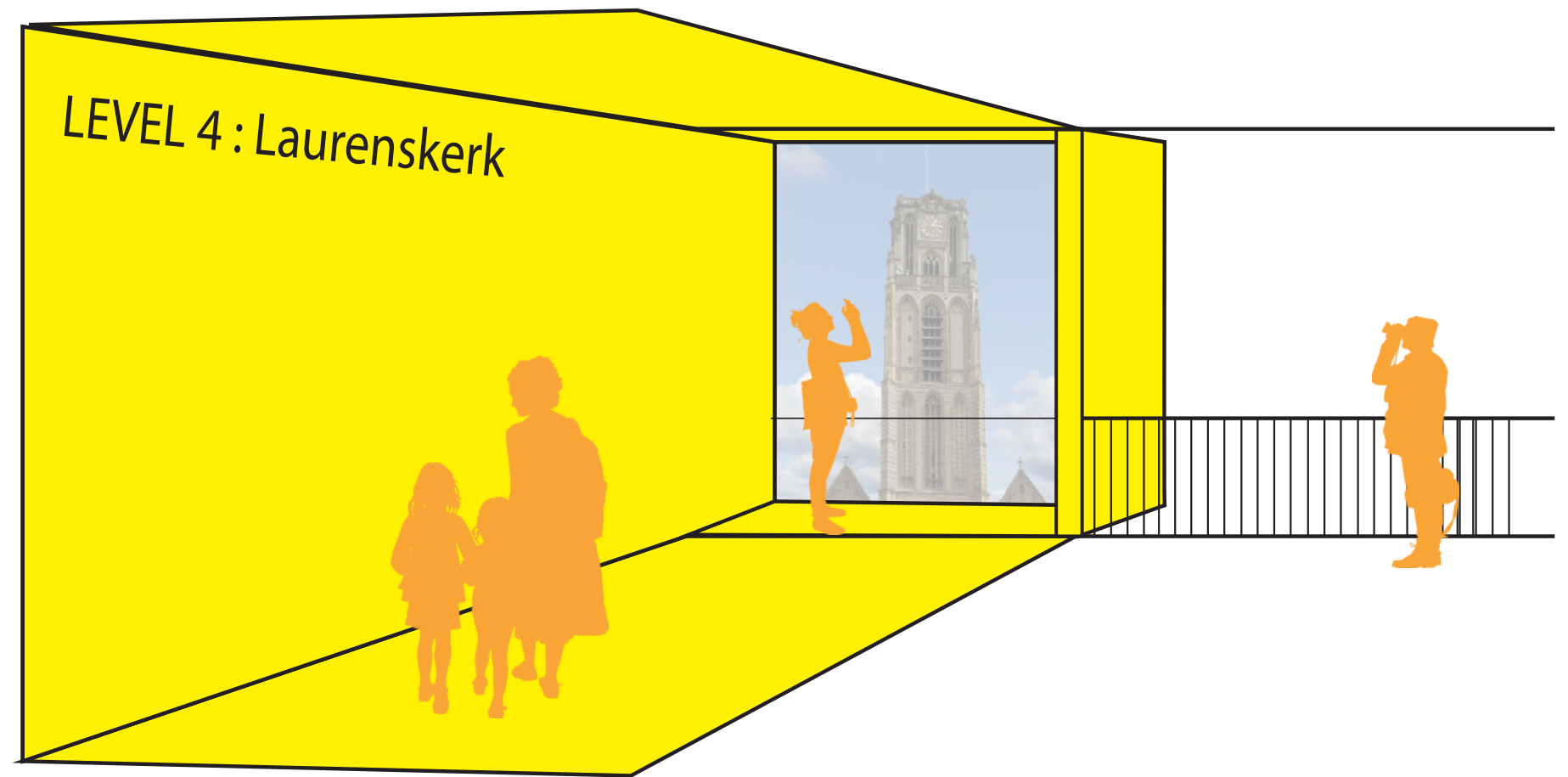
THE NEW CITY BLOCK



PICTURE FRAMES

"TOUR OF HIGHLIGHTS"

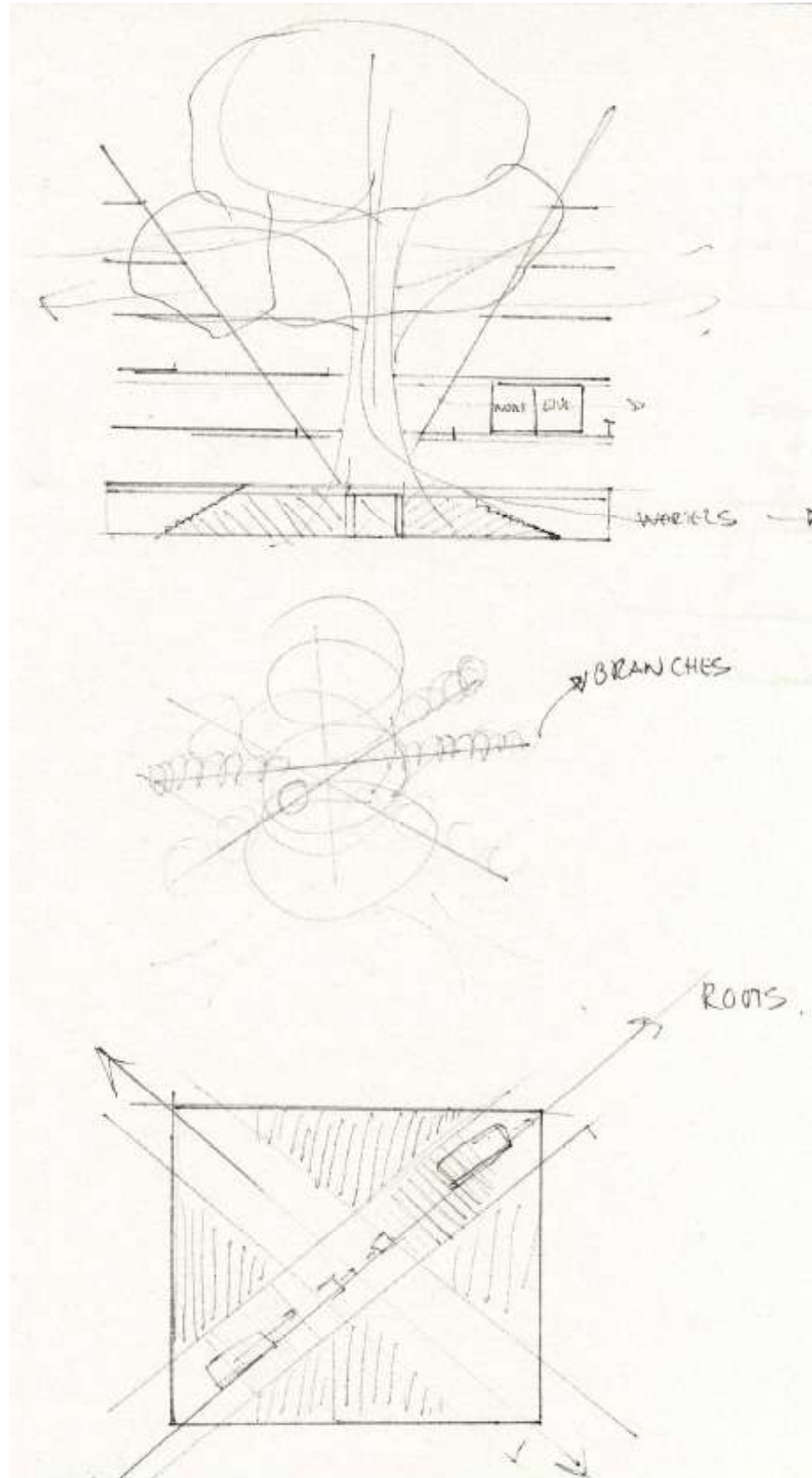
WHEN TRANSITIONING THROUGH THE CITY BLOCK THE CONTEXT OF THE SITE IS KEY. THE PICTURE FRAMES ARE ATTACHED TO THE BUILDING AND HIGHLIGHT VARIOUS SPACES AND BUILDINGS IN THE SURROUNDINGS. THE SOCIAL STREETS CONNECT CITY FLOORS AND SOCIAL STREETS THAT GUIDE VISITORS AND USERS TOWARDS THESE DIFFERENT HIGHLIGHTS. THE PICTURE FRAMES GUIDE VIEWS AND OFFER AN EXPERIENCE ON THE POINT WHERE THE VOID BLURS INTO THE SURROUNDINGS. THE VOID CONNECTS THE BUILT ENVIRONMENT TO DIFFERENT SPACES AND ATMOSPHERES.



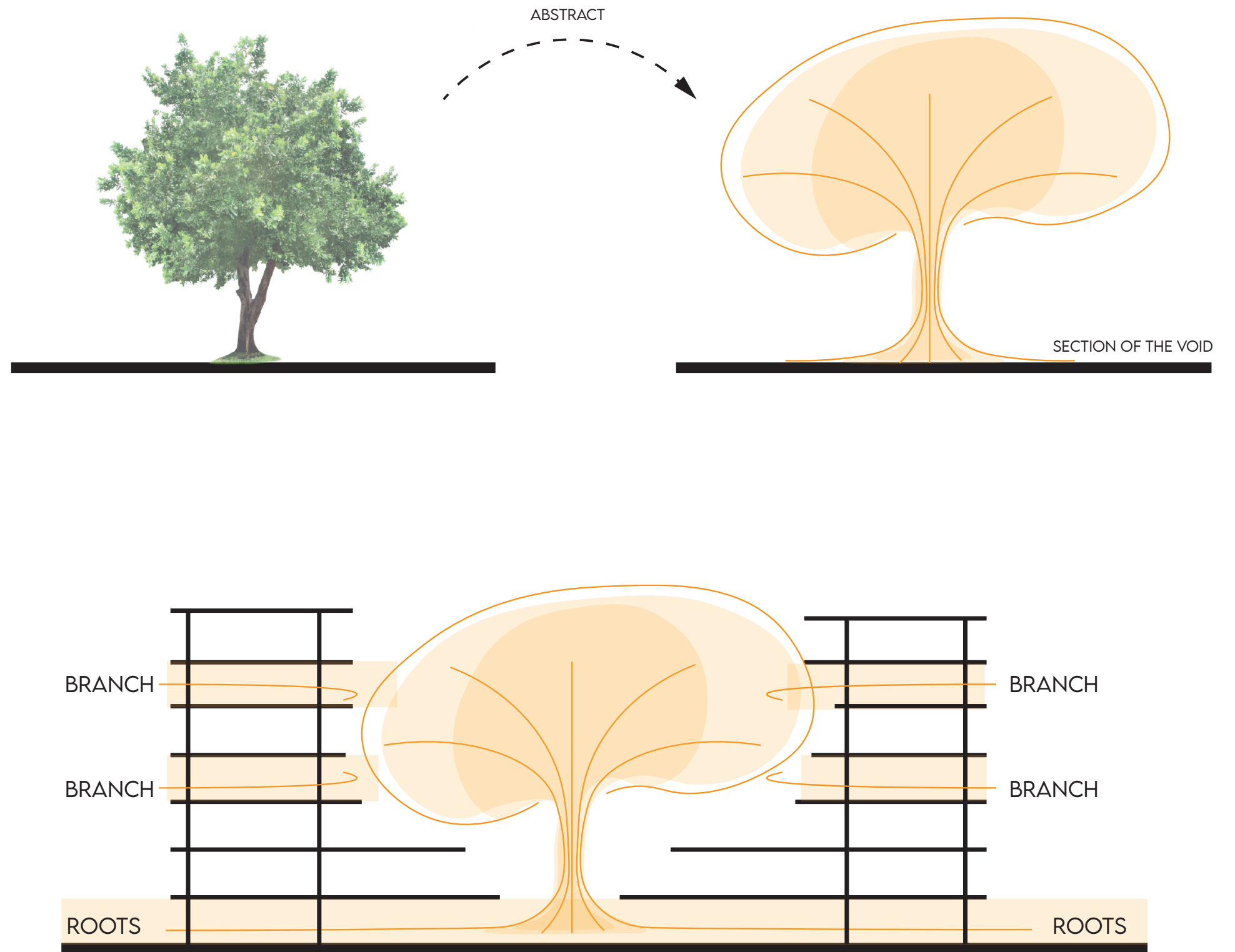
DESIGN CONCEPT

"NATURAL VOID CONCEPT : CONNECTIVE BRANCHES"

THE URBAN TREE



SHAPING THE VOID



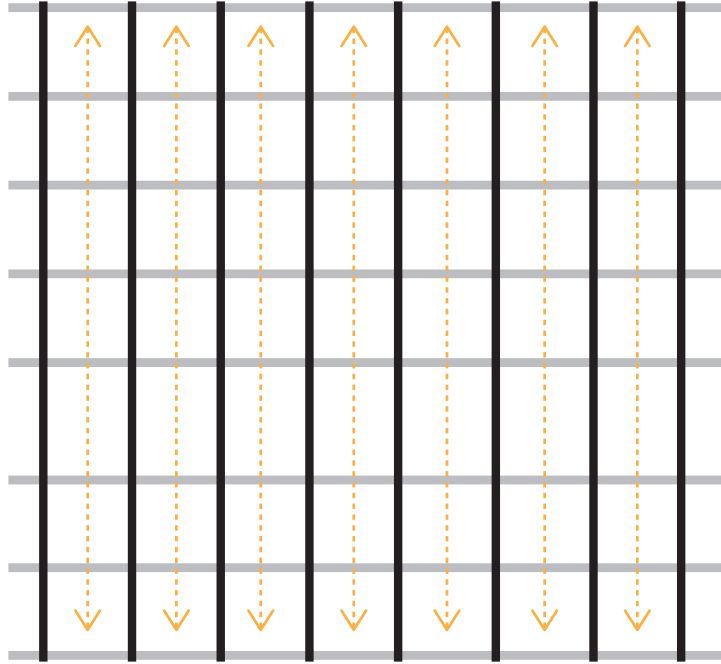
DESIGN CONCEPT

“LAYERED FACADE TO HOUSE FLEXIBLE PROGRAMM “

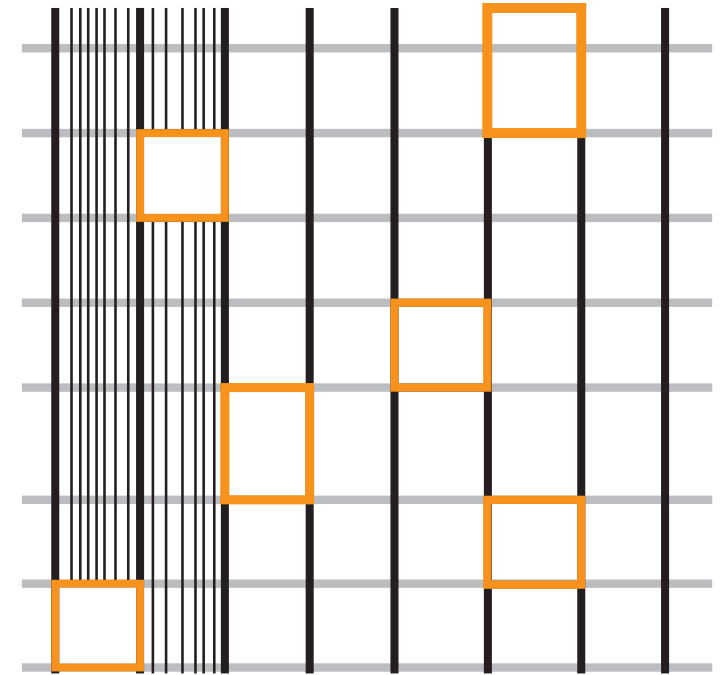
HORIZONTAL ELEMENTS:
FLOOR SCAPES



VERTICAL ELEMENTS:
LINEAR FACADE



FACADE GRID SYSTEM:
PICTURE FRAMES



DESIGN CONCEPT

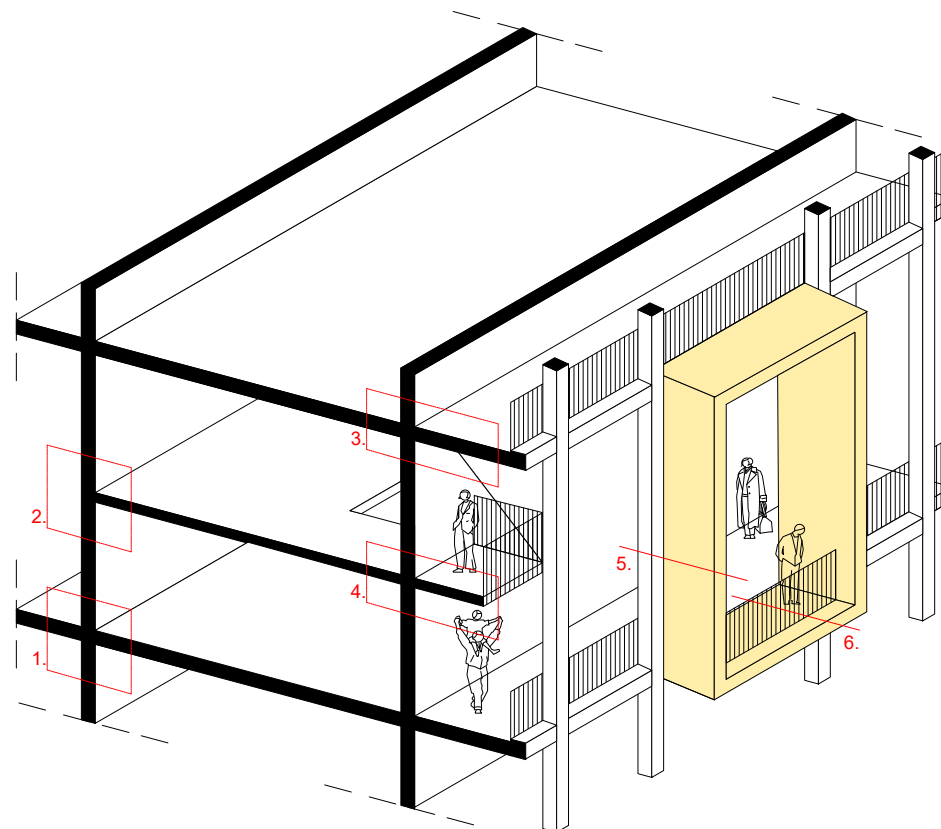
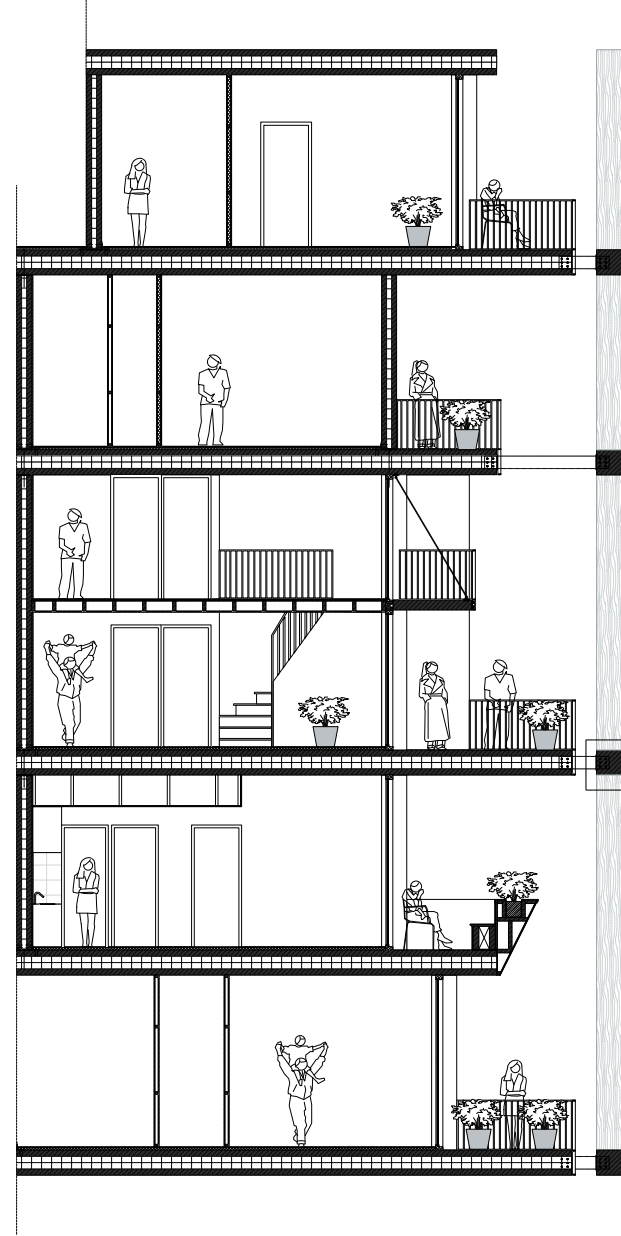
“CLT FOR THE FUTURE “

CLT construction

UNLIKE CONCRETE AND OTHER CONVENTIONAL BUILDING MATERIALS, CLT PANELS CAN BE PREFABRICATED IN AN EXTERNAL PRODUCTION FACILITY AND THEN INSTALLED IN A SHORTER TIME BECAUSE FEWER JOINTS ARE REQUIRED BETWEEN THE INNER SUPPORT ELEMENTS. WITH CLT, A CONSTRUCTION CREW CAN LIFT THE PREFABRICATED PANELS INTO PLACE, APPLY CONNECTORS AND THEN JOIN THE COMPONENTS TOGETHER, WHICH ALSO MAKES THEM EASIER TO DISMANTLE AND INCREASES THE FLEXIBILITY OF A BUILDING.

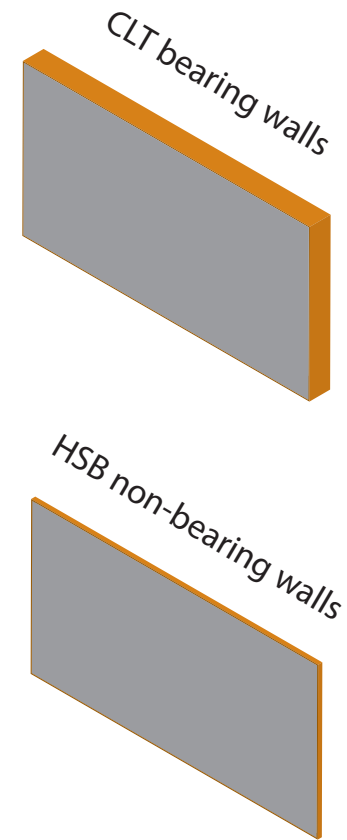
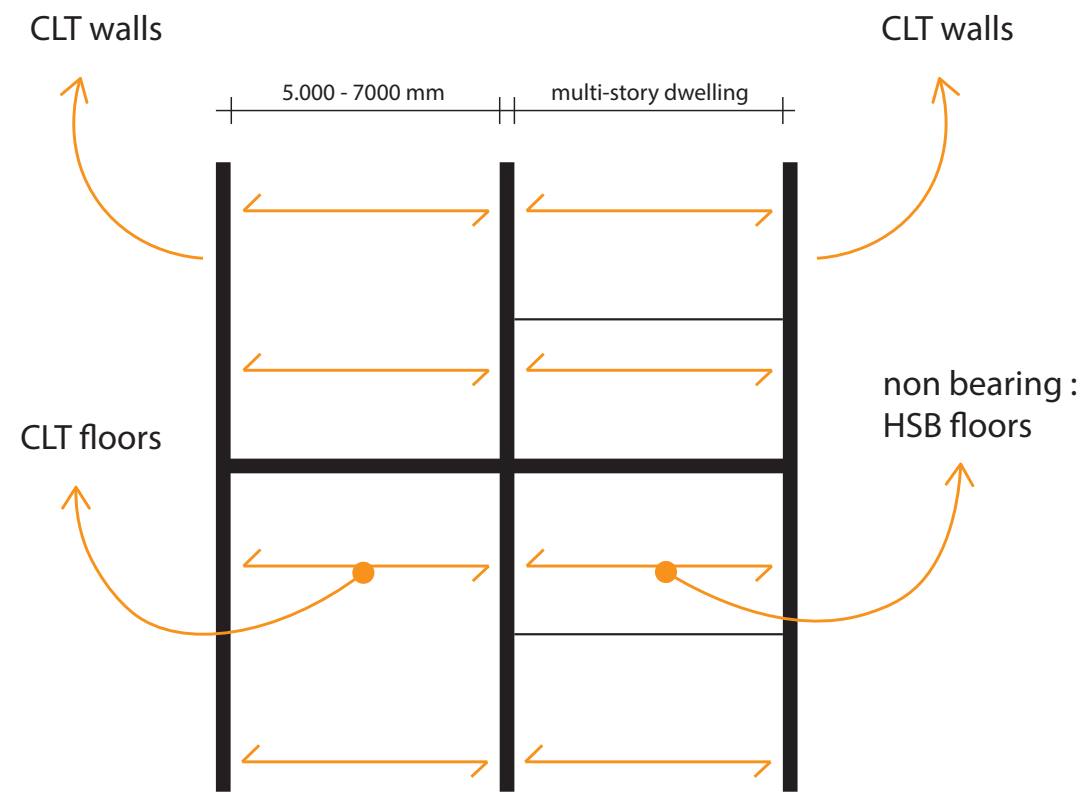
BENEFITS

THE MAIN BUILDING MATERIAL AND METHOD THAT HAS BEEN CHOSEN IS CLT,(CROSS-LAMINATED TIMBER), THE LOOK AND FEEL AND ENVIRONMENTAL BENEFITS SHAPED THIS DECISION. THE PRODUCTION OF BUILDING MATERIALS ACCOUNTS FOR 11% OF GLOBAL GREENHOUSE GAS EMISSIONS. BECAUSE CLT IS MADE OF WOOD, IT CAN STORE AND SEQUESTER CARBON OVER THE LIFE OF THE BUILDING. RECENT STUDY ALSO SHOWS THAT CLT STRUCTURES DUE TO THEIR HIGH DENSITY CAN WITHSTAND FIRE FOR OVER 90 MINUTES BEFORE COLLAPSING.

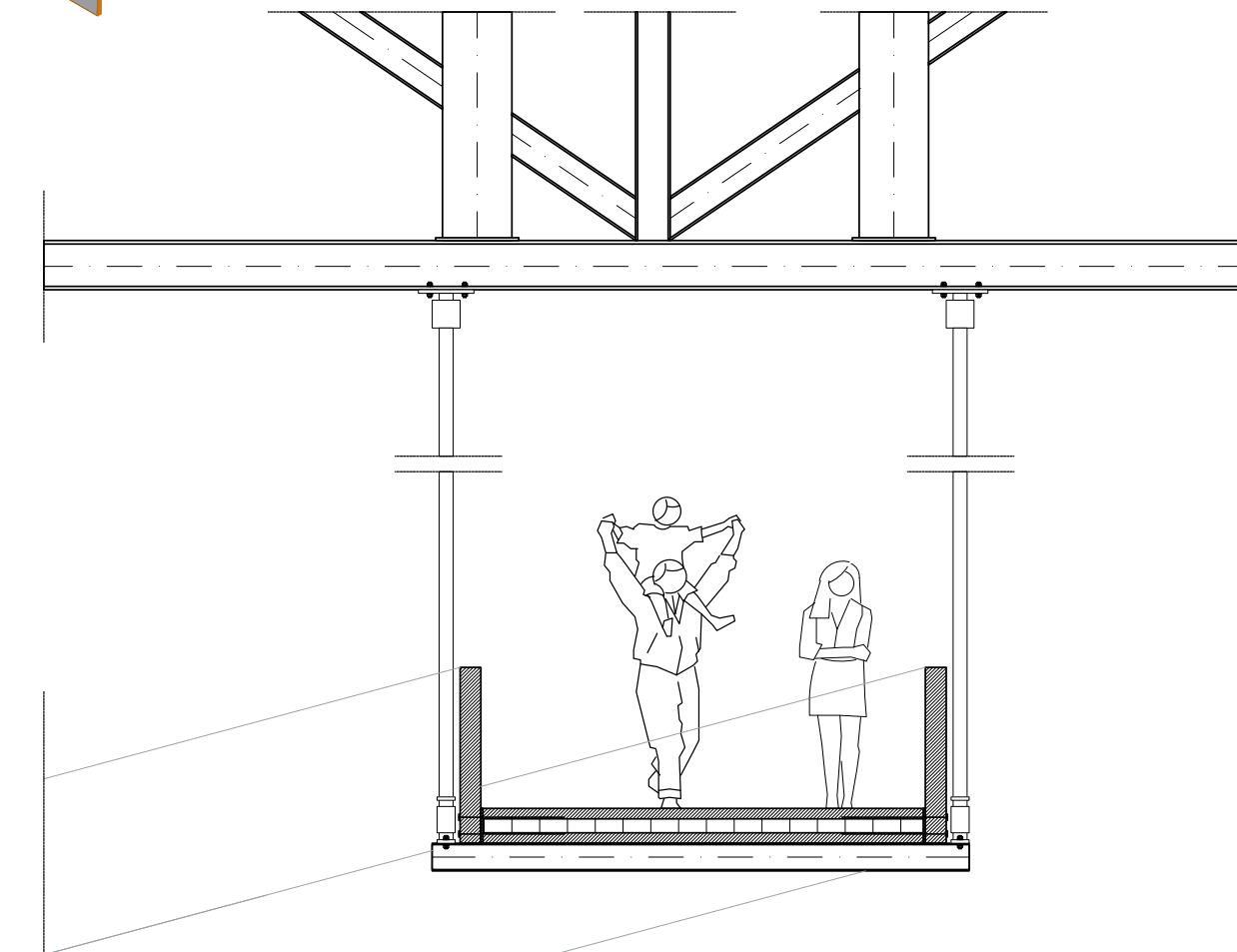
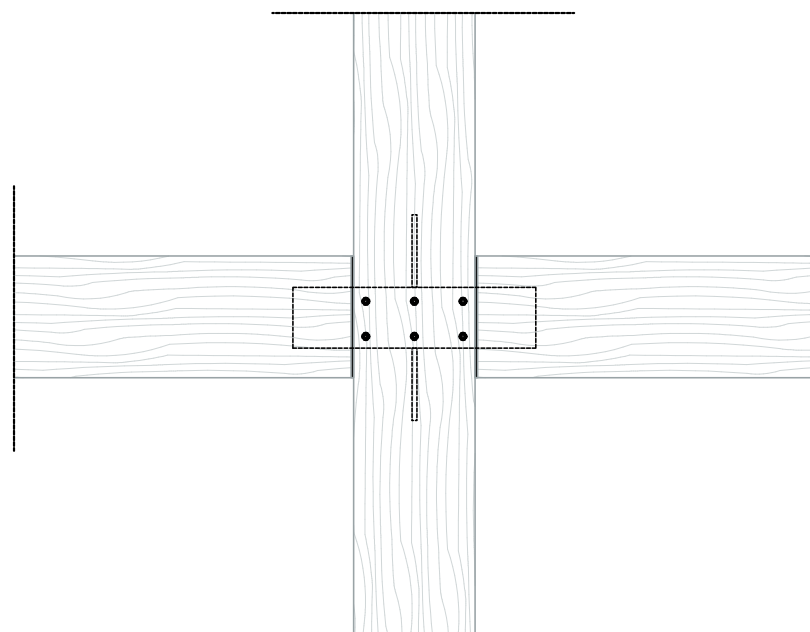
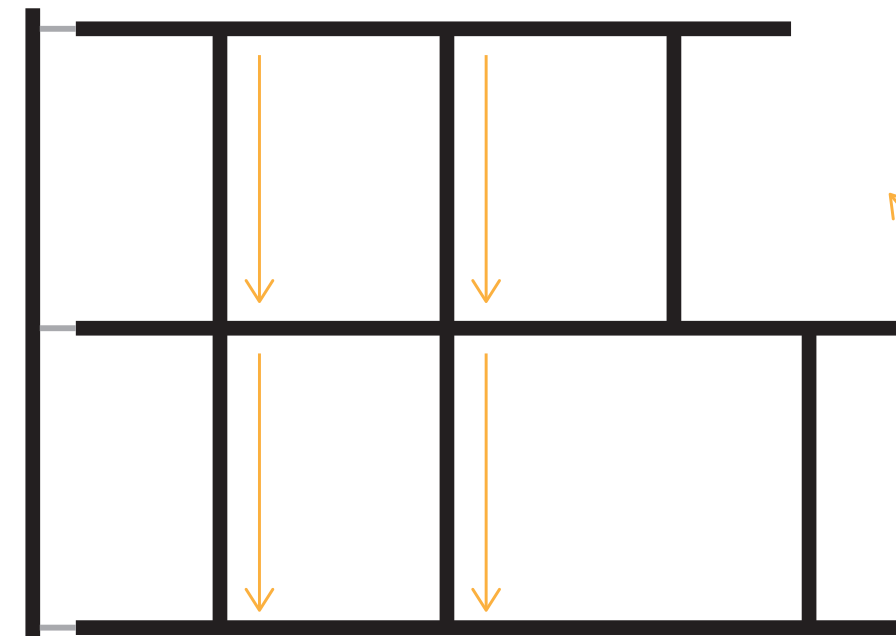


DESIGN CONCEPT

TECHNICAL DESIGN



SECTION





EPILOGUE

THIS JOURNEY THAT IS CALLED GRADUATION HAS BEEN AN ABSOLUTE PLEASURE, CHALLENGE AND MOST OF ALL FUN. DESIGNING SOMETHING THAT IS RELEVANT FOR SOCIETY BUT MOST OF ALL IS A PERSONAL PASSION WAS A GOOD EXPERIENCE. I WOULD LIKE TO THANK JAN-WILLEM KUIJLENBERG (MAU), PIETER FEENSTRA (MAU), PHILLIPE ROLL (EXTERNAL GUIDANCE) FOR THE EXCELLENT GUIDANCE AND CRITICAL FEEDBACK.

LOGBOOK

PHASE 1 : PROJECT SPECS

WEEK 1 : RESEARCH ON COURTYARDS
WEEK 2 : RESEARCH ON CITY BLOCKS
WEEK 3 : RESEARCH SOCIAL INCLUSION
WEEK 4 : SITE RESEARCH
WEEK 5 : COMBINING MATERIAL
WEEK 6 : PRESENTATION PROJECT SPECS

PHASE 2 : RESEARCH

WEEK 7 : FEEDBACK / FEEDFORWARD
WEEK 8 : EVALUTING + CONTACTING TUTOR
WEEK 9 : RESEARCH BY DESIGN TESTING
WEEK 10 : FURTHER DESK RESEARCH ON SOCIETY
WEEK 11 : SITE SURVEY / STAKEHOLDER RESEARCH
WEEK 12 : PRESENTATION RESEARCH PHASE

PHASE 3 : CONCEPTUAL DESIGN

WEEK 13 : FEEDBACK / FEEDFORWARD
WEEK 14 : EXPLORING THREE EXTREME CONCEPTS
WEEK 15 : CONCEPT DEVELOPMENT / RESEARCH
WEEK 16 : PREPARING FOR WINTERSCHOOL
WEEK 17 : WINTERSCHOOL WORKSHOP
WEEK 18 : PRESENTATION CONCEPTUAL DESIGN

PHASE 4 : PRE-DESIGN

WEEK 19 : FEEDBACK / FEEDFORWARD
WEEK 20 : DESIGN PRINCIPLES DEVELOPMENT
WEEK 21 : TESTING DESIGN INTERVENTIONS
WEEK 22 : COMBINING THESIS AND FORM
WEEK 23 : PRODUCING PRODUCTS FOR PRESENTATION
WEEK 24 : PRESENTATION PRE-DESIGN

PHASE 5 : DEF-DESIGN

WEEK 25 : FEEDBACK / FEEDFORWARD
WEEK 26 : STRATEGIC PLAN MOVING FORWARD
WEEK 27 : VOLUME EXPLORATION & RESEARCH
WEEK 28 : TESTING AND PROVING DESIGN ELEMENTS
WEEK 29 : MODEL MAKING AND TESTING
WEEK 30 : PRODUCING MATERIALS
WEEK 31 : PRODUCING MATERIALS & MODELS
WEEK 32 : PRESENTATION DEF-DESIGN

PHASE 6 : FINAL DESIGN

WEEK 33 : FEEDBACK / FEEDFORWARD
WEEK 34 : PLANNING FOR MOVING TOWARDS FINAL
WEEK 35 : ADJUSTING DESIGN & TESTING ELEMENTS
WEEK 36 : PRODUCING PRODUCTS FOR FINAL DESIGN
WEEK 37 : EDETING VIDEO & STORYTELLING
WEEK 38 : FINAL PRESENTATION

BIBLIOGRAPHY

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 - + F. E. WILLIAM C SULLIVAN, *ENVIRONMENT AND BEHAVIOUR, COMMUNITY, SOCIAL ACTIVITY* (PP. 678-700). SAGE PUBLICATIONS.

IMAGE LIST

1.	CBS (CENTRAAL BUREAU VOOR DE STATISTIEK)
2.	CBS (CENTRAAL BUREAU VOOR DE STATISTIEK)
3.	CBS (CENTRAAL BUREAU VOOR DE STATISTIEK)
4.	TECHNOLOGICAL FORECASTING & SOCIAL CHANGE
5.	TECHNOLOGICAL FORECASTING & SOCIAL CHANGE
6.	TECHNOLOGICAL FORECASTING & SOCIAL CHANGE
7.	ANCIENT-ORIGENS.NET
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9.	TURISMO DE CORDOBA
10.	WITHERFORD WATSON MANN
11.	MVRDV
12.	HELEN & HARD ARCHITECTS
13.	RAV- ARCHITECTS
14.	ALISON BROOKS ARCHITECTS
15.	NBC NEWS & BROADCASTING
16.	ZANDERROTH
17.	DRMM ARCHITECTEN
18.	DRMM ARCHITECTEN
19.	HELEN & HARD ARCHITECTS
20.	HELEN & HARD ARCHITECTS
21.	ZANDERROTH
22.	WILSON ARCHITECTS
23.	HELEN & HARD ARCHITECTS
24.	ECHO
25.	HUMAN-SPACE
26.	ZANDERROTH
27.	ARCHIKUBIK
28.	MATTER
29.	HELEN & HARD ARCHITECTS

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31.	FREDERIK ROIJE
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ROTTERDAM



TEUN PRINS
MASTER OF ARCHITECTURE - TILBURG
GRADUATION PROJECT
2022-2023

