

Kirchberg

Toolbox



Densification Toolbox

Gehl

Client:

Fonds Kirchberg
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FONDS KIRCHBERG



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Prologue

The purpose of the densification tool is to illustrate how underutilized space and new development in Kirchberg can deliver a more attractive, lively, safe, sustainable and prosperous district. The Densification Toolbox focuses on built form and the relation it has with public life and public space. The tool is developed to support the delivery of the Public Space Network Plan for Kirchberg.

The content in this toolbox is developed in close collaboration with the client Fonds Kirchberg. Input, local knowledge and inspiration have been integrated and applied from stakeholder workshops with representation from the City of Luxembourg, resident organisations and other key stakeholders and consultants. On going work and project studies made by other consultants have been integrated in the densification toolbox such as the “Cohérence Programmatique Plateau de Kirchberg, Mission d’accompagnement” developed by Alphaville, volumetric and programmatic studies by Urbis and Alphaville for Lux Expo site, J. Bech building and Shuman building.

A part of a bigger project

The Public Space Network Plan

The objective of the overall plan document is to deliver a holistic and people-centered public space network for the whole Kirchberg area that can serve as a tool to manage future development of the area. The public space plan is anchored in local user patterns, identities and environments through an analysis of the potentials and challenges in the existing built fabric and planned projects.

Toolboxes and guidelines — delivering the Plan

The Public Space Network Plan is the main frame for the project, and more specific topics - like urban furniture - will be unfolded and explained further in related toolboxes and strategic documents.

Kirchberg Cases — applying strategies and tools

Strategies and tools are applied in depth to selected Kirchberg sites, illustrating how the tools can be combined to create synergies and how different strategic moves are balanced.



Introduction

The approach to densification is not about adding as many square meters as possible, it is to create the best possible conditions for people's quality of life and experience at eye-level in order to deliver a lively, safe, and sustainable city district. A district that makes it more attractive to walk, bike, use public transportation, spend more time outside, and give people more life opportunities.

Through intelligent densification, the Kirchberg Plateau can deliver a 21st century attractive urban environment and give added value to people living, working and visiting the area.

Added values through densification:

- Optimizing investments in public transport by better utilizing land in walking distance from public transport stops for more housing and services
- Walkable and enjoyable at eye level, through framing streets and public spaces with buildings that strengthen urban qualities and generate people activity
- Improved microclimate and human scale environments
- Livable districts with life 24-7-365 through diversified functions and additional housing
- Safer environments through increased people activity and additional eyes on the street
- More commercial opportunities and diverse life style opportunities
- Increased sense of place and strengthened community identity

There is already planned development in existing areas as well as in new areas on the Kirchberg Plateau. The Densification Toolbox focusses on identifying locations where there is a need and opportunity for additional densification and to give general guidelines for how new development can strengthen qualities at eye-level and deliver the Public Space Network Plan. Proposed additional densification presented in this report is not studied in detail regarding local regulation, feasibility, etc. and needs to be subject for further investigation and design development.

The Densification Toolbox gives recommendations for:

- What to densify with - what kinds of urban qualities, functions, typologies, scale and character
- How to densify - examples of best practice, processes and implementation
- Where to densify - locations of priority through identifying densification drivers; high impact and opportunity for densification



In the Kirchberg Cases report, there are more in depth examples of how the Densification Toolbox can be applied in Kirchberg.



Vision for Rue Erasme with new densification



A modern multi-story building with balconies and a person walking on a sidewalk in the foreground. The image is overlaid with a teal color filter.

1/

Make Use of Valuable Space

1.1/ Buildings act anti-urban

The starting point for the densification strategies and tools is identification of underutilized spaces that lack urban qualities. Today, Kirchberg's underutilized space illustrates both a big potential and the current challenge with poor qualities at eye-level and lack of active streets and public spaces.

- Buildings are acting anti-urban
 - Lack of spatial definition of streets and spaces often with set backs from streets making it unpleasant to walk or stay
 - Underutilized spaces, infrastructure voids and topography challenges like slopes and level changes become barriers for people
 - Voids reinforce the big scale
- + Potential for new densification and activation
 - + Potential for expansion and addition of lacking functions
 - + Potential to increase value of land and optimizing investments

**Total of:
232,600 m²*
underutilized
space**

*security zones, over dimensioned roads and small voids are not included in this total.

Underutilized open space

- empty spaces with no people activity
- buildings set back from streets
- unused green areas



85,400 m²
(+33,700 m² in security zone not included)



Security zones

- Inaccessible for city life for security reasons
- reserve for European institution expansion

**unavailable
58,100 m²**



Infrastructure voids

- Above ground parking
- parking ramps, delivery areas
- over dimensioned roads



Topography challenges

- slopes /terrain
- retaining walls
- over dimensioned stairs



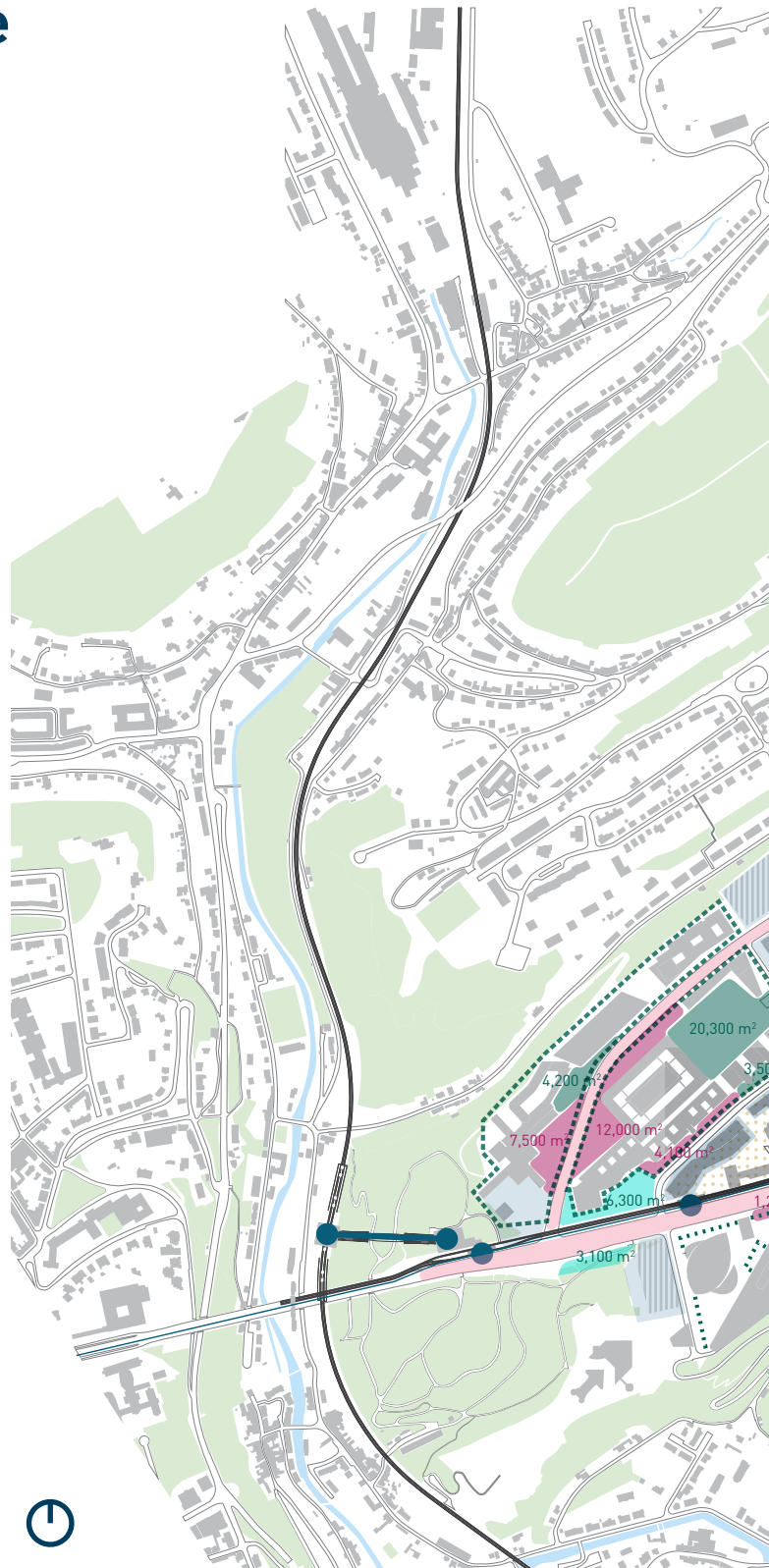
1.2/ Underutilized space in Kirchberg

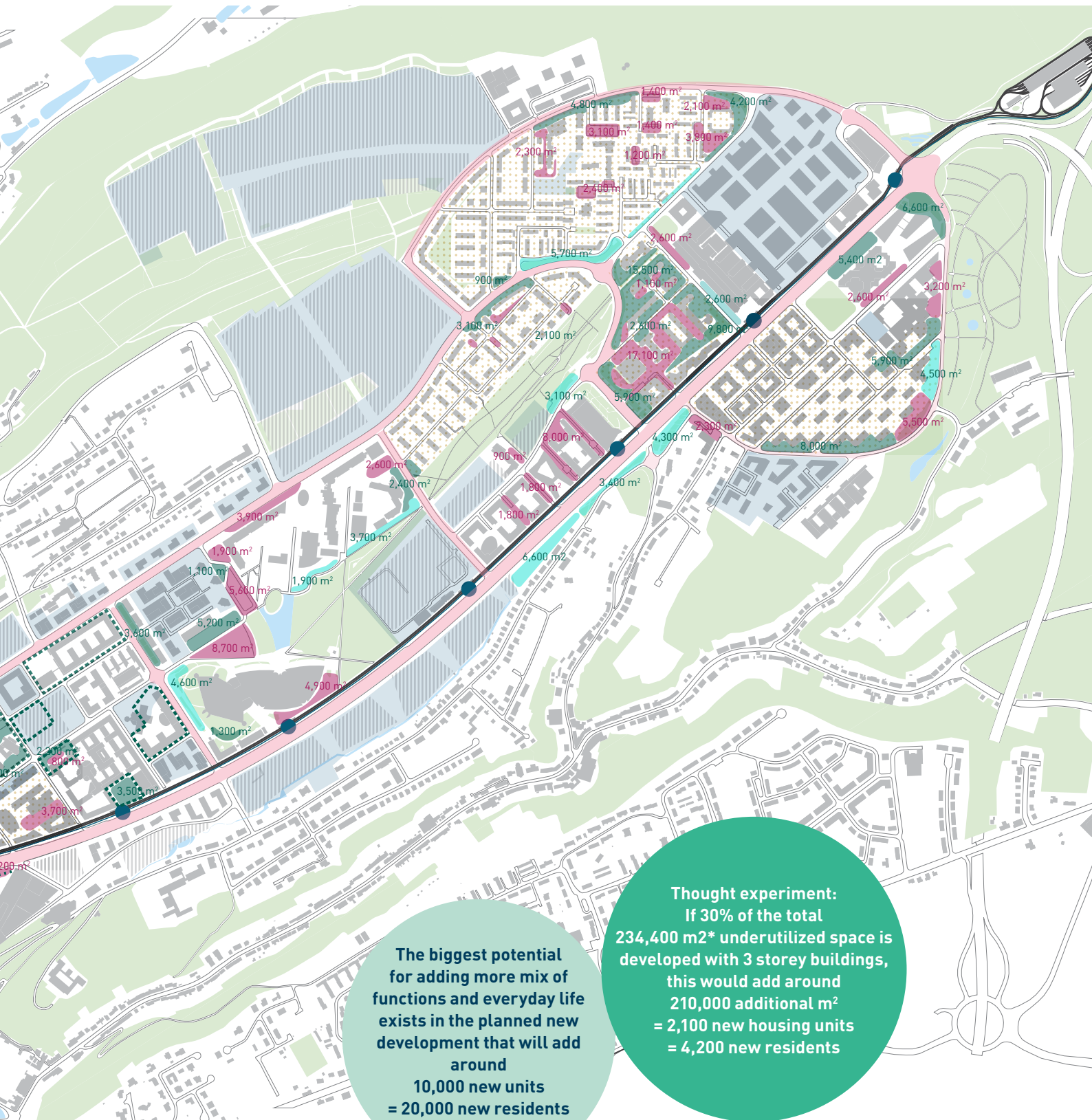
There are many underutilized spaces in Kirchberg that have the potential for activation or densification to bring higher people values and optimize infrastructure and public space investments.

Not all underutilized spaces shown on the map can or should be developed with new buildings. Some have potential for infill buildings, pavilions or additions to existing buildings. Other spaces should instead be activated with urban furniture, temporary structures or new activity programming.

Legend

- Underutilized open space**
 Set-backs, green or hardscaped areas with little or no use
- Topographic challenges**
 Slopes, retaining walls, over dimensioned stairs
- Infrastructure voids**
 Above ground parking, parking ramps, "drop off" streets, delivery areas
- Over dimensioned roads**
 Streets lacking spatial definition or potential for road diets
- New development**
 Planned new development where density should be delivered from the start
- Small voids**
 Smaller spaces subject for activation
- Security areas**
 Not possible for densification but in need of friendly security edges





*excluding security zones, over dimensioned roads and small voids

1.3/ Fill in the gaps

A Activate underutilized setbacks

Depending on the contextual nature of the underutilized space, like size and location, the space can be activated in different ways, through e.g. densification with infill buildings, pavilions and building additions, when space is available. For smaller plots, activation with urban furniture, temporary structures, or new recreational activity programmes can help activate the area.

Every infill needs to take into consideration the local context and ownerships. Densification would in many cases require a rebuilding of the plan, new layout and facades of existing buildings and/or swap of land ownership.

Actions:

- Need vs. barriers: Evaluate the need for activation and balance against barriers of densification
- Demand public benefits: Develop incentives and regulations for private landowners

Additional m² should:

- Support local life and give public benefits
- Have attractive and active ground floor use
- Bring qualities at eye level and support walking
- Support more housing, service or commercial opportunities
- Relate to existing streets and public spaces with entrances and activity
- Frame and add quality to public spaces and streets



Pavilion café infill at the edge of a parking lot creates a continuous facade. Malmö, Sweden



One story extensions as additions to existing industrial buildings open up and activate the ground floor, and expand commercial floor space. Stockholm, Sweden



Narrow pavilion units can be developed as a densification typology for places where space is scarce. Stockholm, Sweden



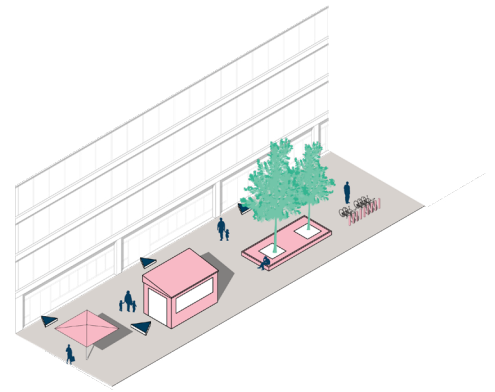
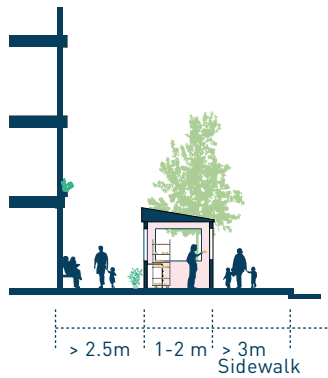
New small-scale housing infill in 60s block housing area. Århus, Denmark (img and project by Effekt)

Small pavilion & urban furniture addition

When space is limited or has security limitations

- Pavilions, kiosks, food trucks
- Urban furniture & greenery

K See more about pavillion programme in the Urban Furniture Toolbox

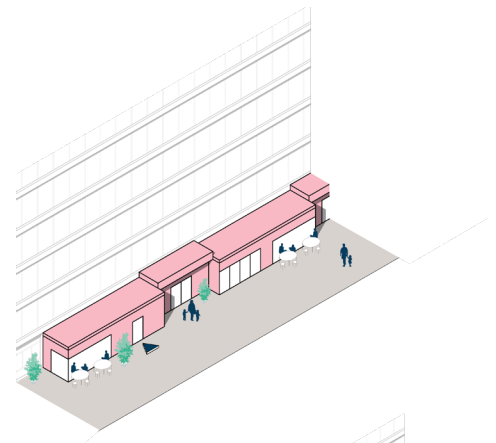
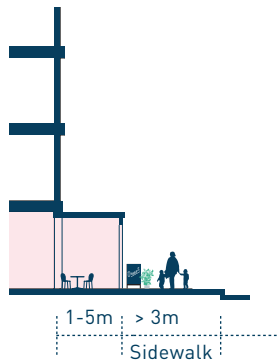


Ground floor addition

When there is a need to activate the ground floor and create variation and stimulation at eye level

- Supply more commercial space/ lobby space for offices / exhibition space
- Can be connected to existing building or independent units

→ See best practice case example on p.19

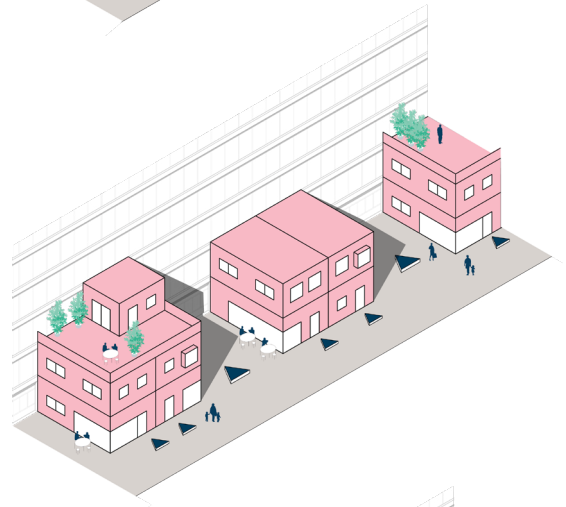
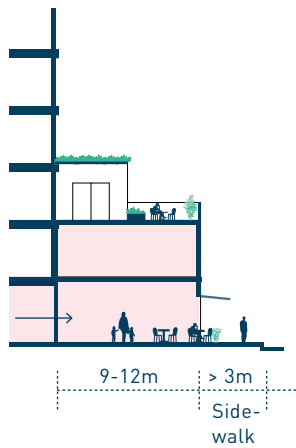


Add-ons

Require facade and plan re-make of existing building

- Additional units with active ground floor and housing/office, live-work units on top or extension of existing functions
- Gaps to allow for entrances to existing building
- Lower volumes (1 1/2 - 2 1/2 storeys)

→ See example for Rue Alphonso Weicker on p.64

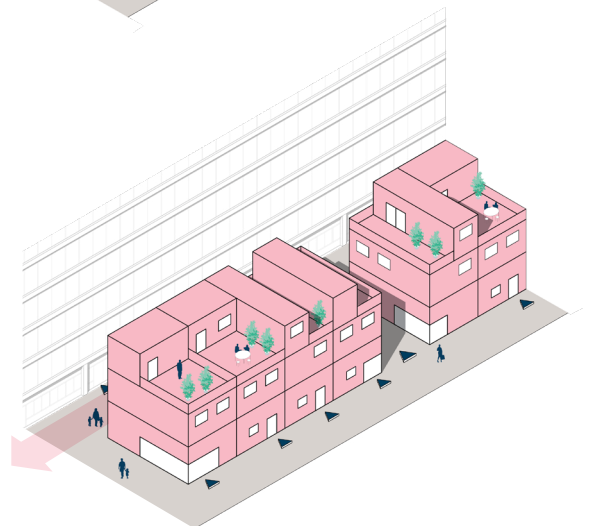
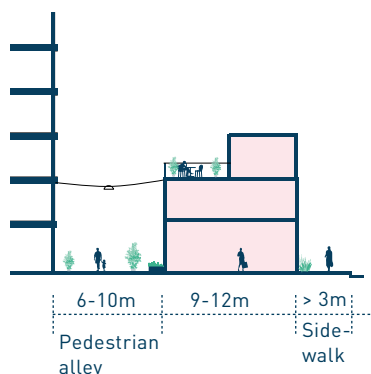


New building structures

When there is sufficient space in front of existing buildings or a road diet can be made

- Units with sufficient outdoor space contained within the building site; generous terraces, balconies and front gardens
- Lower volumes (2 1/2 - 3 1/2)
- Gaps in between volumes allow for narrow laneways, opening space up for sunlight and a human scale section

K See example applied in Kirchberg Cases report, Rue Erasme

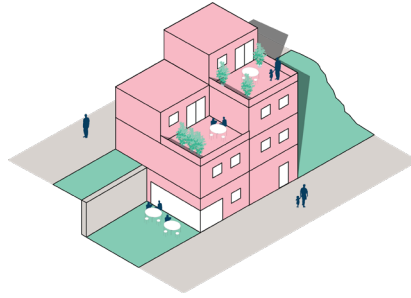


B Bridge topography challenges

Where topography, slopes, retaining walls and overdimensioned stairs are barriers for pedestrian access and densification opportunities

Actions:

- Develop a catalogue of terrain units suitable for bridging topography
- Activate ground floors towards street level
- Design typologies that can accommodate required outdoor space for each unit
- Develop typologies with robust combinations of uses like live-work units and live-shop units



Small office and commercial units bridging two levels



Common DNA of Luxembourg city



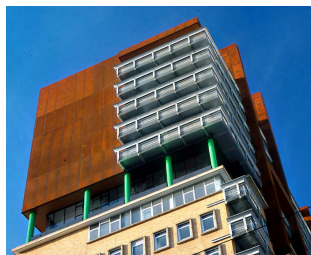
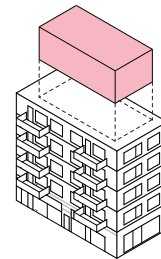
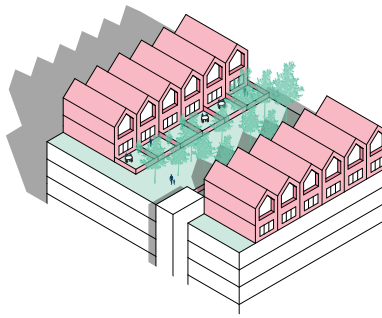
See example applied in Kirchberg Cases report, Rue Erasme,

C Add density vertically

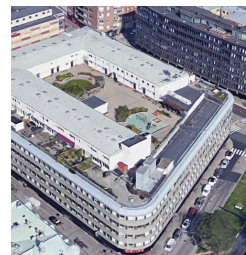
Adding housing units on top of existing buildings when structures allow for attractive living spaces with private roof gardens and views - bringing life to the area without obstructing much daylight.

Actions:

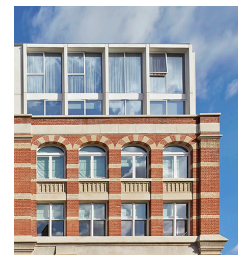
- Identify building areas with low density and robust building structures that can allow additional loading
- Address street level access with new staircases or integrate with existing building access
- Utilize flat roofs for new housing and private roof gardens



Housing as top floor additions, Example from Melbourne, AUS



Row houses on top of shopping mall and offices



Penthouse and rooftop extension

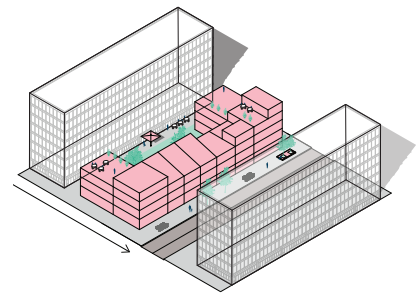
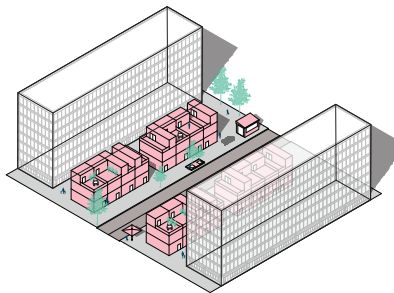
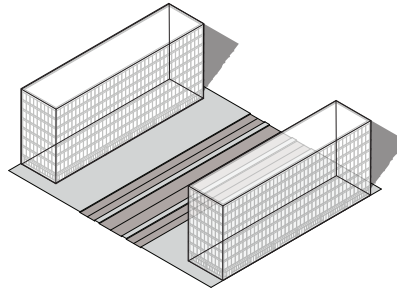
→ Examples of additions on top of existing buildings applied in Kirchberg have not been studied in this report due to the need of construction analysis of individual buildings.

④ Frame the streets; densify over-dimensioned roads and garage ramps

It is a win-win situation when an over-dimensioned street with underutilized building setbacks is subject to a road diet. This creates opportunity for densification to develop an active, human scale street with more life, and can help to lower the speed of traffic and invite more people to walk and cycle.

Actions:

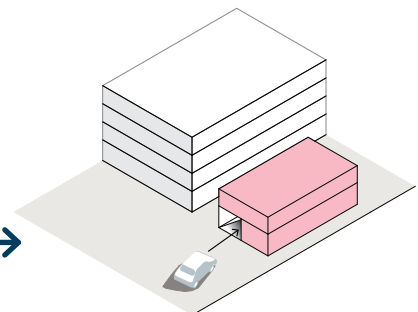
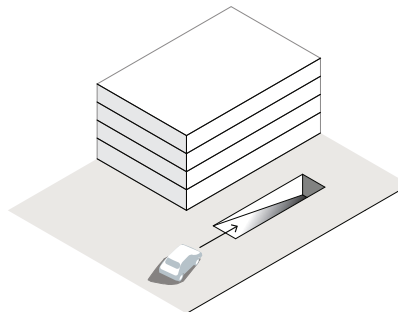
- Identify streets with potential for removal or narrowing of lanes
- Identify streets with larger underutilized setbacks that can be subjects for land swap
- Use densification opportunities as an incentive for workplaces to accept and implement both more strict parking rules and mobility management initiatives
- Change roundabouts to 4-way crossings to increase densification potential
- Integrate parking ramps into buildings



See example applied in Kirchberg Cases report, Boulevard Konrad Adenauer,

A road diet from four to two lanes allows for additional densification, activation and framing of the street.

Moving the location of the street in combination with a road diet often results in more rational and better building plots and a better hierarchy with more clear front and back situations.



Parking garage access placed in the street or as part of building setbacks or front yards creates barriers for pedestrians and poor entrances to buildings.

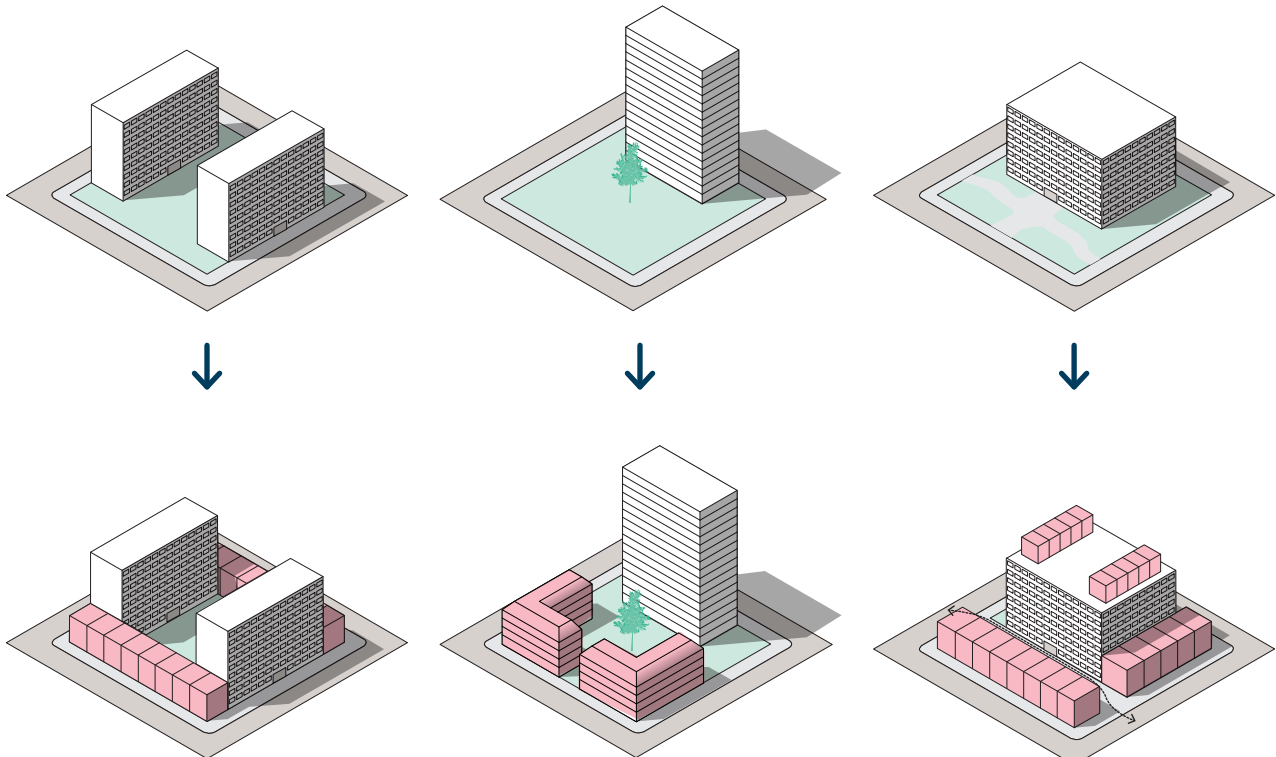
Integrating garage access with buildings when possible utilizes open space that is not suitable for staying or walking for more valuable purposes, while improving urban qualities.

E Frame the plots; optimize plots and frame spaces and streets

Underutilized open space often appears between buildings or as setback zones, creating poor street interface and land with little use or ownership. Every situation depends on the context and thus needs to be studied locally.

Actions:

- Create a logical hierarchy of fronts and backs
- Strive to fill out the plot to create new street and public space edges
- Frame new courtyards and protected space for semi-private and collective outdoor uses
- Find complementary functions to existing uses
- Develop rules for maximum setbacks from streets for new and future development



Densification with live-work units

Rosengård, Malmö, Sweden

Need for everyday life and commercial opportunity

Rosengård is a modernist housing area situated 3 km from the city centre of Malmö. The area had poor urban qualities, no street life and no commercial opportunities for small businesses, start-ups or local shops. In order to strengthen local everyday life and at the same time connect the housing area to the city centre, a central link with densification opportunities was chosen as development site.

Densification with live-work units

Along the link, 1-2 storey live-work units were added to the existing housing blocks - units that were directly attached to the residential unit behind. Residents got the opportunity to start local businesses along the central link e.g. as hair dressers, local shops, cafés etc.

A new attractive connection and public space

Combined with upgrading of surrounding public spaces and streets, the area has become a new hub for local everyday life, and the connection to the city has become a pleasant walking and cycling route that has significantly shortened the mental distance to the city.





A photograph of a modern, multi-story building with balconies and large windows. The image is overlaid with a semi-transparent teal filter. In the foreground, a person in a suit is walking on a sidewalk. The text '2/' is positioned in the upper middle part of the image.

2/

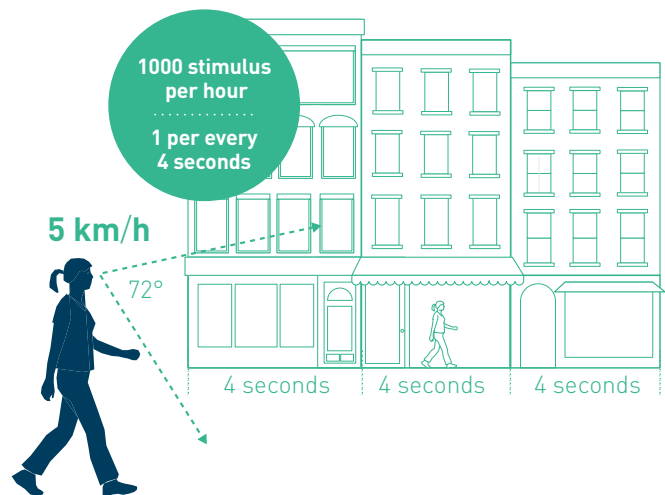
Densify to Soften the City

2/ Densify to Soften the City

Scale and diversity of the built environment affects comfort and walkability. Building a good microclimate is essential in order to invite people to stay and linger. Densifying Kirchberg should support an attractive walking, cycling and staying city through scale and variations that create a good microclimate. Buildings need to address the human dimension and create intimacy and comfort at eye level.

An attractive and varied walking environment stimulates the senses

People's senses are developed for walking speed. 70% of stimuli comes through eyesight and our brains need 1 stimuli per every 4 seconds. Designing a lively and walkable city requires careful design of the ground floor that stimulates our senses in a positive way.



The scale of individual buildings influence the microclimate of the city

Designing for a good microclimate means taking into consideration the local climatic context. On the Kirchberg Plateau, wind is a major challenge. The built fabric of Kirchberg has large voids and long straight roads that create extra challenging wind conditions and unpleasant outdoor environments for staying and walking.

Good practices to create a more comfortable and attractive city environment: strive for a maximum of 25% height difference between buildings; broken sightlines within streets; and a more urban approach with buildings closer together, but lower in height.



From: tall buildings that generate turbulence at ground level



To: a homogeneous city structure that reduces the impact of wind

2.1/ A large scale district

Kirchberg needs human scale and enjoyment at eye level

Lack of small and medium scale

- + High profile architecture and iconic buildings are unique and famous
- Lack of scale diversity, few diverse blocks with a combination of small and medium buildings (2-5 storey buildings)
- Formal and large scale buildings that lack human scale interface at ground level
- Big scale units and long uniform facades reinforces the large scale



Lack of human scale at eye level



Iconic architecture - solo units

Lack of eye level stimulation - uniform architecture

- Slick architecture with a domination of glass curtain walls creates little variation and stimulation at eye level when walking
- Lack of diversity of materiality, colour, and styles creates a uniform and cold impression
- Offices with no active ground floor and few entrances do not stimulate lively streets



Big units with same architectural style. Long facades with few sensory experiences

Lack of shelter and enclosure - wind-swept

- Wind-swept due to long streets with no wind breaks
- Big plazas with little enclosure and shelter from wind
- Tall buildings with no podiums or setbacks create downdraft at ground level

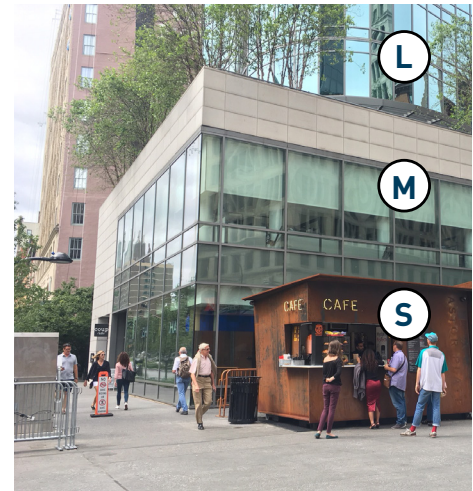


Due to long sight lines, straight streets, large open spaces and free standing tall buildings, the microclimate at ground level is a challenge

2.2/ Scale it down

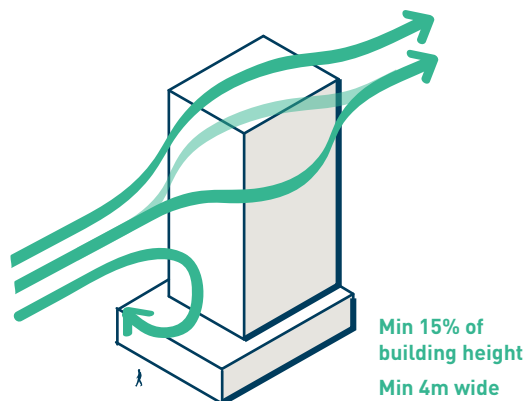
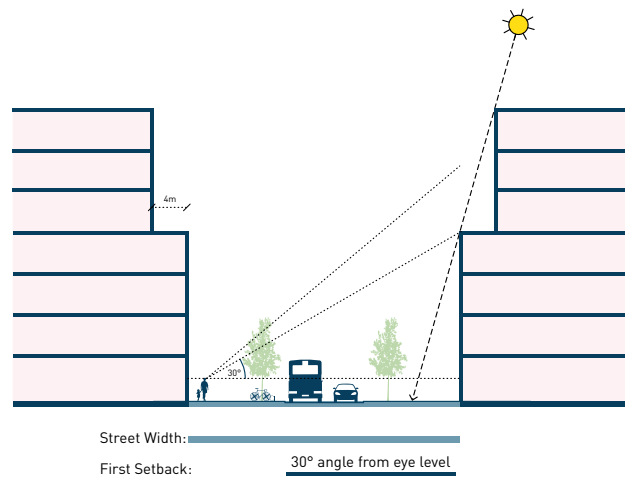
A Densify with small and medium scales

- Add small and medium scale buildings to diversify the scale of the Plateau/existing buildings
- Permanent and temporary pavilion programmes throughout the Kirchberg Plateau
- Buildings should always engage with streets and public spaces via entrances that face the street or square
- Limit the length of blocks to maximum 60-80 metres



B Build for a better microclimate

- Stepbacks for 3 -5 storeys measured by the distance of a 30° angle from eye level to bring down the scale of the street and let sun down to street level
- Podium base for towers (min 15% of building height, min 4 m wide) to hinder downwind
- Careful sun and wind studies when designing new buildings or making building additions
- Prioritize shelter from wind and noise



© Deliver quality at eye level to stimulate walking and cycling

- Give guidelines on vertical division and ground floor activity for new developments appropriate to the location
- Aim at a high level of vertical division with many entrances and detailing of the ground floor facing important public spaces and streets in new developments: 10-20 entrances per 100 m
- Ground floor guidelines for improving existing districts; 6-8 entrances per 100 m
- Street scale (from 2 to 5-6 storeys): Medium level of vertical division. Recommended unit divisions within every block every 10-25 metres
- Give clear regulations and definitions for use of edges zones (size, use & division)



Vertical division at ground floor

1/ Sky scale: (above 6 storeys)

Relates to views from far away, but does not contribute to the eye level experience

2/ Street scale: (from 2 to 5-6 storeys)

Diversity of expressions and volumes, vertical division and/or new units within blocks every 10 - 25 metres

3/ Eye level scale: (ground floor)

Active programme with many entrances and high level of vertical divisions and detailing. Entrances every 5-10 meters (10-20 entrances per 100 m) in locations facing important public spaces and streets.



Need for variation and stimuli increases at eye level. Street scale



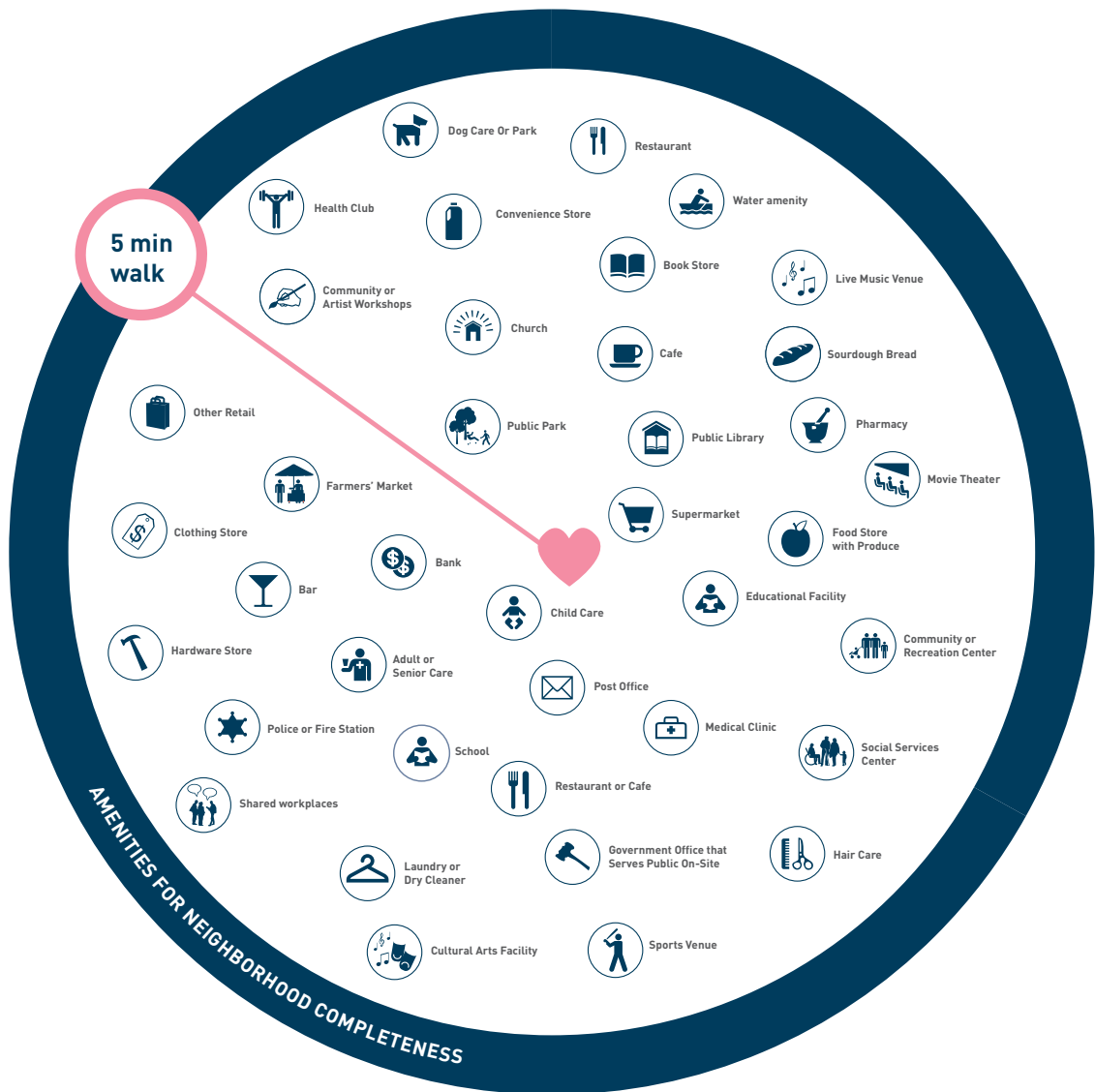
A photograph of a modern, multi-story building with balconies and large windows. The image is overlaid with a semi-transparent teal filter. In the foreground, a person wearing a suit and sunglasses is walking on a sidewalk. The building has a clean, architectural style with visible balconies and air conditioning units.

3/

Density for Diversity

3/ Densify for diversity

A truly mixed-use city, where all necessary everyday functions are within walking distance, is a basic condition for sustainable transport and a comfortable lifestyle. In areas that lack a functional mix, there is also a lack of people at certain times of day and not enough people to support everyday functions and services. The result is a lack of community and sense of home. A complete neighbourhood has everyday amenities and services within a 5 min (400 m) walking distance, reducing the need for unnecessary car trips.



Example of local amenities and services within 5 min walking distance

3.1/ Lack of neighbourhood diversity

Kirchberg needs to mix it up and concentrate everyday service

Mostly monofunctional neighbourhoods

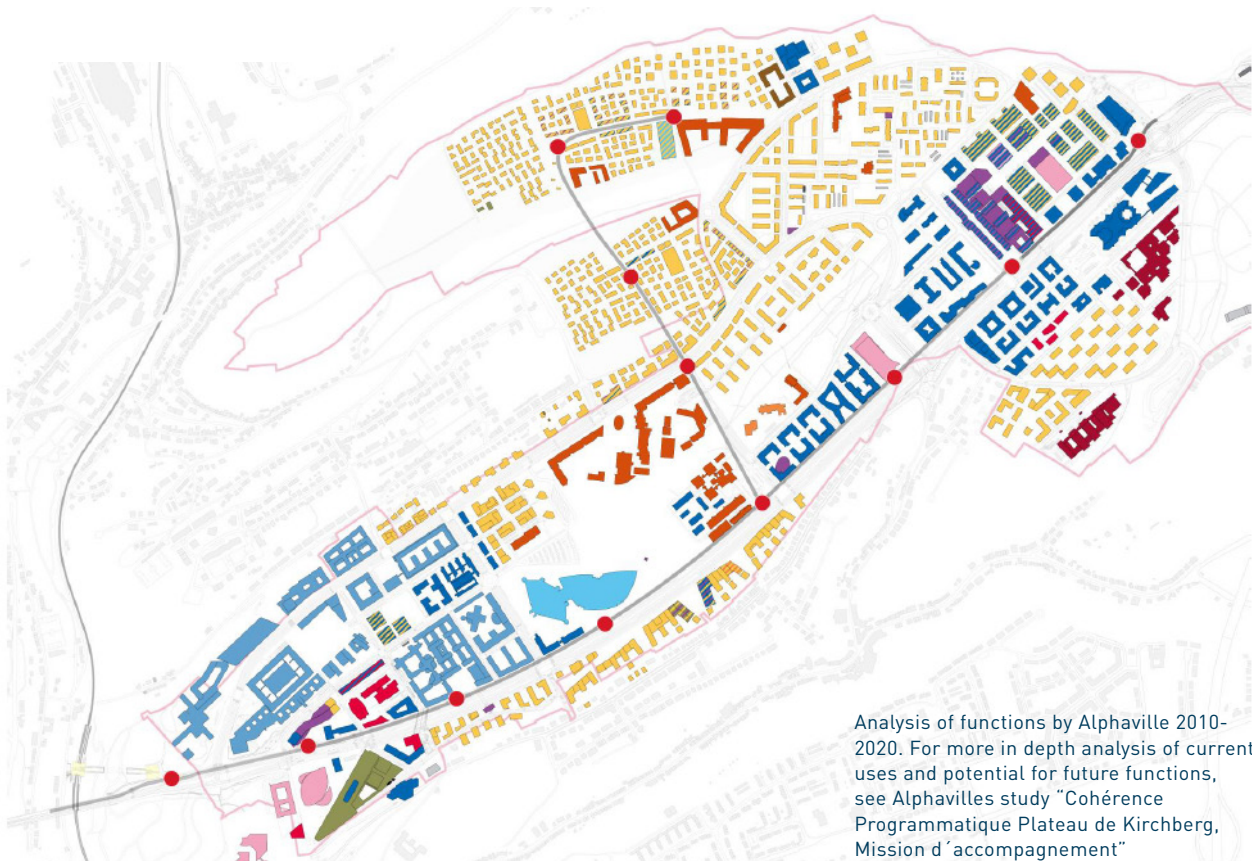
- + Some areas have strong functional clustering and identity; the business area, cultural area etc.
- Certain areas have few users at night - no base for restaurants and potentially a feeling of insecurity at night
- Lack of diversity of services within walking distance in neighbourhoods
- Indoor services are not accessible for all/only for internal use = no interaction or synergy between functions and stakeholders

Many destinations, but lack of everyday life

- + Strong destinations attract many people in peak use
- Lack of integrated housing in office districts - low activity outside office hours
- Lack of small and medium scale, informal/alternative programme and ownership that could attract different user groups

Lack of mixed typologies & functional hybrid blocks

- + Global programmatic plan for Kirchberg is developed by Alphaville
- + Planned development will infiltrate new residents and allow for new types of living and walking
- Lack of diversity of housing typologies, ownership models and small scale office units
- There is a gap in scale and types; "The missing middle"



3.2/ Stimulate community life

Make complete neighbourhoods

A Densify the gap of typologies; diversify ownership, scale and functions

- Add missing typologies and middle scale buildings; row houses 2.5-3 stories, stacked row houses 4-5 stories, mixed use blocks, perimeter blocks with semi-private court yard life, live-work units, stay-long hotels
- Integrate a greater variety of housing types and ownership models for greater variety of users; balance between rental and ownership, co-operation housing, baugemeinschaft (joint home building venture), tenant-owned apartment/ condominium
- Investigate possibilities to convert offices to housing or hotels



B Use everyday community functions and services as central nodes

- Kindergarten, local grocery store, bike repair shop, community centre,
- Everyday life and services within walking distance
- Convert office to housing
- Add roof top housing
- Start first with community life in new development



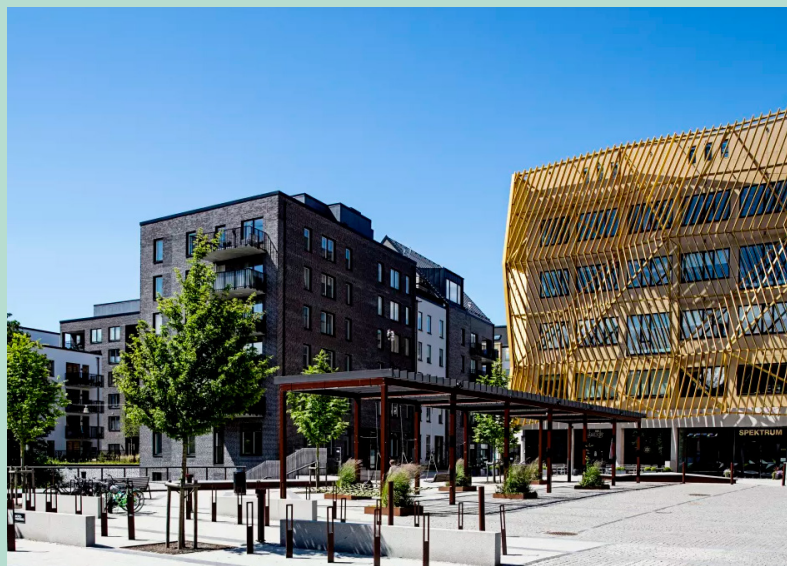
Centrally located neighbourhood meeting places link to everyday community functions like kindergartens, schools, gym, community green house etc.

BEST PRACTICE

Community service as a starting point

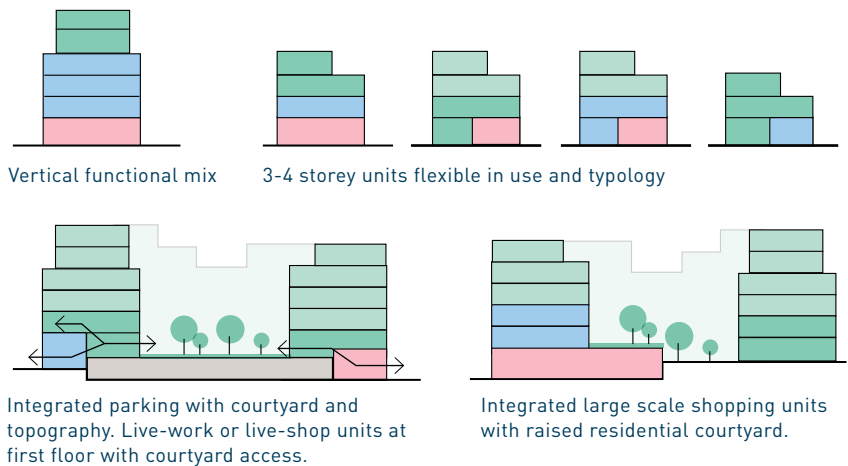
Nya Hovås, Gothenbourg

The first step in the new neighbourhood development in Nya Hovås, located 15 km from Gothenbourg in Sweden, was to build a community hub and public space. The developer and landowner, Next Step Group, invested in a multifunctional building containing small shops at ground floor, a bowling hall and bar in the basement; and a multi-use centre with a local high school, offices with flex spaces, and a kitchen for community cooking classes. This became a catalyst for further development into an area with housing, offices and public facilities.



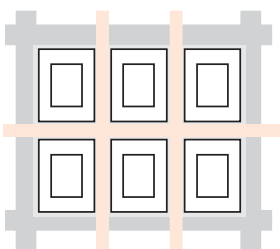
C Mixing functions vertically

- Mixing uses vertically allows for 24 h life in the building
- Allow for flexibility in size of units at ground floor
- Develop smart units with high flexibility in functions and use
- Integrate large commercial units in a smaller scale structure
- Plan for flexibility when integrating parking, with floor heights to allow for future uses like gym, retail, etc. when parking is removed



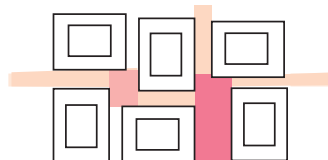
D Building for diversity and hierarchy of spaces

- By placing blocks and buildings in a smart way, a hierarchy and diversity of streets and public spaces can be achieved. The diversity can be created in all types of areas - from main streets and main public spaces, to local slow streets with local neighbourhood places
- The form and scale of buildings can support the hierarchy of public space, from more intimate and smaller scale units towards local streets and public space, and medium scale towards main streets and public spaces



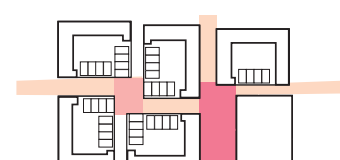
Uniform building layout

Little spatial variation in streets and open space are acquired through the built form. A rigid block layout requires more effort through public space design in order to create diverse spaces and natural hierarchy of streets.



Hierarchy of spaces and streets

The buildings shape the spaces and define their hierarchy, such as local streets and neighbourhood meeting places.



Building scale and typology respond to support public space hierarchy

Taller and more urban buildings towards main streets and public spaces, smaller scale towards local public spaces and streets.

Diversity of functions and scale

Malmö, Sweden

The new city centre rail connection in Malmö, Sweden generated a series of densification projects. At one of the new public transportation hubs, a former open parking and delivery area for a shopping centre was densified with a diversity of built scales and functions. The division between the ground floor frontages and the street, created by the set-back of

the tall building, defines a new square and meeting place with a human scale interface. This space also accommodates valuable square metres for offices, shops, restaurants, hotel, apartments and row houses.





A photograph of a modern, multi-story building with a facade of balconies and large windows. A person in a suit is walking on a sidewalk in the foreground. The image is overlaid with a semi-transparent teal filter. The text '4/' is positioned in the upper middle section of the image.

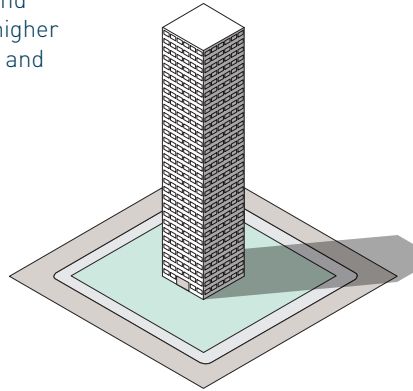
4/

Create Additional Value

4.1 / Do it smart

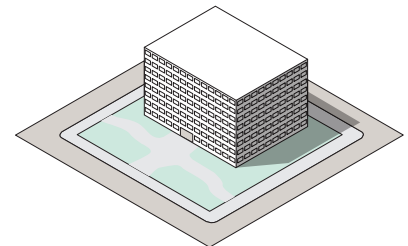
A Build more quality and diversity with the same density

The same square meters can be distributed in many different ways, delivering very different qualities of outdoor space, urban qualities at eye level, and activity at ground floor level. The illustration shows five different ways of distributing the same square meters but delivering different qualities. Currently Kirchberg has few mixed blocks, but with new development there is an opportunity to complement existing quarters and build more robust and socially friendly blocks and neighbourhoods that can accommodate higher levels of diversity of functions, typologies and scales.

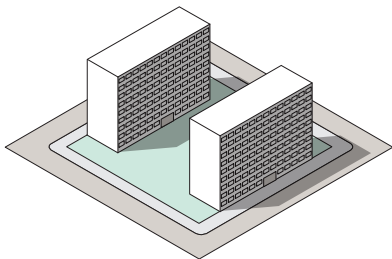


Five ways of distributing the same m²
All scenarios are modelled with FAR 2.84, 12,000 m² on a plot of 4,225 m² (65m x 65m)

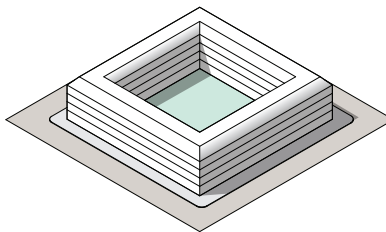
1/ Tower: 30 storeys
Few active edges, long shadows, wind turbulence, long distance from live/work to outdoor space.



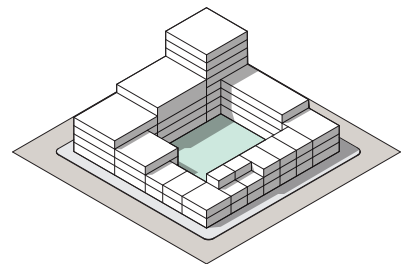
2/ Office block: 8 storeys
Often set back from street facade, few entrances and low activity at ground floor.



3/ Apartment slabs: 9 storeys
Outdoor space with little ownership, little life between buildings, limited ground floor activity.

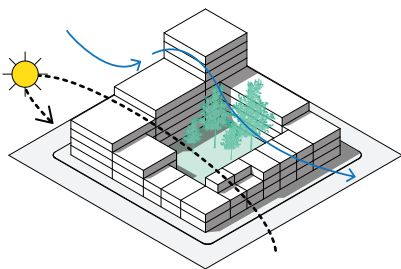


4/ Block: 5 storeys
Defines streets, possibility for an active ground floor, sheltered courtyard for outdoor recreation.

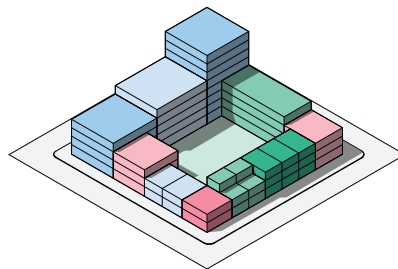


5/ Mixed block: 2-8 storeys
From an urban quality perspective, the mixed block has a lot of benefits and options for diversity. It is a robust and flexible framework that can deliver high density and high level of diversity and quality at the same time. See next page.

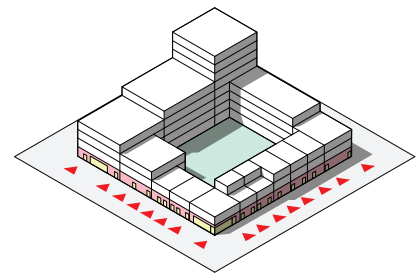
Benefits of the mixed block



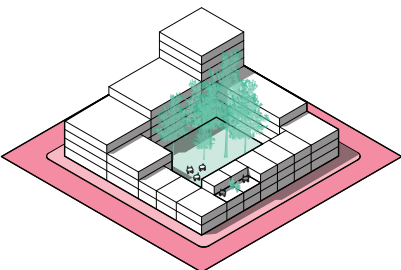
Climate friendly
Adaptable scales to accommodate sunlight and create a silent courtyard that is sheltered from wind, .



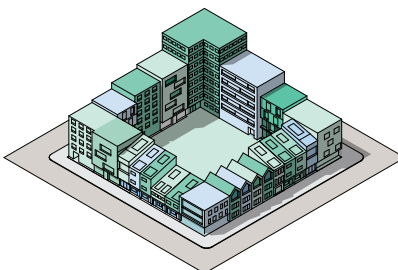
Functional mix
Building wall to wall allows for robustness with different functions next to each other and exchangeable parts to adapt for future changes.



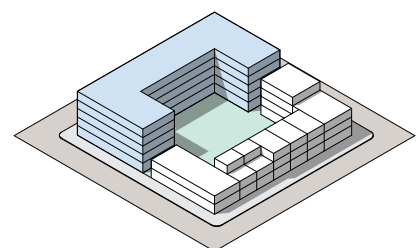
Active streets and quality at eye level
Opportunity for an active ground floor and many doors towards the street. Walkable scale and vertical variation create lively, interesting streets.



Private and public clarity
Defined semi-private courtyard, shared and protected, that invites for social connections in neighbourhood everyday life. Many units with ground floor edge zones for private outdoor life.



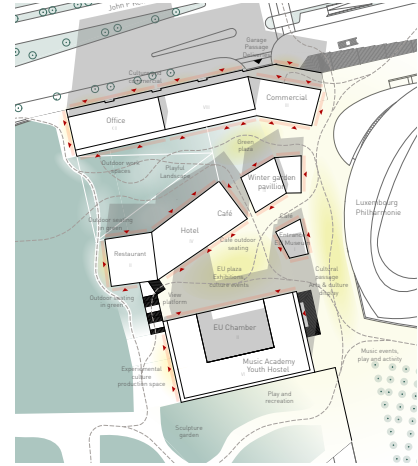
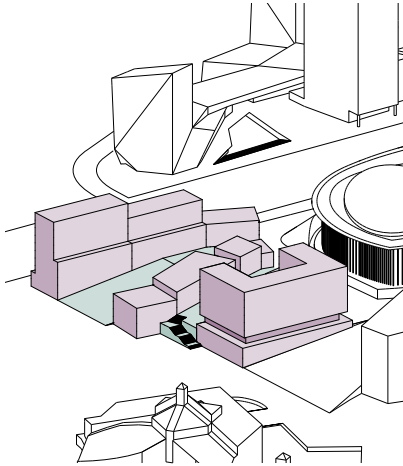
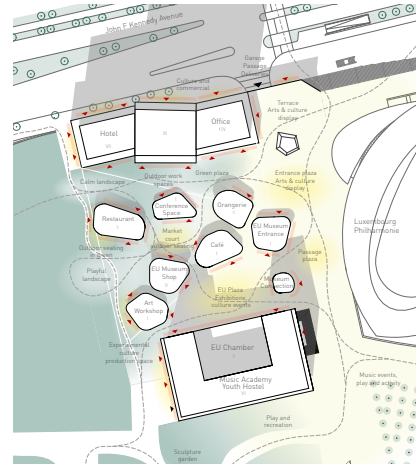
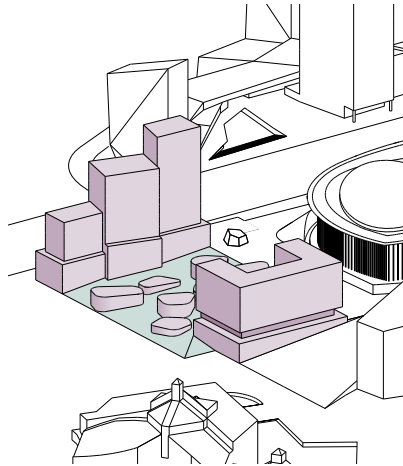
Architectural diversity
Opportunity for many architectural styles, expressions and variation in scale, creating diversity at eye level and stimulating human senses and walkability.



Exchangeable parts and sizes
Different portions of functions can be mixed in the block and buildings exchanged over time. Above is an example of integrating a larger office building into a block.

B Test several strategic scenarios for optimal diversity and quality

- Test several scenarios for distribution of m²
- Define site specific quality criteria/objectives anchored in local needs and developed in dialogue with stakeholders
- Evaluate the different scenarios according to the site specific quality criteria

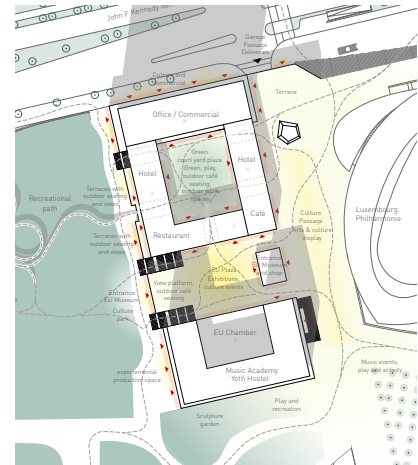
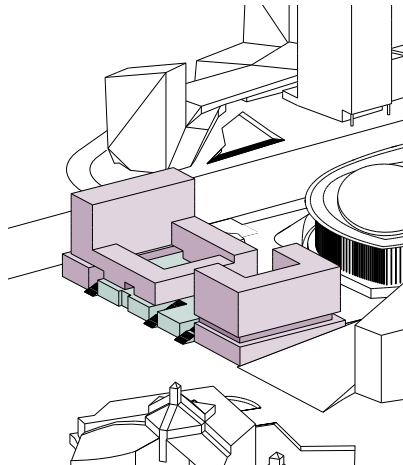


Schuman building scenarios

Three scenarios for the Schuman building with the same m² but with different qualities in public life and public space conditions

Six objectives were developed to be used when evaluating the different options:

1. Introduce a human scale in a large scale context
2. Diversify programme, spaces and users
3. Create more active and attractive edges
4. Celebrate cultural and historical values
5. Improve and create new connections
6. Create a pleasant microclimate



Different ways of measuring density

Various examples

The planning office in Melbourne, Australia, made an Urban Density Study for the South Bank Structure Plan. The study analyzed 10 dense areas in world cities like London, New York, Amsterdam and Barcelona. In addition to comparing the density of residents and employment, building heights and typology, and the number of car parking, the urban quality of the areas are also studied and compared. The qualitative analysis includes quality of the street environment, active ground floor, open space quality, access to community, education and public transportation facilities.

The report draws four main conclusions:

- Higher buildings footprints do not deliver higher densities than mid-rise buildings.
- Car parking requirements are critical in achieving a high quality urban realm within higher density areas.
- The quality of the street interface and distribution of building entrances has a direct relationship with building height and typology.
- Residential densities of >100 per ha and employment densities of >50 per ha are required to support social infrastructure.

As an example, a district in Barcelona of 5-8 storeys delivers higher density of residents and employment as well as urban qualities, than the high rise area of 30 storeys in Battery Park, New York City. One can conclude that density needs to be measured not only in m², but in density of accessible urban qualities for people.



	POPULATION	DWELLING	CARS	CARS/DWELLING	EMPLOYMENT	HEIGHT	CAR PARK LAYOUT	STREET INTERFACE	BUILDING ENTRANCES	OPEN SPACE	COMMUNITY/SOCIAL	PUBLIC TRANSPORT
EIXAMPLE, BARCELONA		230/HA		0.6/🏠		78/HA	8	●	●	●	●	●
COIN ST, LONDON		100/HA		0.2/🏠		300/HA	9	●	●	●	●	●
BATTERY PARK, NY		100/HA		0.5/🏠		830/HA	30	●	●	●	●	●
MID LEVELS, HONG KONG		118/HA		0.1/🏠		45/HA	45	●	●	●	●	●



A photograph of a modern, multi-story building with a facade of balconies and large windows. A person in a suit is walking on a sidewalk in the foreground. The image is overlaid with a semi-transparent teal filter. The text '5/' is positioned at the top center of the page.

5/

Activate Building Edges

5.1/ Ground floor quality is underperforming

Lack of active (A) and pleasant (B) facades in Kirchberg

Assessment of the quality of edges is not based on architectural style, but how well the ground floor supports public life.

- The only truly active facades in Kirchberg are indoors
- Active facades are concentrated around areas with restaurants
- Few facades have interesting detailing and spaces that invites for staying



There is a need for more public life and commercial opportunity at ground floor level.

A - Active

- Small units, many doors (15-20 doors per 100m/328 feet)
- Large variation in function
- No blind or few passive units
- Lots of character in facade relief
- Primarily vertical facade articulation
- Good details and materials

B - Pleasant

- Relatively small units, (10-14 doors per 100m/328 feet)
- Some variation in function
- Few blind or passive units
- Facade relief
- Many details, articulation



Inside Auchan



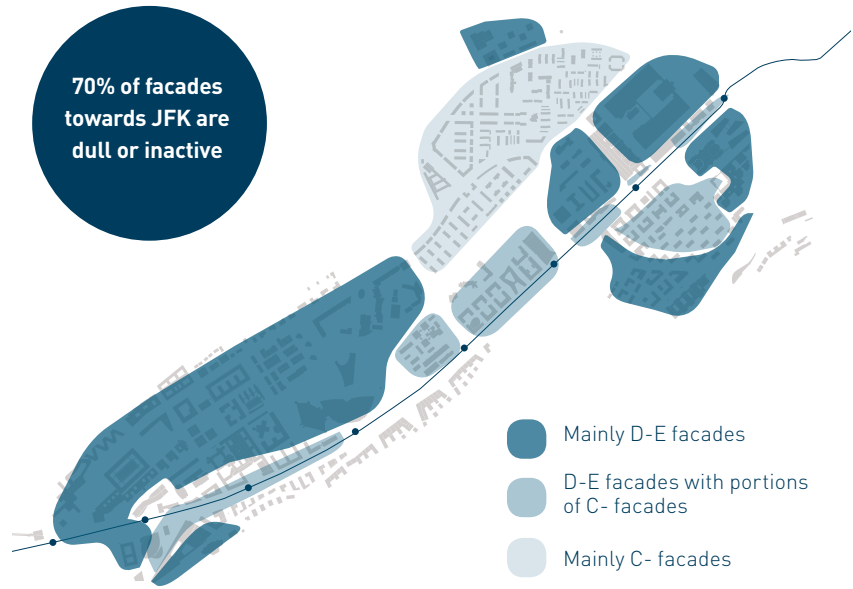
Avenue J.F. Kennedy



Rue Joseph Hoking (south side)

Mainly dull (D) and inactive (E) facades that prohibit public life

- Building edges in Kirchberg are mainly dull and inactive
- Most life happens inside buildings
- Most facades have poor interaction between inside and outside
- Many long facades with little detailing and few doors
- An unusually high percentage of blank walls and glass facades at ground floor level, with few/no entry-points where activity and interaction can happen



C - Mixed

- Large and small units (6-10 doors per 100m/328 feet)
- Modest variation in function
- Some blind and passive units
- Modest facade relief
- Few details

D - Dull

- Large units, few doors (2-5 doors per 100m/328 feet)
- Almost no variation in function
- Many blind /uninteresting units/ transparent but dark glass with poor contact between outdoor/indoor
- Few or no details

E - Inactive

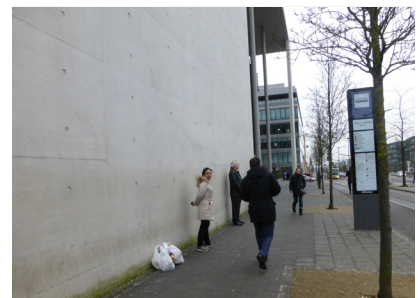
- Large units, few or no doors (0-2 doors per 100m/328 feet)
- No visible variation in function
- Blind or passive units
- Uniform facades, no details
- Blank walls
- Nothing to look at



Rue Marcel Fischbach



Rue Erasme



Avenue J.F. Kennedy opposite Auchan - blank wall



Rue Joseph Hackin (north side)



Avenue J.F. Kennedy - few doors, dark glass

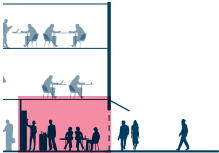


Grünwald square - blank facades

5.2/ Stimulate public life

Open up and activate

A Open up and activate Make more A & B facades



- Give incentives to re-build and open up existing ground floors with new functions
- Give clear guidelines and plans/regulations for ground floor quality and use in future development
- Give guidelines for a more active office ground floor; lobbies with exhibitions, office cantines open to public, shared meeting rooms, transparency to workplaces



K See more in the Public Space Network Plan, Edge zones.

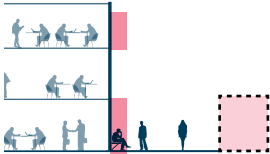


Rue Leon Hengen/Rue Erasme
Today an inactive corner in an important, central location that links to the park, d'Coque, and the Roman Way, the central green spine of Kirchberg



Opening up the corner for community activity, café with take-away, restaurant or other services creates a more welcoming crossroad and entrance to the park

B Add extra functions and art while waiting



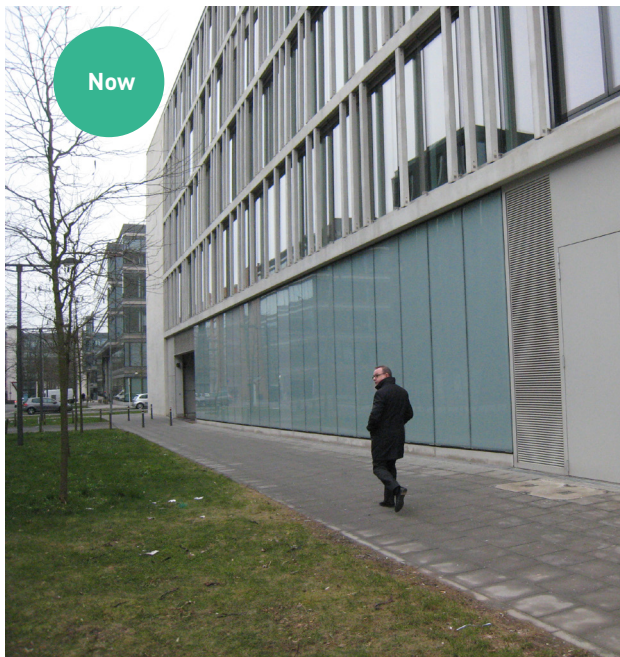
When there are barriers to opening up the facade, active and stimulating additions can be made independently while waiting for the opportunity:

- Additions to existing edges (see more under filling the voids)
- Green walls, balconies, bay windows, terraces - can all give life and soften the facades
- Art, greenery, light to increase sensory stimuli on blank walls
- Temporary and movable programme that activates e.g. food trucks and can be moved to where people are

K See more in Urban Furniture Toolbox

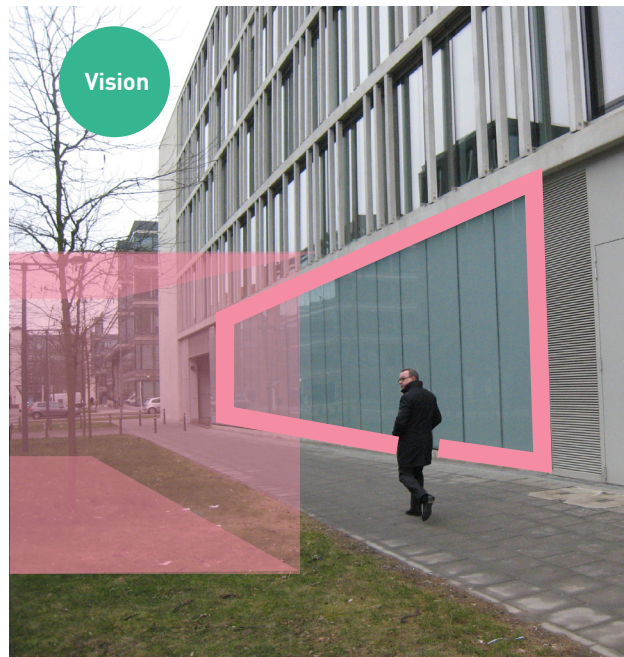


Narrow addition of a coffee shop to blank wall. New York



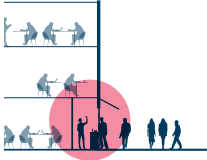
Grünewald square

Between Avenue J.F. Kennedy Auchan and the Grunewald district, there is an underutilized green pedestrian passage with no active functions at ground floor or public space.

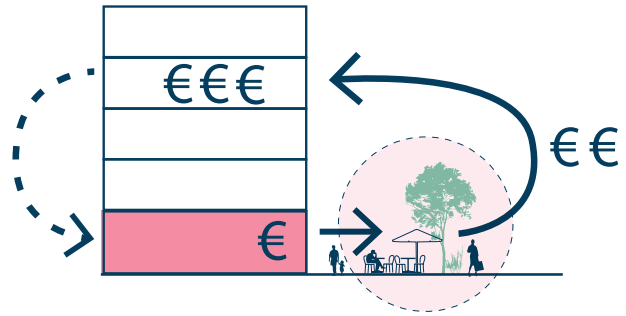


Activation through either a temporary pavilion programme, urban furniture or opening up and transforming the ground floor use would greatly improve the connection to the Grunewald district.

© Curate and regulate ground floor functions



- Develop guidelines and regulations for ground floor use and quality in future development
- Add ground floor guidelines to lease/rent contracts, “Deed of Variation” (see below)
- Regulation of ground floor rent and lease levels in order to stimulate retail, service and restaurants/café
- Help existing companies with leasing agents that can find the right occupant for attractive ground floor functions



Investments in an active ground floor creates a more attractive place that is more desirable as a worklife destination - which increases the value of office spaces above, and in turn makes it more attractive to run a business on the ground floor

BEST PRACTICE

Activating the ground floor

Mayfair & Belgravia, London

Deed of Variation

Grosvenor owns the land in Mayfair and Belgravia in London and leases units to retail, office and residential occupiers. Most buildings are leased out for long periods of time. When working towards a more lively and attractive city, Grosvenor used what is called in legal terms a “Deed of Variation” to a lease.

Generally, leases can be changed and Grosvenor takes the initiative to:

- Change the area of the lease so they can change the first 5-10m of ground floor space to retail/restaurant/co-working/gym etc.
- Buy a tenant out in order to take control of the ground floor units

Grosvenor demands that the tenant of the lease must animate the ground floor frontage with a window display, chairs, flowers etc. A real estate “leasing agent” helps to find emerging businesses that will take on the responsibility of running the retail/restaurant/co-working/gym.

Grosvenor have several examples where providing a restaurant or retail at ground floor has increased the value of office rentals above the ground floor. The more attractive the place is, the more desirable it is as an office destination which drives office value. Grosvenor has done successful transformations at Mount Street, Grosvenor Street, Duke Street and North Audley Street in Mayfair.



Curating local commerce and small scale shopping

Aspern Seestadt, Vienna

Managed and curated shopping street

Aspern Seestadt has succeeded in the difficult art of creating a lively retail environment in a newly built city district at the fringe of Vienna.

Aspern Seestadt:

- Site: 240 hectares of former airfield
- 20,000 new inhabitants and 20,000 new workplaces
- Approx. 1/6 of the overall plan is realized so far

Wien 3420 is the development company, whose key vision has been to create a lively retail environment from day one. This is a difficult vision to achieve in a distant location like Aspern Seestadt. Wien 3420 has decided to take some of the economic risks in realizing this vision – but also creating a strategy allowing them to control the quality of the retail and make sure that the retail units are realized. Today the retail street hosts a pharmacy, two restaurants, bakery with café, flower shop, hairdresser, office supply, supermarket, children's clothes, book store, weekly outdoor food market (all year) and more.

Retail strategy with 4 steps:

1. The main retail link was defined already at the masterplan stage before any plots were sold off to individual developers. Thereby the location of the shops was defined early.
2. Wien 3420 has leased the ground floor units/shops for 20 years from the individual building owners. This had two good outcomes: A. Wien 3420 influences and controls the content and quality of the ground floors – but also holds some of the economic risk. B. The individual building owners escaped the hassle of creating a shop at ground level – and they get a leasing contract for 20 years on their ground floor units.
3. Wien 3420 and a retail company join forces. The retail company curates the shops and finds the right business owners. Normally the retail company works with shopping malls, but in this case, they curate a series of shops along a street.
4. The retail units are hired out based on an individual assessment of the possible profit of each shop. This means, for instance: the pharmacy pays a higher rent per m² than the local flower shop. The Pharmacy has a large customer base as it is the only one in a wider city district. Whereas the flower shop can only rely on very local customers and in general is a type of shop with a lower turnover. This leads back to the overall goal: a lively retail street with a wide range of retail offers, as the guiding tool and not only profit per m².





A photograph of a modern, multi-story building with a facade of balconies and large windows. A person in a suit is walking on a sidewalk in the foreground. The image is overlaid with a semi-transparent teal filter.

6/

Strengthen Local Identity

6/ Strengthen Local Identity

Life in Kirchberg is located in a few isolated places with barriers in between. Kirchberg needs a place making approach to densification in order to address local needs, strengthen central hubs, local character and amenities. The densification should be prioritized where it strengthens links across the Kirchberg Plateau, connecting neighbourhoods and improving access to public transport, in order to better utilize infrastructure investments and improve everyday life quality for people.



Densification around public transport has a more positive impact on climate than zero energy housing

Densifying around public transportation hubs is good for many reasons, both for people and for the environment. A Danish study* measured the environmental impact of building within 500-600 m of a public transportation hub the distance which most people will walk to the tram or train. The study concluded that the reduction of CO₂ is 5 times larger than transforming a building to a zero energy house outside the 500-600 m boundary.

Saves 0.14 ton CO₂ pr. year

reduction of CO₂/year/ workspace going from Danish housing standard to zero energy house



5 times more CO₂ reduction

Saves 0.70 ton CO₂ pr. year

reduction of CO₂ /year/ workspace within 7-8 minute (500-600m) walking distance to public transportation hub



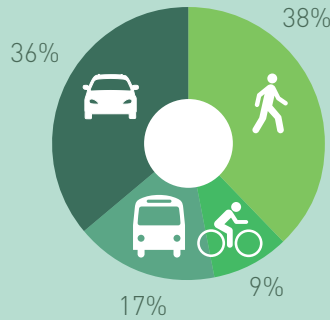
*"Byens rolle i Klimastrategien" by Frederikshavn, Sønderborg and Albertslund municipality and Cowi A/S from 2009

Benefiting from existing infrastructure

Melbourne, Australia

During the last 30 years, Melbourne has worked actively to turn the once monofunctional and car dominated city centre into a lively mixed use city centre. Today people live, work and spend time in the city centre that has a rich variety of activities during day and night, weekday and weekend. Walking is now an essential part of the city life and the public realm is vibrant 24/7/365.

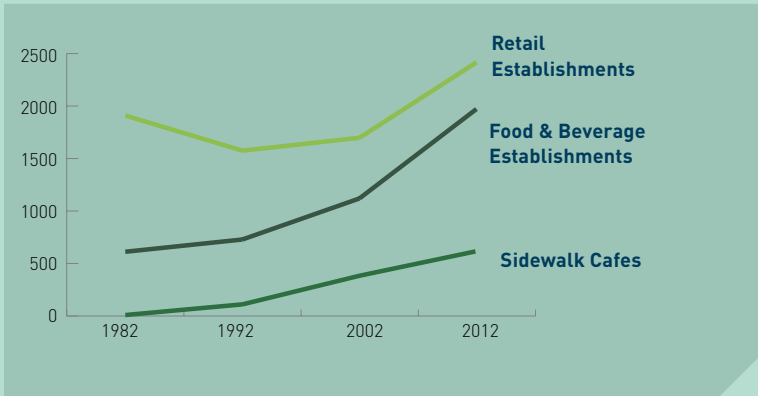
modal share



FACTS

City centre
3.02 km²
9,375 residents (2002)
4.35 million residents
in the metropolitan
area

Major achievements



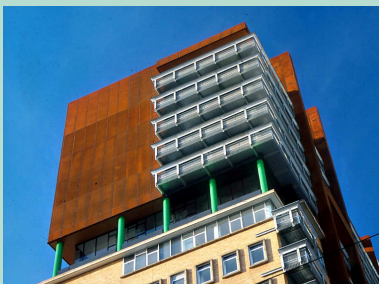
+3770%
More
dwellings
1992-2010
(726 - 28.097)

+4000%
More
sidewalk cafés
1993-2012
(107 - 534)

+55%
More
Establishments
1992-2012
(1.566 - 2.423)

+100%
More
Pedestrians
1992-2004

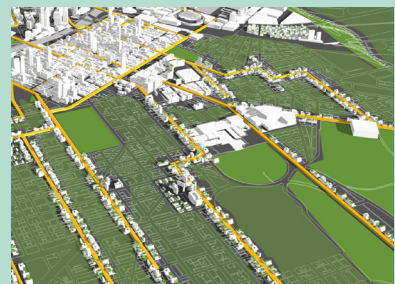
Strategies and change



Melbourne's city centre has increased its resident population by adding apartment buildings to existing structures, which has created a mixed-use city centre.



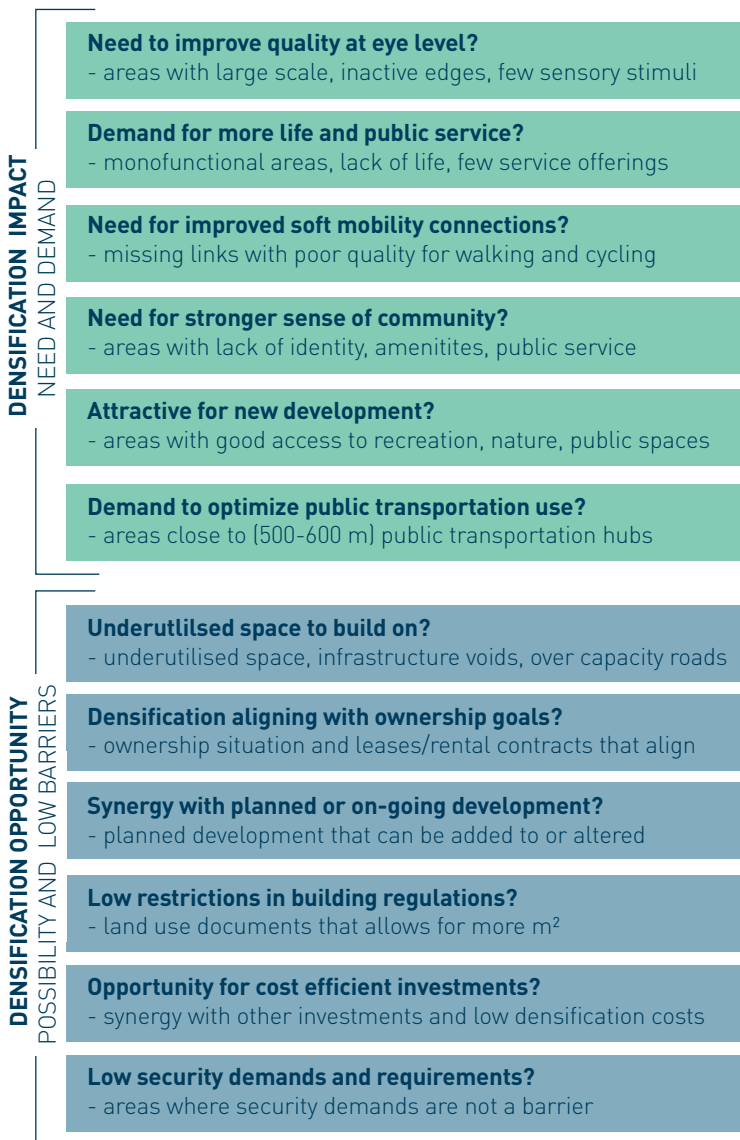
Opening up and activating the laneways in Melbourne created a higher degree of proximity and a fine grain network, also making room for more diverse uses in the city with the addition of small scale establishments.



Melbourne 5 mio is a strategy developed by the municipality. It illustrates how Melbourne can double its population within the city boundaries by densifying around existing public transportation infrastructure.

6.1/ Tool to identify drivers for densification

Evaluating impact and opportunity - a tool for where to prioritize densification. There are several drivers for densification. The level of positive impact densification will have (need and demand) and the level of opportunity there is (low barriers threshold). This is a tool to help identify areas with high impact and opportunity, in order to prioritize where to densify.



IMPACT / NEED AND DEMAND

Where will densification have the highest impact to meet the vision of a lively and sustainable Kirchberg Plateau? Where are there high needs and demands for improving urban quality?

Evaluate how high the need and demand is to assess the degree of positive impact that densification can have on people's quality of life, in order to identify where it is really important to prioritize densification efforts. If there is both a need and a demand, impact will probably be high.

OPPORTUNITY / LOW BARRIERS

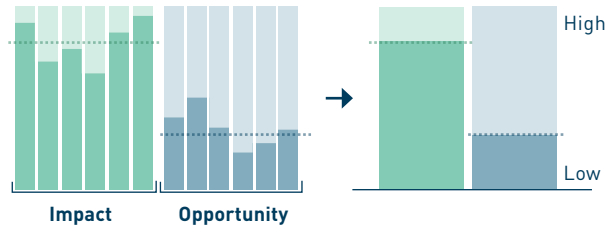
Where are there good possibilities to use densification as a tool for meeting the vision for Kirchberg, and how hard is it to make densification happen? Are there low or high barriers to overcome?

Evaluate the degree of opportunity for densification: identify areas with high opportunity (low barriers) where it is easy to create positive impact through densification.

When barriers are low, the opportunity is high.

How to use the tool

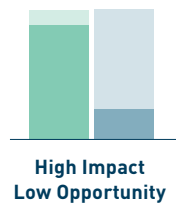
The tool can be used both to help guide where to prioritize densification geographically as well as to identify impact and opportunities in planned projects. Various contexts and situations might require different evaluation criteria. Define the key drivers specific to the site or project and discuss the weight of each. Is one thing more important than another? Use the criteria as a tool for discussion for how to improve opportunities and meet needs and demands better.



Fight for it!

- overcome barriers

If impact is high but opportunity is low, there are barriers to densification. Some identified barriers can be very hard to overcome, for example high security requirements for European institutions or lack of space to develop. Overcoming these type of barriers would require looking into alternative innovative solutions and work towards long-term changes.

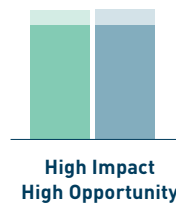


**High Impact
Low Opportunity**

Just do it!

- low hanging fruit

High impact and high opportunity is a win-win situation, and it is where to start in order to create catalysts for further positive impact. The highest quality standards can be used and there is an opportunity to showcase this for other areas in Kirchberg.



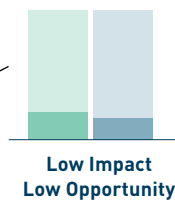
**High Impact
High Opportunity**



Let it go!

- kill your darlings

If impact and opportunities are low, there is not much to gain by working to overcome barriers. These are not areas to prioritize densification.

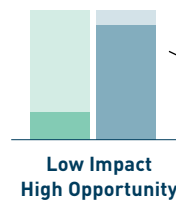


**Low Impact
Low Opportunity**

Raise the bar!

- look for new needs

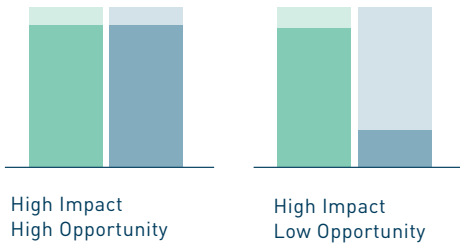
If impact is low but opportunities are high, there are few barriers and it is easy to densify. This opens up to further investigating how impact can be increased through generating and demanding higher goals, standards and quality. Densifying here should not be rushed. Better to do it right than to just do it because it can be done.



**Low Impact
High Opportunity**

6.2/ Blend in everyday life

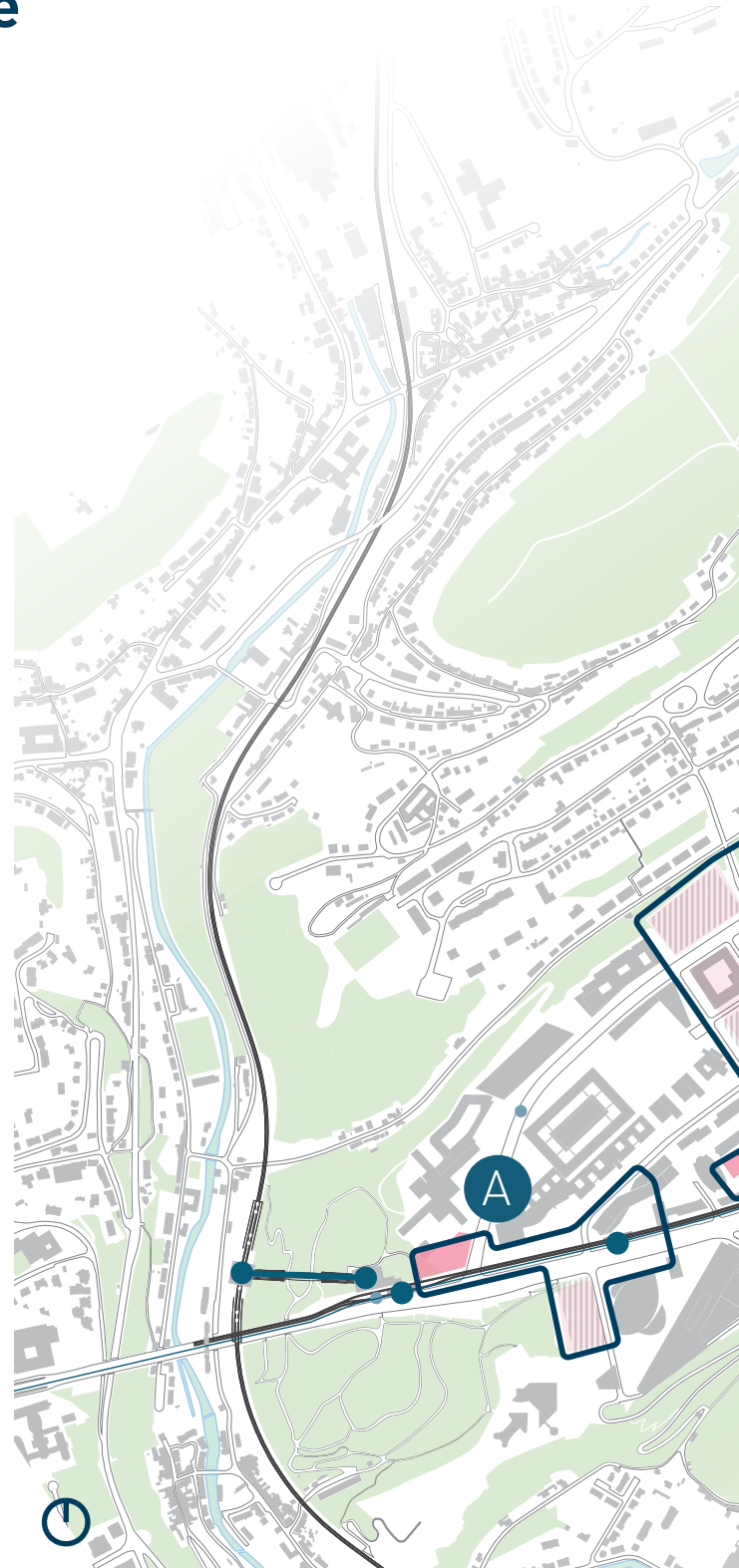
The principle behind prioritizing densification is to identify areas, streets or neighbourhoods where densification has strong drivers, high positive impact and opportunity, but also areas where there is high impact with lower opportunities, where there are barriers to overcome.



- A** **European cultural quarter**
- Philharmonie/Mudam
- B** **European work life quarter**
- The European quarter
- C** **Recreational quarter**
- Rue Erasme & d'Coque
- D** **Learning & living link**
- Université & Laangfur, Kuebebiert
- E** **Everyday culture**
- Library & Reimerwee
- F** **Kirchberg city centre**
- Auchan & Lux Expo

 **Planned new development**

 **Potential for additional densification**





The following pages further describe the evaluation and recommended actions for the six highlighted areas

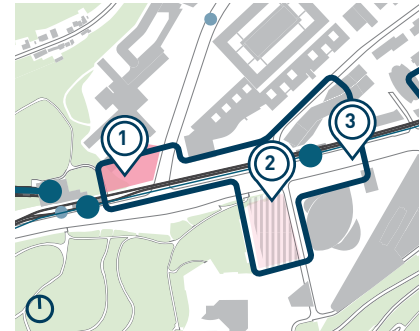
6.3/ European cultural quarter Philharmonie/Mudam

Impact (demand & needs):

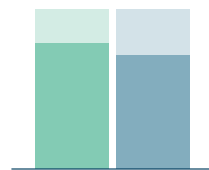
- More continuous building facades along Ave J.F. Kennedy will create a more active and interesting street and entrance to Kirchberg that stimulates walking and cycling, and optimizes tram use.
- There is a need to strengthen the walking and cycling environment between the Funiculaire tram stop and the Philharmonie-Mudam.
- An expansion of the cultural identity for the area with a diversity of cultural uses will invite a more diverse user group and will strengthen the identity and attraction of the area.
- Addition of more residents and hotel guests will create a livelier and safer area during evenings and weekends

Opportunity:

- (1) Densify along the north side of Ave J.F. Kennedy and make sure that new planned development creates an urban edge with everyday service at ground floor level.
- (2) Densify the Schuman building site in order to create a strong active facade towards Ave J.F. Kennedy, integrate hotels and apartments, and focus on a wide variety of cultural functions such as cultural production, artists in residents, small cultural units, etc.
- (3) Cycling hub in a new built structure that can help to frame Ave J.F. Kennedy and the entrance to Place de l'Europe.
- Focus on urban furniture additions and continue to strengthen the temporary street food programme in the whole area to support the outdoor lunch activities and evening programme.



- Planned new development (status 2018)
- Potential for additional densification



High Impact
High Opportunity



(1) A new pleasant and active building edge on the north side of Avenue J.F. Kennedy between Funiculaire and the Philharmonie



(2) The Schuman building site can allow for more diverse cultural uses and better engage with Avenue J.F. Kennedy as well as connecting Place de l'Europe with the surrounding nature



6.4/ European work life quarter

The European quarter

Impact (demand & needs):

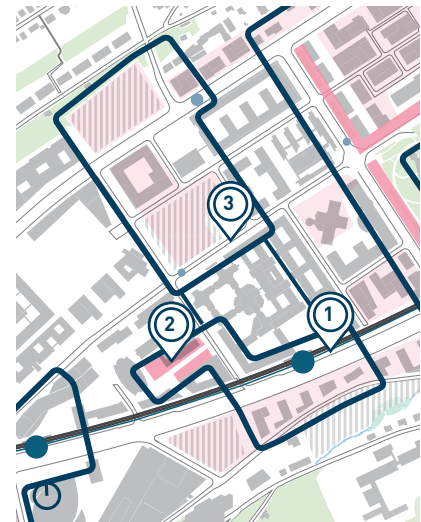
- There is a need to strengthen evening life and population through diversified hotel concepts, bars and restaurants at ground floor and with evening events
- Need for more exposed work life through shared co-work places, meeting facilities, and open office canteens for the public
- Need for more intimate and sheltered public spaces and greenery in the area

Opportunity:

- High security demands are barriers for densification and active ground floors in the area
- (1) Permanent or temporary street food around the public transport stop and new office plaza
- (2) Strengthened hotel quarter such as a lunch and evening

food hub. Removal of sections of the above ground parking would allow for a new intimate and active green plaza. Opening up facades or densification with add-ons to the surrounding buildings and extra storeys on Novotel would activate the space

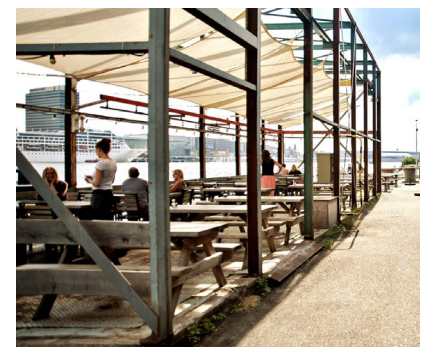
- (3) Let planned densification along Rue du Fort Niedergruenewald activate and green the street - an active edge zone, contact between in-door function and street, green pocket parks to emphasize the Roman way



(1) Temporary food truck programme supporting work-life at lunch time



(2) Adding extra volumes on top of Novotel and activating facades around the space creates a restaurant and hotel hub with focus on food and drink, business meetings, and recreation



6.5/ Recreational quarter Rue Erasme & d'Coque

Impact (demand & needs):

- The main reason and need for densification is to create a more attractive walking and cycling environment along Rue Erasme that supports and increases soft mobility and tram users
- Attractive location with close proximity to recreation, sports, green amenities and tram
- New housing typologies can invite new user groups and increase everyday use of the area
- Need to strengthen and continue the green Roman Way link towards the European quarter

Opportunity:

- There is a lot of underutilized space with potential for densification, and the larger surface parking areas have been prioritized for park and recreation extensions.

- The number of potential new residents in additional m² are not that high and will not demand more service or retail
- (1) Information/visitor kiosks, entrance pavilions with short stop service around the public transport stops
- (2) Medium-scale housing units benefiting from a green and quiet location make the park area safer in the evenings
- (3) Create an urban edge towards Rue Erasme with live-work units that invite for small scale home office spaces at the ground floor towards Rue Erasme. New improved access to the park.
- (4) Small scale housing units creating an intimate (9.5 m) green pedestrian lane way between offices and pocket parks along the street. A greener alternative is to activate the

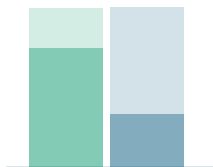
- green strip with urban furniture or a recreation and pavilion programme
- (5) Possible soft housing densification with green edges towards the park
- (6) Removal of all or part of the parking allows for a new outdoor destination; a public water playground and outdoor swimming with sauna facilities relating to indoor facilities at D'Coque
- (7) Investigate a more urban building form to create a more continuous green building edge towards the school



See more about Rue Erasme densification in the Kirchberg Cases report

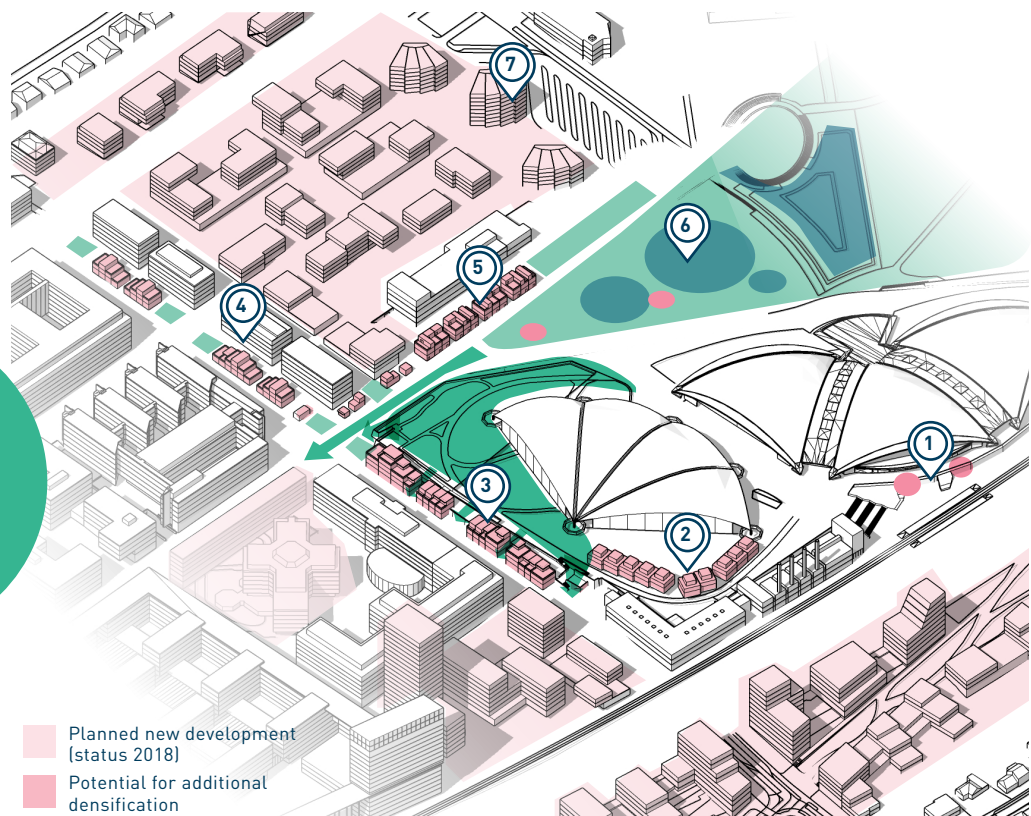


See more about public outdoor swimming pool in the Public Space Network Plan report.



High Impact
Low opportunity

additional densification approx. 10,500 m²



STRENGTHEN LOCAL IDENTITY



[1] Pavilion programme with visitor information and service as a new face for the Coque towards Avenue J.F. Kennedy



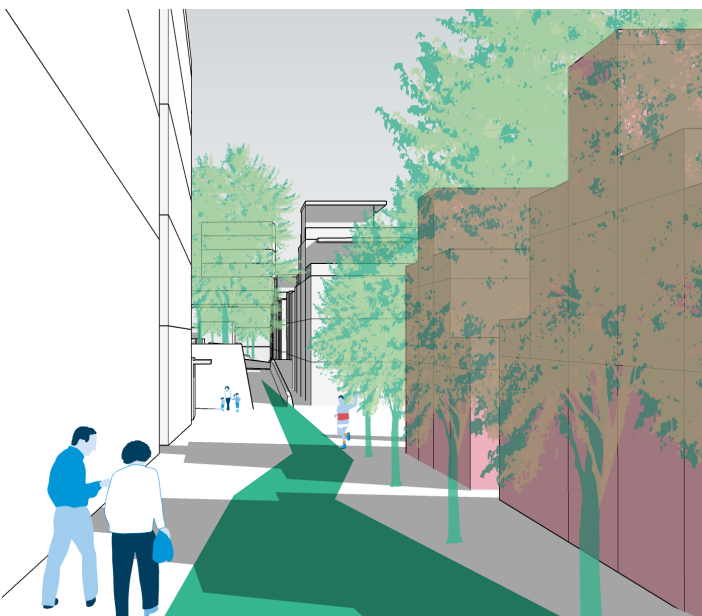
[3] New densification along Rue Erasme with live-work units and active home offices at ground floor, that can be converted to cafés or retail if the retail demand changes.



[3] & [4] Town houses with residential units at ground floor towards Rue Erasme - protected and inhabitable edge zones can be created as a buffer to public street life



[3] Rue Erasme southern section
Variation of height and strong focus on verticality to create a more interesting walk along. Pocket parks and gaps in between buildings to increase physical and visual access to the park from Rue Erasme



[4] Rue Erasme northern section
Above: Alternative use with pavilions and urban furniture instead of housing emphasizing green and recreation use along the street.

[4] Rue Erasme northern section
To the left: A new green pedestrian alley with a direct view and access to the park. Gaps in between to let sun in and allow direct access to existing entrances in the office building.

6.6/ Learning & living link

Université & Laangfur, KuebebiERG

Impact (demand & needs):

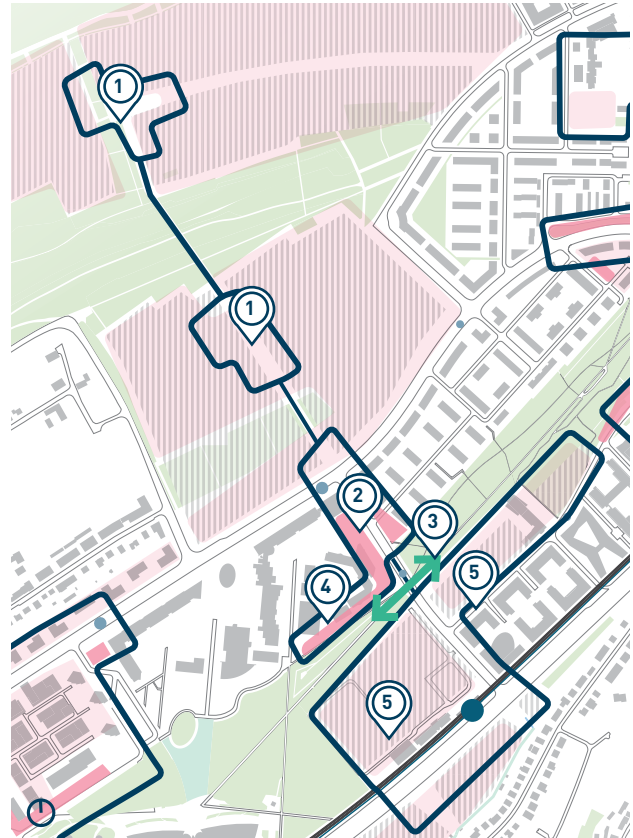
- Need to build a strong connection between community nodes and neighbourhoods across the Plateau, with continuous urban qualities at eye-level that support walking, cycling and tram use as well as street life
- (1) Need for attractive new community hubs along the north-south connection
- (2) Need to close the gap and voids along Richard Coudenhove-Kalergy between the park and Blvd Konrad Adenauer
- (3) Need to strengthen the green connection across Richard Coudenhove-Kalergy
- Demand for a new vibrant area with a learning and innovation hub for all ages
- Demand for spaces and building functions that invite students, youth and young professionals to meet, spend time and exchange ideas

Opportunity:

- The biggest opportunity is through high quality urban planning and buildings in the planned development. Additional densification is small, but will have a positive impact on the street quality
- (2) Investigate possibilities for residential densification; student housing, and small apartments
- (4) Re-think the blind wall along the European school towards the park. Investigate green densification with public service/learning/health related uses that can give the park an active edge and “eyes on the park”
- (5) Kirchberg Campus. Integrate student housing, start-up spaces and campus service open to all. Create open, green and friendly facades towards the surroundings



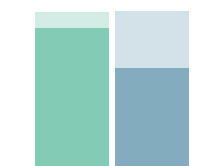
See more about the Avenue J.F. Kennedy interface in the Cases report



Rue Richard Coudenhove-Kalergy

The main north-south link in Kirchberg connects to future new neighbourhoods, and is an important link to densify with buildings that support soft mobility and activity at street level.

- Planned new development (status 2018)
- Potential for additional densification



High Impact
High Opportunity

STRENGTHEN LOCAL IDENTITY



[5] New University and student housing with shared and public courtyard spaces that support social connections and learning for all ages. Image: Student housing in Copenhagen, Denmark



[2] Green edges towards the park and Rue Richard Coudenhove-Kalergy. Small apartments, student housing and short rental hotel. img: Bicycle hotel at ground floor with residential units above. Malmö, Sweden



View along Richard Coudenhove-Kalergy to the North and the future Langfuur development. Today a wind-swept and uninteresting walk with no life.



[2] Densification can add urban qualities to the street and life along the building edges.

6.7/ Everyday culture

Library & Reimerwee

Impact (demand & needs):

- Demand for housing - attractive area to densify near public transport, nature and recreation, work places, shopping and new library
- Need to strengthen the urban qualities at eye level as well as to frame and activate the streets in the area
- Need for a more attractive walking and cycling environment, turning a car dominated space to soft mobility environment

Opportunity:

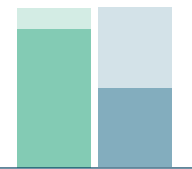
- Many underutilized spaces that can be densified in the area but with the challenge of newly built infrastructure and many stakeholders
- Significant possibilities for increased resident population that can bring a need for more cafés/

restaurants, service, shops, a small food store and kindergarten

- (1) Strengthening the green view and connection between the park, Ave J.F. Kennedy, and landscape through framing and activation of the library park space
- (2) Investigate possibilities to introduce buildings along the south side of Ave J.F. Kennedy that can both bridge the steep topography and make use of the attractive location by the tram stop for new offices and potentially housing
- (3) Removing the tunnel and re-locating the road opens up several scenarios for densification in this prime location, for housing, everyday service, integrated workplaces and commercial opportunity
- (4) Densifying attractive underutilized land with residential units provides a view to the park

along Blvd Konrad Adenauer and gains a better walking and bicycling environment in the street

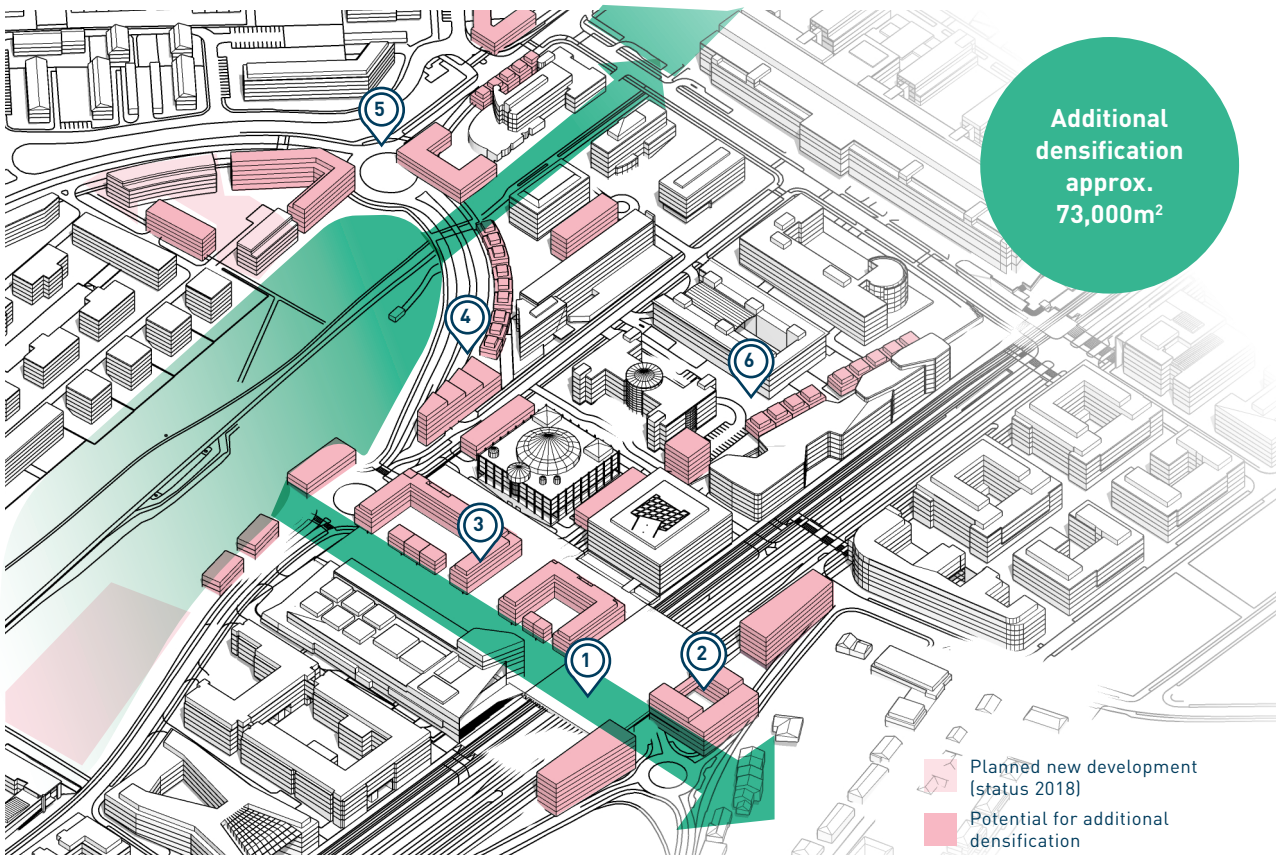
- (5) Investigate possibilities for removal of the roundabout to allow for new development that can open up the possibility for a new "proximity polarity"
- (6) Further investigate the possibility of infill housing in between office units. Challenging land ownership, topography, and access need to be studied further



High Impact
Medium opportunity



See more details and scenarios in the Kirchberg Cases report



STRENGTHEN LOCAL IDENTITY



(4) & (5) New green residential units, both rowhouses, town houses and apartments with green facades and integrated private outdoor spaces.



(4) View along Blvd Konrad Adenauer towards the east. A new green residential building edge towards the street with views and close proximity to the park.



(1) View from Ave J.F. Kennedy towards the park. The library park with new housing densification and possibilities for some cafés/restaurants and service at ground floor supporting the public transportation stop and park life.

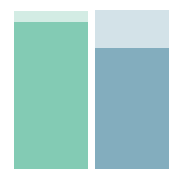
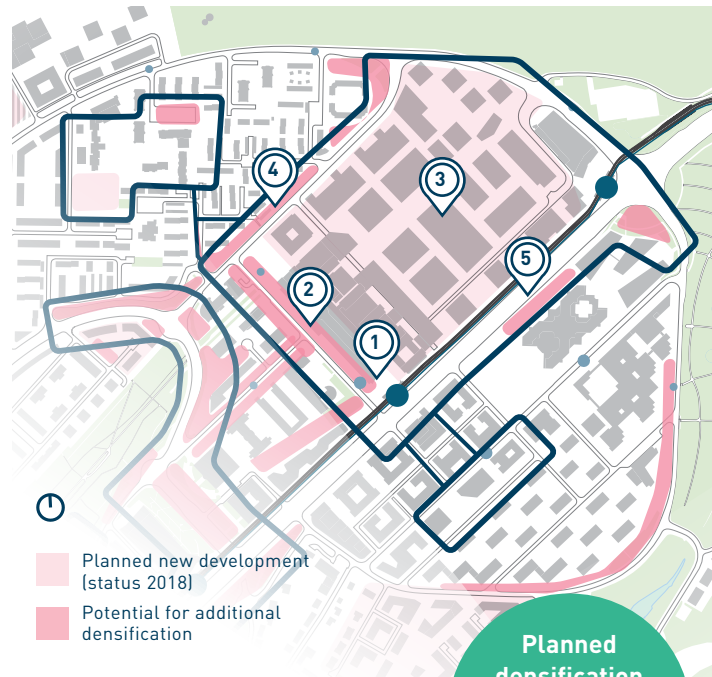
6.8/ Kirchberg city centre Auchan & Lux Expo

Impact (demand & needs):

- There is a high demand and need for Kirchberg to develop a true mixed use urban centre with vibrant public life, outdoor shopping streets, culture and recreation
- Need to strengthen pedestrian and bicycle connections to surrounding neighbourhoods, Kiem and Grunewald, through the Lux Expo site and along Rue Alphonse Weicker

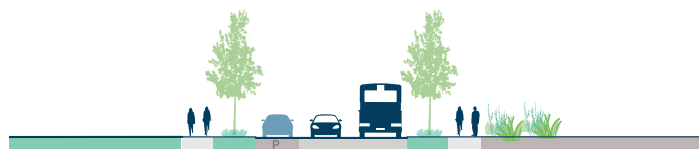
Opportunity:

- The Lux Expo plan together with the J.Bech building remodelled contains the highest opportunity for high quality densification
- Additional densification in the area is possible but there are several barriers and not a lot of open underutilized space suitable for new buildings
- (1) Auchan plaza, the district square. Soft 1-2 storey densification with retail and café/restaurants in an extended plinth bridging topography and activating both sides of Rue Alphonse Weicker towards Blvd J.F. Kennedy.
- (2) Densification along Rue Alphonse Weicker: Two storey additions along the J Bech building turn a closed building into an open and active edge with pocket plazas towards the street. Convert parts of existing offices into residential units and retail/service units at ground floor. On the west side of Rue Alphonse Weicker, there are some possibilities for additions of temporary and permanent pavilions and an urban furniture programme.
- (3) Lux Expo site with new development (volumetric study by Urbis and programmatic study by Alphaville) has potential for a new lively district centre with mixed use and high levels of diversity of functions and typologies of buildings and streets. Investigate potential to integrate more housing in mixed use perimeter blocks
- (4) Investigate possibilities for 2 storey residential densification along Circuit de la Foire Internationale that allows for greenery and new pedestrian links in between and respects the existing private outdoor spaces of Kiem.
- (5) Investigate possibilities for narrow infill along the BGL BNP building that supports J. F. Kennedy with new activity and urban enclosure.

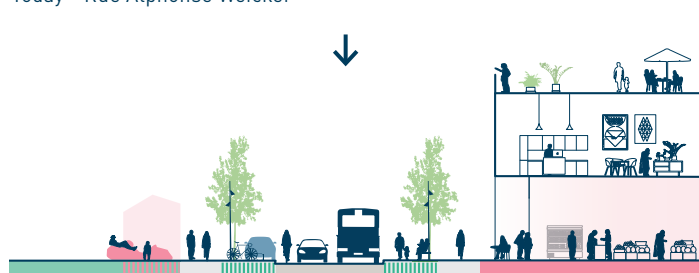


Planned densification
270,000 m²*
+ additional approx.
7,000 m²

High Impact
High opportunity



Today - Rue Alphonse Weicker



(2) Vision for Rue Alphonse Weicker. Traffic calming and densification along the street with 2 storey additions to the J. Bech building and pavilions and urban furniture along the west side.

STRENGTHEN LOCAL IDENTITY



[1] Proposal for extended plinth with active facades toward Place Auchan creating a more inviting entrance, a more attractive public transportation stop and a livelier plaza.



[3] Volumetric study of Lux-Expo site by Urbis



West side of Place Auchan. A blank retaining wall currently faces Avenue J.F. Kennedy and the small plaza in front



[1] Proposal for a low corner building to replace the blank retaining wall with a café/restaurant, further strengthening the extension of Place Auchan on the other side or Rue Alphonse Weicker



A photograph of a modern, multi-story building with a facade of windows and balconies. The image is overlaid with a semi-transparent teal color. In the foreground, a man in a suit and sunglasses is walking on a sidewalk. The text '7/ Summary' is centered in white.

7/ Summary

Recommendations for Densification

1/ Make use of valuable space

Kirchberg has a lot of underutilized open space created by overdimensioned roads and infrastructure, building set-backs and topography challenges as well as security zones. There is a need for densification that creates:

- Activation of underutilized open spaces
- Stronger spatial definition and urbanity with buildings that frame public spaces and streets

2/ Densify to soften the city

A lot of buildings in Kirchberg are large scale buildings and blocks that lack variation, stimulation at eye-level and shelter from wind. There is a need for densification that creates:

- A softer, more human scale and enjoyable environment at eye-level
- A walking environment that stimulates the senses
- Better microclimate in streets and public spaces

3/ Densify for diversity

Kirchberg has several monofunctional areas and a lack of diversity of functional typologies. There is a need for densification that creates:

- More mixed use areas
- Higher diversity of functions and building typologies
- More offerings and concentration of everyday services

Needs

Fill in the gaps

- Activate underutilized set-backs
- Bridge topography challenges
- Add density vertically
- Frame the streets; densify over dimensioned roads and garage ramps
- Frame the plots; optimize plots and frame spaces and streets

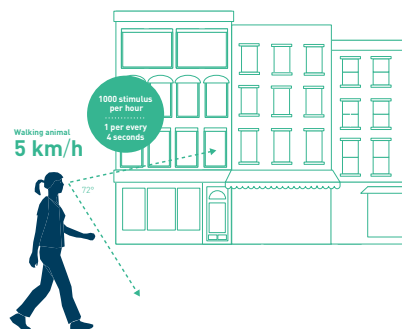
Scale it down

- Densify with small and medium scale
- Build for a better microclimate
- Deliver quality at eye level to stimulate walking and cycling

Stimulate community life

- Densify the gap of typologies; diversify ownership, scale and functions
- Use everyday community functions and services as central nodes
- Mix functions vertically
- Building for diversity and hierarchy of spaces

Actions



4/ Create additional value

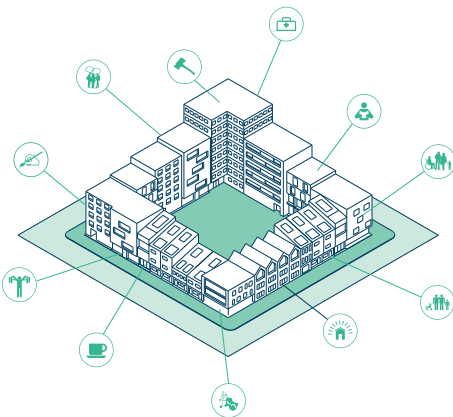
A lot of new development is already planned in Kirchberg. These new neighbourhoods can complement existing quarters with additional values and qualities. There is a need for densification that creates:

- Smarter ways of delivering high density new development that creates strong community and quality public spaces
- A collaborative process that evaluates options according to quality for people and public space



Do it smart

- Build more quality and diversity with the same m²
- Test several strategic scenarios for optimal diversity and quality



5/ Activate building edges

Kirchbergs ground floor use and quality is under-performing because of many long blank facades and buildings that lack services and life at ground floor. There is a need for densification that creates:

- More commercial and service opportunities at ground floor
- More ground floors that activate streets and public spaces
- Better interaction between inside and outside



Stimulate public life

- Open up and activate - make more A & B facades
- Add extra functions to activate while waiting
- Curate and regulate ground floor functions



6/ Strengthen local identity

Kirchberg has many areas with different identities and specific local needs and opportunities that should be the starting point when prioritizing densification efforts. There is a need for densification that creates:

- Stronger local community identity and sense of place
- More attractive links to public transportation
- Connections between neighbourhoods



Blend in everyday life

- Tool to identify drivers for densification
- Blend in everyday life and strengthen local identity
- European cultural quarter
- European work life quarter
- Recreational quarter
- Learning & living link
- Everyday culture
- Kirchberg city centre



