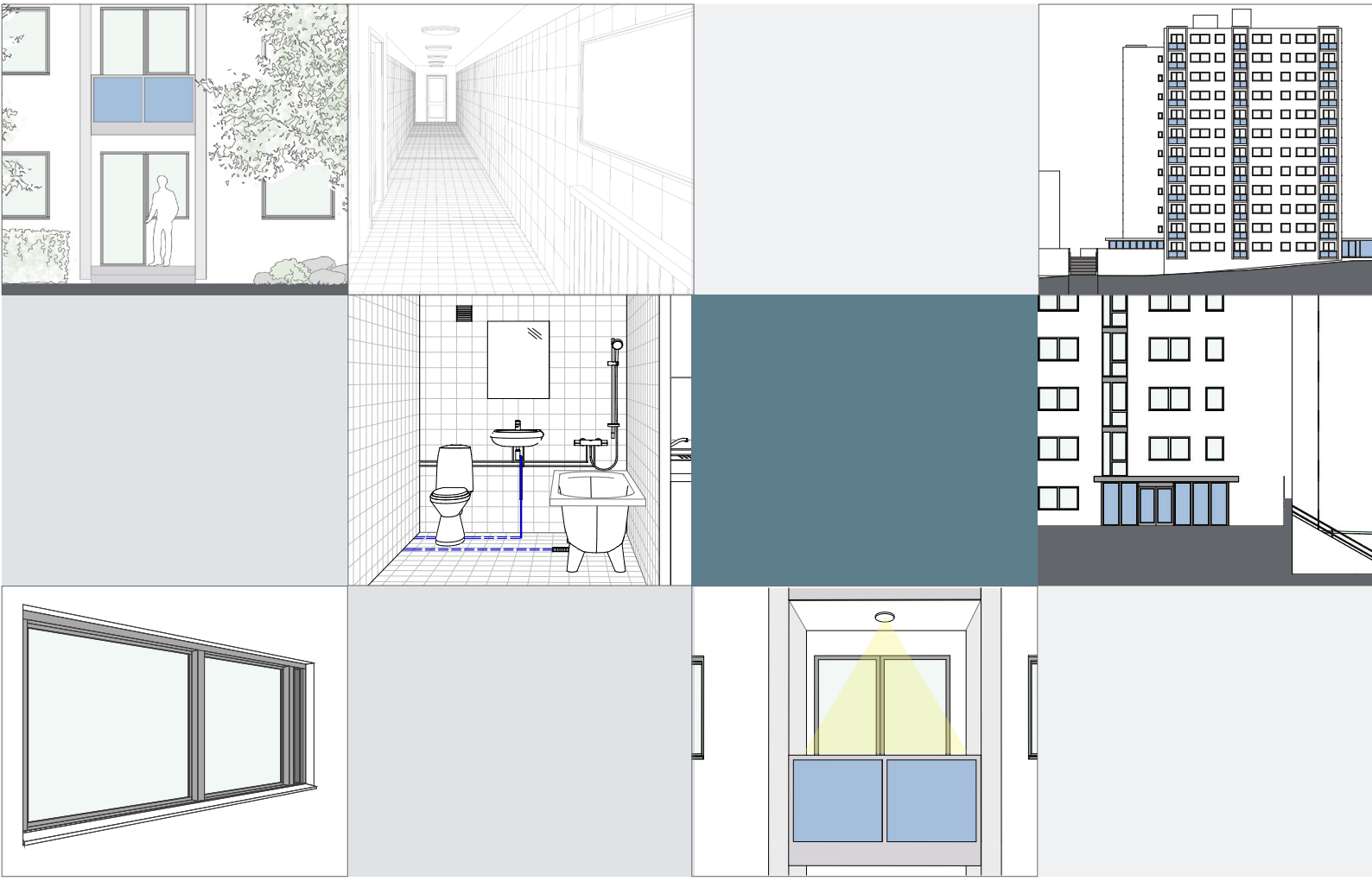
NORDIC BUILT

# Renovation Toolbox



# Renovation Toolbox

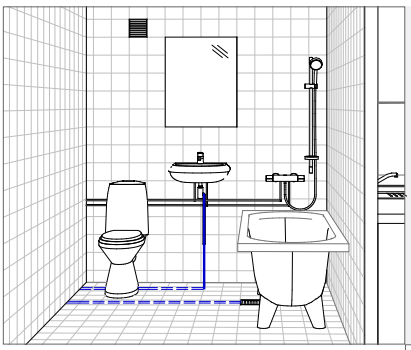
## Introduction

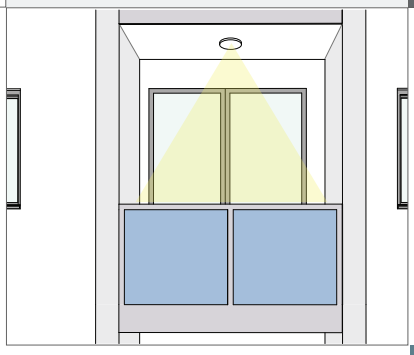
During the 1960´s and the beginning of the 1970´s, the shortage of housing in Sweden was enormous. Many people lived in crowded and worn down buildings, which led to a mass production of apartment buildings: the so called “million program”.

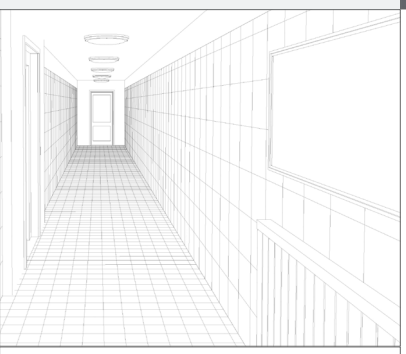
New suburbs took form. The houses were to be situated in bright open areas, close to recreation facilities. To begin with these well-planned apartments were very popular.

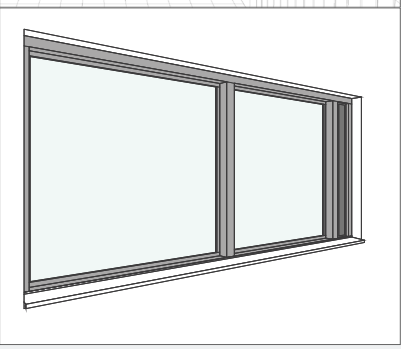
Today many of these buildings are in desperate need of renovation. In addition, these neighborhoods often suffer from problems such as bad reputation, high unemployment, and unwelcoming living environments.
The goal is to make these areas popular again. We believe we have the tools to do it.

To make this happen, we propose simple solutions, which can be implemented swiftly, is affordable, and independent from each other. We are proposing a “Toolbox” of renovation ideas!









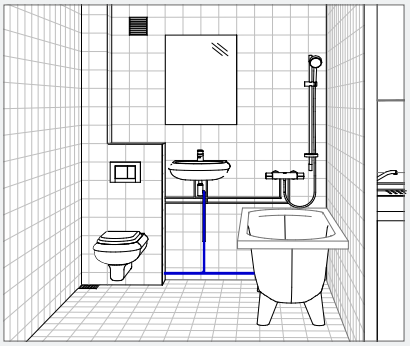
## Our Way of working

We work almost exclusively with home-staying tenants and have done so for over ten years now. We know about the complexity of renovating multifamily housing. Therefore we have gathered several of the most important professionals in one group. The building owner has one contact person, the site manager, who is located next to the building site, and is available to answer questions and lead the workers. The site manager and the assisting staff has different cultural backgrounds to be able to have a positive communication with the tenants. Planning is everything and the foundation for making it happen is good communication.
During our years in business we have come up with alternative technical solutions to renovate the building stock from "Miljonprogrammet" time.
As a first step in the renovation process, the tenants need to feel safe and comfortable with the building process. The tenants have to feel confident that the workers entering the apartment are in fact working for the entrepreneur. We will use a new developed locking system. Each worker carries an ID06-card. On the inside of every door a special handle is installed that does not leave any marks once removed. On each floor an electrical device is installed. This device controls the handle on the inside of the door and will, when the ID06-card is put into the device, provide access only to assigned workers by the site manager.

In the next pages we present our action plan - the "Renovation Toolbox" for Krögarvägen 2, Fittja, Stockholm. It takes the current need, the financial possibilities of the inhabitants and the time aspect into consideration. Each type of renovation is divided into three categories, with alternative technical solutions and designs. They can be chosen separately from each other. This gives the building owner the opportunity to decide which category is the most cost-efficient one and which best suits the building.
Different parts of the renovation have to be done at different times during the year. The facades, the windows and the balcony should be renovated during the summer, but the bathrooms and the kitchen can be spring or autumn. Therefor we propose a "box" of different tools and possibilities.

Now is the time to make this building in Fittja into a welcoming, safe and energy efficient building.

# 1. Bathroom & kitchen



☐ Variant 1A

## Wall-fixed WC with new placements for the pipes and a safe-drain.

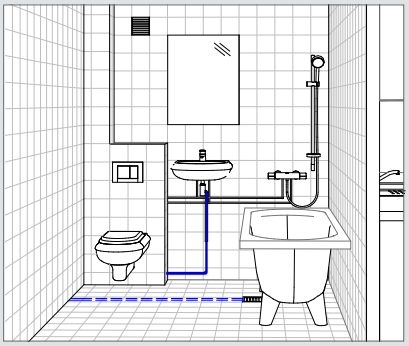
The pipes will be placed in a new position without the traditional floor drain. Instead a so-called safe-drain will be placed in the floor next to the new pipe-shaft. The water will flow, as the picture shows, directly from the bathtub and wash basin through water pipes into the new pipe-shaft. The safe-drain is designed to take care of accidental discharges of hot and cold water.

A removable automatic odor trap will prevent bad smell from spreading from the sewer system. This will be prevented even though the safe-drain has no water.

Pros: No floor drain means that the waterproofing will be non-perforated. Visible plumbing provides safer and easier maintenance and a lower construction cost. It´s an eco-friendly way of renovating bathrooms thanks to less construction material being torn out. The floor and the old plumbing will be sealed and left in place. No floor drain means less water damage, which results in lower maintenance costs. This solution is a common embodiment in Europe.

To consider: You have to shower in the bathtub or in a shower tub and not directly on the bathroom floor.

Cost: 70%



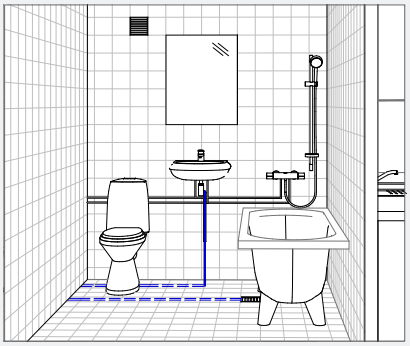
☐ Variant 1B

## Wall-fixed WC with new placements for the pipes and a traditional floor drain

See 1A. The distinction in this alternative is that a traditional floor drain will be used instead of a safe-drain.

Pros: Minor change in the appearance of the bathroom for the tenants compared to alt. 1A. Lower construction cost compared to alt. 1C. The installations are accessible for inspection in the new pipe-shaft.

Cost: 85%



☐ Variant 1C

## Traditional way of changing the plumbings, changing in existing location.

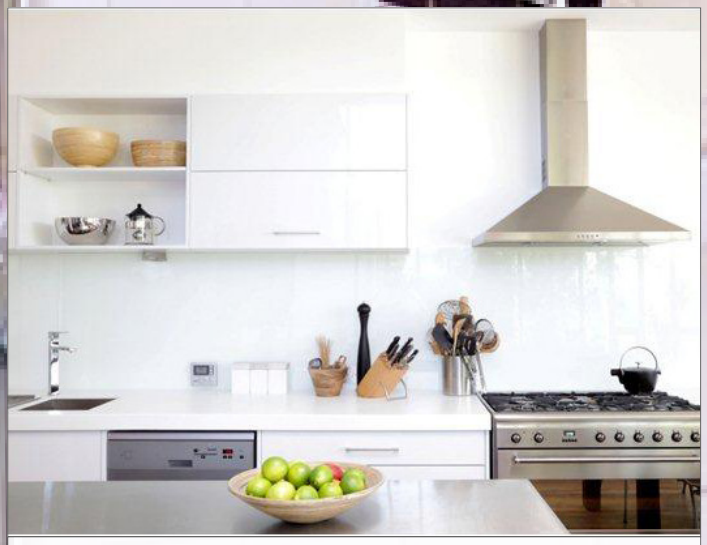
The installations will be exchanged in the existing location.

Pros: No change in appearance compared to alt. 1A & 1B.

To consider: Expensive contracting. The installations will once again be hidden and inaccessible in the wall. Renovation will take much longer. If new floor drains have to be installed they will create acoustic problems in the apartment below because of low room heights and the problem of isolating them properly.

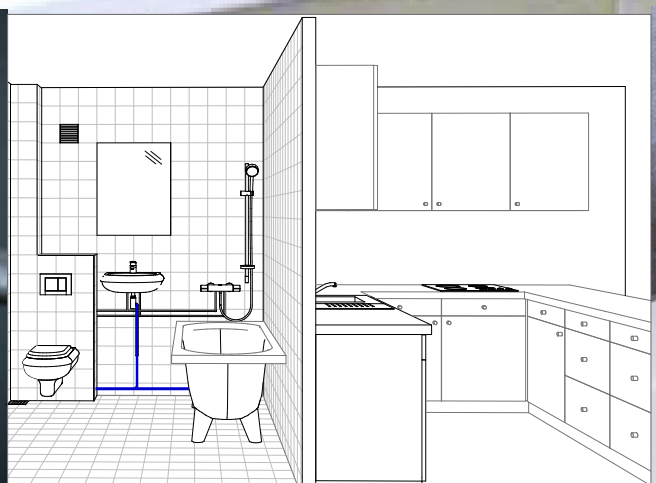
Cost: 100%

## Notes

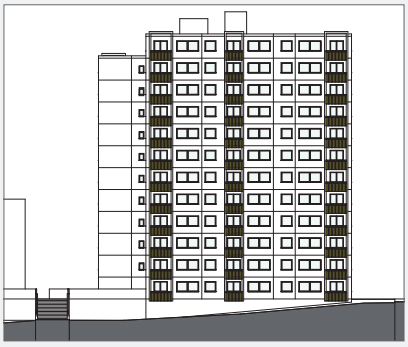


The existing kitchen can renovated in two ways.
If the existing frame is still in good quality its only necessary to renovate the cabinet doors. They will be taken off and send to a paint shop to get a new finish.

If the frame needs to be exchanged the whole kitchen will be replaced with a new and modern one.



# 2. Facades



☐ Variant 2A

## Facade cleaning

Washing and cleaning the existing facade.

Pros: The facade is in good condition apart from the dirt and has a long life left. It is a low execution cost compared to alternative 2B and 2C.

To consider: The facade can appear to be blotchy after washing the facade, maintenance/actions for existing windows remains. (The balcony doors are in great need of maintenance and should be replaced.)

Cost: 30%
U-value: existing

☐ Variant 2B

## Painting the facade and replacing the windows

Painting the existing facade. Replacing windows to energy-glass windows.

Pros: With a new color scheme of the facade, in combination with new windows, the house takes on a whole new, more substantial look. We believe this alternative to be an affordable option, considering that the facade appears to be relatively well insulated. In this option the facade can be left without further additional insulation.

To consider: Changes in the facade and window works requires scaffolding around the building. Maybe the house should take on extra insulation at the same time.

Cost: 60%
U-value: most cost-efficient

☐ Variant 2C

## Tilläggsisolering och fönsterbyte

Insulation is added to the facade with plaster panels and one round of plaster on top or new sheeting elements.

Pros: The house gets a complete facade renovation.
The additional insulation will be installed over existing concrete seams. The overall impression of the facade will be more solid. Insulation and plaster will lower the U-Value. With new sheeting on top the facade will be most durable. This will save maintenance costs in the long run.

The facade appearance can get a new look or the existing style can be adapted because of historical reasons.

Installation of windows in the existing location (at lower cost) or within the new insulation (at higher costs) to avoid a thermal bridge.

Solar panels can be mounted on top of the isolation.

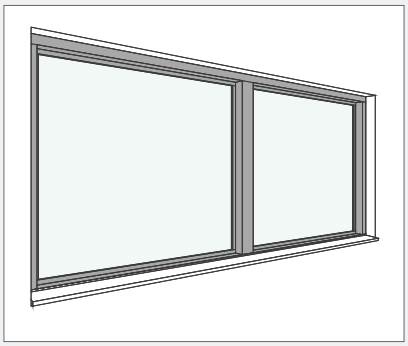
Cost: 100%
U-value: best

Notes

Heating
30-35%
Roof
15-20%
Ventilation
10-20%
Wall
20-25%
Window
20-25%
Ground
5-10%

Heatloss

# 3. Windows



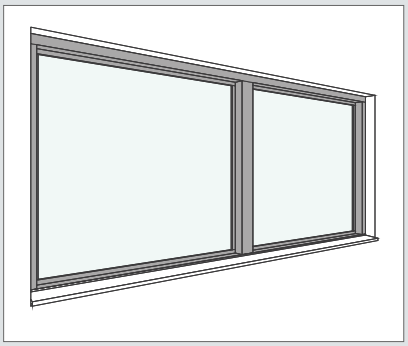
☐ Variant 3A

## Renovate the existing windows and balcony doors

A modest adjustment and renovation of the existing window sash and changing to new silicon weather strips. Existing balcony doors will be adjusted. Child safety will be checked on all windows and balcony doors.

To consider: The facade can appear to be blotchy after washing the facade, maintenance/actions for existing windows remains. (The balcony doors are in great need of maintenance and should be replaced.)

Cost: 20%
U-value: small improvement



☐ Variant 3B

## New windows/window doors in composite

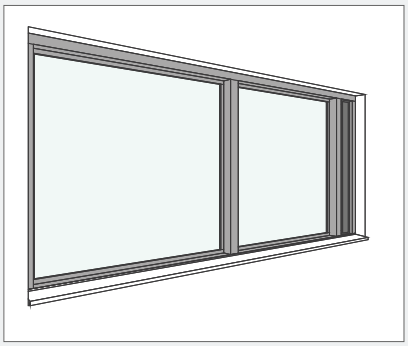
We suggest windows with an U-value from 1.0 to 1.2. That is the most cost-efficient window with respect to insulation and purchasing cost.

The new windows will be installed in the existing location. New windows give the tenants several options on how to open the window. Composite is an immobile material, available in different colors and it´s maintenance-free. A great benefit is that also the inside is maintenance-free.

Replacement of windows provides great energy-savings compared to other energy-saving actions.

After installing new windows the tenants will experience an improved noise reduction.

Cost: 80%
U-value: good



☐ Variante 3C

## New window/window doors in wood/aluminum

It is more common to replace new windows with wood-/aluminum-windows than with composite-windows. Wood-/aluminum-windows have a more traditional Swedish look. We suggest windows with an U-value from 1.0 to 1.2. That is the most cost-efficient window with respect to insulation and purchasing cost.

The new windows will be installed in the existing location. New windows give the tenants several options on how to open the window.

Replacement of windows provides great energy-savings compared to other
energy-saving actions.

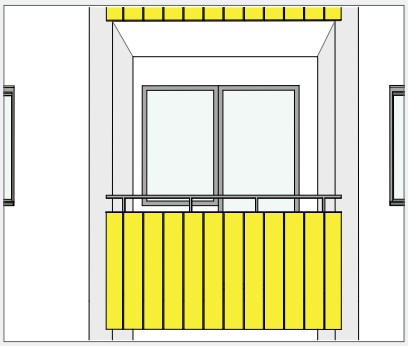
After installing new windows the tenants will experience an improved noise reduction.

Cost: 100%
U-value: good

Notes

Detail view: window types

# 4. Balcony

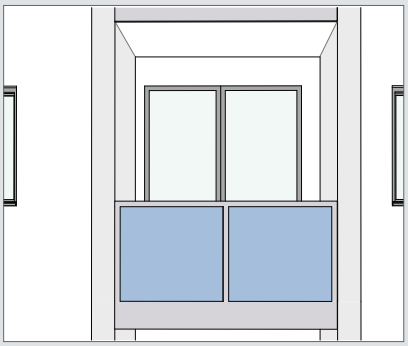


☐ Variant 4A

## Replacing existing balcony screen

Painting the existing balcony screens or replacing them with new aluminum screens in the same look.

Cost: 30%



☐ Variant 4B

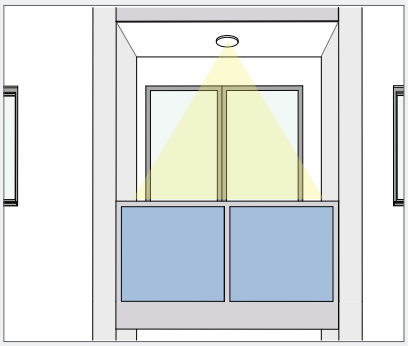
## Colored balcony screens in safety glass

New balcony screens in colored safety glass and safety railings in glass.

Painting the walls and ceiling of the balcony to eliminate the hard concrete appearance.

Cost: 70%

Brighter
More user-friendly



☐ Variante 4C

## Glassed balcony screens, railings, lightning and wooden floor

New balcony screens in colored safety glass and safety railings in glass.

Painting the walls and ceiling of the balcony to eliminate the hard concrete appearance.

Modest wooden balcony-flooring, and lightning the balcony. This change will give the tenants an extra room during the summer-month.

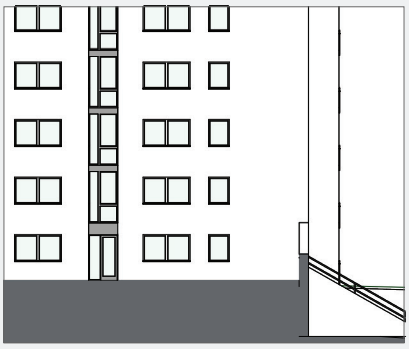
Tenants can install total glazing at their own cost if so wished.

Cost: 100%

More inviting
Brighter
More user-friendly

Notes

# 5. Entrance

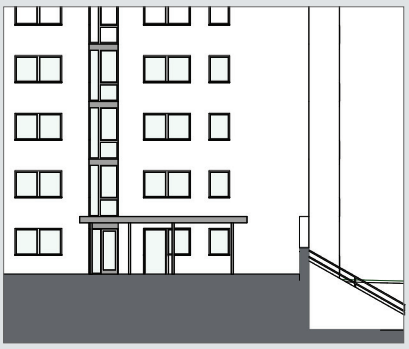


☐ Variant 5A

## Changing the door entry at the main entrance

Freshen up the entrance with a new door section in a vivid colour and make the entrance more visible by putting the house number above the door with big graphical numbers and/ or letters.

Cost: 20%



☐ Variant 5B

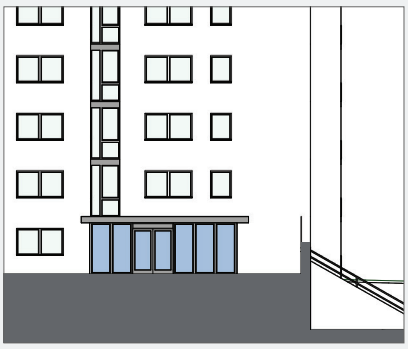
## New canopy framing the entrance

Freshen up the entrance with a new door section in a vivid colour and make the entrance more visible by putting the house number above the door with big graphical numbers and/ or letters.

Adding a canopy on both sides of the house and installing lights in the ceiling. The canopy will mark the building clearly from further away and shows proudly which building it belongs.

Different colours help the tenants to identify their building.

Cost: 60%



☐ Variant 5C

## Glazed entrance

Freshen up the entrance with a new door section in a vivid colour and make the entrance more visible by putting the house number above the door with big graphical numbers and/or letters.

Adding a canopy on both sides of the house and installing lights in the ceiling. The canopy will mark the building clearly from further away and shows proudly which building it belongs.

Different colours help the tenants to identify their building.

The area under the canopy will be enclosed with glass walls which creates a natural meeting place for the tenants. This space is connected to the doorman function. The entrance becomes a visible and protected space instead of corridor.

The idea is to create a warm and homely entrance with seating under the roof.

Cost: 100%

Notes

## The “good soul”

In different suburbs of mayor cities within Europe the function of a doorman is added to big housing complexes to create more security and to avoid anonymity within the building.
The first impression is that it adds costs to the already pressured rents which exist in low income neighborhoods.

We thought a possible solution to this problem by adding the function of a kiosk, a newspaper stand, a flower shop or a cafe to the doorman. It needs to be the possibility to earn money. Migrating citizens in Sweden have a bigger interest in starting their own business so we see this a good chance to make a difference.

This business can be run by a tenant. As a benefit he gets the space rent free but has to “take care of the house. He can accept packages, organize keys if maintenance personal has to get access to an apartment and or chat with the tenants. Maybe he can water the flowers if families are on vacation. This gives him more customers and the house gets a “good soul”.

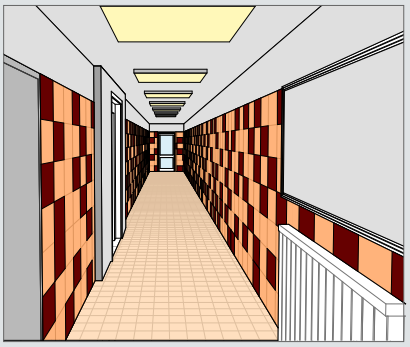
# 6. General spaces

☐ Variant 6A

## Washing and cleaning

Washing, cleaning up and touch-up paint in public areas.

Cost: 20%

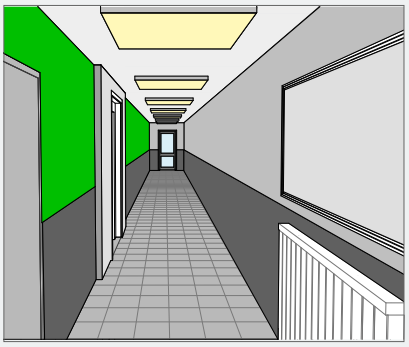


☐ Variant 6B

## Improve the lighting and painting

Repaint the stairwells and public areas. Improve general lightning throughout the property.

Cost: 60%



☐ Variante 6C

## New material and lightning

Tearing down the existing tiling to create a whole new modern look in the general areas.

Improve general lightning throughout the property.

New tiles and easy to clean paint will be used.

Cost: 100%

Notes

## Welcome security

The new entrance with its glass walls give visibility, security and identity to the building.
A simple way to create an extra space which raises the standard of the whole building.

# 7. Groundfloor & garden

☐ Variant 7A

## Safety glass

Replace grids with safety glass. When removing the grids the building takes on a more welcoming impression.

Cost: 10%
Value: 3

☐ Variant 7B

## Lighting the outdoors surfaces

Replace grids with safety glass. When removing the grids the building takes on a more welcoming impression.

Lighting in the new canopy creates a better outdoor environment.

The new look of the canopy and different coloured light helps the residents to identify with their building.

Cost: 50%
Value: 2

☐ Variante 7C

## Create patios

Replace grids with safety glass. When removing the grids the building takes on a more welcoming impression.

Lighting in the new canopy creates a better outdoor environment.

The new look of the canopy and different coloured light helps the residents to identify with their building

Replace the window with a window door, planting plants and build fences. This will give the tenants at the ground floor a private patio. This homely place can be used during the summer months, adds value to the apartments at the ground floor and gives the building in general a more positive tone.

Cost: 100%
Value: 1

Notes

## A home feeling

Small gardens help the community to take care of their environment. They can be creative in their own garden by planting flowers or small apple trees.
As soon as the people feel responsible for their little piece of land, they become something like private guards. They will watch their surrounding more carefully. This helps to build an identification for the whole area. The responsibility does not end behind the entrance door of the peoples apartments.  People will feel more safe and less anonymous. It breaks borders which big anonymous housing complexes create. Lets tear down the bars in front of the windows and create a surrounding with a home feeling.