Greening strategies

for a controlled introduction of nature in an existing building

Ayelt van Veen
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PART A

Vertical Elements
INTRODUCTION

This section shows vertical greening strategies in several diagrams. The diagrams are divided into three categories: Low tech, medium tech and high tech. This defines how much technology is needed to introduce the strategies.

LOW TECH

Ivy wall
Moss wall
Ivy through broken glass
Wall shrub
MEDIUM TECH

Climbing plant on wire mesh

Simple flower box

Bamboo wall with climbing plants
HIGH TECH

Irrigated flower pots

Irrigated flower pots with mesh

Irrigated system with front wall
PART B

Horizontal Elements
INTRODUCTION

This section shows horizontal greening strategies in several diagrams. The diagrams are divided into three categories: Low tech, medium tech and high tech. This defines how much technology is needed to introduce the strategies.

LOW TECH

Green in between concrete rubbish

Ivy on ceiling
Plant through concrete

Ivy on reinforcement bars

Gap in ground floor
Soil on concrete slab with self healing concrete

Soil on low-tech drainage system
Soil on concrete slab

Flower pots

Ivy on ceiling mesh
HIGH TECH

Irrigated system with pallets

Green between walking parts on drainage layers

High-tech green roof system
Appendix A

Climbing plant catalog
Evergreen climbing plants (east and north)

Akebia quinata

Clematis alpina

Clematis armandii
Clematis montana

Ivy

Lonicera periclimenum 'Serotina'

Pileostegia viburnoides
**Evergreen climbing plants (south and west)**

*Clematis cirrhosa var. purpurascens ‘Freckles’*

*Clematis urophylla ‘Winter Beauty’*
Passion Flower

Solanum crispum (Chilean Potato Tree)

Trachelospermum (Star Jasmine)
Non-evergreen climbing plants (east and north)

Celastrus orbiculatus (Oriental Bittersweet)

Hydrangea petiolaris (Climbing Hydrangea)
Rose 'Madame Alfred Carrière'

Rose 'Maigold'

Schizophragma hydrangeoides (Japanese Hydrangea Vine)

Tropaeolum speciosum (Flame Nasturtium)
Non-evergreen climbing plants (south and west)

Actinidia kolomikta

Clematis

Everlasting Sweet Pea
Humulus lupulus 'Aureus' (Golden Hop)

Jasminum officinale (Jasmine)

Parthenocissus tricuspidata (Virginia Creeper)
Rosa banksiae 'Lutea'

Schisandra rubriflora

Vitis (Grape Vine)
Appendix B

Application to a building fragment
Greening strategies

Irrigated boxes with a mesh in between

- Parthenocissus tricuspidata
- Akebia quinata
- Solanum crispum
- Ivy
- Clematis

Climbing plants on walls and beams

Extension of plants that have roots in (irrigated) boxes and in soil around the building

- Lonicera periclimenum ‘Serotina’
- Humulus lupulus ‘Aureus’
- Hydrangea petiolaris

Meshes or strings with climbing plants

Used to introduce climbing plants on higher levels

Wall shrub

Mostly used to cover the sides of the elevated railway trajectory

Example: garrya-elliptica

Earth on concrete floor

Covers the ground where perforations end

Concrete rubble from demolished floors

Simple green floor system

Layers: Soil, Felt, Gavel, Crimp

Wooden container with soil (and optional irrigation system)

Simple flower pot
Appendix C

Green phasing
Phase 1 - West Hub as it is now

Phase 2 - Local government and investors invest money to create a new Metra station together with perforations in the adjacent buildings.

Phase 3 - Greening systems are introduced around a vascular system of perforations and routes. Some new small manufacturing industries move into the building.

Phase 4 - Greening systems make plants grow through the vascular system. More businesses appear.

Phase 5 - Pop-up shops and businesses for the public appear close to the newly created green zones.

Phase 6 - More pop-ups appear as the building gets more attractive. New (temporal) greenery is introduced by owners of the new stores.

Phase 7 - The configuration of the pop-up units changes over time.

Phase 8 - The local economy has grown, the greenery reached in further depth of the building. Pop-up stores and manufacturing halls have become extensive businesses that redevelop the old building partially.

Phase 9 - A new station hall and building replace the West Hub building.

Phase 10 - An extended new station hall and building replace the West Hub building.
GROWTH OF GREENERY FROM A PERFORATION