UNECE DESIGN PROJECT

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P5 presentation june 24, 2011
Brundtland commission, 1983

“publication on the accelerating deterioration of the human environment and natural resources and the consequences of that deterioration for economic and social development”
TRIPLE BOTTOM LINE

Environmental
A viable natural environment

Sustainable natural and built environment
Sustainable economic development

Social
Nurturing community

Sustainable development
Equitable social environment

Economic
Sufficient economy

PROJECT
LOCATION
SUSTAINABILITY
VISION
CONCEPT
DESIGN
CONCLUSIVE
social

environment?

economical
VISITING THE UNITED NATIONS
PROGRAM

PROJECT  LOCATION  SUSTAINABILITY  VISION  CONCEPT  DESIGN  CONCLUSIVE

Pie chart showing the program distribution:
- General offices: 18%
- Facilities: 13%
- Entrance area: 6%
- Collect: 12%
- Produce: 8%
- Exchange: 22%
- Propagate: 21%
sustainability
Functional

Aesthetic Quality

Sustainability
SUSTAINABILITY

- CHANGABLE BUILDING
- DECONSTRUCTABLE
- FLEXIBLE
- Functional
- AESTHETIC QUALITY
- Dealing with natural resources responsibly
SUSTAINABILITY

- Dealing with natural resources responsibly
  - Save energy
  - Generate sustainable energy

- Functional
- Durable building
- Deconstructable
- Flexible
- Changable building
- Aesthetic quality
Sustainability

- Deconstructable
- Functional
- Aesthetic Quality
- Flexible
- Changeable Building
- Durable Building
- Dealing with Natural Resources Responsibly
- Function in the City
- Saving Energy
- Generate Sustainable Energy
Sustainability

- Changable Building
- Durable Building
- Deconstructable
- Flexible
- Functional
- Aesthetic Quality

Dealing with natural resources responsibly
- Save Energy
- Generate Sustainable Energy

Function in the City
- Countering non-sustainable nuisances
- Adding quality to the city

Energy Grid
- Heating/Cooling Grid
MORPHOLOGY

PROJECT
LOCATION
SUSTAINABILITY
VISION
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DESIGN
CONCLUSIVE
MORPHOLOGY

PROJECT  LOCATION  SUSTAINABILITY  VISION  CONCEPT  DESIGN  CONCLUSIVE

Building Height

400 m
200 m
50 m
5 m

Midtown East
CONTEXT
UNECE
UNECE

EDUCATES | DISPLAYS
SUSTAINABLE PRODUCTS
UNECE

EDUCATES | DISPLAYS
SUSTAINABLE PRODUCTS

HIGHER AWARENESS
UNECE

INCREASING DEMAND
SUSTAINABLE PRODUCTS / EDUCATION

EDUCATES | DISPLAYS
SUSTAINABLE PRODUCTS

HIGHER AWARENESS
UNECE

INCREASING DEMAND
SUSTAINABLE PRODUCTS / EDUCATION

EDUCATES | DISPLAYS
SUSTAINABLE PRODUCTS

HIGHER
AWARENESS
A PLACE FOR RECREATION/EDUCATION

OPEN TO PUBLIC
THE BENEFITS OF NATURE IN THE CITY
GETTING CLOSER TO A SUSTAINABLE CITY
A BUILDING THAT COMMUNICATES
IMAGE
EDUCATION vs. RECREATION

UNECE!
EDUCATION vs. RECREATION
EDUCATION vs. RECREATION

UNECE!

RECREATION!
ICONIC ARCHITECTURE
TEMPORARY BUILDING
Underground architecture does not mean this:

Nor does it mean this:

It means simply this:

1. Build a strong, waterproof building.
2. Insulate it. Cover it with earth.
3. And plant it with native plants.
ARCHITECTURAL EXPERIENCE
WHAT LIES BEYOND?

ARCHITECTURAL EXPERIENCE
INTERVENTION
DESIGN SKETCHES
MAIN CONCEPT
PRIMARY INFRASTRUCTURE embedded in construction
SECUNDARY INFRASTRUCTURE
AXES WITH DOUBLE HEIGHT

REPRESENTATIONAL AXES embedded in construction
NFI door Claus en Kaan Architecten

REPRESENTATIONAL AXES
REPRESENTATIONAL AXES
ROUTING VISITOR slow traffic

vertical traffic
EXPLODED VIEW

entrance | BG > -2
EXPLODED VIEW

exposition axes | -2
EXPLODED VIEW
EXPLODED VIEW
ROUTING EMPLOYEE  fast traffic
CIRCULATION axis

employee

visitor
INTERIOR FACADES
interior façade

punctured façade

section

front view (section)

section

front view

1:20

1:20
FLEXIBILITY

1x Auditorium (large)

2x Auditorium (medium)

14x office, lobby space

14x office, lobby space, atrium
DECONSTRUCTABLE ARCHITECTURE
CONSTRUCTION

retaining wall

DESIGN

PROJECT LOCATION SUSTAINABILITY VISION CONCEPT CONCLUSIVE
large span steel construction

CONSTRUCTION
1st floor
CONSTRUCTION
separating walls

CONSTRUCTION
In-between floor

In-between floor with 'vide'

2x In-between floor
TRAFFIC AREA
Main distribution HVAC
> ducts in sight

‘GEBRUIKSRUIMTE’
Secondary distribution HVAC
> ducts above dropped ceiling
> medium sized duct can pass through castellated beams
TRAFFIC AREA
Main distribution HVAC
> ducts in sight

‘GEBRUIKSRUIMTE’
Secondary distribution HVAC
> ducts above dropped ceiling
> medium sized duct can pass through castellated beams
CLIMATE  air intake / outlet
CLIMATE air intake / outlet
CLIMATE  air intake / outlet
CLIMATE  air intake / outlet
CLIMATE clusters
CLIMATE  air intake / outlet
TIDAL ENERGY

source: verdant
ALUMINIUM (3MM), 8,0 kg/m²
dimensions: 800 x 1800 mm
weight 16,5 kg – 14,2 kg (max. punched)

> anodized
> punched
> folded flanges

FUNCTION
> shading
> protection from explosions / firearms
> communicates function
> filters audible nuisance
> no use of stony materials
> reusable
> confines light pollution

Loads:
> dead load
> wind loads
> point loads (fire arms)

FAÇADE SYSTEM
Ground Floor resistant to explosions
SGG ER4 NS* 33mm 83kg/m²
> window does not open, due to excessive loads
> façade opens

Floor 1 to 4 resistant to fire arms
SGG BR1 NS* 20mm 48kg/m²
> window opens inwards

* non-splinter
case façade

section

front view

impression
NORTH FACADE
EAST FACADE
IMPRESSION

AXIS

PROJECT  LOCATION  SUSTAINABILITY  VISION  CONCEPT  DESIGN  CONCLUSIVE
IMPRESSSION
ENTERING THE CASE
DURABLE BUILDING
Functional
Esthetic quality
Architectural experience

CHANGABLE BUILDING
Building is for 90% deconstructable
Flexible floorplans (‘island’-concept)

DEALING WITH NATURAL RESOURCES
Embedded in ground – little energy loss
Shading prevents intensive cooling
Well insulated
Benefits of green roof
Tidal energy generation
Geothermal energy storage
Water of East River for heating/cooling air

FUNCTION IN THE CITY
Energy grid
Esthetic quality
Small footprint - additional public space
No stony materials
Limited light pollution
Communicates sustainable character

SUSTAINABILITY
THANK YOU