Aim of project:

> The primary aim of this project is to understand and test the idea of an *Active Living Senior Community* in Oost-Groningen.

Target group: Seniors of Oost-Groningen 55+

> high percentage live rural

Research:

> Getting to know who they are and what they want!
CONCLUSIONS & INPUT DESIGN

> Respect the individual, facilitate life

> Not a prewritten plan, but involve the target group from the start!

> Avoid any association with growing old

> Offer choice - more than just proficient!

> Provide recreation & vacation feeling close to home

> A welcome environment for all age groups
CONCLUSION: FACILITATE, DON’T DICTATE!
URBAN DESIGN - Location & urban model

Stadskanaal, Oost Groningen
THE GRONINGER LANDSCAPE - CHARACTERISTICS

THE ESSENTIAL THEMES
- seasons
- crops
- cultivated structure

THE DIFFERENT TIMES OF YEAR

EXPERIENCE THE SEASONS

Project definition
Research
Urban Design
Architectural Design
Archetype
Sustainability
Integration

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URBAN DESIGN - The Groninger landscape - Themes

- Local focus
- Participation of residents
- Connection with Stadskanaal
URBAN DESIGN - The Groninger landscape
URBAN DESIGN - The Groninger landscape

Project definition
Research
Urban Design
Architectural Design
Archetype
Sustainability
Integration

architectural design

Senior community
Stadskanaal Community
Connect
CONCEPT

Location: The Groninger landscape

SUSTAINABILITY

Target group

EXPERIENCE THE SEASONS

THE ESSENTIAL THEMES

seasons

crops

cultivated structure

THE DIFFERENT TIMES OF YEAR

DIVERSITY

LONG LINES

ORGANIZED

Archetype

THE BARN (Boerenschuur)

Connect

PROJECT DEFINITION

Research

Urban Design

Architectural Design

Archetype

Sustainability

Integration
CONCEPT

THE BARN

ACTIVITIES

MEETING POINT

SOCIALIZING

SHELTER

SALES

STORAGE

Urban Design

Architectural Design

Archetype

Sustainability

Integration
CONCEPT

Senior community

THE BARN

Stadskanaal Community
CONCEPT

Senior community

Stadskanaal Community

- Project definition
- Research
- Urban Design
- Architectural Design
- Archetype
- Sustainability
- Integration
ARCHETYPE: THE BARN (Boerenschuur)

The traditional ‘barn’ in the Oost Groningen
> agricultural farming - large barns

Simplicity
Form & closed character
Construction & organization
Spacial quality
ARCHETYPE: THE BARN (Boerenschuur)

Form & closed character

Transformation to contemporary form to open up the facades

Traditional pure monolithic form of a barn
ARCHETYPE : THE BARN (Boerenschuur)

Form & closed character

Traditional closed facade with very small openings

From most angles closed, wooden slats half open, on a openable louvre door
ARCHETYPE: THE BARN (Boerenschuur)

Form & closed character

monolithic appearance with a higher level of detail when closeby
ARCHETYPE : THE BARN (Boerenschuur)

Form & closed character

Open/Closed facade - When viewed from an angle the facade appears to be closed, daylight can enter the room and the 90 degree angled views allow both view from inside and outside.
ARCHETYPE : THE BARN (Boerenschuur)

Form & closed character

Open/Closed facade

OUTSIDE

WINTERGARDEN

LIBRARY/MULTIMEDIA

Project definition  Research  Urban Design  Architectural Design  Archetype  Sustainability  Integration
ARCHETYPE : THE BARN (Boerenschuur)

Form & closed character

The pure geometric form of a traditional shed have been transformed without destroying the simplicity of it.
ARCHETYPE : THE BARN (Boerenschuur)

Construction & spatial organization
ARCHETYPE: THE BARN (Boerenschuur)

Construction & spatial organization

contemporary truss construction

characteristic rhythmic structural pattern retained
ARCHETYPE: THE BARN (Boerenschuur)

Construction & spatial organization

Traditional construction with trusses

- Walls play an important role in the construction of the roof
- Moment connection

Transformation to contemporary laminated truss

- Construction allows for a lot of freedom in the roof and facade
- Moment connection using prestressed Lignoforce connections
ARCHETYPE : THE BARN (Boerenschuur)

Traditional constructions need supports to create a solid construction.

Ligno-Force joins aids in creating a contemporary construction.

Spacious quality retained.
ARCHETYPE : THE BARN (Boerenschuur)

Construction & spatial organization

Traditional barns in Groningen are organized from one side with a secondary organization on the other side.
ARCHETYPE : THE BARN (Boerenschuur)

Similar organization principle used to organise the contemporary design program.

- Multifunctional storage
- Wintergarden
- Kitchen
- Sunspace (winter)
- Shaded patio (summer)
- Restaurant

Project definition | Research | Urban Design | Architectural Design | Archetype | Sustainability | Integration

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ARCHETYPE : THE BARN (Boerenschuur)

Ground floorplan

Slide 28
ARCHETYPE : THE BARN (Boerenschuur)

Similar organization principle used to organise the contemporary design program

Storage

Plantroom

Storage/restaurant

Storage
ARCHETYPE: THE BARN (Boerenschuur)

First floorplan

Section A
Section B
Section C

Project definition  Research  Urban Design  Architectural Design  Archetype  Sustainability  Intergration

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ARCHETYPE : THE BARN (Boerenschuur)

Spaciousness & construction
ARCHETYPE: THE BARN (Boerenschuur)

Spaciousness & construction
ARCHETYPE : THE BARN (Boerenschuur)

Materialization

Traditional clay products

Platohout - Face charred with a burner
Materialization: Wood

> Sustainable
> Can be used for basically everything: construction, facade, interior, furniture, flooring, ceiling etc.
> Natural & traditional material

Interior: wooden elements and walls
Laminated construction trusses
ARCHETYPE : THE BARN (Boerenschuur)

Summary
The building blocks

SHELTER
THE SHELL
The outer skin and rain jacket of the building

SEASONS & SURROUNDINGS
A VIEW TO ALL SIDES
Glas elements with dark jambs, transparent material used to sepperate the outside and inside climates. The dark jambs make the appearence less dominant

SPACIAL ORGANIZATION & CHARACTER
THE TRUSS - CONSTRUCTION
Dominant and visible element in and outside the building where the shell has been removed.

FUNCTION ORGANIZATION
FLOORS & WALLS
Spacial seperation elements. Possibility to change and remove elements in the future.
INTERGRATION: BRINGING IT TOGETHER

Result: The contemporary groningse barn
INTEGRATION OF SUSTAINABILITY: A MATTER OF COURSE

More than just ‘green’
SUSTAINABILITY: A MATTER OF COURSE

Use the sun
Orientation, Positioning of glass

sun, wind & rain

orientation

rotated to maximize the sun through the building
daylight infiltration
Passive solar energy & unheated sunspace

autumn & spring

floor mass, direct sunlight
Passive solar energy & unheated sunspace
SUSTAINABILITY : A MATTER OF COURSE

Thermal insulation & Sun shading

Project definition | Research | Urban Design | Architectural Design | Archetype | Sustainability | Integration

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SUSTAINABILITY : A MATTER OF COURSE

Air quality & Ventilation

Summer

Winter

Prevent heat losses.

Balanced ventilation & heat recovery.
SUSTAINABILITY: A MATTER OF COURSE

Air quality & Ventilation

Laminated construction

300

50

Louver door
- Painted vertical wooden slats (95x50)
- Fixed in a hidden steelframe with steel cables & tubes

Insect mesh
- Black colour

Glass shutters
- HR++ glass
- Insulated aluminium frame
- Rubber separators

Project definition | Research | Urban Design | Architectural Design | Archetype | Sustainability | Integration

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**SUSTAINABILITY : A MATTER OF COURSE**

**Water conservation**

> Rain water harvesting
SUSTAINABILITY: A MATTER OF COURSE

Heat pump, heat recovery & solar hot water
Positioning installations

SUSTAINABILITY : A MATTER OF COURSE
SUSTAINABILITY : A MATTER OF COURSE

Flexibility
INTERGRATION: BRINGING IT TOGETHER

Integration of control and choice for the users

Sunspace
(Autumn, Winter & Spring)
Outdoor patio
(Summer)

Wintergarden

Restaurant
ENJOY LIFE @ PAGEDIEP DAL
ANY QUESTIONS?

Thankyou for your time!