The Aalborg model of teaching in Architecture

- a talk about the Aalborg concept of teaching architectural design.

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The Aalborg model of teaching Architecture

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At Bern University of Applied Sciences Architecture, Wood and Civil Engineering June 4 20

In my presentation, I will focus on:

1. A general introduction to the study environment in Aalborg and the study programme at Architecture and Design, Aalborg University.

2. A presentation of the specialisation in Architecture and the challenges that we have had to face when creating this course of study.

3. Giving a more detailed example of a final project dealing with Environmental Sustainable Architecture.

Architecture & Design domicil Gl. Torv

Sydney Operahouse
By Jørn Utzon

Utzon Centre
By Jørn Utzon
& Kim Utzon

Bachelor education

Basic studies programme:

1. Semester	Intro to PBL studies & Ark/Design theory/method + mathematic
2. Semester	Intro to PBL studies & Ark/Design theory/method + mathematic

Basic educational programme:

3. Semester	Main Project: DD/ID + Ark/ Urb Mini Project
4. Semester	Main Project: Ark/Urb + ID/ DD Mini Projekt
5. Semester	Main Project: TEMA & -pre. specialization./ optional study activities

6. Bachelor Project.: Architecture | Industrial Design | Urban Design | Digital Design

Architecture & Design Master education

Architecture master programme

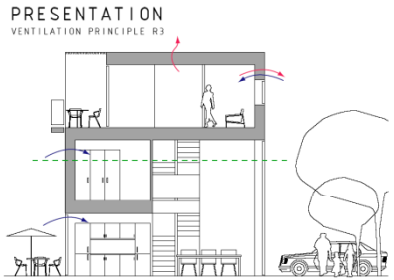
1.1. Main Project: Project Work 23 ECTS /7 ECTS Project unit courses. Mini Project 7/2 ECTS.

1.2. Main Project: Project Work 23 ECTS /7 ECTS Project unit courses/2. Mini Project 5/1 ECTS

2.1. Main Project: Project Work 25 ECTS /3 ECTS Project unit courses. Mini Project 5/2 ECTS.

Plus optional study activities: courses and study trips

2.2. Master Thesis 30 ECTS.



Architecture & Design Master education

Architecture master programme

1.1 . Tectonic Design. Archietctural Form and Structure + Minip.: Studies in Tectonic Design

1.2. Architectural Form, space and Environmental Design + Minip.: Conceptual Archi. Design

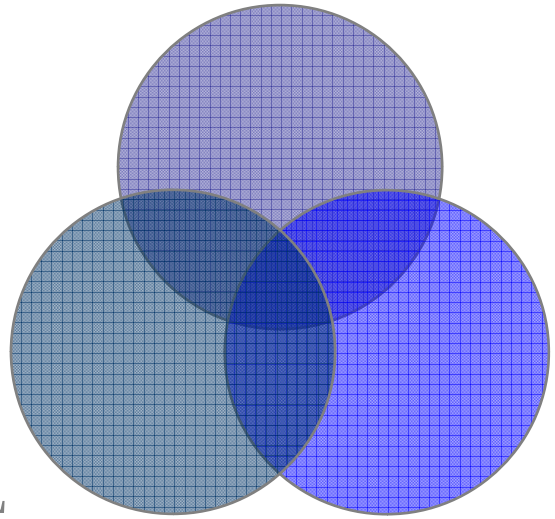
2.1. Architectural Research and Development + Minip.: Architectural Project Manegement

Plus optional study activities: courses and study trips

2.2. Master Thesis

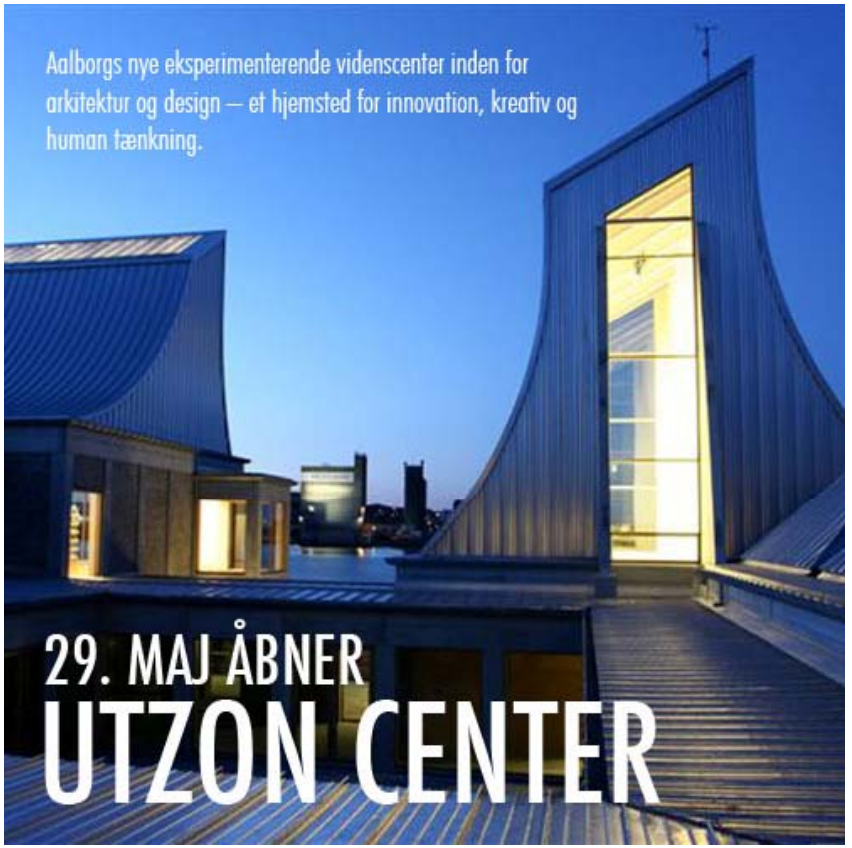
Tectonics

TECHNIQUE



MATERIAL FORM

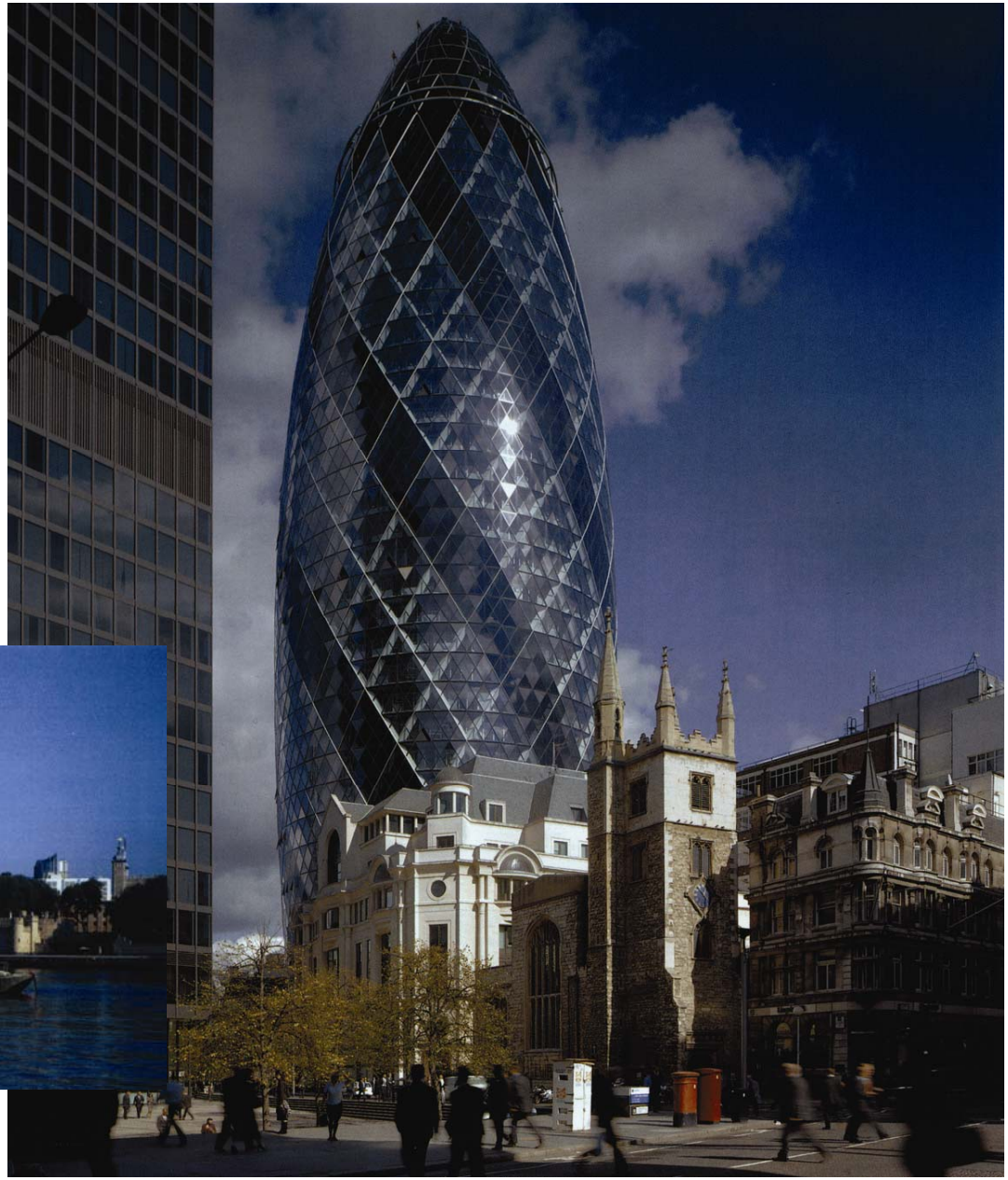
Frampton proposes that tectonics is a means to reveal the essence of a building. Therefore he suggests logic constructions, in order to clarify the structure of a piece of architecture, and make it immediately understandable.



Utzon Centre by Jørn Utzon & Kim Utzon
http://www.utzoncenter.dk/

Swiss Re UK
Headquarters,London

Foster and Partners



EDITT Tower,

Singapore

Ken Yang

Ecotowers,

London

Ken Yeang

Is it important to make sustainable buildings?

- The global environment is in a poor state.
- Over the coming years, building legislation will require energy consumption for construction to be reduced by up to 50-90%.
- To bring down the CO2 level.
- Developing new integrated building concepts is therefore necessary.
- In Europe, today, the ”Passiv Haus Concept” is in focus and the ultimate aim is to build energy-producing houses by means of sustainable energy sources.

“Since 1998, floods in Europe have caused some 700 deaths, the displacement of about half a million people and at least 25 billion Euro in ensured economic losses”.

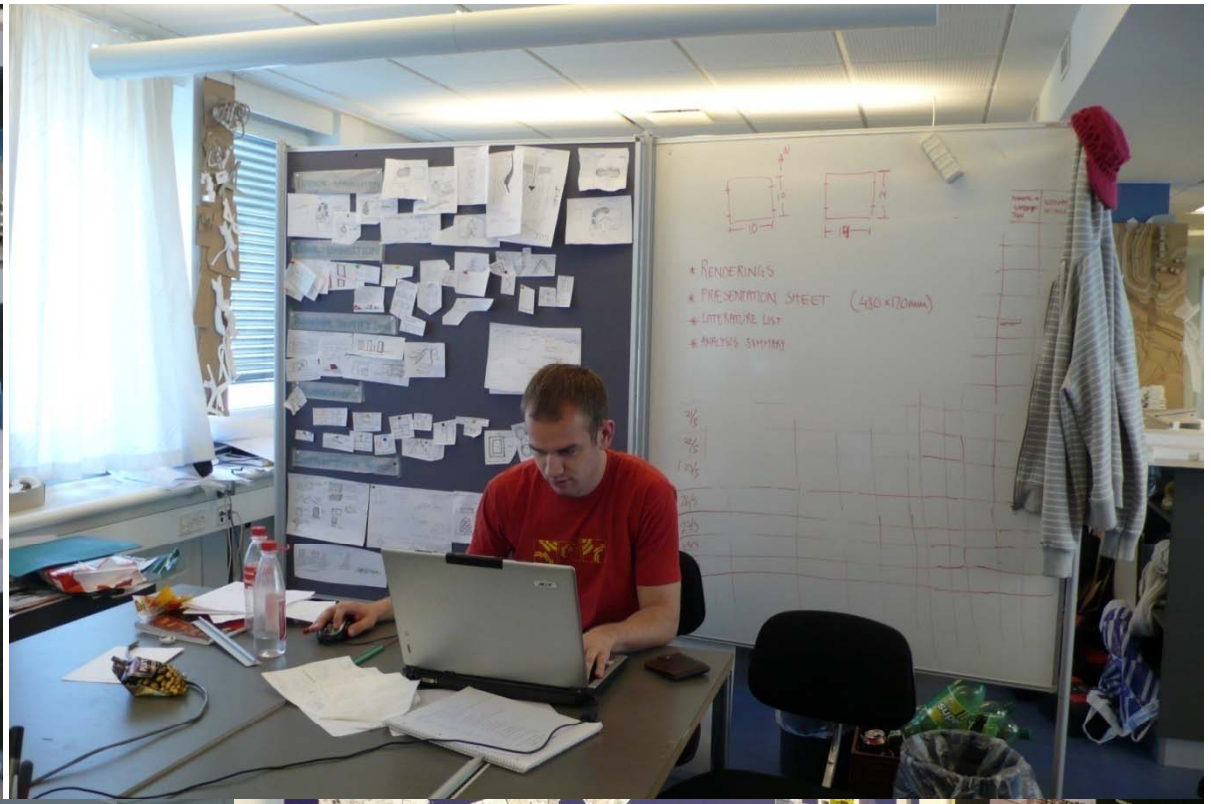
(From Press Release of the European Parliament April 2007)

The great challenge!

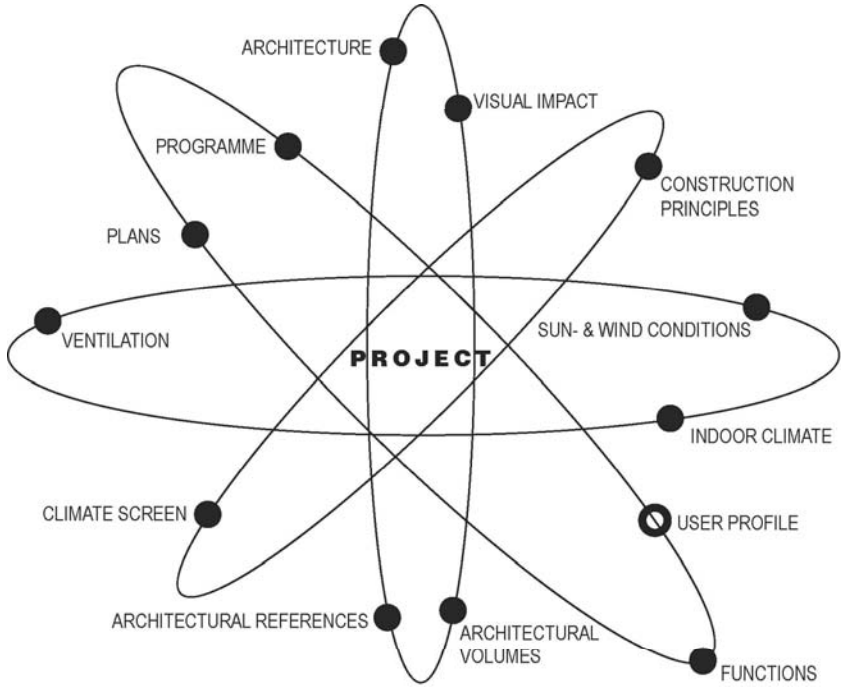
- The building and construction industry is today facing great challenges due to the fact that energy consumption will have to be reduced to a considerable degree within the next few years in order to ensure that no further damage is done to the global environment.

- The industry is thus facing major changes in terms of public regulation and in the way building and construction is carried out in practice, whereby “bad habits” seen in relation to an energy optimisation of the building will have to give way to new and better methods.

- It has been a natural challenge for a relatively new university like Aalborg University to develop teaching methods that are tailored to dealing with current societal/technological issues. In terms of both research and teaching, Aalborg University utilises an interdisciplinary approach to a considerable extent.


RENDERINGS
PRESENTATION SHEET (430 x 120mm)
LITERATURE LIST
ANALYSIS SUMMARY

The Integrated Design Process (IDP) at A&D



The Integrated Design Process are using the professional knowledge and design method from architecture and parameters from engineering in an integrated process.

The architect's artistic approach to the creation of ideas as well as he or her ability to see new solutions and work strategically and Inter-disciplinary in interaction with engineering parameters is very important.

Mary-Ann Knudstrup

Problem formulation / project idea / aim

↓

Analysis phase

Analysis of site, urban development plans, company profile, functional diagram, energy and indoor environment principles as well as principles of construction.

(*ideas to the main concept)*

Aim & program

↓

Sketching phase

Through the sketching process, architectural ideas are produced and linked to principles of construction, energy consumption and indoor environment. As well as the functional demands to the new building. In this phase*, the main concept* usually emerges.

↓

Synthesis phase

Architectural & functional qualities, the construction and demands of energy consumption and indoor environment flow together, and more qualities may have been added.

A new building has been created

↓

Presentation phase

The final project is presented in a report, drawings, cardboard model and via IT visualisation.

Mary-Ann Knudstrup

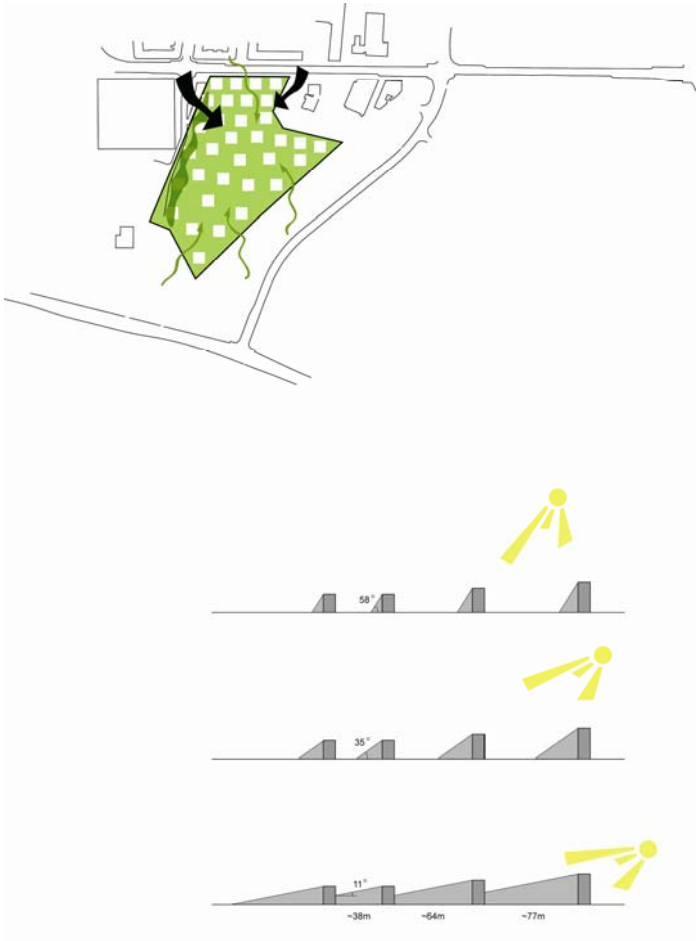
The barriers and the challenges that appear when you cross the borderland between architecture and engineering

- It is important to combine knowledge from engineering and architecture from the beginning of the process.

  By making an integrated approached and collaboration between design solutions of the architects and the technical parameters of the engineers running into conflicts at later stage can be avoid

- So it’s a good idea to take the technical parameters into consideration early on in the architectural process and to include technical calculations already in the sketching process.

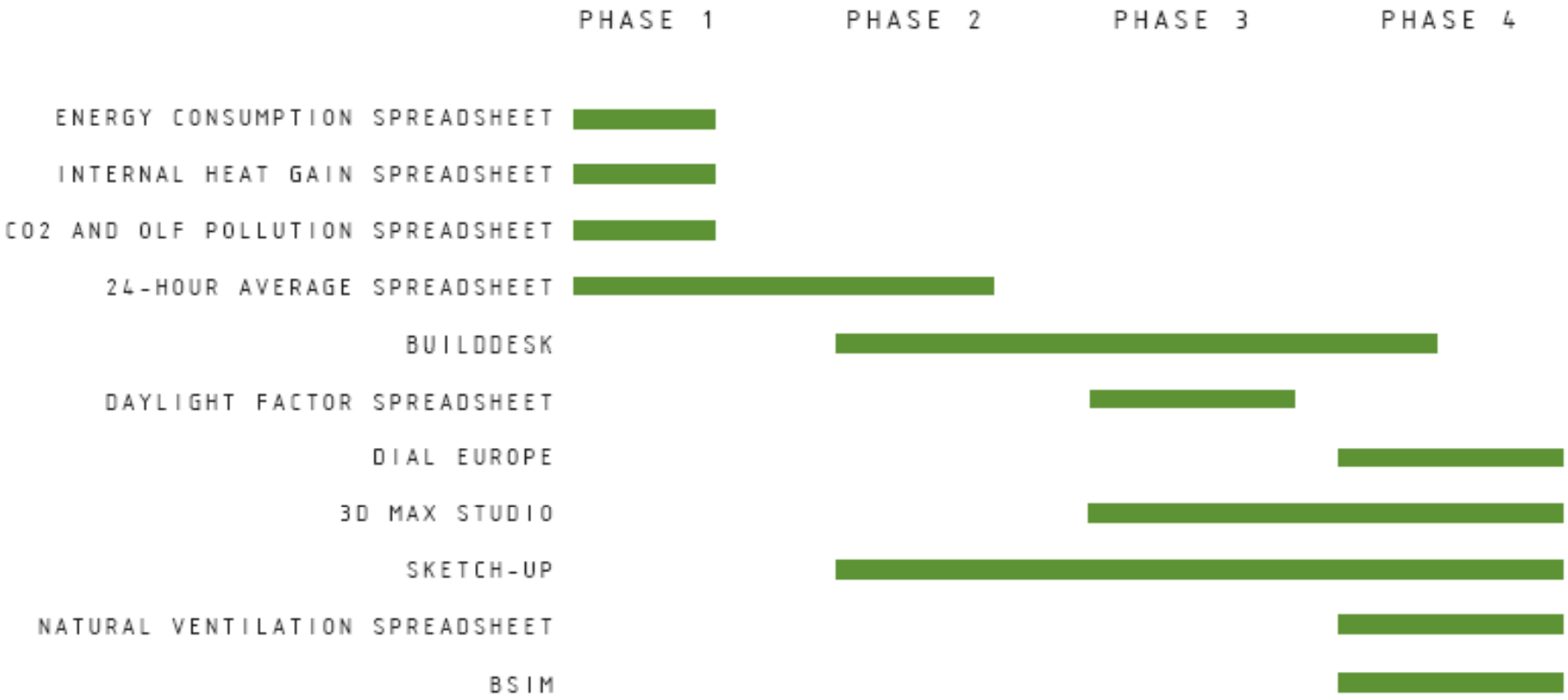
Housing at the old goods railway area in Aalborg

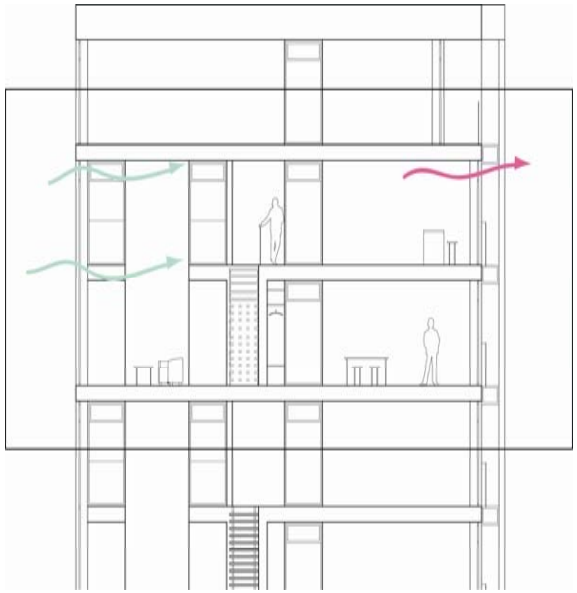


THE FLAT TO THE VEST

To allow for the integrated design process to function optimally, a number of design and calculation tools are available for use in the different phases. The phases and tools will undoubtedly overlap each other depending on each individual project and process.

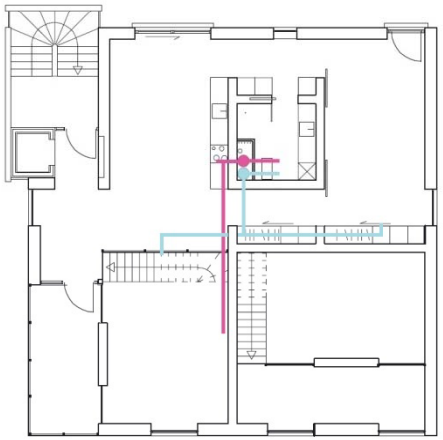
PROCESS

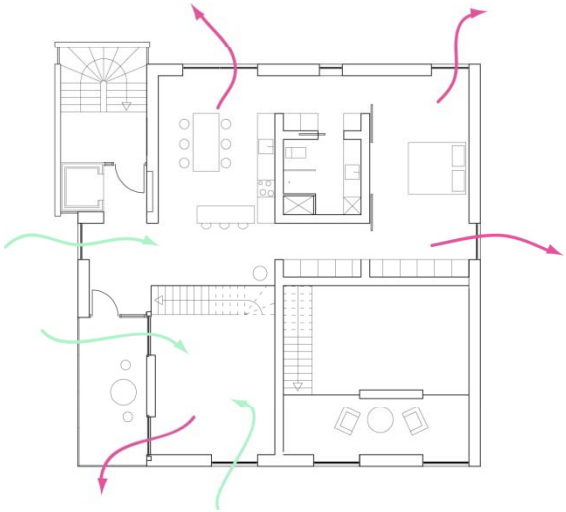




Natural ventilation

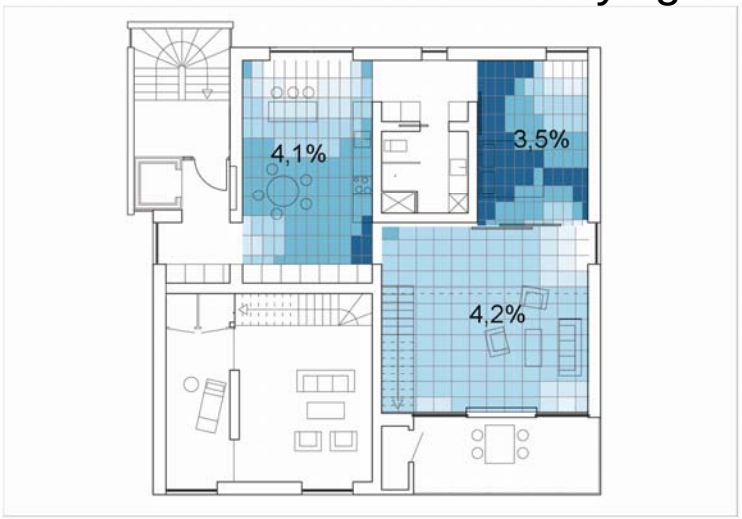
Mechanical ventilation





THE FLAT TO THE EAST

Day light



Thank you !