

# SENSORS BOOKLET

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# PROCESSING FACILITY FOR SEAWEED

**candidate**

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**title:**

Processing Facility for Seaweed

**institute:**

The Institute of Form, Theory and History

**supervisor:**

Erik Fenstad Langdalen



Photo by Alex Asensi

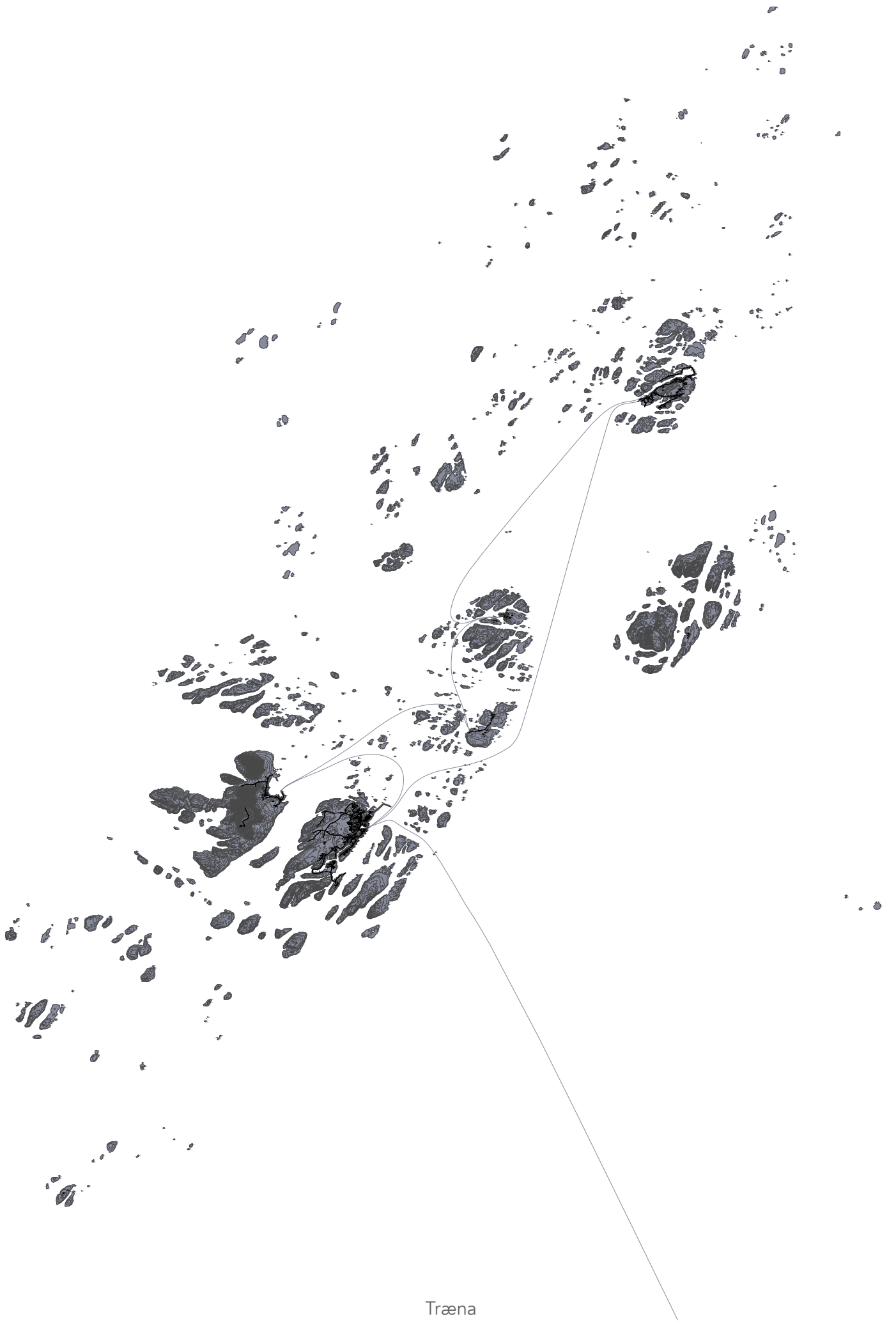
The project investigates a new industrial typology - a facility where high quality seaweed food products are produced. My interest is how the conditions and the requirements of a production process can inform architectural space.

Seaweed is one of the most unexploited natural resources on the planet. Norway has a large and rich occurrence of this re-growing resource and it can be turned into an important source of income for coastal communities.

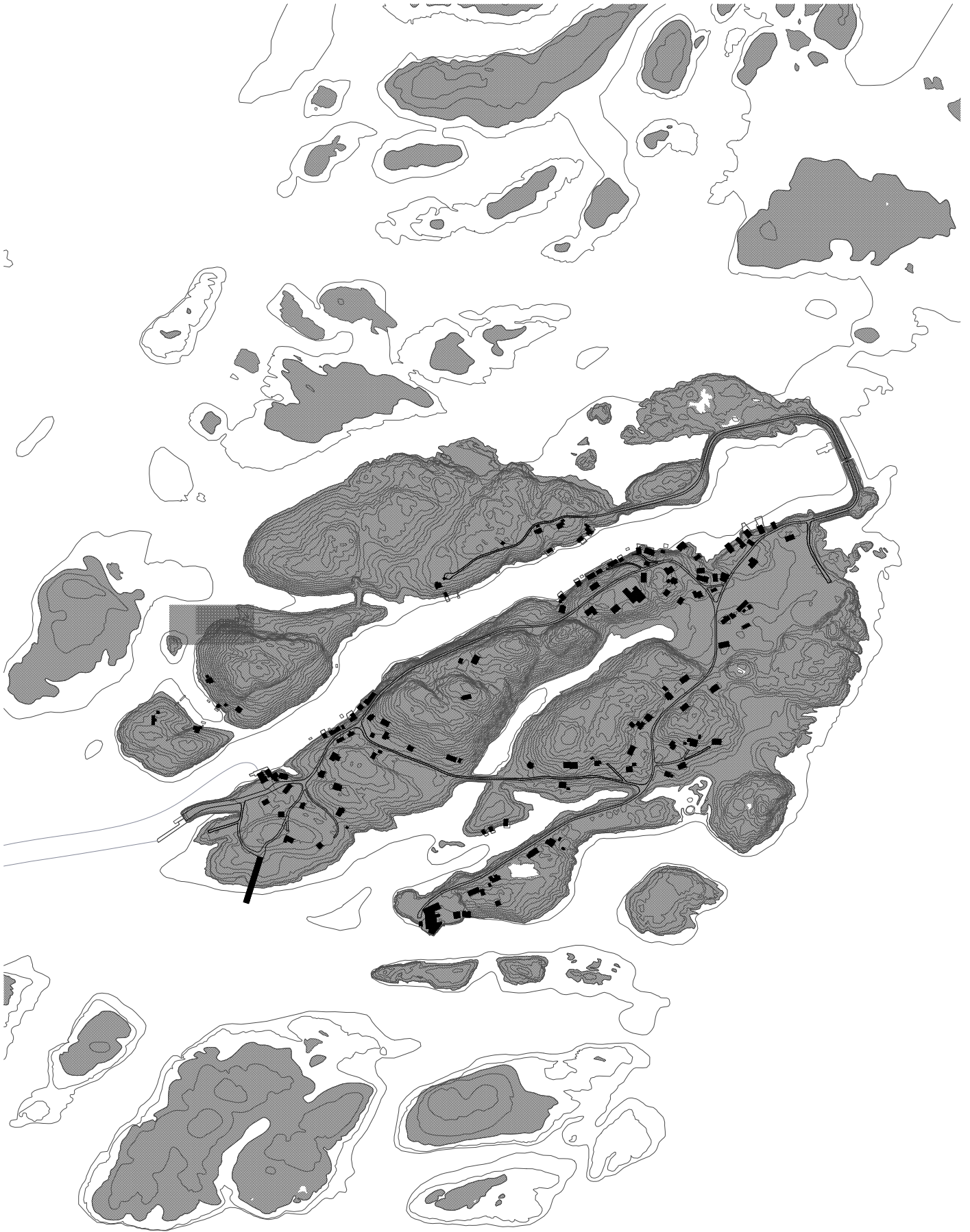
My starting point for this project is The Northern Company which today are located at the island Selvær in Træna and are temporarily using an old fish landing facility as a production space. I therefore started this project by looking into the possibility of reusing the old building, but through the process I discovered I was more interested in investigation how the conditions and the requirements of a production process can inform architectural space and working with a typology.

The location and the topography for where a processing facility for seaweed can be placed will vary, but a common challenge is the difference in the tide and the water level. The scheme is therefore based on the production line and the idea of the building as a bridge between the ocean and the infrastructure on land. By placing the building on columns the production facility can be placed in different types of terrain along the coast. The building is also oriented towards southwest to let the morning light come into from the east and the afternoon light from the west. This way one can also use the sun to dry seaweed is one wants to.

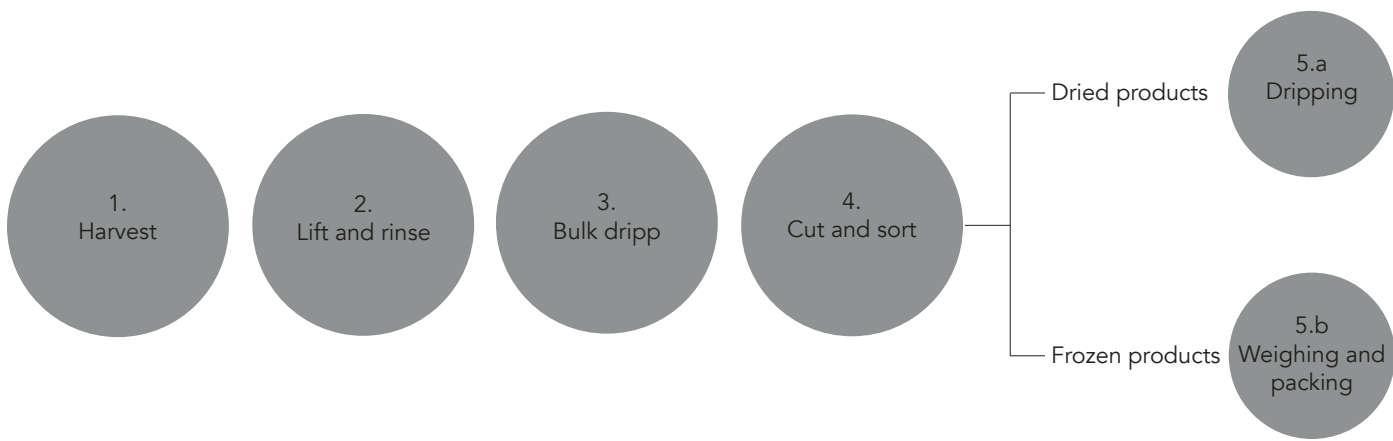
Since the seaweed industry still in its early stage I also had to envisage the production process and define a set of rules as a base for the architectural work. There are many ways of processing seaweed and a variety of products one would also imagine that each producer has different need and the size of the production facility will vary depending. In addition the building vary in size depending on the site. The load bearing structure is therefore independent from the walls to allow each producer to customise their facility for their needs. In addition is the whole building based on prefabricated elements.



Træna

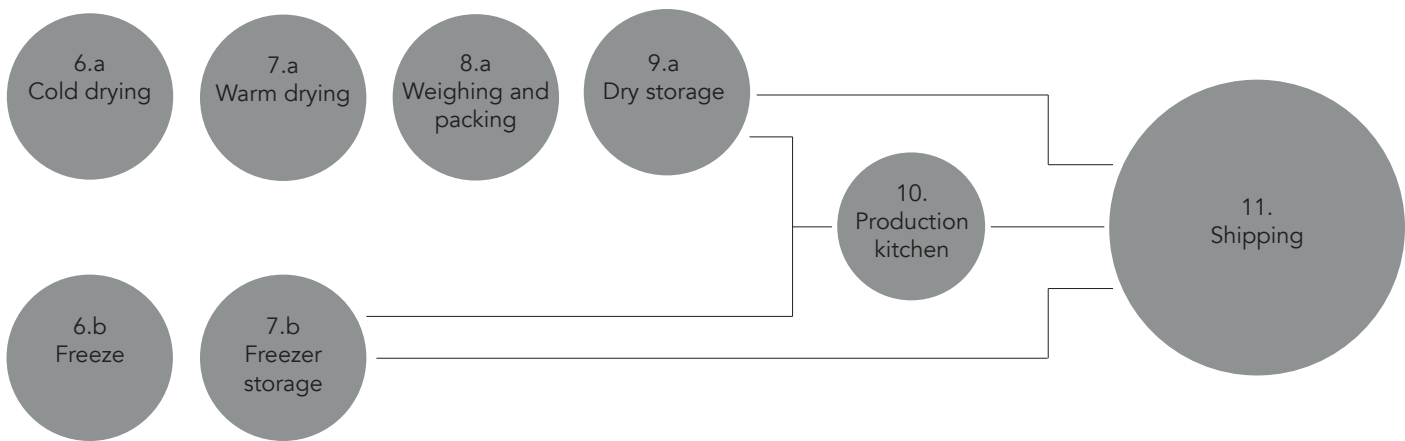


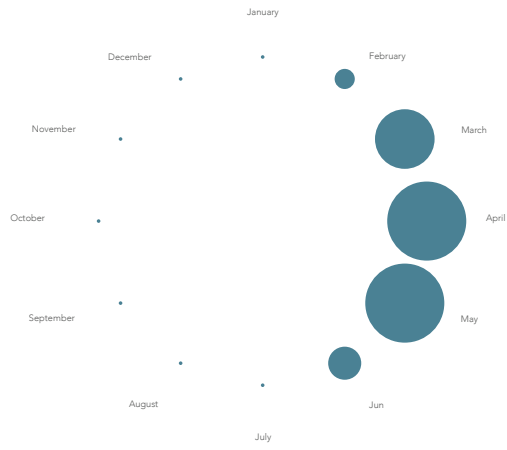
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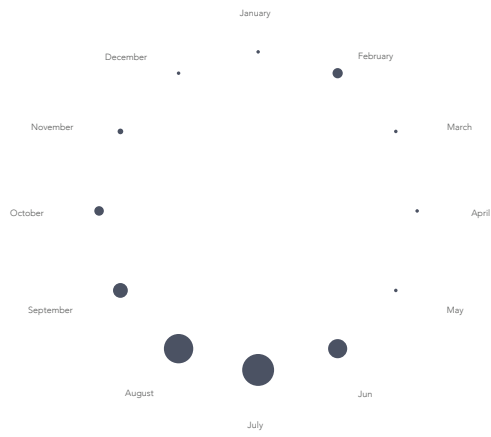
Production line



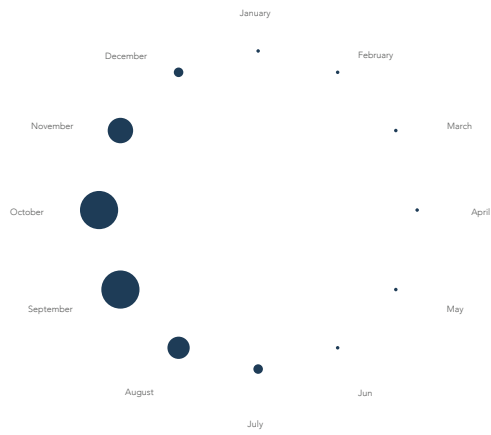




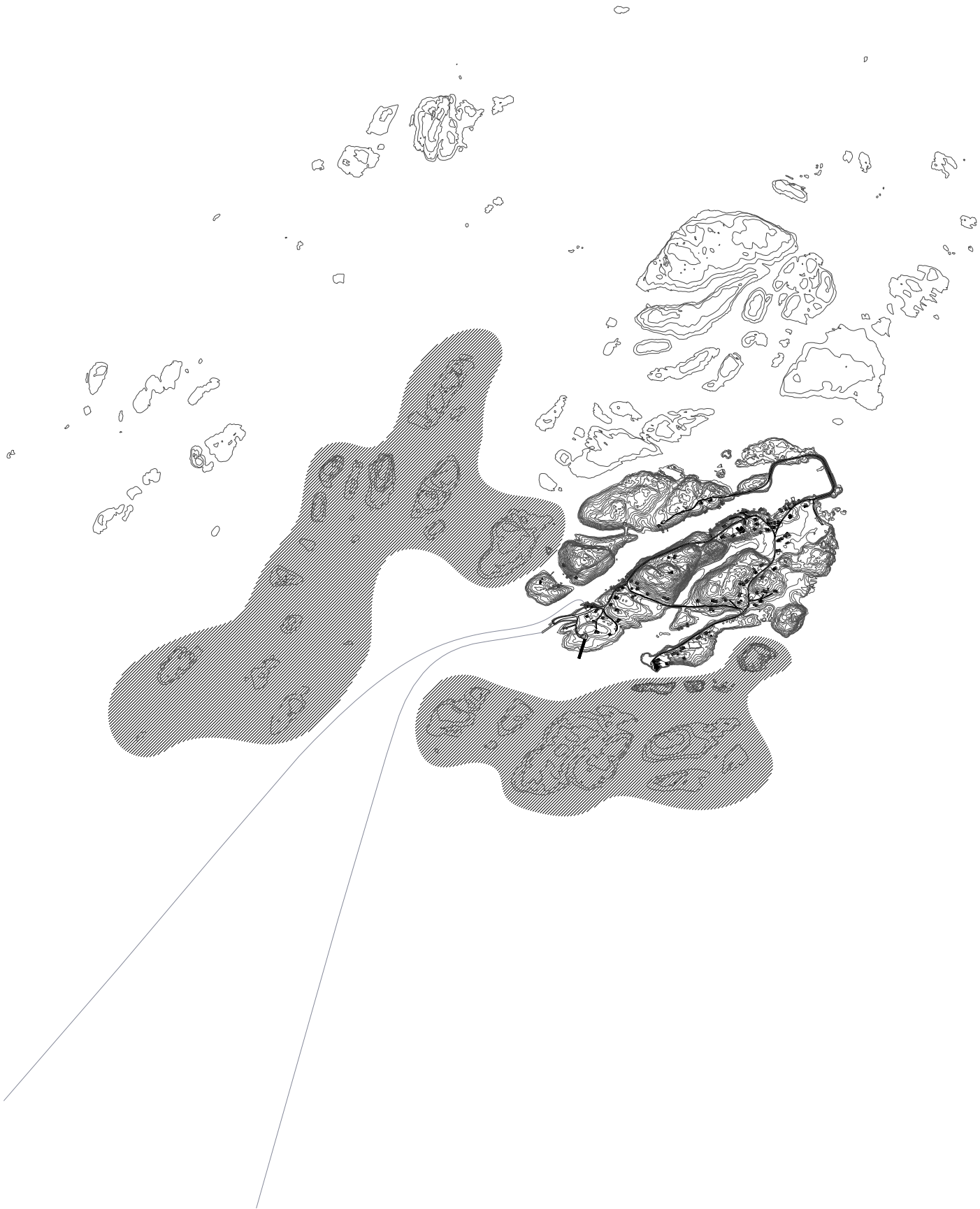
Harvest season



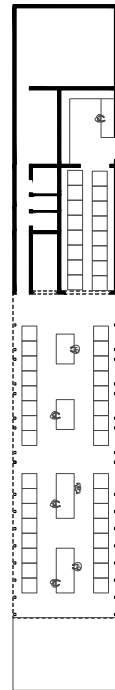
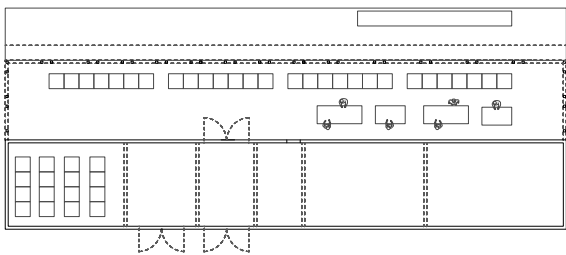
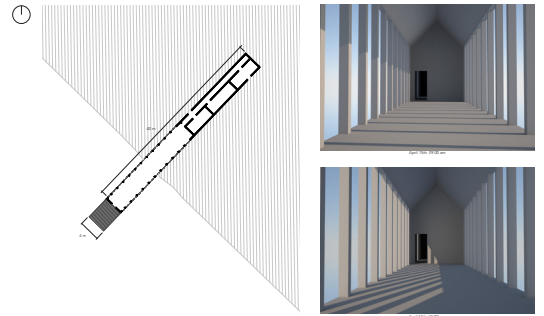
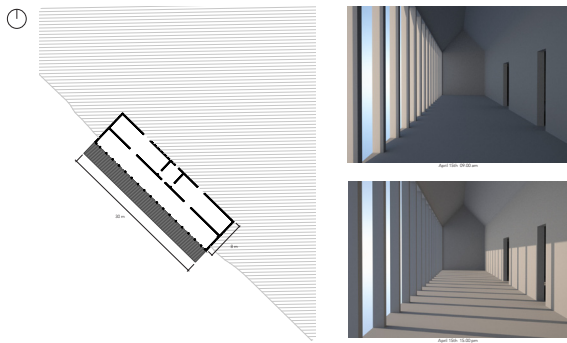
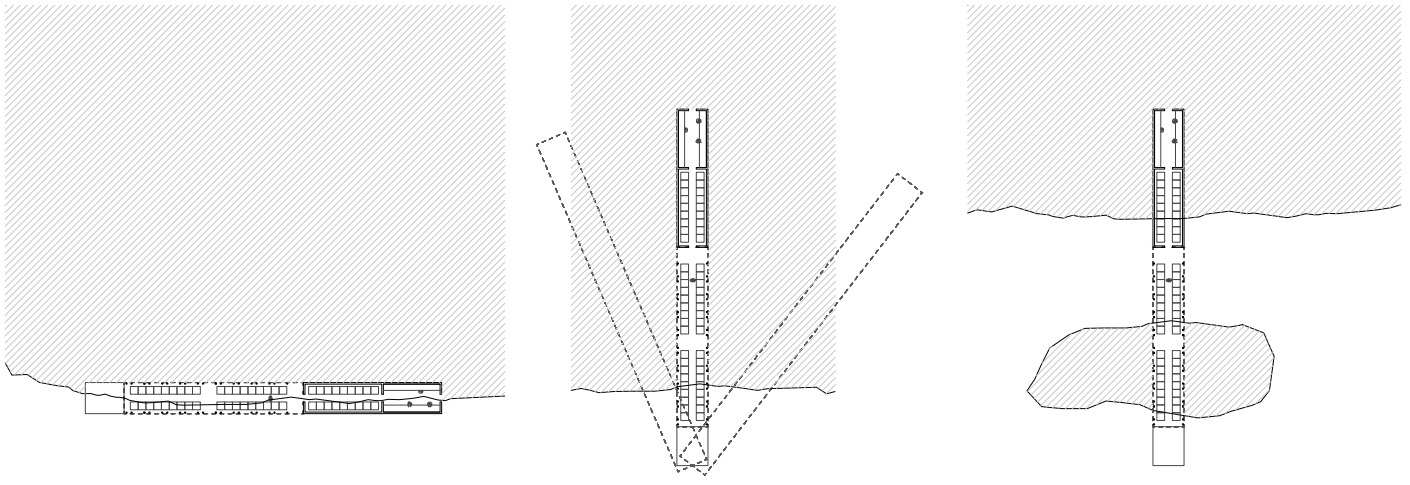
Træna Foodlabs



Product development












Harvest areas







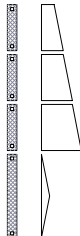




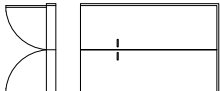



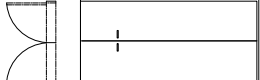


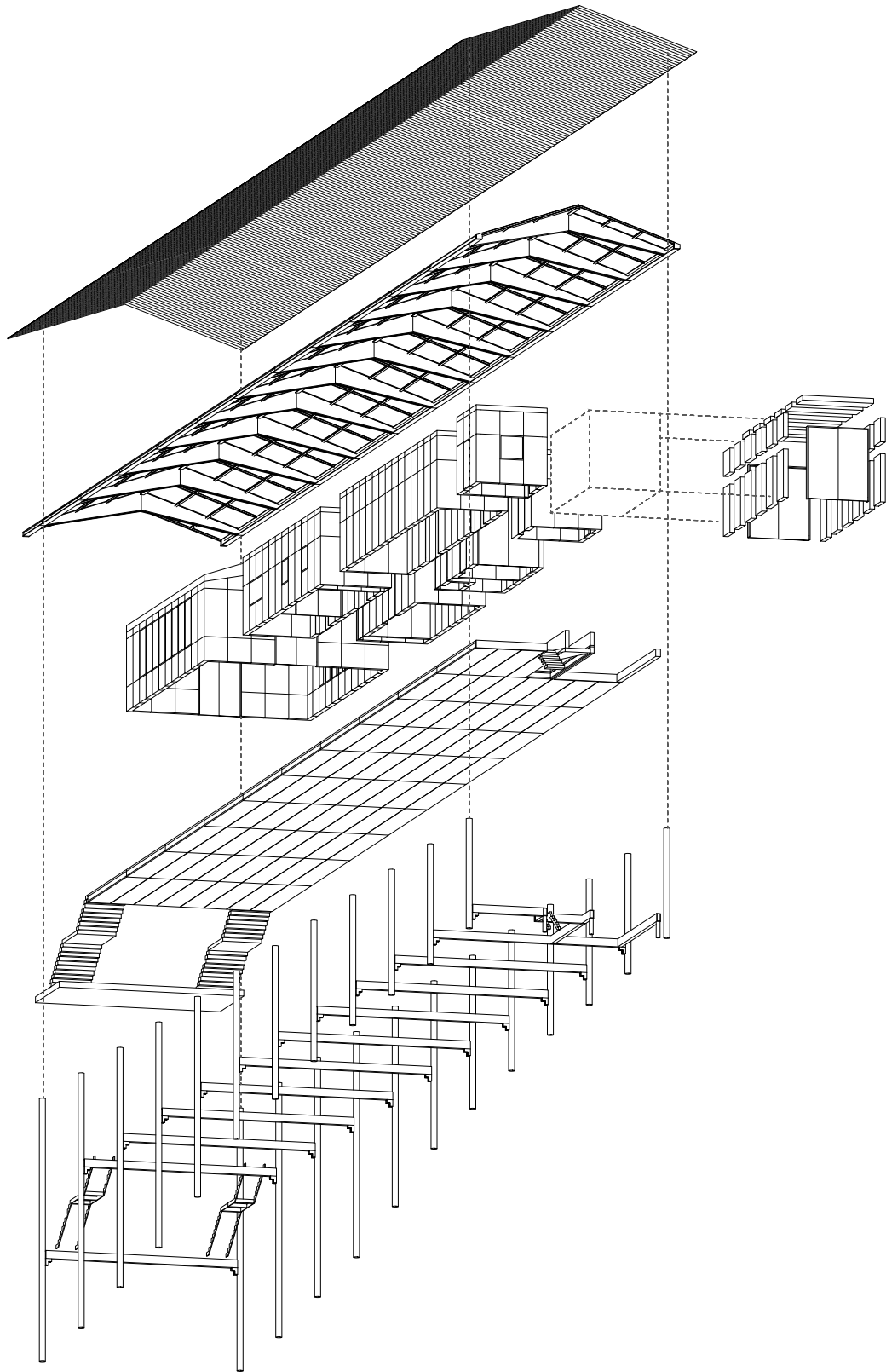
Sketches



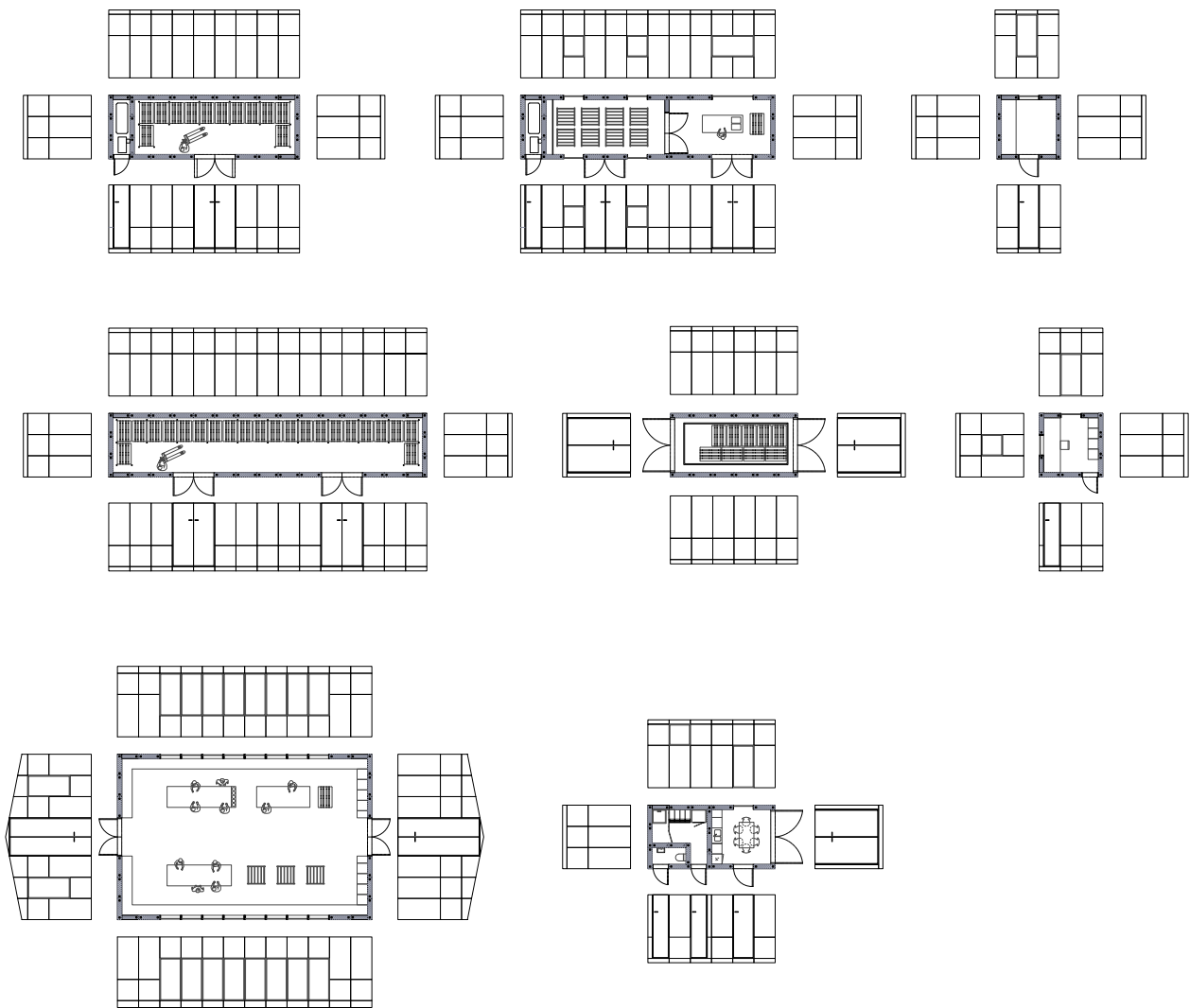
Siteplan

- Roof beam 1  x 44
- Roof beam 2  x 11
- Roof beam 3  x 22
- Roof beam 4  x 22  
x 24
- Roof beam 5  x 22
- Column  x 24
- Beam  x 12
- Floor element 1  x 75
- Roof cladding  x 100

- Roof element 2  x 67
- Wall element 1  x 100
- Wall element 2  x 120
- Wall element 3  x 22
- Wall element 4  x 7
- Wall element 5  x 67
- Wall element 6  x 4
- Wall element 7  x 12
- Window 1  x 21
- Window 2  x 6
- Window 3  x 5
- Door 1  x 5
- Door 2  x 5
- Door 3  x 2
- Door 4  x 3
- Door 5  x 2

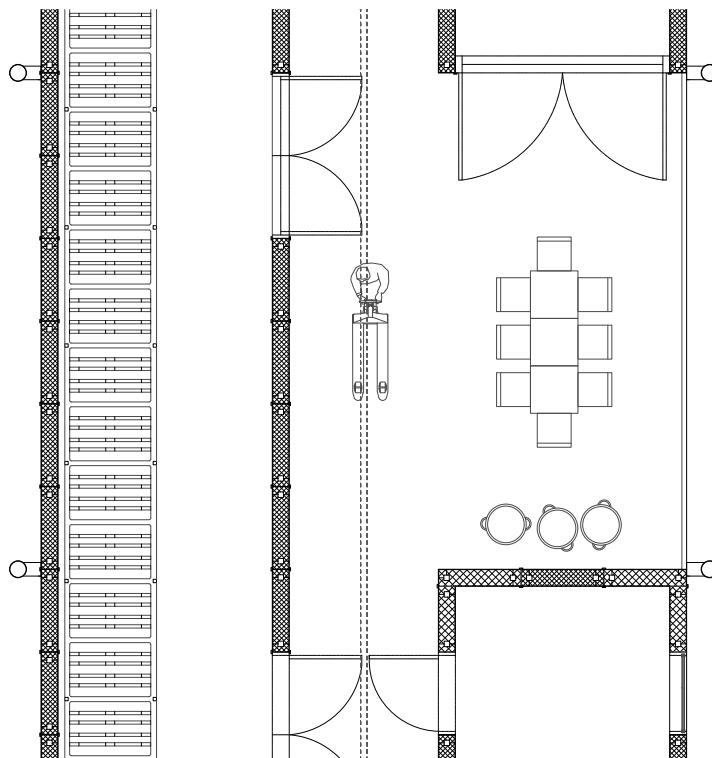
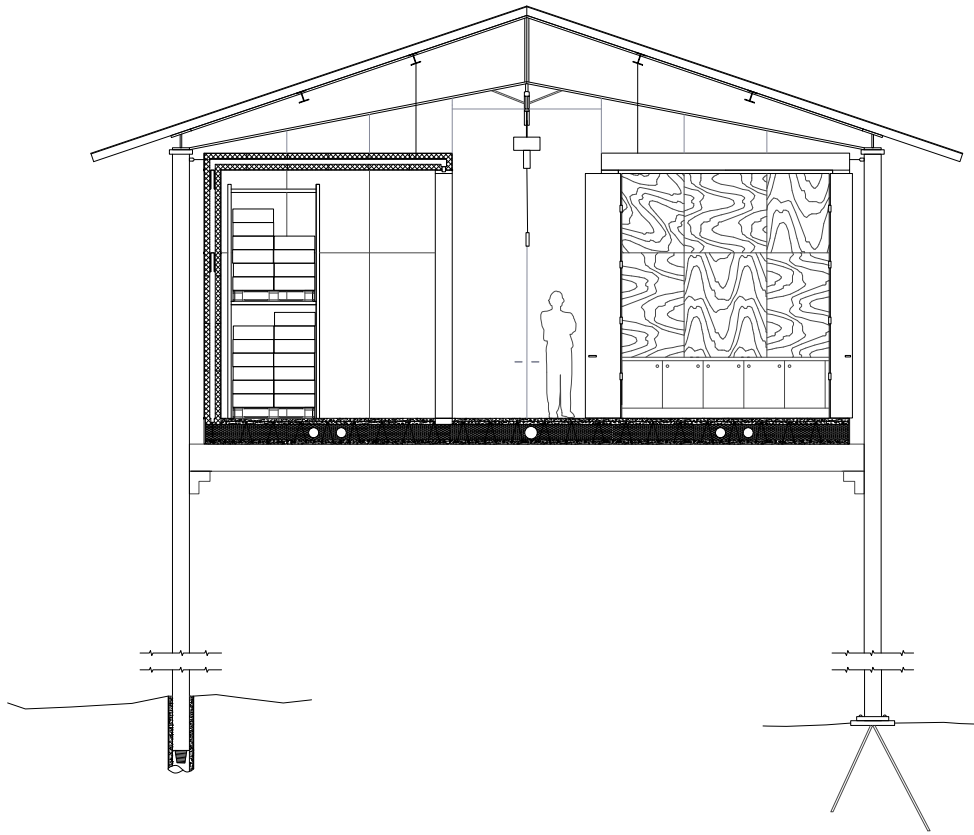


Axonometric of the assemblage of the prefabricated elements

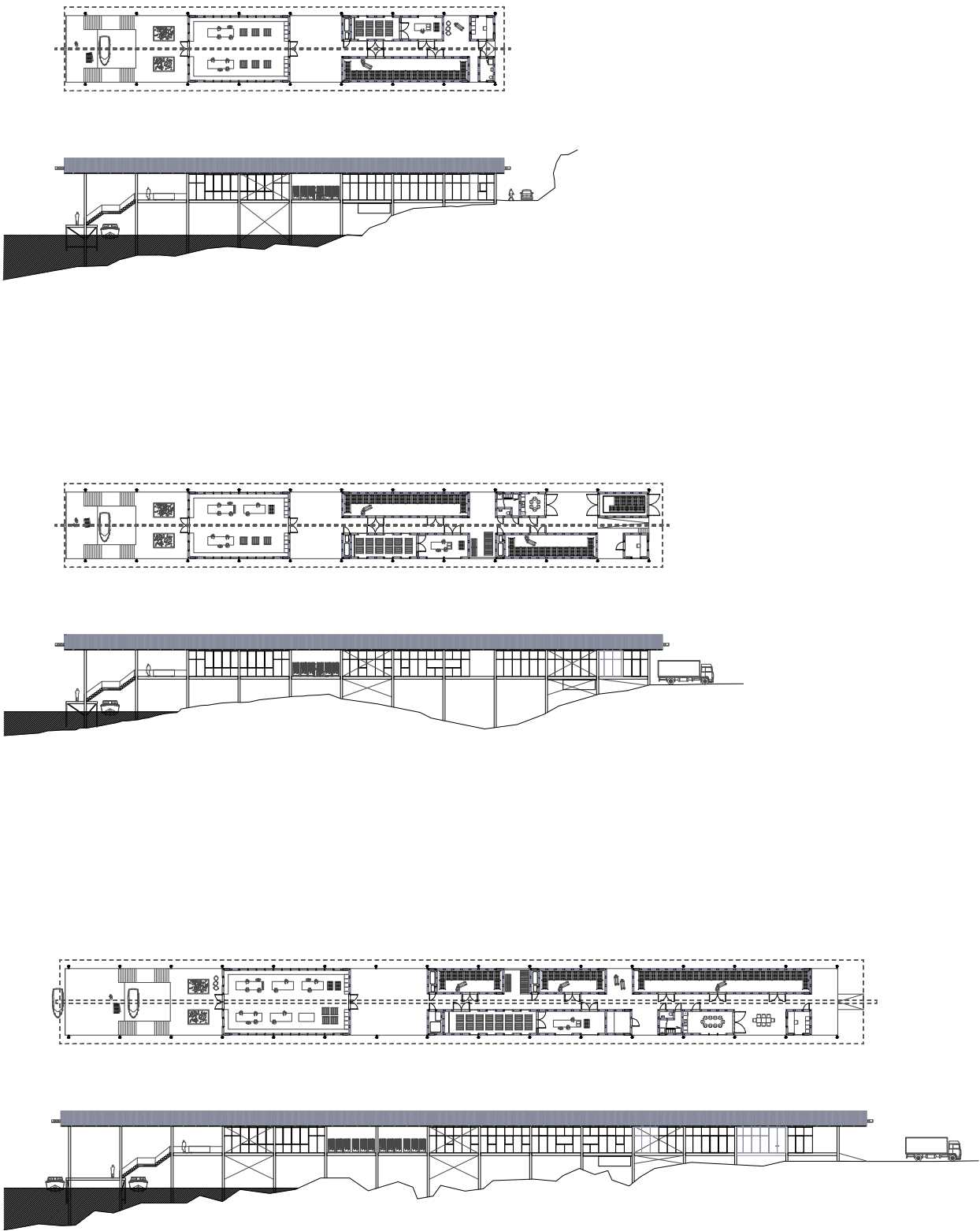


Assemblage of the facades with prefabricated elements of the refabricated elements



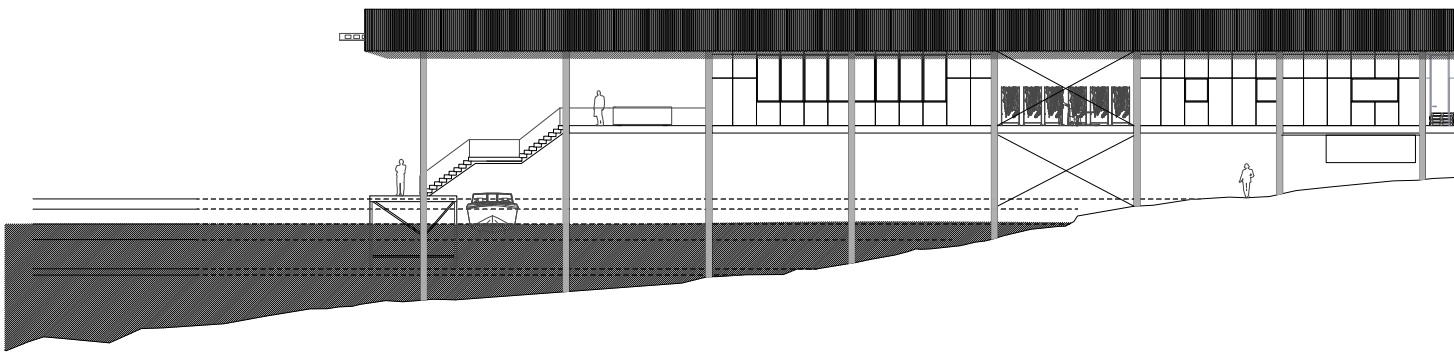
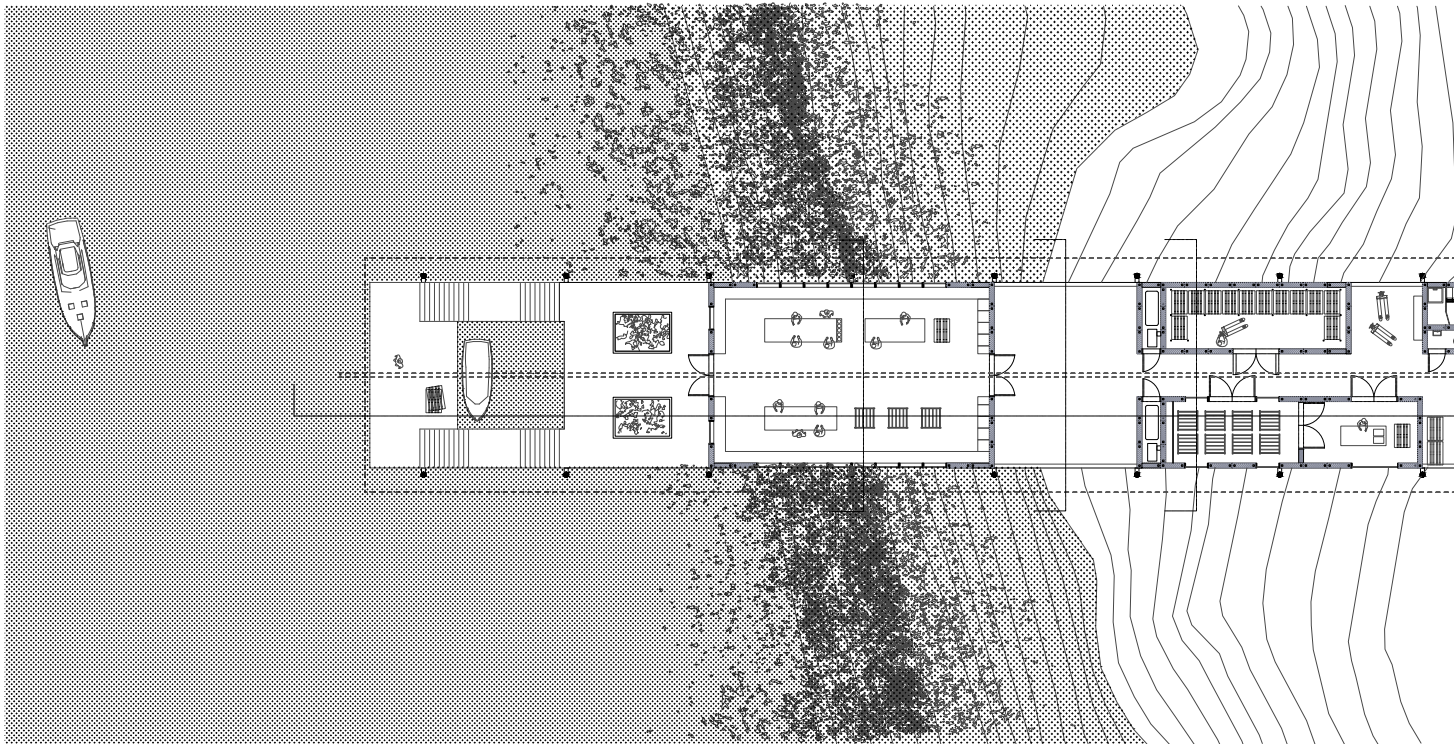
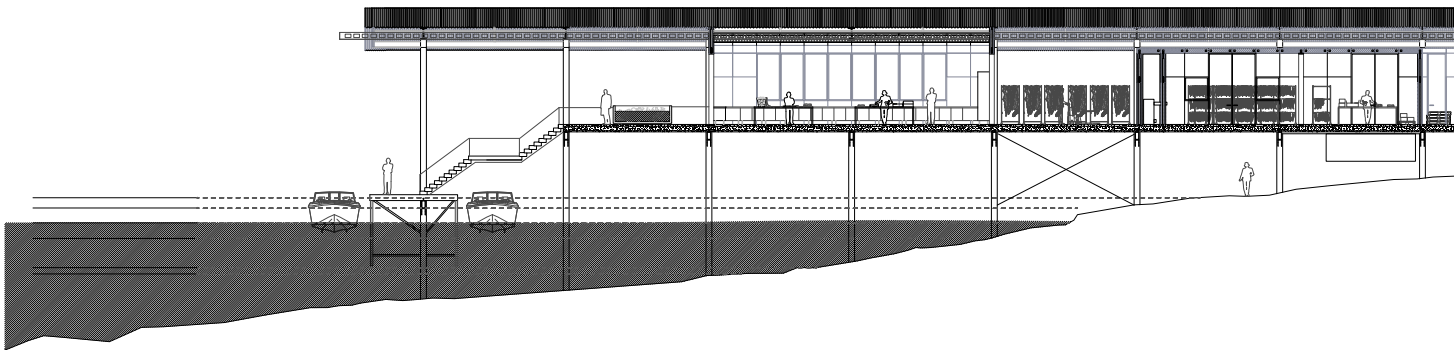


Section and plan



Examples of different combinations and sizes of production facilities





Plan, section, elevation of the proposed production facility for The Northern Company on Selvær

