



OPEN

Innovation Competition

Urban Food from Residual Heat

- DEADLINE JUNE 2, 2017

compete for
210 000 €

2 MSEK in prize money

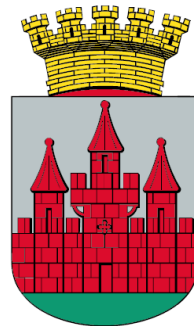
- 1 MSEK from Vinnova

- 1 MSEK from the competition partners

SSEC



Länsstyrelsen
Skåne



LUND



Malmö stad



Comptetion question(s)

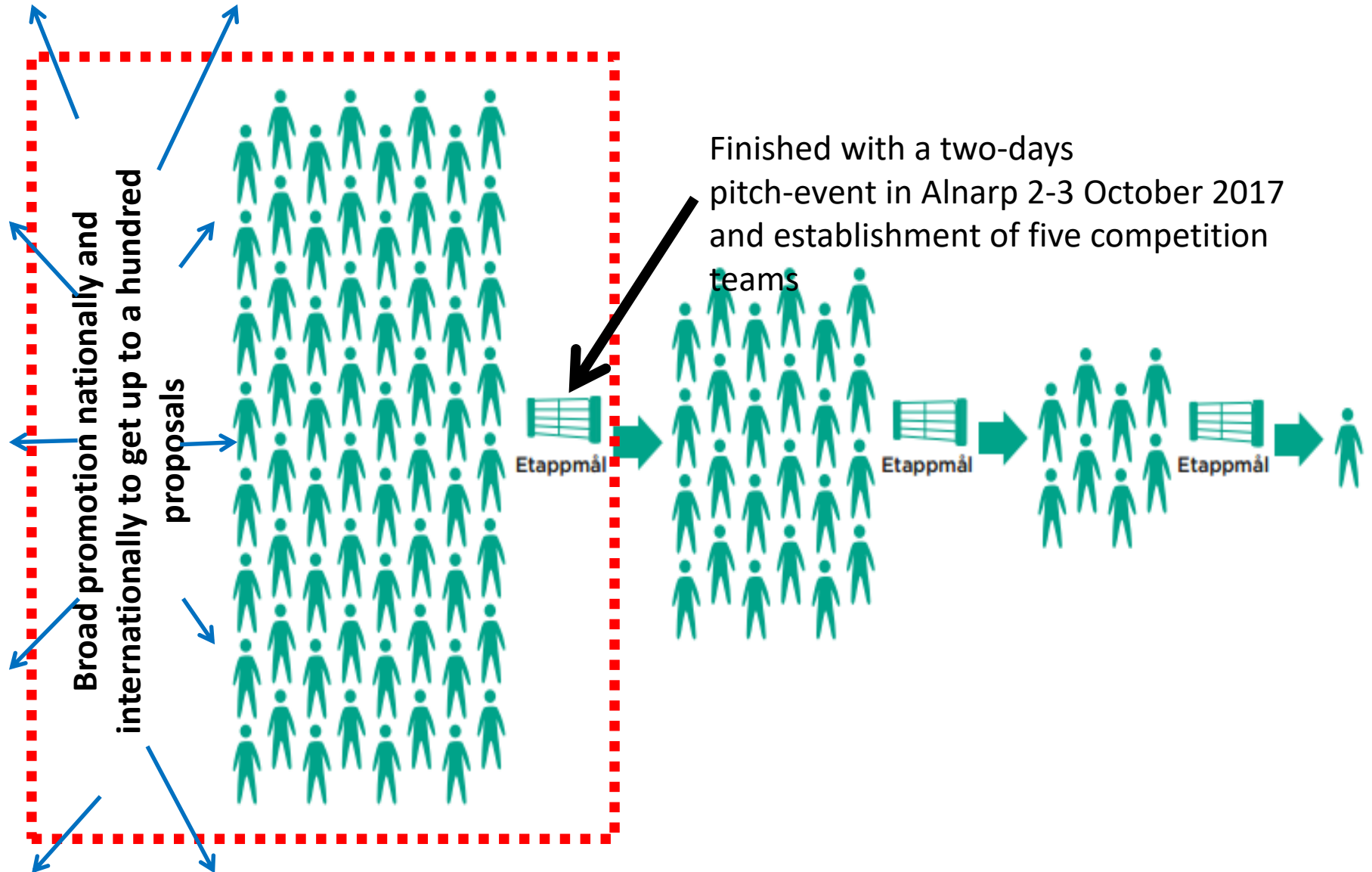
- How can biological production units using low temperature residual heat – and possibly other residual flows for biological production – be organised so that they can be located in dense urban areas whilst also having the potential for side functions such as in-house shop, food processing area, opportunities for employment and spaces for community events and social meeting?
- How can the production process be organised to be space effecient whilst maintaining profitability?
- How can technical challenges such as heat storage, heat distribution and cycles of residuals be solved alongside the project's ambition to create social value in the local community through the creation of employment, social meeting places and local distribution, sales and processing?

Practical implementation within a few years

- **Oskarshamn** as a model plant.
- **Bjuv** as a model plant for Bjuv Food Valley
- **Brunnshög i Lund** with the Brunnshög project and Ica
- **Malmö hamn** with Nyhamnen and industrial symbiosis with Norra hamnen

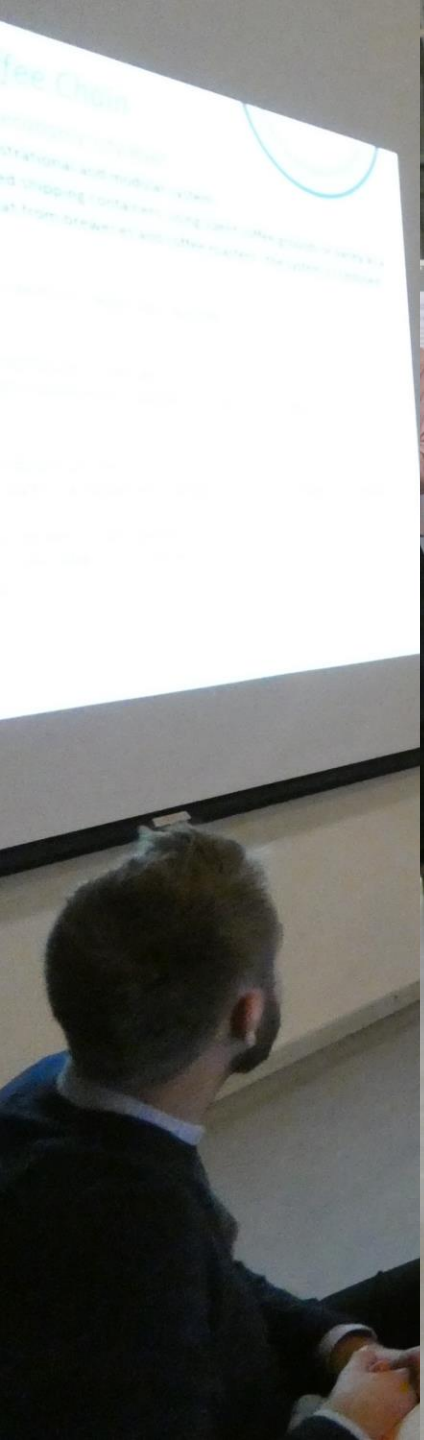


Step 1 Open Innovation Process



Resultats from step 1

- 46 proposals submitted
- From 21 different countries
- 28 proposals invited to present at the pitch-event 2-3 october 2017 i Alnarp, 21 proposals attended
- Six teams had interest in becoming team leaders and five was invited to step two

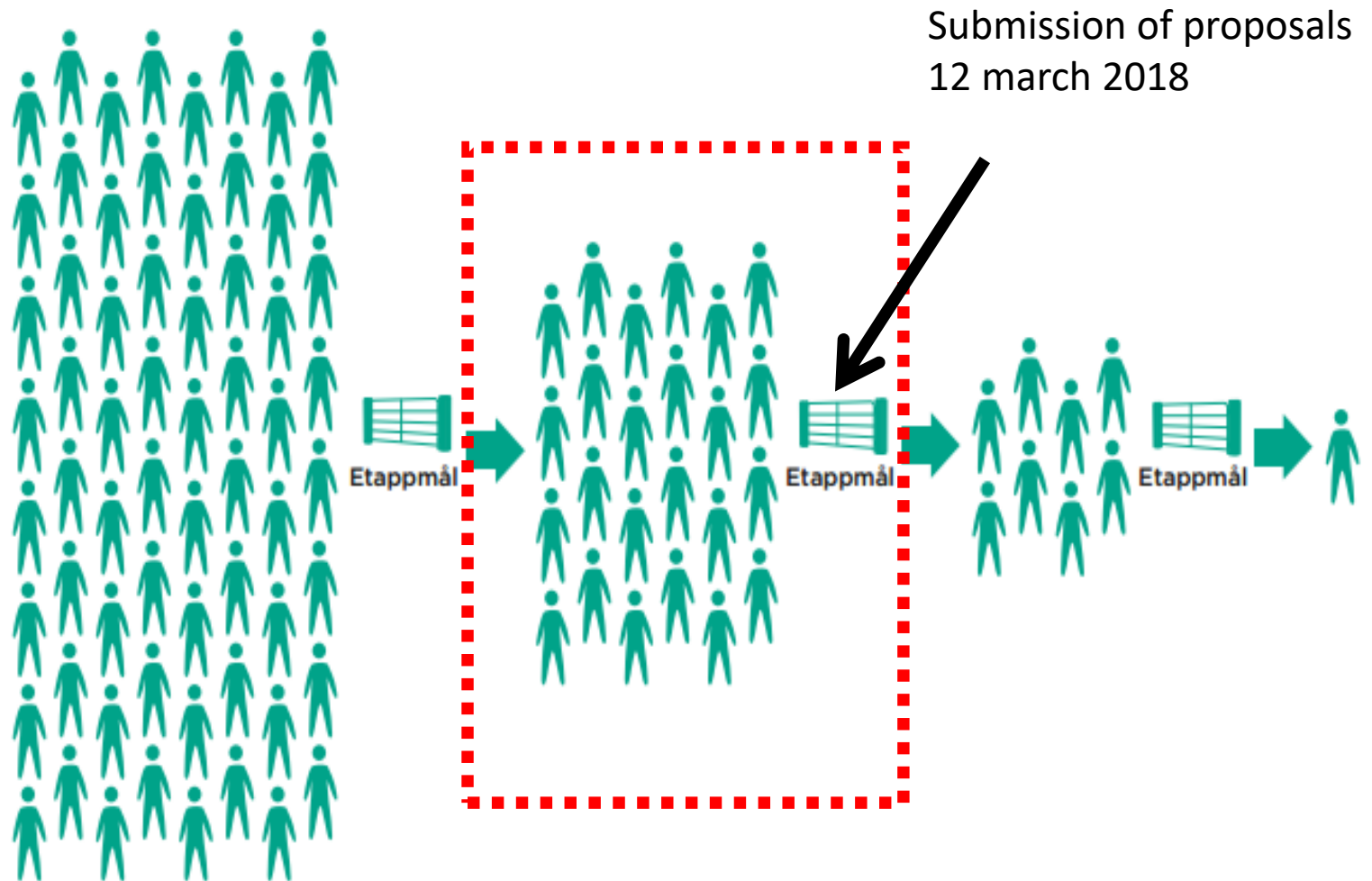


Peter Vagnsbo, Climate-KIC



Pitch-event Alnarp 2-3/10 2017

Step 2 Interactiv process with five teams



Results from step 2

- 5 teams/proposals invited to step 2
 - CE Farm. Urban Farming Company. Contact: Jason Morenikeji. Scotland.
 - Green Phoenix. AquaBioTech. Contact: Kyra Hovenaaars. Holland/Malta.
 - Growing Together. Samraekt Ltd. Contact: Ragnheidur Thorarinsdottir. Island.
 - Season 5. Tailormade arkitekter/Greenhouse living. Contact: Fredrik Olsson. Sweden, Göteborg.
 - Urban Ecosystems. Hemmaodlat ideell förening. Contact: Niklas Hjelm. Sweden, Malmö.
- 3 proposals invited to step 3
 - Island, Samraekt ltd
 - Sweden (Malmö), Hemmaodlat ideell förening
 - Sweden (Göteborg), Tailormade arkitekter AB

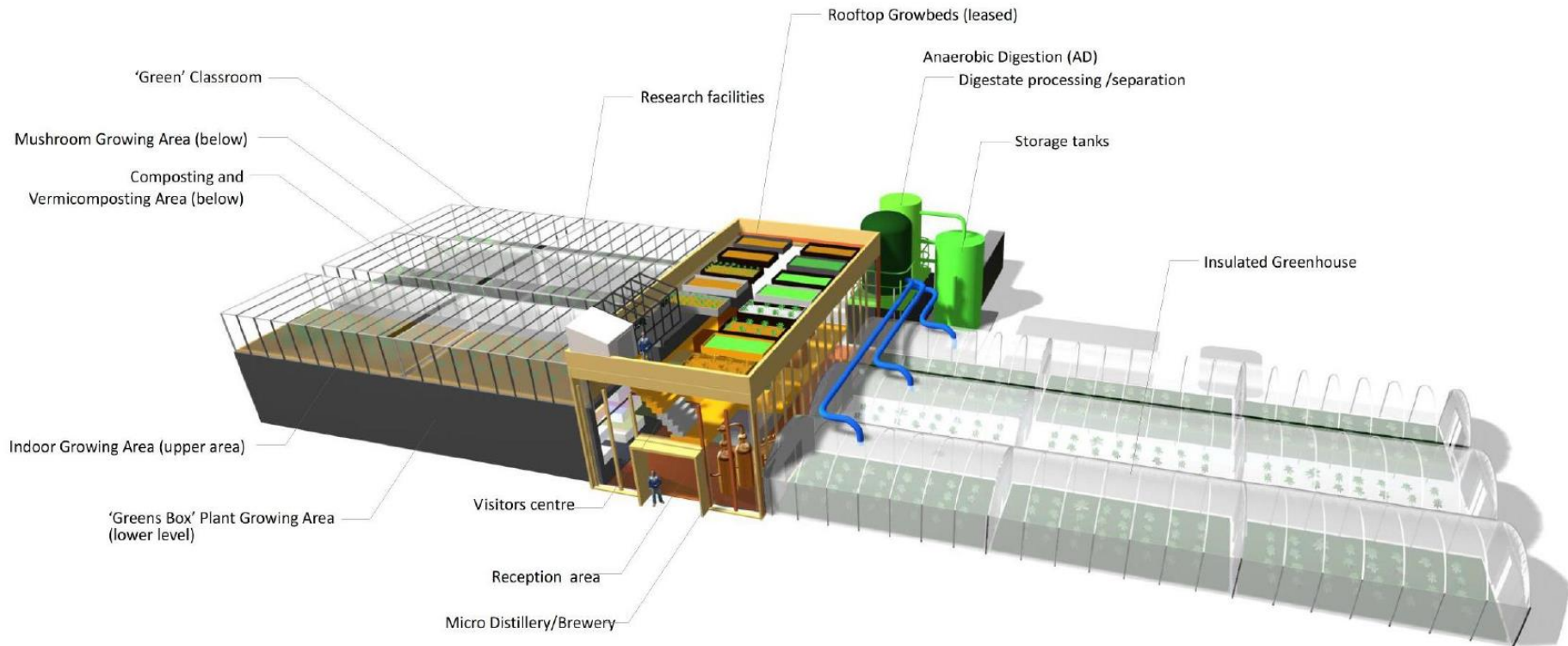
Key partners:

Project Management & leadership
Urban Farming Company

Sweden-based project management
TBC

Technical design / Infrastructure:
-Grønt Skifte (Norway)

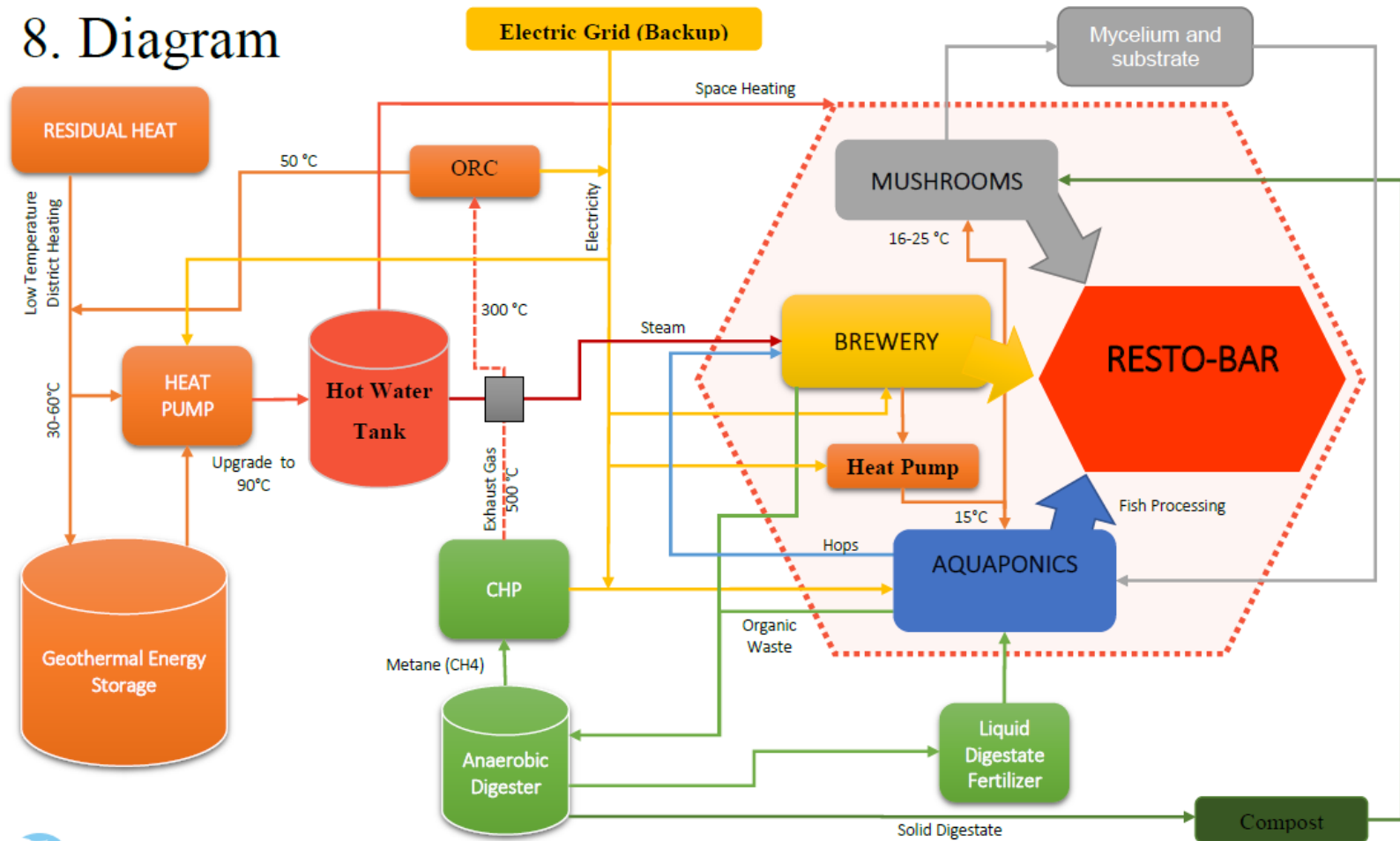
Urban farming

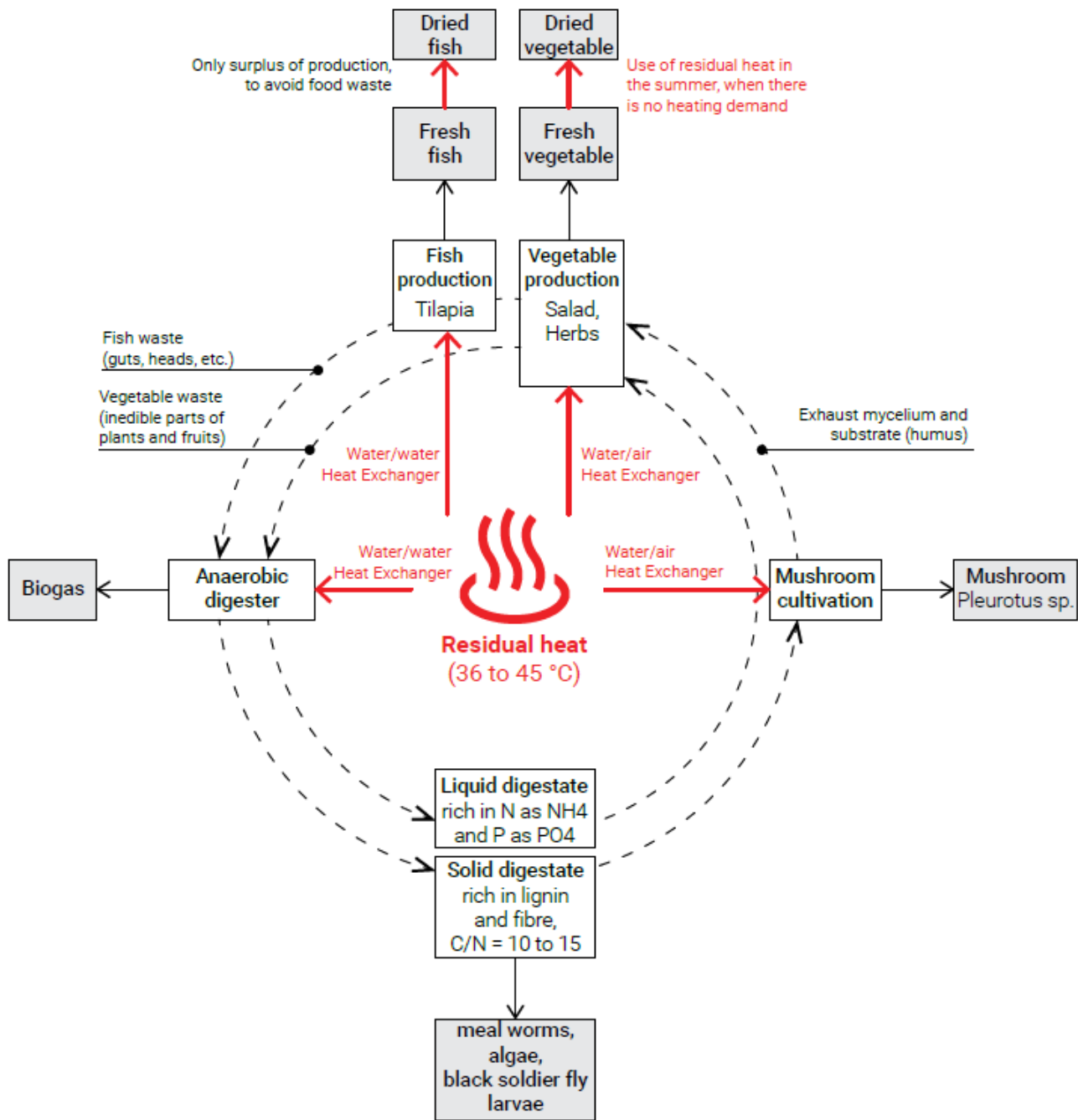


Green Phoenix



8. Diagram





Growing together



PROPOSAL - OVERVIEW

ILLUSTRATION #1. EARLY SKETCH OF THE FULL PROPOSAL. (REFERS TO TEXT ON PAGE 3)

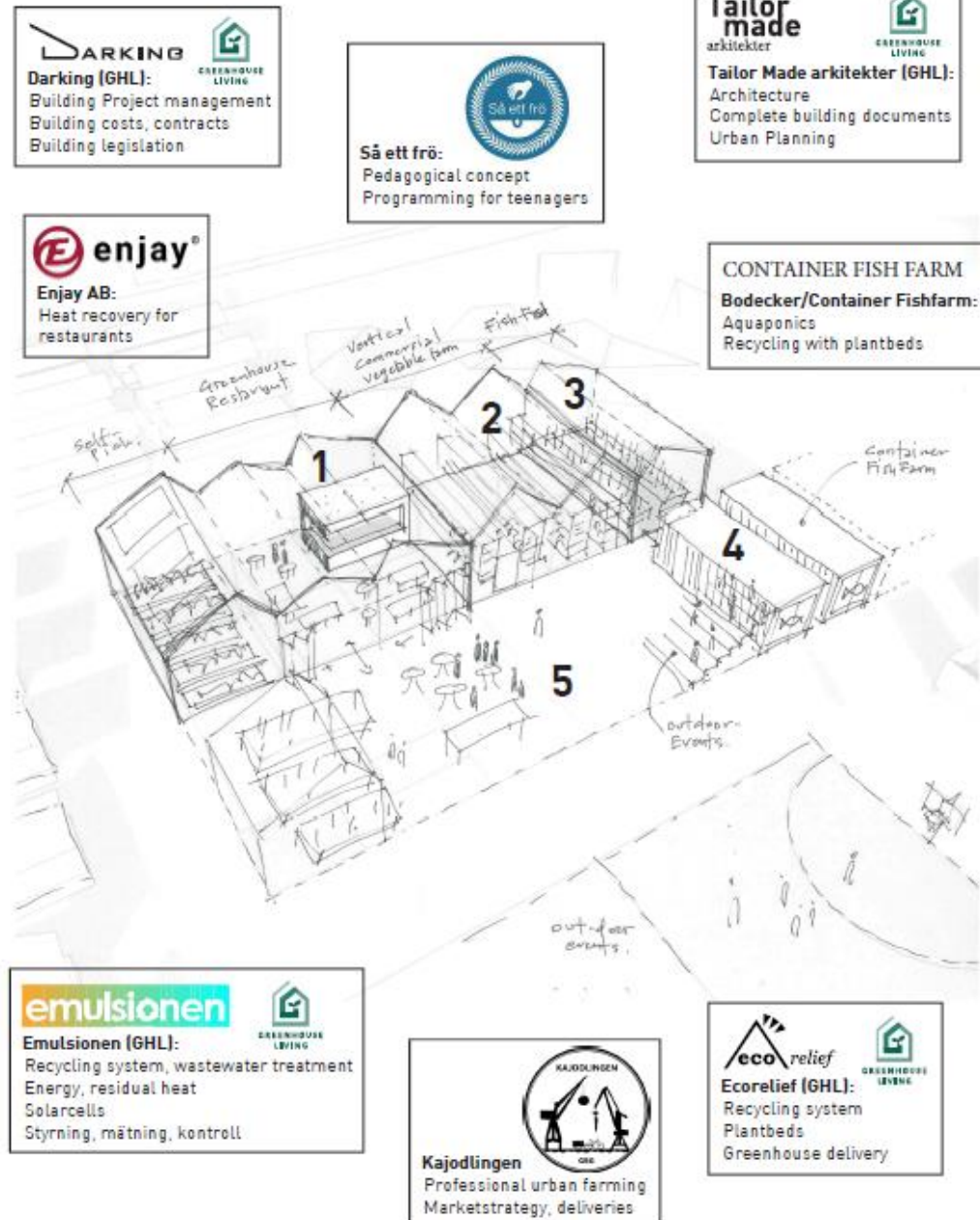
Season Five

Team leader:

Tailor-made arkitekter

Partners:

- Darking AB
- Ecorelief AB
- Emulsionen AB
- Container fish farm AB
- Enjay AB
- Kajodlingen AB
- Så ett frö



Urban Ecosystems

FUNCTIONAL AREAS OF THE GREENHOUSE

- How it all comes together -

1. Production unit for leafy greens using vertical towers



3. Composting room,
BFS breeding, filtration
and machinery.

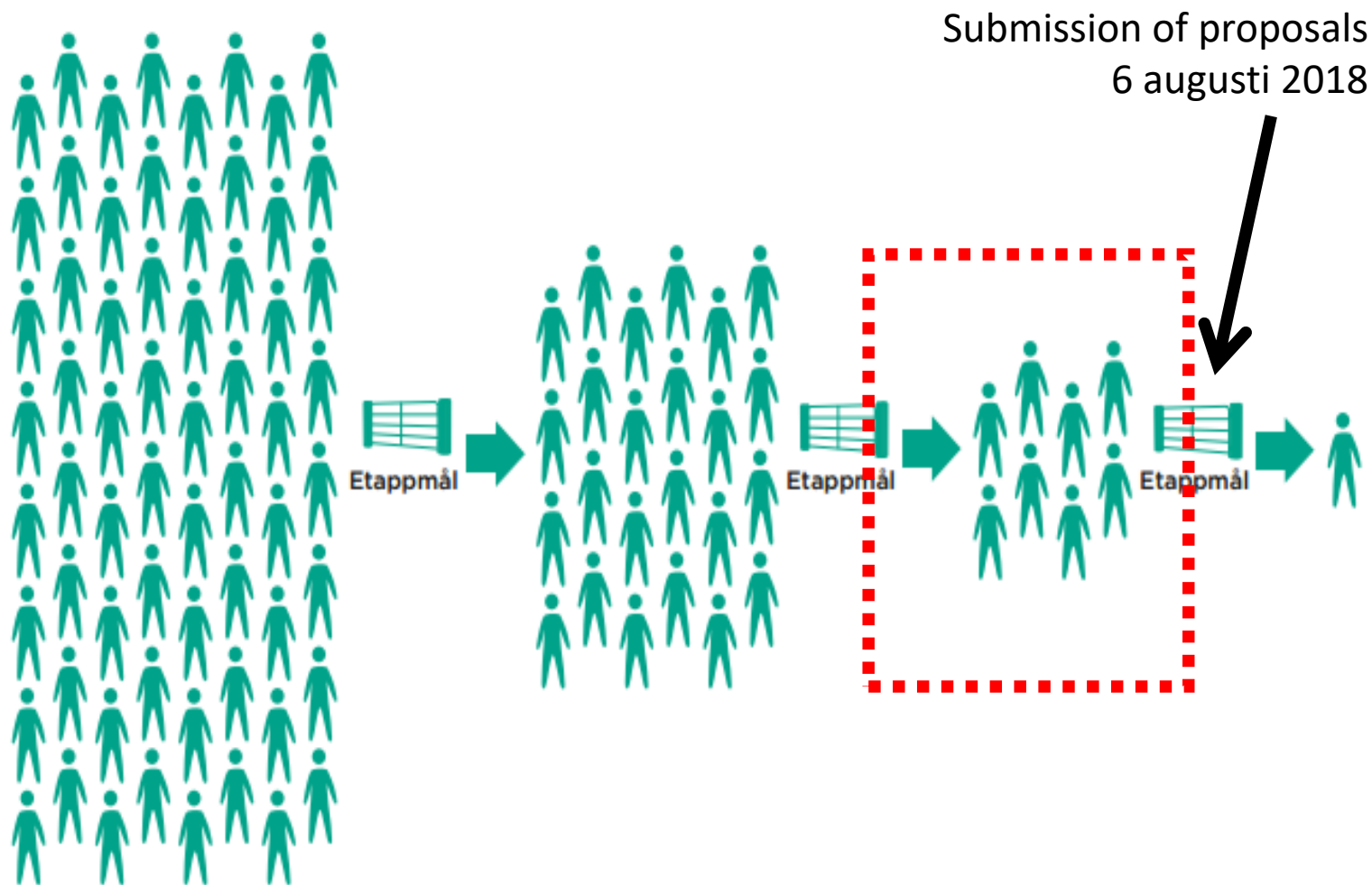


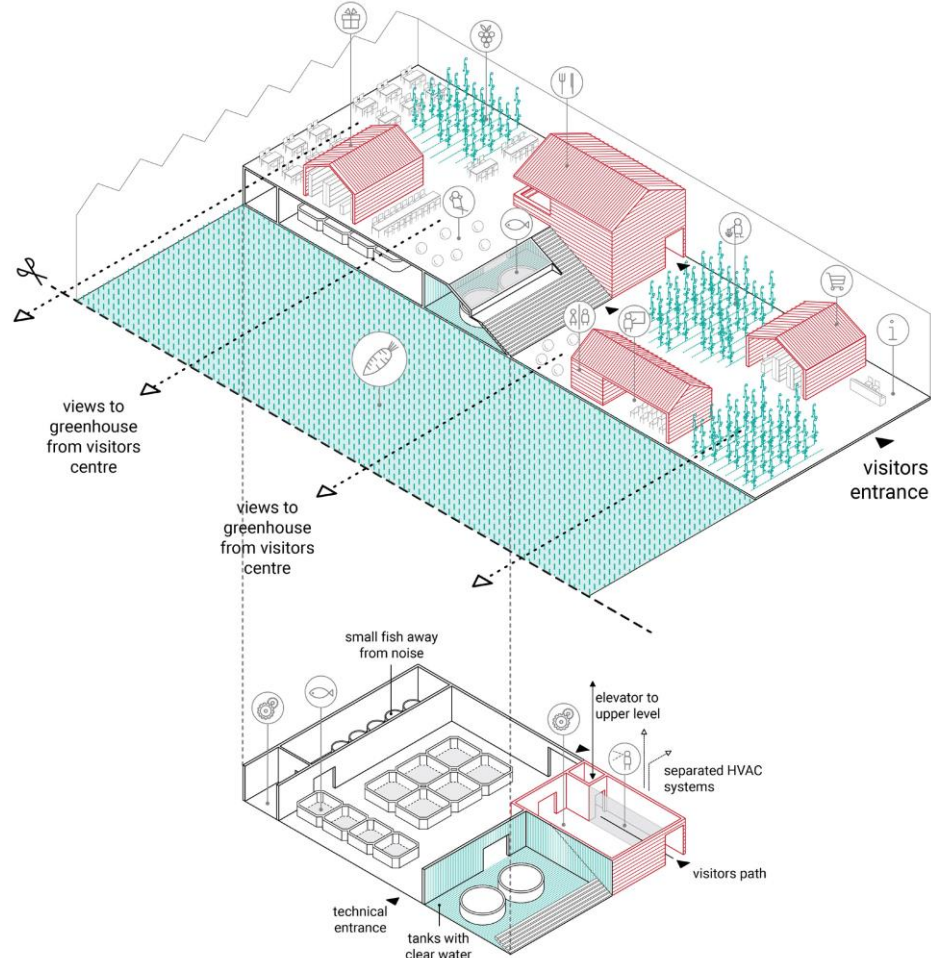
2. Café serving fruit and vegetables from the greenhouse



4. Self-picking where families can come and pick their own tropical and citrusfruit

Step 3 Interactiv process with three teams





Growing together

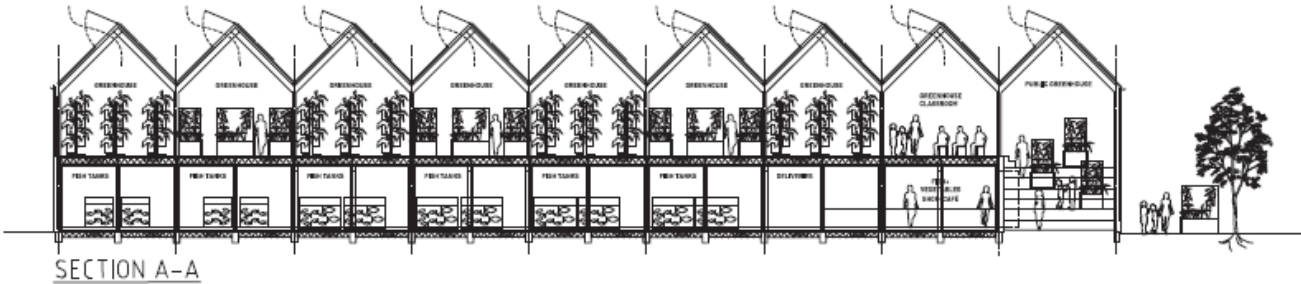


Season Five, Tailormade

6. LARGE - PRINCIPLE SOLUTION

6.1 LARGE - SHORT DESCRIPTION

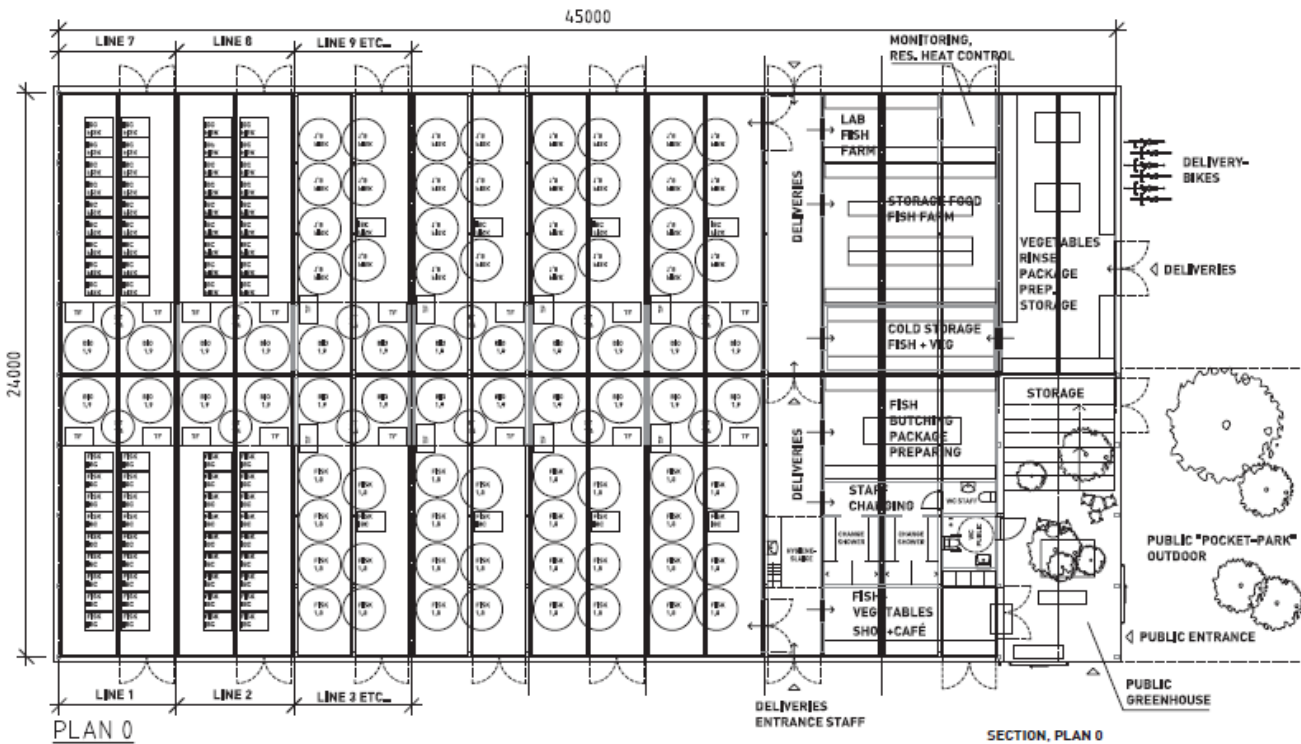
The LARGE-unit is scaled-up version of the SMALL unit. The food-producing parts (fish farm and cultivation) are scaled up. The public greenhouse stays the same size and therefore get a less important role for the business case. The footprint is 1080 m².



SECTION A-A

6.2 LARGE - FACTS

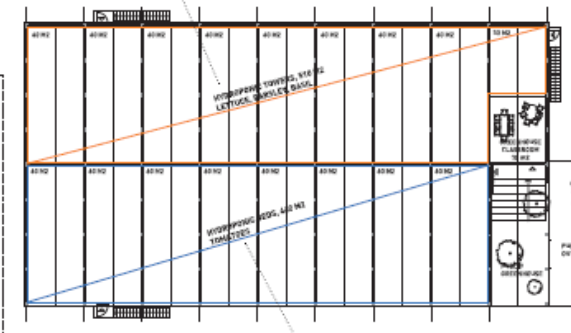
FLOORAREA:	
Footprint (on ground)	1080 m ²
INVESTMENT COSTS:	
Construction cost	30 098 600 sek
FOOD-PRODUCTION (yearly):	
Vegetables type A (basil)	22500 kg
Vegetables type B (tomatoes)	20250 kg
Fish (file)	30 000 kg
REVENUE (yearly):	8 830 510 sek
BREAK EVEN:	5 years



PLAN 0

SECTION, PLAN 0
SCALE 1:250 [A3]

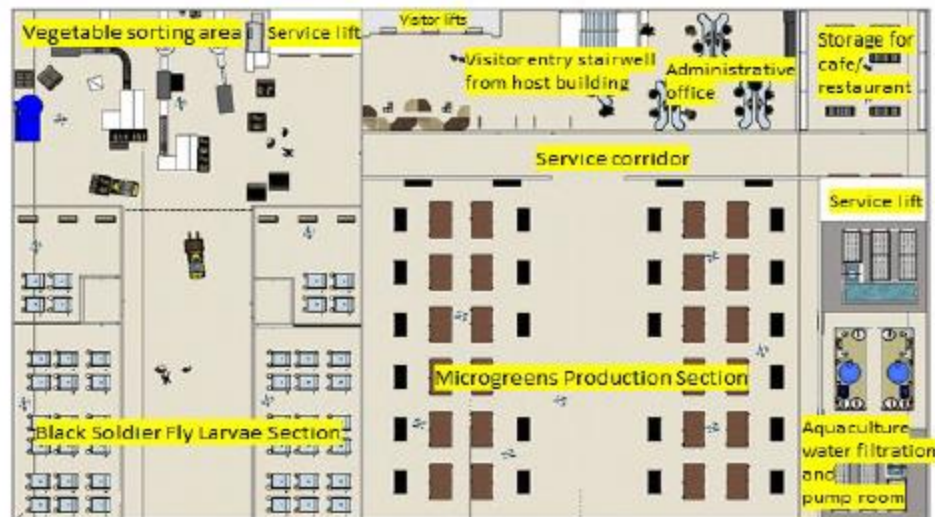
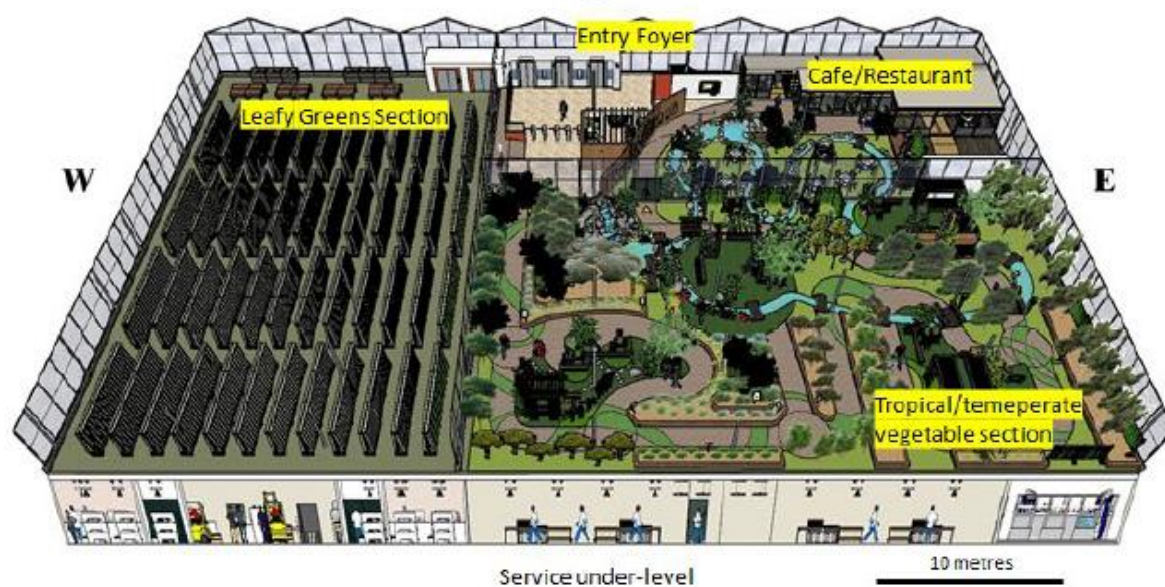
HYDROPONIC TOWERS 510 M²
(LETTUCE, PARSLEY, BASIL, ETC.)



PLAN 1 - greenhouse
SCALE 1:400 [A3]

HYDROPONIC BEDS 480 M²
(TOMATOES, ETC.)

Urban Ecosystems, Hemmaodlat



Today: prize ceremony in Malmö 19 September 2018

