

GUIDEBOOK  
International student  
challenge:



URBANFARM2024

# CONTENTS

<b>PREFACE.....</b>	<b>3</b>
<b>THE CHALLENGE.....</b>	<b>3</b>
_The Aim .....	3
_Requirements for participation .....	3
_Team registration .....	4
_Challenge Clarification .....	4
<b>INTRODUCTION OF THE LOCATION .....</b>	<b>5</b>
_The Trelleborg prison facility project.....	5
<b>ROUNDS, and DEADLINES.....</b>	<b>7</b>
_Round 1 .....	7
_Round 2 .....	8
_Online voting.....	9
_Grand Finale .....	9
_The Award .....	10
<b>AFTER THE CHALLENGE .....</b>	<b>11</b>
_Intellectual Property Rights .....	11
<b>Privacy.....</b>	<b>12</b>
<b>PARTNERS AND SPONSORS.....</b>	<b>13</b>

## PREFACE

This Guidebook is a useful summary of all information, terms and conditions for those students who would like to be involved in the international student Challenge UrbanFarm2024.

## THE CHALLENGE

The competition is intended for university students who are interested in making a contribution in the field of sustainable urban agriculture.

The objective of the competition will be the Trelleborg (Skåne) prison facility, in Sweden, that will be renewed following the three pillars of sustainability (economic, environmental, and social).

The evaluation will focus on choices and solutions related to growing systems and climate management, as well as the strategies for water, mineral nutrition, and integrated pest management. The case study areas must be designed so that inmates can be kept in a safe, humane, and efficient manner, and that recidivism is prevented. The facility's design must support the implementation of interventions adapted to risks, needs, and receptivity. The premises must provide the conditions for conducting safe, qualitative, and efficient operations as well as a safe working environment for staff and inmates. This includes, among other things, energy and cost efficiency, sustainability, requirements for changeability, i.e. generality and adaptability, but also premises that offer an appropriate care and treatment environment.

The competition will take place in English language and will be evaluated by a mixed jury of professors and international experts of the field.

### The Aim

The main aim of UrbanFarm2024 challenge is to design innovative urban agriculture systems that integrate the best technological innovations to produce food in urban environments. It also intends to promote multidisciplinary and international cooperation between students belonging to the University of Bologna Alma Mater Studiorum in Italy and the Swedish University of Agricultural Sciences in Sweden.

### Requirements for participation

Teams must be composed by university students regularly enrolled in the courses of

- **Urban Agriculture** (Master in Global Change Ecology and Sustainable Development Goals), University of Bologna Alma Mater Studiorum
- **Smart Horticulture** (International Master in Horticultural Sciences), University of Bologna Alma Mater Studiorum
- **Urban Farming** (International Master in Horticultural Sciences), University of Bologna Alma

Mater Studiorum

- **Urban Agriculture and Social Interactions** (International master course open for all SLU students at master level), Swedish University of Agricultural Sciences, Alnarp, Sweden

### Team registration

Students must fill in the [survey](#), available also on the [website](#) within **March, 18<sup>th</sup> 2024**. **The survey is mandatory for participation in the challenge.** Teams will be created according to the survey results by the organizing committee and announced on the 22<sup>nd</sup> of March.

To find more information about challenge conditions please continue reading this handbook. Further information can be found on the challenge [website](#).

### Challenge Clarification

1. Teams will design new functions and **renovate the existing spaces** in the setting of Trelleborg (Skåne).
2. Teams will choose crops that are essential to **self-sufficient consumption** within the prison walls.
3. The developed concept should be **applicable and scalable** on similar locations.
4. Technological innovation is one of the most important aspects of the project. Teams will consider the processing and use of the crop products as well as **main farming innovations**.
5. Teams will design the food production systems and **ensure circular resource flows**. The food production systems will need to be appropriate to the typologies of users that will work on them.
6. Sustainable solutions will need to address the concept of circularity. Therefore, contribution to the **circularity of the prison resources**, as well as integration of **recycle and upcycle strategies** are a plus.
7. **Food production, environmental issues, and inmates/staff inclusion** are the key functions essential to the business model(s) teams will develop.
8. Teams should focus **on inmates' and staff's security issues**. The working spaces must be easily checked at all times by the guards. Furthermore, teams must indicate the chosen farming tools so that they cannot be used to cause any harm to oneself or to others.

## INTRODUCTION OF THE LOCATION

Despite the general objectives, it is good to remember the specificities of the location and therefore the aspects on which focus shall be made.

### The Trelleborg prison facility project

The site in Trelleborg, Skåne, is based on high quality agricultural land in a coastal setting. The surroundings consist of flat open land with small villages and farms. To properly carry out the project, the design proposals must focus on improving inmates and staff mental health, personal wellbeing, and providing areas for meaningful leisure time for the inmates. It is also necessary that the project has a strong focus on safety, so that no one can hurt themselves or others while using the tools and the spaces. Accordingly, avoid loose furniture and hanging wires. Furthermore, all outdoor areas should be easy to check and control with no 'hidden' areas, to always keep watch on the inmates and their work.

Students should elaborate their proposals for **two project areas**:

#### *Case 1. Recreational gardens*

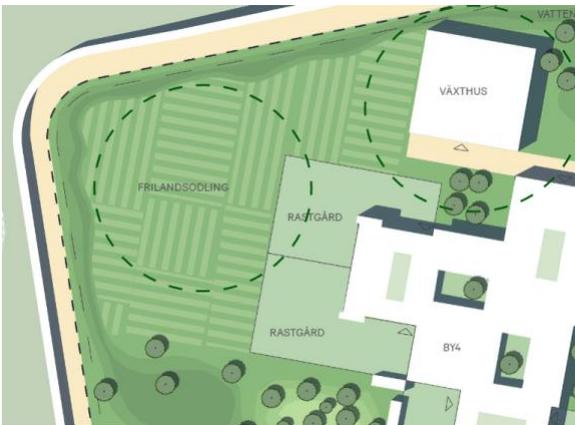
In each building, there are two recreational gardens, serving 80 inmates each. Approximately, up to 40 inmates can use the space at the same time, but usually there are no more than 20 altogether at a time. The Recreational gardens are an easily accessible workspace which can be used during workdays, evenings, and weekends. They are surrounded by 2-3 story brick or concrete buildings on all sides, and function like contemplative monastery courtyards. Each inmate can interact with the area differently, and they could function as kitchen gardens with herbs or spaces for barbeque and seating. There is an internal common area with a library, a church, lounge seating, ceramic workshop, etc. that can be opened to the garden. The gardens have different orientations so sun/shade will vary in the different gardens. In the recreational gardens the activities carried out by inmates should always be controlled by the prison's guards to ensure the safety of inmates and staff at all times.



More information on Case study 1 can be found [here](#).

### **Case 2. Indoor and outdoor farming system**

The focus of this task is to foster intense food production, promote education for inmates creating new job opportunities, and finally reach food self-sufficiency in the prison. Up to 40 inmates will be involved in agricultural activities in the indicated area. The farming activities should be considered intense, with equal workload throughout the seasons in the fields or in the indoor greenhouse. The total area for cultivation is about 3,000 m<sup>2</sup> for the indoor greenhouse, and 10,000 m<sup>2</sup> in the outdoor agricultural field. The facilities should enable social and educational activities, while also fostering inclusion and therapeutical aspects of horticulture. In this case, the safety requirements mostly refer to materials, tools, and furniture. In the cultivation areas, the inmates are always accompanied by staff, so the need to control the whole area from one spot is not as crucial as in Case 1; however, it is still important that the cultivation spaces are easily controlled and monitored.



More information on Case study 2 can be found [here](#).

## ROUNDS, and DEADLINES

The challenge is organized in three steps: Round 1, Round 2 and the Grand Finale.

### Round 1

Round 1 will run until **April, 10<sup>th</sup> 2024**. Within this deadline, each team must submit the Abstract of their project and a 2-minutes video illustrating the design concepts to [urbanfarm@unibo.it](mailto:urbanfarm@unibo.it). On **April, 10<sup>th</sup> 2024**, each group will have a separate session with the jury no longer than 10 minutes. The session will consist of a **3-minutes** PowerPoint presentation during which each team will expose their own project ideas. The following 7 minutes will be dedicated to further questions, mentoring and final feedback.

### Abstract

The abstract is a short summary of your project. The abstract must be sent both in word and pdf format, following our [template](#). Send the abstract to [urbanfarm@unibo.it](mailto:urbanfarm@unibo.it) by email. The maximum range of the abstract is 500 words. Please, indicate name, surname, and affiliation of each team member, in addition to the name of your team, on the second page you should insert a photo of your team, landscape-oriented (1920x1080 px). Please make sure to have rename your abstract file as ABSTRACT\_NAMEOFYOURTEAM prior to submission.

### Video Presentation

Each team must produce a 2-minutes video (MP4) introducing the team, its approach, and the reasons behind their participation in the challenge. Video must be sent to [urbanfarm@unibo.it](mailto:urbanfarm@unibo.it) using a file sharing software (e.g. WeTransfer). **Before sending it, rename your MP4 file by using only the NAME OF YOUR TEAM** (or its acronym).

### Evaluation criteria

- Abstract: up to 10 points
  - Team Video: up to 10 points
-

## Round 2

The deadline to hand-in the teams' projects is set on **April, 22<sup>nd</sup> 2024**.

Each team will have to send:

- *the final project proposal*;
- *proof of the concept* and/or graphical designs.

In the text below, you will find detailed conditions regarding how to send and prepare the material for the submission:

### Project proposal

The project proposal describes the whole concept of your project. The [template](#) contains all the instructions needed for the projects' submission. **The use of the template is mandatory.**

Send the document to [urbanfarm@unibo.it](mailto:urbanfarm@unibo.it) by email. **Before sending it, rename your file by using only your TEAM NAME or ACRONYM. The document must be sent both in word and pdf format.**

The final project will be composed of 6 sections, organized as follow:

- **General introduction of the project (200 words)**
- **Agricultural section (600 words)**
- **Environmental sustainability section (400 words)**
- **Economic section (400 words)**
- **Social and educational section (400 words)**
- **Annexes (max 5 pages)**

### Proof of concept

Proof of concept is the demonstration, typically resulting from an experiment or pilot project, that a design concept is feasible. You are asked to provide a demo of key technologies/innovations in the form of a prototype, a video, an architectural model, academic literature or commercially available solutions etc. depending on the type of innovation. It is not required to innovate on all criteria. It is suggested to innovate at the level of the total concept, while selecting at least one (1) environmental, (2) economic, (3) social. It is possible to provide multiple proofs of the concept. The document must be sent as PDF file to [urbanfarm@unibo.it](mailto:urbanfarm@unibo.it) by email.

### *\_Evaluation criteria*

- Overall project concept: up to 10 points
- Agricultural innovation and credibility: up to 10 points
- Environmental sustainability: up to 10 points
- Economic sustainability: up to 10 points
- Social and educational sustainability: up to 10 points

### *\_Online voting*

Online voting will be available on the challenge [website](#) from **April, 12<sup>th</sup> 2024 to April, 22<sup>nd</sup> 2024**. General audience can vote online the preferred team video. 5 points will be attributed to the team with the most voted video. The results of the online voting procedure will be published on the morning of April, 30<sup>th</sup> 2024 on the challenge [website](#).

---

### *\_Grand Finale*

The Grand Finale will take place at Alnarp Farm in Malmö on **April, 30<sup>th</sup> 2024**. All the teams will pitch their projects to local stakeholders and the international jury.

### *\_Pitch*

The final pitch should not be longer than 5 minutes. How to organize the pitch is given to the teams. Each team will present its project to the public and jury and then undergo a 5-minute session of questions from the jury. The jury will evaluate pitches up to 25 points, based on the quality of the projects and the presentations and the capability of the teams to stand questions.

## *\_The Award*

Awarded team will receive the Young Mind Award of the International Society for Horticultural Sciences (ISHS). This includes a complementary 1-year membership to the ISHS for one year for each of the team members.

## *\_Rating Criteria*

	Deadline	Evaluated material	Score	Assessors
Round 1	10/04/24	Abstract + Video	20	Scientific committee
Round 2	22/04/24	Full project + Proof of concept	50	Scientific committee + International Jury
Online voting	22/04/24	video	5	General audience
Pitch	30/04/24	5' pitch + 5' questions	25	International Jury

## *\_The Jury*

Members of the Jury include professors and researchers from UniBO and SLU together with the project's leading architects, and members of the prison board. Please see the dedicated [webpage](#) for further information on the International Jury composition.

## AFTER THE CHALLENGE

After the challenge, each participant will receive an attendance certificate. The University of Bologna will publish the materials developed during the competition in an open access book of proceedings, identified by a Digital Object Identifier (DOI).

### *Intellectual Property Rights*

Each team has intellectual and industrial property rights to data, designs, information, prototypes developed and submitted or transmitted under this Challenge.

By entering the Challenge, each participant agrees to grant the University of Bologna, as the owner of the challenge, a perpetual, **royalty-free** and irrevocable license of use of the documents, prototypes, materials and information submitted within the Challenge for research and educational purposes, including the production of scientific publications aimed at communicating and promoting the Challenge's results. In addition, each participant agrees to grant to the general public the license to view and use data, designs, prototypes and information submitted, exclusively for the purpose of urban regeneration covered by the Challenge. Furthermore, each participant authorizes the ALMA MATER STUDIORUM - University of Bologna to publish photos and videos taken during the Challenge, including the final event, as well as to publish on its website the names of the participants, the names and identifying signs of the projects for promotional and advertising purposes closely related to the challenge or in other ways considered valid for the dissemination of the results of the competition.

## Privacy

The data provided will be processed for the purpose of carrying out the institutional activities of the University and will be stored in accordance with the provisions of the European Privacy Regulation EU 2016/679 and D.Lgs. 196/2003 ss.mm.ii.

The data will be processed by computer and not. The provision of data is required to present Ideas and Projects in the context of this challenge. Such data will be communicated and/or diffused only in execution of precise normative dispositions.

The Data Controller of the data provided is Alma Mater Studiorum - University of Bologna, with registered office in via Zamboni, 33 - 40126 Bologna, in the person of the Rector as legal representative.

Contact details: [privacy@unibo.it](mailto:privacy@unibo.it); [scriviunibo@pec.unibo.it](mailto:scriviunibo@pec.unibo.it)

Contact details of the Data Protection Officer (RPD/DPO): [privacy@unibo.it](mailto:privacy@unibo.it).

The Internal Responsible for the reply to the interested party is the Director of the Department of Agricultural and Food Sciences.

As data subjects, participants enjoy the rights set out in sections 2, 3 and 4 of Chapter III of Regulation (EU) 2016/679 (e.g. to ask the data controller for: access to and rectification or erasure of their personal data; to request the restriction of the processing of their personal data; to object to the processing of their personal data; to have the right to data portability).

## PARTNERS AND SPONSORS

Organizers:



KROOK  
& TJÄDER

Promoter:



The activity has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No. 101084198 and from the UK Research and Innovation under Project Ref. 10082340