

STARTUP INCUBATOR CENTER





People's Democratic Republic of Algeria
Ministry of higher education and scientific research

UNIVERSITY OF SAAD DAHLEB BLIDA -01-
INSTITUTE OF ARCHITECTURE AND URBAN PLANNING
ARCHITECTURE DEPARTMENT

Architecture master degree thesis

DESIGN SUSTAINABILITY : RENEWABLE ENERGY INTEGRATION IN ARCHITECTURE

GRADUATION PROJECT : DESIGN OF AN INCUBATOR CENTER

CASE OF STUDY : UNIVERSITY CAMPUS BLIDA -01-

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Technology For More Ecology.

SUMMARY

- Blida city situation
- Study area situation
- Sensory and sequential analysis
- Urban area intervention
- Master plan
- Site analysis
- Idea ana form generation
- Startup office's deck components
- Surface table
- 3D views



Situation

Situation

Blida, part of the metropolitan area of Algiers, is situated beneath the majestic Chrea mountain, a prominent peak within the Tell Atlas range, enjoys a picturesque location along the right bank of Oued Sidi el Kebir. Located approximately 48 km southwest of Algiers, the capital of Algeria. Blida occupies a central position between Algiers and Tipaza to the north, Bouira and Boumerdes to the east, and Ain Defla to the west. To the south, Blida is bordered by Medea, the Atlas Mountain of Chrea, and the captivating Chiffa Gorges.

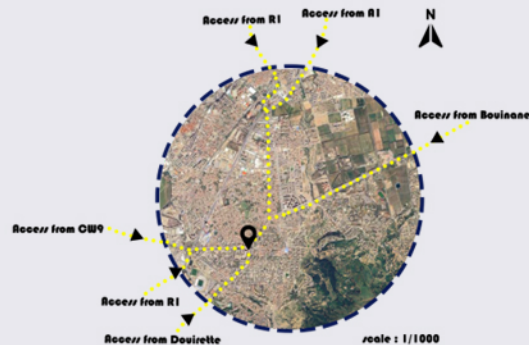
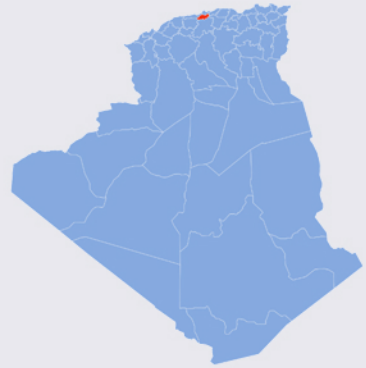
The commune of Ouled Yaïch is centrally located within the Blida province, approximately 4 km northeast of Blida, around 42 km southwest of Algiers, and about 29 km northeast of Médéa.

The commune is boarded:

- To the north: Beni Mered
- To the east: Blida
- To the west: Guerouaou
- To the south: Chrea

Ouled Yaïch is an important municipality of Blida's city, because it contains different kinds of services, public services, different scale educational services, different kinds of trades...which makes it accessible from different scale roads, which are the following:

- AutoRoute 01 (the high way)
- Route 01 (road 01)
- Bouinane
- Chemin de wilaya 09 (wilaya path 09)
- Douirette.





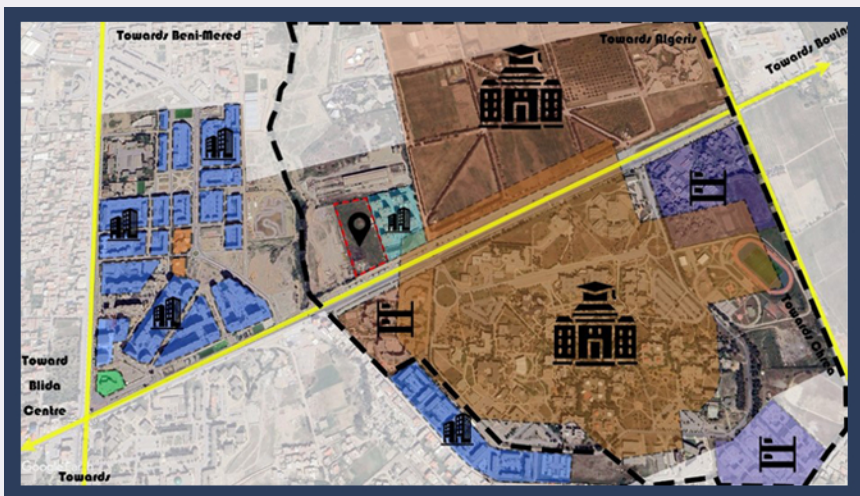
Towards Algiers

Towards Bouinane

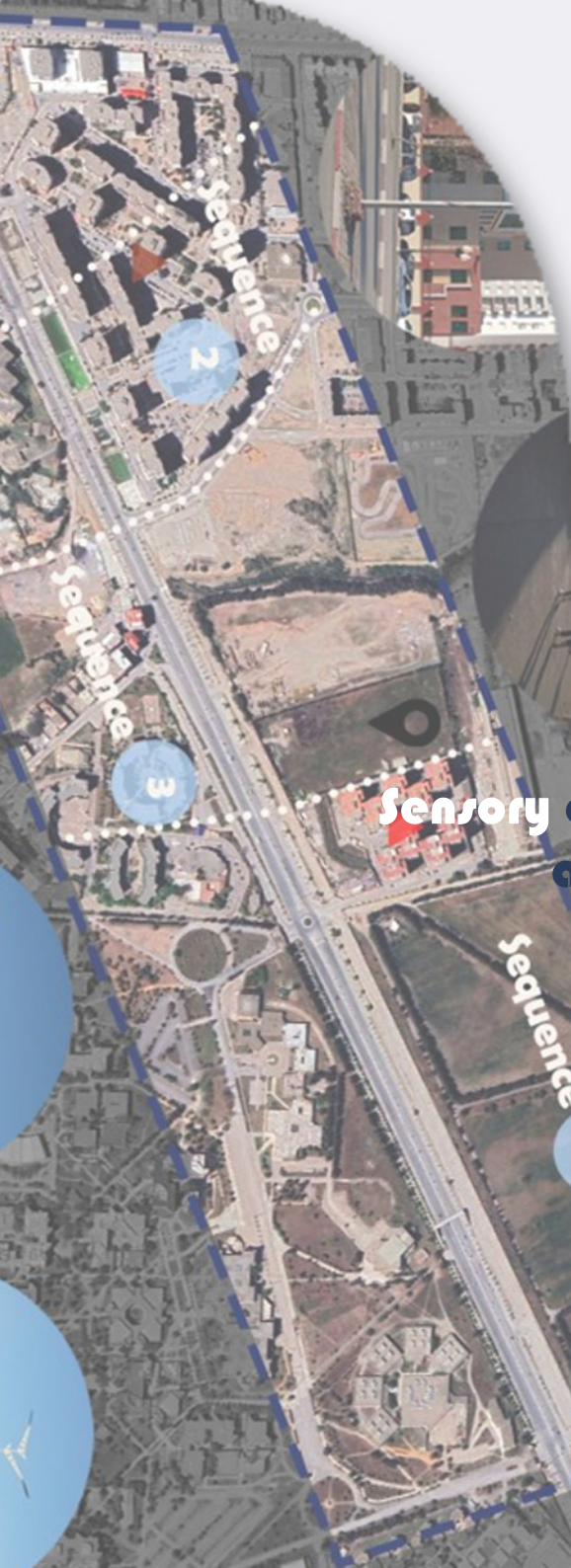
Study area Situation



The proposed site: Startup incubators are usually located in technology parks, in a university campus or in a university center, The pinned site is the most suitable for such service, in terms of attractiveness, liven up the area, and therefore revalue it.



Residential buildings
University dorms
University
APC headquarters
Leisure services



Sensory and sequential analysis



The Sequential analysis involves linking urban morphology with human sensory perception to facilitate the appreciation of "imageability," which refers to the ability to identify oneself within a given space. Through immersion in our study area, we were able to discern several sequences. Please refer to the sequential analysis map provided below for further details.

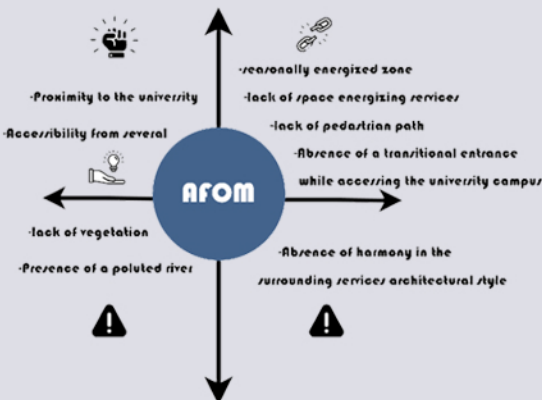
Our study Area has been divided into 4 sequences because of the different sensations felt in each sequence's urban space.

1st Sequence: A strong atmosphere: Crowded and noisy: due to the presence of a bus stop, it is always crowded and noisy, it also has important mechanical and pedestrian flows, due to the disposition of services like: APC headquarters, a middle school....

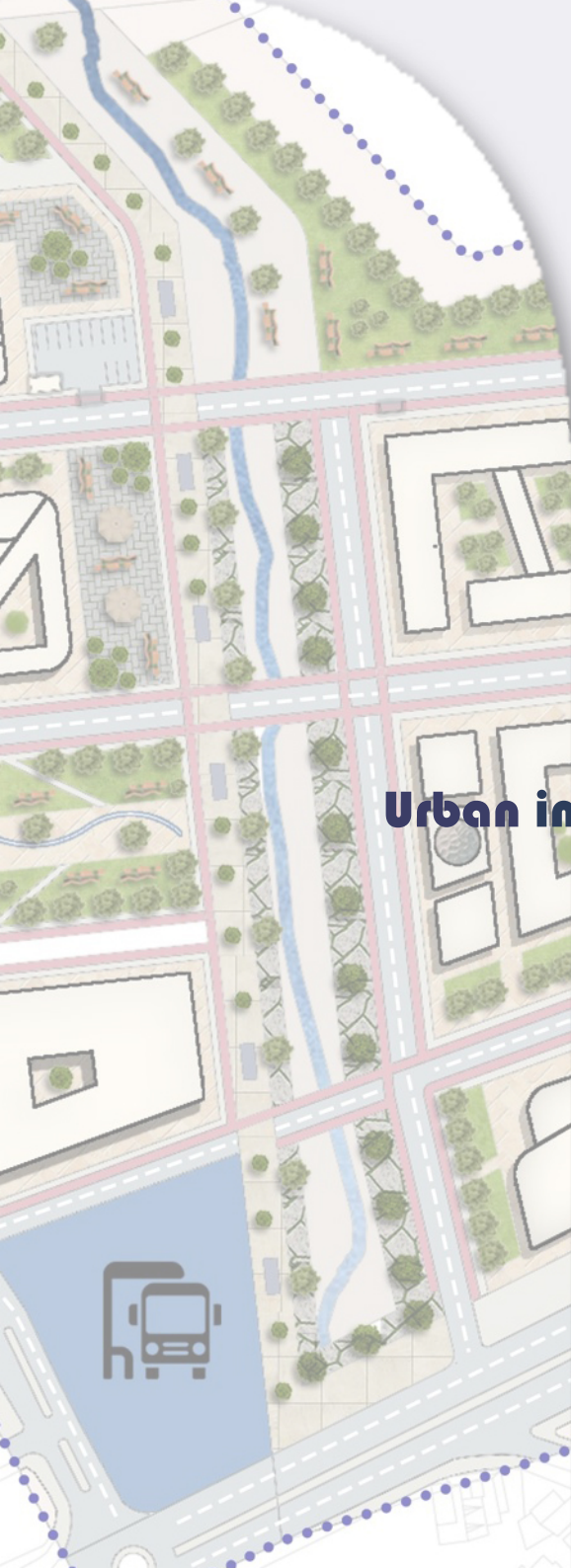
2nd Sequence: A calm secure atmosphere: due to the presence of residential buildings, so it basically contains neighborhoods, that are less crowded.

3rd Sequence: Very calm but insecure: due to the physical interruption, this sequence has less buildings than the previous ones.

4th Sequence: University Campus: a seasonally energized area: a seasonally important mechanical and pedestrian flow, which means this area is seasonally crowded, which makes its security low.



This analysis makes it possible to identify the strengths and weaknesses of the study area, as well as the threats and opportunities,



Urban intervention area

Problematic:

The present problematic in our study area, is not only that it is the lack of energizing services, but also the presence of a physical urban interruption or it can also be referred to as the absence of a transitional area between the university campus and the services situated on the west of the university campus.



PDAU and POS recommendations :

- The PDAU recommendations for this area are for it to be urbanized
- POS: This area belongs to the P.O.S C5, it is situated on the north of the RN 29, and the POS recommends to carry out a development study for this area, that is intended for collective housing.



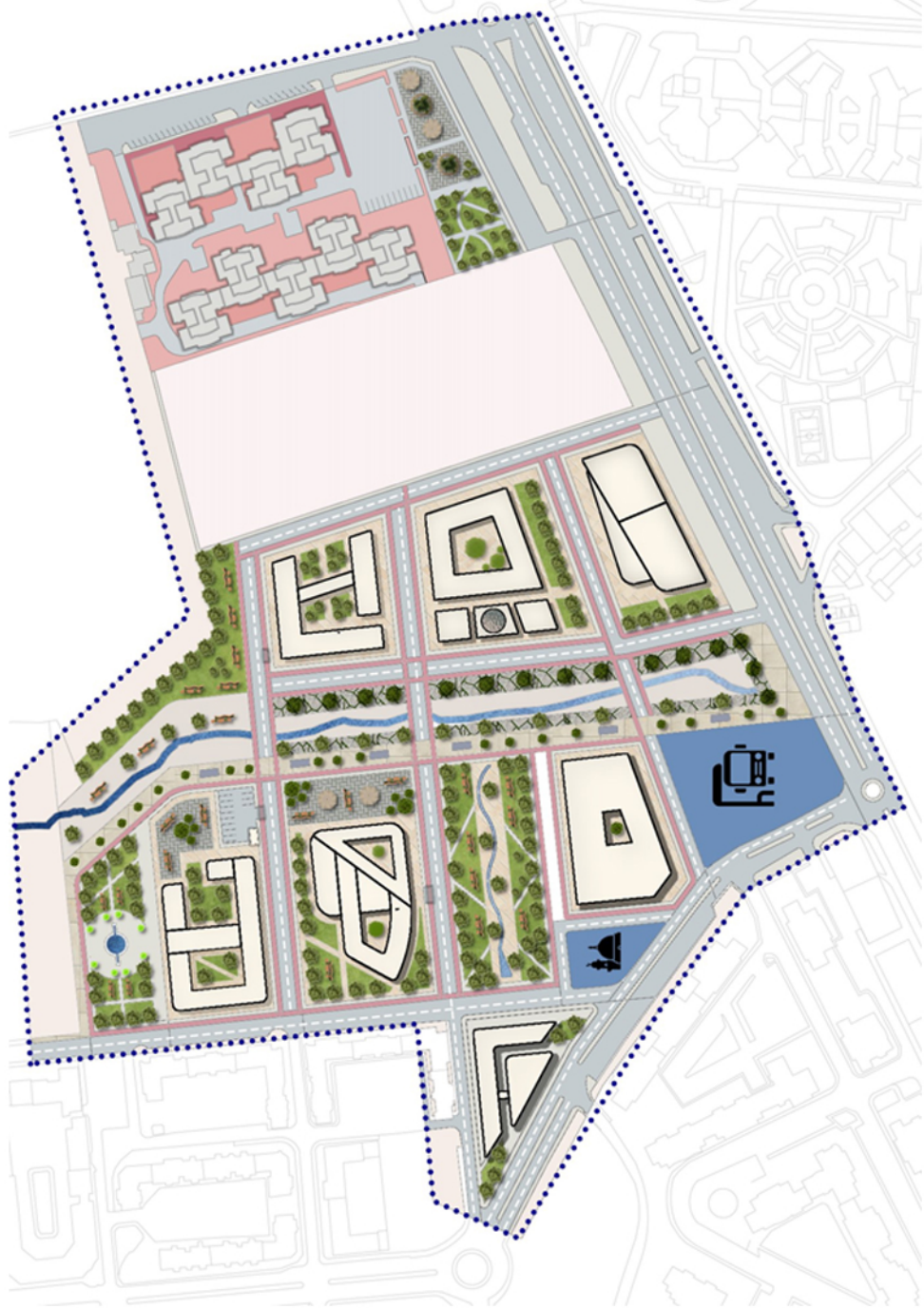
Schemas:

The POS recommendation won't help solve the problem of the "seasonally energized area", but in fact it will transform this area into a 'dormitory town'.

The actions taken to prevent that, are mainly to inject energizing services, green spaces and educational services, leading to a promiscuity and communication.

To get there we started by the extension of the roads as well as the creation of new roads following the same principle of the existing urban layout, to finally result in a checkerboard layout.



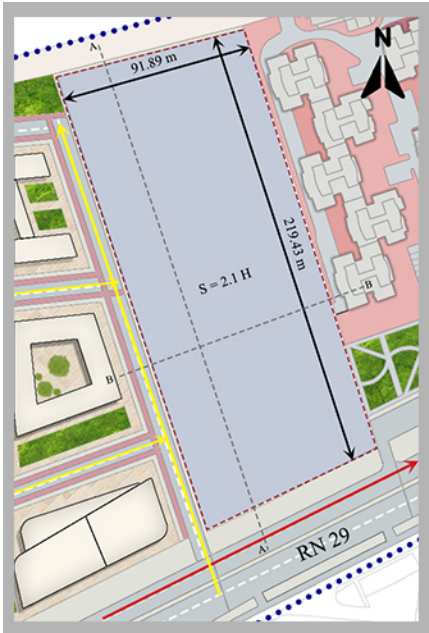


Master plan

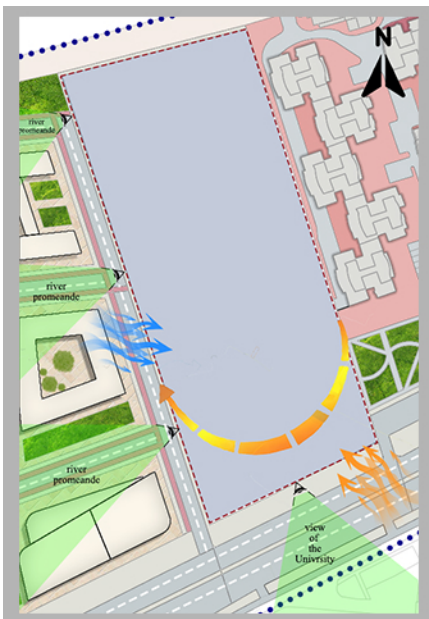




Site analysis



Characterized by a regular shape, extending over an area of 2.1 hectares, the site is surrounded by 2 different scales of tracks, RN 29 and created secondary roads, as well as 2 pedestrian paths and a bicycle lane.

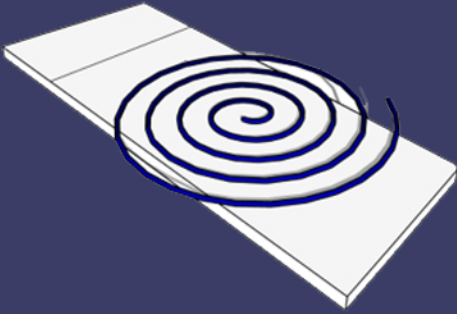


Well exposed to sun rays

The south oriented facade is directly exposed to the sun.

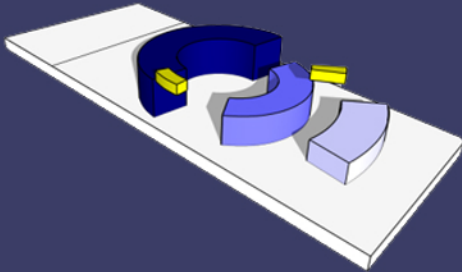
Exposed to summer wind from southern east, and winter winds from western north.

INNOVATION :



Startup incubators call for innovation
The spirale shape calls for innovation

INCUBATION :



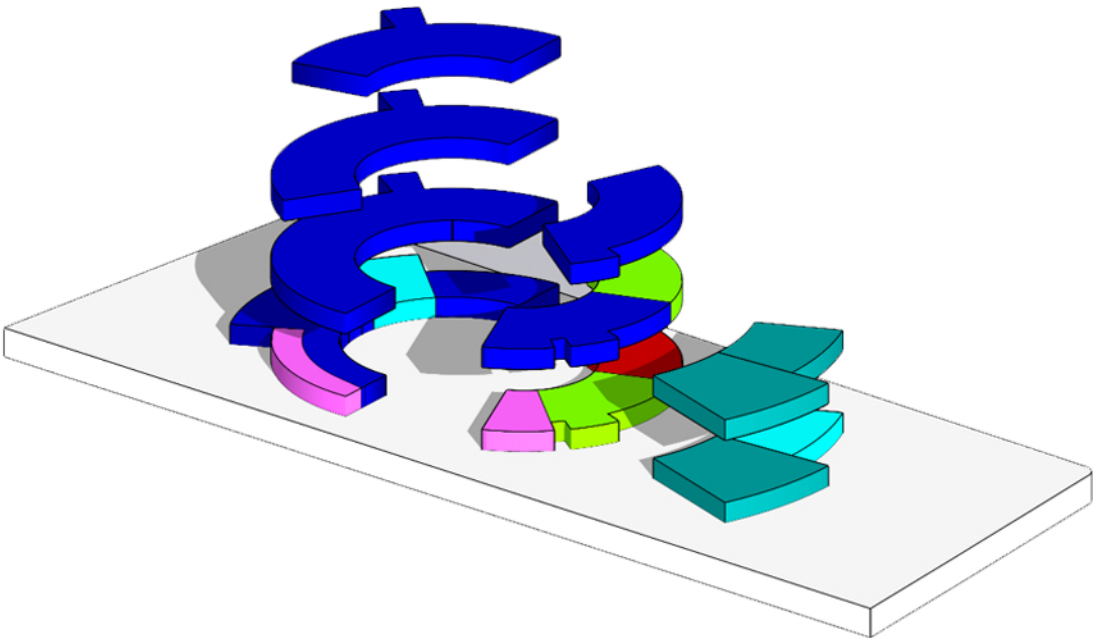
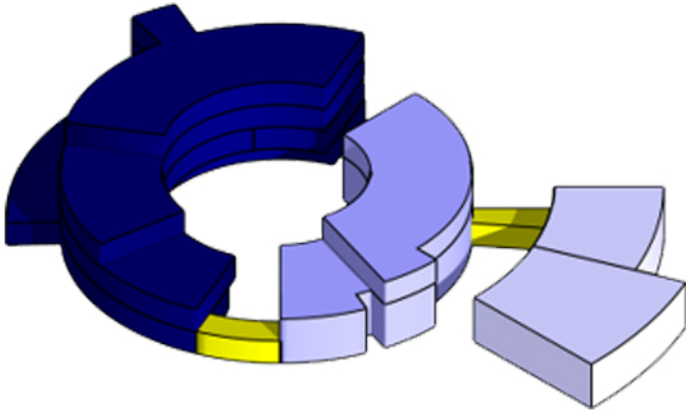
Dividing the spirale hierarchily into 3 part
Representing the 3 main steps of a company

SHAPING :



Rotating the 3rd volume to create an incubating shape

Adding 2 volumes serving as a passage between the 3 main volumes, and also translating the transitional phase of companies' innovation



PUBLIC SPACES

- Coffee shop
- Stores
- Exhibition hall

SEMI PUBLIC SPACES

- Library
- Building administration
- Conference hall

PRIVATE SPACES

- Startup offices' decks
- Learning spaces



LEARNING spaces:

| SPACES | AREA | NUMBER |
|----------------|---------------------------------------|--------|
| Monitor's room | 50 m ² | 01 |
| Computer lab | 59,4 m ² | 01 |
| Learning rooms | 53 m ² - 68 m ² | 03 |

ADMINISTRATION spaces :

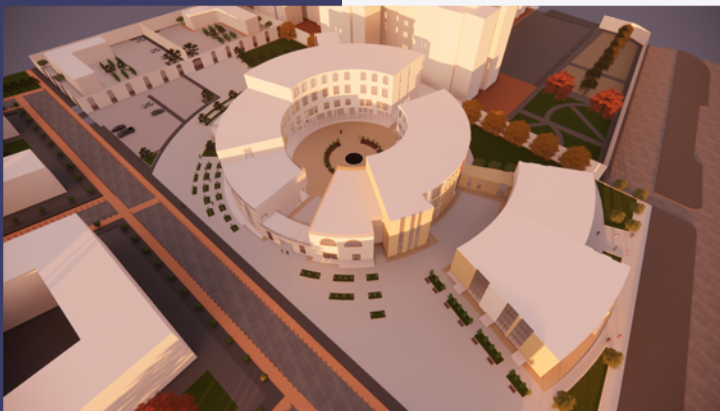
| SPACES | AREA | NUMBER |
|------------------------------|---------------------|--------|
| Building's manager's office | 58m ² | 01 |
| Secretariat | 37,5 m ² | 01 |
| Meeting room | 36 m ² | 01 |
| Guidance office | 18 m ² | 01 |
| Registration office | 17,6 m ² | 01 |
| Managment office | 26 m ² | 01 |
| Investor registration office | 26 m ² | 01 |
| Investor meeting room | 23 m ² | 01 |
| Investor room | 20 m ² | 01 |
| Startups manager room | 29 m ² | 01 |

Working spaces:

| SPACES | AREA | NUMBER |
|------------------------|--|---------------|
| Small working modules | 32,64 m ² | 05 |
| Medium working modules | 42,5 m ² | 07 |
| Big working modules | 132 m ² | 14 |
| Small coworking spaces | 54 m ² | 02 |
| Big coworking spaces | 85,5 - 94,5 m ² | 07 |
| Conference hall | 451 m ² | 01 |
| Meeting rooms | 50 – 52 m ² | 05 |
| Workshops | 60 m ² - 103 m ² | 02 |
| Laboratories | 68 m ² - 83 m ² | 07 |
| Gaming rooms | 91 m ² - 86 m ² | 02 |

Public spaces:

| SPACES | AREA | NUMBER |
|------------------------|---------------------|---------------|
| Big exhibition hall | 451 m ² | 01 |
| Medium exhibition hall | 244 m ² | 01 |
| Small exhibition hall | 58,5 m ² | 01 |
| Coffee shop | 267 m ² | 01 |
| Stores | 44 m ² | 04 |



3D VIEWS





E-Cow Built

Technology for more Ecology