THE DREAMER INSTITUTE - GOALS

This concept design for the Dreamer Institute aims to create a hub of innovative learning grounded in maker-based education. The Institute combines a 9-12 grade high-school (education center) with state of the art innovation center at Kabul University. The center integrates classrooms, laboratories, and workshops to create a learning environment for both highschool and university students to prepare them for an increasingly technologically focused world.

This design embodies four overall goals:

- To create two separate but symbiotically linked buildings
- To create a secure space for learning while maintaining a sense of openness
- To create an institution that addresses and can adapt to its cultural context
- To create a learning environment that links thinking and making
BACKGROUND RESEARCH - INNOVATION CENTERS

Yale Center for Engineering Innovation and Design

RISD Nature Lab

Otlin College of Engineering

BACKGROUND RESEARCH - AFGHAN ARCHITECTURE

Qala Fortified Village

Barbur’s Gardens

RESEARCH

The research behind the design for the Dreamer Institute looks ahead to innovation and back to tradition. Developments in how classrooms, laboratories, and maker spaces are integrated to form a fluid learning environment were studied in developing the building plan. In addition, the role of gardens, courtyards, and villages in traditional Afghan architecture were examined to formulate ideas about thresholds, boundaries, and the integration of interior and exterior space in forming community.
The Dreamer Institute will be sited within the walls of Kabul University in District 3 of Kabul, one of the fastest growing cities in the world. The site is in the Southwest corner of the campus, adjacent to a dormitory and a planned complex of athletic facilities. It is flanked by the campus wall on its southern border and on axis to a campus artery at its northeast corner. The site is approximately 12,000sm in area, measuring 80m north to south and 150m east to west.
LOCATING - The Education Center (highschool) holds the more secluded south-west corner of the site. The Innovation Center holds the more prominent northeast corner on access with a campus road that will turn south to connect to a new campus gate.

INTERLOCKING - The Education Center encircles the Innovation Center which circles in on itself. The two building forms are connected by three ‘study bridges’ that are part of either building, but can allow for the two centers to eventually be connected with each other. A wider ‘head’ of each building holds more public functions.

ELONGATING - Both institutions are organized as single-loaded corridors, allowing all spaces access to light and air. This allows for energy-saving cross-ventilation as well for continued operation in case utility service is interrupted.

GREENING - The interlocking of the two buildings creates multiple gardens recalling traditional Islamic architecture. A formal garden creates a larger gathering area at the center of the Innovation Center. Smaller pocket gardens where students can meet and relax create separation between the two buildings.
OUTDOOR ACCESS - The pocket gardens between the buildings will provide multiple points of access to outdoor space for students. This will serve a secondary security role by offering proximity to building exits. The Education Center also has an exit, and entry, at its southeast corner.

ENTRY - The Education Center and Innovation Center will have primary access from a new campus gate on the southern boundary of the university. Education Center access will be more secluded and controlled in the center of the site. Innovation Center access will be along the more prominent northeast corner of the site.

CIRCULATION - Movement within the each building remains separate from the other. Main entry is at the building 'heads' where larger more public program - lobby, cafe/cafeteria, exhibition, auditoria - are located. While moving through the buildings, the user has visual access to outdoor space, light, and fresh air.
VIEW FROM SOUTH AT NEW CAMPUS GATE TOWARDS INNOVATION CENTER 'HEAD'
VIEW FROM NORTH EAST TOWARDS INNOVATION CENTER ‘HEAD’
**FLOOR 1** - The Education Center and Innovation Center have similar programmatic logic. The first floor contains public programs at the buildings’ "heads" - lobby, auditorium, exhibition, cafe - as well as administration and larger classrooms. The Innovation Center extends into the highschool on the southeast corner, and though separate, creates an opportunity should the institutions desire to merge in the future. The central garden can be accessed from the corridor of the Innovation Center, while the smaller protected gardens can be accessed from the Education Center.

**FLOOR 2** - This is primarily the laboratory floor in both buildings. Here the circulation switches to overlook the interior gardens. Areas of the circulation widen and bridge over to the Innovation Center forming study areas. Again, should the Dreamer Institute choose to merge the buildings in the future, it can do so in these locations. The "heads" contain communal programs, including auditorium, religious space, and a study overlook.
FLOOR 3 - Smaller scale classrooms are prominent in both spaces. They overlook the laboratories below, creating a connection between thinking and making. A third floor terrace is formed by the roof of the Innovation Center to the south west. A cafeteria for the highschool provides views to the campus and the Dreamer Institute courtyard below.

FLOOR 4 - The Education Center has a fourth floor on its south end, providing more classrooms and a gymnasium, allowing the exercising students some separation from the campus ground below. Skylights in the roofs of both buildings bring light and ventilation from above to the double height laboratory spaces.
Throughout the Dreamer Institute, spaces for making are always connected to spaces for thinking. The project is thought of both horizontally and vertically, so that classrooms overlook laboratories and laboratories are lit from skylights above. The project is conceived of as a collection of learning clusters with rooms and uses that enrich each other.
INTERIOR VIEW OF MAKER SPACE AND GARDEN BEYOND
THE DREAMER INSTITUTE
Concept Design
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