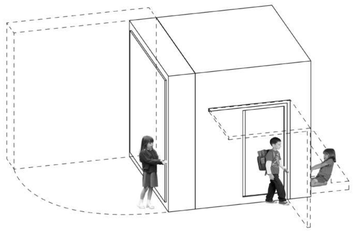
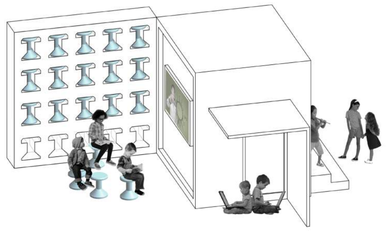
# Unmanned Autonomous Classroom

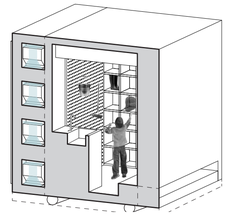
team code: SWC7090W

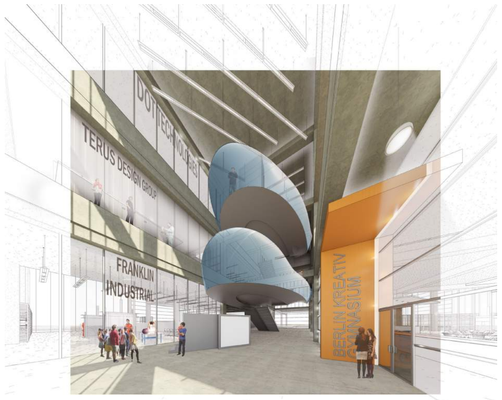
## The Cube

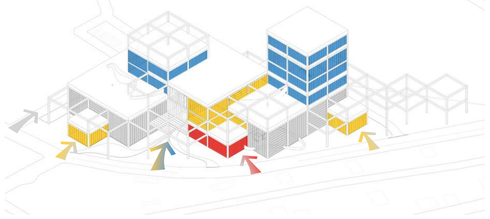
What if the classroom was not contained in a box, but inverted? The classroom is replaced with a cube, where teaching surfaces are exposed to the surrounding environment. The interior of the cube becomes storage and service. The cube can be shaped by the learners. The cube is the homebase, and learners as assigned to a cube as they would be a classroom.







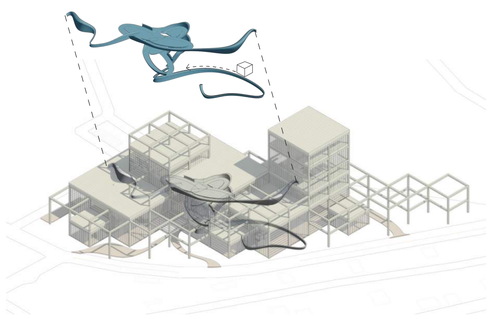


Office
Manufacturing
Creative
School Admin

## Colocation as Pedagogy & Business Strategy

This is a new typology of school, where manufacturing, creative, and office environments cohabitate in a learning environment. The cube lives within this environment, a touch down point for learners. Co-mingling opportunities are also integrated for cross-industry collaboration.

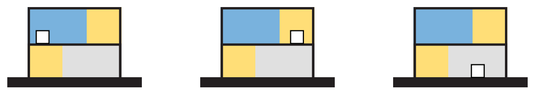


## Wayfinding & Circulation

A network weaves through the building. This network allows the cubes to travel through the building, and acts as wayfinding for learners.

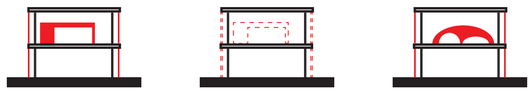
## Mentoring, Teaching & Safety

All students are accompanied by an administrator, supervising students, mentoring learners, and looking after their well-being and progression through the program. All students have the benefit of interacting with office workers, manufacturers, and creatives, who also become their mentors.



## Learning, Recall & Cognition

The environment of learning is ever changing, the learning landscape extends beyond the school into the city. The students travel to where their assigned cube is for the day.



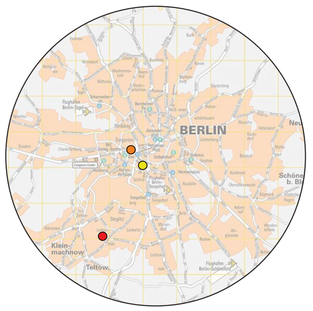
## User Needs & Architectural Adaptation

The facility is designed around the idea that creativity and the learning experience must adapt with the user's needs. The structure, floor plates/roof structures, and services are built, and the tenants are responsible for building the exterior, interior, and elements needed for their workplace. The users create temporary structures within the structure for ultimate flexibility.

Museum of Technology

New National Gallery

Platz der US Berlin Brigade



STEVE BLYE 2017

# JACK AND THE BEANSTALK (Jack und die Bohnenstange) SPACE ELEVATOR

## INTERNATIONAL SCHOOL WITHOUT CLASSROOMS • Berlin, Germany

5 TO 12 YEARS old

SITE: TEMPELHOF FELD, BERLIN - FORMER SITE OF WORLD'S LARGEST AIRPORT & POST WWII BERLIN AIRLIFT

1

CARBON NANOTUBE ELEVATOR TUBE WITH STENTED STRUCTURE AND CAPSULE

2

GENETICALLY MODIFIED HYBRID AIR PLANT VINE (TILLANDSIA PAUCIFOLIA) BIO-REINFORCEMENT

ELEVATOR SHUTTLE CAPSULE

AERO MAG-LEV PROPULSION

FIRST IMAGINED BY KONSTANTIN TSIOLKOVSKY, RUSSIAN SCIENTIST, 1895

HELIDRONES

DRONES

POD MAINTENANCE

OUTDOOR PEDAGOGY (CLASSROOM/ RESEARCH/ LABORATORY) PODS

ROTATION AROUND EARTH

1 GEO-ANCHORED LAUNCH PLATFORM

2 BIO-REINFORCED ELEVATOR TUBE

3 OUTDOOR PEDAGOGY PODS

4 LINE OF GEOSTATIONARY ORBIT ALTITUDE

5 CENTER OF MASS ORBITING CENTRIFUGAL SPACE CASTLE

6 PROTEINACEOUS SPIDER SILK REINFORCED CARBON NANOTUBE TETHER

7 CENTRIFUGAL CARBON NANO-THREAD NETTING OF SPACE DEBRIS

BERLIN, GERMANY

EARTH PROFILE

1 GEO-ANCHORED LAUNCH PLATFORM:
- ARRIVAL/ORIENTATION
- TRAINING/ ASSIGNMENTS
- COMMUNICATIONS
- LOGISTICS
- TRANSPORT PREP
- SAFETY PROTOCOL
- SCHEDULING

HANS

ROTATION ABOUT AXIS

EQUATOR

ORIGIN OF BIO-REINFORCED ELEVATOR TUBE

BIO-HARVEST/ GLEANING

HYDROGEN POWERED SCHOOL SHUTTLE TRANSPORTS

6 METERS

DRONE GAMING

GALAXY CHARTING

ASTRO-AMBULATORY TRAINING

TETHER TO SPACE DEBRIS

DRONE TASK SYNCHRONIZING

ELEVATOR TUBE TERMINAL

5 EXTRA-TERRESTRIAL PEDAGOGY/ RESEARCH SPACE CASTLE

TETHER COUPLING TO CASTLE

# ECOLOGICAL CONSERVATION ACADEMY

People as gardeners. One of the most basic and fundamental roles of mankind, but unfortunately one that is often forgotten. As caretakers of the earth and the resources therein, we are in need of redemption. The focus of this school – in theory, program, and design – is to focus the education of future generations on ecology and conservation.

In the Ecological Conservation Academy, formal classrooms are eliminated. Open floor plans allow education to happen organically and specifically for each group, individual, or topic. Unique applications of sustainable practices are incorporated throughout the enclosure of the tower – the building acts as both a sustainable machine and an educational resource.

Rooting the base are planters and agriculture, which engage and connect the Academy with the entirety of the Freizeitgelande Tempelhofer Field. Here, students tend to plants and crops, working in the dirt as gardeners. Water collection and filtration happens in the middle tier of the tower. Bird habitats are incorporated towards the top of the tower, along with air purification.

This proposal reaches beyond the site of the school to integrate the entire Freizeitgelande Tempelhofer Field into the educational mission of the Academy. Through doing so, this open space is repurposed for community use. Portions of the old airport are maintained and improved for public entertainment, recreation, and gardening – functions that are informally served currently. The majority of the open green space is converted to a forest preserve for both public enjoyment and educational use.

VEGETATION

BIRD HABITAT

RAIN WATER COLLECTION

AIR FILTRATION

STUDENT GARDENS

OUTDOOR AMPHITHEATER

RECREATIONAL TRAILS - MAINTAINING EXISTING RUNWAYS

FOREST PRESERVE

EXISTING AIRPORT

SWC64737

# AGE-*less* LEARNING

## TEMPELHOF FELD, BERLIN

When we talk about learning, or how we learn, people often recall a significant memory through which they have learned. A granddaughter may recall learning how to plant a garden at grandma's house two summers ago. Or, a grandson may remember the first time his grandfather took him camping and taught him how to start a campfire.

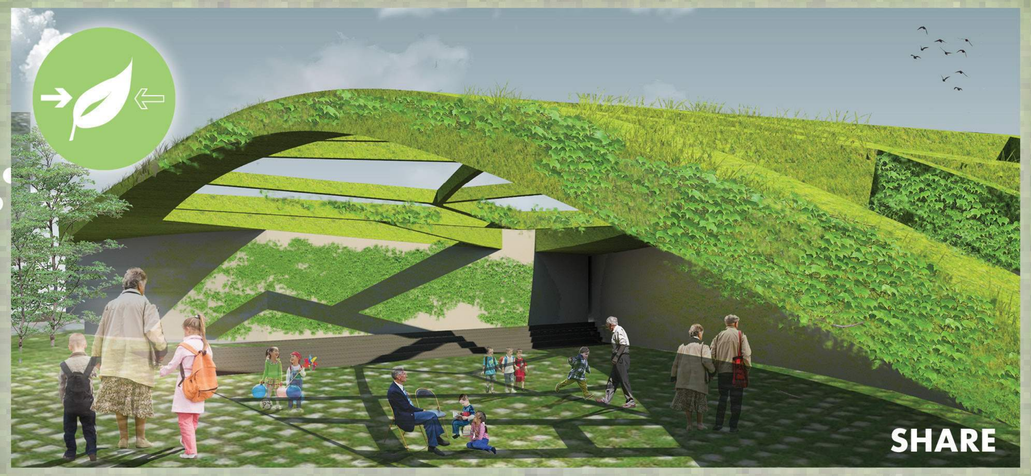
Often overlooked is the importance of intellectual growth in academia that stems from people and natural environment as a primary educational means. Humans learn best by making memories and form those memories when we...

*SHARE* our experiences

*DISCOVER* our environment

*FOCUS* our interests with others

These memory-making opportunities promote learning environments that encourage individuality and the pursuit of oneself. Sharing these moments with others, either older or younger, encourages personal discovery that will be more memorable. Incorporating the elderly within the program further engages learning via memory making in that children will have the opportunity to learn from retired adults who do have the time and memories to share. Creating spaces that facilitates intergenerational growth by means of the natural environment is key in breaking the boundaries of the typical learning environment.






TEAM: SWC0751C

# SHIFTING GEARS

## PAST, PRESENT, FUTURE

LIFE IS A LOT LIKE A GEAR; THE END OF ONE LIFE MARKS THE BEGINNING OF ANOTHER, AND IT JUST KEEPS ON TURNING. TO PREPARE STUDENTS FOR ALL THEY NEED TO LEARN TO SUCCEED IN LIFE, THE LEARNING DOESN'T HAVE TO HAPPEN IN A CLASSROOM, BUT CAN BE JUST AS EFFECTIVE, IF NOT MORE EFFECTIVE, IF THE TEACHERS COME FROM ALL WALKS OF LIFE. THE BLENDING OF A SCHOOL AND A NURSING HOME CREATES THE PERFECT CONDITIONS FOR THE WISDOM AND STORIES OF AN OLDER GENERATION TO BLEND WITH THE ENERGY AND IMAGINATION OF A YOUNGER GENERATION. STUDIES AND REAL LIFE EXAMPLES OF THESE TWO ENVIRONMENTS COEXISTING SHOW BENEFITS FOR BOTH THE STUDENTS AND RESIDENTS/PATIENTS. THE BLENDING OF THE TWO GENERATIONS IN MANY WAYS OF OUR DESIGN. THE PRIMARY EXTERIOR MATERIAL ON THE NURSING HOME SIDE IS A TRADITIONAL BRICK, WHILE THE SCHOOL SIDE IS CLAD WITH BRIGHT, NEW METAL. THE ENTRANCES HAPPEN IN THE SAME PLACE AT THE FRONT OF THE SITE, WHILE THE ACTIVITY AREAS FOR BOTH PROGRAMS HAPPEN A FEW STEPS AWAY FROM EACH OTHER AT THE BACK OF THE SITE. AN ATRIUM SPACE SERVES AS A COMMONS/CAFETERIA FOR THE SCHOOL AND HOME, AND THEY BOTH FACE EACH OTHER ACROSS THE COURTYARD. THE COURTYARD IS RIGHT AT THE CENTER OF THE BUILDING AND BREAKS OUT OF THE WALLS AND SOCIAL BARRIERS CO-MINGLING OF GENERATIONS OFTEN FACE. IN THIS SPACE, ALL PEOPLE SHARE AND LEARN FROM ONE ANOTHER, AS EDUCATION TRANSCENDS GENERATIONS