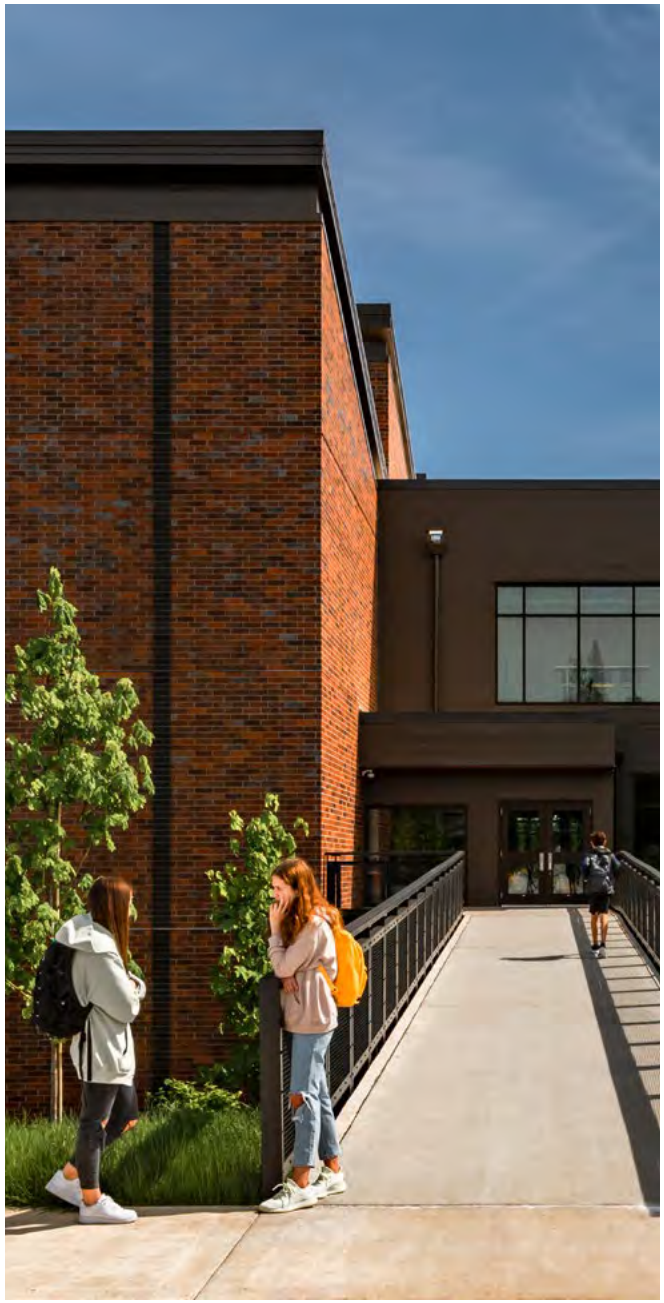
VANCOUVER iTECH PREPARATORY

2020 A4LE LEsolutions Award Submission



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EXECUTIVE SUMMARY

Scope of Work and Budget

- With an initial budget of $35,618.000, scope for the project included the design and construction of an 80,711 SF building with 700 student capacity school for grades 6-12
- The new STEM magnet campus is based on-site at Washington State University-Vancouver (WSU-V), serving middle and high-school students who were previously based at two locations in Vancouver

School & Community Engagement

- The school was designed entirely around students, in close collaboration with staff, administrators, WSU-V staff, and student representatives
- Because WSU-V is located within the Battle Ground District, an enrollment lottery was established with a designated number of slots for each zip code, with ten percent of the slots reserved for Battle Ground Public Schools students

Educational Environment

- iTech's project-based curriculum weaves multiple subjects together and requires students to think about a problem from multiple angles
- This creates an environment where STEM subject matter, theory, and technology come to life and can be applied to issues in the world

Physical Environment

- The schools' philosophy is reflected throughout the design and in the building's story
- There is a strong focus on transparency, collaboration, flexibility of spaces and movement
- Each of the spaces and classrooms connects through a grand central area for presentation and events, showcasing students' work and organically supporting peer-to-peer collaboration

Results of the Process & Project

- iTech successfully opened its doors in January 2020
- Governor Jay Inslee attends iTech's Grand Opening Ceremony
- The school currently serves around 400 students with plans to grow to 670

SCOPE OF WORK & BUDGET

Vancouver iTech Preparatory's new building was designed to nurture the minds of tomorrow's innovators and problem solvers.

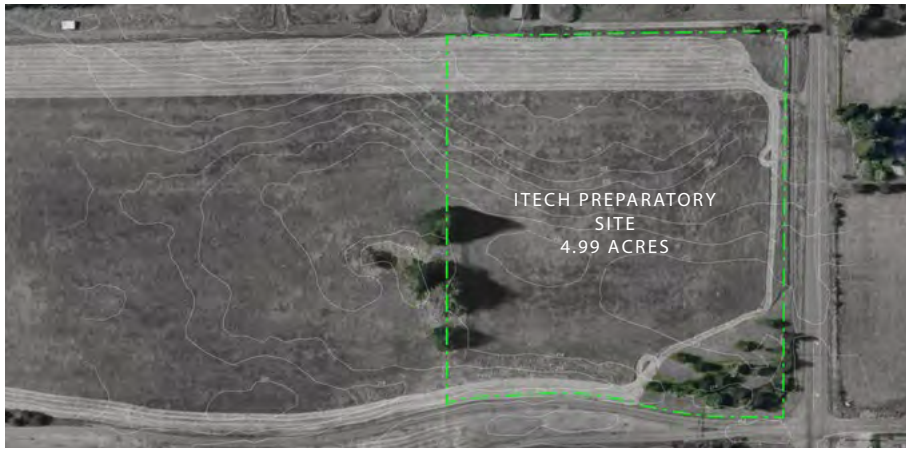
Scope for this project included the design and construction of a 700 student capacity school for grades 6-12. This would serve as a home base for Vancouver Public School's early college STEM-focused program, serving the middle and high-school students who were previously based at two separate locations.

The program needs were dynamic and based around a progressive academic curriculum. It needed to include classrooms, science labs, computer labs, collaboration break-out spaces, makers spaces, offices, administration space, a fitness/activity multi-purpose space, a media center, full kitchen, and commons/ gathering space.

With an initial budget of $35,618.000, the team delivered a three-story building with all the above-mentioned spaces and capacity for all students, located on the campus of Washington State University - Vancouver (WSU-V). This location physically connects these institutions, giving students the opportunity to attend college classes and gain experience on campus.

Key Stats

- ***Construction Budget:*** *$35,618.000 (includes Sales Tax)*
- ***Year Completed:*** *2019*
- ***Project Type:*** *Institutional, K-12*
- ***Project Location:*** *16100 NE 50th Ave, Vancouver, WA 98686*
- ***Size (sq ft):*** *80,711*
- ***Construction Costs:*** *$33,393,787.27*



Top *On-site location, pre-build.* ***Bottom*** *Aerial view of location, pre-build.*

SCHOOL & COMMUNITY ENGAGEMENT

Transparency, connection, and collaboration are central to the iTech experience.

The Community

Founded in 2012, Vancouver iTech Preparatory quickly established a reputation as the Southwest Washington hub for students with an aptitude for problem solving and critical thinking.

The school initially operated from two sites in Vancouver, serving the middle and high-school students at separate locations. In February 2017, a bond was passed that included plans to consolidate both schools of iTech into a new building on the Washington State University-Vancouver (WSU-V) campus. One of iTech's core goals is to form and foster a community of tech partnerships; and there could not be a better location to support this goal.

The WSU-V site allows iTech students to attend college classes from their freshman year and connect with mentors at both institutions. Students also benefit from the range of speakers and business leaders who visit the university, exposing them to new ideas that can help shape their perspective of what is possible.

Stakeholders

- *Vancouver iTech Preparatory Faculty and Staff*
- *Vancouver Public Schools Students*
- *Battleground District Students*
- *WSU-V for conformance with WSU Design Standards*
- *Community and Business Partners*
- *VPS voters who approved the bond for funding*

View of Mt. Saint Helens from WSU-V Campus.

SCHOOL & COMMUNITY ENGAGEMENT

Challenges

Community Engagement: One of the project's key logistical challenges was moving iTech (located within the Vancouver Public School district) from two locations to a new site that is located in the Battle Ground School district. This required a transparent solution that would be embraced and supported by the community.

To meet this challenge and ensure that iTech's student body reflects the demographics of the Vancouver district, an enrollment lottery was established with a designated number of slots for each zip code, with ten percent of the slots reserved for students in the Battle Ground School District.

Designing iTech's New Home: One of the key challenges was combining the resources, facilities, and unique experiences that encompassed two schools into a shared, single location. From an aesthetic and structural standpoint, this also meant that iTech had to meet WSU design standards, adding to the sense of unity between both institutions.

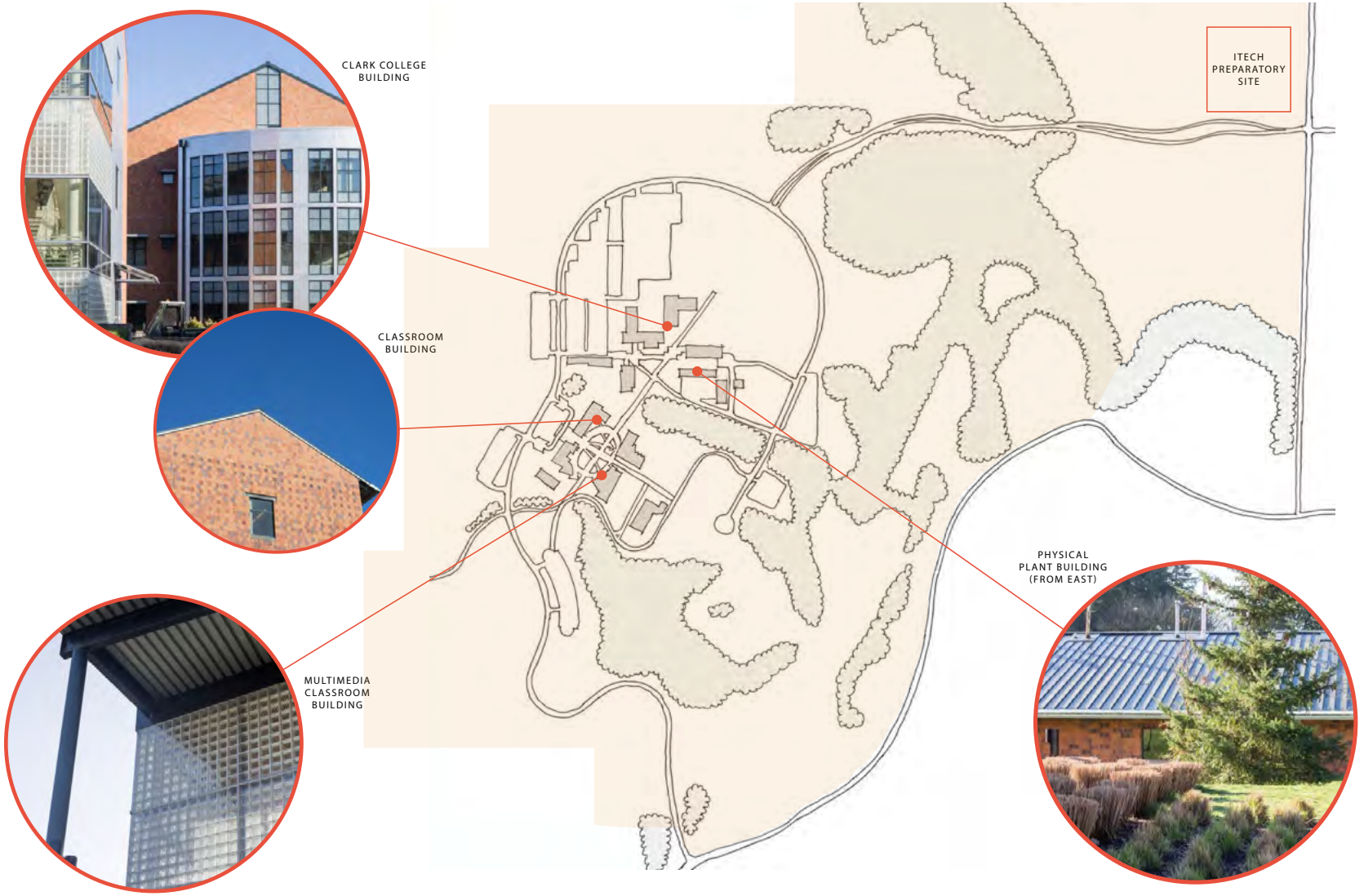
To help focus the design on the needs of the students, the design team launched and facilitated a multi-day symposium with staff, administrators, and student representatives. This process included meetings, brainstorming sessions, and interactive workshops, with the goal of creating consensus and unity around a vision for the school's new home. From the symposium discussions and workshops, the design team began to map out ideas for the school program and uncovered some of the big ideas that stakeholders wished to see translated into spaces. These included:

- *The desire for a learning environment that is fused with a sense of play; a space that grants permission to consider infinite possibilities*
- *The need for a flexible learning environment that can accommodate workshops, collaboration, and spontaneous presentations; a space where art and science come together*
- *The need for spatial variety, and a desire for a school environment that lends itself to multiple types of learning methods*

Following the symposium, a Core Team, consisting of members from the design team, VPS, and WSU-V, was assembled to meet regularly throughout the design and construction process. These ongoing meetings provided regular opportunities to discuss complex issues, identify solutions, and ensured that stakeholders were up-to-date on progress.

Core Team engaging in an activities discussion.

SCHOOL & COMMUNITY ENGAGEMENT



The iTech campus can be seen in the top right corner in relationship to the WSU-V campus. Special attention was made to existing campus architecture in an attempt to match iTech's design to the university's design standards.

SCHOOL & COMMUNITY ENGAGEMENT

Challenges (Cont.)

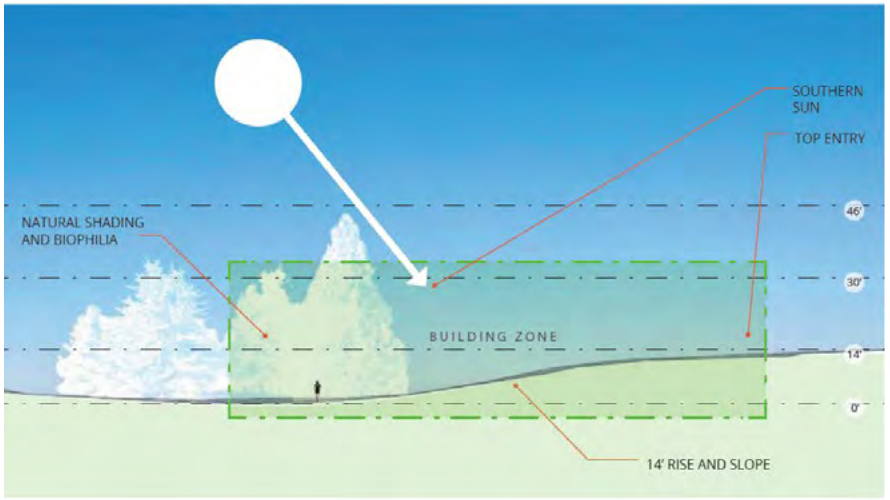
Engaging the Landscape: Positioned between a developing urban and agricultural landscape, the site for iTech's new campus was set upon 4.9 acres of rolling fields (see page 9). This presented an array of possibilities and challenges for the design team, who worked closely with an agricultural consultant to ensure:

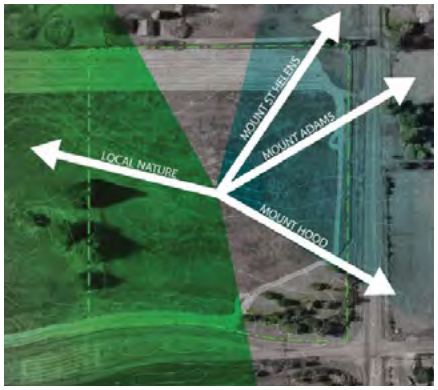
- → *They understood the existing conditions*
- → *Translated them into design choices that engaged the site*

One significant challenge to navigate was the existence of a wetland. The design team chose to use the wetland to create a natural draining system that captures and cleanses storm water from the parking lots, roof, and adjacent landscape. This was further repurposed by turning the functional wetland into a focal point at the northern student entry. A footbridge crosses the wetland, creating a whimsical moat-like feature, and leads to a shaded, paved area where students can play half-court basketball and four-square (see page 10).

The building's design itself takes its shape and aesthetic from the sloping topography and foliage, harmonizing interior elements with the natural elements outside. This includes orienting it to maximize natural daylighting levels and views of the building's natural surroundings, both of which have proven neurological benefits to students in learning environments.

Access Points: To manage vehicular flow to and from the school grounds, parking for students, faculty, and the general public is located behind the building and to the north. This had the dual benefit of preserving views of the rolling meadow landscape to the southwest. Entrances to the school are located at three different levels, allowing ease of movement through the school to various outdoor spaces (see page 10).

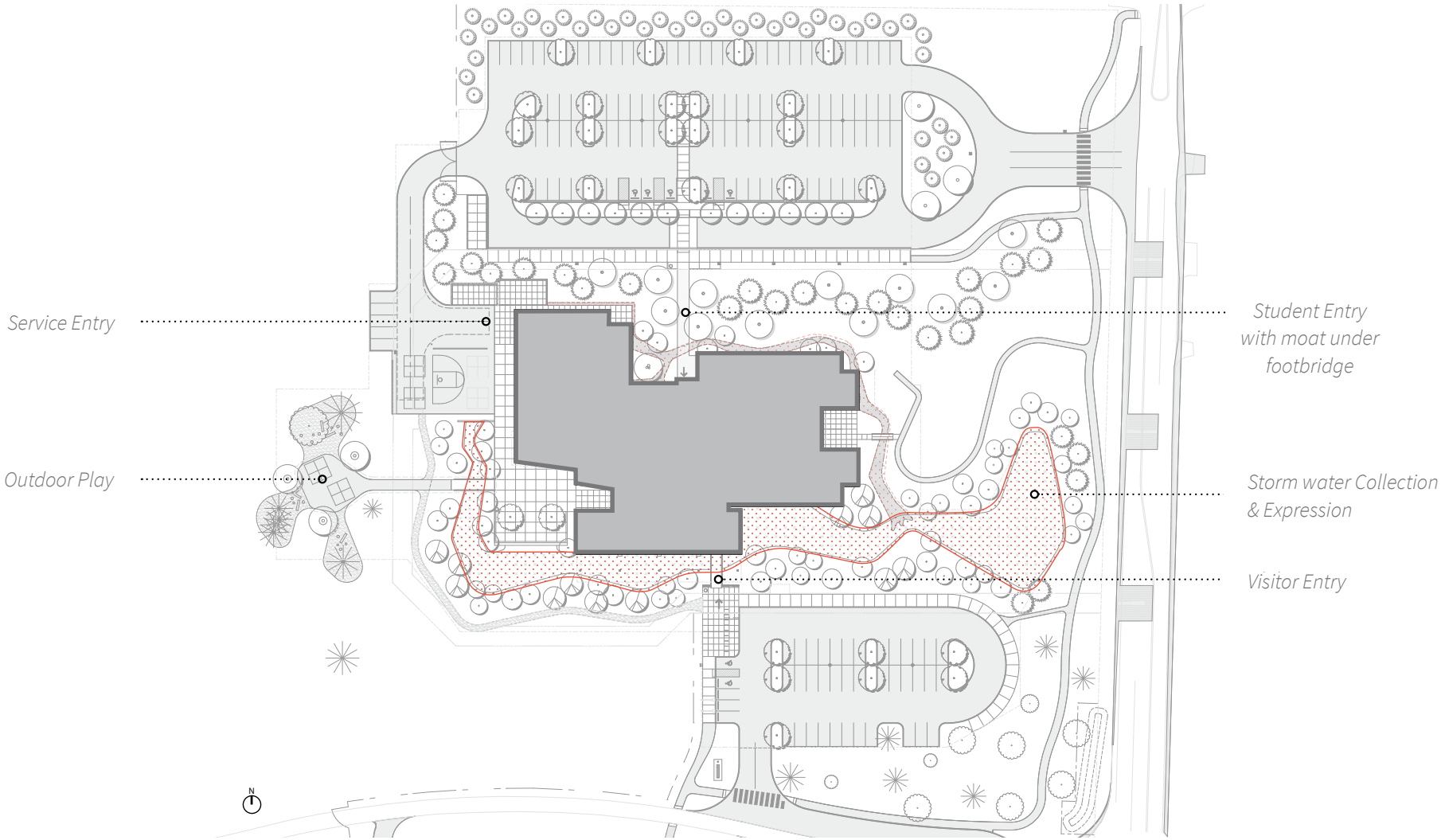




Various Site Analyses

SCHOOL & COMMUNITY ENGAGEMENT

SCHOOL & COMMUNITY ENGAGEMENT



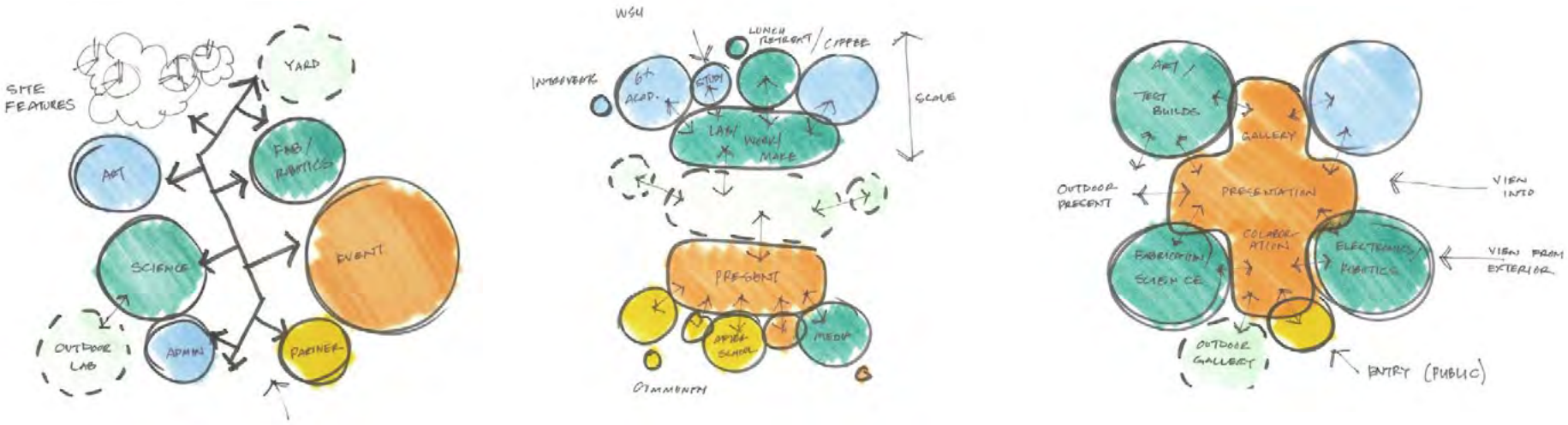
EDUCATIONAL ENVIRONMENT

> *"The iTech philosophy of learning grows out of a commitment to specific principles, which guide us in how we learn. Students and staff alike come to the school knowing that the people here teach and learn with a creative and inquisitive approach sustained by high academic integrity.*
>
> *Within the framework of our guiding principles, we constantly ask fundamental questions that explore evidence of learning. In this school, we learn the value of individual commitment and respect for uniqueness because we live and learn every day with people who are inventive, receptive to new ideas, responsible, and committed to learning."*
>
> *~ Vancouver iTech Preparatory Statement*

iTech's Vision:

- *Develops Future-Ready Students who are INNOVATORS and CRITICAL THINKERS*
- *Instills GRIT and builds CONFIDENT learners*
- *Solves REAL-WORLD problems*
- *Forms a COMMUNITY of Tech and Partnerships*
- *Embraces that "AHA MOMENT" where learning "clicks" for a student, on their INDIVIDUAL journey*
- *EMPOWERS STUDENTS to decide: "What problem do you want to solve?"*
- *Celebrates and respects: Our STUDENTS TAKING CHARGE of their own learning!*

EDUCATIONAL ENVIRONMENT



Activity Relationship Diagrams

Supporting the Curriculum

iTech's project-based curriculum weaves multiple subjects together and requires students to think about a problem from multiple angles, creating an environment where STEM subject matter, theory, and technology come to life and can be applied to issues in the world.

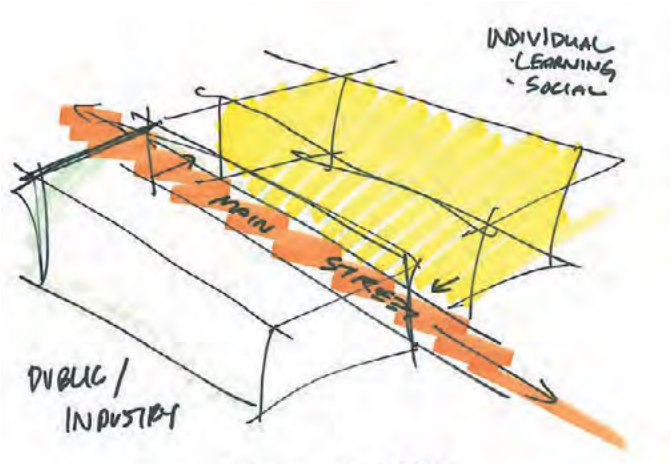
Flexible, Collaborative, Learning Environments

Collaboration and group activities are common practice at iTech, and the building's program is geared to support the school's flexible and personalized style of teaching. The classrooms and labs can be opened up to views of the learning staircase in the center of the school.

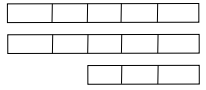
Fabrication spaces are adjacent and visible from the school's central gathering spot, and these are flanked by flexible collaboration spaces. These collaboration zones are arranged both horizontally and vertically to allow variety, transparency, and views to the classrooms and labs, the outdoors, and to adjacent floor levels.

This ties back to the idea of students embracing an inter-connected curriculum of projects, composed of multiple ideas and disciplines. The school spaces are as flexible and open as the students need them to be, in order to build their own solutions.

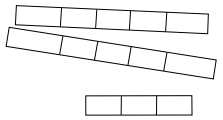
EDUCATIONAL ENVIRONMENT



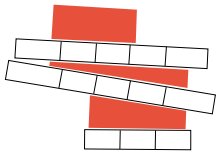
Connecting liminal spaces or "streets," encouraging social and educational interactions



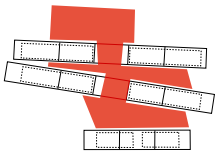
I. Dedicated Program



II. Expanded Liminal Space

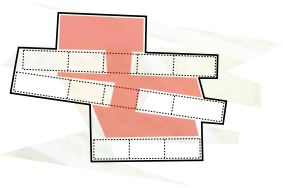


III. Define Liminal Space



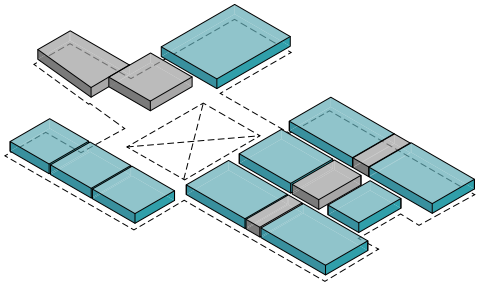
IV. Weave Program & Liminal

V. Access Exterior



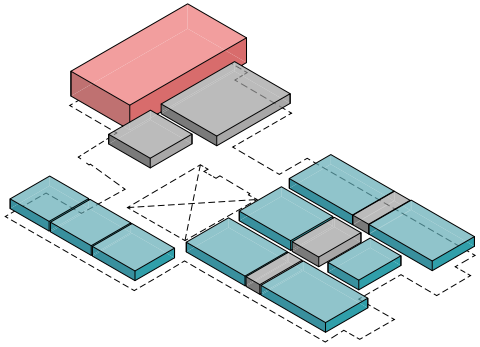
VI. Define Built Edge

EDUCATIONAL ENVIRONMENT



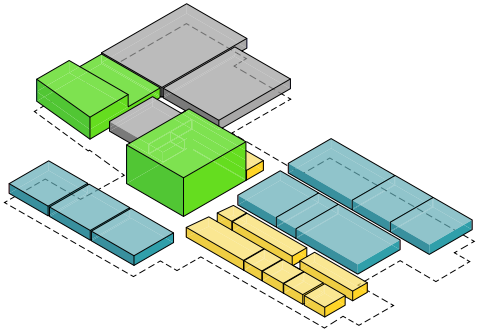
Level 3

- Classroom
- Support



Level 2

- Classroom
- Turfnasium
- Support



Level 1

- Classroom
- Gathering
- Support
- Admin

EDUCATIONAL ENVIRONMENT

Connection and Transparency

Throughout the school, there is a strong sense of connection between all things: students to one another, mental and physical health, and to the land itself. There's a lot of natural light and plenty of views to the outside world, creating a space for students to feel like they're a part of nature and not in a typical classroom environment.

Floor-to-ceiling glass in selected classrooms invites students to observe what is happening throughout the school and reinforces that sense of connection. The presence of natural light offers a mental health benefit by giving students and staff a stronger connection to the outside world, especially in the Pacific Northwest, where sunshine is a rare commodity during winter months.

Light and movement extend through the building's classroom environment and into the outdoors. To the east is the maker space and courtyard. The courtyard can be used for testing ideas, fabrication, mock-ups, and is surrounded by garden terraces that offer inspiration and a space for research. To the west, the primary outdoor space spills out from the cafe and central common, inviting students to explore their natural surroundings (see page 16).

Emphasis on daylighting and connection to nature.

Transparency provides observation points to learn and grow from one another.

EDUCATIONAL ENVIRONMENT

To the west of the visitor entry, the primary outdoor space spills out from the cafe and central common, inviting students to explore their natural surroundings.

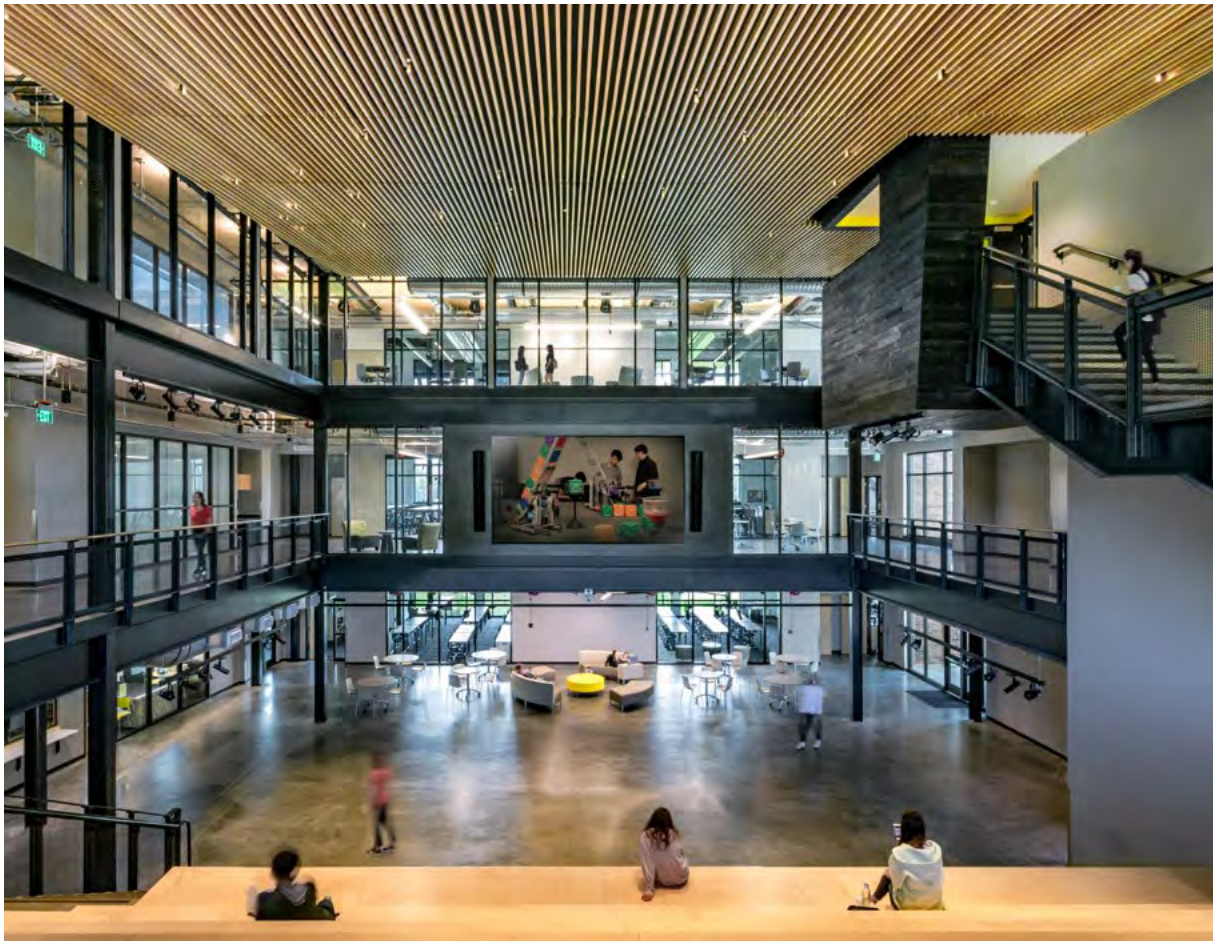
PHYSICAL ENVIRONMENT

Inspiration

One of the great byproducts of iTech's open environment is the peer-to-peer inspiration that happens when students are free to share their work, learn from one another, and build each other up.

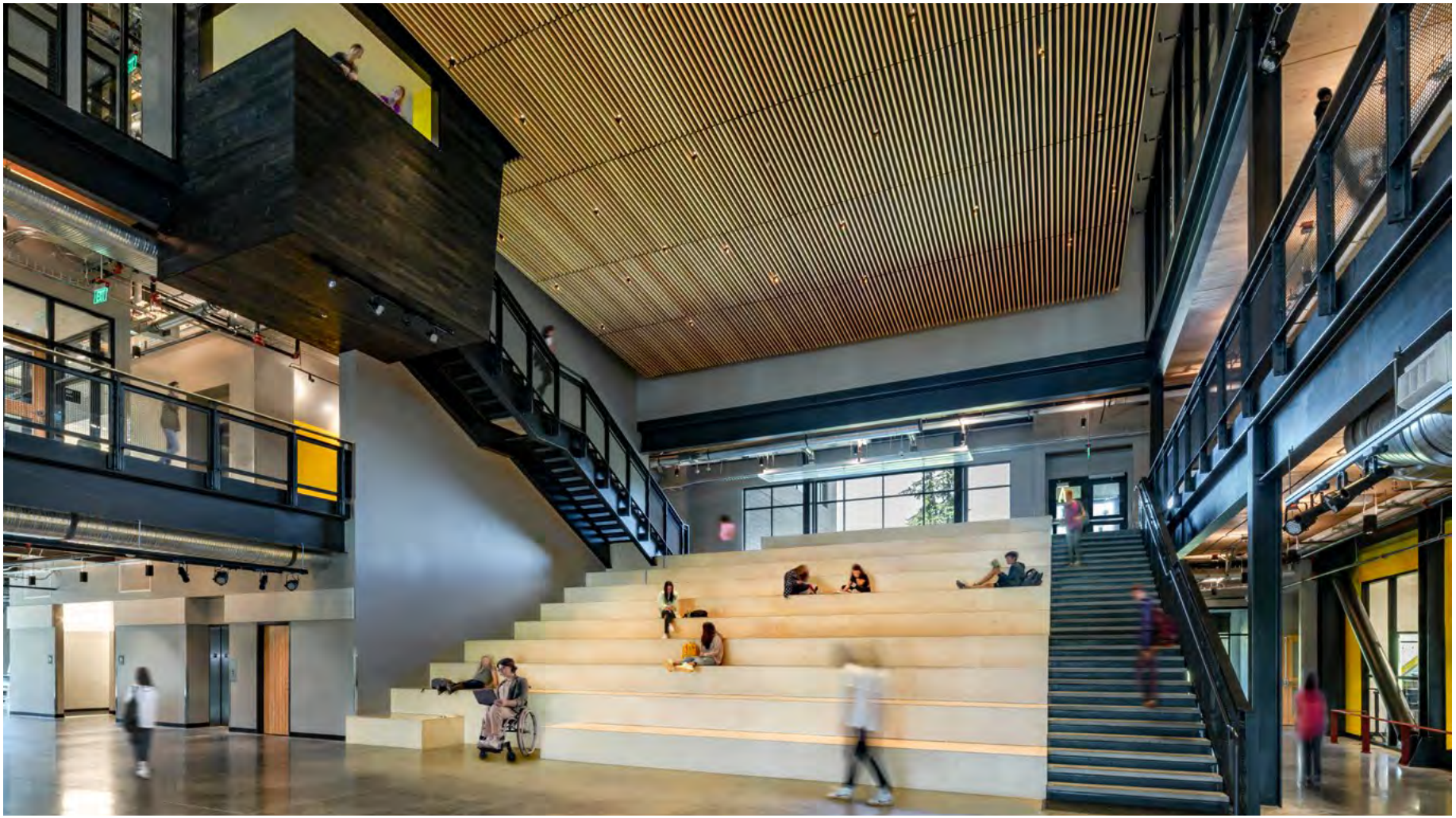
iTech's progressive approach to education is reflected throughout the design and in the building's story. Each of the spaces and classrooms overlooks a large learning staircase, meant to be an interchangeable gathering and presentation venue. This emphasizes the idea that individual learning is connected to the greater whole and goes to the hearts of iTech's central theme, "process on display."

Much of the project work at iTech is done in an open setting with no fixed barriers to visibility. The result is a fun and vibrant atmosphere that lends itself to open dialog, learning by doing, and out-of-the-box thinking. The building's design further accentuates this open mode of operation by centering the labs, collaboration spaces for project work and meetings, and workshops around the gathering and learning staircase. This stair acts as a central point to showcase iTech's unique curriculum.



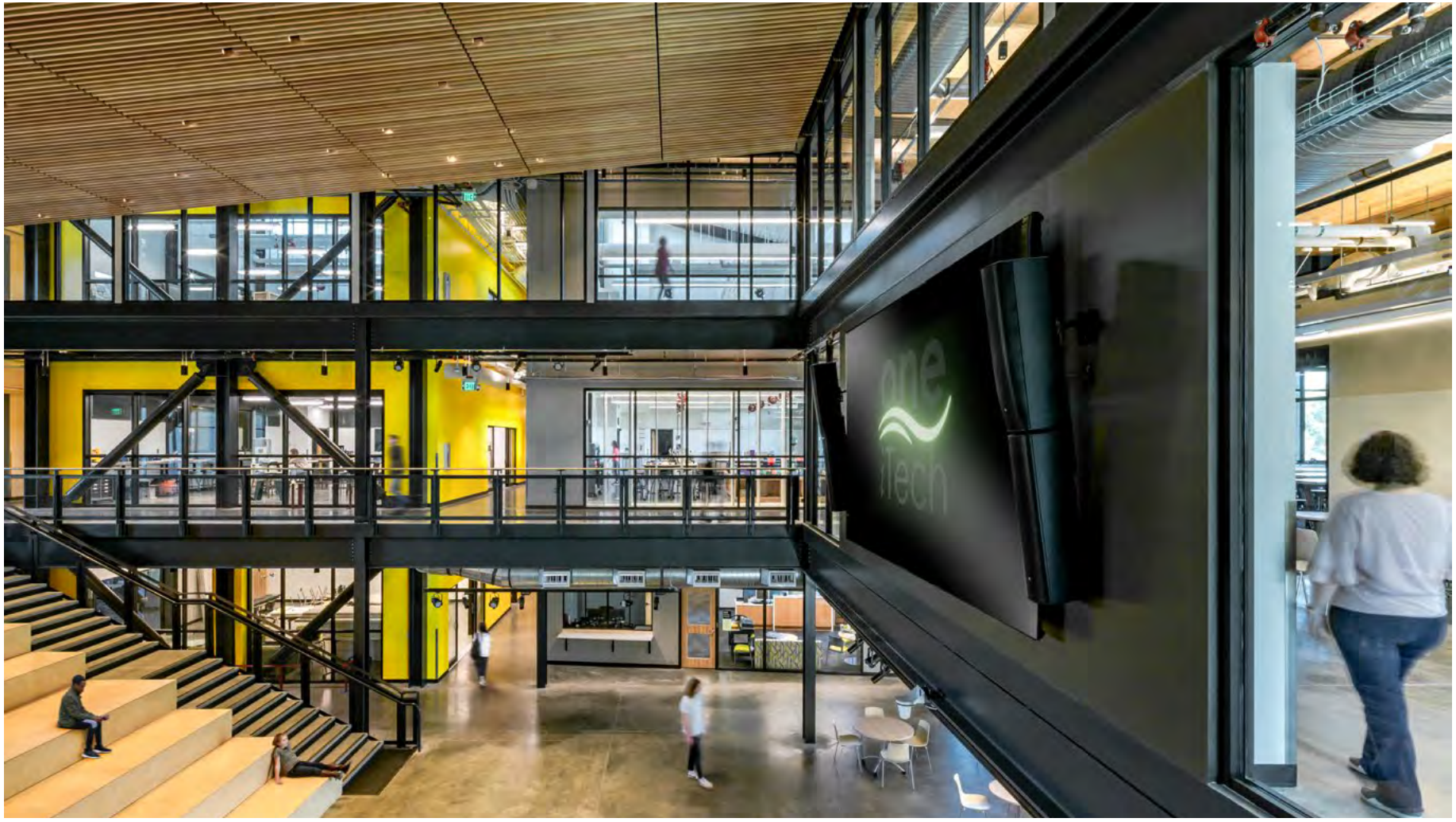
View of the central collaboration spaces from the learning staircase, showcasing "process on display."

PHYSICAL ENVIRONMENT



Learning staircase in the main gathering space.

PHYSICAL ENVIRONMENT



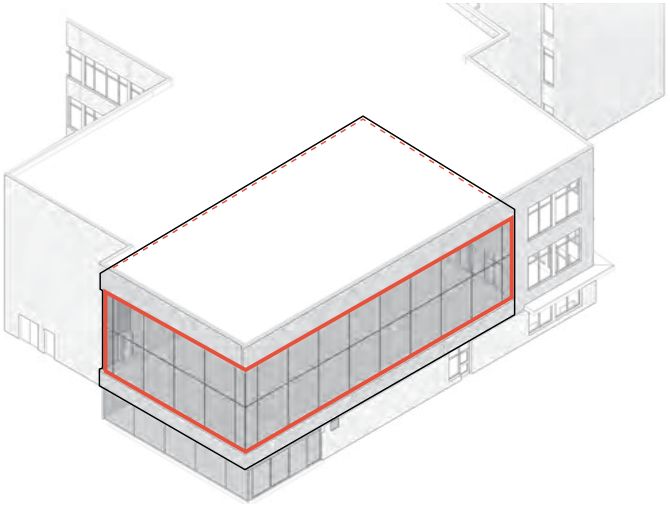
Main gathering space shows connecting "streets," encouraging social and educational interactions.

PHYSICAL ENVIRONMENT

PHYSICAL ENVIRONMENT

Movement

Part of iTech's innovative learning environment is the natural integration of elements that promote wellness, movement, and mental health. The school includes a "turfnasium," which is a reimagined turf gymnasium with floor-to-ceiling windows that provide a flood of natural light. This infusion of outdoor play space places emphasis on the connection between mental and physical health. And true to the school's encouragement of "outside the box" thinking, the Turfnasium offers a unique and fun location to play and exercise.



Wall of mesh provides airflow and transparency while enabling ball sports.

PHYSICAL ENVIRONMENT

Turfnasium with views of surrounding wetlands.

PHYSICAL ENVIRONMENT

Access and Equity

In line with iTech's goal to promote and support an inclusive, equitable learning environment, several key features have been designed to eliminate barriers to access for students. These include transparency throughout the building which exposes students to all of the opportunities at iTech, as well as aids in clear wayfinding both horizontally and vertically. The building supports many methods and scales of learning ranging from large, open communal spaces down to small, quiet study rooms so there is a space for every student to feel comfortable.

Crow's nest offers a view of the third floor collaboration space, into a classroom that overlooks the south facing landscape.

Direct access to the outdoors from one of the main floor classrooms.

PHYSICAL ENVIRONMENT

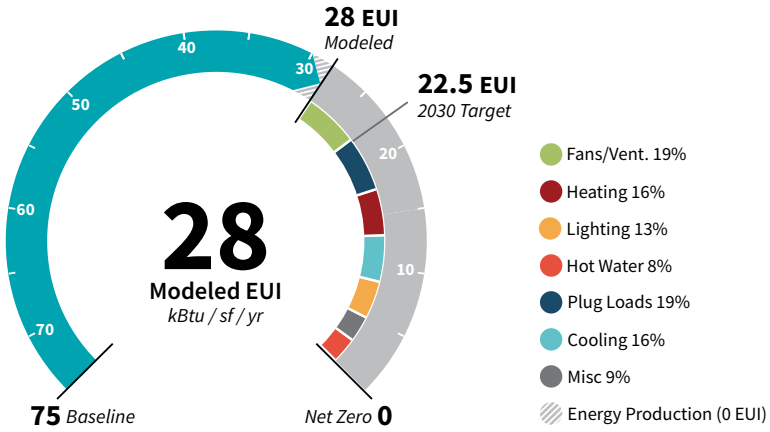
Accessible student entry located on north side of the building that crosses over moat.

Sustainability

Part of our shared commitment to the community and to the standards of the Washington Sustainable Schools Protocol was to design a high-efficiency building that prioritizes human health and comfort. Some of the key ideas we used to ground our choices around energy efficiency include:

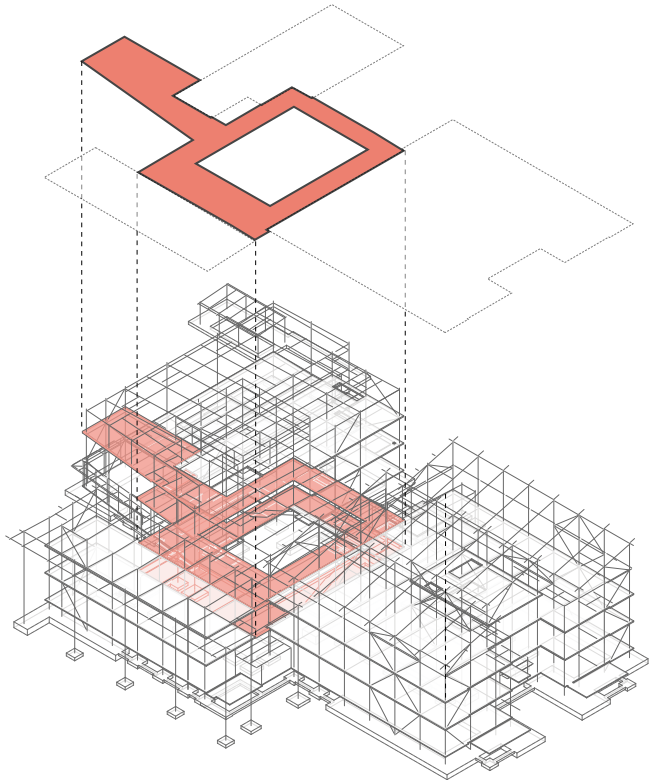
- *Maintaining a minimal footprint on site and revitalizing the landscape back to its native state*
- *Providing optimal daylighting and indoor connection to nature*
- *Showing the building's efficiency as a learning tool through digital visualization of energy use on display, exposed systems, and visual transparency to the mechanical spaces*

The Energy Use Intensity (EUI) graphic below illustrates the overall performance of the building against the AIA 2030 commitment target.



Sunshades block the entry of direct sunlight from the south and reduce overall energy consumption.

PHYSICAL ENVIRONMENT



On the second and third floors, over 9,000 square feet of cross-laminate timber serves as structural flooring near the core of the building.

PHYSICAL ENVIRONMENT

The public face, located on the east side of the building, emerges from a new wetland environment that captures and cleanses all water from the parking lots, roof, and the adjacent landscape.

RESULTS OF THE PROCESS & PROJECT

With support from partners in the public, private, and higher education sectors, iTech successfully opened its doors in January 2020.

Today, iTech serves as a model to other schools for what is possible with the right ideas, support, and approach to learning. By providing an environment that sets students and staff up for success (academically, mentally, and emotionally), the school is serving the community to the best of its ability.

In February 2020, the school held a public Grand Opening that was well received by all community stakeholders. Governor Jay Inslee did the honor of cutting the ceremonial ribbon and was quoted as saying, "I can honestly say that the coolest thing in the state of Washington today is iTech."

Academic Excellence

Vancouver iTech Preparatory was one of seven schools to earn Washington state's "Innovative Schools" designation for 2016 and was the focus of a "Most Innovative School Districts" case study by the American Association of School Administrators in 2018.

- *The school currently serves around 400 students with plans to grow to 670 over the next few years*
- *iTech's four-year (on-time) graduation rate is 100%*

Governor Jay Inslee cutting the ribbon at the iTech Grand Opening Ceremony, February 2020.