

VANCOUVER iTECH PREPARATORY

Vancouver, WA | Vancouver Public Schools | STEM Magnet School



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EXECUTIVE SUMMARY

- → Vancouver iTech Preparatory is an early college, STEM-focus (science, technology, engineering, math) "school of choice" program created and operated by Vancouver Public Schools.
- → The heart of iTech's design process, or "Process On Display," empowers students to think critically, innovate, and problem-solve through collaboration, effective communication, and technology.
- \rightarrow In collaboration with iTech staff and faculty, WSU-V, our firm conducted a lengthy discovery process to understand and listen to the wants and needs of all parties.
- → The schools' philosophy is reflected throughout the design and in the building's story. Each of the spaces and classrooms connects through a grand central area for presentation and events areas to showcase students' work and put the unique iTech "process on display" which went on to become a grand theme for the entire project.

SCOPE OF WORK & BUDGET

The project included the design and construction of a new school, 700 student capacity, for grades 6-12 for an Early College STEM program. The spaces outlined included: 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.

The project consisted of a three-story building, approximately 80,000 square feet of new construction on a land-lease parcel located on the campus of WSU-V.

- → **Construction budget:** \$35,618.000 (includes Sales Tax)
- → Completion Date: 2019
- → **Project Type:** Institutional, K-12
- → **Project Location:** 16100 NE 50th Ave, Vancouver, WA 98686
- → Size (sq ft): 80,711





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

The Community

The Vancouver and SW Washington community recognized the need for a unique learning environment. Specifically, one that would provide a creative, technical, and collaborative environment, with the focus on academic excellence. Supported by partnerships with business, industry, and higher education, iTech combines STEM with liberal arts by integrating art and design principles into research and problembased learning.

Stakeholders

This project included the following 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
- \rightarrow VPS voters who approved the bond for funding



Challenges

Consolidation: iTech initially operated from two sites in Vancouver, serving the middle and high-school students separately. In February of 2017, a bond was passed by taxpayers that included plans to consolidate both the middle and high schools of iTech into a new building on the WSU-V campus.

Many Stakeholders: Throughout development, iTech had the support of many stakeholders who invested their time and energy into making the school successful. When it came to designing a new campus that would combine and serve the needs of two existing schools, it was critical that we understand, consider, and integrate the ideas and input of all stakeholders. While challenging, this was also one of the biggest opportunities for us to gather information and inspiration for the design of the school. To this end, we conducted a symposium process during the pre-design phase to understand and listen to the wants and needs of all parties. This process included several meetings, brainstorming sessions, and interactive workshops, with the goal of creating consensus and unity around a vision for the school and the community it serves. We have outlined this process in the next section of this application.

The Site: The location for iTech's new campus included an array of natural elements that we aimed to work with and preserve, rather than mitigate. We worked closely with our landscape architects to ensure we understood the existing conditions and translated this into a design that engaged the site. One significant challenge was the existence of a wetland on the site. Rather than viewing this as a limiting factor, the design team chose to celebrate and preserve it. The result is a natural draining system for the building, simultaneously turning it into a focal point at the entry, allowing it to naturally manage stormwater and provide a secure public presence. We also preserved views of the rolling, meadow landscape by locating parking behind the building and away from key vistas to the southwest and to the existing grove of mature trees.

Design Standards: WSU also had a specific set of design standards which required the new school to be approved by the university. This meant marrying the distinct architectural style of the university with the needs and ideas generated by stakeholders from iTech.



Various Site Analyses



Special attention was made to existing campus architecture in an attempt to match iTech's design to the university's design standards.

Assets

iTech is located on site at WSU-V, creating a bridge between the two institutions. This relationship to the university is an important part of the learning experience at iTech.

Students at the high school have the opportunity to attend college classes from their freshman year, allowing them to engage with mentors, professors, and advisors without having to break entirely from their daily routine. Additionally, professors from the university offer guest lectures at iTech.

The campus itself attracts guest speakers and industry professionals who can expose students to innovative developments in a variety of sectors, furthering their education in a way that extends well beyond the traditional classroom.

From a mission standpoint, this also serves the students by creating an environment where students can benefit from the opportunity to build relationships. The result is that iTech becomes a learning environment that prepares students for college in a very tangible way.



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

Value

Symposium

As a tax-payer funded project, our first priority was to ensure the public's investment in this school is honored through our design. Throughout the design process, we went to great lengths to work in a collaborative manner, with trust, respect, and transparency as the cornerstone of our process.

At the start of our journey with iTech and VPS, we met with school staff and key stakeholders from the district for a symposium. This process was designed to bring everyone to the table for discussions that help us understand important needs, make space for perspectives and views, and build consensus in large, diverse groups. During the initial symposium workshop, we dove into the school program, its students and how they learn, and uncovered some of the big ideas that everyone hoped to see translated into spaces. Below are the key points we heard during this process:

- → A distinct desire for a learning environment that was fused with a sense of play; a space that grants permission to consider infinite possibilities.
- → A need for flexible learning spaces that can accommodate workshops, collaboration, and spontaneous presentations; A space where art and science come together.
- → A need for variety and creativity, and the desire for a school where education does not limit itself to traditional ideas or classroom dynamics.
- \rightarrow A team of passionate educators dreaming outside the box.

Design Process

Following the symposium, a Core Team, consisting of VPS and WSU-V staff, was assembled to meet regularly with our team throughout the design and construction process. These ongoing meetings provided regular opportunities to discuss complex issues and ensured that all stakeholders stayed up-to-date on the project as it made its way through development.

Coordination among all team members is essential for an informed design process and for avoiding conflicts. The involvement of this Core Team was not only critical to ushering the project through its design and construction process but also afterward. The relationship that exists between our team, iTech's staff, and WSU-V is an important part of how the school's story is told moving forward.



Core Team Activities Discussion

iTech's Vision & Goals

"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

Supporting the Curriculum

The school's curriculum focuses on project-based learning, weaving multiple subjects together and requiring students to think about a problem from multiple angles. This progressive approach is reflected throughout the design and in the building's story.

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. This goes to the root of iTech's central theme, "process on display."

Collaboration and the iTech Design Process are at the very heart of the iTech story. As mentioned, the curriculum takes a project-based approach that weaves multiple subjects together, requiring students to think about a problem from multiple angles. Through the exploration of culture, values, and vision, the Core Team established the following attributes that would help tell the story of iTech in built form and support its unique curriculum:

- → An indoor/outdoor/connection to nature
- → Daylighting
- → Spatial variety
- → Bridges/transparency (observation points to view/learn from each other)
- → A visual and spatial juxtaposition of nature/urban
- ightarrow A procession of the public to private: polished upfront/family and less refined in the rear
- → Warmth/scale
- \rightarrow At the core: collaboration / family / unified / shared experiences
- → "Process On Display"



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





Dedicated Program

Dedicated Program





Define Liminal Space

Define Liminal Space





Access Exterior

Access Exterior



Activity Relationship Diagrams

Supporting Learning & Teaching Styles

The building concept is arranged to tell the story of iTech. Collaboration and group activities are a common idea throughout the school, and at the very center is a large group space meant for gathering, presentation, and display. This emphasizes the idea that individual learning is connected to the greater whole. While the classrooms and labs are used for specific lessons or workshops, they can just as easily be opened up to sounds of peers gathering on the learning staircase in the center of the school.

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, blurring the lines between work and play. This has the dual effect of making students feel like they're a part of nature and not in a typical classroom environment.

In the Pacific Northwest, where sunshine is a rare commodity during winter months, the presence of natural light offers a mental health benefit by giving students and staff a stronger connection to the outside world.

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 that brings the outdoors in. The 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.



Adaptable & Flexible

In order to serve the school's collaborative and open style of teaching, there are multiple spaces and labs to support the technological needs of students.

For example, 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 goes 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.



Process on Display Much of the project work at iTech is done in an open setting, showcasing processes in real-time with no barriers to visibility. One of the great byproducts of this environment is the peer-to-peer inspiration.

How iTech Fits Within the Community

A lottery process with a designated number of slots for each zip code helps ensure that iTech's enrollment reflects the demographics of the Vancouver district. Ten percent of iTech's enrollment is reserved for students in Battle Ground Public Schools, because the WSU-V / iTech campus is located within that district.

Inspires & Motivates

Much of the project work at iTech is done in an open setting, showcasing processes in real-time with no barriers to visibility. The facility is designed to encourage collaboration among students and teachers across grade levels and disciplines. One of the great byproducts of this 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.

The result is a fun and vibrant environment that lends itself to open dialog. The building's design further accentuates this open mode of operation by centering the labs, collaboration spaces, and workshops around the gathering and presentation stair. This stair acts as a central point to showcase iTech's unique curriculum.

The school is well suited and equipped to host speakers and presenters. This adds a new and exciting layer to the experience of learning, which exposes students to big ideas, innovations, and progress.



iTech's Grand Opening Ceremony, February 2020



Physical Attributes

The building takes its shape and aesthetic from the surrounding topography and foliage, harmonizing its 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.









The school is located at the NE corner of the campus; a place where the university meets the broader community.











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.







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



RESULTS OF THE PROCESS & PROJECT

Achieving Educational Goals & Objectives

At the end of this lengthy design process, following all of the engagement that informed its aesthetics and program, the end result is a school that is built to serve the unique goals and aspirations of tomorrow's problem-solvers.

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





The public face to 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

Achieving VPS Goals

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.

- $\rightarrow~$ 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%.

Achieving Community Goals

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 our students and staff up for success (academically, mentally and emotionally), the school is serving the community to the best of its ability.

Unintended Results & Achievements

The media attention that iTech has generated could be viewed as an unintended result, yet this would not have happened without the considerable efforts, planning, and passion of all who have been involved in the school's evolution.



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

EDUCATIONAL SPECIFICATIONS

The Vancouver Public Schools board of directors adopted Design II, Chapter 2, the second phase of the district's strategic plan, on June 10, 2014. The plan reflects the community's vision for Vancouver Public Schools and is intended to guide the district through the year 2020. This plan has six goals:

Instructional Quality

Creating the context and conditions to personalize learning

Flexible Learning Environments

Integrating digital technology tools and modernizing facilities to ensure all students are prepared to thrive in the globally interdependent economy and community

Programs of Choice

Helping students discover and develop their abilities, talents, and interests

Early Learning

Collaborating with parents and partners to promote readiness to learn

Family Engagement/Family-Community Resource Centers

Building a culture that welcomes and supports parents' participation in their children's education, and forging community partnerships focused on student success

Safe and Supportive Schools

Creating more inviting, culturally respectful, and emotionally safe places for students to learn.



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

EDUCATIONAL VISION

Educational Vision

The heart of iTech empowers students to think critically, innovate, and problem-solve through collaboration with the design process on display.

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!



Emphasis on daylighting and connection to nature.



I can officially say the coolest thing going on in the state of Washington is iTech."

Gov. Jay Inslee iTech Grand Opening, February 2020



