

ENABLING GREATNESS

Our story behind UBC Vancouver's buildings and grounds



THE UNIVERSITY OF BRITISH COLUMBIA

Building Operations



THE UBC POINT GREY CAMPUS IS SITUATED ON THE TRADITIONAL, ANCESTRAL, AND UNCEDED TERRITORY OF THE MUSQUEAM PEOPLE.

ACKNOWLEDGEMENTS

The following contributed directly to completing this self-evaluation, investing considerable time and effort to ensure an APPA submission worthy of the University of British Columbia. This effort could not have been possible without their individual and collective commitment and participation.

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Thanks to the dedicated men and women of the Building Operations team who have invested considerable effort and ingenuity in making our world-class campus what it is.

Copywriting and copyediting support for this publication provided by Andrew Tzembelicos of WERDNA Communications, design by Rod Roodenburg and the Ion Design group, and photography by the UBC photographers. Thank you for your expertise.

Every effort has been made to ensure the information in this document is accurate and current at the time of printing. All figures cited in this publication are in Canadian dollars unless otherwise stated.

Printed on 100 per cent post-consumer waste recycled paper.

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With more than 11,000 inventoried trees across more than 200 hectares of core operations, our gardeners need to be quick with their tools

Welcome to UBC Building Operations



Our story behind UBC Vancouver's buildings and grounds



You can think of the University of British Columbia's (UBC) Vancouver campus as a combination of a city and a large, complex corporation.

Founded in 1908, the UBC Point Grey campus is situated on the traditional, ancestral, and unceded territory of the Musqueam people on the University Endowment Lands. UBC has always been independent from the City of Vancouver. Wrapped in 2,000 acres of dense forest known as Pacific Spirit Regional Park, our campus proper consists of more than 400 hectares (990 acres) of public realm containing 838,000 square metres (9,021,000 square feet) of academic building space, and another 760,000 square metres (8,176,000 square feet) of ancillary space such as student housing and athletic facilities.

Over the last two decades, UBC has worked to expand its international reputation. UBC's goal is not only to become Canada's best university, but among the world's best. Currently ranked as one of the top 20 publicly-funded universities in the world, UBC is working to achieve a more audacious goal: to join the top 10. To achieve this, UBC will need every aspect of the university working together.

We have a saying in Building Operations: "UBC is not in the business of buildings, it's in the business of ground-breaking research and exceptional student outcomes." We know our job is to be the silent heroes who enable UBC's students and faculty to reach our institutional goals. In each section of this publication, we will share our story, and how Building Operations works to enable greatness through UBC's buildings and grounds.

BUILDING OPERATIONS TEAM BY THE NUMBERS

- Custodial: 412
- Trades: 189
- Municipal: 110
- Customer Services: 34
- Asset Stewardship: 7
- Total: 752**

VP Finance's 2017-2018 budget submission to the board of governors:

http://vpfinance.ubc.ca/files/2017/04/2017_2018_Operating_Budget.pdf

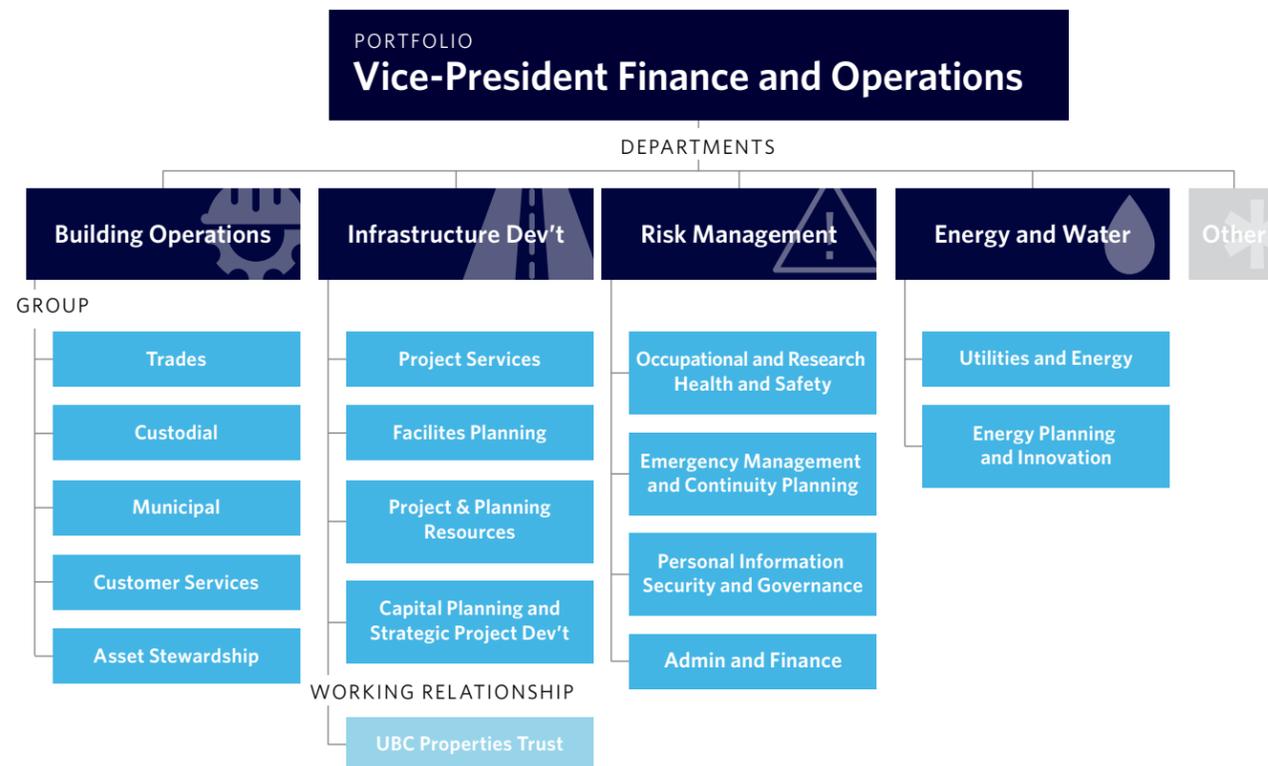
WE ARE PART OF A CAMPUS TEAM

Building Operations isn't alone in operating the university. Building Operations is part of the VP Finance and Operations Portfolio. It provides strategic leadership and support for UBC's academic vision by providing and delivering financial and operational management excellence. Eight units in the portfolio are responsible for stewardship of all UBC physical and financial assets. This includes overseeing an operating budget \$1.894 billion (fiscal 2017-18) and endowment of \$1.538 billion (March 31, 2017). VP Finance and Operations also manages the university's relationships with the UBC Investment Management Trust (IMANT) and UBC Properties Trust.

Building Operations works closely with many departments to produce the campus experience, including our portfolio colleagues in Energy and Water Services and Infrastructure Development, our planning colleagues in Campus and Community Planning, and our construction partners in UBC Properties Trust.

Energy and Water Services is UBC's centre of energy and utility system experts. Building Operations supports the implementation and operations of many energy-saving initiatives originated by this team.

Infrastructure Development provides stewardship for all institutional facilities projects and is responsible for major capital, including the planning, development, renewal, and renovation of campus facilities. Building Operations lends its expertise to the design, construction, and commissioning of new buildings to improve operational outcomes for our campus.



Please visit our website for the full version of the organizational chart: <http://vpfinance.ubc.ca/team>

BUILDING OPERATIONS MAKES UBC WORK

Our work includes maintaining and operating our lands, buildings, and fleet as sustainably as possible for the lowest total cost of ownership. For Building Operations, keeping costs low involves balancing between proactive maintenance of campus assets and making strategic capital improvements. Among some of the many daily functions members of our team perform, we keep spaces lit, the air temperature comfortable, waste sorted and recycled, and our campus clean.

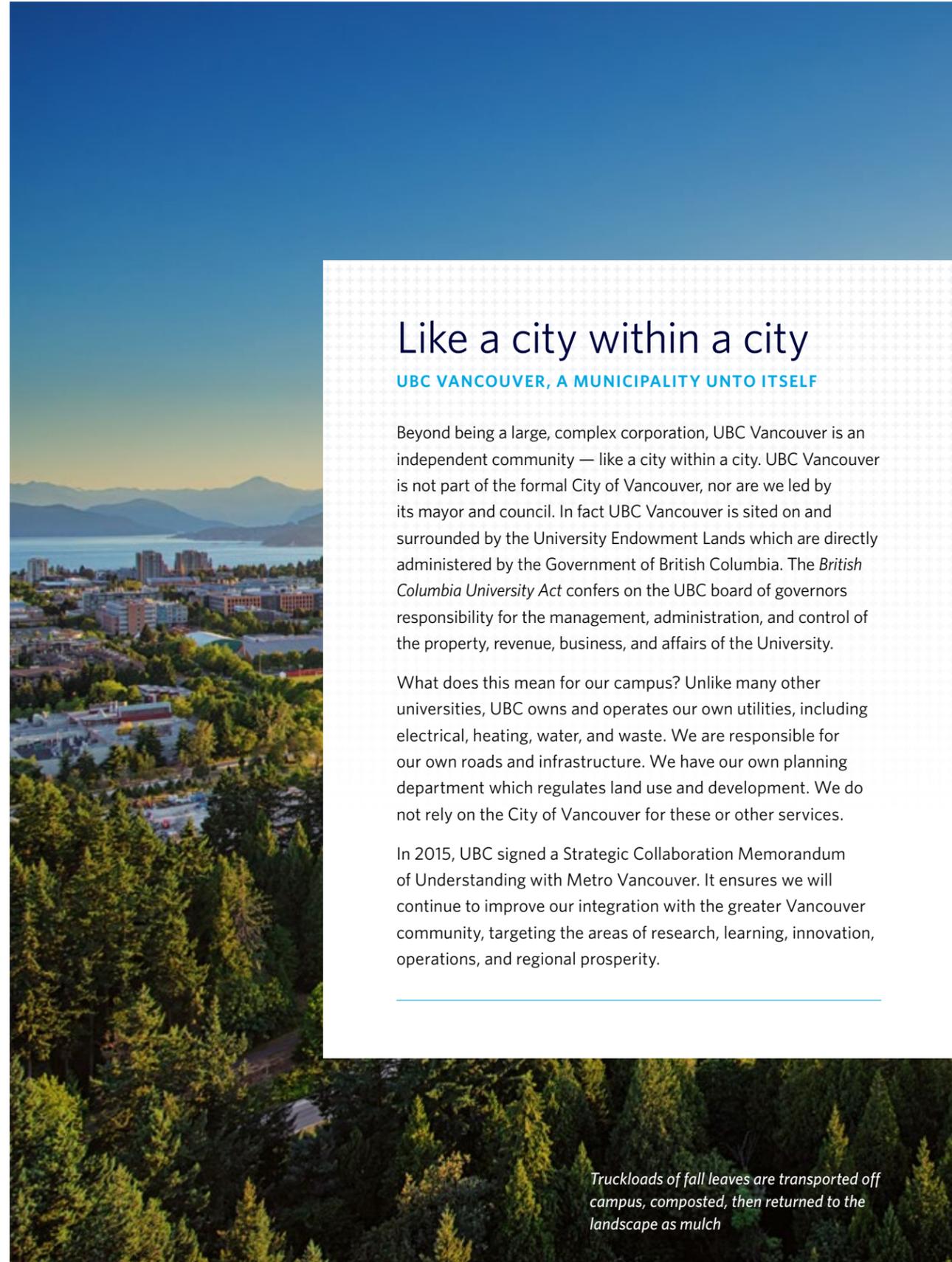
Building Operations includes a diverse group of people, a passionate, skilled, and customer-focused team of more than 700 — representing more than 8,400 years of campus knowledge. We are divided across five different areas:

- Our tradespeople
- Our custodial team
- Our municipal team
- Our customer service representatives
- Our asset stewardship team

Together, this dedicated group works to help other members of the UBC community achieve greatness on campus — whether that involves enabling the spaces for the Nobel Prize-winning work of the Michael Smith Labs, or providing a welcoming student study space that leads to top marks and future career success.



Our Custodial team operates 24 hours a day, 7 days a week



Like a city within a city

UBC VANCOUVER, A MUNICIPALITY UNTO ITSELF

Beyond being a large, complex corporation, UBC Vancouver is an independent community — like a city within a city. UBC Vancouver is not part of the formal City of Vancouver, nor are we led by its mayor and council. In fact UBC Vancouver is sited on and surrounded by the University Endowment Lands which are directly administered by the Government of British Columbia. The *British Columbia University Act* confers on the UBC board of governors responsibility for the management, administration, and control of the property, revenue, business, and affairs of the University.

What does this mean for our campus? Unlike many other universities, UBC owns and operates our own utilities, including electrical, heating, water, and waste. We are responsible for our own roads and infrastructure. We have our own planning department which regulates land use and development. We do not rely on the City of Vancouver for these or other services.

In 2015, UBC signed a Strategic Collaboration Memorandum of Understanding with Metro Vancouver. It ensures we will continue to improve our integration with the greater Vancouver community, targeting the areas of research, learning, innovation, operations, and regional prosperity.

Truckloads of fall leaves are transported off campus, composted, then returned to the landscape as mulch

OUR PURPOSE

At Building Operations, everything we do in our work ties into our department's mission statement and four strategic pillars. Collectively they guide our work, helping us make key decisions and informing where, when, and how we spend resources.

Our Mission

UBC Building Operations proactively and cost-effectively manages the operations and maintenance of all assets on campus — creating enriching and inviting inside and outside spaces. This enables the university to provide an environment that supports exceptional learning and research outcomes.



1,505 hot/cold calls were serviced in 2016

Our Four Pillars

Asset stewardship — We create the strategies for capital renewal and proactive maintenance, and share our expertise to ensure each space on campus functions as it was intended. We clean, operate, and care for each physical space or asset as if it were our own. And we do all of this to help the university reach its goal of sustainable, inclusive, and effective spaces at the lowest total cost of ownership.

Leadership development — We believe that leadership is not a position — it is an attitude and a skill; and we supply training and support to develop each of our team members to be leaders.

Customer service — We deliver the best value to our customers by working in a trusting partnership that anticipates their needs and finds creative solutions to emerging issues and always keeps them apprised of our priorities and progress.

Employee engagement — We value the strengths of our colleagues and support each individual to be their best by providing clear direction, appropriate tools, and open, transparent, and caring communication.

Our four pillars make decentralized decision making more successful as they provide clear direction as we work towards achieving specific outcomes. When frontline supervisors are equipped with the right information on goals and objectives, and the right tools to handle the work and workforce, not only can and do they flourish, but they enable our crews to deliver their best. This helps us achieve our overall objectives within Building Operations — becoming more proactive and less reactive — so the members of our university community experience more reliable, sustainable, inviting, and enriching spaces.

ENABLING OUR CUSTOMERS

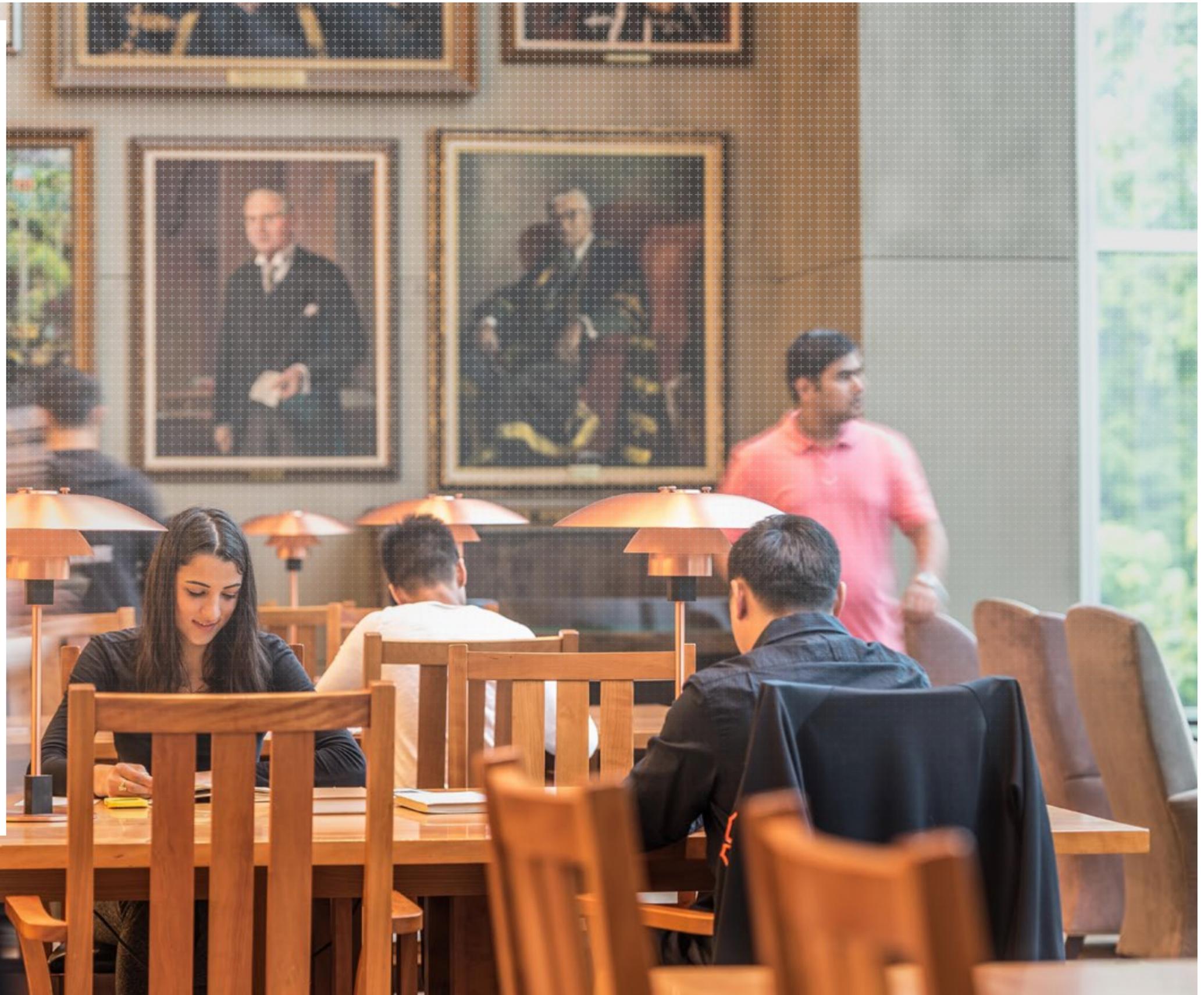
Our customers include anyone who spends time at UBC — students, faculty, staff, alumni, and visitors — be it for decades-long research, a campus tour, a sessional class, a concert at the Chan Centre for the Performing Arts, or a visit to the Museum of Anthropology. As the university develops on-campus market housing, thousands of permanent private residents are redefining and expanding our base of customers.

To accommodate the changes happening on our campus, we are transforming our customer-facing technology to offer our customers new and varied ways of interacting with Building Operations. This includes our new Twitter channel ([@UBCFixMySpace](#)) and an updated Building Operations' website ([buildingoperations.ubc.ca](#)). Our objective is to enhance outreach, eliminate barriers for reporting issues, and cultivate relationships with our customers so we can better understand and anticipate their needs.

We're reaching out to our university community through multiple channels to ensure the initiatives in which we are investing our time, and the services we are providing, are delivering the intended results and meeting campus needs. We do this through regular face-to-face meetings between our facilities managers and key faculty and department representatives; senior leadership presentations; stakeholder engagement sessions; and hearing and understanding feedback and requests gathered through our various service input channels.

Our customers count on us to deliver reliable spaces that support their activities on campus. We do our best to understand the needs of these groups so we can anticipate their needs, accommodate their priorities, minimize the impacts of our work, and optimize our efforts to ensure our campus continues to be world class.

To do this we collect a wide range of qualitative and quantitative information from customers, the university administration, and our own staff. By collecting and tracking leading and lagging indicators, we gain feedback on specific issues or programs and can identify trends in progress and deterioration of campus assets.



EMPOWERING OUR STAFF

To be able to act on our customer feedback and systems data, Building Operations has embarked on a cultural and systems transformation. We are moving from reactive firefighting to planned and proactive operations and maintenance — from a directive work culture, to a highly-collaborative work culture. In this transition, we are always working to find the right balance of personal empowerment, robust technical systems, and process to create a nimble organization that can respond to the varied needs of our complex campus.



This transition is being driven by two forces: empowering our staff, supervisors, and managers in their daily work, and our Enhanced Assets, Operations, and Services (EAOS) program. EAOS uses qualitative inputs and quantitative data to validate our efforts and outcomes. It is helping us eliminate outdated processes that no longer serve us, simplify and standardize those processes that are valuable, and, where possible, automate other processes through tools or systems. A major outcome we anticipate will result from EAOS will be the ability to integrate customer and performance data through a new central Computerized Maintenance Management System (CMMS).

As we improve processes and systems, we are also changing how we work with our people. We have added a new business informatics and solutions architect as well as additional business analysts. They are helping ensure quality control is embedded in every initiative and effort we undertake while allowing for iterative improvements so we can be confident we are delivering best value for UBC at the lowest total cost service.

We continue working with our staff, one on one, to ensure we are building a resilient work culture that celebrates striving, enables growth, and fosters the sentiment that there is always more to achieve. We can be effective because our roles and responsibilities are clearly defined, communicated, and understood. Through new communications channels, we are supporting our people by providing them with valuable information that helps them do their jobs even better — and fostering closer ties to Building Operations. We collaboratively identify the tools and training they require to be effective; we involve and engage them in process improvements to ensure our efforts make them more effective; and we create a world-class workplace that supports safe and efficient work.

SPACE PERFORMANCE, OUR UNIT OF SUCCESS

UBC consistently ranks as one of the top universities in Canada and around the world. Building Operations supports this cause directly by providing spaces that meet the standard of excellence that UBC and other top-ranked universities strive to achieve.

Our scope has been described as “mind-boggling.” Beyond maintaining and operating all core campus buildings (totalling 204 academic buildings) and everything that entails, we keep our outdoor campus spaces beautiful and usable. We also make sure all equipment and assets are in regulatory compliance. We have 264 elevators, more than 20,000 fire alarms, and more than 2,500 pieces of safety authority-permitted equipment (such as boilers and chillers) that require mandatory inspection, testing, and operating protocols to ensure not only that they are all functioning but do not pose any serious safety risks.

In Building Operations our role is to keep campus spaces not only functioning as they’re intended, but to allow those spaces to bring out the best possible performance from the people on our campus. We ensure our campus spaces are delivering the intended experiences for the campus community by collaborating with our customers. Together, we establish the right balance between proactive maintenance and capital renewal to deliver maximum utility at the lowest total cost. Together we carefully plan and schedule major work to ensure we are maximizing shutdown opportunities to deliver our services with minimal impacts on campus activities.

To keep spaces working for UBC, we are moving to an asset-focused approach in prioritizing work — to benefit our customers. In the end, if we can create more reliable spaces that meet our collective goals of being sustainable, inviting, enriching, and cost-effective over the life of that asset, then we are proactively providing exceptional spaces that allow our customers to focus on doing what they do best.

When we are at our best, everything we do creates a shared accountability for campus spaces and drives all campus users towards the desired outcome of creating extraordinary learning and research outcomes.



LOOKING FORWARD

Building Operations can continue supporting the university by continuously improving on our operational performance and building on our successes. To deliver the full value of a modern operations department, we always need to be looking even further ahead to help the campus plan for the future.

There is a story, perhaps anecdotal, of President John F. Kennedy visiting Cape Canaveral at the height of the space race. The President was meeting and greeting staff across the facility and stopped to shake hands with a custodian. When asked what his role was at the high-tech rocket facility, the custodian answered simply, "To put a man on the moon, Mr. President."

We cherish this story. It shows that the right mix of mission and empowerment can put Building Operations directly into the conversation about UBC's next century. To become what we can be, we must be trusted as a strategic partner in UBC's success.

Our future will not be without its challenges. Our campus continues to grow and age, and is becoming increasingly complex. To be entrusted stewards of the physical spaces, we must continue to improve our methods of acquiring and assessing condition data and implement better ways to learn from the performance of our buildings. We must understand trends to prevent failures, and continue demonstrating the operational viability of our campus' ingenuity and ground-breaking work in sustainability to the world. Beyond that, we must do this all while meeting our fiscal responsibilities to the campus.

HOW TO USE THIS PUBLICATION

Our goal is to offer a window into our department and our work. To achieve this, we've structured this publication around a series of questions. Not only do they serve as a guide to general readers, but they speak to a technical audience known as APPA, the Association for Higher Education Facilities Officers, a Virginia-based organization whose mandate involves assessing educational facilities for operational excellence.

This publication serves a dual focus: it helps build understanding of our current work and where we are headed while also serving as the first step in a process that will see APPA formally evaluate Building Operations as an outside third party for facilities management excellence. APPA will help us understand where and how we can make further improvements in serving our UBC community.

Our diverse UBC Building Operations team includes skilled trades workers, landscapers, custodians, labourers, project managers, professional engineers, architects, managers, and more.

1.0 Leadership

In Building Operations, we look at leadership as a skill not a position. It is how our staff demonstrate the values of our department, embodying our four strategic pillars to successfully execute our mission. This keeps campus spaces not only functioning as intended, but allows those spaces to bring out the best possible performance from the people on our campus in realizing UBC's academic mission.

Our leadership shows in our roles and responsibilities, which are clearly defined, communicated, and understood. Our leadership shows in how we think through issues and set priorities based on best outcomes for the campus. Our leadership shows in how we treat our customers — and each other. Our leadership shows that when we go that extra step we ensure our campus is working for our entire campus community.



Where did we come from?

The Building Operations culture is slowly changing, from a one-way, management vs. union approach to a more progressive and inclusive style. Previously, it was a low-accountability environment that depended on a highly directive management style matched to a highly prescriptive collective agreement.

In this environment, innovation was stifled and feedback from the front line was not duly considered by management.

What are we trying to achieve?

A more progressive and inclusive style based on personal accountability. In this model, leadership is a skill — not a position.

Why are we doing it?

Accountability helps build and drive team engagement. When staff are restricted in what they can and cannot do, and don't have room to 'think outside the box,' engagement tends to be that much lower — with expectations that match. There is little chance to innovate or take that extra step. However, when accountability and leadership are the norm, staff are liberated to think broadly, take risks, and explore options. An engaged staff is also one that's directly tapped into our department's mission and pillars. Not only does this help align our people under one approach, but collectively we work together to improve the outcomes of Building Operations and the campus overall.



1.1

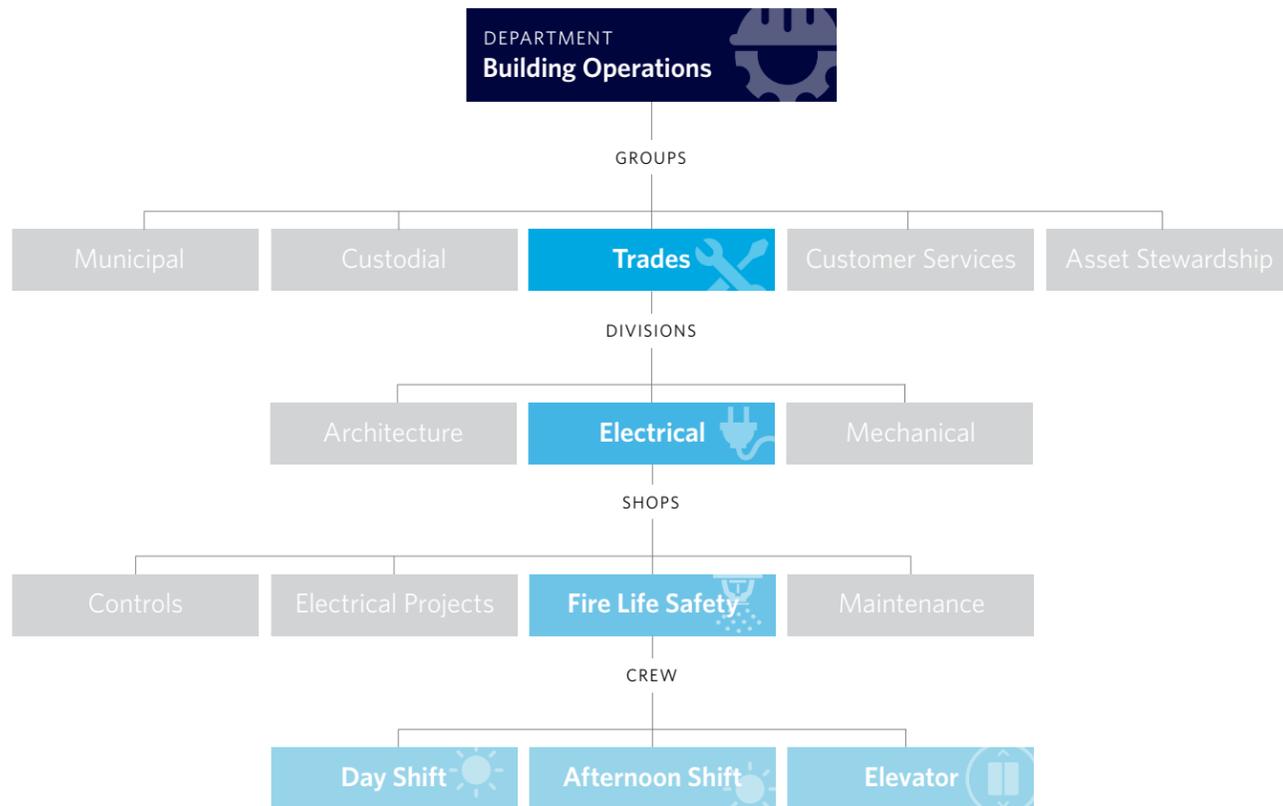
How are leadership roles, responsibilities, and decision-making structure defined by Building Operations and generally understood by internal and external stakeholders?

1.1

Describe how leadership roles and responsibilities and the decision-making structure are defined by the facilities department and generally understood by internal and external stakeholders.

Building Operations maintains clear roles and responsibilities through a simple organizational structure that is arranged around the spaces we support and the services we provide. Our major groups include:

- **Trades** — responsible for the performance and condition of our buildings;
- **Municipal Services** — responsible for the performance and condition of our public realm spaces, which also includes waste/recycling/organics management, labour and moving services, and fleet and inventory services;
- **Custodial Services** — responsible for the cleanliness of our indoor spaces, as well as minor repair work (such as changing lightbulbs and unplugging toilets);
- **Customer Services** — acts as a channel between our customers and the services we deliver. Touch-points for this group also include minor construction projects, departmental administration, and continuous improvement services; and,
- **Asset Stewardship** — responsible for providing input for capital planning, technical guidelines, and construction design review.



Please visit our website for the full version of the organizational chart: <http://buildingoperations.ubc.ca/about-us/leadership/org-charts>

To ensure there is further clarity of responsibility each group is further sub-divided.

Our Trades group is divided into three divisions: Architectural, Electrical, and Mechanical. Within each group, a system owner is accountable for the condition of each division's assets. (We have many assets that require a diverse set of skills to operate and maintain; in 2015, we reviewed all equipment, systems, and assets on campus to assign a lead system owner as many assets were in less than optimal state.) Reporting to the system owner are a technical specialist, who focuses on preventive maintenance strategies, equipment selection, and supporting crews with troubleshooting; and a people and process manager, who manages the large group of technical tradespeople, through unionized heads and sub-heads. We call this organization of system owner, technical specialist, and people and process manager a 'pod' — which has created new positions where, previously, we had one manager in each division. This new structure helps create capacity in our organization by contributing to forward-thinking and being proactive, not reactive. In clearly defining the relationship between systems and people, our trades now benefit from having a single, direct source of information on the systems they maintain. Equally, the system owner benefits from being able to have a direct dialogue with those performing the maintenance. Our pod concept illustrates our proactive approach to asset stewardship, and how it works at an organizational level.

Within Municipal Services, we have adopted the pod philosophy in the areas of landscape and fleet. In these groups, the system owner holds the dual responsibility of managing the people and process role as well as the technical role which includes leading the asset strategy.

Additionally, across our Trades divisions, our service delivery is organized through a zone model; by faculty, the campus is divided into eight zones. Each has a base zone team that includes a plumber, carpenter, painter, electrician, controls electrician, millwright, utility worker, and facilities manager. All remaining trades not in a zone are situated in central shops and can be called upon as needed to support the zone teams.

Our pod concept illustrates our proactive approach to asset stewardship

The Custodial group delivers service through shift work. There are three shifts: day, evening, and night. Service is scheduled for periods of time when there are the least number of customers that would be impacted.

To drive stakeholder understanding of our structure:

- We display our organizational chart¹ on our website, so students, faculty, staff, alumni, and visitors have easy access to our structure;
- We created a roles and responsibilities matrix, shared with our staff, to clearly distinguish roles and responsibilities within Building Operations. See Section 5.0 for more detail;
- We ensure our facilities managers, project coordinators, trades heads, supervisors, managers, and Service Centre are easily accessed by email, phone, or in person, so our customers can quickly find the help they need; and,
- Our facilities managers regularly deliver presentations outlining our services to new and existing customers.

These diverse channels help us reach a variety of audiences in different ways.

¹ <http://buildingoperations.ubc.ca/about-us/leadership/org-charts>

1.2

What mechanisms exist for Building Operations' leaders to conduct self-examination, receive feedback, and make improvements?

1.2

Describe how the leadership system includes mechanisms for the leaders to conduct self-examination, receive feedback, and make improvements

The Building Operations culture is slowly changing, from a one-way, management vs. union approach to a more progressive and inclusive style.

Previously, feedback from the front line was considered by leadership but not weighed significantly. We've now progressed to a place where feedback is valued. We ask our leaders to seek feedback from our staff, other departments, and themselves. Our initiatives in self-examination drive the desire in our leaders to give and receive feedback which, in turn, drives performance improvements. Over time, in addition to formal, ongoing training opportunities, such as our Leadership Development Program described in more detail elsewhere in this publication, this helps further build skills of our leaders. In Building Operations, we foster an environment that promotes and supports continuous improvement.

Our more engaging, inclusive, and collaborative approach takes its shape through the following initiatives:

Self-examination

- StrengthsFinder assessment sessions help individuals and teams assess their strengths, identifying where and how they can best adapt their strengths to maximize their own potential and the potential of their immediate teams.
- Self-evaluations conducted by managers on themselves are then included in each manager's annual performance reviews, which also include staff and customer comments. This feedback provides our managers with real and meaningful direction.

Receiving feedback

- Our working committees give our crew members an opportunity to engage their managers in open dialogue, allowing them to raise issues previously unaddressed.
- Our Communications survey, is an opportunity for our leadership to engage staff in discussions about what, how, and from whom they want to receive communication. These surveys have proven vital in strengthening communication and trust within our department and, in turn, have resulted in our use of new and multiple communications channels.²
- Key initiatives are launched through crew talks and town halls with support from our Building Operations newsletter and website, while ideas are validated and direction on key departmental issues is sought through workshops, customer focus groups or by gathering feedback from large blank poster sheets placed on the walls in the main halls of our buildings; this has proven to be especially valuable in soliciting feedback from a range of staff in a very transparent way.

Making improvements

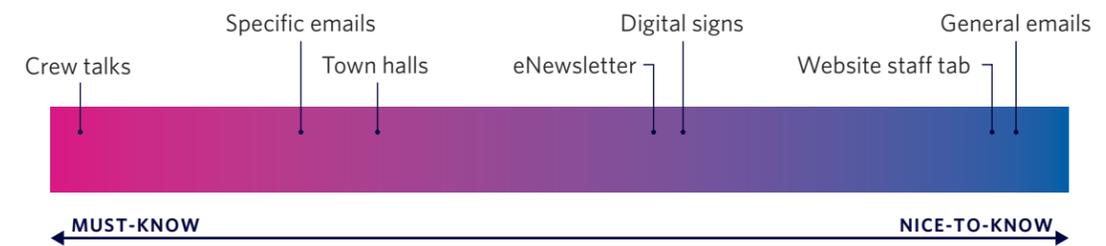
- Our Leadership Development Program, a series of tailored workshops offered to managers, heads, and frontline employees, offers a platform whereby all members of our organization learn the soft skills needed to effectively navigate relationships, build high-performing teams, and foster meaningful ways to provide feedback that inspire improvements and change.

We are starting to see the results of having an environment of thoughtful and inclusive dialogue. In an environment where unionized supervisors might have once left performance issues solely to senior leadership, we now see open, respectful, meaningful communication that is supported by staff and managers alike.

Other means we use to gather inclusive feedback include:

- Weekly shop talks;
- Monthly trades and custodial heads' meetings;
- Quarterly managers' meetings;
- A bi-annual Building Operations' town hall;
- A Bright Ideas email address which invites Building Operations' employees to send their ideas to an email address for consideration; and,
- Comments from peers and customers for performance reviews.

INFORMATION CHANNELS



² <http://buildingoperations.ubc.ca/staff/communications>

1.3

1.3

Describe how the organization aligns its mission, vision, and value statements with those of the institution.

How does Building Operations align its mission, vision, and value statements with those of UBC?

We believe strongly in our mission, vision and values. They are the foundation upon which we try to base every action we take as an organization.

Our mission:

UBC Building Operations proactively and cost-effectively manages the operations and maintenance of all assets on campus — creating enriching and inviting inside and outside spaces.

This enables the university to provide an environment that supports exceptional learning and research outcomes.

Our mission closely aligns with the university's current vision and values:

As one of the world's leading universities, The University of British Columbia creates an exceptional learning environment that fosters global citizenship, advances a civil and sustainable society, and supports outstanding research to serve the people of British Columbia, Canada, and the world.

For more information on UBC's vision and values, visit:

<http://strategicplan.ubc.ca/the-plan/vision-statement>

For Building Operations' mission and pillars, see our website:

<http://buildingoperations.ubc.ca/about-us/accountability/strategic-goal>

At Building Operations we have reframed our values into four pillars which are the cornerstones for our strategic plan; they guide how we do our work, decentralize decision making, and measure what successful outcomes look like. Through our pillars, we support UBC's vision and values every way we can. For example:

- Our **Employee Engagement and Leadership Development** pillars contribute to advancing the skills of our staff and their attitudes towards themselves and others, which can contribute to a civil and sustainable workplace
- Our **Customer Service** pillar drives our practices in building trust in our customers, the students, faculty, staff, and visitors who use our spaces, and, in that way, we support UBC's environment of global citizenship
- Our **Asset Stewardship** pillar ensures we are thoughtful and strategic in operating and maintaining UBC's spaces, empowering us to efficiently and cost-effectively create enriching, inviting spaces where exceptional learning and research can take place

In this way, we want to ensure every action we take speaks clearly and boldly in support of the university.

UBC's Values

ACADEMIC FREEDOM

The University is independent and cherishes and defends free inquiry and scholarly responsibility.

ADVANCING AND SHARING KNOWLEDGE

The University supports scholarly pursuits that contribute to knowledge and understanding within and across disciplines, and seeks every opportunity to share them broadly.

EXCELLENCE

The University, through its students, faculty, staff, and alumni, strives for excellence and educates students to the highest standards.

INTEGRITY

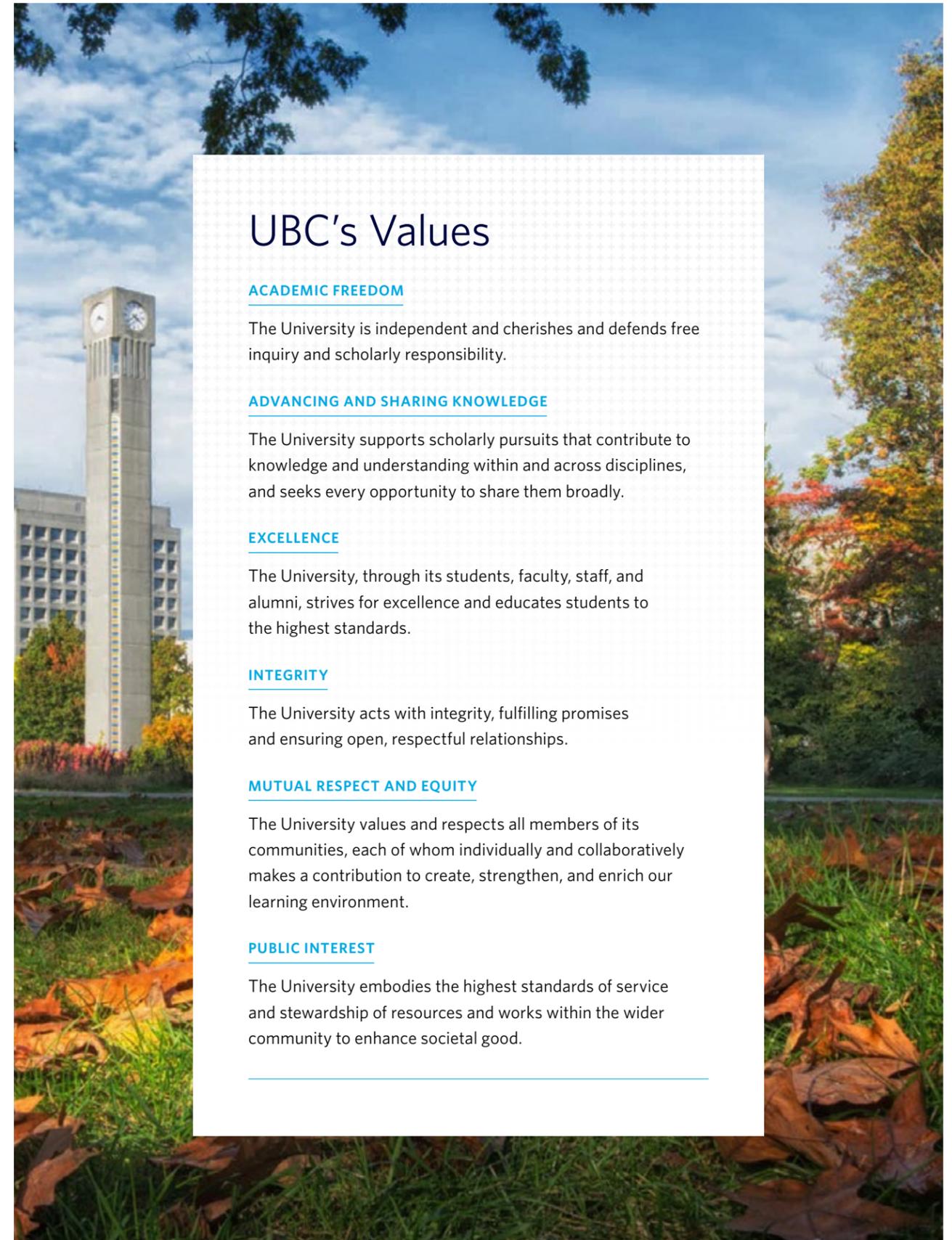
The University acts with integrity, fulfilling promises and ensuring open, respectful relationships.

MUTUAL RESPECT AND EQUITY

The University values and respects all members of its communities, each of whom individually and collaboratively makes a contribution to create, strengthen, and enrich our learning environment.

PUBLIC INTEREST

The University embodies the highest standards of service and stewardship of resources and works within the wider community to enhance societal good.



1.4

How effective has Building Operations' senior leadership been in establishing and sustaining internal and external communications plans that:

1.4

Describe how effective the senior leadership of the department has been in establishing and sustaining internal and external communications plans that:

- a. educate the campus community on the facilities department's role in institution success;
- b. promote customer and stakeholder feedback; and
- c. reinforce the role of frontline staff in creating a positive public impression of the quality of organization services.

- a. Educate the campus community on the role of Building Operations in UBC's success?
- b. Promote customer and stakeholder feedback? and,
- c. Reinforce the role of frontline staff in creating a positive public impression of the quality of organization services?

There was a time when we were labelled by our customers as inefficient, as they were frustrated with the quality of our overall service and lack of communication. Meanwhile, Building Operations' own staff thought the department's leadership was out of touch with the reality of our organization's overall operations.

Now, thanks to our use of effective communications strategies and a suite of communications channels, the skills of our leaders, and the trusting partnerships we've formed with our staff, customers, and other stakeholders, we are taking ownership of our brand. These efforts are about ensuring our campus community knows we support the university; and fostering trust in our abilities.

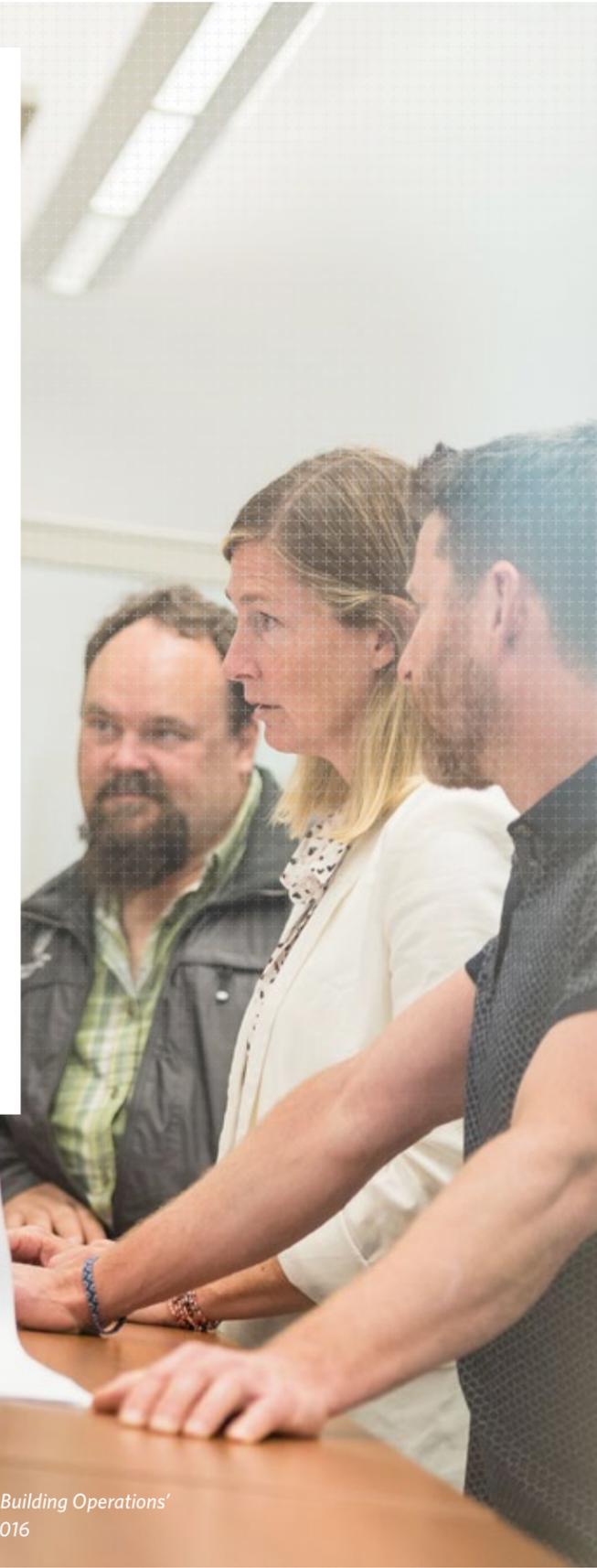
Our communications are based on open, clear, and caring interactions. We employ a number of strategies to achieve our objectives. Two communications tools are vital in our efforts to reach a wide audience, allowing us to share our purpose and services with students, faculty, staff, alumni, and others:

- Our website — buildingoperations.ubc.ca
 - Includes links to our story, our services, our resources, our commitment to sustainability, and our staff resources page.
 - Our website was recently overhauled, consistently aligning its look and feel with websites for other areas/ departments under the purview of the vice-president, finance and operations, and highlighting our place and the role we play within VP Finance and Operations and at UBC overall.
- Our social media presence on Twitter — our [@UBCFixMySpace](https://twitter.com/UBCFixMySpace) handle
 - We receive and respond to requests for service from users of campus spaces, which has strengthened our brand of delivering quick and responsive support for our customers.
 - Our Twitter account is staffed by members of our frontline inbound contact centre, called the Service Centre. Their personable and approachable tone on Twitter highlights the valuable role our staff play in creating a positive public impression of Building Operations.

To further support our staff in helping Building Operations leave a positive overall impression with our customers, we've created a dedicated section on our website for staff and managers with a detailed communications guide. It includes resources such as templates, communications guidelines, and an archive of our internal staff newsletters, giving our employees access to information they can readily share with their customers — and the soft skills needed to communicate effectively and address a wide range of customer issues and comments.

By asking the question 'How did we do?' we offer our customers the opportunity to build a relationship of trust with us through clear and open communication.

A cornerstone of our outreach, our Net Promoter Score (NPS) seeks direct customer feedback on the quality of services we provide. The NPS is a one-question survey graded on a 1-10 scale that we send to customers after completing a service request. By asking the question 'How did we do?' we offer our customers the opportunity to build a relationship of trust with us through clear and open communication. See Section 4.0 for more detail.



768 meetings were held in Building Operations' main conference room in 2016

Net Promoter Score

ENABLING SPACES THROUGH MEANINGFUL FEEDBACK

Feedback from our various and diverse customer groups helps us improve our services. It ensures we are truly meeting the space performance needs of our campus community.

Before 2010, we relied on a multi-page annual satisfaction survey, which was cumbersome and received less than 20 completions each year. Since 2010, Building Operations has been using Net Promoter Score (NPS) to measure customer satisfaction. As the NPS form takes less than 10 seconds to complete, it's easy for our customers to tell us what we're doing right — or where we need to improve.

NPS accurately measures customer satisfaction by posing one simple question, in plain language, using a 1-10 scale:

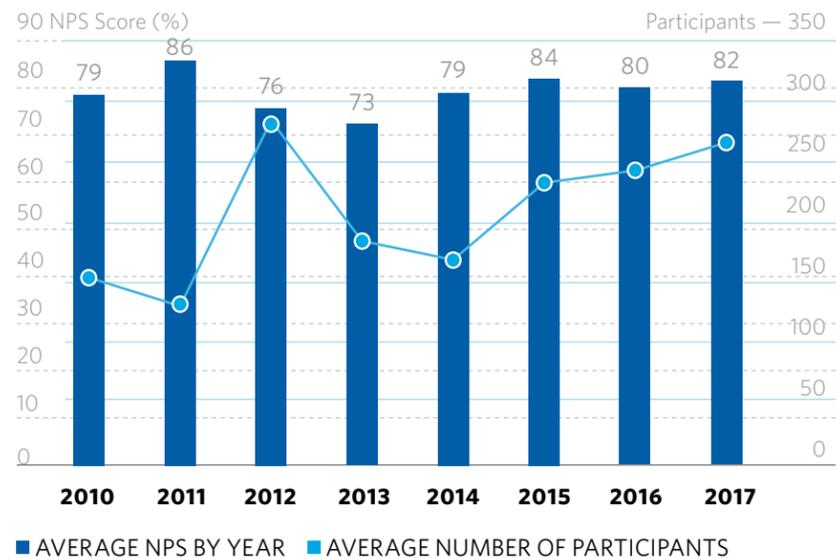
How would you rate your most recent experience with your Building Operations zone team?

Respondents are grouped as follows:

- Promoters (score 9-10) are service enthusiasts
- Passives (score 7-8) are satisfied but unenthusiastic customers
- Detractors (score 0-6) are unhappy customers

Subtracting the percentage of detractors from the percentage of promoters yields the Net Promoter Score, which can range from a low of -100 (if every customer is a detractor) to a high of 100 (if every customer is a promoter). Thanks to NPS, we now average more than 2,000 discrete pieces of timely feedback each year and can see our six-month rolling Net Promoter Score is beyond 82 per cent.

NET PROMOTER SCORE BY YEAR



1.5

How do representatives of Building Operations engage with key communities on and off campus? How does this outreach contribute to enhancing community?

1.5

Describe how representatives of the facility department engage with key communities, both on and off campus (e.g., town and gown, agencies having jurisdiction) and contribute to the enhancement of their various communities—both personal and professional.



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ICE CREAM BARS SERVED BY CUSTOMER SERVICE AT THE ICE CREAM SOCIAL IN AUGUST 2016

Building Operations is committed to supporting UBC’s larger vision of advancing a civil and sustainable society. One way we do this is by sharing our resources with our surrounding community. UBC’s Vancouver campus is located at the westernmost edge of Vancouver, British Columbia, Canada. A vibrant community of market and rental housing surrounds the core academic campus. We acknowledge our place in this community by interacting with its members in the following ways:

- Supporting the University Neighbourhood Association (UNA) which, in turn, supports the private residents who live in on-campus housing. We provide several municipal services, including snow removal, waste organics removal, and emergency preparedness services;
- Supporting UBC’s annual United Way campaign through personal donations, 50/50 ticket sales, bake sales, and other special events during the year;
- Donating building materials to Habitat for Humanity Vancouver. Members of the Building Operations team also support the organization by volunteering;
- Supporting the child care facility located in our University Services Building, home of Building Operations on campus. Each year, for example, we organize a Halloween event for the children in this day care;
- Inviting local school students to visit our University Services Building to learn more about what we do in a fun-filled inspiring day for kids and adults alike; and,
- Encouraging our employees to share in cultural festivities around holidays.

1.6

What leadership development and succession plans are in place to ensure continuity of leadership at Building Operations?

1.6

Describe the leadership development and succession plans presently in place to ensure continuity of leadership.



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TRAINING SESSIONS WERE HELD IN 2016

We have enabled leadership succession by:

- Creating succession opportunities in various divisions of Building Operations, provided through a formal Expression of Interest (EOI) process to select a pool of candidates who gain experience through temporary promotions during vacation and absence coverages;
- Planning effective handover from retiring managers;
- Offering a robust orientation and training program for new employees, described in Section 5.0, positioning employees to succeed in their jobs and providing opportunities for advancement; and,
- Providing dedicated leadership training for our employees, one example being our in-house Leadership Development Program — currently offered to all 120 supervisors and 25 additional self-selected frontline staff.

Leadership Development is one of our four strategic pillars. Through it, we create an environment where our staff practice leadership as a skill — and do not simply cherish a position. With this basic tenet, we encourage leaders to develop from within our ranks, reinforcing the values practiced daily by the members of our department and our senior leadership.

Our pod organizational structure, referenced on page 25, offers one example of this in action. Our people and process managers are flexible across pod structures and can assist with managerial coverage when resources are lacking. Meanwhile, because of their close contact with our trades, our systems owners can fill in for our people and process managers and technical specialists should the need arise. Our pod structure allows for flexibility in management, but also offers opportunities for our leaders to learn valuable management skills through practical experience.

WHAT OUR CUSTOMERS ARE SAYING

“Thank you to the UBC Building Ops team for being so responsive and professional in responding to the recent room temperature service request tickets at the Pharmaceutical Sciences Building. Peter has been really good at going through the Building Management System (BMS) and explaining features to my team. People generally understand temperature is a dynamic issue and it can be tricky to find an optimal temperature that suits everyone, but they are happy to see UBC Building Operations is taking their concerns seriously and working on solutions.” — REHANA A.

1.7

How does Building Operations' leadership emphasize the importance of excellence and how does it engage in excellence?

We believe excellence is not a destination, but a discipline to be practised in every action we take. This applies to Building Operations as an organization, and every member of our staff as individuals.

1.7

Describe how the leadership of the facilities department emphasizes the importance of excellence and how it engages in excellence.

We emphasize excellence by seeking to identify and acknowledge it. As an organization, Building Operations demonstrates its commitment to identifying excellence in the following ways:

- Staff and leadership attendance at APPA events, training, and workshops;
- Some of our senior leaders have attended APPA's Leadership Academy, allowing key members of our organization to learn about current trends and best practices in educational facilities management; and,
- Building Operations has also hosted the Pacific Coast Region of APPA (PCAPPA) and Western Canadian Universities Physical Plant Administrators (WCUPPA) events in the past.

Within the organization, we encourage excellence by:

- Identifying, acknowledging, and rewarding exceptional acts of service through our staff excellence awards; and,
- Consistently promoting from within Building Operations, so staff strive to always deliver their best — and see excellence rewarded — should they wish to progress through our organization.

For more information on our organizational initiatives in emphasizing excellence, see Section 5.0.

WHAT OUR CUSTOMERS ARE SAYING

"Tino and team were spectacularly helpful, quick, and effective. Our temperature stabilization is working again and we hope to achieve ideal stabilization after Tino tunes the BMS system. If we get our +/-0.25 degrees Celsius stability that we want, and you guys give Tino a salary raise, your score will increase to 10.5." — KIRK M.

1.8

How does Building Operations' leadership promote and ensure ethical behaviour in all interactions?

At UBC, we strive to provide a safe, respectful, and productive work environment for our faculty, staff, and students. The Respectful Environment Statement sets out the expectations of all members of the UBC community. Its statement of principle is clearly stated:

The best possible environment for working, learning and living is one in which respect, civility, diversity, opportunity and inclusion are valued. Everyone at the University of British Columbia is expected to conduct themselves in a manner that upholds these principles in all communications and interactions with fellow UBC community members and the public in all University-related settings.

1.8

Describe how the leadership of the facilities department promotes and ensures ethical behaviour in all interactions.

Building Operations fully supports this environment.

To do so, we take the following steps:

- All our employees receive anti-bullying and harassment training;
- All our supervisors receive mental health training with the goal of raising awareness and providing local support to those in need;
- The expectations of a civil, inclusive environment begin from the moment a new employee starts working with us, as emphasized in our New Employee Training program; and,
- We encourage work/life balance to support healthy lifestyles and mindsets.





In closing

We believe our four pillars make decentralized decision making more successful as they provide clear direction on how we do our work and desired outcomes. Our four pillars also help bring consistency to everything we do at Building Operations, which helps bring out the very best in our staff and organization.

We can and will do more to build skills within our supervisor ranks, particularly in strengthening their ability to help drive value to our organization. When frontline supervisors are equipped with the right information on goals and objectives, and the right tools to handle difficult situations, not only do they flourish but they help us achieve our overall objective of becoming more proactive. Going forward, we will look to strategies such as:

- Identifying ways for our leaders to regularly spend time directly engaging our staff and customers to support their needs and help prioritize our efforts;
- Continuing to build metrics for our initiatives, so we can publicly track the impact we are making;
- Continuing to educate the university board and executive on the challenges, opportunities, and funding strategies required to maintain a complex campus that supports UBC's academic mission;
- Continuing to practice the soft skills explored in detail in our Leadership Development Program, so we can improve the personal and professional interactions within our workplace; and,
- Identifying ways to objectively seek and collect feedback on our leadership's performance, through initiatives such as our Leadership Development Program and the university-wide Workplace Experiences Survey (WES).

2.0 Strategic and Operational Planning



The UBC campus relies on Building Operations. We ensure our campus spaces are delivering the intended experiences for the campus community. If we neglect a space or equipment, it will deteriorate to a point where it no longer provides value. So, we focus on establishing the right balance between proactive maintenance and capital renewal to deliver maximum operable time, also known as uptime, at the lowest total cost.

We recognize our work can also cause considerable disruptions to campus spaces — so we carefully plan and schedule major work to ensure we are maximizing shutdown opportunities to deliver our services with minimal impacts on campus activities.

Our department has begun a cultural and systems move, from reactive firefighting to planned and proactive operations and maintenance. We initiated this transformation by building capacity with many new technical roles that are solely focused on creating asset strategies.

As we progress, we're reaching out to our university community through multiple channels to ensure the initiatives we are investing time in and the services we are providing are delivering the intended results and meeting campus needs. We do this through regular face-to-face meetings between our facilities managers and key faculty and department representatives; senior leadership presentations; stakeholder engagement sessions; and hearing and understanding feedback and requests gathered through our various service input channels.

In 2016, Utility workers completed 4,046 services calls

Where did we come from?

We are a dedicated, customer service, responsive organization. We want to bring those values forward by taking a more planned and strategic approach to campus infrastructure. We want to build on the successes of our zone model rollout in 2009 to ensure our key campus stakeholders continue experiencing suitable levels of support. We want to create more informative publications that will help our campus community understand why we do what we do. We also want to gather appropriate information which will help with our prioritization exercises.

What are we trying to achieve?

Our ultimate goals are to achieve the right balance: the right staff, with the right skills and tools, doing the right work at the right time. If we can create clarity around what each of those variables means to our campus, we can be assured that we are providing the most cost-effective asset management services possible. We are prudent about our budgets and spending, and mindful that everything we do and spend, is focused squarely on supporting creating spaces that work for the university today and in the future.

Why are we doing it?

The University of British Columbia is one of the top 20 public institutions worldwide. We believe this success is rooted in spaces that enable great teaching and great research. We cannot continue building the brand and quality of our UBC community, and continue living up to those standards of the very best institutions, if our campus infrastructure fails to meet the needs of our students, faculty, staff, and alumni.



Between June 2016 and May 2017, 2,874 boxes of confidential shredding were collected on campus

2.1

What is the Building Operations strategic plan? What are the department’s goals and objectives?

Building Operations’ core mission is driven by our strategic plan, which we know as our four pillars. Each pillar has related goals and objectives.

Our plan is simple and clear, which is what makes it impactful.

2.1

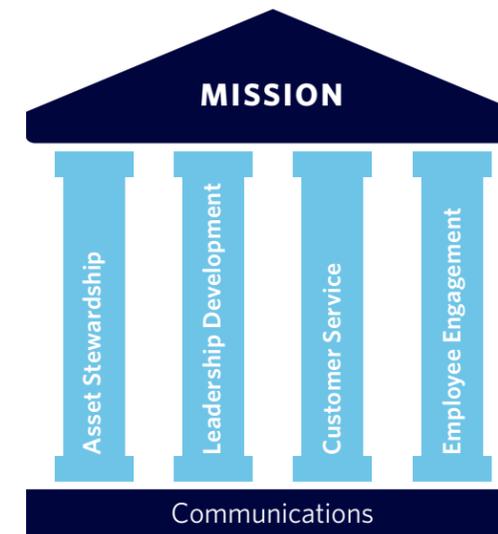
Describe the strategic plan that was developed for the facilities organization that includes the goals and objectives of the department.

Strategic Pillar	Goal: What do we want to do?	Objective: What do we do to accomplish it?
ASSET STEWARDSHIP	<ul style="list-style-type: none"> To ensure every space on campus functions as intended To help the university reach its goal of sustainable, inclusive, and effective spaces at the lowest total cost of ownership 	<ul style="list-style-type: none"> By creating the strategies for capital renewal and proactive maintenance By cleaning, operating, and caring for each physical space or asset as if it was our own
CUSTOMER SERVICE	<ul style="list-style-type: none"> To deliver the best value to our customers 	<ul style="list-style-type: none"> By working in a trusting partnership that anticipates customer needs By finding creative solutions to emerging issues By always keeping customers apprised of our priorities and progress
LEADERSHIP DEVELOPMENT	<ul style="list-style-type: none"> To believe leadership is not a position but an attitude and a skill To develop each of our team members to be leaders 	<ul style="list-style-type: none"> By supplying training and support
EMPLOYEE ENGAGEMENT	<ul style="list-style-type: none"> To value the strengths of our colleagues To support each individual in being his or her best 	<ul style="list-style-type: none"> By providing clear direction, appropriate tools, and open, transparent, and caring communication

2.2

How was the strategic plan developed? How was participation from internal and external customers invited? How did the strategic plan gain the university’s approval, and how has that information been communicated to Building Operations’ internal and external customers?

BUILDING OPERATIONS’ CORE MISSION AND STRATEGIC PLAN



The four pillars

The mission, purpose, and four pillars of Building Operations were developed through a series of workshops with our 25 departmental managers, designed to align with the university’s strategic and campus plan. They were then proposed to the entire department through town hall meetings; using the feedback we gathered, they were subsequently enhanced to reflect our staff values. Since then, our newsletters and crew talks have been structured to align celebratory stories, lessons learned from projects, and newly assigned initiatives to our mission and four pillars. Our intention is to ensure our mission is always at the fore of everything we do.

Our four pillars have been included in reports to the university’s senior executives, particularly around budget context-setting, and the UBC board of governors, providing the background and rationale for our decision making and work priorities.

We also share our strategic pillars through our website, buildingoperations.ubc.ca, giving everyone with Internet access the ability to view our core mission, purpose, pillars, and objectives. In this way, we ensure free and easy access to our strategic plan, our goals, and objectives to our key customer groups: UBC’s students, faculty, staff, alumni, and visitors.

2.2

Describe the process used to develop the strategic plan and how participation from internal and external stakeholders was sought out, the process used to gain approval of the plan by the administration, and how it was communicated to internal and external stakeholders.

2.3

What processes have been used to ensure Building Operations' strategic goals and key performance measures are understood by the campus community? To what extent are these goals and measures periodically reviewed?

2.3

Describe the processes defined to ensure that strategic goals and key performance measures are understood by all, and the extent that those goals and measures are periodically reviewed.

We ensure our strategic goals and key performance measures are understood internally by consistently communicating across multiple levels through various channels, including crew talks, newsletters, town halls, visual media in our shops and hallways, face-to-face meetings, and our website. Collectively, these opportunities link back to the common language in our strategic goals. Key performance measures that substantiate progress improvements or challenges are used to demonstrate that progress.

In Section 4.0 of this publication, we discuss metrics and data collection. For each initiative or action members of our team take, they are also responsible for tracking metrics. We want to ensure we are collecting useful data that offers better business intelligence about where and how we are spending. This is one approach we use to make sure our goals and methods are periodically reviewed, and that performance measures continue tracking intended outcomes.

Under our Customer Service strategic pillar, two initiatives commit our team to always keeping our customers informed of certain key performance measures:

1. We are developing a one-page building report, highlighting the building's current status, past activities, and future plans. These reports include several indicators: the Facility Condition Index (FCI); maintenance and utility costs; a list of capital upgrade projects; risk indicators; status of preventive maintenance actions; and future planned maintenance expenditures.
2. Providing our crews with the additional option of calling our inbound contact channel, called the Service Centre, to provide service request status updates and indicate when service requests have been completed. Giving our crews access to this channel, will greatly improve service request information. This approach came about as some of our staff have difficulty using technology, and service requests are hosted online; consequently, they were not adding notes or providing valuable update information. By offering our crews a call option, we ensure that customers who have placed service requests with us will now receive up-to-date information on progress. Meanwhile, tracking completed service requests is a key measure for our organization.

2.4

How do the UBC and Building Operations' master plans incorporate and reflect principles of sustainability, total cost of ownership (TCO), and overall facilities renewal?

2.4

Describe how the institution's and the facilities' master plan incorporate and reflect principles of sustainability, total cost of ownership (TCO), and overall facilities renewal.

Our Asset Stewardship strategic pillar supports UBC's goal of fostering sustainable, inclusive, and effective spaces at the total lowest cost of ownership. If not properly managed, we recognize physical assets can be an incredible drain on campus resources and a long-term financial liability. Because of this, we collaborate with Infrastructure Development, UBC Properties Trust, and Energy and Water Services, both within the VP Finance and Operations portfolio — which also includes Building Operations. Together, we take a long-term strategic view when making decisions around maintenance vs. repair vs. replace decisions, and in establishing our respective long-term capital plans.

The University of British Columbia is globally recognized as a sustainable leader. Our work in Building Operations contributes to this success. We support the concept of Campus as a Living Laboratory in the Campus Plan,³ and work closely with Energy and Water Services to ensure our buildings limit unnecessary use of resources.

One key initiative worth underscoring is in development, in association with UBC researchers. Software is used to anonymously count the number of wireless devices in rooms, which are then entered into our Building Management Systems' (BMS) remote monitoring and controls system to estimate the number of users in a space. The system then adjusts airflow through the relevant building, allowing the system to heat and cool rooms only when they are occupied.

Building Operations plays a key role in supporting this initiative by partnering with Energy and Water Services to deploy and support the programs in several ways, including:

- Providing feedback and progress reports to building occupants;
- Identifying and providing access to stakeholders through our facilities managers; and,
- Consulting through our technical specialists and people and process managers and trades support to install and maintain the physical systems.

Since 2010, the university has reduced its greenhouse gas (GHG) emissions by 33 per cent from our 2007 GHG levels, putting UBC well on track to achieve our campus goals by 2020 as stated in our Climate Action Plan.⁴ UBC's Climate Action Plan is one of the most aggressive GHG emission reduction initiatives in North America. Building Operations supports this plan through key activities such as optimizing our own fleet of vehicles' GHG reduction and exploring alternative-fuel vehicles (such as all-electric and biodiesel vehicles). As a result of our sustainability efforts, in 2014 Building Operations was awarded a Platinum rating for excellence in the green performance of our fleet of vehicles by E3 Fleet (a third-party program that reviews and rates public and private vehicle fleets based on their green practices and standards).

A key improvement initiative has begun in the VP Finance and Operations (VPFO) portfolio, with the objective of improving project delivery processes to achieve total cost of ownership. This initiative is being led through the New Building Quality Assurance Committee, comprised of key university stakeholders. Building Operations continues to gain some traction in this area with tasks assigned through our transition team (described in Section 2.11).

³ <https://planning.ubc.ca/vancouver/planning/policies-plans/land-use-governance-documents/vancouver-campus-plan>

⁴ <https://sustain.ubc.ca/campus-initiatives/climate-energy/climate-action-plan>



393.5
TONNES OF
GREENHOUSE GASES
(GHGs) REDUCED
ANNUALLY BY THE
BUILDING OPERATIONS
FLEET SINCE 2007

2.5

What strategies and processes are in place at Building Operations to ensure continuity of functions in the event of staff turnover, contractor failure, or other unanticipated disruptions?

2.5

Describe the current strategies and processes defined to ensure continuity of functions in the event of staff turnover, contractor failure, or other unanticipated disruptions.

UBC has incredibly active and evolving physical spaces, both from a maintenance and major capital expenditure perspective. Within the VP Finance and Operations facilities portfolio, between three and seven new buildings and public realm⁵ outdoor spaces are brought online each year; an additional \$41.3 million was spent on major and routine capital improvements executed in the 2016-17 fiscal year. Not only do Building Operations' crews support construction and handover, but we also support hundreds of different contractors on campus at any given time.

Further, we spend considerable effort coordinating with the Project Services⁶ group in Infrastructure Development and UBC Properties Trust⁷ on layered strategies to ensure our campus community is not unnecessarily impacted by these different activities.

How do we do this?

- With Project Services, we created an 'impact map' for upcoming capital projects and programs, a graphic representation of these project locations. This allows us to look at any potential conflicts or project overlaps. Through this impact map we can also identify ideal construction windows to minimize the disturbance and disruption caused by construction (e.g., construction noise, water, and utility interruptions) that take away from learning and research.
- Once contractors have been hired and are ready to deliver, things do occasionally go awry. When this happens, we follow our emergency response protocols — sending project managers and facilities managers to investigate issues and then communicating via email-to-text notifications and emails to key campus stakeholders so they understand what has happened and when it will be resolved.
- Building Operations identified a gap in communication following unanticipated disruptions. To address this, we partnered with Project Services and UBC Properties Trust to develop a process called 'the unintended consequences process' where contractors must do a root cause analysis (RCA) on any failures — and are thus held accountable for any errors they may have made in their work. This also helps promote better adherence to safe and sustainable work practices in the future. Overall, this initiative has led to considerable improvements in contractor performance on campus, creating fewer disruptions such as unnecessary power outages, false fire alarms causing evacuations, and gas leaks.

Between three and seven new buildings and public realm outdoor spaces are brought online each year; an additional \$41.3 million was spent on major and routine capital improvements executed in the 2016-17 fiscal year.

⁵ <https://planning.ubc.ca/vancouver/planning/policies-plans/public-realm-plan>

⁶ <http://www.infrastructuredevelopment.ubc.ca>

⁷ <http://www.ubcproperties.com>

Within Building Operations, we have also tried to manage the continuity of our work functions when challenges such as unexpected absences or staff turnover occur. In such circumstances, leadership, including our team of unionized supervisors, can and do provide backup support.

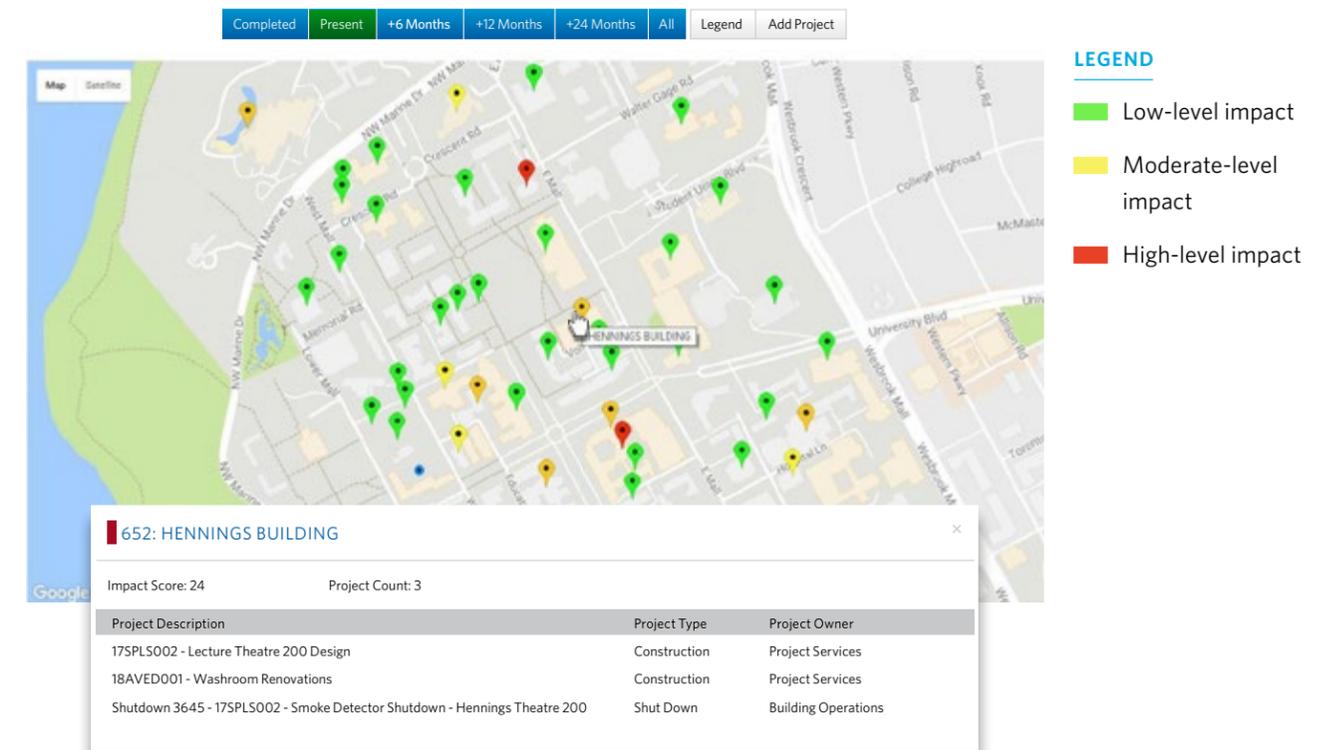
When there are unexpected absences, sub-heads fill in for unit heads, while manager partners can step in for managers — meaning there are no service interruptions.

As far as staff turnover, we combat potential service disruptions in several ways:

- In our electrical and municipal shops, we piloted a program offering training to trades heads interested in a future supervisory role. Upon successful completion, staff can then fill in should there be an absence;
- Our apprenticeship program ensures that employees with proven aptitude to enter the trades are considered for apprenticeship positions; and,
- Our mentorship program serves ticketed tradespeople and apprentices by training them, respectively, as either mentors or mentees.

UBC VANCOUVER CAMPUS IMPACT MAP

2017 LOCATION AND IMPACT LEVEL OF CURRENT AND FUTURE PROJECTS



2.6

What emergency response plans are in place and how are they communicated to Building Operations' employees and the campus community?

2.6

Describe the emergency response plans that are currently in place and how they are communicated to facility employees and the campus community as required.

As an operations group, Building Operations responds to 'micro emergencies' almost daily: false fire alarms, minor flooding due to plugged toilets, and tripping breakers are regular occurrences. When these things happen, we draw on established protocols to respond, escalating decision making and communicating with all affected stakeholders as the situation warrants. These protocols can be easily 'scaled up' should the emergency be of greater magnitude, such as a large fire, major flood affecting multiple spaces, or multi-building power outage, at which time our campus Emergency Operations Centre⁸ (EOC) is activated and its protocols and emergency plans are followed.

In emergency situations, Building Operations and Energy and Water Services play a key role in ensuring the university's base utilities are unaffected and that backup plans are put into operation — including the university's potable water and electrical supplies. We ensure diesel generators are functioning and that primary campus roadways are clear so emergency vehicles can access our campus. This is documented in our department's emergency plan, and as part of the overall task force campus operations where we own the Emergency Operations Centre (EOC) response. In an EOC setting, our managing director of Building Operations serves as section chief for operations. Similarly, in an EOC-initiated event many of our Building Operations' team also play primary roles.

Emergency response plans naturally lead into business continuity plans, where we look at core spaces and critical functions on campus to ensure we are prioritizing resources — and getting our buildings and other campus infrastructure back online as soon as possible, appreciating that our campus community relies on operating spaces and core infrastructure to support key activities.

⁸ <http://rms.ubc.ca/emergency>

2.7

What is the process and timing for regular, periodic review of Building Operations' strategic plan?

2.7

Describe the process and timing for a regular, periodic review of the facilities strategic plan.

Our Building Operations' strategic plan consists of a mission statement, four strategic pillars, goals, and objectives. Action items and initiatives stemming from goals and objectives are tracked to show progress and improvement in delivering on the strategic pillars. While our strategic plan does not include a set timeline for renewal, we update our action plans annually in addition to reviewing them throughout the year to ensure they are generating desired results.

The Building Operations leadership team reviews all departmental initiatives on a quarterly basis, prioritizing based on alignment to our mission and strategic pillars before assignments are made.

Two years in the making, our current strategic plan was finalized in spring 2017. Our mission and four strategic pillars are unlikely to change unless there is some dramatic change at the university level as far as our overall departmental expectations in keeping our campus spaces inviting, enriching, and functioning properly to support UBC's academic mission.

The university is currently redrafting its strategic plan, from Place and Promise: The UBC Plan, introduced by former UBC president Stephen Toope in 2009, to a new vision being shaped and defined by current president Santa Ono — UBC's Next Century. We anticipate considerable changes to our university's strategic plan, as more than 1,000 people were surveyed to reflect on what makes our university distinct. When that new plan is available, we will revisit our Building Operations' plan to ensure it aligns with the university's plan. Until then, our core mission,⁹ to proactively and cost-effectively manage the operations and maintenance of all campus assets, will remain fundamentally the same.

⁹ <http://buildingoperations.ubc.ca/about-us/accountability/strategic-goals>

2.8

What process is used to develop the capital plan? How does it address renovations, major repairs, and/or upgrades?

2.8

Describe the process used to develop the capital plan, addressing needs for renovation, major repairs, and/or upgrades.

FACILITY CONDITION INDEX CHANGES AS A RESULT OF OUR TOTAL CAPITAL SPEND

FCI

0.32

0.30

Development of the major capital program (construction of new buildings and major renewals greater than \$5 million) is managed by the Capital Planning Working Group in the Infrastructure Development department and UBC Properties Trust. This group consists of key academic and operational stakeholders, and includes the following steps:

- Requirements-gathering and project concept development through consultation with faculties and departments, and incorporation of key operational data on facility condition, seismic risk, and code upgrade requirements
- Initial evaluation of potential capital projects by the Capital Planning Working Group using a prioritization model that scores each project based on its contribution to current university strategic plan priorities, such as:
 - learning
 - research
 - the student experience
 - community engagement
 - Aboriginal engagement
 - sustainability
 - operational performance and risk mitigation
 - health and safety/seismic risk
 - deferred maintenance/reliability
 - legal/regulatory
 - business case
- Consultation on initial prioritization results with the following groups:
 1. Deans
 2. Senate Budget and Academic Building Needs Committee
 3. Property and Planning Advisory Committee
 4. Alma Mater Society
 5. Graduate Student Society
- Final review and prioritization by UBC executive members, with decisions on Five-Year Capital Plan projects and longer-term capital priorities
- Approval for the Five-Year Capital Plan by the UBC board of governors for submission to the Government of British Columbia

Major capital needs are evaluated and prioritized on an annual basis and incorporated into a rolling Five-Year Capital Plan submitted to the provincial government.

ROUTINE CAPITAL PROGRAM

The routine capital program (cyclical maintenance, renewal projects under \$5 million) is managed by the Infrastructure Development department. It develops the annual plan, in collaboration with Building Operations and Energy and Water Services. As a lead stakeholder, Building Operations directs facility and equipment condition replacements; our system owners identify renewal needs based on facility condition assessments, building performance, and data inputs validated by our staff. Meanwhile, Infrastructure Development sets priorities for programming and space perspective. Synergies are sought with other infrastructure renewal and modernization requirements, such as learning space upgrades, accessibility upgrades, seismic upgrades, energy retrofits, and more. This process is governed by a Routine Capital Steering Committee, comprised of the operational stakeholders, mentioned above.

In 2016-17, we completed \$43 million worth of capital projects funded jointly by the Government of British Columbia's Ministry of Advanced Education and UBC; this represents a portion of our total capital spend on new buildings. Our total capital spend enabled us to bring our Facility Condition Index (FCI) from 0.32 to 0.30. We were able to use our building condition master list and visually identify improvements resulting from this minor capital investment; this information was, in turn, shared with the UBC board of governors so it could appreciate the positive impacts of the board's budget decisions.

The Building Management System has more than one million sensing points, gathering information from buildings and systems across campus

2.9

What processes ensure a budget is developed that includes input from multiple levels of staff using historic expenditures, needs analyses, and effective allocation of available resources to support Building Operations' goals and objectives while seeking new and innovative measures to leverage resources?

2.9

Describe the processes utilized to ensure a budget is developed with input from multiple levels of staff using historic expenditures, needs analyses, and with effective allocation of available resources to support the organization's goals and objectives, while seeking new and innovative measures to leverage resources.

Building Operations manages a capital budget to fund unplanned capital renewals that emerge as immediate priorities due to system failure.

We know whether unplanned renewals capital projects are priorities for the university by looking to UBC's strategic plan to ensure our efforts align. The unplanned renewals capital budget is based on spending in previous years; the budget is determined based on historical data. Unplanned renewals are categorized into trades, municipal, and construction office components. Budgets for the trades and municipal components empower employees working within these systems to make the best possible system-specific decisions for optimal usage.

Projects led by the construction office are typically more complex. These jobs require cross-coordination with the trades, and occasionally external consultants. Further, the budget approval process is more formalized. Requests for funding and coordination emerge from the trades group or facilities managers in our Customer Services group. (Read more about the role of our facilities managers in Section 3.0.) Funding requests are posed to the director of trades; if approved, they are then passed along to the manager of the construction office who assigns a project coordinator who manages the budget and executes the project.

Building Operations manages a capital budget to fund unplanned capital renewals that emerge as immediate priorities due to system failure.

Building Operations at work

Building Operations manages the budgeting process for unplanned renewals, in alignment with the university's strategic plan, while involving multiple levels of staff, a needs analysis, effective allocation of resources, and a mandate for innovation. Optimizing the efficiency of fume hoods in our Chemistry Physics Building is one example of this process at work.

The background

Researchers in the Chemistry Physics building had concerns the fume hoods they depend on for safety were not operating as designed. The function of these hoods is regulated both by WorkSafeBC and UBC Risk Management Services. Because the function of the fume hoods is critical to research in this building, Building Operations identified this as a priority for project funding.

The result

The project landed successfully. We developed a comprehensive scope to address an ongoing, systemic problem. Through the process, facilities managers and project workers engaged customers in regular two-way communication, resulting in minimal disruption to researchers. We measured success through data gathered before and after the project. It has suggested we were able to successfully meet the requirements of the necessary regulatory bodies while ensuring research needs were also met.

This project's success serves as a model for projects of a similar size and scope going forward. In this example, success was achieved in that we initially assigned a budget, then evaluated the building's entire system. In turn, we assigned the technical resources, mobilized our internal trades to execute work based on technical recommendations, collaborated with our clients, and finally, validated the process through empirical evidence.

In 2016-17, 188 service requests were assigned to Construction Office project coordinators

2.9

The operating budget is developed based on building square footage and customer-funded work. Once developed, the budgeting responsibilities are then managed by the system owners and people and process managers.

On a broader scale, budgets are developed at a university level. Yearly, the university executives are presented with an assessment of the condition of the Vancouver campus to show how critical investments might help adjust and improve our overall Facility Condition Index (FCI). Rather than solely relying on historical spending, we can use the facility condition data to articulate the need for a more precise amount to be spent in any given year to provide a balance between reliable spaces and spending capital dollars.

We emphasize needs analyses based on modelling data relative to historic expenditures. Typically, different building components have varied lifespans. In any given year, it could be \$100 million or \$20 million worth of assets that reach end of life. From a budgeting perspective, we try to level our estimates and understanding so the university can anticipate overall expenditures and plan accordingly. We also try to determine needs precisely, to maximize every dollar spent.

Routine Capital UBC Vancouver	2016-17	2017-18	2018-19
AVED 75%	31,000	35,000	40,000
UBC 25%	10,300	11,700	13,300
TOTAL	41,300	46,700	53,300

The Government of British Columbia’s Ministry of Advanced Education (AVED) has now provided notice of significant increased routine capital funding amounts which must be cost-shared with UBC funds and spent within 12-month windows, with some exceptions in 2018 and 2019.

Generally, for UBC and other academic institutions across the province, the Ministry’s objective is to see the FCI values of core academic facilities reduced. Ministry funds are directed to projects that fall in the AVED category of ‘Major Maintenance and Rehabilitation’ (MMR), which improve FCI (the condition of the physical asset), reduce deferred maintenance backlog, and maintain or extend the asset’s life. Capital project budgets are developed with input from external experts (construction managers, quantity surveyors), knowledge of previous project costs from UBC’s wide portfolio of completed construction projects, and consideration of specific sustainability and performance goals, as well as project-specific risks, and lessons learned from previous projects.

2.10

What process ensures Building Operations’ capital planning process aligns with the campus master plan and UBC’s strategic plan in terms of preferences, current and future priorities, and initiatives? How does the University of British Columbia define each of these plans?

Within the university, multiple levels of capital planning occur. Campus and Community Planning’s Campus Master Plan drives all capital plans, including:

- Major capital — directed by Infrastructure Development, supported by Building Operations;
- Routine capital — directed by Infrastructure Development, supported by Building Operations; and,
- Unplanned capital — directed by Building Operations.

Campus and Community Planning is responsible for the Campus, Land Use, and Public Realm plans, which dictate appropriate development locations for different building use types and provide building design guidelines and standards for campus public spaces. To ensure these campus-level considerations are reflected in the Capital Plan, Campus and Community Planning is represented on the Capital Planning Working Group.

UBC operates outside the City of Vancouver’s municipal jurisdiction. Setting its own Land Use Plan, approved by the Government of British Columbia, UBC acts as its own authority, with jurisdiction for issuing development and building permits. All capital projects at UBC are planned and developed in accordance with both the Campus and Land Use plans, and subject to a thorough Development Permit (DP) review process that is overseen by Campus and Community Planning. The DP process involves a review of project schematic design by an Advisory Urban Design Panel (AUDP), as well as a Development Review Committee (DRC). The DRC includes operational units.

To engage the campus community and solicit input on proposed projects, a public open house is held for each DP application. Finally, to ensure alignment with university strategic priorities from the earliest project planning stages, a comprehensive approval process involving the executive and UBC board of governors is followed for all major capital projects.

Major capital projects are evaluated and prioritized in alignment with and contributing to the overall university strategic plan (in addition to contributing to operational performance and risk mitigation), as mentioned in section 2.8.

The major capital planning process is run as a steering committee made up of key staff from Campus and Community Planning, Infrastructure Development, Building Operations, and the university’s development arms (Infrastructure Development and/or UBC Properties Trust). There are several steps to major capital planning (see diagram that follows), achieved collaboratively with several stakeholder groups ranging from the project clients, through the Building Operations groups, to planning and design, sustainability, the Provost’s Office and Treasury. In taking this approach, we ensure we are maximizing the expertise that resides across our campus to deliver exceptional projects.

Routine capital planning is managed by Infrastructure Development, as explained in section 2.8. It develops the annual capital plan, in collaboration with Building Operations and Energy and Water Services.

Section 2.9 illustrates the unplanned capital process and explains how Building Operations is accountable for the budget for unplanned capital on campus.

2.10

Describe the process used to ensure that the capital planning process aligns itself with the campus master plan and the institution’s strategic plan, in terms of preferences and current and future priorities/initiatives. Provide your institution’s definition for each of these plans.

Building Operations at Work

The D.H. Copp Building offers insight into Building Operations' role in the overall capital planning process — in supporting the university's strategic plan and campus master plan. This building, which contains undergraduate science teaching labs, is nearing end of life, and slated for demolition (as captured in the major capital plan). Building Operations communicated the demolition date to internal staff so they understood the need to maintain the building at minimal levels while continuing to fully support all teaching and research needs.

Our facilities managers have kept building occupants apprised of all operator actions. Open communication has also helped create awareness for all involved that the building will soon be replaced; keeping key systems operable is a shared responsibility. Thanks to open communication, which involves outreach and listening, building occupants have identified systems that are critical to/for their research endeavours.

For example, with temporary occupants moving into the building, Building Operations revitalized the fume hood systems; this included maintaining the exhaust fans to operating standard, and recertifying the fume hoods to ensure proper regulatory compliance.



Building Operations has 12 smart automobiles in its vehicle fleet, saving 8,328 kilograms of greenhouse gases (GHGs) per year. That's like planting 213.6 trees that grow for 10 years.

What process ensures representatives from operational units participate in the development of construction program planning and are active participants in accepting completed projects and documents?

2.11

This is an area where Building Operations has made the greatest strides over the last two years. With a growing campus, we recognized the operations groups were often being left out of key design development decisions. Our skill and expertise was not being leveraged to ensure the campus was getting best outcomes with respect to reliable and maintainable campus building spaces.

In our Asset Stewardship pillar, we cite our commitment to share our expertise so as to ensure every space on campus functions as intended. To support that objective, we developed a transition team¹⁰ and key new roles within Building Operations dedicated to participating in building design, reviewing construction for quality control, overseeing commissioning, identifying deficiencies, managing demonstrations and training for new equipment, and initiating service contracts and/or service protocols for our group or external contractors to ensure new equipment is being operated and maintained properly. Once construction has finished, the transition team participates in handover of the project following processes described in the UBC Technical Guidelines.¹¹

We are starting to see the positive effect of this new transition team on building handovers on campus. Overall, this approach sets us up to be a much more effective operating and maintenance organization — one that allows us to apply our expertise to influence decision making early in a project's design.

2.11

Describe the process used to ensure that representatives from operational units participate in the development of construction program planning and are active participants in the acceptance of completed projects and documents.

NEW BUILDING HANDOVER PROCESS



¹⁰ <http://buildingoperations.ubc.ca/staff/projects-programs/new-building-transition-team>

¹¹ <http://www.technicalguidelines.ubc.ca>

2.12 How is Building Operations' leadership building and expanding organizational capacity and capabilities?

2.12

Describe how leadership is building and expanding organizational capacity and capabilities.

BETWEEN JULY 2016 AND MAY 2017



1,921
SERVICE REQUESTS WERE COMPLETED BY THE LABOUR DIVISION

In the last two years, Building Operations has made concerted efforts to introduce new technical positions within our trades group. This provides us with new-found capacity to make strategic decisions around best effort, best maintenance protocols, and decisions about repairing and replacing assets. Creating these positions has liberated our traditional trades managers, enabling them to focus more specifically on their people and processes within their crews. Having managers who are more directly engaged in their challenges and opportunities has resulted in better overall staff performance. Crews are now more able to contribute to process improvements, working hand in hand with managers who can — and do — execute their ideas. All told, this contributes to building valuable organizational capacity and capability as we can more readily identify roadblocks or common frustrations and quickly eliminate them.

For example, a major equipment failure in our district energy system in early 2017 tested the resiliency of our expanded organizational capacity. Thanks to the additional knowledge contributed by our technical specialists and system owners, who assisted with quick decision-making in the critical areas of health and safety, we were able to significantly limit the overall impact of the system failure.

Another example of our commitment to expanding our capacity and capability is our participation in the transition team mentioned earlier. By working with our colleagues from other departments, we are helping the university build better spaces. When maintenance groups are directly involved in designing and constructing new spaces, inherently those spaces are easier to maintain; this reduces overall cost for the university, while driving better outcomes for our campus occupants.

WHAT OUR CUSTOMERS ARE SAYING

“We were very happy with the product Manuel and Gord created for us in SR48075. We had some tables made and installed so we could fit more people in the room. The process stalled after the units were made and in the shop, but we’re waiting for them to be delivered to the building. To get a score of 10: a more seamless operation between the trades and movers, with less wait time would be appreciated. But we understand the labourers and movers are busy. Anyways, the users are happy and the desktops look great. Thanks!” — JONATHAN V.

2.13 What practice is used to ensure the Building Operations workplace environment optimizes staff performance?

2.13

2.13

Describe the practice used to ensure the workplace environment optimizes staff performance.

Building Operations prides itself in building a culture where staff are supported in delivering their very best. This is viewed across many initiatives, ranging from a wellness centre that was constructed to prevent workplace injury and support overall staff wellbeing, to equipping our supervisors and managers with the skills and tools they need to support staff issues and promote safe, productive work. We have a very evolved workplace safety culture — one where staff look out for each other, especially when performing or preparing to perform risky work, such as climbing into confined spaces for maintenance jobs.

We know The University of British Columbia can be a geographically challenging place to get to, situated at the city of Vancouver’s westernmost point. Many of our staff travel a great distance to get to work. Recognizing this, we introduced an alternate work schedule so people can work a compressed week.

We recognize top performance through annual staff excellence awards, crew talks, and newsletters celebrating outstanding project work. We also take time away from our tools to build relationships within and among our crews so we can be more productive.

When individual staff performance occasionally wanes, we have programs to help equitably and transparently put people ‘back on track.’ We do this through attendance management and performance reviews; both processes follow a progression of engaging conversations, with the goal of understanding the core issue — with disciplinary actions taken if/as warranted to correct behaviour.

See Section 5.0 for more information on how we optimize staff performance.



In closing

Building Operations has spent considerable energy creating enhanced processes to ensure the skill and experience of our maintenance staff contributes to better construction outcomes for the university. By creating a transition team and through dedicated efforts to collaborate on creating lowest total cost principles with the staff teams responsible for planning, design, and construction of new assets, we are making a positive difference to the UBC campus.

We have improved how we manage our facilities conditions and prioritize our budget. We have also improved how we communicate, so the university's leadership is readily informed of the risks and opportunities presented by deferred maintenance and our approaches to mitigating such risk.

Next steps will involve:

- Continuing to enhance the new building handover process to ensure the operations and maintenance staff are familiar and knowledgeable about building systems before we take them over;
- Continuing to build common understanding of the concept of 'lowest total cost,' and participating in defining what this means from an evaluation perspective in a variety of decision paradigms;
- Procuring a Computerized Maintenance Management System (CMMS) that will give us the technology backbone to generate better data on our efforts. The system will also integrate work order productivity measures and the planning/scheduling of crew resources, with feedback from our spaces such as Building Management System (BMS) data and/or customer comments. We are excited about the opportunities this will afford us as a team, enabling us to be even more productive;
- Strategizing and defining processes to ensure continuity of functions in the event of staff turnover; and,
- Continuing to work with our colleagues in Infrastructure Development to ensure Building Operations is included for input at specific integration points over the full life cycles of projects.

3.0 Customer Service

We have a saying in Building Operations: “UBC is not in the business of buildings, it’s in the business of ground breaking research and exceptional student outcomes.” Our job is to be the silent heroes who enable greatness. This is reflected in our customer service, one of Building Operations’ core strategic pillars.

Our customers include anyone who spends time at UBC, students, faculty, staff, alumni, and visitors. With each of these constituencies we strive to be proactive, collaborative, transparent, and honest in all our communications. This enables us to create meaningful relationships built on trust, which gives us licence to operate.

12,513 inbound service calls were made to the Service Centre in 2016

Where did we come from?

Long ago we were a department that did not consider customer feedback to improve service or processes. In 2009, we moved to a zone model — with dedicated facilities managers (FMs) and specifically-assigned zone trades providing services to better align with the needs of our customers. That, in turn, helped improve relationships with the members of our campus community. With a continuing focus on doing what is best for the campus, but not solely based on customer wants alone, we find ourselves needing to develop deeper strategies — particularly around our long-term total cost of ownership approach. This means we draw heavily on our four pillars, striking a balance that involves taking an asset-focused approach while meeting our customers' needs.

What are we trying to achieve?

We aim to provide the best possible value to our customers by knowing who they are, what they need, and how they like to receive our services. As a department, we are shifting our approach — to a proactive organization that can anticipate needs and better engage our customers by building in the necessary supports and communications to ensure that spaces contribute to their successes with minimal effort from our customers.

Why are we doing it?

This allows us to streamline processes, prioritize work, and develop consistent communications so our campus benefits from reliable, sustainable, and cost-effective spaces that enable great things.

Combined, our seven facilities managers have a contact list that includes 434 members of the UBC community, faculty, staff, and external space occupants in buildings across campus



3.1

How do we identify our customers?

3.1

Describe the process you use to identify your customers.

COLLECTIVELY, OUR FACILITIES MANAGERS HAVE A COMBINED TOTAL OF 95 YEARS OF EXPERIENCE

We consider any person who physically spends time on UBC's Vancouver campus a customer. Customers are identified in two ways:

- Customers identify themselves by contacting us through one of our inbound channels, such as our Service Centre, our website, our Twitter channel, or through our facilities managers.
- Our facilities managers proactively identify new customers through networking opportunities, leveraging relationships with existing customers.

Employing APPA definitions here, we categorize our customers based on their relationship to Building Operations and UBC. Our customers are either 'internal' or 'external' to Building Operations. Our external customers can be further classified as either UBC-affiliated, such as our core UBC departments, faculties, and ancillary units, or non-UBC-affiliated entities — such as private businesses that procure our services while leasing campus spaces, or film and special event productions.

Category	Description	Customers
EXTERNAL — CORE	UBC departments and faculties	Students, faculty, staff, alumni, and campus visitors
EXTERNAL — ANCILLARY	University business units that are self-supporting and revenue-generating (housing, athletics)	Students, faculty, staff, alumni, and campus visitors
EXTERNAL — NON-UBC	Business units unrelated to UBC but located on the university campus that procure our services	Examples include The Centre for Drug Research and Development in the Pharmaceutical Sciences Building, Shopper's Drug Mart in the David Strangway Building, or film productions
INTERNAL	Building Operations' employees	Building Operations' employees who receive support services from other Building Operations' employees

3.2

How does Building Operations identify the needs and expectations of its internal and external customers? How is success measured?

3.2

Describe how you identify the needs and expectations of both your internal and external customers and how you measure your success in meeting those expectations.

Building Operations' core strategic pillar of Customer Service is about delivering best value to our customers. We aim to achieve this by ensuring we have correctly identified our customers' needs, and setting realistic expectations through our regular interactions with them.

We identify many of the needs of our external customers through their interactions with our Service Centre and facilities managers (FMs), our primary links to the people we serve. Customers tell us their needs by submitting requests for service Monday to Friday, from 7:30 a.m. to 5:30 p.m. Requests can be received by phone, email, an online service request form, or Twitter. If issues are complex or customers require more assistance than the centre can provide, a FM meets with the customer and helps explain the best way to clearly communicate their needs to us. In turn, this enables us to help them more effectively. In these meetings, facilities managers educate their customers on service standards and frequency, framing service delivery in the overall context of the university's vision and mission.

Truly, the role of the FM is to co-create perspective with the customer — to set customer expectations in terms of priorities relative to overall campus priorities. Thanks to ongoing and carefully-nurtured relationships with their customers, FMs gather meaning about customer needs and expectations; this allows the facilities managers to advocate for their customers independently. For example, should a facilities manager become aware of an ongoing need for cooling in an IT data centre, the FM can act quickly to prioritize repair before there is a failure situation. The FM responds in a manner that not only anticipates but protects the customer's needs.

FMs tend to their customer relationships through ongoing communication in the form of meetings, site visits, email exchanges, and phone calls. To measure success, Building Operations has a tool, our Net Promoter Score (NPS). A link is included in the email signature of each FM, as well as the Building Operations website; it's also embedded in automatic responses generated by our service request system.

Truly, the role of the facilities manager is to co-create perspective with the customer — to set customer expectations in terms of priorities relative to overall campus priorities.

Building Operations identifies the needs of internal customers through shop talks, safety meetings, and bi-annual town hall meetings. Feedback loops, in the form of two-way communication in shop talks with heads and managers and interactive bi-annual town halls, previously mentioned in Section 1.0, give employees opportunities to provide in-person feedback on proposed initiatives. See Section 5.0 for more about our open and transparent interactions with internal customers.

WHAT OUR CUSTOMERS ARE SAYING

"4th floor — Musty/mildew smell has not recurred over past couple of days so service request (SR) now closed. Appreciated Shawn checking air filter (AH#3) and taking time to discuss matter with me. As he suggested, if odour appears again I will contact him directly to check ASAP and will follow up by reopening the SR." — LUCILLE H.

3.3

What process has Building Operations used to establish service levels? What organizational structures do we use to establish and meet customer needs and expectations about service levels? What processes are used to share service levels and organizational structures with our customers?

3.3

Describe the process you use to establish the type of organizational structure and levels of service most likely required to meet customers' needs and expectations and describe the communication processes you use to share those service levels and structure.

Building Operations' service levels vary depending on the type of service and recipient. For example, our custodial services clean every UBC campus building to a service level based on industry standards developed and published by APPA. Meanwhile, the service level for regulatory trades work is specified by an outside authority, where service levels for other trades are based on the twin goals of desired system reliability and space performance. Municipal landscaping is largely aesthetic, and managed based on season and growth rates.

Our zone model and facilities managers help us address customer needs and expectations as an organization. Customer-requested work and many smaller maintenance-related tasks are executed by dedicated trades assigned to each zone. In 2009, Building Operations moved to this model understanding the critical role that trades and timely service play in the overall customer experience. The campus was divided into eight zones, aligned largely by faculty. Under this model, a dedicated group of tradespeople are assigned to each zone — including a carpenter, painter, plumber, electrician, controls electrician, millwright, and utility worker. The outcome has seen much-improved relationships between our dedicated trades and customers. These relationships, in conjunction with the trades' deep knowledge of their buildings, foster trust and, ultimately, improved space performance outcomes as zone trades can better anticipate customer needs based on past experience.

While we have established organizational structures to set and meet customer needs, we recognize more can be done to set levels of service and expectations. This includes:

- Formally establishing added service levels for some of our trades and municipal work;
- More consistently communicating our service levels to all our customers, both internal and external;
- More consistently communicating our method for prioritizing work, so our customers understand the rationale for delays on some requests; and,
- Greater consideration of the needs of our spaces when setting service levels, identifying which assets or systems are essential for spaces to perform their key functions.

Building Zone Model



<http://buildingoperations.ubc.ca/business-units/building-services/facilities-management/zones-model>

3.4

What processes are in place that enable customers to obtain and monitor progress or status? How does your department receive customer feedback?

3.4

Describe the process that enables customers to obtain services and monitor progress or status. Describe the processes available to customers that encourage them to provide feedback on results and/or perceptions of quality and value.

Of all the inbound contact methods our customers can use, currently only our online service request system allows our customers to monitor progress on their service requests. To submit an online service request, customers must create a profile and log in to the system, then complete a form and add detailed notes about their request; that request is then directed to a staff member for actioning. Through automated emails, customers are notified of every status change to a service request — including when the request has been completed.

In receiving customer feedback, and built into the automated emails that accompany online service requests, we include a web link to our NPS form which invites our customers to provide detailed feedback on our service quality. Customers are also encouraged to speak directly with their facilities managers and trades. Finally, the Provost's Office serves as an indirect channel for customer feedback. The reality is that many of our customers do not require a full progress report on simple issues, such as a plugged toilet; they simply want us to address the problem.

Channels such as email, phone calls, and Twitter give our customers the ability to choose how much they hear from us. Ultimately, having a flexible service request process backed by various communications channels that flow in both directions (between Building Operations and customers and vice versa) ultimately improves customer service.

NPS Score
CONSISTENTLY
>80%
FOR THE PAST YEAR

WHAT OUR CUSTOMERS ARE SAYING

"Special thanks to both the Service Centre operator and zone electricians for processing and responding to this call so quickly (less than 20 minutes). A -80 freezer can lose temperature quickly, and we were concerned about the frozen specimens." — LUCILLE H.

Building Operations Online Service Request System:
<http://buildingoperations.ubc.ca/resources/building-administrators/peoplesoft-service-request-customer-training-video>

3.5

How does customer feedback affect continuous improvement and innovation?

3.5

Describe how customer feedback is used to affect continuous improvement and innovation.

Building Operations engages campus stakeholders before undertaking continuous improvement initiatives, part of our ongoing effort to engage stakeholders to build robust outcomes. We proactively engage with our customers. For example, Building Operations generates a report on each building highlighting specific details such as its construction date and the building's general condition. To improve the usefulness of these reports, and ensure relevant information is being included, key customers were invited to offer their feedback through a focus group exercise; customers were asked to comment on the type of information they would find most valuable. We are currently using insights gathered from that session to adjust our overall approach to these reports, to improve their overall value to our trades and customers.

In situations where building system failures impact customer space, Building Operations works with customers to determine best shared outcomes. For example, following a flood in a mechanical room in the Life Sciences Centre, building occupants — our customers — were engaged throughout the critical incident investigation. The facilities manager met with impacted customers to debrief on the incident and determine the desired outcomes of the investigation from the customers' perspective. Then, the lead investigator met with customers, touring their spaces to determine the physical impact of the flooding on research space. In turn, once the internal incident report was prepared, customers were sent an executive summary for their information and understanding. They were invited to give feedback on the summary, which was integrated into the next version of the document.



RECEIVED MORE THAN
125,000
SERVICE REQUESTS

Since we launched our online service request system in 2013

WHAT OUR CUSTOMERS ARE SAYING

"Thank you to the electricians for getting all the electrical requests for lab 5202 done in one shot. This really helped minimize any inconvenience for lab users." — REHANA A.

3.6

What practice is used to evaluate the extent to which Building Operations' leadership and its frontline staff meet customer needs and expectations?

3.6

Describe the practice used to evaluate the extent to which both the leadership of the organization and its front-line staff meet customer needs and expectations.

Building Operations evaluates how well we are meeting our customers' needs and expectations through two practices:

- Customer feedback is solicited as part of the facilities managers' annual performance review process. The superintendent of customer service extends an invitation to key customers within each FM's zone. This invitation asks for direct feedback on various performance aspects, and is then delivered anonymously to each facilities manager. Often feedback on various zone trades is also acquired at this time, and subsequently shared with the people and process manager who, in turn, relays that feedback to the tradesperson.
- Our NPS survey is an easy tool our customers use to provide feedback on any aspect of their interaction with Building Operations. A report summarizing NPS responses is shared internally on a weekly basis which includes comments and the score for each zone based on responses within the past six months.



In closing

The types of users frequenting our on-campus spaces are changing, to include new customers. For example, university initiatives such as UBC's Vancouver Campus Plan invite permanent private residents and visitors to facilities and grounds maintained by Building Operations. With this shift, we are redefining — and expanding — our definition of a customer. At the same time, we're also looking to build on the success we've enjoyed using technology, including our Twitter channel and updated Building Operations' website, not only to discover new types of customers, but to begin cultivating relationships with them so we can better understand and anticipate their needs sooner.

Building Operations employs several strategies to build relationships with our customers:

- Our Service Centre can receive customer requests through various inbound channels, which makes accessing our services as barrier-free as possible;
- Our online Service Request system serves as a communications bridge between our trades and customers, enabling both parties to understand how a service request is progressing;
- Our facilities managers actively set expectations with our customers and help prioritize our efforts; and,
- Our Net Promoter Score (NPS) allows us to understand and validate that the services we provide are satisfying our customers.

As we move to an asset-focused approach in prioritizing our work, this will benefit our customers. If we can create more reliable spaces across campus that are sustainable, inviting, enriching, and cost-effective over the life of each asset, then we are achieving our goal of providing exceptional spaces in a proactive manner that allows our customers to focus on doing what they do best.

Next steps will involve:

- Redefining the facilities manager role to balance customer needs and asset needs;
- Optimizing the Zone model to improve efficiencies;
- Establishing and communicating service levels for some of our trades and municipal work;
- Communicating our method for prioritizing work, so our customers understand the rationale for delays on some requests; and,
- Greater consideration of the needs of our spaces when setting service levels, identifying which assets or systems are essential for spaces to perform their key functions.

4.0 Assessment and Information Analysis

Good decisions rely on information, great decisions rely on trends and analytics. Building Operations is driven by reliable information and insights that provide valuable feedback on how our efforts and initiatives are enabling our campus in a proactive, sustainable and cost-effective way.

Currently, we collect a wide range of qualitative and quantitative information from end customers, the university administration, and our own staff. By collecting and tracking leading and lagging indicators, we gain feedback on specific issues or programs and can identify trends of progress and deterioration.

We know every initiative and effort requires quality control, and it is this data that allows for iterative improvements that benefit the campus and ensures we deliver best value and lowest total cost of service. And we have the data to prove it.

Custodial schedules are always changing, fluctuating with events, exams, seasonal use of spaces, and after-hours space use

Where did we come from?

Like many operations groups, we struggle with the day-to-day firefight of equipment breakdown. We knew we could provide a more cost-effective service and create a more reliable campus if we could adjust from a reactive approach to one that was proactive — planning scheduling operations and maintenance efforts. Additionally, we recognized that keeping our workforce engaged, with the right training, tools, and direction to be efficient, was essential. We needed to capture measurements in critical areas of our business so we could understand where efforts are best spent, in addition to tracking the benefits of our new approach. We have since been practising data-driven decision making, which drives operational improvement.

What are we trying to achieve?

We are trying to make informed decisions based on key performance indicators, validated by industry best practices where possible. We want to have data that will provide us with sound business intelligence, so we can constantly evaluate our business processes and gain insights that will allow us to make future performance improvements as well as smart adjustments in how we work and approach making our campus spaces even better.

Why are we doing it?

Collecting key measures and acting on them allows us to fulfill our mission of managing UBC's spaces in a proactive, sustainable, and cost-effective manner. Data that shows our cost-effectiveness allows us to be confident in the amount of university budget we ask for. In Building Operations, we recognize that maintaining campus spaces is not part of the university's core academic mission, but a failure to do so can certainly undermine that mission. Good metrics and data help ensure the campus community can continue benefiting from functioning, inviting, enriching, and reliable spaces at the lowest total cost — spaces that enable great things to happen at UBC and keep UBC in its position as a world leader in sustainability.



Building Operations' Soft Landscape Group pays close attention to safety. Many of the team's members are trained in a wide range of safety programs, including traffic control, fall protection, arboricultural safety, and safe equipment-handling.

4.1

What processes are used to identify and collect key performance indicators/benchmarking for Building Operations' most critical areas? What key performance measures are critical to the department?

4.1
Describe the processes that are used to identify and collect key performance indicators/benchmarking for your most critical areas. Describe the key performance measures determined to be critical to your organization.

The entire Building Operations team prides itself on making a practice of adapting, and evolving in search of best practice. Before embarking on any change initiative, our process involves asking ourselves what success looks like and how it can be measured and compared with other organizations. From there we identify performance measures we can use as success indicators, then work towards collecting them.

For example, when we rolled out our zone model in 2009 (referenced in greater detail in Section 3.0), we implemented the Net Promoter Score (NPS) survey; it allows our external customers to quickly rate our services in one question on a 1-10 scale, with the invitation to provide comments. We have NPS data dating back to 2009, which gives us good trending on our service levels and our customers' experiences.

With respect to overall building condition, we conduct full building condition assessments on a five-year rolling schedule. This enables us to track the Facility Condition Index (FCI), allowing us to demonstrate the results of our operating and capital investments and make progress towards minimizing the liability of deferred maintenance.

With respect to our people, we track efforts to attract and retain staff. This has resulted in retooling our recruiting process, bolstering our onboarding process, introducing a flexible nine-day fortnight schedule, and revisiting our wage structure in hard-to-hire areas. Another area we track with respect to our people is engagement trends; we do this by monitoring attendance, injury-related time-loss days, and participation rates in non-compulsory events — which all serve as a measure of not only how people show up at work, but their efforts once they are here.

With respect to regulatory and critical equipment, we track our Preventive Maintenance (PM) work and inspections to ensure systems and equipment maximize operational 'high uptime' and long-term reliability while providing regulatory compliance.

To some degree, we benchmark ourselves against peer organizations. Building Operations is an active member of APPA: Leadership in Educational Facilities (APPA). We participate in its annual Facility Performance Index (FPI) surveys, allowing us to identify performance indicators relevant to our operational efficiency. This also enables us to compare our performance to other similar institutions.

Through our participation in benchmarking surveys, and from measures collected by our staff, Building Operations has established dozens of key performance measures across three distinct areas of our operations:

- Assets and systems — data about system performance, equipment life cycles, condition assessments, maintenance costs, Service Request volumes, and time it takes to complete services;
- Administrative and services — data about staff, customers, fleet costs, inventory turns, purchasing processes, waste/recycling/organics collection and capital and operating actuals vs. planned for budget tracking; and,
- Regulatory — data about regulatory performance and compliance.

We also track, in cooperation with Energy and Water Services, building performance metrics:

- Sustainability performance — data about GHG emissions, water, and energy usage.¹²

Building Operations is focused on efficient and cost-effective asset ownership. For us, this means trying to have an asset-focused mindset when collecting data. We have considerable work to do towards this; while trades collect measures and information from systems and equipment and this data is tracked over time and used as performance indicators, we aim to collect them more consistently. Currently, deriving good insights into the condition of some of our assets has been challenging.

Despite this, we collect information from many critical systems such as:

- Chillers — regulatory inspections, preventive maintenance effort and schedule;
- Building fire alarms — regulatory inspections, preventive maintenance effort and schedule;
- Elevators — service disruptions, entrapments, contractor call backs, regulatory inspections, preventive maintenance effort and schedule;
- Filters — schedule for replacement, static duct pressure changes;
- Boilers — regulatory inspections, preventive maintenance effort and schedule; and,
- Backflow preventers - regulatory inspections, preventive maintenance effort and schedule.

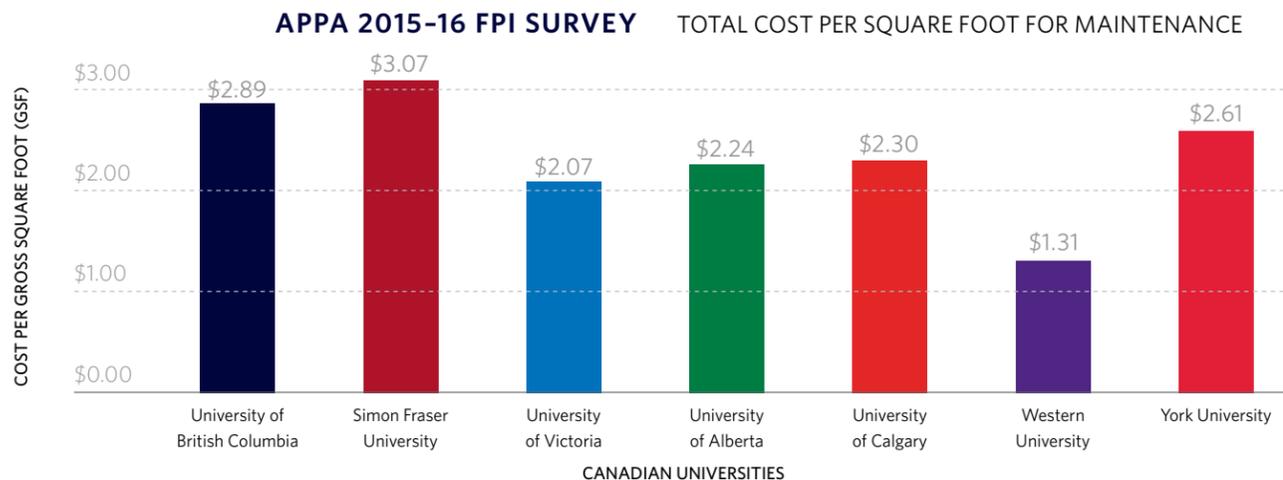
In short, the data we collect aims to help us ensure we are using the right staff, with the right skills and tools, to do the right work at the right time to keep the campus running at the lowest total cost.

WHAT OUR CUSTOMERS ARE SAYING

"Although we are happy this door is now installed, my department has expressed concerns about how long this service request took from quote approval to installation/completion." — NICK S.



THE ELEVATOR CREW COMPLETED
1,098
SERVICE CALLS IN 2016



¹² https://public.tableau.com/views/UBCEnergyStoryExtracted/UBCCampusEnergyStory?:embed=y&:display_count=yes&:toolbar=no&:showVizHome=no

4.2

What process is used to incorporate results of key performance metrics into a systematic evaluation that supports improvement of key processes, decision making, innovation, and achieving continuous improvement within Building Operations?

4.2

Describe the process that is used to incorporate the results of key performance metrics into a systematic evaluation that supports improvement of key processes, decision making and innovation, and achieving continuous improvement within the facilities departments. Include discussions on ROI calculations.

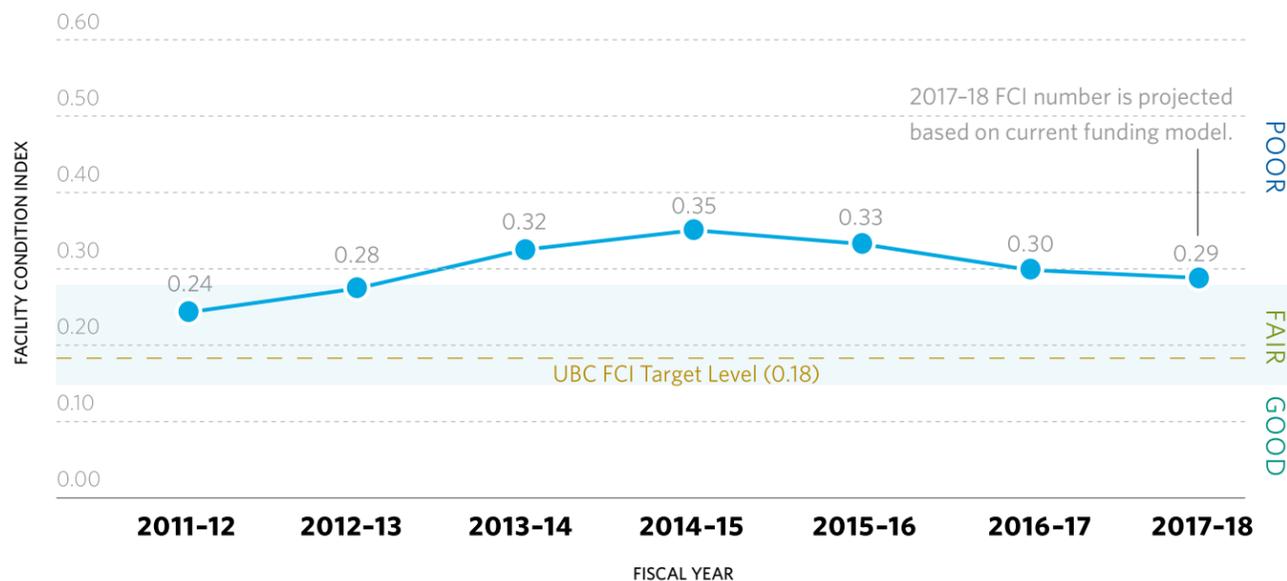
We look at our performance measures to gain insights into how we can improve our business processes. We always search for trends and insights against our historical values. Whenever possible, we also look at APPA benchmarking for performance comparisons to similar organizations.

Generally, individuals within the department responsible for the program or process identify what to measure and then adjust based on what the trends tell them. Data is then collected within our customer service team and disseminated for review monthly (or at whatever frequency is deemed helpful). For instance, our clerical team compiles data for our people and process managers who focus on data around staff performance, attendance, sick time, injury rate, training hours, work order backlog, expenditures on tools and materials, and tracking of budget actuals vs. plan. Our system owners would look at data that would indicate space performance, such as our Building Management Systems (BMS) data, equipment breakdown logs, and Preventive Maintenance (PM) program quality control logs. Our yearly review focuses on data that informs us on the outcomes of our efforts, such as the costs of our programs and activities and changes in the Facility Condition Index (FCI); where possible, these criteria are all evaluated against APPA benchmarks.

FCI is used by Building Operations in another process we employ, for investigating the return on investment related to some of our aging buildings. If a building has a high FCI and other issues, such as high-risk seismic liability and/or poor functional layout, we view the building as a potential candidate for demolition/renewal.

UBC VANCOUVER CAMPUS FACILITY CONDITION INDEX (FCI)

FACILITY CONDITION INDEX VS. FISCAL YEAR



Most recently, our Chemistry A, B, and C wings were investigated through this process. We identified that these facilities had significant deferred maintenance and were poorly supporting the teaching and research programming needs of the faculty and had moderate to high seismic risk. Because of the research intensity of the space, performing upgrades to key systems was incredibly disruptive. As of June 2017, these buildings have been added to the five-year capital plan for high-priority replacement.

Innovation and business process improvement is also something we achieve through thoughtful evaluation of key measures. One example of this comes from our Custodial Services group.

Our Custodial group regularly reviews staffing metrics and compares our measures to similar values reported through benchmarks, such as APPA's Facilities Performance Indicators survey. While we are on par with peer organizations, we had to ask ourselves if there was more we could be doing to improve our required resources and estimating processes. Typically, full-time equivalent (FTE) estimating considers multiple factors including their physical ability, the square footage of buildings requiring cleaning, and APPA cleaning standards. In applying these factors to our shifts, most calculation work is completed manually. Because of this, it was difficult to fully understand which buildings were adequately staffed for cleaning. As new and more complex buildings were being added to the overall UBC campus footprint, and the intensity of use different spaces varied, our custodial department saw a need — and an opportunity — to improve on its processes.

Our custodial operations manager engaged the UBC Sauder School of Business to conduct a business practice review as part of their Centre of Operational Excellence coursework. This resulted in a pilot project that saw the implementation of new shift modelling software, where key performance metrics as well as intensity of space usage could be entered into a central software system. For the first time, the custodial department could simulate hypothetical shift staffing scenarios to better identify staffing levels and strategies so as to provide greatest return on investment.

Though we work hard to improve our business through thoughtful consideration of our key performance values, more work can be done in this area such as using collected utility data to understand areas for focused repair or improved BMS analytics. Work such as this is contingent on sensibly collecting and processing our BMS data. Under the Enhanced Assets, Operations and Systems (EAOS) program, we're making strides to improve our business in this area.

For the first time, the custodial department could simulate hypothetical shift staffing scenarios to better identify staffing levels and strategies so as to provide greatest return on investment.

CURRENT FCI

0.30

In 2016-17, UBC's Facility Condition Index (0.30) was assessed at 0.3 by Building Operations' senior analyst.

TARGET FCI

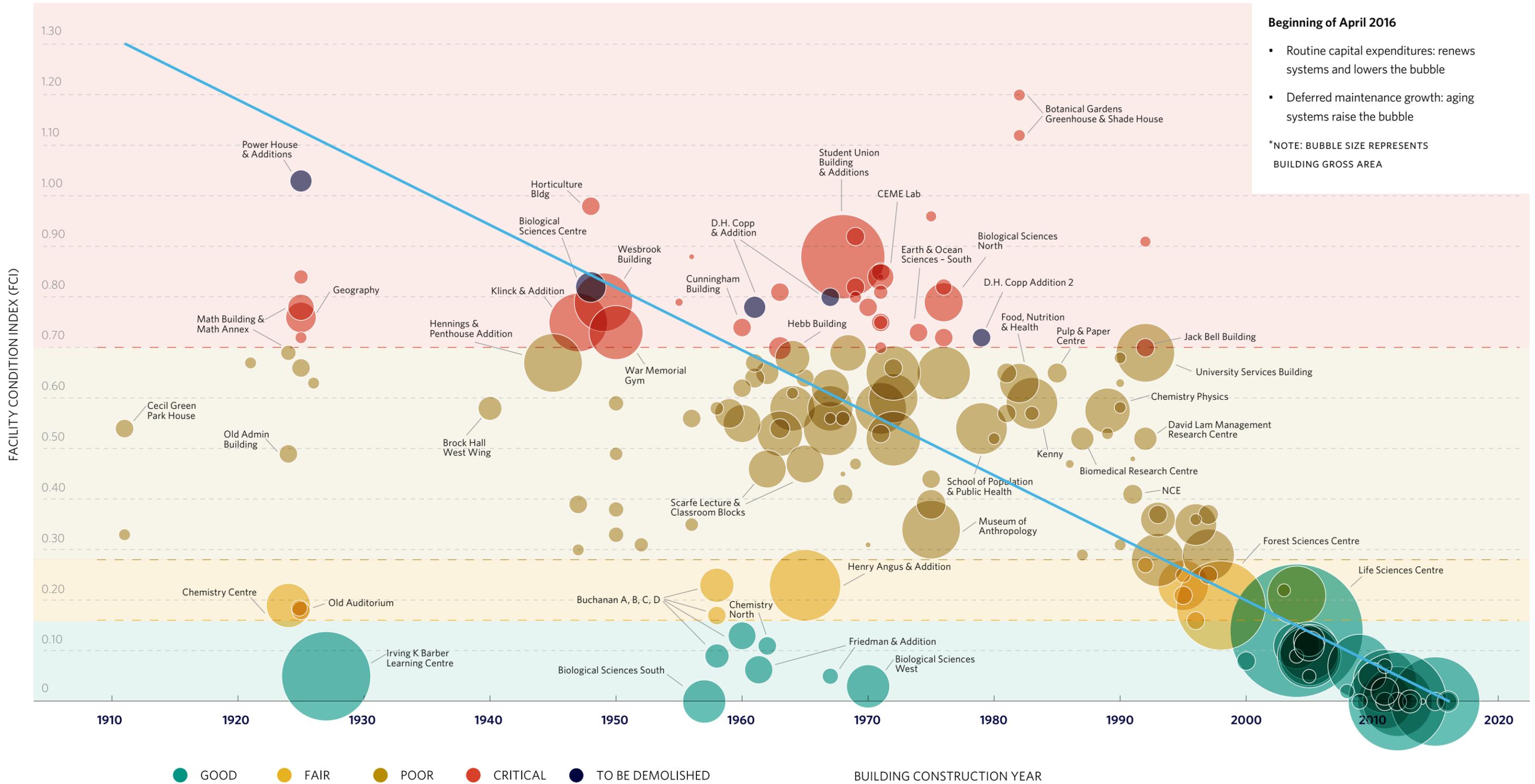
0.18

WHAT OUR CUSTOMERS ARE SAYING

"I held an exam in SRC yesterday. The new lighting is very much improved. On behalf of all the students who have the joy of writing exams in SRC, thanks." — PROFESSOR ROBERT G.

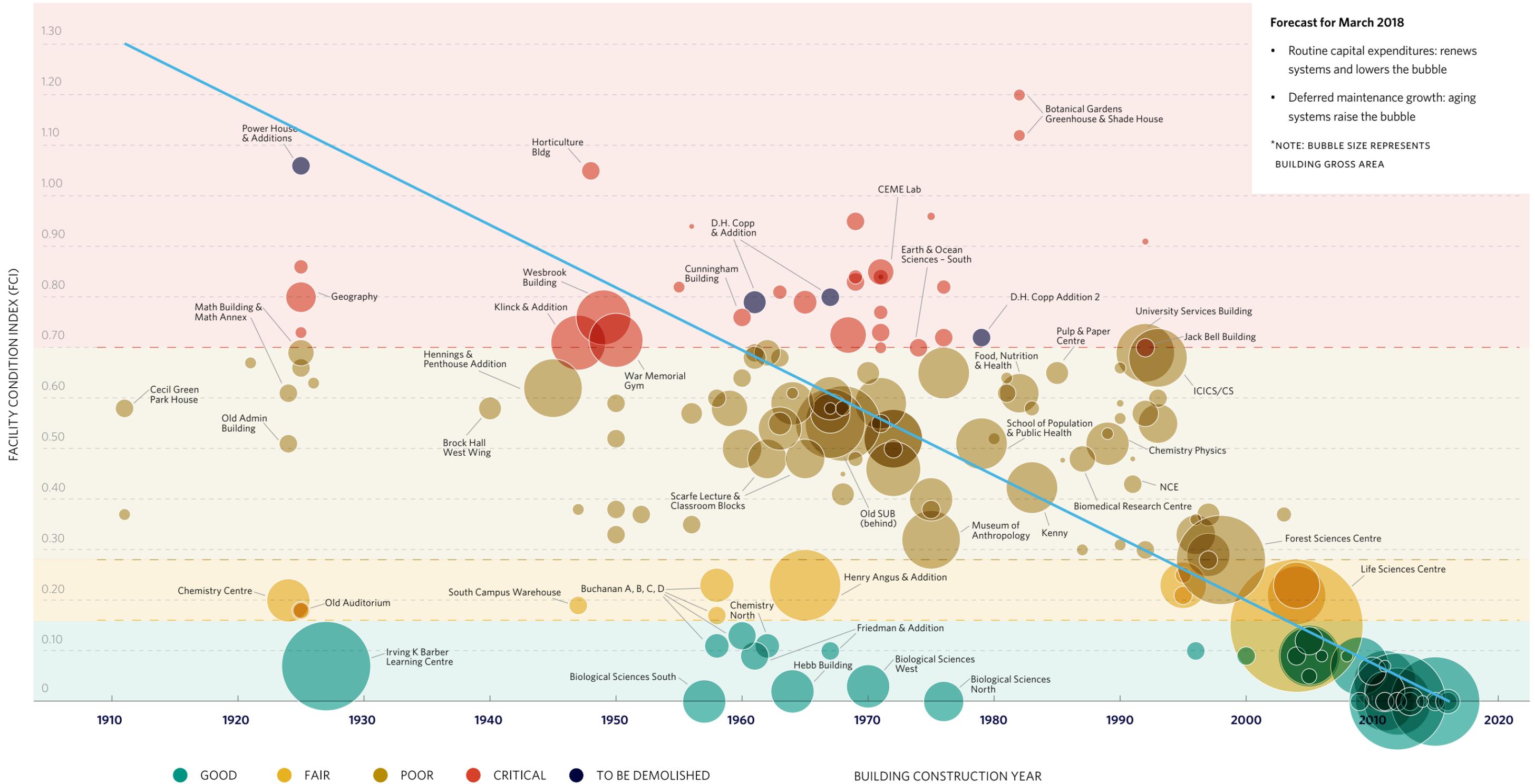
Core Buildings FCI/Age Profile

BEGINNING OF 2016-17



Core Buildings FCI/Age Profile

FORECAST STATUS FOR END OF 2017-18



4.3

What process ensures any performance measures being used are current, valid, and align with those of peer institutions?

4.3

Describe the process that is used to ensure that performance measures being used are current and valid and how these align with those of peer institutions.

The simple act of reviewing metrics regularly helps ensure the data being collect is not only current but is helping us make improvements that are in alignment with our mission and vision.

Building Operations collects and maintains key measures related to our assets, including values such as building ages, deferred maintenance costs, square footage, and more. This information is hosted in our Asset Management software system and regularly updated as values change. These values are also checked against those of peer institutions through benchmarking activities, such as the annual APPA Facilities Performance Indicators Survey.

Of these, the values that are relevant across our department are reviewed by senior members of the Building Operations leadership team and the results become content for crew talks, staff newsletters, and digital screens that are present throughout our work areas. This helps us connect our mission with our efforts and outcomes in a way that is easy to understand for all staff, creates transparency about our initiatives, and gives our staff an idea of how we compare to other universities.

There's more we can do in this area and in 2016 we created a new position — a business intelligence and informatics architect — to help individuals create and use our software systems to collect the kind of data that is useful.

While the above examples highlight how we use data to be introspective and ask ourselves the question of how we think we are doing, we also believe it is equally important to more fully investigate what other peer institutions are doing with their performance measures. We hope to use the data we collect to understand our performance, then engage with other universities through other benchmarking programs and direct consultation to gain better understanding of what is and has been working within the industry.

COST OF DEFERRED MAINTENANCE AND BUILDING CONDITION

SIZE OF BAR INDICATES COST OF DEFERRED MAINTENANCE.
COLOUR OF BAR INDICATES BUILDING CONDITION.



4.4

What procedures are used to communicate results of performance indicators and benchmarking to key campus decision makers and other interested stakeholders? How is the effectiveness of this communication process validated?

4.4

Describe the procedures used to communicate the results of the performance indicators and benchmarking to key campus decision makers and other interested stakeholders (internal and external) for the purpose of education, budgeting, and engagement. Describe the process used to validate the effectiveness of that communication process.

Key decision makers on campus are often interested in two of our core areas: how we measure the efficiency and effectiveness of our services, and outcomes from these efforts in providing reliable, sustainable and cost effective campus spaces while mitigating the liability of deferred maintenance. Annual reports to the campus executive and budget presentations to UBC's board of governors allow us to demonstrate progress across both areas.

One of the most critical measures of performance outcomes is our Facility Condition Index (FCI). It allows us to fully understand the relative condition of key facilities on the Vancouver campus. Building Operations calculates the FCI for 203 buildings on campus through our rolling, five-year condition assessment audits. FCI is a critical factor in our business processes, especially in relation to whether a building component is repaired, replaced, or if a building is entirely renewed or demolished. FCI allows us to determine where efficiencies and cost-effectiveness intersect, with the overall objective of realizing a higher return on investment. In other words, it helps us ensure we are spending funds in the wisest possible manner when considering the cost of a building's repair and maintenance relative to its overall lifespan.

FCI also plays a part in our reporting to senior university executives. Each year, after participating in the APPA benchmarking survey, we gather our results and other key data into our own benchmarking report that includes our FTEs, our total administrative, operating, maintenance, and deferred maintenance costs, as well as our FCIs.

APPA <http://www.appa.org>

This report is presented to Building Operations' managers which they in turn use to gain high-level insights on the cost-effectiveness of their functional groups. Senior departmental managers also use this information in annual budget approval meetings.

In 2016, Building Operations began reaching out to other key campus stakeholders. The faculties of medicine, science, and arts now meet to discuss the condition of their assets and routine capital improvements planned to manage space performance and mitigate the effect of infrastructure failure.

Finally, Building Operations has begun creating new one-page summaries for all core academic buildings. Called the *Building Annual Report*, having a summary for each core building underscores our commitment to transparency and accountability while capturing key facts and metrics on condition, expenditures, and upcoming improvements. These reports are available to our entire campus community.

By effectively demonstrating operational efficiency and communicating our strategy around planning and prioritizing for capital investments to manage deferred maintenance liabilities and associated risks, the university has increased both its operating and capital budgets for the last two fiscal years.

We know there is still more to be achieved. While we are now showing that we communicate our performance indicators within and outside Building Operations, we aim to improve how we communicate these values directly to our customers and how they help create a shared understanding of the campus condition and the efforts taken to improve it.



55

ACADEMIC BUILDINGS WERE DEMOLISHED BETWEEN 2008 AND 2017

Totalling 47,465 gross square metres (510,909 gross square feet)

4.5

What processes are used to ensure hardware and software systems are effective, user-friendly, secure, reliable, and up to date? What business continuity plans are in place should an emergency or other out-of-normal event occur?

4.5

Describe the process used to ensure that hardware and software systems are effective, user friendly, secure, reliable, and up to date. Include a description of the business continuity plan describing actions to be taken in the event of an emergency or other out-of-normal event.

We try to ensure our software systems are effective and user-friendly through training, improving input and in some cases activating modules and customization. One example is our online campus records tool which stores key information about our buildings, such as record drawings and maintenance manuals. Through staff feedback, we learned the records system was difficult to navigate because the information was not stored in an organized way and was not searchable. To remedy this, we embarked on a process to improve the user interface by sectioning out records into their logical divisions; we also separated maintenance manuals from specifications. Additionally, we provided staff training, and are putting more of our asset information into records for better document management. The hope is that our staff will use our records system more consistently and regularly because of these changes and, ultimately, be able to perform their work more efficiently.

We also work hard to maintain the continuity of our systems, even in the event they falter.

Building Operations uses a customized version of Oracle's PeopleSoft Maintenance Management system. UBC's Information Technology (IT) department supports all PeopleSoft users on campus who may experience technical issues with this system. Because of the level of customization and number of our staff and customers using the application, Building Operations created an additional level of support to meet the needs of these customers.

To identify possible technical issues and promote adoption of the software system among our staff and customers, a plan was implemented to have Building Operations' Service Centre staff act as frontline software support — in addition to fulfilling their regular duties. Feedback from our staff and customers on this approach suggests the Service Centre has been effective in quickly identifying and documenting user issues as they arise; instead of having users interact directly with IT, issues that can be corrected through user education are addressed through a single contact while technical issues are appropriately documented and quickly reported to IT. The Service Centre also documents enhancement requests by system users. These are reviewed regularly by our operations and project manager and our superintendent of customer service, as a means of identifying ways to improve software performance.

WHAT OUR CUSTOMERS ARE SAYING

"We were missing some pieces of shelving at Koerner Library we needed to make a project happen. We brainstormed together and came up with some solutions that worked well for everyone." — ALICIA M.

Our Service Centre also plays a vital role in mitigating issues that could arise should our software systems fail. For example, during a system outage where PeopleSoft users could no longer submit service requests, users could still connect with Building Operations through alternate inbound channels — including phone, email, and Twitter. Thanks to our efforts in clearly communicating the various options available, our customers now have much better understanding about the various ways they can reach us.

Building Operations is currently gathering business requirements and researching central computerized maintenance management systems (CMMS) so we can invest in a new system in the near future that will support further evolution of our work order management, planning and scheduling, and improved data analytics. Regardless of software system, Building Operations has a published policy for communications outreach in the event of system outage that effects our typical communications channels. This policy also provides direction in the event of an emerging issue requiring timely communication of details to multiple campus stakeholders, such as classroom scheduling, risk management, the Provost's Office, public affairs, and relevant vice-presidents. This policy supports emergencies of a lesser scale, from mild to moderate; for emergencies of a larger scale, the campus Emergency Operations Centre (EOC) is activated.

UBC VANCOUVER CAMPUS ONLINE RECORDS TOOL

DATABASE FOR BUILDING RECORD DRAWINGS AND MAINTENANCE MANUALS

The screenshot shows the UBC Vancouver Campus Online Records Tool interface. At the top, it says 'THE UNIVERSITY OF BRITISH COLUMBIA' and 'Infrastructure Development - Records'. Below that is a navigation menu with 'Home', 'Building Records', 'Services Records', 'Board Reports', 'Search', 'Options', and 'Logout'. The main content area is titled '529: LIFE SCIENCES CENTRE' and features a photograph of the building. To the right of the photo is a 'Links:' section with a list of links: 'BUILDING KEYPLANS', 'RECORD DRAWINGS', 'MAINTENANCE MANUALS', 'SPECIFICATIONS', and 'MORE...'. Below the photo is a red warning message: 'Access to this building is restricted. Some documents may not be available.' To the right of the photo is an 'Address:' section with the following information: 'Address: 2350 Health Sciences Mall', 'vancouver', 'Campus: Point Grey', 'Gross Area: 56595,65 Sq. M', 'Construction Type: Concrete', 'Use: Academic', 'Alternate Name(s): 52900, LSC'. Below the photo and links is a table titled '529: LIFE SCIENCES CENTRE RECORDS SUMMARY'.

Record Drawings	Maintenance Manuals	Specifications	Keyplans	Inspections
Landscape/Services x 50	Architectural x 21	Architectural x 1	Keyplans x 10	Reports x 1656
Architectural x 439	Mechanical x 55	Mechanical x 1	Equip. Keyplans x 8	
Structural x 63	Electrical x 24	Electrical x 2	Fire Alarm Keyplans x 9	
Mechanical x 431			Emergency Keyplans x 15	



221: the number of Building Operations fleet vehicles currently in use

In closing

Over the past few years, Building Operations has built an organizational culture that validates its efforts and outcomes based on qualitative inputs and quantitative data. Data is collected that is meaningful for business process and asset system owners and reviewed regularly. We share this data with our crews, our campus customers, and our senior leaders so we can be accountable for the budgets we receive and so we can engage in meaningful conversations around value and priorities of our work.

Currently, gaps exist with our data storage and how it is organized, as well as a reporting service or system that will parse the data for us and give us the details we need to inform better maintenance decisions and processes.

Going forward, our priorities in this area include:

- Enhancing the processes we use to collect key performance measures by integrating all data through a central computerized maintenance management system (CMMS);
- Introducing improved fault-detection diagnosis and intelligent trending information from our vast Building Management System (BMS) system;
- Continuing to restructure our organization to include resources dedicated to our data, such as the recent addition of a new business informatics and solutions architect to our team, as well as additional business analysts; and,
- Continuing to share data and trends in an informative and open way to improve decision making at the campus level.

5.0 Development and Management of Human Resources

We are a large department, in an even larger university. You can think of UBC as a combination of a city and a large, complex corporation; as such, you'll probably be surprised by who works here and all the things it takes to make UBC run. Fortunately, Building Operations has more than 8,400 years of campus experience on our current payroll, which helps make this place seem a little smaller and a little simpler.

Our staff are critical to enabling the success of UBC. They are the way we achieve our overall mission of creating enriching and inviting inside and outside spaces that meet our sustainability objectives at the lowest total cost of ownership. Our staff's unique skills and how they are applied, coupled with their knowledge of our campus, assets, and community, are what makes them invaluable.

We know it is important to nurture these strengths with a strong work culture. We strive to be proactive, collaborative, transparent, and honest in all our communications. Our culture creates accountability for continuous improvement of skills and knowledge and fosters the sentiment that there is always more that can be achieved. In this way, we ensure our most valuable resource — our people — are growing to optimally serve the needs of our university.

Seven facility managers cover eight zones on campus supporting all of the core academic buildings and many ancillary buildings where we provide contracted services

Where did we come from?

Building Operations has a history of human resource issues, such as strained relationships with unions and other units at the university. We had generic job descriptions, and little clarity around roles and responsibilities which, in turn, led to poor guidance for our staff on their responsibilities. We were an organization that missed opportunities to recognize, reward, and ultimately learn from members of our team who performed exceptional acts of service, making it difficult to consistently provide outstanding service. Silos between our own intra-departmental groups prevented us from working as a team and understanding each other's needs. At the same time, silos between us and other university departments made it difficult to gauge how efficiently we were addressing issues — both in terms of time and money.

What are we trying to achieve?

The ability to consistently identify how and when our staff perform exceptionally, and give other members of our team an opportunity to learn from these successes.

A working relationship between our staff and leadership that is fair, firm, and friendly.

A leadership team that is equipped with the people skills to drive improved performance in our staff in a fair, firm, and friendly manner.

Why are we doing it?

We believe an engaged staff with clear direction, with a high level of skill and expertise, under leadership with strong values and an empathetic approach, provides best value to our campus community.



The Plumbing crew completed 3,034 service calls in 2016

5.1

What process is used by Building Operations to identify and develop position responsibilities, determine competencies required, and develop job descriptions to ensure they align with work unit and department roles and responsibilities and that they are well understood?

5.1

Describe the process used by the department to identify and develop position responsibilities, determine competencies required, and develop job descriptions to ensure these all align with work unit and department roles and responsibilities, and that they are well understood by all members of the staff.

Industry practices in higher education facilities management have evolved over time. Similarly, the values and mission of Building Operations have also evolved to keep pace. We have made changes to many aspects of our organization, including updating the roles and responsibilities of our leadership and staff so they reflect our values of giving clear direction, providing the right tools, and maintaining open, transparent, and caring lines of communication.

Clarity in our roles, responsibilities, and job descriptions is a key building block of our Enhanced Assets, Operations, and Services (EAOS) program. In 2016, all our unionized supervisory job descriptions were reviewed for clarity and improvements. For example, we identified that many of our job descriptions failed to reference the soft skills needed in the modern workplace and which align with our mission and four key pillars. We have subsequently rewritten almost every unionized supervisory job description to include interpersonal, communications, and organizational competencies. All these job descriptions were rewritten in collaboration with UBC’s Human Resources (HR) to comply with the data standards for its Human Resources Management System (HRMS) to support our intent to be more data-driven. To ensure common understanding of the language and appreciation for the intent and direction, affected staff and the union were involved in creating and reviewing these new job descriptions before they came into effect.

Much as the expectations for competencies at work have changed, the work itself has become increasingly high tech and data-driven. During this process, we also began to see the outlines of gaps in technical responsibility. We reinforced the revised supervisor jobs with new positions for trades system owners, technical specialists, and business informatics to help create robust support for supervisors across operational systems.

As our structure has modernized, supervisors and managers need to see at a glance who is responsible for the roles in each branch of our organization. We have created a roles and responsibilities matrix to clearly identify management’s areas of responsibility. For example, the responsibilities of the technical specialist and system owner were designed in tandem to complement each other in the areas of administration and technical assistance; the system owners make decisions on what to do with their systems, and the technical specialists advise staff on what those decisions mean when performing maintenance on those systems. The roles and responsibilities matrix clarifies these complementary duties.

To ensure all staff are aware of the matrix, roles, responsibilities, and organizational changes, we regularly update our staff of any changes through crew talks, our weekly newsletter, and via reference materials such as our organizational chart (available on our website).

SNAPSHOT ROLES AND RESPONSIBILITIES MATRIX (EXCERPT)

THE ITEMS BELOW UTILIZE THE RASCI METHOD TO BETTER ILLUSTRATE HOW OUR SUCCESS IS INTERCONNECTED

Item	Head	People and Process Manager	Tech Specialist	System Owner
ASSET MANAGEMENT				
Develops, maintains, and owns a list of all assigned assets and systems on campus	S	S/C	S/C	R
Develops planned maintenance for all applicable assets and systems on campus	S	S/C	S/C	R
Develops planned maintenance for regulatory items	S	S/C	S/C	R
JOB SCOPING AND PLANNING				
Provide technical support for scoping, estimating, and planning	R	A	S/C	I

R = Responsible
Owns the problem or task

A = Accountable
To whom 'R' is accountable; has final decision-making or signing authority

S = Supportive
Can provide resources or play supporting role

C = Consulted
Can be consulted; has information and/or capability to complete the work

I = Informed
To be informed; must be notified of results, but need not be consulted

Our employees are represented by Association of Administrative of Professional Staff (AAPS), CUPE Local 116, and IUOE Local 882.

5.2

What employee recognition programs and practices have been established? How are they used to encourage, recognize, and reward improved performance?

5.2

Describe employee recognition programs and practices and how they are used to encourage, recognize, and reward improved performance.

One of the biggest cultural changes we are pursuing is to foster an environment that empowers staff to seek improvements themselves. We believe that by identifying, encouraging, and rewarding improved performance, cultural shifts, and exceptional acts of service, we enable a culture that allows for personal accountability and work to emulate their peers.

Formally, the Building Operations Staff Excellence Awards¹³ are key to identifying acts of exceptional service, recognizing the staff member who performed them, and rewarding and celebrating the behaviour.

Staff who have demonstrated performance excellence are nominated by their peers or management to receive awards in the following categories:

- Leadership — for being a role model in demonstrating leadership skills;
- Innovation — for processes, technology, and more;
- Customer service — for superior service;
- Health, wellness, and safety — for dedication to workplace health, wellness, and safety; and,
- Teamwork — for exemplary performance in collaboration, cooperation, reliability, and flexibility;
- Inspiration — of particular note is our Kim Nulty Staff Excellence Award for Inspiration. Named after a member of our staff who consistently demonstrated excellence across all categories above, this award goes to individuals who have consistently performed at a high level in at least three criteria. To receive this award is one of our department's highest honours.



Kim Nulty (middle) was an integral part of Building Operations' garden shop. Despite a debilitating illness, she consistently showed up and stepped up, advocating for sustainability, safety, equity, and diversity in the workplace. While she no longer works in the field, she continues to strengthen our work culture by attending our holiday events and special occasions. She is an inspiration to us all.

¹³ <http://buildingoperations.ubc.ca/staff/staff-recognition>

The awards are presented at our annual holiday staff event in December, one of our largest staff gatherings.

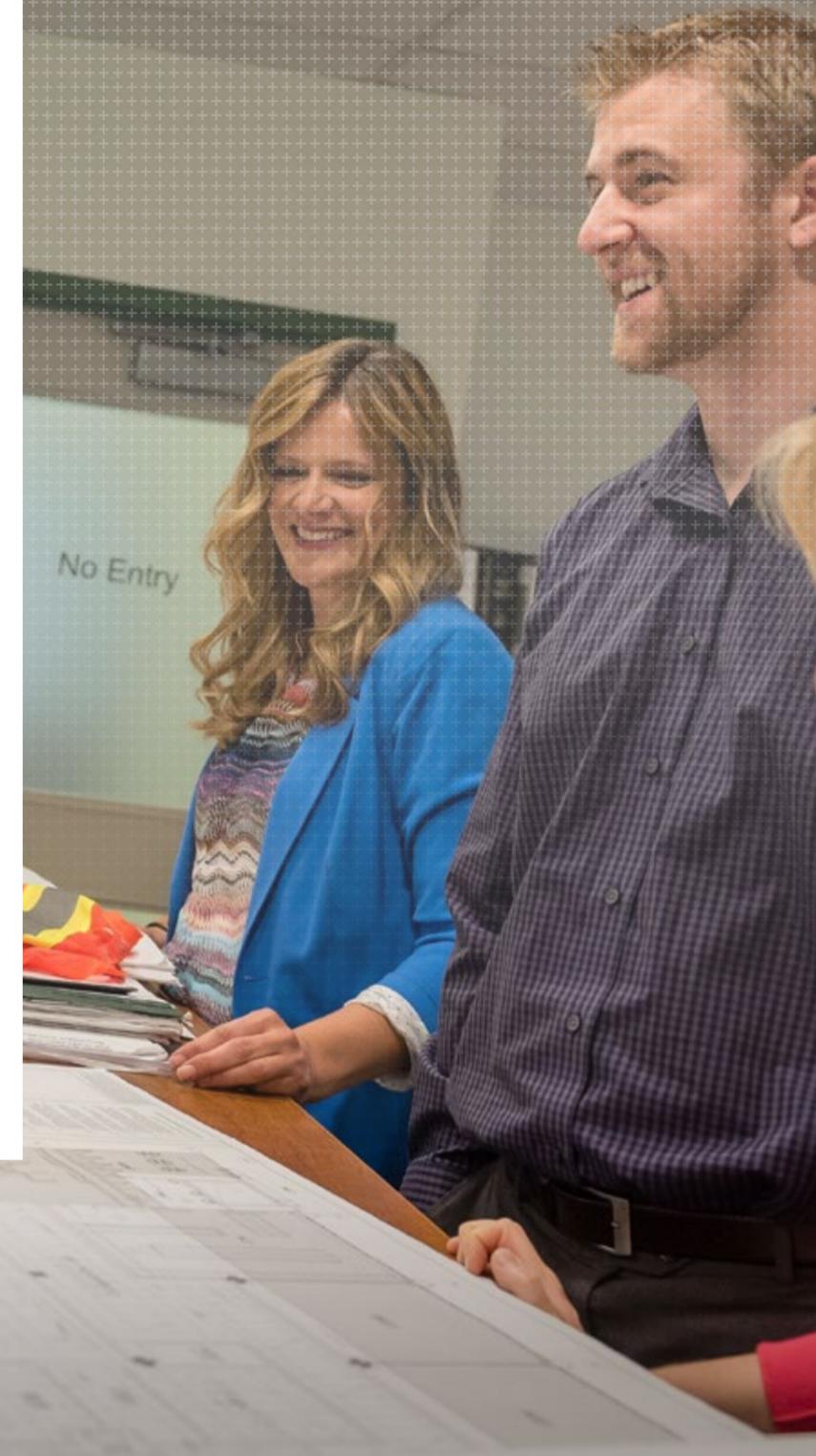
In that many members of our team join us and then build careers and a lifetime around creating better campus spaces, years of service are recognized through our service awards. Staff reaching five, 10, 15, 20, 25, 30, and 40 years of service are awarded with a certificate and gift.

To celebrate and recognize day-to-day work, we held a 'You Are Awesome' coffee for staff and shared highlights of great teamwork and outcomes for all our crews. One of our managers secretly created a video — a spoof trailer for 'You Are Awesome, The Movie.' This fun, light-hearted montage of our staff was shared at our annual holiday events to highlight the working environment we strive to create while also serving as a reminder of the direction we are travelling.

Informally, we recognize members of our team in our daily work. For example, in our crew talks we share accolades from clients that we collect through emails and Net Promoter Score (NPS) comments as well as opening the floor for staff to share success stories for work well done.

Our leadership development program includes a section dedicated to identifying and practicing daily recognition. Our managers and supervisors have learned that recognition needs to be personalized to an individual's preference so it is meaningful. For example, not everyone wants to be publicly recognized in the newsletter or crew talk; some prefer a quiet congratulation from their supervisor

The Trades group closed 17,703 service requests in 2016



5.3 What processes are used to set individual goals and how do they promote innovation within Building Operations?

5.3
Describe your process for setting individual goals and how they promote innovation in the department.

Building Operations' leadership uses regularly scheduled one-on-one meetings to set goals and performance objectives with superintendents, managers, and frontline supervisors. Frontline supervisors meet with individual crew members as required — mainly to recognize performance, provide feedback, or discuss opportunities for improvement. While management and supervisors have a defined performance management process, we are working to develop a formal process for individual staff/supervisor discussions to be captured and actioned in a clear and objective way.

We want to ensure our performance processes drive our goals to strengthen relationships and build trust between staff and management. Our leadership development program equips our management and supervisory team with techniques they can use to have discussions with empathy and professionalism. We believe this fosters a work environment that promotes innovation and teamwork.

One of the most common goals our supervisors work on with their staff is career progression. Supervisors and managers look for opportunities to encourage staff to apply for internal job competitions for temporary (acting) or roles through our Expression of Interest (EOI) process so they can step up, try new responsibilities, share their frontline experiences with management, and prepare for a permanent leadership role. We find that with this acting experience they return to their regular roles with enhanced understanding of the department's goals, which helps the whole crew. This is one of our best tools for developing supervisory and management talent.

To maintain the learning from this process, if a team member is unsuccessful in winning an internal job competition we provide valuable feedback about the interview. This helps provide clarity on what competencies we are hiring for, keeps the recruiting process as transparent as possible, and supports our employees in focusing their personal development. By doing this we are more likely to have an engaged and productive employee who will share his or her ideas and look to make improvements — both on his/her team and in her/his personal approach to work.

There is always more we can be doing in this area. We are committed to improving the 1:1 process between frontline supervisors and frontline staff. We want to do this because it will allow our supervisors to better know their staff and interests so they can assign work that best suits each staff member, in turn spurring higher levels of engagement and encouraging innovation.

5.4 How does Building Operations foster an organizational culture that rewards cooperation, communication, and skill-sharing across work units?

5.4
Describe how the facilities department fosters an organizational culture that rewards cooperation, communication, and skill sharing across work units.

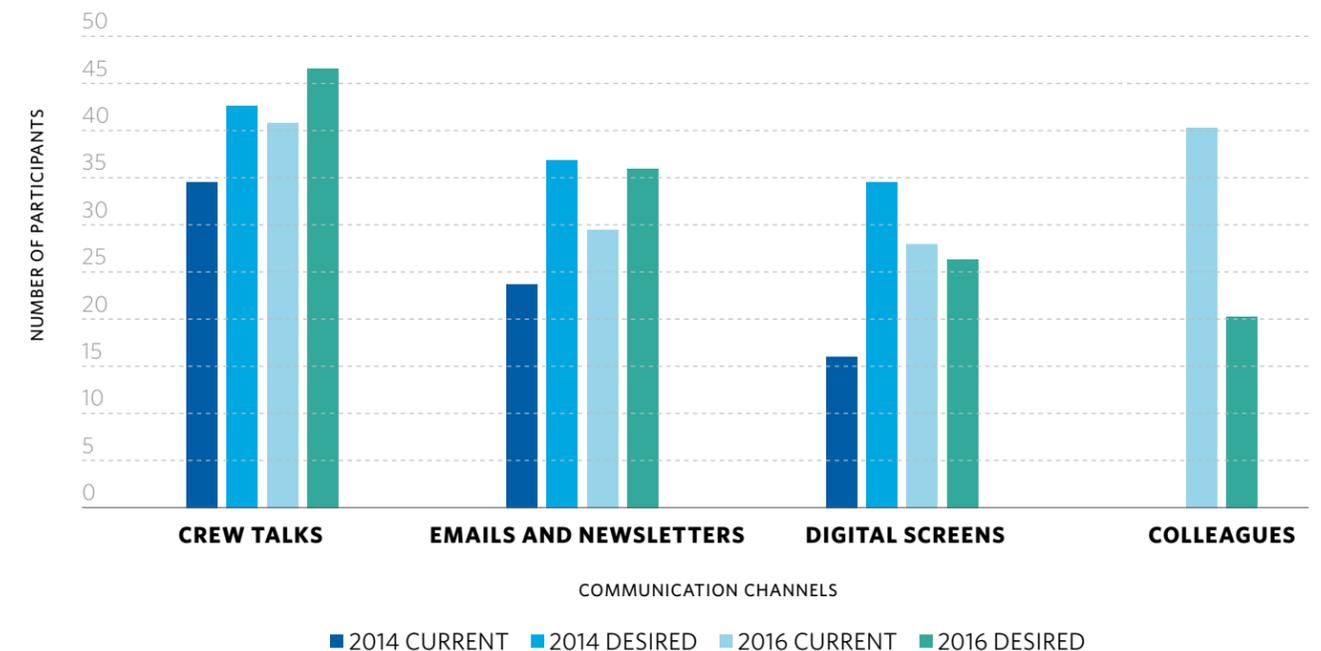
We know how important it is to for our culture to reward cooperation, communication, and skill-sharing across our different work groups — we are at our best when the various functional groups of Building Operations are working well together, as well as in collaboration with the university's other business units and departments.

We have made some significant strides in improving communication within our department. We did this through a formal communications audit called 'The Communications Snapshot' conducted by independent communications professionals from the university's Communications and Marketing department in partnership with our managing director. In this process, a combination of quantitative and qualitative research was undertaken in 2014 and 2016 to better understand what our staff must know, should know, and could know, and who they most want to hear this information from. By doing this we learned our staff prefers to communicate through the following channels:

- Crew talks with their direct supervisors and other face-to-face communication where they can ask questions and provide feedback;
- Backup by electronic channels such as Building Operations' digital signage network, email newsletters, and the Building Operations website (with reference to information provided by subject matter experts).

THE COMMUNICATIONS SNAPSHOT

HOW DO YOU GET INFORMATION?



5.4



\$1.5

MILLION WORTH OF SERVICE CONTRACTS ARE ADMINISTERED BY CONSTRUCTION OFFICE PROJECT COORDINATORS



THE CAMPUS MAKES A BEAUTIFUL LOCALE FOR MANY A WEDDING.

Our Custodial and Customer Service team provides the planning, chairs, set-up, and take-down once the nuptials are over.

Through the 2016 Building Operations' Snapshot survey, we learned we have made clear progress in improving/increasing crew talks, and improving the quality of information shared through digital signage, UBC internal emails, and our weekly newsletter. Additionally, supervisors/superintendents/managers are increasingly seen as trusted sources of information about Building Operations' projects.

Beyond a rigorous approach to improved communications, we are working to improve cooperation and skill-sharing across units by making both the time and space required. This is important as it ensures different university units and cross-functional groups within Building Operations are working towards the same goals, even when our mandates may be different. It ensures there is common understanding so we do not unknowingly undo what another unit has worked hard to achieve. It also provides learning opportunities and context for why we do things.

To achieve better teamwork within and outside Building Operations, we make time for regular cross-functional meetings. Examples include meetings between:

Building Operations and external stakeholders	Building Operations and internal stakeholders
Our facilities managers work with project managers from UBC Project Services to work through existing issues and understand roles and responsibilities to provide timely communication of building shutdowns, renovation projects, potential noise disruption, and more to customers.	Our millwrights and electricians recently worked together to fix the Ladner Clock Tower, an iconic UBC landmark.
Our leadership works on multiple committees and work groups with representatives from Energy and Water Services, UBC Properties Trust, Infrastructure Development, Campus and Community Planning, Sustainability and Engineering, Student Housing and Hospitality Services departments, and the Provost's Office to discuss issues such as the university's total cost of ownership, zero waste, development permits, service contracts, and sustainability.	Zone crew members of different trades are more easily able to work on jobs requiring multiple trades as they are co-located. Prior to implementation of the zone model, trades from different crews did not know each other which made collaboration difficult.
Our leadership and one of our unions, CUPE Local 116, have been able to make significant progress on issues such as equitable overtime sharing and the shop steward leave request process by working together.	Our system owners rely on technical specialists, heads, technicians, and consultants to get the right answers when making decisions on operations and maintenance.
Our transition team works with the design and construction arms of the university through regular scheduled meetings to ensure a smooth transition to receive new buildings.	Our Custodial and Municipal groups work together to ensure zero-waste support at high-profile university events.



1,262

VEHICLE SERVICES WORK ORDERS ARE CREATED AND CLOSED EACH YEAR

We have renovated five of our workshops (electrical shop, mechanical shop, stores, labour division, and garage) to create more efficient and inviting workspaces that promote communication, cooperation, and collaboration. We are currently working through a collaborative planning process to renovate our carpentry workshop.

Again, our Building Operations' Staff Excellence Awards reward staff for consistently demonstrating excellence in performing their work duties. Criteria for our Kim Nulty Award for Inspiration, as well as our innovation, leadership, teamwork, and customer services awards, all call for demonstrating cooperation, communication, and skill-sharing.

To encourage the casual cross-flow of information among our crews and other departments, we have renovated the two atria of our main location, the University Services Building. By creating open spaces with comfortable seating and tables, we allow for employees from a variety of teams, roles, and levels to share ideas, collaborate, and build relationships. In distributed locations, zone model trades staff have their own open offices, where they muster in the mornings and at day's end, allowing them to collaborate on solving maintenance issues.



5.5

How are work performance and attendance expectations reviewed? What process is used to communicate this information to employees?

5.5

Describe how work performance and attendance expectations are reviewed and the process used to communicate such information to employees.



OUR UTILITY TEAM HAS NOT HAD A TIME-LOSS ACCIDENT OR INCIDENT FOR EIGHT YEARS

Managing the quality and efficiency of our work is a cornerstone of managing our reputation with our customers. As employee engagement is one of our strategic pillars, we want employees who ‘show up and step up.’ Our managers and supervisors review incomplete service requests regularly to evaluate work performance. We do this to help employees be accountable for their work, including being able to prioritize getting help when there are roadblocks. If there is a discrepancy between our expectations and an employee’s output, managers and supervisors rely on their training from our leadership development program; they have coaching conversations to understand why the employee is struggling, working with staff to manage outcomes.

Beyond quantitative measures, we are working through our revised job descriptions, new support positions, and roles matrix to create time for our supervisors to go onsite more often to support and review the quality of work being performed by their teams.

With the pace and scope of managing the assets of a large, sophisticated campus, it is important to have our complete range of staff available. A few missing employees can affect the progress of many projects. We discuss attendance performance with staff in a clear and empathetic manner. To do this, we set clear expectations early as part of our onboarding process for new employees. Before new hires begin work, our leadership presents details about how their performance will be reviewed. All unionized employees receive an informal 10-day check-in and two formal evaluations before passing probation.

Evaluations are focused on job performance and safety. New managers receive two formal performance evaluations in their first year of service, then one annually. Further, managers meet frequently with their direct supervisors so performance-related feedback is regular and timely.

We also share our attendance management program with new employees, where we review attendance performance measures quarterly and chart planned/unplanned absence data in colour-coded calendars. Employees who require follow-up due to attendance performance issues first have informal conversations with their manager to understand what may be going on and to give them an opportunity to improve their attendance. If we are unable to positively affect attendance through informal coaching, employees are enrolled in our formal attendance management program. In the program, they meet with managers and union representatives to discuss their attendance statistics, the impact on operations, and future possibility of regular attendance, in addition to identifying sources of support or accommodation, and discussing discipline — such as culpable or non-culpable dismissal due to poor long-term attendance.

More work can be done in this area. Under our Enhanced Assets, Operations, and Services (EAOS) program, we are looking at implementing computerized time and attendance workforce management tools. This will further enhance our reporting abilities on attendance performance, enabling members of our management team to have better conversations with our staff — further promoting an environment and culture where excellent attendance is encouraged.

How are career development needs assessed, provided, and monitored?

In Building Operations, career development is assessed and supported on an individual basis. For our frontline staff, the process is less formalized and discussions focus around postings for Expression of Interest (EOI) opportunities to serve in acting and permanent leadership roles. With our managers, the conversations about career aspirations occur through one-on-one meetings or during formal performance evaluations. In all these conversations with our staff, we identify the individual’s interests, skills, and areas for growth. We also assess career development needs based on competencies required for the positions within our department. When gaps in soft or hard skills are identified, our employees are provided with the training required to gain those skills.

We provide for career development needs financially, through in-house learning opportunities, and practical experience. Career development that will enhance skills but is not a required competency for the position may be fully or partially supported by the department (in line with Building Operations’ Professional Development Policy). Employees can access professional development funds (\$1,000 per year for CUPE Local 116 employees, and \$550 per year for managers) and tuition waivers (12 university credits per year) as part of their benefits.

We also provide in-house learning opportunities, such as our leadership development program or training for our staff in the safe performance of duties. We actively monitor training by tracking the required training needed to maintain professional certifications and trades tickets as well as managing the process by scheduling trainees, providing personal reminders prior to training dates, and informing managers when employees are absent from training.

Our EOI process offers another in-house learning opportunity. It provides employees with the opportunity to express interest in temporary promotions so they can leverage those opportunities to learn the requisite leadership skills to be considered for future supervisory opportunities. As part of this process, employees are provided with appropriate training to help them acquire tools for personal and positional success in their temporary roles and they receive feedback on their performance at the end of term.

For larger career transitions, the Building Operations Apprenticeship Committee reviews difficult-to-fill trades positions and considers the feasibility of adding apprenticeships in these areas. By adding positions to our apprenticeship program, we provide career advancement opportunities for our unskilled workforce. We monitor the progress of our apprentices by reviewing their performance regularly and through formal bi-annual performance evaluations.

BUILDING OPERATIONS’ APPRENTICESHIP COMMITTEE

The Apprenticeship Committee meets on a quarterly basis. This committee is comprised of managers from Building Operations, Energy and Water Services, and CUPE Local 116, as well as some apprentice mentors and apprentices going through the program. The committee’s mandate is to review issues, improve processes, engage students, reach out to include more women in trades, and fill gaps in the organization through apprenticeship opportunities.

5.6

5.6

Describe how career development needs are assessed, provided, and monitored.



1,790 TIMES WHERE STAFF WERE SCHEDULED FOR TRAINING IN 2016

5.7

What processes are used by the organization at the institutional and departmental level to promote organizational diversity in its workforce and leadership?

5.7

Describe the processes used by the organization, both at the institutional and departmental level, to promote organizational diversity both in its workforce and leadership.

The University of British Columbia was just recognized as North America's most culturally diverse university in *Times Higher Education's* "World's Most International Universities 2017" ranking. At Building Operations, we work to create a workplace that is as culturally and generationally diverse as our university and its supporting communities.

Organizational diversity starts with our hiring process. All our job competitions contain the following language, as per UBC's employment equity policy:¹⁴

UBC EMPLOYMENT EQUITY POLICY

UBC hires on the basis of merit and is strongly committed to equity and diversity within its community. We especially welcome applications from visible minority group members, women, Aboriginal persons, persons with disabilities, persons of minority sexual orientations and gender identities, and others with the skills and knowledge to productively engage with diverse communities.

Building Operations' organizational diversity is also supported by UBC's Respectful Environment Statement.¹⁵ It supports our inclusive work environment with policies that promote a respectful workplace free of bullying or harassment.

For example, despite educational facilities management being a historically male-dominated industry, at Building Operations there are equal opportunities offered, regardless of gender. However, we recognize there is more we can do to expand our leadership in this area. The Building Operations Apprenticeship Committee is working closely with CUPE 116 to see how we can increase the number of women in the trades at UBC. To promote this goal, we have included specific language in these job postings to target female workers. We recently hired a female steamfitter apprentice and a female mechanic. Our goal in diversifying our crews is not to simply meet a target or ratio, but to expand our talent pool to ensure the best candidate gets the job without any historical bias influencing outcomes.

¹⁴ <http://equity.ubc.ca/policies-guidelines>

¹⁵ <http://www.hr.ubc.ca/respectful-environment>

5.8

How does the organization use formal and informal assessment methods and measures to determine employee well being, employee satisfaction, and motivation?

5.8

Describe how the organization utilizes both formal and informal assessment methods and measures to determine employee well-being, employee satisfaction, and motivation.

We try to build a staff team that 'shows up and steps up.' We can measure this through formal metrics such as attendance, Workplace Experience Survey (WES) results, and indirect metrics that indicate engagement such as participation in non-compulsory events, input into initiatives, and injury-related time-loss data.

In 2011, only 40 employees out of 764 staff completed the WES survey. Due to strained relationships at the time many of our unionized workers chose not to take part in the university survey. The results showed, beyond the obvious lack of participation, that employees did not trust Building Operations' management and members were generally dissatisfied with their work environment. Participation in all non-compulsory department functions, such as holiday events and activities, was poor.

In 2014, trust was starting to be re-established and 266 out of 700 employees participated. Results indicated dissatisfaction by frontline employees across the following areas:

- Unit/head managers;
- Engagement;
- Attraction and retention;
- Unit culture;
- Collaboration;
- Total compensation; and,
- Leadership and strategy.

Since then, as detailed throughout this publication, Building Operations has made great strides in improving results across these and other areas.

Anecdotally, we have also seen improvement in attendance at non-compulsory department events. We've also realized considerable successes in 2015, 2016, and 2017 around reducing worker injury, and further reducing the overall number of work days lost due to injury. We see this as a direct result of our investment in a safety culture, but also an investment in engaging our employees as we consider workplace injuries and related time loss to be an indirect key performance indicator of worker engagement.

In 2017, the WES is to be conducted again. We plan on using the survey to validate that, through our efforts in these and other areas, we are headed in the right direction.

WORKPLACE EXPERIENCE SURVEY (WES)

Administered university-wide by HR, the Workplace Experience Survey aims to measure employee satisfaction and engagement. This survey is conducted every three years. First completed in 2011, then again in 2014, the survey's third iteration is planned for 2017.

WHAT OUR EMPLOYEES ARE SAYING

Where we were: Communications Snapshot 2014

In 2014, Building Operations performed a communications audit to understand our current state and opportunities for improving staff communication. This is a sampling of some of the employee replies we received on the audit survey:

- “Thanks for being so inviting, giving us a chance to voice our concerns. Hope there will be some GOOD changes.”
- “Communication between departments has historically been terrible campus-wide. There seems to be no awareness of how actions and decisions affect other groups and little or no consultation takes place. We don’t work as a team. Management distrusts and disrespects the working staff and, in return, workers are reduced to doing less for the employer. Years go by when we give our input and nothing changes. Most have all but given up.”
- “[We need] more regular in-shop tool talk meetings for supervisors and sub-heads.”
- “[We need] improved feedback on job application skills requirements, process --> mostly this comes through the grapevine.”
- “[We need] improved assessment/tracking of warranty periods ... with work during the warranty period going back to the warranty body (contractors, manufacturers, etc.)”
- “[We need] improved management consistency between shops/teams ... some groups get different treatment than others without clear rationale for the differences.”

WHAT OUR EMPLOYEES ARE SAYING

Where we are: Leadership 2016-17

In 2016, Building Operations began a mandatory leadership training program for managers and unionized supervisors (heads and sub-heads). This is a sampling of some of the employee replies we received on the training feedback surveys:

- “Sitting down with people from different ‘departments’ of the organization and understanding what they go through is helpful. Sometimes just focusing on my own crew gives me limited vision/ideas ...”
- “The most valuable part of the course was the group feedback, hearing from others clear strategies for providing/receiving feedback.”
- “Learning about my communication style, and also being aware of other people’s style. I also confirmed that my style is and should be situational depending on the environment and need at this time.”
- “We need more sessions like this as most of the supervisors don’t have leadership/communication experiences in dealing with people/staff.”
- “I think we glossed over gossip and negativity too quickly. More in-depth review of reasons why both exist, and explore more in-depth the strategies to change culture ... rather than ‘don’t do that!’”

5.9

What approaches are used to ensure the effectiveness of recruitment programs to provide well-qualified staff and retain high-performers?

5.9

Describe the approaches used to ensure the effectiveness of recruitment programs to provide well-qualified staff and to retain high performers.



31

**NEW EMPLOYEE
MULTI-DAY
ORIENTATION
SESSIONS WERE
HELD IN 2016**

UBC is consistently ranked as one of British Columbia's Best Employers, yet Building Operations has faced significant challenges in recruiting and retaining Red Seal trades. To understand why this was happening, we worked with UBC HR to develop a recruitment strategy for Building Operations. As part of this initiative, we learned the difficulties we were experiencing are for the following reasons:

- Job market — Skilled tradespeople are in high demand and shortages of skilled trades workers are being reported in sectors across Canada, resulting in increased competition to attract talent;
- Compensation — Our hourly wage does not match the external market rate. Our ability to close this gap is constrained by negotiated terms and agreements and the university's financial capacity to continually match market rates;
- Geographic location — UBC is located in West Point Grey, the westernmost point in Metro Vancouver. The majority of Building Operations employees and prospective employees live in communities east of Vancouver, making for a long commute to work;
- An aging workforce — We are seeing a significant number of retirements across our Trades portfolio. This creates additional overtime costs and strain on our current employees; and,
- Complex recruitment, selection, and onboarding processes — The job posting, selection, and onboarding processes for UBC Building Operations are complex and time-consuming. This widens the time from the job posting to when a new employee actually begins working with us.

We have also experienced difficulty in hiring and retaining Trades management positions. By better understanding our challenges, we have made the following changes to attract and retain well-qualified high-performers:

- Upward wage adjustments for Red Seal trades — Achieved in partnership with Energy and Water Services, Student Housing and Hospitality Services, Human Resources, and CUPE Local 116, ticketed trades classifications across UBC are now aligned in three new classifications. This will enable trades employees to have some potential upward wage adjustment that would be aligned with the language and constraints of the current Collective Agreement and allow us to modernize our treatment of trades classifications;
- UBC market review of management positions — This has resulted in some wage increases;
- Alternate work schedules — Recognizing that our staff, supervisors, and managers have a long commute to work in heavy traffic, we have introduced an alternate work schedule compressing 10 days into nine;
- New selection criteria for CUPE Local 116 positions — This allows us to award positions to the best and most qualified candidates, with consideration for seniority only factoring when all else is equal;
- Revised new employee onboarding program — To ensure a smooth transition for new employees, we have made changes to help them feel connected and committed to the team more quickly;
- Advertising positions — Through newspapers, online industry recruitment websites, and by participating in career fairs to increase awareness that UBC and Building Operations are in need of skilled, enthusiastic tradespeople, we have increased our presence through advertising;
- Building Operations' website — Has been redeveloped to include a careers portal that provides dedicated information about working in Building Operations, high-level job descriptions, and benefits; and,
- Creation of 'system owners' and 'technical specialists' within the Trades group — We did this to create resiliency against turnover in trades management, as the burnout rate was remarkable. We recognized that we needed to do this to retain high-performers.

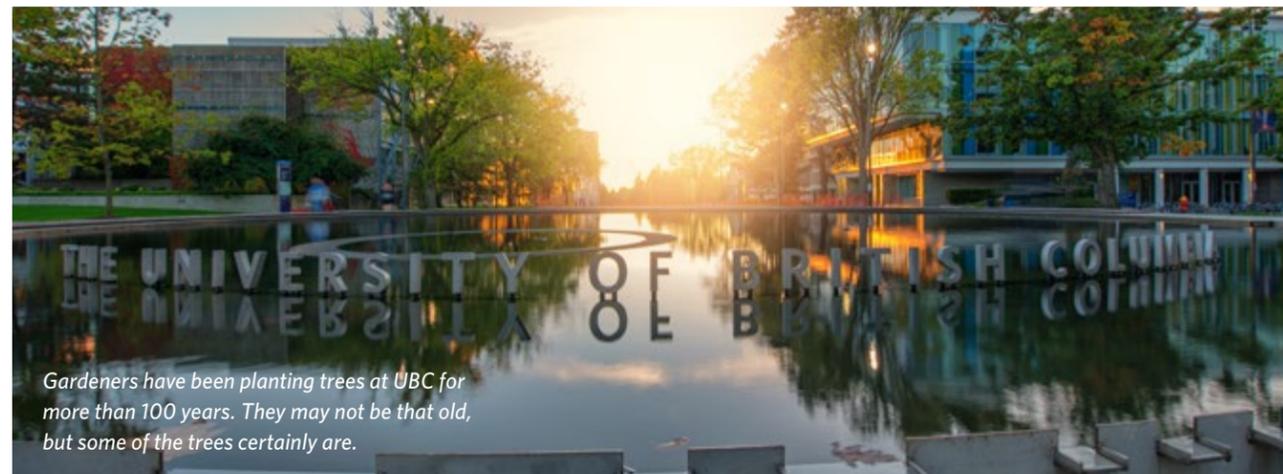
5.10 What processes are used by Building Operations and the university to orient new employees so they can successfully fulfill their responsibilities?

5.10

Describe the processes used by both the department and the institution for orienting new employees so they can successfully fulfill their responsibilities.

Effectively onboarding new employees can help them feel connected and committed to the team quicker, improve learning, and reduce workplace injuries. Building Operations has a new employee onboarding program. Launched in 2015, it includes:

- Checklists for the administrative side of the recruitment process, prior to a new employee joining the team, then for first day, the second day, and within 10 days, 30–60 days, and 60–90 days;¹⁶
- Ensuring the department’s managing director meets with every new employee;
- Meetings with unionized supervisors to review roles and responsibilities;
- A crew welcome coffee during a new employee’s first week on the job;
- Two probationary reviews before passing probation;
- A ‘buddy system’ that gives all new employees a ‘go-to person,’ and,
- An annual celebration coffee event, for all staff and new employees that started with Building Operations in the previous year.



Gardeners have been planting trees at UBC for more than 100 years. They may not be that old, but some of the trees certainly are.

All managers and heads are trained in this new process. As part of this program, new employees spend parts of the first 10 days learning about safety, HR policies, standard operating procedures (see new employee onboarding checklist), and other critical Building Operations’ information that will enable them to safely, effectively, and quickly ‘hit the ground running.’

¹⁶ <http://buildingoperations.ubc.ca/staff/managers-heads/neo-program>

What processes are used to determine appropriate staffing levels, based on identified and approved operational performance standard(s)?

We are driven by the outcome of enabling spaces to fulfill UBC’s academic mission. Currently we rely on our intimate knowledge of campus expectations to make value judgements on service levels and timeliness. We try to attend to issues as quickly as possible but prioritize service requests based on issues that affect research and learning and/or prevent damage to our campus assets. Other work is driven by condition outcomes, and needs a more intentional performance evaluation based on data and feedback from our customers and crews. Moving to a more formal understanding, while optimizing the support required for these outcomes is an ongoing effort.

In the Trades group, our recently-hired system owners are working to understand and document our asset systems across UBC; they are developing a systematic and rational approach for delivering optimal maintenance and performance. Our goal is to have the right staff, with the right direction, the right tools and skills, doing the right work, at the right time to enable optimal space performance. Once our system owners have completed this review, we will have a better understanding of our actual full-time equivalent (FTE) needs. Our Trades group is also reviewing effort spent on reactive, preventive, and customer-funded work (work performed for free through the zone model, and actual cost-recoverable work). Once these variables are refined for reliability and effectiveness, we will be able to define the true FTE required to operate the campus.

In other areas, such as custodial services, waste collection, and regulatory preventive maintenance, determining FTE requirements is easier. For example, our Custodial Services department determines appropriate staffing levels by reviewing factors including historical data, square footage, APPA cleaning standards, and intensity of space usage. Custodial Services recently engaged students from UBC’s Sauder School of Business to help develop a systematic approach to estimating optimal staffing levels and deploying staff efficiently given building use intensity. They now have a tool to scenario-test and validate required staffing for a building by space and usage intensity. Section 4.0 includes more detail on this strategy.

Our goal is to have the right staff, with the right direction, the right tools and skills, doing the right work, at the right time to enable optimal space performance.

5.11

5.11

Describe the processes used to determine appropriate staffing levels, based on identified and approved operational performance standard(s).

THE WASTE MANAGEMENT GROUP EMPTIED AN AVERAGE



2,040
ORGANICS CARTS PER MONTH, CREATING COMPOST FOR THE CAMPUS

5.12

How does Building Operations manage and organize its workforce to accomplish its advertised mission and objectives?

5.12

Describe how the department manages and organizes its workforce to accomplish its advertised mission and objectives.

Building Operations' mission¹⁷ is to “proactively and cost-effectively manage the operations and maintenance of all assets on the campus — creating enriching and inviting inside and outside spaces.” Our mission is supported by our four pillars, asset stewardship, customer service, leadership development, and employee engagement.

We have made the following efforts to organize our workforce in alignment with our mission and pillars:

ASSET STEWARDSHIP

Our system owners make strategic decisions to balance proactive maintenance against capital renewals to get the best performance at the total lowest cost. They analyze building data and work with crews to determine priorities. Under each system owner is a technical specialist dedicated to supporting crews to troubleshoot issues and make decisions around material purchases and contractor services. These new positions have freed up our traditional trades managers, giving them the capacity to focus on people and process performance.

Our New Building Transition Team¹⁸ organizes system demonstrations for Building Operations' crews so they become familiar with equipment before post-commissioning building handover happens. We now also record these demonstrations on video for staff unable to attend, or who are new to Building Operations.

System owners are also tasked with creating specific preventive maintenance programs based on space needs. For example, by engaging supervisors and frontline staff, the mechanical system's owner created a defined set of tasks for the Centre for Comparative Medicine Plant.

We also use approved and scheduled planned shutdowns as opportunities to schedule and perform additional preventive maintenance. We plan to formalize this process through a bi-weekly planning meeting.

We also have crews, such as utility workers, serve as a SWAT team for quick fixes like changing light bulbs, LED bulbs, and florescent tubes and unplugging toilets.

¹⁷ <http://buildingoperations.ubc.ca/about-us/accountability/strategic-goals>

¹⁸ <http://buildingoperations.ubc.ca/staff/projects-programs/new-building-transition-team>

CUSTOMER SERVICE

To deliver best value to our customers, our facilities managers are a dedicated liaison to building administrators. They work diligently to establish trusting partnerships with customers to find creative solutions to emerging issues. They work with our staff to create a high level of awareness about customer requirements

We have also organized service delivery through a zone model; by faculty, it divides the campus into eight zones. Led by the facilities manager, each zone has a base zone team consisting of plumbers, carpenters, painters, electricians, controls' electricians, millwrights, and utility workers. The model's purpose is to greatly simplify how work is performed. Trades are empowered to look after buildings and customers in their care. They are encouraged to foster strong relationships with customers, so customers can feel comfortable directly approaching trades for small jobs that could be completed in under two days.

We have a service centre that manages service requests, phone calls, Twitter, and emails from Monday to Friday, 7:30 a.m. to 5:30 p.m. After-hours customer requests go to our partners in Security.

LEADERSHIP DEVELOPMENT

We have rewritten all our unionized supervisor job descriptions to include mandatory soft skills. To support our supervisors and ensure they have these skills, all supervisors participate in the Building Operations Leadership Program. We have created clear reporting lines to ensure performance feedback happens regularly.

EMPLOYEE ENGAGEMENT

By hiring system owners and technical specialists, we have built capacity for our traditional trades managers so they can focus on people and process to provide clear direction, appropriate tools, and have open, transparent, and caring communication with their employees.

Our well-developed safety culture involves constructively helping employees to reduce injury.

While our facilities managers are responsible for campus facilities, their work also includes coordinating events such as exams, graduations, art installations, on-campus film shoots, and participating in various campus-wide improvement and operational committees

5.13

How does Building Operations identify improvement needs and measure progress in the areas of regulatory requirements, health, safety, emergency preparedness, and security? What processes are used to train employees in these areas? How is effectiveness determined?

5.13

Describe how the department identifies needs for improvement and measures progress in the areas of regulatory requirements, health, safety, emergency preparedness, and security. Describe the processes used to train employees in these categories and how the effectiveness of those training programs is ascertained.

We identify our improvement needs by reviewing acts and regulations against our standard operating procedures to ensure regulatory and health and safety compliance. Through crew talks, we ask our staff for feedback on areas for improvement. We also use one-on-one meetings with supervisors to further explore issues that create barriers to success.

As the data on our assets is not currently organized in a way that readily allows us to track trends, measuring progress involves labour-intensive follow-up. In the coming years, our objective is to better leverage our Building Management System (BMS) trend data to give us better information on our space performance. In so doing, we will ensure we are making better-informed decisions on our maintenance and operations work more efficiently.

Regulatory requirements — We collaborated with the British Columbia Safety Authority (BCSA) to review our inspection and operations protocol. Through this, we identified some key shortcomings and have since modified our deployment strategies. We have also created a training program; our managers and heads are now providing much clearer direction, so our operating engineers can operate equipment systems rather than merely inspecting equipment. Not only does this create much higher reliability, but it ensures regulatory compliance. Ultimately, this contributes to our 'lowest total cost of ownership' (TCO) approach as the key equipment enjoys a greater lifespan with optimal performance.

Health and safety — We have a comprehensive and holistic program for investing in the welfare of our workforce. We recognize that operational settings can generate major injuries and illness. In 2013, we decided to invest in building a wellness centre in our main building. The Centre for Occupational Health, Safety, and Wellbeing helps staff identify areas they need to be attentive to, so they don't become future problems. The centre provides a range of resources for our staff. From helping educate and inform members of our team about back injuries, to functional movement screening, dedicated training programs build strength and awareness that help reduce the likelihood of workplace injuries. The centre's programming is supported and provided by the School of Kinesiology and Risk Management Services.

With the help of university experts, we also run safety training through crew talks to ensure our work procedures and pre-job safety evaluations minimize risk exposure for all our workers. We track injury incidents as well as near-misses, in addition to conducting thorough investigations into the root causes of each incident so Building Operations can evolve its work practices to ensure incidents are not repeated.

Emergency preparedness — As an operations group, we engage in emergency response on a near-daily basis for occurrences such as small laboratory fires or floods due to backed-up toilets. This has resulted in an emergency management strategy that allows us to:

- Be quick and nimble in responding to incidents;
- Communicate effectively through various channels, allowing us to reach as many of our customers as possible. An example of our emergency response involves our use of an email-to-text notification process that immediately provides updates to key campus stakeholders, such as scheduling services, information technology, public affairs, and managers in other key departments. This allows the greater campus community to be aware of what is happening and the resources required to resolve the issue; and,
- Escalate our incident response based on the nature of the event. In the first five months of 2017, we have been able to test this on two occasions: when a campus-wide blackout occurred due to a transformer failure, and again when an uncharacteristically cold and snowy winter created issues in the greater South Coast region of British Columbia and on campus. In both cases, we were able to communicate quickly and effectively with campus executives to ensure sound decision making and clear lines of communication.

Through UBC's Risk Management Services department, we work collaboratively with other departments to create a comprehensive response and deliver appropriate training. In this matrix, Building Operations is primarily tasked with responding to the physical responses to emergencies. Our four main likely events include: earthquakes, fire, an epidemic, or a security threat on campus.

Security — We support UBC Security in providing a secure and safe campus by keeping the public realm (outdoor public spaces) well landscaped and pruned so there are clear sight lines. We also keep street and pathway lights working to ensure the campus is well lit at night to mitigate any security risks. Our operating engineers and custodians work 24-7 shifts, and are the eyes and ears of campus. They stay in touch with Security and report any suspicious behaviour. When an incident or break-in does occur, Building Operations secures the infrastructure and repairs any broken doors or glass.

These areas all involve common elements: being mindful of safety risk exposure, looking out for one another, and being responsive to the campus community. They are all values not only that we talk about, but, more importantly, that we practice every day. From an employee's very first day on the job, to the dedicated members of our team who have been here 25, 30, or even 40 years, this culture is embedded in each and every member of our Building Operations' team.



OUR CUSTODIAL AND UTILITY WORKERS ARE AMONG THE FIRST TO ARRIVE WHEN THERE'S A FLOOD ON CAMPUS.

As Building Operations, our timely response is critical to limiting further damage.



WHEN THE LAWN HAS STOPPED GROWING, OUR MOWERS ARE FITTED WITH PLOUGHS FOR LEAF AND SNOW REMOVAL

The Centre for Occupational Health, Safety, and Wellbeing

MANAGING RISKS TO EMPLOYEE HEALTH AND WELLBEING

Ensuring our workers are healthy and safe prevents injury and illness, and improves overall productivity while reducing time-loss due to injury. Working with UBC's Risk Management Services, Building Operations integrates occupational safety and health protection within our workplace policies, programs, and practices to promote worker health and wellbeing.

This effort became concrete in 2014 when the Centre for Occupational Health, Safety, and Wellbeing opened its doors. It provides a range of health and wellness programs and services to address the various needs of our workers, including ergonomic services, injury prevention education and physical conditioning, injury and health risk screenings, and onsite physiotherapy and massage therapy. By providing focused programs and services, the centre is advancing worker safety, health, and wellness at UBC Building Operations.

The centre operates in collaboration with various UBC and community groups, including the Allan McGavin Sports Medicine Clinic Physiotherapy, the UBC Pharmacists Clinic, the Faculty of Pharmaceutical Sciences, School of Kinesiology, and the BC Cancer Agency, with the support of CUPE Local 116 and CUPE 2950, IUOE Local 882, and the Association of Administrative and Professional Staff (APPS).



Our Custodial team regularly cleans
8,785 academic office and related
spaces, 750 classrooms, 1,108
undergraduate labs, and 4,097
faculty and graduate research labs



In closing

UBC has a compelling mission to become one of the top 10 publicly funded universities in the world. Our staff and managers are transforming our work towards that vision. We create enriching and inviting inside and outside spaces that meet our sustainability objectives at the lowest total cost of ownership because our staff work with high accountability and trust.

As we compete to recruit and retain new staff, we will continue being reflective and creating new and innovative approaches and training which will transfer our aging staff's knowledge of their trades and our campus, assets, and community while embracing the best of the new tools that are becoming available.

While we work to bring new staff and systems together, we are working daily with our people, one on one, to ensure we build a resilient work culture that celebrates striving, enables growth, and fosters the sentiment that there is always more to be achieved. In this way, we're ensuring that we can continue to enable campus spaces that will propel the university forward.

It sounds audacious, but we believe promoting such an environment is key to ensuring our staff are operating as effectively and efficiently as possible. In this, we are committed to:

- Further improving on our open communications by making one-on-one meetings with our staff a greater part of our everyday business;
- Supporting more cross-functional interactions by continuing to improve our workspaces;
- Further increasing our organizational diversity; and,
- Validating our efforts and approach through the university's Workplace Experience Survey (WES).

6.0 Process Management

Building Operations is always working to find the right balance of personal empowerment, robust technical systems, and process to create a nimble organization that can respond to the varied needs of our complex campus.

Our belief is that process exists to create clear, repeatable results the campus can count on. We have been working through our Enhanced Assets, Operations' and Services (EAOS) program to eliminate those processes that no longer serve us, simplify and standardize the processes that are valuable, and where possible, automate process through tools or systems so they can just happen.

We are then wrapping this transition with a culture based on personal accountabilities. In this way, our staff are doing the right things for the right reasons — not because they are checking a list. That way, we'll be working with the end in mind and not the process. We'll shift our work from the transactional to the transformative, so we can spend our time pushing UBC to new heights.

Our tool crib and stores purchase, track, and maintain 5,565 tool assets

Where did we come from?

Our organization has changed over the years, from one that previously included Infrastructure Development and Energy and Water Services, to where we are today — working closely together but as three separate entities. With this evolution, processes and stakeholders have also changed. At times this has created issues and significant turmoil, including confusion over which organization is responsible for service delivery.

What are we trying to achieve?

We are developing strategies and processes that bring clarity and direction to our core competencies. With clarity, our staff and key partner departments at UBC now have a framework for more effective decision making and delivering better collective value to our campus community. Together, we manage the complete life cycle of campus infrastructure and we are committed to doing it in the most sustainable and cost-effective manner.

Why are we doing it?

With a growing and evolving campus, our workforce requires strong processes to effectively align strategies that will create sustainable and repeatable value for Building Operations, our strategic partners, and UBC.



The Trades group created 3,081 purchase orders in 2016

6.1

How do Building Operations' core competencies impact its approach to administration; operations and maintenance; planning, design, and construction; and utilities and energy? How do they contribute to delivering value for customers, organizational success, and stewardship? How do they support necessary compliance and coordination?

6.1

It is critical that a facilities organization understand its "core competencies" and how they relate to the mission, environment, and strategic goals in areas of:

- Administration
- Operations and maintenance
- Planning, design, and construction
- Utilities and energy

Describe:

- How the core competencies described in 6.1 contribute to the delivery of customer value, organization success, and stewardship in your organization.
- The Facility Performance Indicators and related measures for each core competency.
- How the core competencies support compliance and coordination with the agencies having jurisdiction.

Building Operations plays a unique role on campus, operating and maintaining the core academic campus buildings and campus grounds. We have some core competencies we highlight as being highly important to our organization because we perform them especially well, and others that we *want* to perform well. What follows are examples of how our core competencies provide value, success, and compliance in four typical physical plant operations functions.

Administration:

- **Communications** — We developed a computer tool that works with Microsoft OneNote to populate content from our weekly updates to all our communications channels. This allows our teams to receive the following information: *what* they need to know and *when* they need to know it, using the communications channel that works best for them. We supply background information for frontline supervisors so they can deliver information to their crews in a more personalized way. We also share regular updates with our campus customers so they are informed about our work and how it may affect them. The root of many issues is poor communications; we've learned that a little time and investment in clear and regular communications goes a long way in creating real efficiencies and improving outcomes.
- **Leadership** — We have created a training development program for our supervisors and managers that emphasizes how soft skills can be used to manage difficult situations effectively and efficiently. We firmly believe that by supporting this type of learning, where self-understanding and improvement are first and foremost, we are creating an environment that fosters a true 'learning organization.' We are building an entire organization that is self-reflective; seeks to understand how well it is performing towards the university's greater goals; and, acts to improve our performance, sustainability, and cost-effectiveness. We measure the value of this training through regular one-on-one discussions and managers' annual performance reviews.

- **Customer service** — We are building on years of excellent customer responsiveness and adjusting to a more comprehensive approach of proactive and anticipatory customer service. It's quite simple: if our campus spaces work, our customers are well served. So, we focus on maintaining reliable spaces and being accountable to the impacts our work can have on others, and we take demonstrable steps to mitigate those impacts. Two ways we minimize our disruption are: to check for possible compounding effects of multiple construction projects with an impact map we created; and, publishing a road closure map so our staff and campus community can more easily navigate any campus construction that may be taking place. Our NPS survey, referenced throughout this publication, offers our customers a quick and easy way to give us feedback on all our projects and services.
- **Employee engagement** — We are investing significant effort in providing clarity around roles and direction, developing skills for constructive feedback, and introducing processes for input and work prioritization so there are fewer barriers for development of personal accountability among our staff teams. With a heightened level of engagement, we have better attendance, fewer time-loss days, better innovation, improved customer service, and a generally happy workplace overall. We measure staff engagement through the university-wide Workplace Experience Survey (WES) conducted every three years, as well as other less formal indicators such as participation in non-compulsory department events. Having a staff team that shows up and steps up creates significant added value for the university.

- **Safety culture** — We continue investing significant effort to move from simply creating safe work procedures to a culture of safety where every member of our staff knows about and understands the risks in their work and takes appropriate steps to minimize risk — not only in their work, but the work of their fellow team members. We do this through proactive and reactive approaches. Proactively, we encourage staff to prevent injury through: functional movement assessments (to understand their physical status and develop training plans for improvement), and by attending sessions on injury prevention (such as our 'healthy back' series in our wellness centre). We also have formal processes for exploring job risks before work is initiated.

UBC Centralized Accident/Incident Reporting System (UBC CAIRS) is an online system used to report incidents and accidents; information gathered in this system helps with decision making in determining the appropriate response.

We build on this learning by reporting and examining all incidents, including near-misses, in our UBC Centralized Accident/Incident Reporting System (UBC CAIRS), and we implement any recommended changes to work procedures through crew talks and safety committees. Because of this focus, we have seen a significant reduction in workplace injuries over the years; this translates into better value for UBC as there are fewer paid days away from work, and a happy, healthier workforce.

6.1

- Organizational structure** — For the past three years, we have been undergoing regular and significant changes in our organizational structure, mainly at the senior manager level, all to help align roles with the stated objectives in our mission and pillars and to create capacity for strategic thinking and people management. While these changes reflect our nimbleness to adapt, they have created some confusion within our workforce and discomfort for those unaccustomed to rapid change. We are committed to spending the time required to provide clear communication on what we have done and why around our organizational redesign.
- Systems for finance and HR** — Currently, the university has an outdated PeopleSoft enterprise system for HR and Finance. This creates a barrier for us as we use the maintenance management module that came with this system. We must invest in a new, dedicated Computerized Maintenance Management System (CMMS) to modernize our workflow management, improve our day-to-day planning, and schedule service calls. We are currently in the business requirements gathering phase, and using our EAOS program to identify where process can improve before we implement the software system.

Operations and Maintenance:

- Facility condition and recapitalization strategies** — The Government of British Columbia’s Ministry of Advanced Education (AVED) assesses the building condition and provides the Facility Condition Index (FCI) to Building Operations. Building Operations is responsible for tracking the FCI for all academic facilities on campus. Buildings are audited on a five-year cycle, and every system is tracked for current age against projected life. This becomes the foundation of the capital renewal prioritization program. Other inputs include customer experience with the space (does it meet faculty programming and performance needs?), and our trades’ experience with the space (how hard is it to keep the space functioning properly?). Our colleagues in Infrastructure Development then take these inputs and create the campus Five-Year Capital Plan.

The annual routine capital program is developed in partnership between Building Operations and Infrastructure Development. These projects are contracted to ensure best value, and so our staff can focus on operations and maintenance. Occasionally, a capital project will be completed by in-house resources when we can provide best value — even if that work is done on overtime hours so as to ensure regular staff hours are focused on our core day-to-day operations and maintenance business. The condition of our campus municipal assets, such as our roads and grounds, is tracked less formally, however a portion of the routine capital program is dedicated to funding renewal for these spaces with the remainder allocated to routine maintenance for performance of the asset and aesthetic service levels.

- Fleet** — Building Operations manages its own fleet of more than 225 vehicles very effectively. We were recently awarded, for the second time, the highest recognition for sustainable fleets — **E3’s** platinum rating. We are especially proud to be the first organization in Canada to achieve this standard. We received this recognition because of our comprehensive approach to fleet management, including vehicle selection, maintenance protocols, and driver training. Adjusting the composition of our fleet, through efficient fuel selection and right-sizing our vehicles, contributed greatly to our successes in reducing campus GHG emissions. We believe we can help deliver better value to the campus over the next decade by assuming administration of more than 125 faculty and department vehicles to align with best practices in sustainability.
- Inventory control** — Over the past five years, we have invested considerable energy in restructuring our stores and promoting purchasing through a contracted distributor to limit materials on hand and provide best value for commonly ordered items. The most common items are stocked in a vending machine for easy access for our trades. In our custodial storage closets, we use a Kanban system (described in greater detail later in this section) to ensure cleaning supplies are stocked at the right levels. As many speciality items are still purchased through trade shop heads, we created a new ‘purchaser’ position to support efficient ordering and tracking. Finance performs annual store area audits to measure effectiveness, as well as monthly managerial reviews of purchase order spending by crew member and vendor.

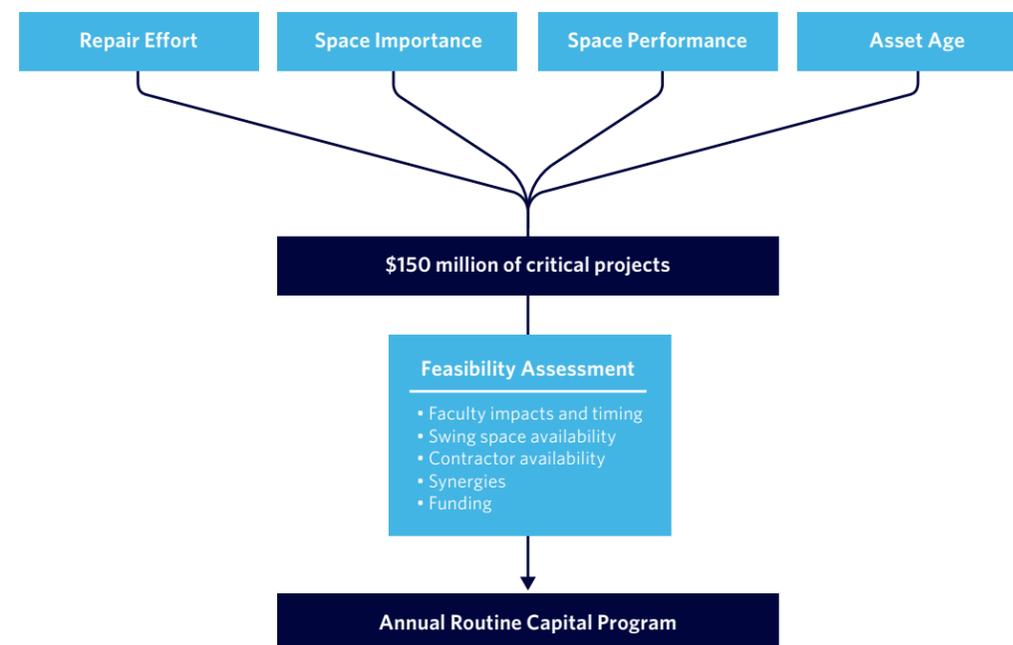
E3 stands for **Energy, Environment, and Excellence** — and that is the core focus of the program. The intent is to ‘green up’ Canada’s fleets by helping managers tackle the tough issues: how to reduce operating costs, lower harmful emissions, and increase efficiency. It is also the only program to recognize excellence in green performance.

E3 rates performance of fleets and recognizes publicly Bronze, Silver, Gold, or Platinum level standings based on points accumulated that relate to a fleet’s action plan, training and awareness, idling reduction, vehicle purchasing, fuel data management, operations and maintenance, trip and route planning, utilization management, fuel efficiency, and greenhouse gas performance.

In 2016, E3 Fleet celebrated its 10th anniversary as Canada’s first and only green fleet review and rating program.

For more information see: <http://www.e3fleet.com/about.html>

CAPITAL RENEWAL PROCESS



3,697
DIFFERENT ITEMS
ARE INVENTORIED
BY OUR STORES

30,109
ITEMS ARE DISPENSED
YEARLY BY OUR STORES

6.1



OUR CUSTODIAL TEAMS
CLEAN MORE THAN
1,400
WASHROOMS DAILY

- Preventive maintenance (PM) planning** — We have processes to schedule and track major maintenance events, such as high-voltage feeders, and for regulatory-required maintenance for equipment and systems such as elevators, backflow preventers, fire systems, boilers, chillers, and filters. Other campus equipment receives intermittent preventive maintenance. Due to our newly created system owner roles, more campus spaces will be assessed under our EAOS initiative and we will develop more preventive routines to deliver best life cycle cost for our assets. Currently, the tracking of PM work takes place manually through Microsoft Excel sheets or log books. Moving to a dedicated computerized maintenance management system (CMMS) in the coming years will create much more robust information on PM planning, tracking, and reliability outcomes.

- System/space reliability** — Our system owners assess the functionality of spaces on campus and plan and produce specific maintenance regimes to provide reliability for critical systems. This, in turn, provides a prioritized list of spaces and systems. For instance, humidity and temperature are critical in an animal care space; in any laboratory, airflow is key; in a classroom space, temperature and lighting are critical; and in research experiment settings, process water is essential. Also, as new buildings are brought online each year, maintenance regimes and service contracts are created as appropriate. Ultimately, we hope to shift from being reactive to proactive; in this way, we would anticipate seeing more workforce hours spent on proactive and preventive maintenance. Overall, this will enhance space reliability for the entire campus community. Currently, our Municipal and Custodial groups create space reliability in their respective areas by following routine cleaning or gardening schedules based on APPA service levels.



CUSTODIAL PLAYS A
LARGE ROLE IN ALL
CAMPUS GRADUATION
CEREMONIES, SETTING
UP THE FURNITURE,
ORGANIZING THE
STUDENTS SO THEY
WALK ONSTAGE IN
PROPER ORDER,
AND HOSTING THE
GUEST SPEAKER

- Regulatory compliance** — We are currently meeting our regulatory requirements, however we achieve this with significant effort. In the future, our approach will allow better coordination and synergies of regulatory and PM work, Building Management System (BMS) oversight to reduce the requirement for physical checks, and more approved risk-based approaches in addition to regulatory compliance. In the absence of a new CMMS system, we are creating dashboards to track compliance. We have built a good relationship with the primary regulator, the British Columbia Safety Authority (BCSA), and have made several recent modernizations (with BCSA approval) in the areas of permit records and major alternate safety approaches for two complex research buildings. Ultimately, when we receive approval for more efficient risk-based approaches, we save UBC resources and improve our relationship with the safety authority.

- Work planning and scheduling, and work effort tracking** — We take great care in ensuring our planned major work is scheduled well in advance, consulting with our customers and syncing some additional planned maintenance to minimize impacts that would otherwise exist were they treated as unique, one-off jobs. While this work gets performed on time and to a satisfactory degree, we believe more can be done in this area. This includes identifying a better way to collect our scheduling and resourcing data in one repository, through a CMMS. In taking these steps, our overall goal is to allow us to nimbly react to whatever happens in a day in a way that allows critical planned work to continue as scheduled. We would also prefer scheduling processes and tools that enable us to plan minor work with more notice, so we can better forecast resource needs and manage customer impacts. If maintenance work is not compromised by reactive repair, we can take a long-range approach to planning our work which should translate to a lower cost of ownership for the university.

- Emergency planning** — We are a key supporter of emergency response on campus and an active participant in the Emergency Operations Centre (EOC). In our day-to-day work, we try to mirror our response plans so crew responsibility, reporting relationships, and communications protocols are easy to escalate. In the years ahead, we aim to spend more time exercising some of our response duties that are not typically part of our daily work — such as setting up generators for the emergency social service centre, or distributing potable water from our aquifer-fed pumping and treatment trailer.

6.1

Planning, Design, and Construction

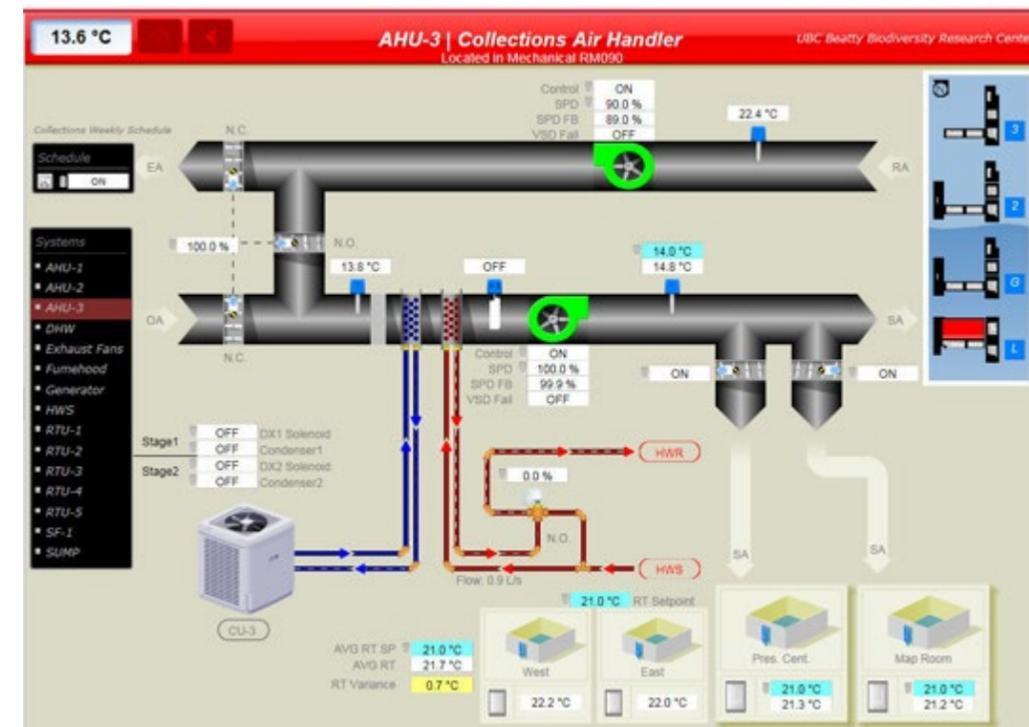
- Small projects** — Within Building Operations, we have a team of project coordinators who manage small customer-requested construction projects and multiple-trade repair projects. More complex jobs, those beyond our skill set or valued at more than \$50,000, are generally contracted out. In those cases, project management is assumed by the dedicated Project Management Office in Infrastructure Development — an approach that ensures UBC is getting best value, and we are right-sizing the management of jobs.
- Design and construction, major projects** — Building Operations' design review process and technical guidelines¹⁹ serve as quality control for Infrastructure Development's core competencies in facility design and construction. In all new construction, our architect and technical specialists ensure space designers are using materials that conform to our maintenance and operations requirements — and the larger campus master plan. We also review designs to ensure best practice for sustainability and maintainability for lowest cost of ownership over the long term.
- New building handover and commissioning** — In the past three years, we have created new responsibilities and roles for better controls around new building handover. Now, technical specialists review projects nearing completion to prepare our teams for new equipment demonstrations, new systems training, setup of maintenance contracts, and tracking any deficiencies the construction manager may have missed. This provides incredible value to UBC for two reasons: we are an extra set of eyes for quality control, and we are better educated about the building so we can improve our performance when we ultimately perform our operations and maintenance duties. Worth noting is a challenge with the current local commissioning services; while we choose equipment and design buildings to achieve certain performance targets and LEED points, these are not always realized in a newly-opened building. Often, Building Operations and Energy and Water Services staff will spend years fine-tuning a building, post-construction, to deliver the best possible operating footprint.
- Customer impact mitigation** — Through our dedicated facilities managers, we review planned construction projects from a customer-impact perspective. We look at noise, vibration, access, shutdowns of fire systems to prevent false alarms, and more — anything that might impact teaching and research. We provide this feedback to the project manager to ensure the right mitigation is in place.

¹⁹ <http://www.technicalguidelines.ubc.ca>

Energy and Utilities

- BMS operations** — We are beginning to use Building Management System (BMS) data and trends to improve our efficiencies and priorities, not simply as threshold alarms but true, early failure indicators. By monitoring energy used in heating, cooling, and lighting on campus, we contribute to Energy and Water Services' core area of sustainable energy management conservation.
- Innovation** — As new technologies become available that can save energy or reduce maintenance, we evaluate the cost benefit of replacement before end of life so we can start realizing operational savings sooner. We collaborate with Energy and Water Services to save maintenance and operations dollars, and support load-shedding through efforts around variable frequency drives, LED lighting, night time set backs, and occupancy load-sensing.

SCREEN CAPTURE OF OUR BUILDING MANAGEMENT SYSTEM (BMS)



By striving to be better in our own key core competencies, we are also striving to be better partners with other campus stakeholders in making UBC a better place through facilities management actions that are sustainable and cost-effective.

We acknowledge that managing the university's facilities is not only our responsibility, though we are solely responsible for operating and maintaining many campus spaces. That said, we share total facilities management responsibilities with Campus and Community Planning, Infrastructure Development, and Energy and Water Services. As stakeholders, each of our respective departments draws upon its own core competencies and areas of expertise to ensure safe, sustainably efficient, and cost-effective facilities management.

6.2

What processes are used to establish measurements for process inputs and outputs required to achieve efficiency and effectiveness?

6.2

Describe the processes used to establish measurements for process inputs and outputs required to achieve efficiency and effectiveness.

Our primary focus is ensuring that our indoor and outdoor campus spaces are performing optimally. Generally, as an organization, we work on being effective, as the outcomes of our work are what the campus sees and experiences; we then refine our processes to create efficiencies and monitor progress.

With current PeopleSoft Maintenance Manager and HR/Finance modules, we can measure our performance in some areas. Our Service Centre is responsible for compiling data and developing the following reports which help measure process inputs and outputs:

- 60-day/No-progress service requests** — This report summarizes the number of service requests by employee and zone that have not progressed in status for 60 days or more. The report is sent to our people and process managers as well as our facilities managers for review. Trends and barriers are analyzed and discussed, and action is determined.
- Purchase order report** — This report provides analysis of material purchases by employee and vendor.
- Too hot/cold report** — This report summarizes the number of calls made by customers reporting room temperature issues. This information helps us find solutions for locations with systemic issues. This report assisted us over the past two winters when the new hot water District Energy System (DES) was providing space heating and domestic hot water. By tracking too hot/cold calls, we helped commission the system.
- Attendance management calendars** — These reports are provided for staff with higher-than-average absences from the workplace. The colour-coded calendars allow our people and process managers to look for trends and patterns that can assist them in having conversations with employees about the root cause/s for absences.
- Budget tracking** — Monthly statements are produced for review of actual expenditures vs. plan, and to track capital expenditures against project or program budgets.

WHAT OUR CUSTOMERS ARE SAYING

“We had a number of electrical projects Deb and the electricians were able to schedule concurrently (changing outlets, wiring freezers, working in tight spaces). We’re happy with the organization of the process, and the electricians’ willingness to add new aspects to the projects.” — JONATHAN V.

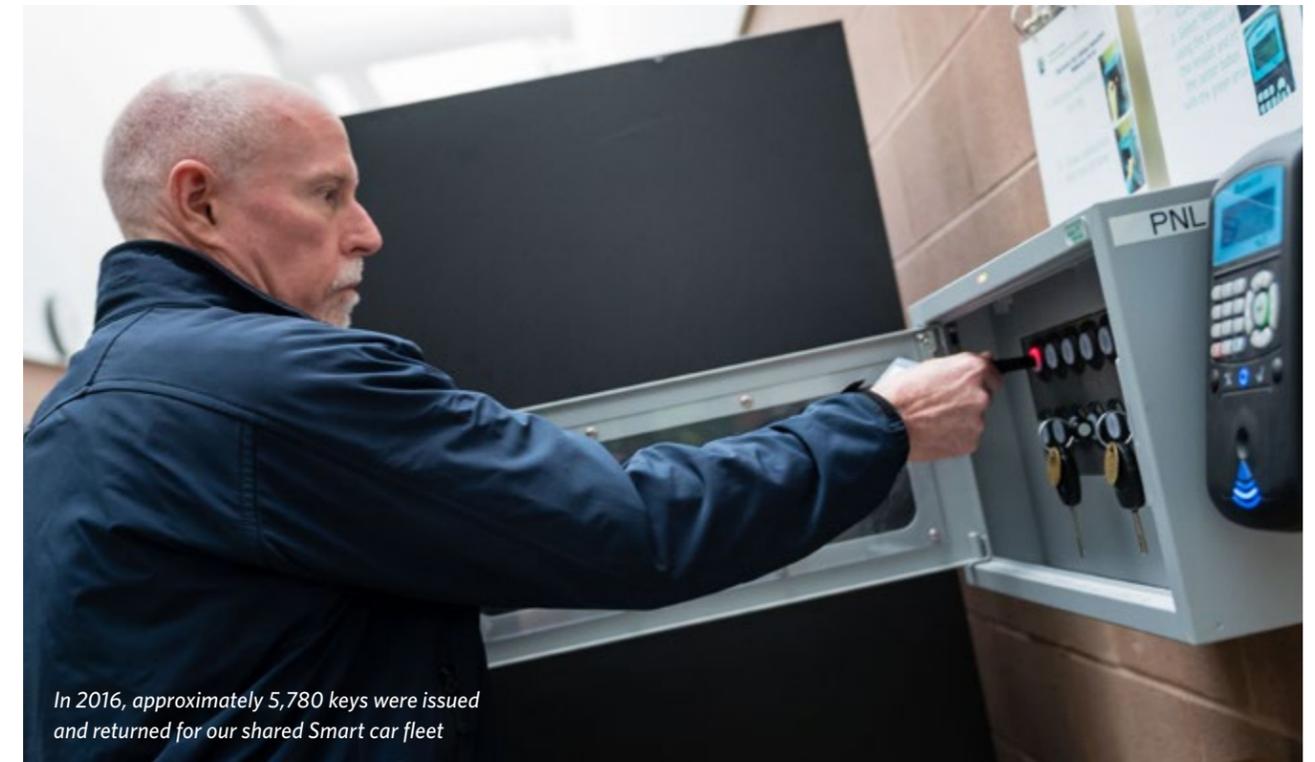
We also do manual tracking, for example:

- Elevator call-backs and entrapments** — This spreadsheet tracks incidents occurring in more than 264 elevators under our care. We have developed business rules around escalation for contractor troubleshooting based on reliability data; this spreadsheet allows us to monitor for those thresholds.
- Monthly emergency generator inspections** — This spreadsheet tracks the schedule for preventive maintenance checks; it includes a dashboard highlighting progress to ensure we are in compliance.
- Filters** — This database tracks filter inspections/replacements. We also monitor BMS data to provide insights into when filters need changing to maintain proper air exchange.
- Annual primary backflow preventer inspections** — This spreadsheet/dashboard tracks inspections and progress, as well as cost, effort, and failure rates.
- Safe rooftop access** — In development, this database is being designed to track ventilation leaks to provide a safe working environment for our crews.
- Vehicle data** — As part of our E3 platinum fleet designation, we use telematics to track our vehicle performance and driver behaviours against best practices. We can monitor incidents of heavy acceleration and braking, harsh cornering, speeding, and safety issues such as failure to wear seatbelts while the vehicle is moving. Observable trends subsequently become topics for crew education and training.

IN 2016, OUR SHARED SMART CAR FLEET COLLECTIVELY DROVE



38,097.63
KILOMETRES



In 2016, approximately 5,780 keys were issued and returned for our shared Smart car fleet

6.2

IN AN AVERAGE
WORKDAY



100
ORGANIC CARTS ARE
PROCESSED AT OUR
IN-VESSEL COMPOSTER

Many sustainability initiatives exist on our UBC campus. As the operations group, we often execute those programs and track related progress towards campus goals. Examples include:

- Sort It Out** — The university’s zero-waste program effectively demonstrates a process implemented with measurements and tracking progress towards a defined goal. This program is jointly run by our Custodial and Municipal teams, under direction of the sustainability group within the Campus and Community Planning department. The University of British Columbia is aspiring to be a zero-waste campus²⁰ where all unwanted products and materials will be treated as resources that can be used again. Most garbage can be recycled, yet today we recycle only about one-half of what we generate as a campus. To help achieve the university’s zero-waste goal, UBC is replacing garbage cans with multi-bin recycling stations that support collection of four streams of waste: garbage, paper products, plastics, and organics. Our goal is to divert 80 per cent of our operational waste from the landfill by 2020. Members of our campus community are encouraged to use recycling stations to sort food scraps and recyclables into the proper bins (not the garbage). Our Custodial group helps ensure receptacles are purchased and placed in optimal locations. They also assist with some re-sorting when they empty bins, helping minimize cross-stream contamination. Members of our Municipal team also assist, picking up and measuring waste and recyclable materials and tracking progress towards key goals. UBC was the first in the region to initiate organic composting on a large scale and uses an in-vessel composter which can process five tonnes of organics per day, creating compost for reuse on campus within two weeks. We are exploring new readily-available commercial services to enable further expansion of our organics collection.

BUILDING OPERATIONS’ IN-VESSEL COMPOSTING FACILITY

UBC Building Operations operates an in-vessel composting facility. This composting facility, the first of its kind at a Canadian university, enables UBC to expand its waste reduction and recycling efforts by allowing food and landscape wastes generated on campus to be composted on-site in a contained and sustainable manner with finished compost material used on UBC gardens and grounds.

²⁰ <https://sustain.ubc.ca/campus-initiatives/recycling-waste/sort-it-out>

The biggest initiative underway right now in Building Operations is our EAOS program, intended to improve our ability to deliver effective and efficient services. We try to take a methodical approach to validating success and efficiency, whether it’s monitoring our existing business processes or discovering areas for improvement.

Our EAOS program is a comprehensive improvement program. It covers nine areas or interdependent process improvement streams, including:

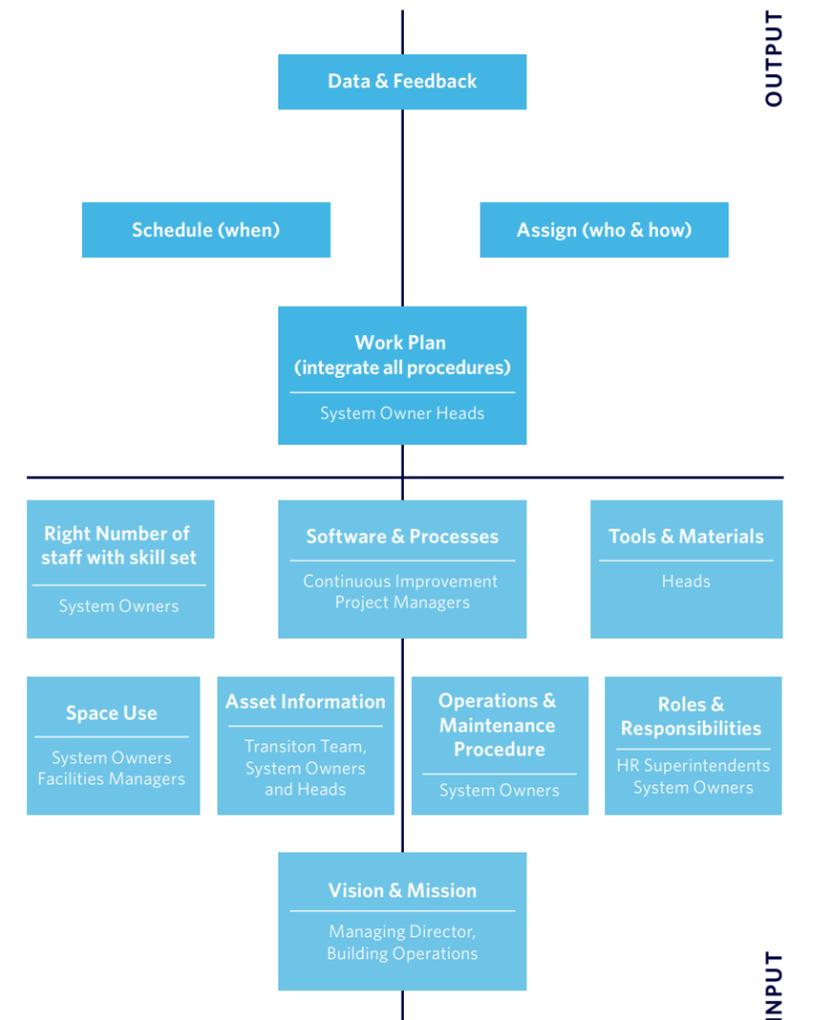
- Space use information** — What does the campus need this space to do? How does it rank in priority?
- Asset information** — What equipment or systems are fundamental to creating the right space performance?
- Operations and maintenance procedures** — What specific tasks and frequencies are required to keep those key assets operating at their best?
- Roles and responsibilities** — What is needed to provide clarity of responsibility and accountability?
- Staffing** — What are the requirements around staff FTE (training and tools) to get the job done efficiently and effectively?
- Software and processes** — What supporting software and process are needed to effectively carry out Operations and Maintenance (O&M) procedures?
- Tools and material** — What tools and materials are required to carry out O&M procedures?
- Work planning** — What is the O&M plan?

<http://buildingoperations.ubc.ca/staff/projects-programs/eaos>

- Scheduling** — How can all O&M procedures be planned for effective use of staff resources and work prioritization?
- Assigning** — Who will be assigned the tasks to complete O&M procedures?
- Data and Feedback** — How are we doing? How are we measuring success, through which key performance indicators?

EAOS APPROACH

THE ENHANCED ASSETS, OPERATIONS, AND SERVICES (EAOS) PROGRAM

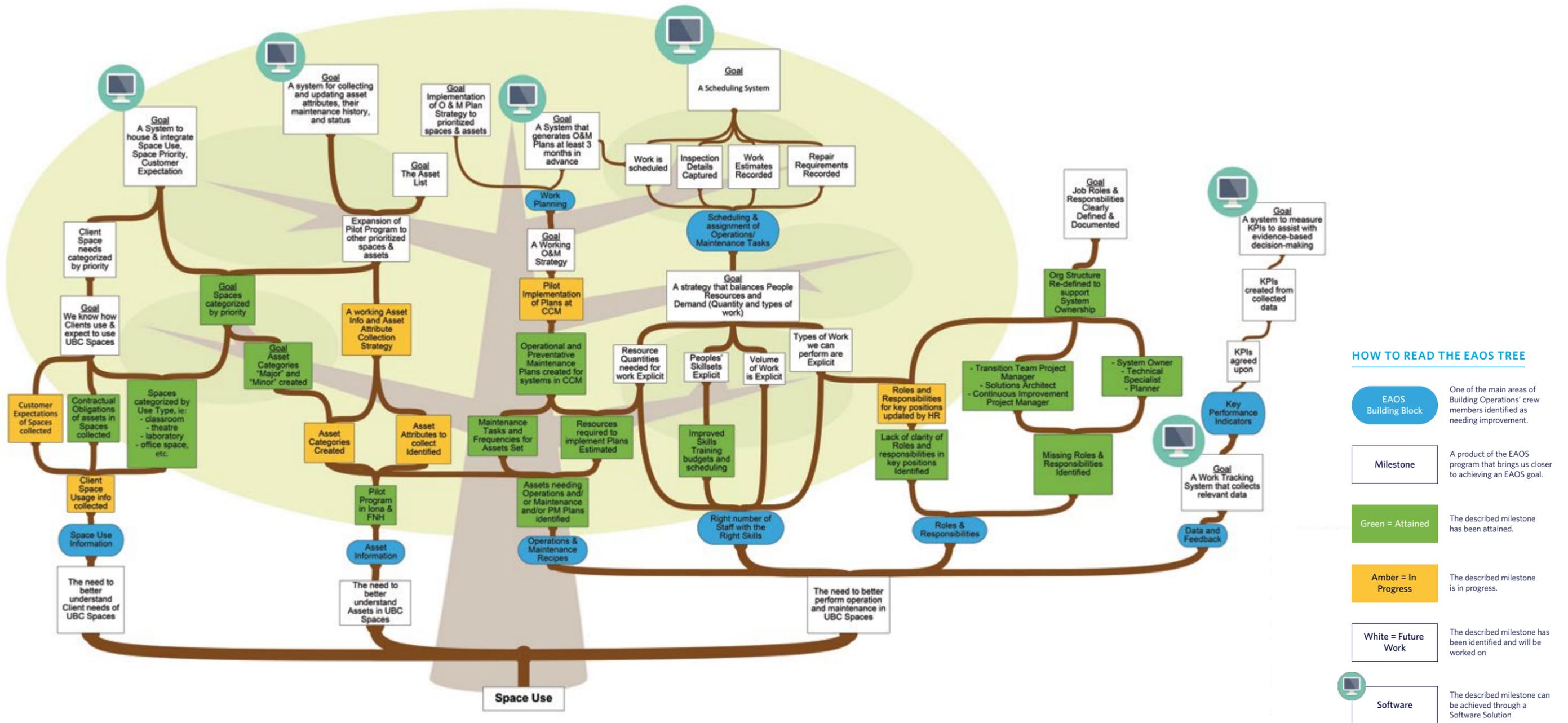


6.2

Each of the nine areas for improvement are mapped to a specific set of inputs and outputs, as seen in one of the key EAOS communication tools: the EAOS Tree.²¹

By updating the tree poster and displaying it in a key location in the Building Operations building, we can clearly communicate where we are at in this program, give staff ideas for how they can get involved, and be accountable and transparent about the program's effectiveness.

EAOS Tree



²¹ <http://buildingoperations.ubc.ca/staff/projects-programs/eaos>

6.3

How are stakeholders engaged and involved in developing and implementing core processes?

6.3

Describe how stakeholders are involved in the development and implementation of core processes.

Building Operations is a very collaborative and service-oriented department. When it comes to developing or refining our core processes, we often include key stakeholder groups in the process. Some examples of our core processes include:

- Make vs. buy decisions** — The decision on whether to use in-house staff or contractors rests with a series of business rules embedded in our collective agreement. However, the process to discuss alternate strategies goes to a committee known as the 'Contracting Out' committee. It engages union executives in discussions around different service delivery models and best value for the university.
- Technical Guidelines** are hosted by Building Operations and provide all architect and design engineers working on new major capital programs with direction on university-required specifications. The process to update these guidelines includes numerous partners, including infrastructure development, risk management services, energy and water services, access and diversity, campus and community planning, campus security, finance, information technology, parking and access services, athletics, student housing and hospitality services, UBC Okanagan, UBC properties trust and architectural and engineering consultants to UBC. These guidelines play a significant role in ensuring buildings are constructed, renovated, and maintained to robust standards.
- In the design review process for major capital projects, a representative from Building Operations participates in the concept and design of new buildings. This representative brings the lens of effective operations and optimized total cost of ownership for significant capital investments to the project — important value-add for future maintenance of the building.

WHAT OUR CUSTOMERS ARE SAYING

"SR #0000104797 washroom ventilation/air flows: Explanation notes from BMS and the electrical tradesman added to the service request were appreciated. Thank you for the info and the repair." — LUCILLE H.

We also include our staff teams when conceptualizing and implementing core processes for our work, such as:

- Our Custodial team's use of the '**Kanban system**' to effectively organize storage rooms and assess just-in-time reorder points for custodial supplies. This system has been implemented in 37 custodial storage rooms across campus. During the system's development and implementation, staff were consulted to determine the right reorder points and in developing a strategy to organize storage rooms for efficient use by custodians. There are another 25 storage rooms slated for organization by Kanban.

THE CUSTODIAL KANBAN INITIATIVE

BEFORE



\$3,010
INITIAL SUPPLY
INVENTORY COST

AFTER



\$1,075
INVENTORY COST
AFTER KANBAN

After Kanban, inventory cost was reduced by 64 per cent while supplies were reduced by almost one-third, resulting in more available equipment space.

- Equipment replacement processes** — New proposed equipment is reviewed by Risk Management Services (RMS) for health and safety implications, and by staff for functionality to ensure proper equipment choices are made.
- Green Housekeeping Program** — This program includes the criteria of portion-controlled products, based on APPA's philosophy of sustainable cleaning, which includes reducing chemical use by introducing mixing dispensers which assist with portion control and consistent dilution ratios thereby removing error and guesswork. This program creates cost savings, frees up valuable shelf space, improves our ability to predict inventory needs, and improves safety by limiting the chances of concentrated chemicals coming into contact with skin or eyes. While analyzing the need to implement change and have controlled dilutions dispensed, it was also important the chemicals we chose not only worked but demonstrated results. Staff were involved in product trials and a pilot was implemented whereby appropriate employee training was conducted and a dispensing process was tested. After the pilot, lessons learned were incorporated. Over a two-year period, the Custodial unit rolled out self-dispensing units throughout the campus while we eliminated and depleted the existing inventory.

6.3

Again, worth underscoring here, is that our largest process improvement initiative is EAOS — described in the question above.

In the early stages of our EAOS program, we conducted a current state analysis of key areas of our business. We hosted dozens of workshops with frontline staff and asked them which areas of our department worked well, and which needed improvement. We analyzed the data and provided our staff with a summary of our findings for staff to validate; in so doing, we laid the groundwork for open and honest communication.

We then created a future-state document, workshopping that document with our frontline staff and supervisors to validate our direction. This helped gain buy-in and ensure we were focusing on improvements that would generate sustained benefits for our department and campus.

As the program progresses, we have committed to informing staff of actions that have been taken through shop talks, digital screen signage, and town hall meetings. We also actively ask staff if they are interested in volunteering their insights and knowledge towards the program's goals. Our working committee includes representatives from the trades, including our millwright shop head and one of our electrical technical specialists. Staff involvement goes further than asking for feedback: we also ask staff if they would like to lead initiatives. Under an EAOS pilot project, project coordinators agreed to facilitate a process to collect asset information in two buildings. They coordinated a group of our crew members through the building, then created a comprehensive list of systems and equipment. The pilot results are being used to investigate ways to improve consistency in how we collect asset information.

UBC Technical Guidelines:

http://www.technicalguidelines.ubc.ca/technical/gov_overview.html

Given the scope of change our EAOS program spans, we know engaging and involving our staff is key to success. We leverage our Employee Engagement pillar at every step of the EAOS process to ensure this happens.

However, we also need support beyond our staff. We acknowledge that senior leadership both within and outside Building Operations must support us if we are to achieve all our EAOS goals. To that end, senior leaders within Building Operations are directly involved in the EAOS program; the superintendent of our customer services branch is the project manager, managing the program as it develops. Meanwhile, our managing director fully supports the program and relays its progress to her peers at the director level as well as other university stakeholders whenever the opportunity is available.

What protocols have been established to evaluate processes and determine opportunities for improving Building Operations' efficiency, effectiveness, and value to UBC and its success?

We believe in our talented workforce and the wealth of experience every team member brings to their work. As already discussed, we seek opportunities for both staff and our campus customers to provide feedback and ideas for improvement. Many ideas brought forward are simple and can be executed by the individual who owns the process or the manager or crew lead where the idea will have most relevance.

More complex ideas follow formal protocol for assessing ideas: they enter 'the greenhouse.' If prioritized, they progress to 'the pipeline' where they are assigned resources and become a project.

BUILDING OPERATIONS #101

The greenhouse — This is a Microsoft Excel spreadsheet we use to collect all ideas that cannot readily be executed by an individual or specific area. The spreadsheet is reviewed quarterly, and initiatives assessed relative to our four pillars and departmental priorities. Ideas that get prioritized progress to the pipeline.

The pipeline — This is a tracking tool that includes project objectives, pillar alignment, intended outcomes, and key performance indicators/KPIs (if possible at this early stage), as well as anticipated resources. From here, a project manager is assigned and the project launches.

On the back end of initiatives, or following an incident, we have a lessons learned post-mortem that consists of:

- **Lessons learned sessions** — Significant events are analyzed to determine lessons learned and actions for future improvement. For example, a snow debrief from the 2016-17 winter season (detailed in other sections of this publication) created an opportunity to analyze and develop lessons learned from a strategic and operational perspective to drive improvement and establish renewed understanding of campus' service level expectations. With respect to snow and ice, it is important to define what constitutes a hazard and how to provide safe passage for all.
- **Unexpected failures with significant consequences and all safety incidents** are thoroughly investigated for root cause/s and recommendations for process improvements to combat systemic contributors to the incident. Learnings from these investigations are shared with our campus community to further improve organizational learning.

The benefit of having more formalized protocols for ideas intake and incident reviews demonstrates our department's commitment to the values of transparency, engagement, continuous improvement, leadership, and customer service. This can increase buy-in from our staff and improve accountability and transparency with our customers. It steadfastly contributes to creating a culture of continuous improvement that provides the campus with service that is of better value, as well as improved outcomes.

6.4

6.4

Describe the protocol established to evaluate processes established to determine opportunities for improving efficiency, effectiveness, and value to the success of the organization.



In closing

Working in concert with our colleagues in Infrastructure Development and Energy and Water Services, Building Operations ensures the strong, positive, and enduring quality of our physical campus.

Within Building Operations, there is more we can do to improve our processes and work management systems. We are continuously seeking ways to further define our processes and supporting software systems to enable efficiencies, effectiveness, and value. Going forward, our priorities in this area include:

- Developing a more comprehensive preventive maintenance management program through EAOS that will enable more efficient online scheduling of tasks;
- Developing an estimating system under EAOS that will provide accurate estimates of labour and material requirements; and,
- Continuing to work closely with our colleagues and partners in other departments to achieve our shared strategic goals of sustainable lowest total cost of ownership while delivering exceptional spaces that support the success of our campus community.

We will continue measuring our effectiveness against our core competencies, and engaging campus stakeholders in refining efficiencies in our programs, processes, and overall service delivery.

7.0 Performance Results



In each section of this publication, we have shared the story of how Building Operations endeavours to enable greatness through UBC's buildings and grounds. When all these moving pieces are working together, our customers feel cared for, the look and feel of our campus matches our brand, spaces perform reliably, and our staff are empowered and accountable.

To get these performance results, we must enable our strategic plan and align our people, processes, and tools to allow our department to be a key player in making UBC work.

When we are at our best, everything we do creates shared accountability for the spaces we support and drives all campus users towards the desired outcome of creating extraordinary learning and research outcomes.

The UBC Rose Garden hosts many visitors, often serving as the locale for filming and other special events, so every rose gets just the right amount of tender loving care

Where did we come from?

We have had successes building relationships with our campus customers through our zone model, which helps deliver our services in a more personalized fashion. However, we were neglecting the relationships with our own staff and that was leading to inefficiencies and a lack of innovation and accountability. This was creating noise that prevented us from achieving our intended performance results which was, in turn, impacting our customers and campus.

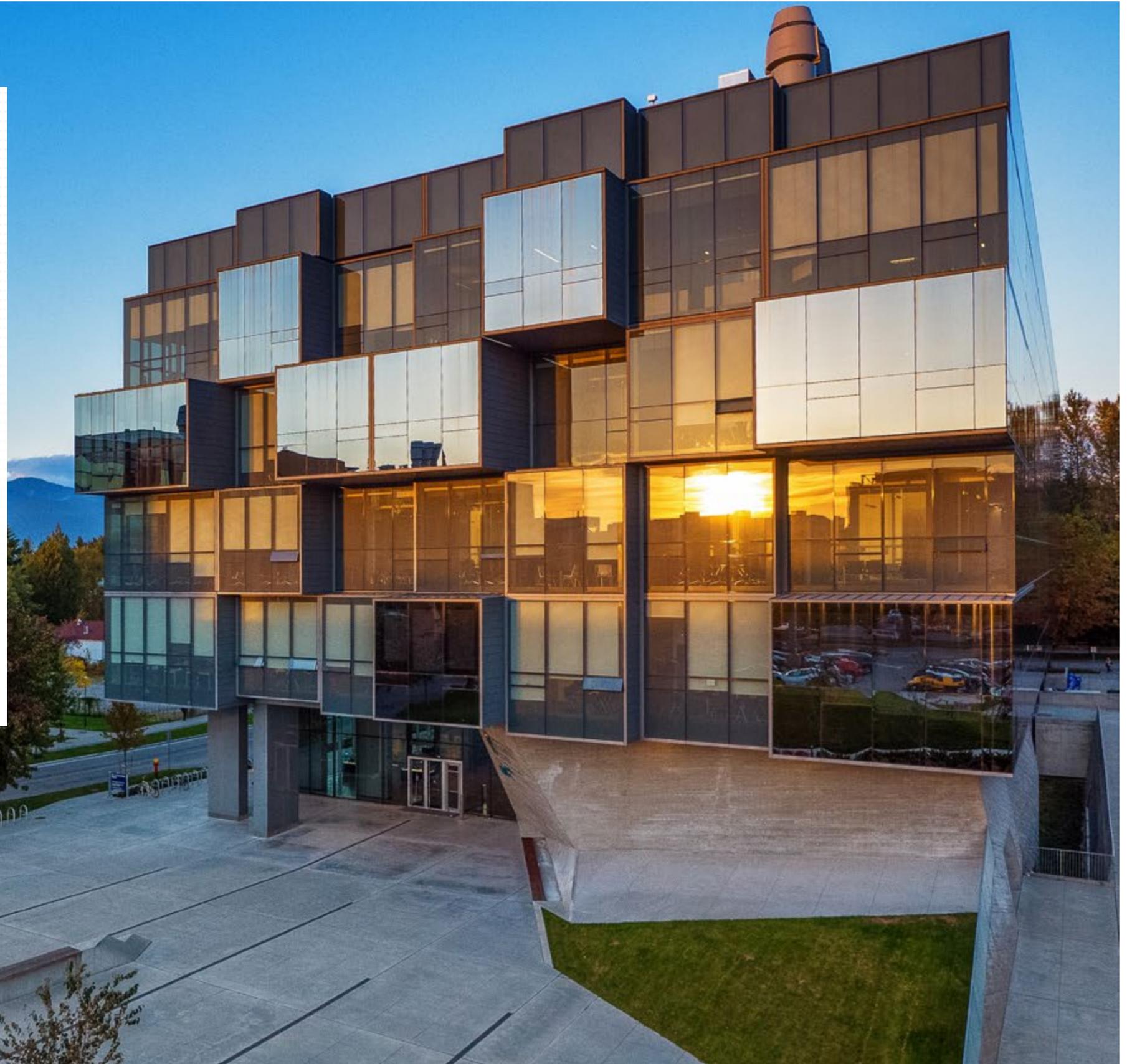
What are we trying to achieve?

We are trying to move from a customer-centric model of work planning and delivery to an asset-centric model based on space reliability and meeting the true needs of our customers on campus. Our performance results should speak to anyone who visits campus.

Why are we doing it?

Because we understand how our work and the outcome of our efforts support our campus community in delivering its best work, and contributing overall to UBC's ranking as a top 20 public research institution in the world.

26 academic buildings were constructed in the last 10 years (2008-2017), for a total of 210,287 gross square metres or 2,263,515 gross square feet



7.1

What processes are in place to ensure the appearance of campus buildings and grounds aligns with the surrounding community and the university's desired image?

7.1

Describe processes in place to ensure that the appearance of the buildings and grounds is in keeping with the surrounding community as well as the desired image of the institution.

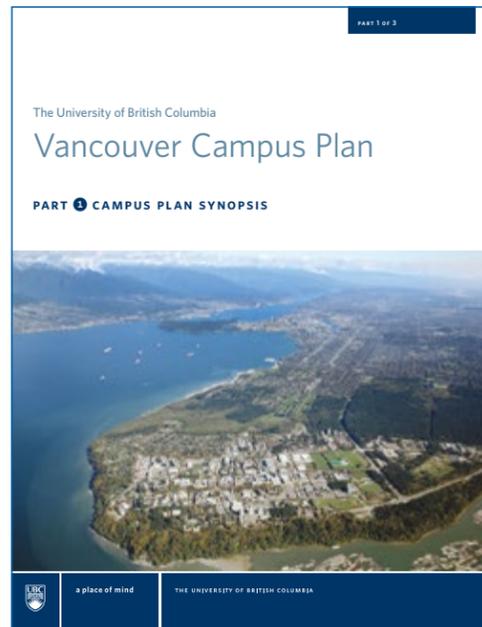


8,785
ACADEMIC OFFICE
ROOMS AND RELATED
SPACES ARE CLEANED
BY CUSTODIAL

UBC's Vancouver campus buildings and grounds are located on the western tip of Point Grey Peninsula, the city of Vancouver's westernmost point. Geographically, we are defined by oceans, mountains, and forests. Our cultural surroundings also define us: we acknowledge the Vancouver campus is situated on the traditional, ancestral, and unceded territory of the Musqueam people. Private residents call this campus their home, and we host visitors from across the world. As a result, you will find elementary schools, high schools, community centres, shopping areas, recreational facilities, and museums on our campus — elements found in any other neighbourhood or community. We believe it is important to show our respect to the communities and nature that surround us by maintaining campus grounds and buildings to a high level of cleanliness and functionality, while ensuring we do so sustainably, and cost-effectively.

The desired image for the UBC Vancouver campus is set by the *Vancouver Campus Plan Design Guidelines*.²² These guidelines cover campus buildings, nearby community buildings, residential neighbourhoods, schools, walkways, landscaping, and other aspects of the Vancouver campus' exterior aesthetics. New construction must adhere to these guidelines.

UBC VANCOUVER CAMPUS PLAN STRATEGIES



1. Create a sustainable campus
2. Provide a campus for globally significant teaching, learning and research
3. Nurture a more vibrant and interesting campus for UBC's community of scholars
4. Rediscover UBC's sense of place and natural west coast beauty
5. Ensure a well-connected and accessible campus

Please visit the website for the complete UBC Vancouver Campus Plan:
<https://planning.ubc.ca/vancouver/planning/policies-plans/land-use-governance-documents/vancouver-campus-plan>

²² <https://planning.ubc.ca/vancouver/planning/policies-plans/land-use-governance-documents/vancouver-campus-plan>

To ensure new construction projects consider operations and maintenance in the design elements of their projects, and to ensure we in Building Operations are fully aware of the intent of those design elements so we can understand how to maintain them following construction and subsequent handover, representatives from Building Operations take part in several groups that focus squarely on new construction, including:

- UBC's New Building Quality Assurance Committee;
- The Development Review Committee, which reviews all applications for campus and neighbourhood development; and,
- The Landscape and Infrastructure Committee, a sub-committee of the Development Review Committee, focused on landscaping and infrastructure development applications.

These committees also include representatives from other key stakeholders involved in new construction, including Planning and Design, Sustainability and Engineering, and the Energy and Water Services departments. Generally, the purpose of these meetings is to ensure the UBC Campus Plan is followed when new buildings, landscaping, and infrastructure are being designed, and that all departments are working collaboratively to deliver long-term success.

We focus our maintenance of the *public realm* by providing clear way-finding signage, convenient recycling, waste and organics collection, accessible paths free of trips, in addition to maintaining planning beds and lawn areas.

Our landscape crews are assigned to five zones on campus. Much like our building zone system, this approach allows our staff to become knowledgeable about their smaller sub-areas of campus, while getting to know and build valuable relationships with staff and faculty.

²³ <https://planning.ubc.ca/vancouver/planning/policies-plans/public-realm-plan>

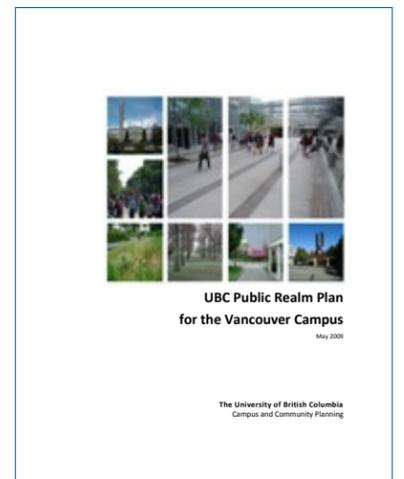
We make sure our grounds are maintained in alignment with the university's commitment to be recognized as an ecologically responsible and sustainable post-secondary institution. In 2015, UBC received its second consecutive gold rating under the Sustainability Tracking, Assessment & Rating System (STARS), a higher-education sustainability rating system administered by the Association of the Advancement of Sustainability in Higher Education (AASHE). In our submission, we highlighted how Building Operations' certified arborists maintain more than 11,000 trees that make up UBC's urban forest, and how our integrated pest management plan mandates using a combination of cultural/biological techniques; we selectively use chemical methods, only when necessary.

STARS submission:
<https://stars.aashe.org/institutions/university-of-british-columbia-bc/report/2015-08-04/OP/grounds/OP-11>

Building Operations' New Building Transition Team:
<http://buildingoperations.ubc.ca/staff/projects-programs/new-building-transition-team>

THE PUBLIC REALM

The *public realm* is the collection of outdoor spaces between buildings shared by the university community. It is comprised of everything from courtyards, pathways and student displays, to street furniture and public art. It is shaped by street layout, building massing, and building footprints. UBC's public realm plays a significant role in strengthening the university's identity and supporting campus activities. The *UBC Public Realm Plan for the Vancouver Campus* is a call to action to repair and revitalize UBC's public realm.²³



A successful public realm is memorable, legible, and functional. It is the connective tissue relating individual buildings to one another, and facilitating the movements of people, information and ideas. At its best, the campus public realm expresses a collective image which is greater than the sum of the parts. The quality of the public realm helps shape social interactions, how we move about campus, and how inviting and safe the campus feels. These spaces provide inspiration to students, faculty, staff, alumni, and visitors, enriching their campus experience.

7.2

How does the organization determine whether the condition and cleanliness of campus facilities align with the image and standards adopted by the institution as well as activities associated with its mission and programs?

7.2

Describe how the organization determines that the condition and cleanliness of facilities are in keeping with the image and standards adopted by the institution as well as activities associated with its mission and programs.



750
CLASSROOM
FACILITIES ARE
CLEANED BY
CUSTODIAL

Our Custodial group uses APPA cleaning standards as a guide for cleanliness, servicing the campus overall at a blended APPA Level 3, meaning floors are vacuumed or swept, garbage is removed and washrooms are cleaned and stocked daily. New or newly-renovated buildings are cleaned at a Level 2 standard meaning more attention to details such as tile grout, fixtures, and baseboards.

To determine a space's cleaning level, our Custodial department also requests input from the space's primary users about their cleanliness requirements to ensure the condition and cleanliness of educational spaces such as classrooms and laboratories does not detract from the space's core function. For example, during university exam periods, libraries extend their operating hours to 24 hours a day — a significant usage change. To accommodate these extended hours, our Custodial team adjusts the cleaning frequency of spaces that see increased student use so these spaces continually provide our students with clean study spaces.

Custodial's leadership also empowers its staff to clean to their own high-performance expectations; members of the team are encouraged to ask themselves if they walked into a room cleaned by someone else to the same level, if they would be satisfied.

We monitor the quality of Custodial's cleaning performance through site audits and inspections performed by Custodial's leadership team. Customer feedback on cleanliness is also gathered through our one-question NPS feedback survey, referenced throughout this publication in greater detail.

Our Custodial department knows that ensuring the cleanliness of our buildings is ongoing in keeping with UBC's core academic mission. Recognizing this, current initiatives aim to see us improve our quality control procedures to include more customer engagement; additional efforts to identify and collect key performance indicators; and new benchmarking reports that capture the true cost of maintaining floors and carpet cleaning.

Our grounds maintenance crew members also use APPA standards as a guide for visual quality, though very loosely, and rely on feedback from the campus community around areas that appear unkempt so we can adjust our efforts to meet expectations.

In our estimation, we are under-resourced to fully meet the ultimate standard we would like to achieve in the appearance of our campus grounds. However, we manage this gap by choosing native species that perform well in our climate with less effort, and prioritizing resources to campus areas of more significance. These areas include UBC's Rose Garden, the key pedestrian spines of our Main Mall and University Boulevard (UBLVD), and green spaces associated with the Student Housing and Hospitality Services functions.

APPA STANDARDS

APPA CUSTODIAL STANDARDS — LEVEL OF CLEANING

Level 1 Orderly Spotlessness

Level 2 Ordinary Tidiness

Level 3 Casual Inattention

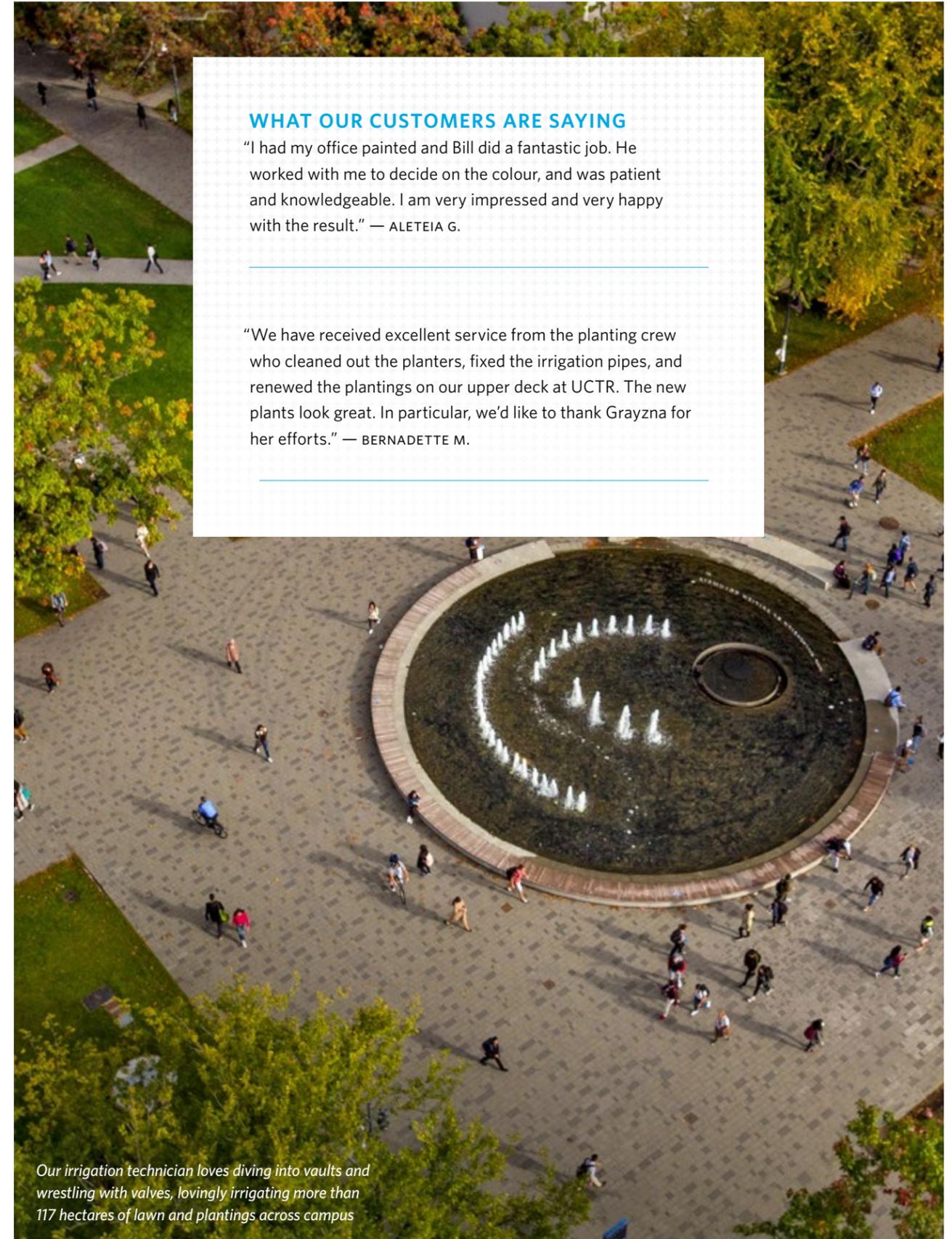
Level 4 Moderate Dinginess

Level 5 Unkempt Neglect

WHAT OUR CUSTOMERS ARE SAYING

"I had my office painted and Bill did a fantastic job. He worked with me to decide on the colour, and was patient and knowledgeable. I am very impressed and very happy with the result." — ALETEIA G.

"We have received excellent service from the planting crew who cleaned out the planters, fixed the irrigation pipes, and renewed the plantings on our upper deck at UCTR. The new plants look great. In particular, we'd like to thank Grayzna for her efforts." — BERNADETTE M.



Our irrigation technician loves diving into vaults and wrestling with valves, lovingly irrigating more than 117 hectares of lawn and plantings across campus

7.3

How does Building Operations assess whether buildings, infrastructure, and utility systems are maintained and operated at a level of reliability and efficiency that contribute to successfully implementing the university's mission and programs?

7.3

Describe how the department assesses that building systems, infrastructure systems, and utility systems are maintained and operated at a level of reliability and efficiency that contributes to the successful implementation of the institution's mission and programs.

As one of Canada's leading research universities, UBC's Vancouver campus operates 24 hours a day to support the university's academic mission. Building Operations' mission is to provide sustainable, cost-effective, and reliable spaces so the members of our campus community can engage in their best work. We monitor and inspect systems and equipment that are critical to academic spaces, such as the systems supporting spaces that run laboratory experiments continuously over months and years. Our 24-hour mechanical operating engineer (OE) team conducts inspections for this equipment and is on-site to react to issues should they arise. The Energy and Water Services department also has a 24-7 team of operators at two main energy plants who monitor the campus.

Aside from our own assessments and monitoring, our building assets are audited on a five-year rotation. Currently these audits are performed by VFA, a facilities assessment company commissioned by the Government of British Columbia's Ministry of Advanced Education (AVED); VFA actively assesses virtually every system associated with a building. This allows us to build a comprehensive list of building conditions by system which, in turn, informs our routine capital program.



Currently our campus FCI is 0.30, well away from our targeted goal of 0.18. This means we are bound to have some unplanned system and equipment failures on campus. It also means we are spending too much effort on less productive repair — repair that is reactive. To combat the risk associated with our current state, we do our best to ensure we understand where the critical spaces for highly specialized tasks lie, such as sensitive animal care research. Our facilities managers work with building administrators to ensure we understand which systems support research and teaching work, so we can take special care in monitoring space performance through BMS data in addition to prioritizing proactive and preventive maintenance in these areas to improve reliability.

We have worked closely with the regulating authority, the British Columbia Safety Authority (BCSA), to ensure our Alternative Safety Approach (ASA) achieves the desired results in a building that supports animal care research. This innovative approach enables technology and work practices in a structured and controlled regulatory environment, resulting in regulated equipment this is operated and maintained to the highest standard.

ALTERNATIVE SAFETY APPROACH (ASA)

ASA is an innovative way of achieving safety that is acceptable under the *Safety Standards Act* (SSA). It is an approach that gives owners and operators of regulated equipment flexibility in managing safety. The approach treats safety as an integrated whole instead of simply complying with a series of prescriptive requirements. ASAs enable innovations in technology and work practices within a structured and controlled regulatory environment.

See more at: <https://www.safetyauthority.ca/permits-approvals/alternative-safety-approaches>

There is more work we are doing to improve our performance assessment capabilities. Our Enhanced Assets, Operations, and Services (EAOS) program's focus on space use will see us create new strategies to increase our understanding of spaces we operate and maintain, as well as our customers' understanding of those spaces. For us, this means:

- Engaging with customers to gain better understanding of their space needs;
- Allowing system owners to develop specific operating and maintenance programs to improve reliability of critical spaces at the lowest total cost; and,
- Creating data on assets, systems, and equipment, with meaningful performance attributes so we can better match work effort to condition outcomes in a proactive manner.

For more information on EAOS and its effect on our knowledge of space use, see Section 6.0.



1,108
UNDERGRADUATE
LABORATORY SPACES
ARE CLEANED
BY CUSTODIAL

7.4

What processes are established to ensure funding resources are effectively used and adequate to support a level of facilities maintenance that prevents the deferral of major maintenance and repairs?

7.4

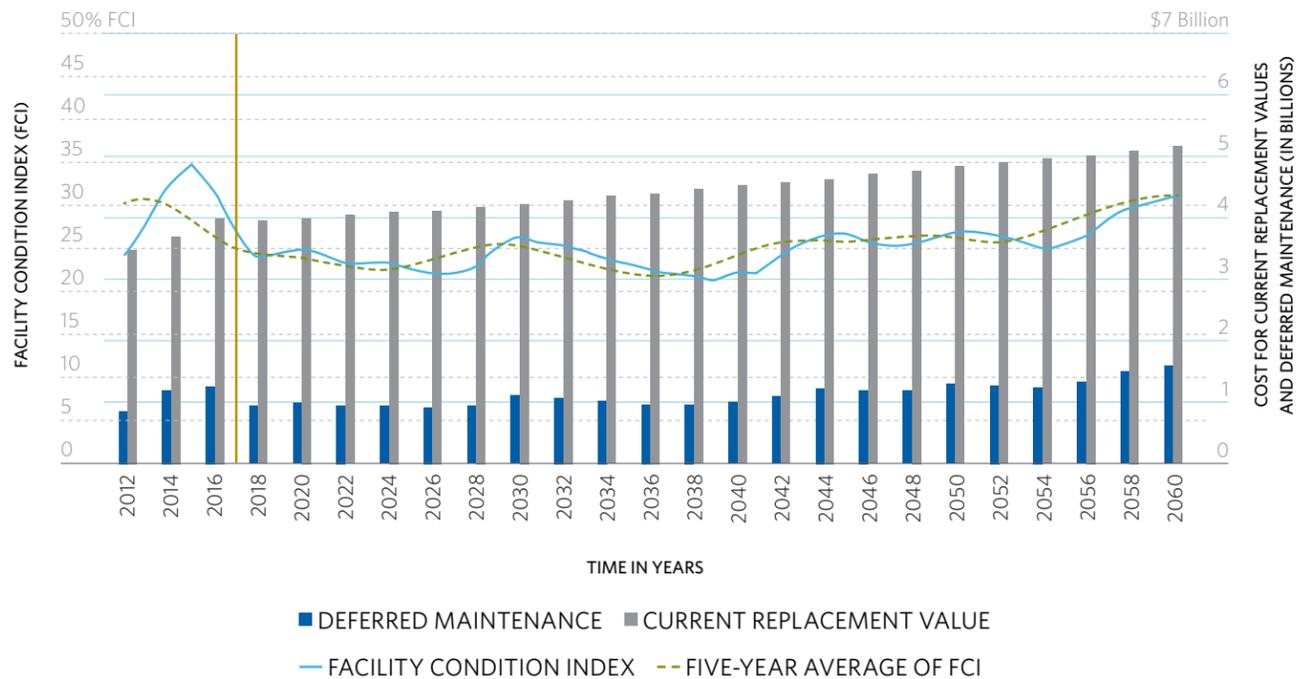
Describe the processes established to ensure that funding resources are effectively used and are adequate to support a level of facilities maintenance that prevents the deferral of major maintenance and repairs.

Funding requests for our operating costs and routine capital, including a fund for unplanned renewal, are presented to the university's executive each year. The budget proposal includes the current condition of our assets and the effect the desired budget would have on improving that condition, and ultimately, space reliability. This is also translated for staff and presented through crew talks and hallway posters so our teams are engaged in asset stewardship.

We monitor data that shows how our investment in renewals through our routine capital program is reducing our Facility Condition Index (FCI, currently at 0.30), resulting in greater reliability of certain systems. We have presented a model to senior administration that shows the investment required to keep FCI steady and trending toward our goal of 0.18.²⁴

FACILITY CONDITION INDEX MODEL

\$50 MILLION ANNUAL FUNDING SCENARIO



²⁴ <http://buildingoperations.ubc.ca/about-us/accountability/understanding-fci>

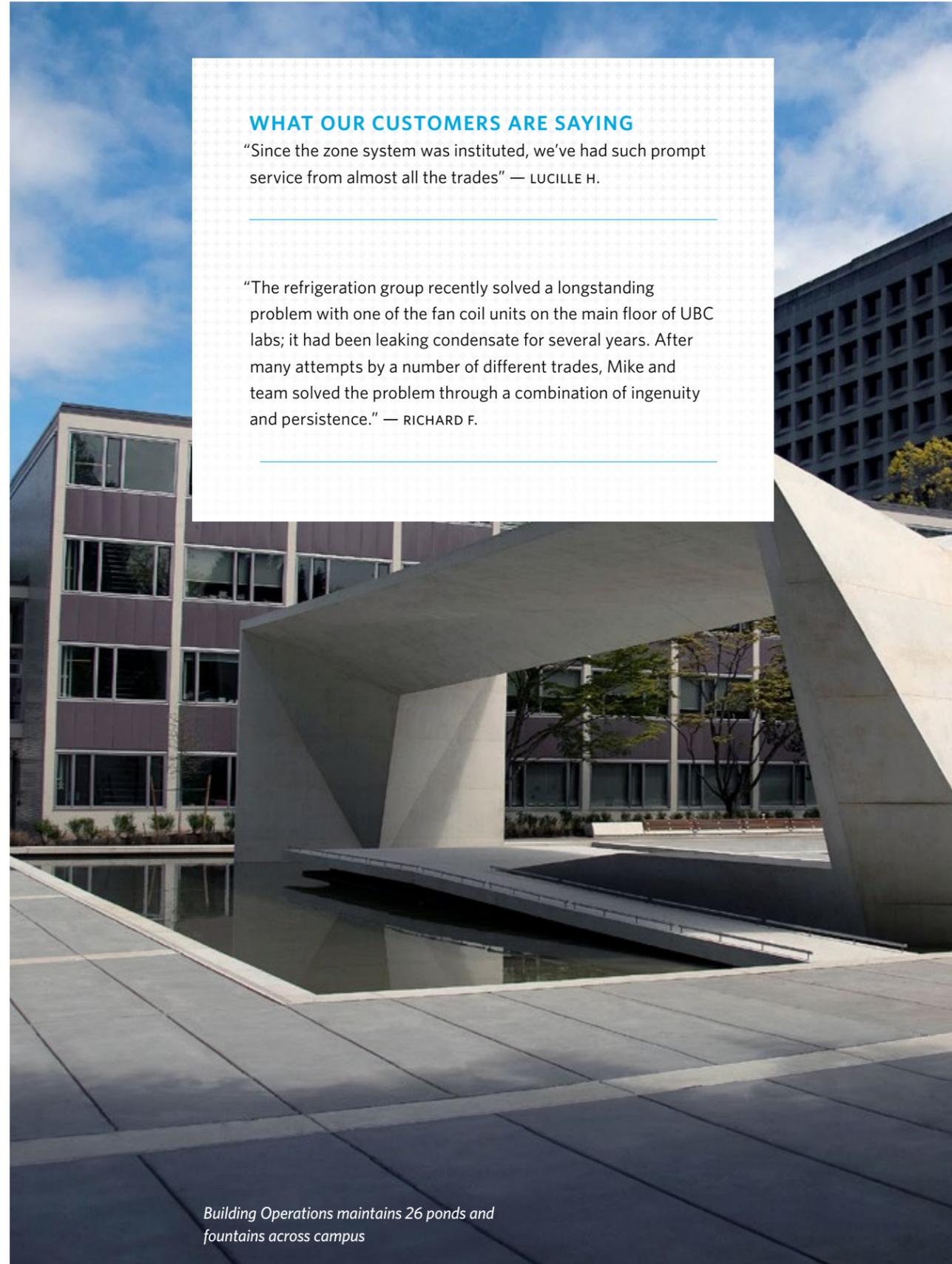


Routine capital is planned capital renewal, such as cyclical roof replacement.

We also receive money for some deferred maintenance costs as part of the Routine Capital Program from the Government of British Columbia's Ministry of Advanced Education (AVED). To ensure the campus is receiving best value on our AVED spending, the routine capital planning committee was formed. Building Operations is a key committee stakeholder. The committee's goal is to identify projects to ensure AVED funding is earmarked in a way that's transparent to other eligible spenders at UBC, such as Energy and Water Services and Infrastructure Development — our sister departments.

Our Asset Spend Improvement (ASI) initiative is our process for ensuring funds are effectively used by Building Operations staff and that capital is separated from operating expenditures. ASI is a training and awareness campaign that educates our managers and supervisors on how Building Operations is funded and how to better track our spending of operating and capital funds. We focus this training on how to leverage funding from the routine capital program for unplanned renewals (unplanned renewals are unexpected or end-of-life failures of large components of systems or building systems). Prior to ASI training, the cost of materials and effort to maintain a failing piece of equipment was buried in the operating budget — making it difficult to track spending. Now, we can make informed repair vs. replace decisions as we have reliable data given that staff are following ASI training practices.

In 2016, the Waste Management Group processed approximately 850 tonnes of food/organic waste



WHAT OUR CUSTOMERS ARE SAYING

“Since the zone system was instituted, we’ve had such prompt service from almost all the trades” — LUCILLE H.

“The refrigeration group recently solved a longstanding problem with one of the fan coil units on the main floor of UBC labs; it had been leaking condensate for several years. After many attempts by a number of different trades, Mike and team solved the problem through a combination of ingenuity and persistence.” — RICHARD F.

Building Operations maintains 26 ponds and fountains across campus

What tools are used to assess whether staff is highly motivated and productive, and taking pride in accomplishing their duties?

We strive to build a culture of staff who show up and step up. Engaged and motivated employees are more innovative, and will ‘go that extra mile’ to identify and prevent problems. They are also less likely to get injured at work. To formally measure engagement, Building Operations’ staff participate in UBC’s Workplace Experience Survey (WES). Every three years, it queries every member of faculty and staff on campus. Building Operations’ leadership uses the results to understand staff experiences, needs, and priorities, and to shape strategic planning and initiatives at both the institutional and unit levels. For example, the 2014 WES report identified that faculty and staff saw the quality of the university’s leadership and overall strategy as two areas for workplace improvement at the university. At Building Operations we, in turn, incorporated these findings into our own leadership development training program. It seeks to develop the skills of our leadership.

Outcomes we expect from our Leadership Development Program include:

- Building a common approach to supervising people in a way that is fair, firm, and friendly for the 120 supervisors/managers in our Building Operations’ family;
- Developing skills to give effective and constructive feedback to members of our staff;
- Building better emotional intelligence, so we can appreciate how we and others react in certain situations;
- Building skills to better handle difficult situations with ease, creating better direction and outcomes for our workforce; and,
- Engaging our entire Building Operations team in finding better ways to get critical work done effectively.

²⁵ <http://buildingoperations.ubc.ca/staff/staff-recognition>

Though this program is in its first year, we are already seeing marked improvements across these and other areas.

Informal assessment of engagement and productivity takes place through tracking indicators such as attendance, time-loss due to injury, participation in non-compulsory social events, volunteering to take part in working committees, and ideas-sharing for overall departmental improvement. In each of these areas, we have seen measurable improvement over the past three years. For example, in 2014 time-loss due to injury was 1,100 days; in 2015, this declined to 440 days, while in 2016 it was approximately 400 days. Meanwhile, attendance at our holiday meals has also markedly improved, from 125 in 2013, to 200 in 2014, 400 in 2015, and more than 550 staff in 2016.

At Building Operations, we empower our staff to take pride in their work and acknowledge the accomplishments of their peers through staff excellence awards. Nominees must meet specific criteria and winners are selected by a committee of their peers.²⁵

See Section 5.0 for more detail on our rewards and recognitions programs, as well as our staff excellence awards.

7.5

7.5

Describe the tools used to assess whether the staff is highly motivated and productive, taking pride in the accomplishment of their duties.



4,097
FACULTY AND
GRADUATE RESEARCH
LABORATORIES
ARE CLEANED
BY CUSTODIAL

7.6

What processes are used to ensure service levels are consistent with customer needs and requirements and within Building Operations' capability?

7.6

Describe the processes used to ensure that the levels of service are consistent with customer needs and requirements and within the facilities department's capability.



26

ANCILLARY BUILDINGS WERE CONSTRUCTED BETWEEN 2008 AND 2017
(student residences, child care, athletics)

As mentioned in Section 3.0, our NPS feedback survey is the primary tool we use to check that our service levels are consistent with customer needs. Our facilities managers (FMs) provide a more personal connection with building administrators to get direct feedback on how our work is being received with each building in their care. Our FMs also play a key role in managing expectations and helping customers understand how space reliability and performance supports their needs. We track lists of unfulfilled service requests by crew, volume, crew member, and time to execute. This offers an excellent measure of any inefficiencies, or where we may be under-resourced.

Our Custodial team ensures that building cleanliness aligns with the needs of customers through its audit processes, with leadership performing quality control checks. Custodial's leadership also routinely consults space users to ensure cleanliness levels match space requirements, as space use changes over time — such as when new scientific experiments are conducted in spaces, or new users with different cleaning requirements move into a building.

WHAT OUR CUSTOMERS ARE SAYING

"The electricians did a great job installing the lights in 3302. The work was done efficiently with minimal disruption, and the office users are very happy with the improved lighting in their area. Thank you." — REHANA A.

On a monthly basis we also hold an internal meeting where our facilities managers meet with the trades people and process managers to discuss delayed jobs, emerging issues, and upcoming work. In this way, the needs of our customers are always at the fore of all high-level planning.

For certain customers who regularly procure our services, such as UBC Athletics or Student Housing (both ancillary customers), we set service level expectations through a service contract. We draft this contract based on the services being requested, and level of service the customer is seeking. Once the customer signs the contract and starts receiving services, one of our FMs actively engages the customer on an ongoing basis to assess whether we are effectively performing our duties.

How are managers and supervisors encouraged and enabled to stay in touch with the needs of higher education, particularly in relation to UBC?

7.7

7.7

Describe how managers and supervisors are encouraged and enabled to stay in touch with the needs of higher education and how they relate to their own institution.

Supervisors and managers are encouraged to seek out industry best practice. For example, Building Operations' representation at Association for Higher Education Facilities Officers (APPA), Pacific Coast Association for Higher Education Facilities Officers (PCAPPA), and Western Canadian University Physical Plant Administrators (WCUPPA) organizational conferences is encouraged, and a contingent of our staff consistently attend the events. In 2014, Building Operations hosted the annual PCAPPA conference; in 2009, UBC hosted the WCUPPA conference. Both experiences gave facility professionals the opportunity to connect and share best practices.

Many of our staff are certified Facilities Management Administrators (FMAs), Project Management Professionals (PMPs), Applied Science Technologists and Technicians (ASTTs), and Professional Engineers (P. Eng).

Our managers and unionized supervisors are continually encouraged to seek additional accreditation and training dedicated to improving our ability to better address campus needs. For example, our custodial superintendent recently received the Cleaning Industry Management Standard ISSA Certification Expert designation. Some senior leaders have also attended APPA's Leadership Academy to further develop their awareness of industry-specific issues. Our director of trades holds Certified Educational Facilities Professional (CEFP) credentials.

WHAT OUR CUSTOMERS ARE SAYING

"The Pharmacy loading bay was looking pretty haggard with leaves, plastic, and other detritus strewn about. Maria and team took care of it, and now it looks great. We didn't ask them to do it, they just took it on their own. Thanks!" — JONATHAN V.



Building Operations' Soft Landscape Group has six International Society of Arboriculture (ISA)-certified arborists who do most of the routine tree work and hazard tree abatement

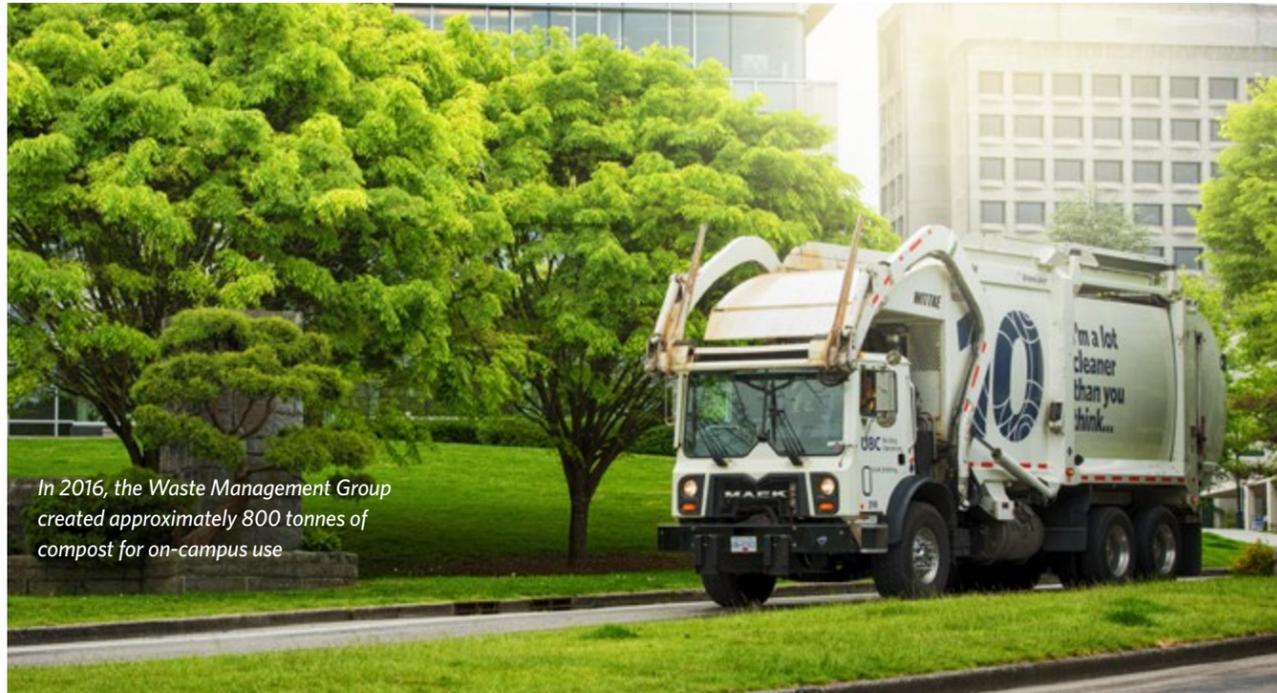
In closing

UBC consistently ranks as one of the top universities in Canada and around the world. Building Operations supports this directly by providing spaces that meet the standard of excellence required to achieve great things.

Building Operations will continue supporting the university in its overall mission by further improving our operational performance and building on our successes. We are committed to:

- Improving on our operational efficiency by driving our FCI down from 0.30 to 0.18 through changes to our operations and maintenance efforts and continued routine capital investment;
- Improving our custodial quality assurance practices, to provide us with better insights on how we can improve our cleaning performance; and,
- Increasing our presence at the design development and commissioning stages of new construction, so maintenance and operations needs are considered as early as possible and better Total Cost of Ownership (TOC) outcomes are achieved for the university.

The Campus is the Story



In 2016, the Waste Management Group created approximately 800 tonnes of compost for on-campus use

Each and every day, our work at Building Operations involves building valuable relationships and trust with our core customers: the students, faculty, staff, and alumni of The University of British Columbia. In this publication, we've tried to offer an overall sense of our organization — who we are, what we do, who we serve, how we work, and why we do what we do.

We've also offered a broad window into our department and operations while bringing into focus some of the finer points of our organization. Across that entire continuum, what drives us are our mission and four key pillars. They anchor our work, our planning, and our spending.

In Building Operations, we are deeply connected and committed to this campus. We invest in our team through engagement strategies and leadership development training and support. This builds a culture that is growing within our team around personal accountability, innovation and stewardship for the campus. We are a team that shows up and *steps* up. In other words, we are steadfastly committed to delivering the very best service for our customers — always and without compromise.

Research shows that spaces can positively affect learning outcomes. As our campus continues growing, evolving, and aging, our job involves ensuring we minimize resources — including people, time, and money — so we can stay true to our lowest total cost of ownership mandate. This calls for improved planning and development of business intelligence from our data. In Building Operations, we know every dollar spent on a renovation or repair on an asset that has reached the end of its natural life ultimately takes away from the university's core mandate of delivering teaching and research excellence. In this regard, we view ourselves, and the work we do with colleagues in our sister departments, Infrastructure Development and Energy and Water Services, as stewards of the campus physical spaces.

Ultimately, we see UBC's successes as our successes.

If there are a few points readers might take away with them, we hope they might be:

- Building Operations is responsible for keeping the physical spaces of the Vancouver campus of The University of British Columbia (UBC) working. This includes maintaining and operating our lands, buildings, and fleet;
- Building Operations includes a diverse group of people, a passionate, skilled, and customer-focused team of more than 700;
- We always aim to deliver best value for the university at the lowest cost of service. We know we need to keep costs low by balancing between proactive maintenance and making minor improvements;
- Looking forward is critical to our work. When the cost of maintaining an asset becomes greater than the cost to replace it, action is required or repair costs will continue escalating. We are constantly assessing the state of all campus assets and adjusting our work priorities to provide best value;
- Through BMS, we must improve our collection of data on space performance — including data on the condition of our assets and systems, and data on the effort we spend to keep the campus running. We must analyze this data to improve our business decisions so we can deliver best value; and,
- In all our work we strive to be as transparent and accountable to our campus community and our staff as possible. That means establishing ways to measure our progress, share our plans, gather feedback, and engage in conversations around opportunities to improve.

Overall, our goal is to create a campus with spaces that inspire and function optimally. When those spaces truly work, be they inside or outside, we believe that gives the members of our UBC community the opportunities to deliver their very best.

Ultimately, we hope readers leave this publication with a better understanding of Building Operations — and how we're doing our part to enable greatness at The University of British Columbia.



ACRONYMS

AASHE	Association of the Advancement of Sustainability in Higher Education
APPA	Association for Higher Education Facilities Officers
ASA	Alternative Safety Approach
ASI	Asset Spend Improvement
ASTT	Applied Science Technologists and Technicians
AUDP	Advisory Urban Design Panel
AVED	Ministry of Advanced Education
BCSA	British Columbia Safety Authority
BMS	Building Management System
BOMI	Building Owners and Managers Institute
CAIRS	Centralized Accident / Incident Reporting System
CEFP	Certified Educational Facilities Professional
CMMS	Computerized Maintenance Management System
DES	District Energy System
DM	Deferred Maintenance
DP	Development Permit
DRC	Development Review Committee
EAOS	Enhanced Assets, Operations, and Services
EOC	Emergency Operations Centre
EOI	Expression of Interest
EPI	Energy Planning and Innovation
FCI	Facility Condition Index
FMA	Facilities Management Administrators
FM	Facilities Managers
FPI	Facility Performance Index
FTE	Full-time Equivalent

GHG	Greenhouse Gas
HR	Human Resources
HRMS	Human Resources Management System
IMANT	UBC Investment Management Trust
IT	Information Technology
MMR	Major Maintenance and Rehabilitation
NPS	Net Promoter Score
P. Eng	Professional Engineer
PCAPPA	Pacific Coast Association for Higher Education Facilities Officers
PM	Preventive Maintenance
PMP	Project Management Professional
OE	Operating Engineer
O&M	Operations and Maintenance
RCA	Root Cause Analysis
STARS	Sustainability Tracking, Assessment & Rating System
TCO	Total Cost of Ownership
UBC	The University of British Columbia
UBCPT	UBC Properties Trust
VPFO	Vice-President Finance and Operations
WCUPPA	Western Canadian University Physical Plant Administrators
WES	Workplace Experience Survey

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Publication Date: June 2017



THE UNIVERSITY OF BRITISH COLUMBIA
Building Operations
