George Mason University

Master Plan
Phase One Progress Report

April 2021

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LETTER FROM THE PRESIDENT AND EXECUTIVE VICE PRESIDENT

Dear Colleagues,

We are pleased to share with you the enclosed progress report, which documents the first phase of George Mason University's master planning process.

This framework will help guide decisions, maximize resources, and provide the flexibility to react to new challenges and opportunities as we determine the university's path forward.

The report reflects extensive data collection and analysis regarding space use and needs, program connections, and future demographics and enrollment. This critical step involved more than a year of research and analysis, designed to offer a data-informed accounting for our physical planning, and ensure we create an environment that can support the university's mission and vision.

The master planning team solicited and received robust input from university and community stakeholders, through hundreds of interviews, meetings, work sessions, and virtual town halls, as well as an online interactive mapping survey that included almost 5,000 respondents.

These master planning efforts concurrently inform the four pillars of our strategic planning process – enhanced affordability and access, diversity and equity, elevating research/reinventing graduate education, and economic development. **This phase of the Master Plan does not determine the priority or placement of specific buildings or facilities.**

We are now eager to enter the second phase of master plan development. This will involve more detailed physical planning that leads to effective decisions about capital investment at Mason.

We wish to express our gratitude to the Board of Visitors and leadership for electing to pursue this first phase of the master planning process under interim leadership so that early findings could inform our senior leadership team and its emerging vision for Mason.

We also are grateful to the steering committee members who have guided this process and to the many faculty, students, staff, alumni, and community members who contributed their ideas and suggestions.

We will continue to welcome input as the process progresses.

Sincerely,

Gregory Washington, President

Carol Dillon Kissal, Senior Vice President for Administration and Finance

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The George Mason University master plan will be a framework to guide future decision making about the physical environment. It focuses on the university's three primary campuses—Arlington, Fairfax, and SciTech—although its broader philosophy will be applicable to all university facilities and landholdings. The intent is for the plan to inform a "lifestyle" through which the university can act in a planful manner, be strategic rather than reactive, and seek to maximize the deployment of available resources. As such, the master plan will ultimately consist of the following:

- a set of principles which can be used to evaluate future opportunities,
- datasets and data management guidelines that will ensure decision making is well-informed,
- an evaluative framework to ensure future projects' alignment with capital prioritization processes,
- and a comprehensive design "kit of parts" which will allow the university to shape appropriate physical responses to future opportunities.

Development of the master plan is structured over two phases. This report documents the first phase of work which began in January 2020 (just before the onset of the pandemic). The initial purpose was to collect and analyze relevant data, both hard and soft, so as to provide the university with an accurate accounting of the state of the institution from a physical planning perspective. The broader strategic goal is to establish a data-informed programmatic identity for each of the three primary campuses so that the more detailed

physical planning work of Phase Two is purposefully guided by a larger vision.

The major tasks and findings of Phase One are:

ANALYSIS OF THE USE OF EXISTING SPACE

We have carefully analyzed the composition and use of existing space across the university's three primary campuses with the purposes of identifying: opportunities for improved utilization; any potential existing space deficits; and opportunities for improved data management practices that could potentially better inform future decision making.

Space utilization at Fairfax is generally robust, particularly for instructional space. The university has begun a major shift to active-learning classrooms, which has been well received, and which should continue, ensuring the university has a diversified portfolio of learning spaces that can support a diverse array of pedagogies. In general, a small net increase in the number of classrooms is likely warranted at Fairfax to meet existing demand. The use of specialized instructional space is likewise generally strong. In particular, the use of core science labs, particularly for biology, chemistry, and physics, is at or near maximum achievable levels, and is likely a near-term chokepoint on future growth. Accessibility is also an important factor that must be incorporated in all capital planning moving forward, and in particular, ADA issues with some Fairfax classrooms must be addressed.

Utilization of the Arlington campus typically follows an evening profile with peak use after 4pm. This utilization profile matches the needs of the current students who are largely part-time graduate students, but there are opportunities to increase daytime use of the campus should a different student profile be identified.

Scheduling at SciTech follows a more typical daytime pattern. The campus' existing teaching and learning facilities have the capacity to support additional enrollments if that were strategically desirable.

The university's increasing emphasis on research will require the continued development of an appropriate infrastructure to manage, support, and incent research activities. This likely means the university may benefit from continued discussion of the management of laboratory space with the development of associated metrics to track lab use and guide bench assignments; the further development of research cores with shared equipment; and a careful alignment of available laboratory space with likely future directions of research activity (note, for example, the university currently rents a significant number of engineering-related lab spaces because its existing lab portfolio does not offer these spaces).

Workspaces for both faculty and staff comprise the single largest (non-residential) category of university space. As such, careful thought of the management and assignment of workspace represents a critical component of ongoing space management and future capital prioritization. The university's workspace portfolio consists of both shared workstations and private offices (and other supporting spaces like break rooms and conference rooms). There has been significant recent debate on private vs. shared workspaces, with faculty explaining the importance of private spaces to their personal workflows and their interactions with students. The master plan will explore this issue in more detail in Phase Two. The primary finding for Phase One is that the university could potentially benefit from improved data collection and management practices that better help it to understand occupancy information. This improved data would potentially help shape future policy guidelines (although this benefit should be assessed relative to the not insignificant ongoing cost of maintaining the data). The pandemic has added further complexity to the question of how best to provide workspaces. Future recommendations will need to consider that some employees may have a preference to work from home, and that meeting spaces may need to simultaneously support both virtual and face-

to-face collaboration. As a result, there may be increased interest in shared space and hoteling. Of course, there is unlikely to be a simple "one size fits all" solution, so careful guidance will be needed to align future work expectations.

Finally, the university would likely benefit from further development of informal and collaboration spaces. This will be studied in more detail in Phase Two, along with more intense investigation specific to student and residential life, well-being, and recreation spaces.

ANALYSIS OF PROGRAM CONNECTIONS

In order to better understand the relationships between academic programs, and to explore whether any programs are natural candidates for relocation between Mason's campuses, we used course enrollment data to generate social graphs of program connections. The data shows that Mason's undergraduate academic programs are generally highly interconnected, and that it is therefore difficult to identify natural candidates for relocation, particularly at the first- and second-year level. Graduate programs are generally more self-contained, but Mason does not have, and does not desire to have, a separate graduate faculty (in fact Mason is very intentional about integrating undergraduate and graduate student experiences). In addition, many of Mason's programs are interdisciplinary in nature, and many faculty work across programs.

ANALYSIS OF FUTURE DEMOGRAPHICS AND ENROLLMENTS

The Weldon Cooper Center for Public Service performed an independent analysis of likely future workforce needs and demographic trends in Virginia, and then calculated potential enrollments for five-year (at the program level) and twenty-year (at the division level) timeframes.

Mason's current and planned programs align well with Virginia's likely future workforce needs, with no obvious large gaps in offerings. The Commonwealth's recent rapid increase in population is not likely to continue over the next ten plus years with a resulting plateau in high school graduates. Absent a significant effort in an increasingly competitive environment, Mason should therefore not expect the same rapidly increasing in-state student demand as it has experienced over the last decade.

In addition to the work completed by Weldon Cooper, Mason has undertaken significant internal investigations of future enrollment scenarios. While Mason's internal calculations generally show higher projections than Weldon Cooper, the various models are in fact consistent with respect to in-state students. Differences arise because Mason's internal models place increasing emphasis on online, out-of-state, and international growth, which are factors that will depend on strategic investment by Mason, and were therefore not part of Weldon Cooper's work (which instead focused on extrapolating historical trends). Mason also believes that, through programs like ADVANCE, the university can sustantially grow its community college pipeline.

For the purposes of Phase Two master planning, we will investigate a 50,000 total enrollment scenario, with the majority of this growth occurring online. Our planning assumption will be for 4,000 additional in-person students.

PHYSICAL ANALYSIS OF THE THREE PRIMARY CAMPUSES

Phase Two will focus on detailed physical assessments and planning for the three primary

campuses. For the purposes of Phase One, we therefore limited investigations to a high-level, primarily oriented at understanding if there are any restrictions on program identity or program growth based on land availability.

Arlington is the only campus that is growth constrained because of real estate availability. Once the IDIA project is completed, Arlington will essentially have no future capacity for further growth. In addition, significant change of the existing buildings may be somewhat limited by their nature, particulalry Vernon Smith Hall, which was designed as an office building.

The opposite situation applies to both Fairfax and SciTech where there is significant growth potential (if desirable). This is true even in the existing Fairfax core campus where significant square footage could be added, while at the same time enhancing campus open space.

Finally, Fairfax has an additional planning challenge: because of the campus' age, building condition is an important consideration, and there are a number of academic facilities, including facilities in prime locations, that are in need of either significant renovation or replacement.

BROAD AND INTENTIONAL STAKEHOLDER ENGAGEMENT

Success of the master plan depends on broad and extensive stakeholder engagement with both Mason's internal and external communities. Phase One efforts included numerous stakeholder interviews and work sessions, and an online interactive mapping survey that included almost 5,000 respondents who placed over 50,000 icons on campus maps and provided over 9,000 comments. This feedback was analyzed using a machine learning algorithm to identify positive or negative sentiment associated with various campus activities and buildings. It will provide a rich source of data for the development of the master plan and for future decision making.

Phase Two will include continuing stakeholder engagement. This kind of iterative engagement is essential to developing a plan that is responsive to institutional needs and can be effectively implemented.

ANALYSIS OF POTENTIAL FUTURE (SPACE) NEEDS

We analyzed likely potential space needs based on various enrollment scenarios. On an aggregate basis, considering only quantitative needs based on the Weldon Cooper enrollment scenarios, the university could likely accommodate the projected growth associated with the Weldon Cooper scenarios through a combination of the better use of existing space and the construction of the various future building projects already under consideration. As a thought exercise, this is important because it suggests that strategic initiatives, program relocation, and most importantly, building condition and accessibility considerations, viewed through the lens of mission and value, should likely be the compelling factors in future capital investment decisions. Note that this macro observation does not negate the fact that individual units will grow, and that careful planning and space assignments will be needed to accommodate this growth. Please see the Appendix for more detailed college-level based estimates.

Initial investigations of new square footage based on these strategic factors estimate new construction needs could range between an additional 340,000 GSF and 880,000 GSF once the IDIA project is completed (not including residential, athletics, recreation, dining, retail, or structured parking, which will be investigated in Phase Two) depending on various scenario assumptions. These estimates do not include capital renewal, which will be an important component of Phase Two considerations.

PROGRAM IDENTITIES OF THE THREE PRIMARY CAMPUSES

Based on the emerging strategic vision of the university's Senior Leadership Team, the critical role each campus plays in advancing civic, economic, cultural, and intellectual life in their surrounding communities, a synthesis of all stakeholder feedback, and the rigorous analysis conducted during Phase One, the master plan proposes the following program identities for the university's three primary campuses:

The Arlington campus is located in an exciting, if increasingly competitive, urban context. It will focus on law and policy programs that benefit from the proximate location to DC, on other professional programs including information and data-science, and on partnerships.

The Fairfax campus, given its size and scale, will retain a core role in Mason's identity with a significant emphasis on collaboration—collaboration will necessarily occur wherever Mason exists, but given the sheer number of scholars in Fairfax it offers unique opportunities for interdisciplinary connections and critical mass. Further, Fairfax, as Mason's historic campus, with its concentration of existing facilities, is well suited to emphasizing the student experience.

Because of its scale, Fairfax also offers a larger spectrum of possible future development patterns, from more minimal schemes that emphasize the clarity of a potential north-south and east-west cross axes with related renovations and limited new construction located to bolster the axes' intersection, to an ambitious vision which could establish a series of linked quads cascading north-south down the campus, supporting significant growth, improving the campus' front door and connections to Fairfax City, and transforming the campus environment.

The SciTech campus will continue to take unique advantage of both its natural ecological resources and its emerging surrounding innovation district and research park. A partnership with the developer-led Innovation Town Center and University Village will be instrumental to future campus success, and future campus development should be organized to ensure seamless integration between campus and town centers with the possibility of establishing a mixed-use "Main Street" with academic uses on the north side and residential and retail opportunities on the south side. The western arm of George Mason Circle is a perfect candidate for this purpose.

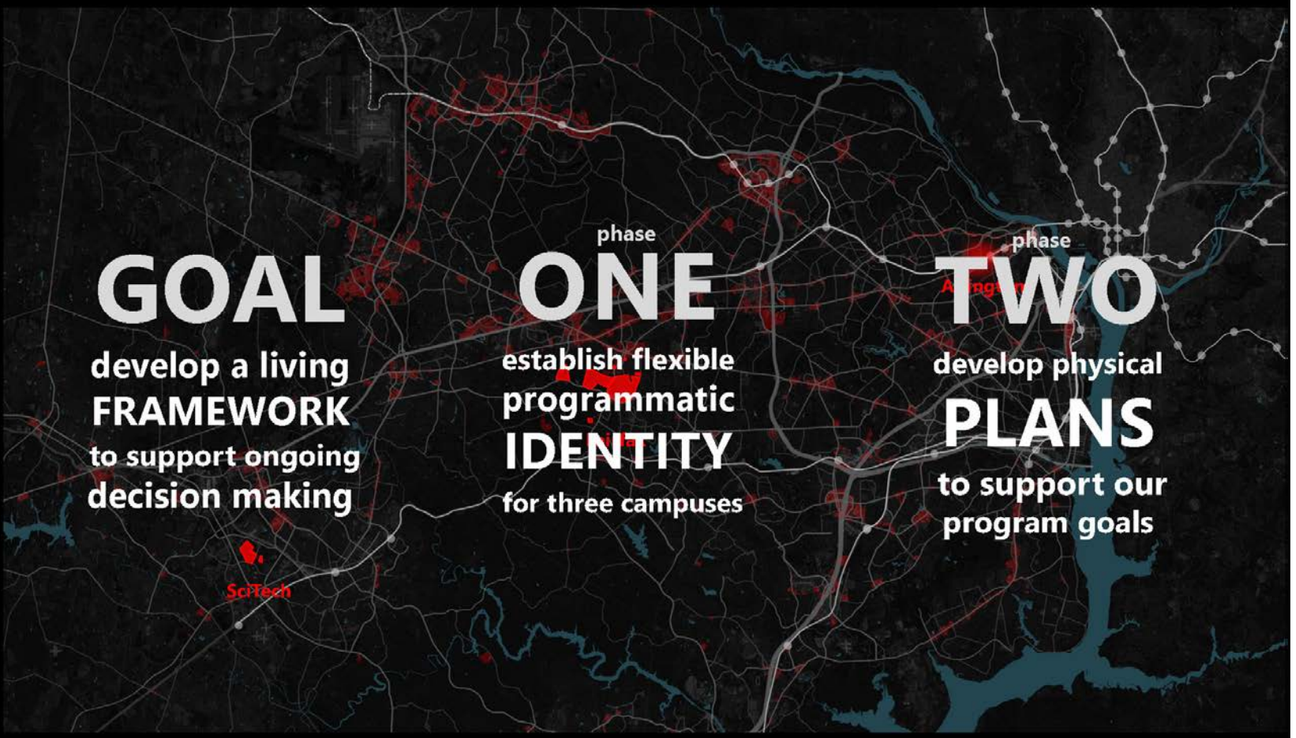
From a program identity perspective, SciTech will focus on health, particularly the potential for a future medical school (note there are no current plans to relocate existing health-based programs currently in the Peterson Building on the Fairfax campus), innovation and research (including partnerships with the growing regional industry presence), and will likely be primarily (although not exclusively) a graduate campus. The Hylton Performing Arts Center and the Freedom Center will continue to be important and defining elements of the SciTech campus. Specific goals include:

- Establishing a research park where Mason can relocate large research centers
- Provide infrastructure to support upskilling, reskilling and, retraining in data center operations, cloud computing (applications, infrastructure, security, and services), and cybersecurity via continuing education
- Deliver entrepreneurship services related to SMEs that support data centers, cloud, and cyber activities. Note that Continuing Education will maintain their primary location at Arlington, but will also maintain multiple locations based on existing operations, including provisions to expand into SciTech.

PHASE TWO AND NEXT STEPS

With the necessary analysis complete and clear program identities for each campus established, the master plan's development continues to Phase Two. This phase will include detailed assessments and planning for: infrastructure, parking and mobility, athletics, well-being, recreation, residential and student life, ecological resources, campus heritage and historic resources, land use, growth patterns, urban design and open space, real estate and the university's larger land holdings in the Fairfax area, and other related topics. The goal is to provide the university with the toolset it needs to make capital investment decisions moving forward and to ensure the creation of a dynamic exciting environment that works seamlessly to support Mason's mission.

PROJECT PROCESS

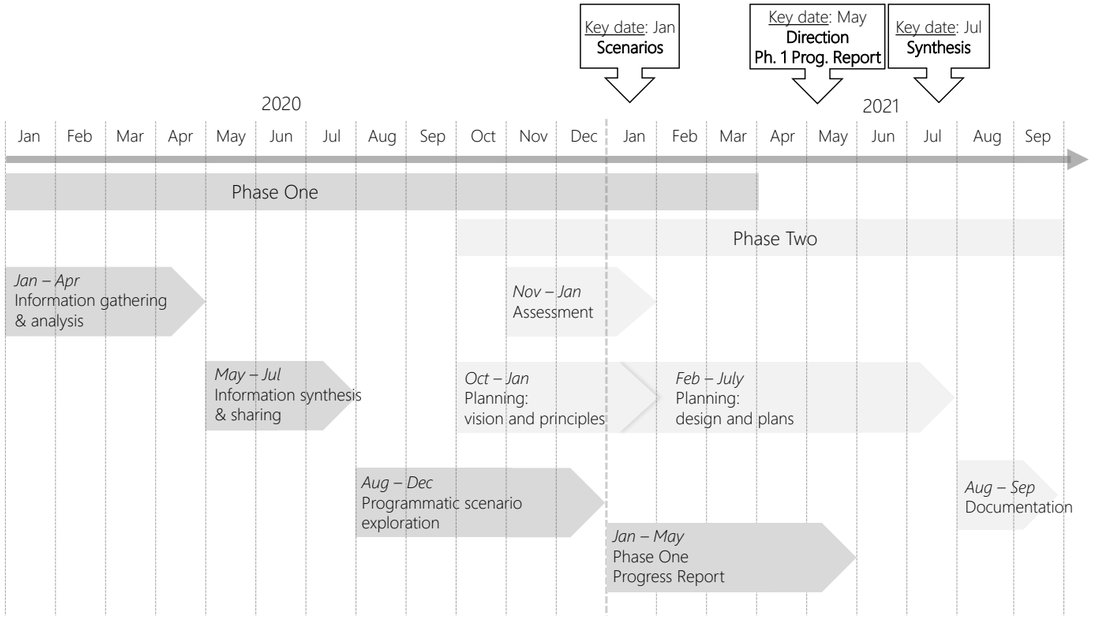


PURPOSE

The university's last completed master plan dates from 2002. George Mason University engaged the DumontJanks team in early 2020 to lead the development of a new campus master plan. Since the completion of the 2002 master plan, the university's enrollment has grown by 50%, with the majority of that growth taking place on the flagship Fairfax campus. The master plan must carefully consider the impacts of this growth, and of future growth, along with program placements across its Arlington, Fairfax, and SciTech campuses. The university anticipates sustained growth as it continues to expand program offerings, particularly those associated with its Tech Talent commitments to the Commonwealth (primarily oriented around computer sciences). The university is taking a major step in addressing this demand with the construction of the Institute for Digital InnovAtion (IDIA) at the Arlington campus – a new 500,000 square foot facility, of which 225,500 square feet is for university use, 135,000 square feet is for industry partners, and 146,000 square feet is for parking. This facility will house classrooms, specialized instructional spaces, and areas to foster collaboration and encourage industry partnerships. The Science and Technology campus located in Prince William County is currently largely focused on STEM disciplines and research, with outstanding performing arts and recreation facilities. Fairfax, the largest campus both in terms of enrollment and physical size, is the hub of activity at Mason.

Moving forward, Mason will be best served by a framework that supports ongoing decision making at the university rather than a prescriptive fixed plan. This will allow the university to remain nimble as it moves forward and discovers new opportunities for growth, including ideas we cannot conceptualize right now!

DECISION TIMELINE

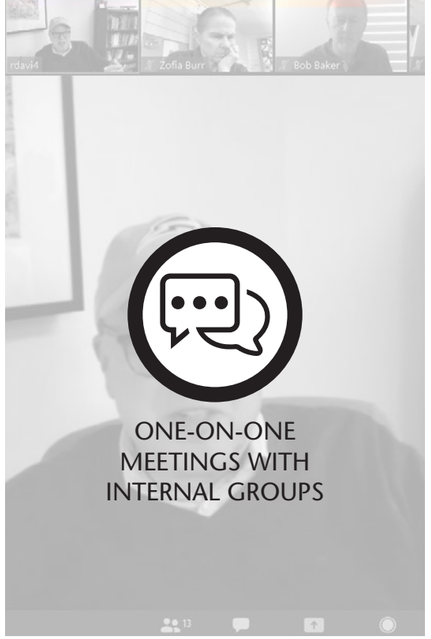


PHASES AND TIMELINE

The first phase of this engagement, which kicked off in January 2020, consisted of extensive stakeholder interviews, rigorous data collection and analysis, development of demographic projections, and the identification and refinement of initial program identity scenarios. These scenarios will be further explored and developed into design ideas as we move into Phase Two.

It is important to highlight that all analysis presented in this report is point-in-time. As such, it is reflective of current conditions when university datasets were captured in early 2020. Notable developments between then and the publication of this report include bringing Horizon Hall online, taking Robinson Hall B offline, and reorganizing the engineering program into College of Engineering and Computing which encompasses the Volgenau School of Engineering and the School of Computing.

The second phase will also include an enlargement of the master planning team which will include a myriad of disciplines from broad engineering expertise to architects and environmental and ecological planners. The team will conduct in-depth design investigations as we work toward selection of a preferred direction in April 2021. Completion of the master plan is anticipated for September 2021.



ENGAGEMENT

A robust stakeholder engagement effort is the cornerstone of any successful planning process. Mason is a large, complex university with a diverse population of students, faculty, and staff spread across three primary campuses, one international campus, and seven local satellite sites; and a strong desire to collaborate broadly with its host communities and other partners. We held discussions with many constituents to get the most accurate picture of current conditions. Given that Phase One began in January 2020, we were able to conduct the bulk of our initial stakeholder engagement sessions in-person. With the onset of the COVID-19 pandemic in March, we successfully transitioned to online virtual sessions. This stakeholder engagement process involved dozens of conversations and means of engagement. This information was synthesized to identify key themes, and these themes then directed our analytical and program investigations. A full listing is available in the appendix, but includes:

- Regular meetings with the university's senior leadership team
- Regular meetings with a broadly diverse steering committee
- One-on-one discussions with all of Mason's academic deans
- Meeting with the faculty senate and inclusion of faculty senate representatives on the steering committee
- Meetings with representatives of student leadership groups
- Meeting with the staff senate
- Meetings with officials from Arlington County; Fairfax City and County; neighborhood organizations; Prince William County; and representative of the local business community
- Multiple public, town hall-style conversations around our analysis, planning, and potential scenarios
- An interactive online campus mapping survey through which respondents could describe the campus from their perspective
- A frequently-updated master plan website to disseminate various master planning materials and presentations as well as allowing the general public to submit questions and comments as they arise

TOPICS SYNTHESIZED

Articulate clear and programmatic priorities

Create distinct identities for each campus that also combine synergistically to promote a broader Mason brand

Address issues of growth that have historically produced stresses on the institution

Foster collaboration

Further enhance the student experience

Leverage core Mason strengths in providing access to higher education and in growing STEM disciplines

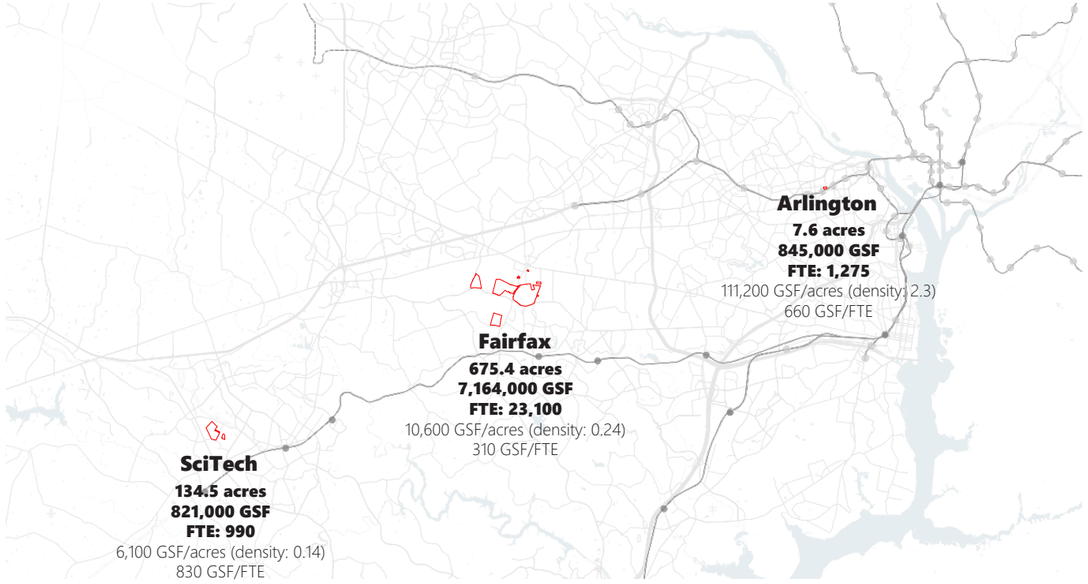
Examine and address the use and condition of existing facilities

Be mindful of connections, communication, and transportation between campuses

Take the lead in an increasingly competitive marketplace

PHYSICAL CAMPUSES

CAMPUS GROSS SQUARE FOOTAGE



Note:
The gross square footage above includes all the space as listed in the space inventory, including parking structures.

OVERVIEW OF THE THREE CAMPUSES

George Mason University operates three primary campuses in Northern Virginia. It also has a presence at Loudoun, Front Royal, Woodbridge, Lorton, and a campus in Korea. The master plan focuses on the three primary campuses, but its resulting framework will have principles that will broadly apply across all Mason facilities.

The Arlington campus is located to the northeast of the Fairfax campus in Arlington's Virginia Square. The setting of the campus is urban, and occupies three (soon to be four) buildings on a large city block. The campus is well-served by nearby highways and public transportation. It is the home of the Law School, the Carter School for Peace and Conflict Resolution, and the Schar School of Policy and Government, which gives the Arlington campus a clear professional and policy orientation, with the bulk of scheduled instruction taking place after 4pm to accommodate the part-time nature of most of its (graduate) students.

The Fairfax campus hosts the highest concentration of activity and space across the three campuses. Its setting is suburban and is primarily accessed by private automobile. The majority of Mason's schools and colleges have a presence at Fairfax and many core courses and student services are only offered here.

The Science and Technology campus is located southwest of the Fairfax campus in Prince William County near Manassas. The setting of the campus is exurban and is primarily accessed by private automobile, although there is a university-provided shuttle service to transport students, faculty, and staff to and from Fairfax. As its name suggests, the campus' primary focus is on teaching and research in STEM fields. This campus also hosts the Hylton Performing Arts Center and the Freedom Aquatic and Fitness Center, both of which are significant assets for the university and the Prince William community.

ARLINGTON CAMPUS
7.6 acres

ARLINGTON CAMPUS

Mason's Arlington campus is located along the Rosslyn-Ballston Corridor, with proximity to Washington, D.C., and is conveniently located just off of Interstate 66 and blocks away from the Virginia Square - GMU and Clarendon stations on the Washington Metro's orange and silver lines. The ease of access to the Arlington campus, as well as its location close to major employment centers, in particular its proximity to Amazon's much-awaited "HQ2," is a great asset. This diagram shows the Arlington campus highlighted in the center, with red line showing the Metro line and Metro stations, and red dots representing the nearby retails and dining options.

OPEN SPACE

Metro line
Metro stop
Main open space

NATURAL SYSTEMS

Located in an urban setting, the campus has little topographic change and no 'natural area' conditions or waterways. Main planting includes tree planters, landscaping within raised planters or along edge of building, and street trees.

OPEN SPACE

The most important open space for this campus is the elevated plaza in front of Van Metre Hall, with rows of trees and fixed tables and chairs. Note that the plaza is built on top of the garage so there are limits to future design options.

Metro line
Metro stop
Main road
Parking garage
Access to parking

WMATA daily entry data source: https://www.wmata.com/initiatives/ridership-portal/Rail-Data-Portal.cfm#main-content, calendar year 2019-2020

CIRCULATION

The campus is located in a busy urban context with Fairfax Drive to the south, Washington Boulevard to the north, and two alleys on either side. In addition, two metro stations are within walking distance, providing easy access to the orange and silver lines. The diagram shows average daily entry figures of surrounding Metro stations and traffic counts of major nearby routes.

PARKING

The Arlington campus has two parking garages. The Van Metre Hall Parking Garage is a reserved garage that guarantees spots for day and evening permit-holders and contains spots for campus visitors. The Vernon Smith Garage is a first come, first served garage for faculty/staff and students in possession of a general permit. Both garages are accessed from Founders Way, the alley in between Vernon Smith Hall and Van Metre Hall, making Founders Way a tricky road to navigate. There is also metered parking on surrounding streets. Parking is limited, especially during evening times, but never fully maxed out. Alternative transportation options, including the metro, walking, and biking, are therefore well-used.

BUILDING CONDITION
Facility Condition Index (FCI)

- Good (0-5%)
- Fair (5%-10%)
- Poor (10%-30%)
- Critical (>30%)

BUILDING CONDITION

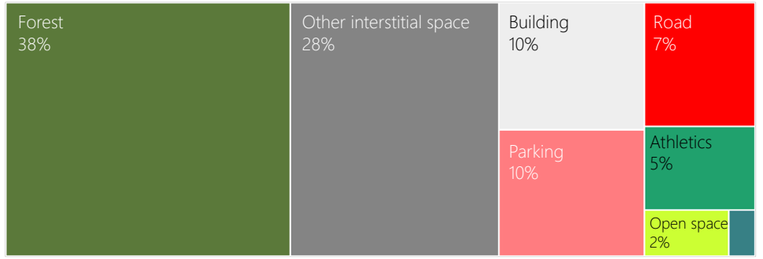
The Arlington buildings are in various states of condition. The diagram shows the buildings' Facility Condition Index. Van Metre Hall is in good condition. Hazel Hall, built in 1998, is rated poor. The Original Building is slated for demolition, and will be replaced by the IDIA. Vernon Smith Hall is under the ownership of the George Mason University Foundation and, as such, is not indexed.

FAIRFAX CAMPUS
675.4 acres

FAIRFAX CAMPUS

The Fairfax campus is Mason's largest and oldest campus, with the highest concentration of activity of the three campuses. It is located on just over 675 acres located to the south of Old Town Fairfax. The heart of the campus, as identified by students, is the Johnson Center, a student center with offices, dining, and retail spaces. The core of the campus is centered around this building, predominantly organized along a north-south axis, and mostly lies within a 10-minite walking circle, as seen in the accompanying diagram. The campus' landholdings are divided by Ox Road (State Route 123) with academic and administrative functions and the campus core located to the east of the road, and athletics and recreation functions to the west of Ox Road. The campus is geographically roughly equidistant to the two other northern Virginia campuses, and somewhat proximate to a metro connection, which is serviced by a shuttle route.

Below is a treemap showing the land use distribution for Fairfax campus. Detailed maps for the land use can be found in the following pages.



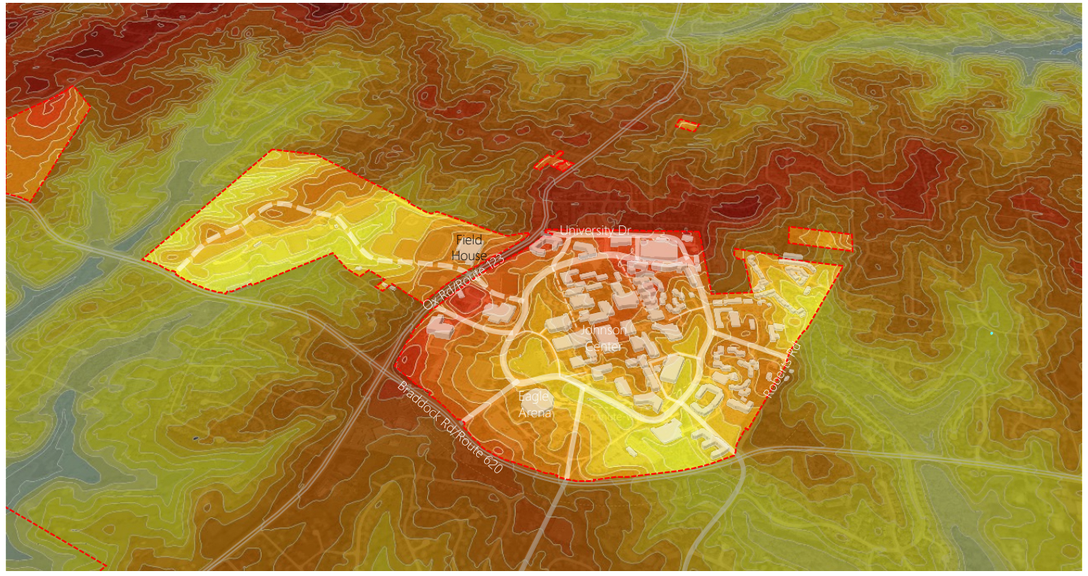
High
Low

Forest
Water body
Stream

NATURAL SYSTEMS

This diagram shows the forested areas on campus marked with a light green. Forest makes up 38% of the acreage of the Fairfax campus. Also shown are waterways and topography, with higher ground colored red and low-lying areas colored yellow.

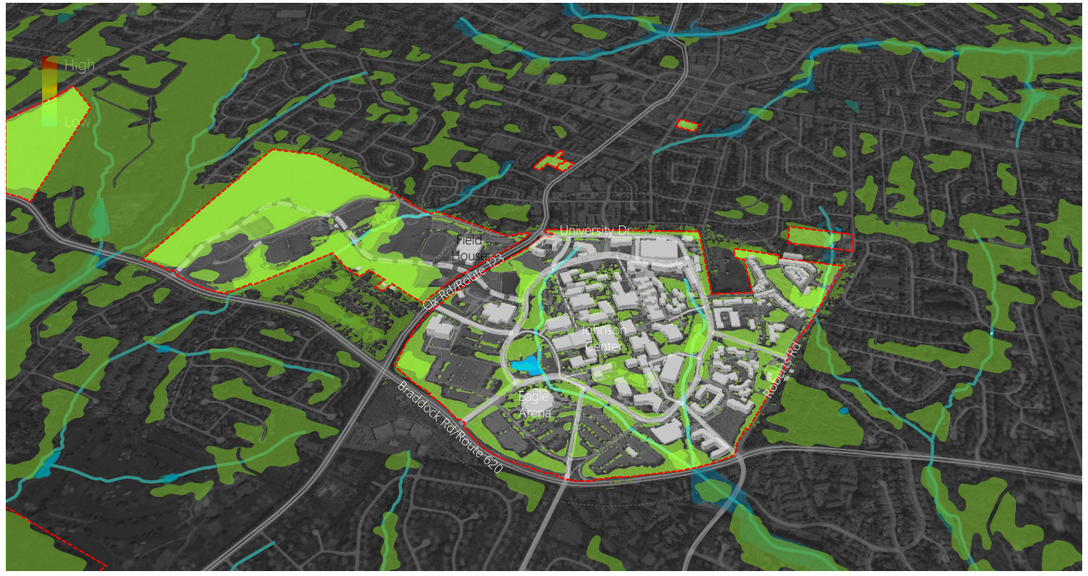
TOPOGRAPHY



High

Low

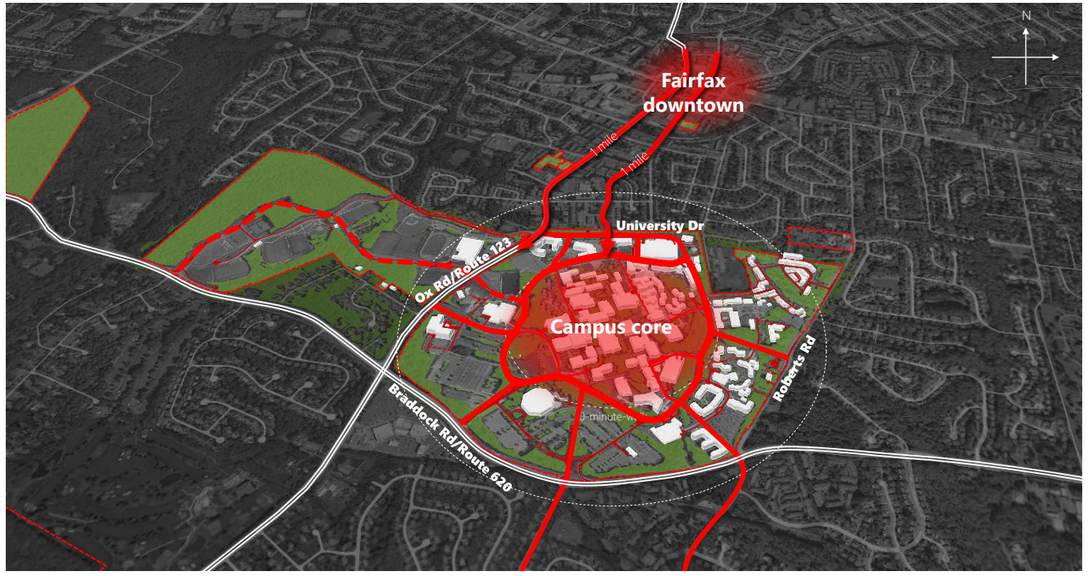
FORESTRY



Forest

Water body

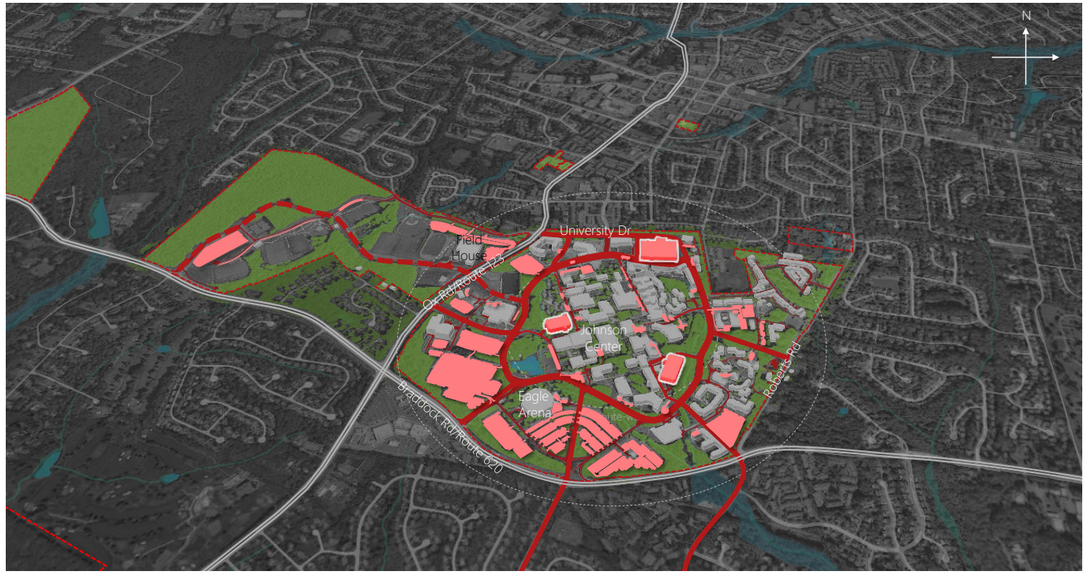
Stream



Forest
Building
Road

CIRCULATION

Streets make up approximately 7% of the acreage of the Fairfax campus. The street layout of the Fairfax campus is based on a loop road, with the core of the campus surrounded by Patriot Circle. For the most part, motor vehicles are directed around and kept out of the campus core. There are, however, several access roads which lead into the heart of the campus for accessibility and service uses. Because of this layout, the highest potential vehicle-pedestrian conflict areas are concentrated at crossing points along Patriot Circle. There are at least ten entry points identified by people. Some of the highly used entry points are found on the north side on George Mason Boulevard, on the west side from Ox Road (State Route 123), and on the south side from Braddock Road (State Route 620). Clear definition of entry points and improvement of the circulation system is a key topic for the campus. Mobility, connections, and circulation will be addressed in detail in Phase Two.



Forest
Building
Road
Parking
Water

PARKING

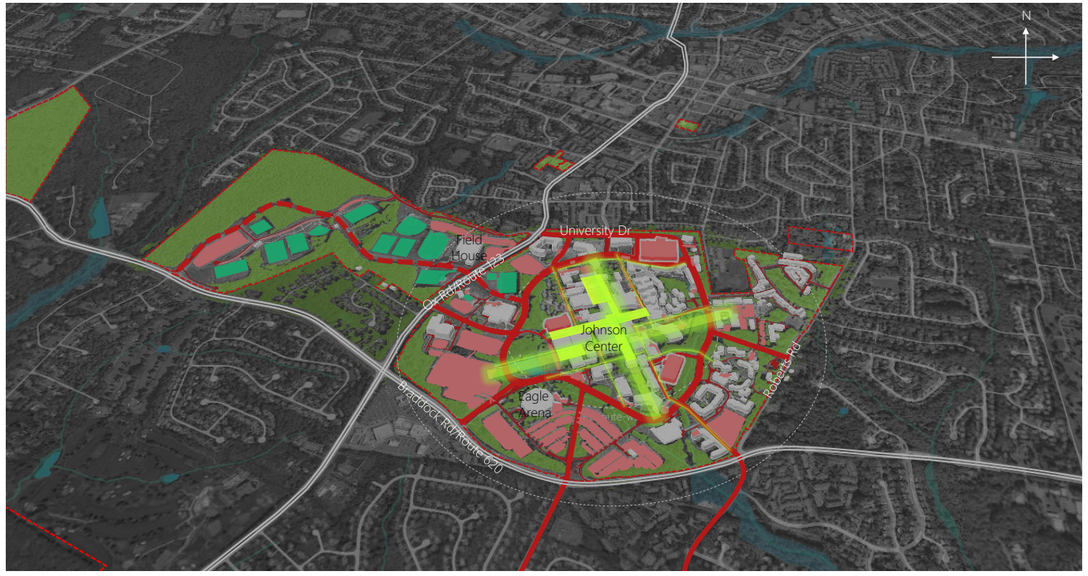
Surface parking lots and multi-level parking decks make up 10% of the acreage of the Fairfax campus. The university has generally done a good job of limiting the use of small interior lots within the core campus. Instead, the majority of lots are peripheral, with the major supply in the large surface lots to the south and west of the core campus off of Braddock Road, as well as the Mason Pond, Rappahannock, and Shenandoah parking decks on the edge of the core. Parking will be studied in more detail in Phase Two.

ATHLETICS AND RECREATION FIELDS AND COURTS

- Forest
- Building
- Road
- Parking
- Water
- Athletics and recreation (A – athletics, R – recreation, S – shared)

ATHLETICS AND RECREATION

Athletics and recreation fields make up 5% of the acreage of the Fairfax campus. Aside from the Recreation and Athletics Complex field and tennis courts to the north of the RAC, the majority of athletics and recreation fields lie to the west of Ox Road (State Route 123).



- Forest
- Building
- Road
- Parking
- Water
- Athletics and recreation
- Open space and/or connection

OPEN SPACE AND PEDESTRIAN CORRIDOR

Structured and intentional open space makes up only 2% of Fairfax campus acreage. These open spaces are marked in bright green and are clustered around the heart of the campus surrounding the Johnson Center. Major pedestrian corridors are marked in light green and stretch both north-to-south and east-to-west. The major north-south corridor goes from Peterson Family Health Sciences Hall in the north to the Aquatic and Fitness Center in the south. The major east-west corridor goes from the facilities complex in the east to the major parking area (lots J and K) in the west. These nascent corridors intersect in the heart of campus adjacent to the Johnson Center, and represent a significant opportunity.

There is a significant amount of interstitial open space on the campus. This kind of space is scattered or not well-designed, and lacks a sense of place. The grass area east of the Engineering Building, and the lawn north of Hampton Roads and Pilot House are two examples. This kind of space has the potential to be re-organized within the larger landscape system.

- Forest
- Building
- Road
- Parking
- Water
- Athletics and recreation
- Open space and/or connection

CAMPUS BUILDINGS

Buildings make up 10% of the acreage of the Fairfax campus. They are colored light gray on the map.

BUILDING CONDITION
Facility Condition Index (FCI)

- Good (0-5%)
- Fair (5%-10%)
- Poor (10%-30%)
- Critical (>30%)

Average FCI for Fairfax E&G: 22.2%
Average FCI for Fairfax housing and dining: 8.5%

BUILDING CONDITION

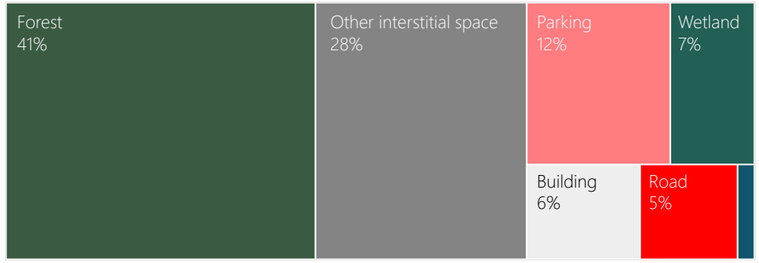
Mason has 106 buildings on the Fairfax campus. Across this inventory, there are a wide range of building ages and conditions. This figure represents the Facility Condition Index of buildings at Fairfax. The FCI is the ratio of the current maintenance, repair, and replacement deficiencies cost to the current replacement value of a given facility. The lower a building's FCI is, the better condition the building is in, and vice versa. For example, the Roberts House was built in 1925 and is currently in critical condition, and contrasts with the Peterson Family Health Sciences Hall which was completed in 2018 and is in excellent condition. That said, there are a number of critical buildings, particularly the Lecture Hall, Eaglebank Arena, and the Center for Arts, which are in need of significant renovation and/or replacement. This map shows the condition of buildings across campus, based on their facility condition indices (FCI), with green signifying a building is in good condition and red signifying buildings in critical condition and in need of immediate attention. In particular, resolving issues associated with David King Hall, Planetary Hall, the Finley Building, the East Building, the West Building, Krug Hall, and the Lecture Hall, either through renovation or replacement, will be critical in Phase Two.

SCITECH CAMPUS
134.5 acres

SCITECH CAMPUS

The Science and Technology campus is located southwest of the Fairfax campus in Prince William County near Manassas. The setting of the campus is exurban and is primarily accessed by private automobile, although there is a university-provided shuttle service to transport students, faculty, and staff to and from Fairfax. High traffic volumes in this area make travel times between the campuses unpredictable, and represent a significant challenge to campus connectivity. As its name suggests, the campus' primary focus is on teaching and research in STEM fields. This campus also hosts the Hylton Performing Arts and Freedom Aquatic and Fitness Centers, both significant assets for the university and the Prince William community.

Below is a treemap showing the land use distribution for SciTech campus. Detailed maps for the land use can be found in the following pages.



High
Low

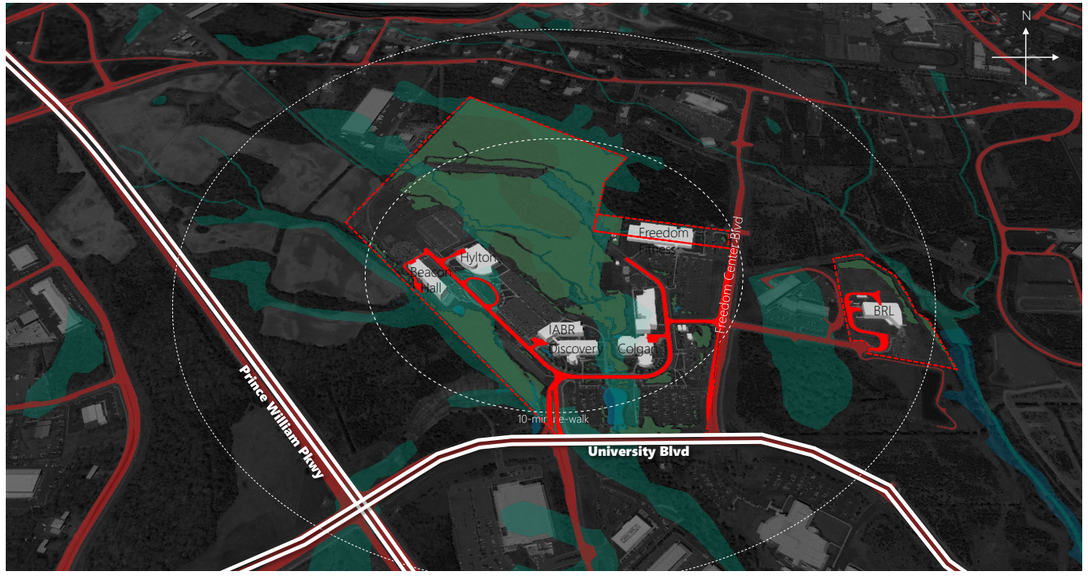
Forest
Water body
Stream
Wetland

NATURAL SYSTEMS

The SciTech campus is located in an exurban setting, with relatively flat topography, abundant wetland, and large forested patches. One waterway runs through the center, and another penetrates through the west edge of the campus. As shown in green in the left diagram, forest makes up 41%, and wetland 7%, of the acreage of the SciTech campus. The abundant natural resources provide unique opportunities for ecological and sustainable research and learning to happen at this campus.

OPEN SPACE

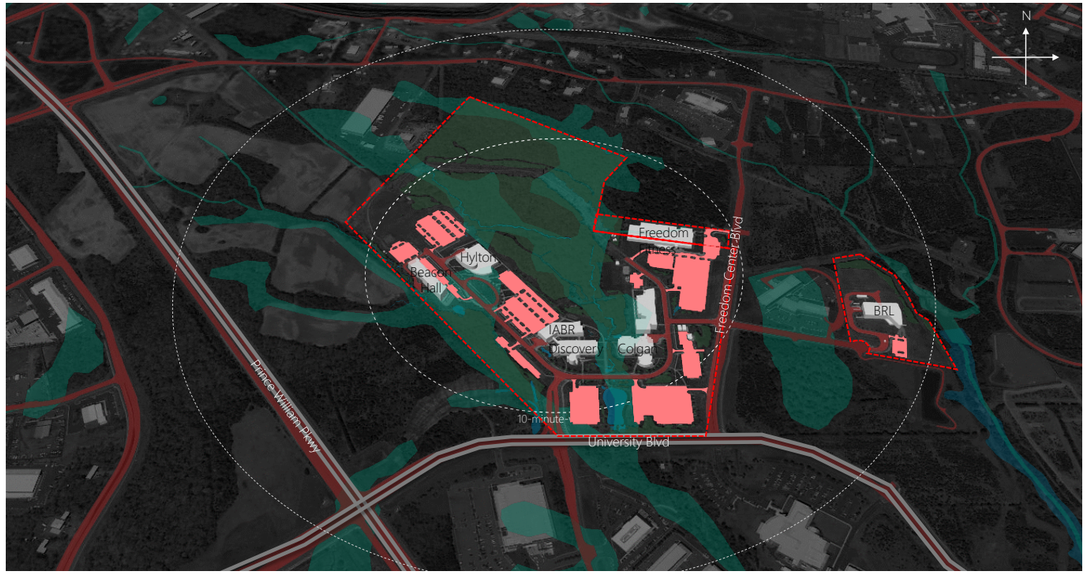
Although there are small courtyards in-between the buildings, the campus lacks a clear, well-organized open space system. The forest at the north of the campus, together with the water corridors running through the campus, have the potential to support a major open space idea for the SciTech campus



- Forest
- Water
- Wetland
- Building
- Road

CIRCULATION

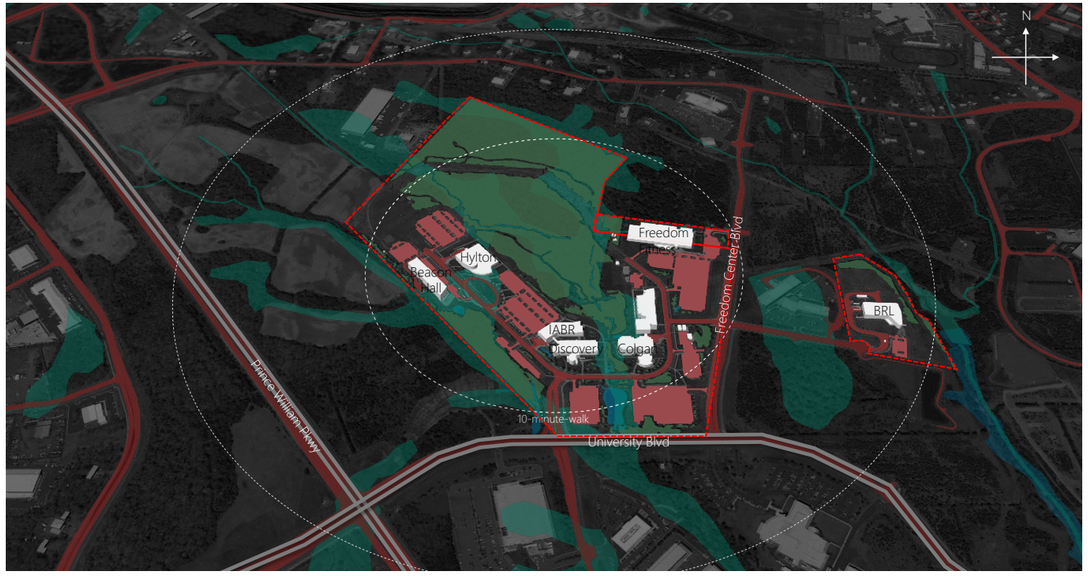
Streets make up approximately 5% of the acreage of the SciTech campus. The main road, George Mason Circle, connects the Hylton Performing Arts Center with the Freedom Fitness Center. There are two entry points to the campus, one to the south on University Boulevard, and the other one to the east on Freedom Center Boulevard.



- Forest
- Water
- Wetland
- Building
- Road
- Parking

PARKING

The parking lots are shown in light red in the diagram. Surface parking lots make up 12% of the acreage of the SciTech campus. The approximately 2,000 parking spots serve both the 990 (FTE) student and faculty/staff, as well as the event parking for the Hylton Performing Arts Center and the Freedom Fitness Center.



- Forest
- Water
- Wetland
- Building
- Road
- Parking

CAMPUS BUILDINGS

Buildings make up 6% of the acreage of the SciTech campus. They are colored light gray on the map.

BUILDING CONDITION
Facility Condition Index (FCI)

- Good (0-5%)
- Fair (5%-10%)
- Poor (10%-30%)
- Critical (>30%)

BUILDING CONDITION

The SciTech campus is the newest of the three campuses. The Institute for Advanced Biomedical Research, constructed in 2015, is the newest building at SciTech campus, and is in good condition. The other new buildings, the Hylton Performing Arts Center, Beacon Hall, Katherine Johnson Hall, and the BRL are in fair condition. The older buildings, which were built before 2000, including Charles Colgan Hall, Discovery Hall, Freedom Fitness Center, Facilities Modules, are in poor or critical condition, and will need attention.

CAPACITY STUDY
Arlington campus

CAPACITY STUDIES

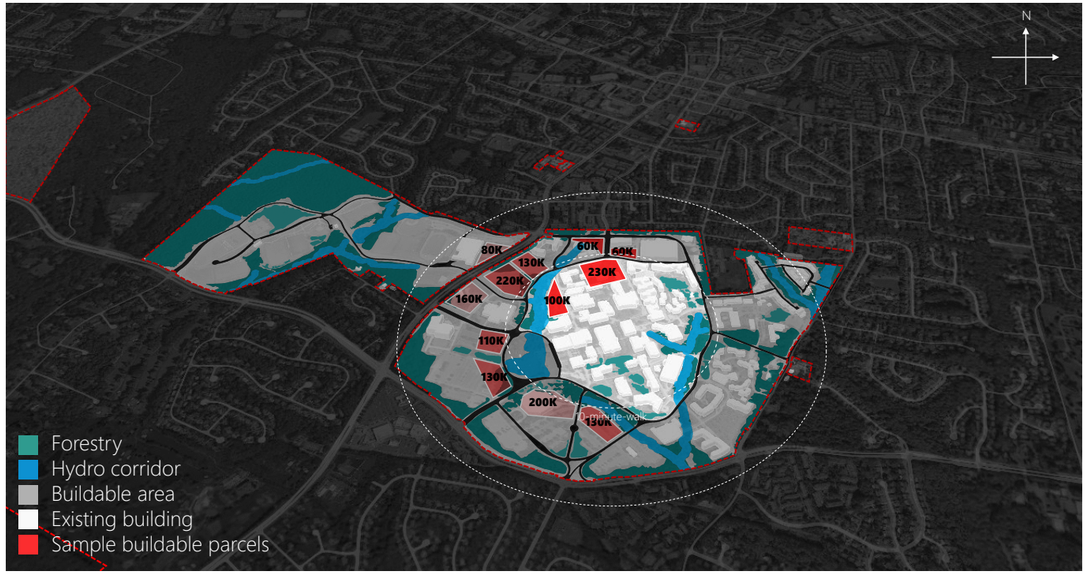
Phase Two will focus on detailed physical assessments and planning for the three primary campuses. For the purposes of Phase One, we therefore limited investigations to a high-level, primarily oriented at understanding if there are any restrictions on program identity or program growth based on land availability.

ARLINGTON CAMPUS

Future growth at Arlington is constrained by real estate holdings. Once the IDIA project is completed, there are no likely further expansion opportunities on the campus.

CAPACITY STUDY

Fairfax core campus (10-min-walk circle)



Existing condition

Site area	4,705,729	
Buildable area	3,788,994	This is 81% of the site area.
Existing GSF	4,124,192	
Existing FAR	1.09	

Capacity test under different FAR assumptions

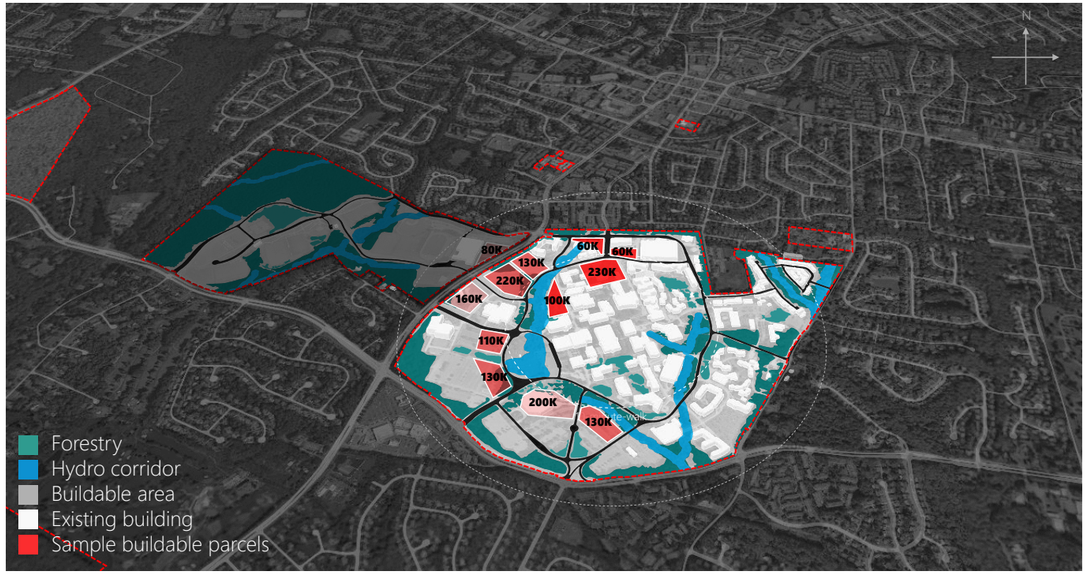
Test FAR	Total Capacity	Available Capacity
1.4	5,304,592	1,180,400
1.3	4,925,693	801,501
1.2	4,546,793	422,601

FAIRFAX CAMPUS

We undertook an initial high-level exploration of capacity of the Fairfax campus, to identify current land use patterns and determine potential sites for new buildings with the larger intent of understanding if real estate is a likely chokepoint for future growth. This diagram shows the amount of buildable area in the campus core (within a 10-minute walk circle) and highlights potential new building sites in red. The table below shows the amount of gross square footage of buildings in this zone at different floor area ratios (FAR)*. The following pages show two similar capacity studies for the Fairfax campus – one for east and one for west of Ox Road (State Route 123). The conclusion is that the Fairfax campus core has significant growth potential, and that real estate holdings are not likely to limit growth or building placement decisions for the foreseeable future.

* Floor area ratio measures the relationship of building square footage to land area. Many great American campuses typically have an FAR between 0.8 and 1.2 with urban campuses having potentially much higher FARs.

CAPACITY STUDY
Fairfax core campus



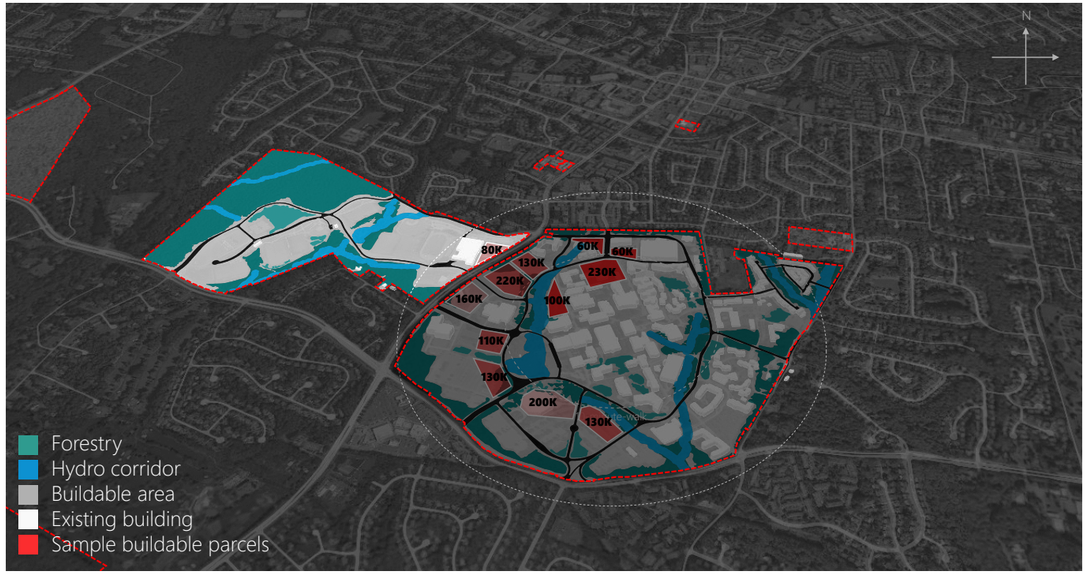
Existing condition

Site area	15,758,000	
Buildable area	10,811,000	This is 69% of the site area.
Existing GSF	7,028,000	
Existing FAR	0.65	

Capacity test under different FAR assumptions

Test FAR	Total Capacity	Available Capacity
1.2	12,973,200	5,945,200
1	10,811,000	3,783,000
0.8	8,648,800	1,620,800

CAPACITY STUDY
Fairfax west campus



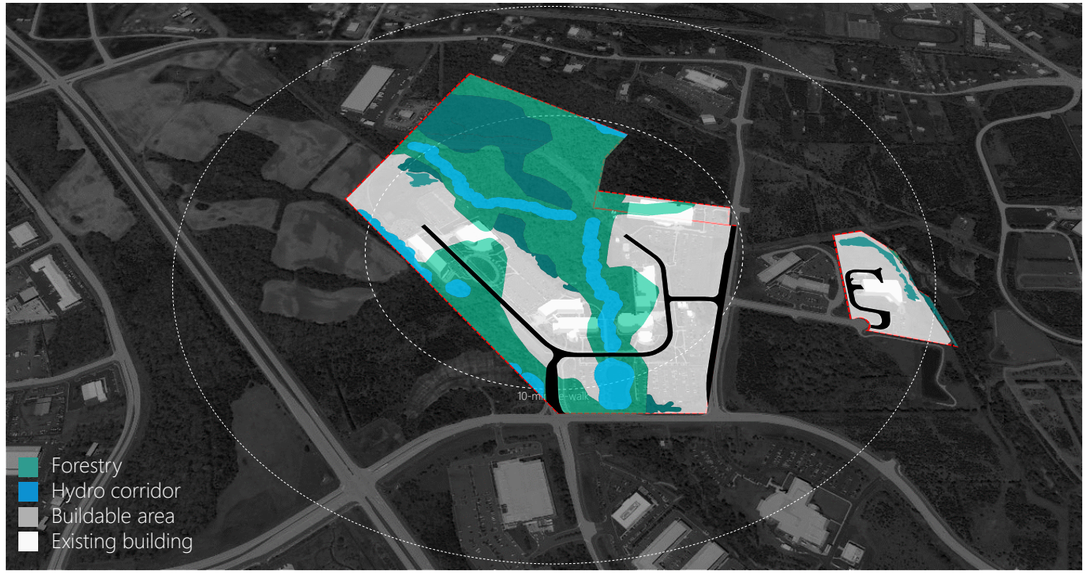
Existing condition

Site area	8,887,000	
Buildable area	3,890,000	This is 44% of the site area.
Existing GSF	136,000	
Existing FAR	0.03	

Capacity test under different FAR assumptions

Test FAR	Total Capacity	Available Capacity
1.2	4,668,000	4,532,000
1.0	3,890,000	3,754,000
0.8	3,112,000	2,976,000
0.6	2,334,000	2,198,000
0.4	1,556,000	1,420,000

CAPACITY STUDY
SciTech campus



Existing condition

Site area	5,856,000	
Buildable area	2,212,000	This is 38% of the site area.
Existing GSF	821,000	
Existing FAR	0.37	

Capacity test under different FAR assumptions

Test FAR	Total Capacity	Available Capacity
1.2	2,654,400	1,833,400
1	2,212,000	1,391,000
0.8	1,769,600	948,600
0.6	1,327,200	506,200

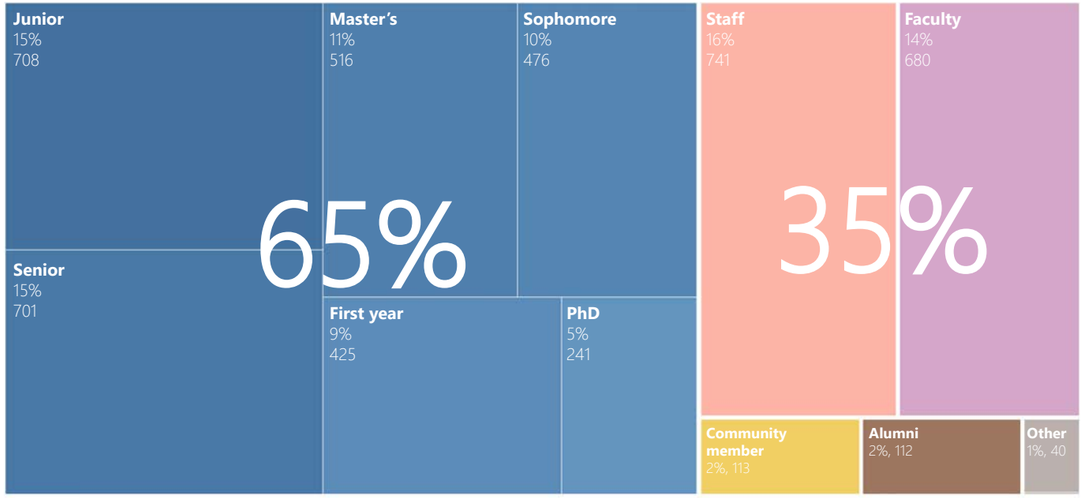
SCITECH CAMPUS

We performed a similar FAR analysis for the SciTech campus. SciTech has significant expansion potential and is not growth-constrained by real estate.

COMAP SURVEY

RESPONSE FROM DIFFERENT GROUPS

4,754 total respondents – *With which group do you most identify?*

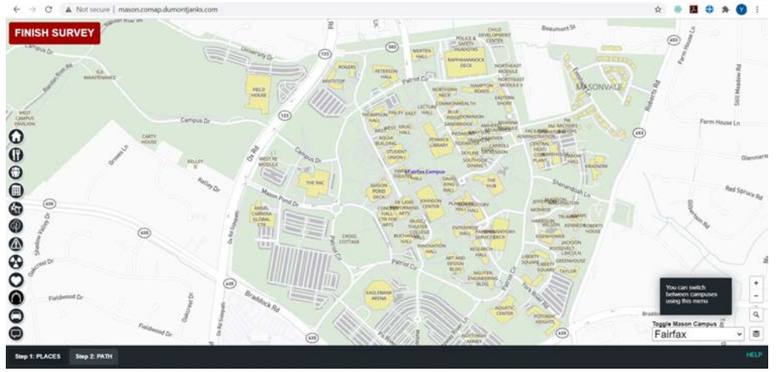


RESPONSES

CoMap is an interactive survey tool we used to gather people's perception of how the three campuses are used.

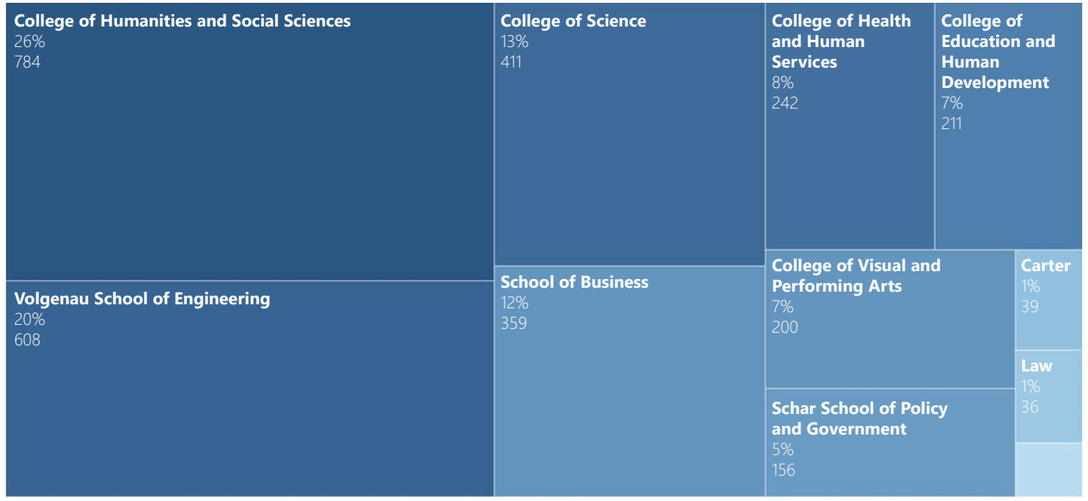
The survey had broad participation. Almost five thousand people completed it, of which about two thirds were students, with remaining participants equally distributed between faculty and staff, and a small number of alumni and community members. The tree maps to the left and on the following pages show the total number of people who participated in the survey, as well as the number of responses from different demographic groups.

The CoMap survey platform is illustrated below.



RESPONSES FROM STUDENTS

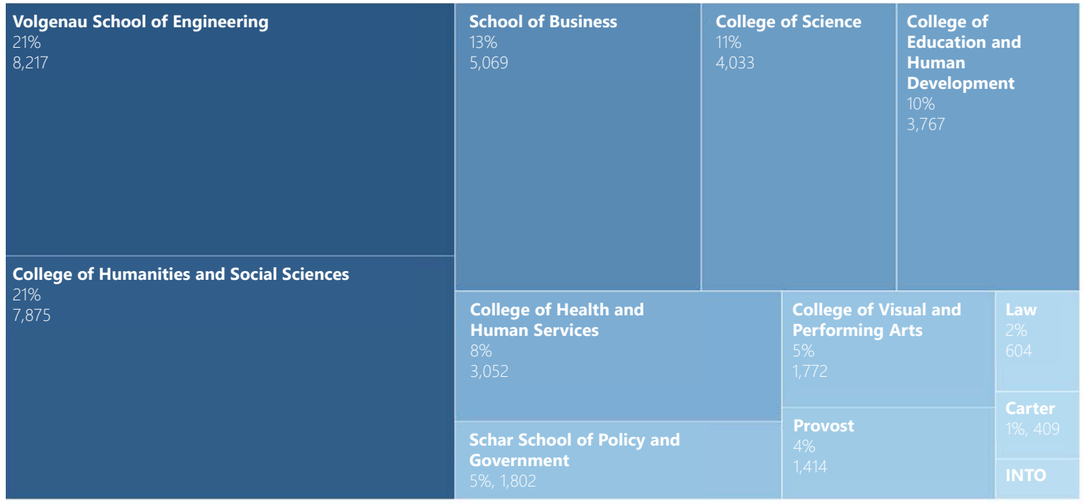
3,067 responses from students – *With which college or division are you affiliated?*



The number of responses from different colleges are largely related to the total number of students in the college. With more than 6,000 FTE, the College of Humanities and Social Sciences and the Volgenau School of Engineering are the two largest colleges at Mason, and their students provided the most responses.

STUDENT POPULATION OF EACH COLLEGE/DIVISION

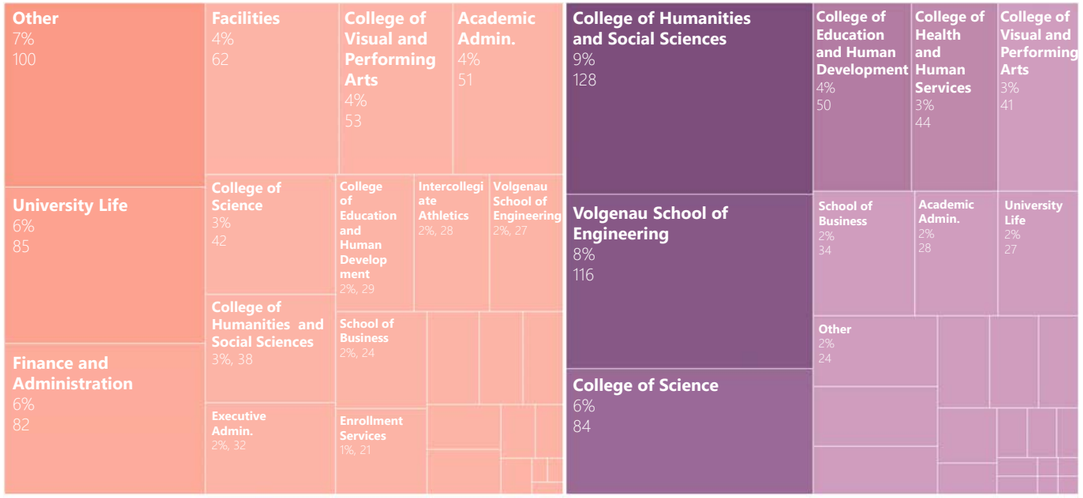
38,255 students in total



This suggests the CoMap data represents a representative sample of students relative to their schools and colleges.

RESPONSES FROM FACULTY AND STAFF

1,421 responses from faculty and staff – *With which college or division are you affiliated?*

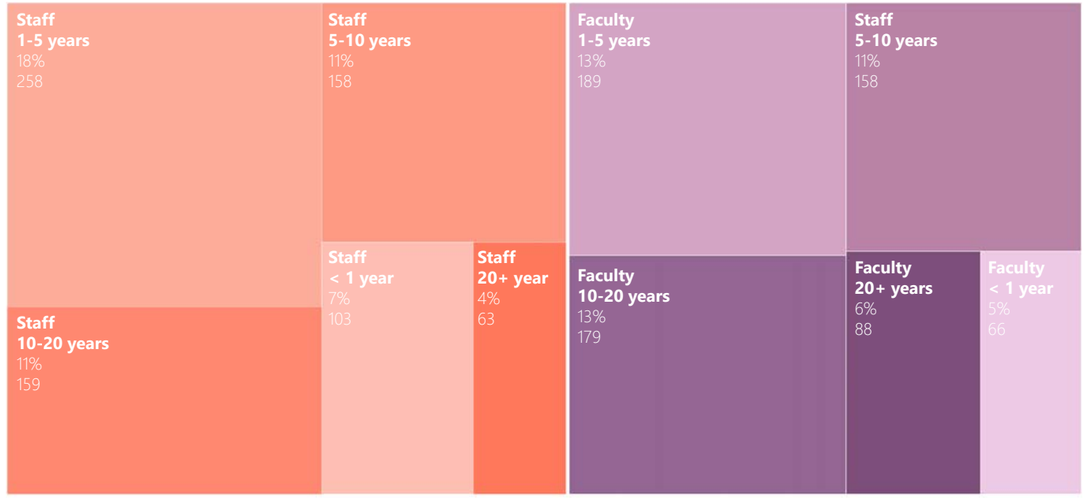


Staff
Faculty

Roughly equal numbers of faculty and staff participated in the survey. The number of responses from different divisions are largely related to the total number of the people in the division. The survey received responses from a diverse group with varying years of experience at Mason, which represent both the experienced and those who offer a fresh lens through which to look at the campuses.

RESPONSES FROM FACULTY AND STAFF

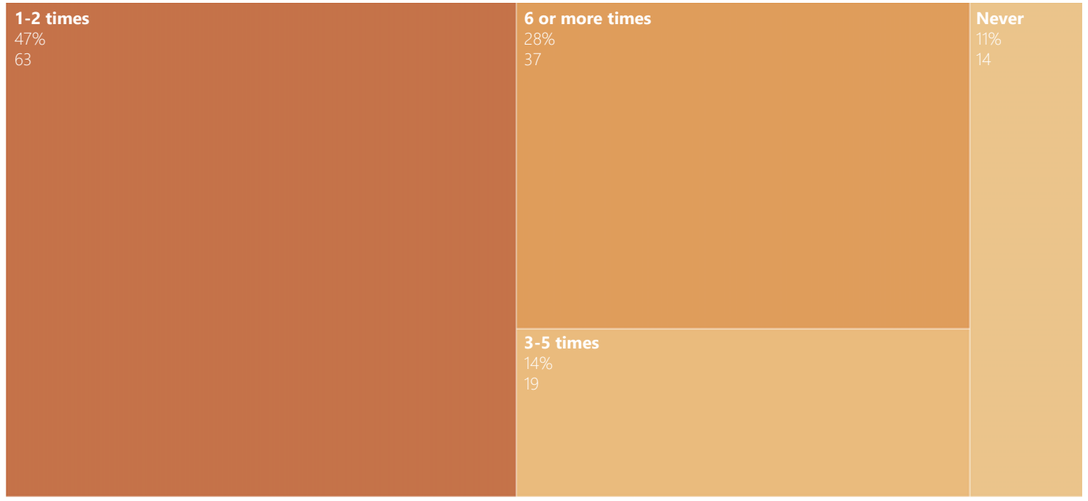
1,421 responses from faculty and staff – *How many years have you worked at George Mason University?*



Staff
Faculty

RESPONSES FROM COMMUNITY MEMBER AND OTHER

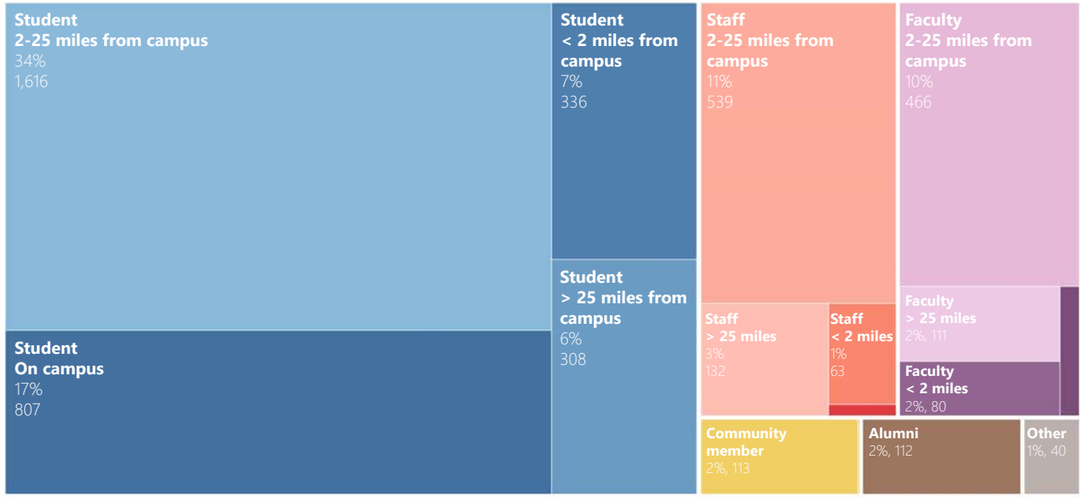
154 responses from community member & other – *How many times do you visit campus in a typical month?*



Half of the community members who responded come to the campus one to two times a month. The other half come more than twice a month.

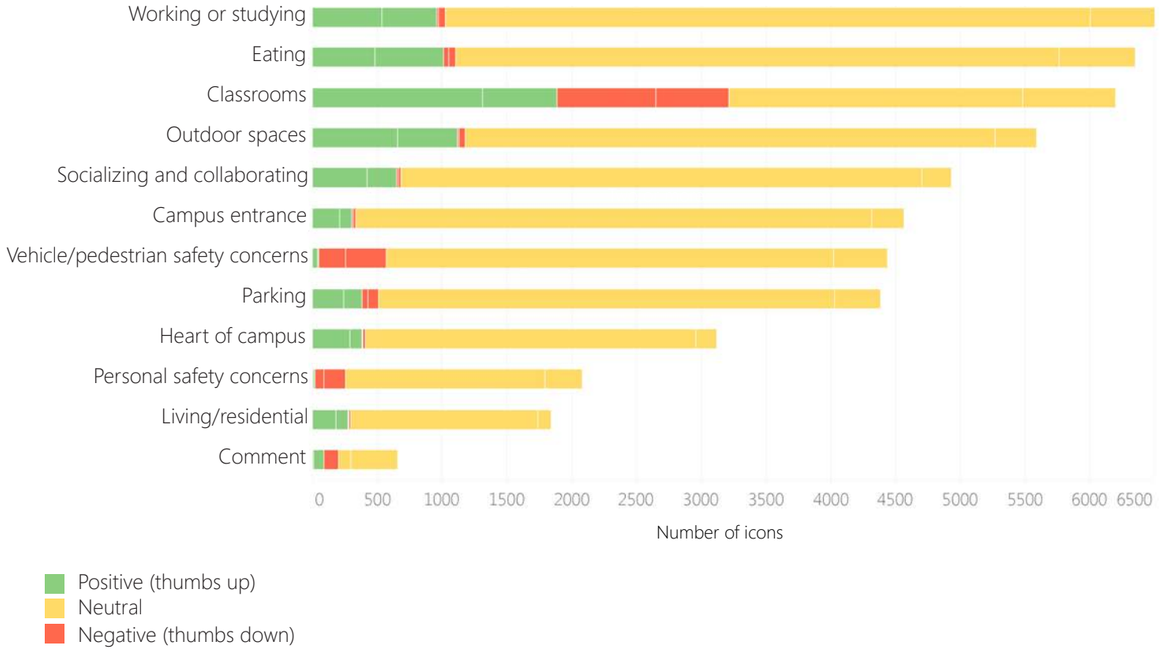
WHERE PEOPLE LIVE

4,488 responses from student, faculty and staff – *Where do you live?*



'Living within 2 to 25 miles from campus' is the most common response. This potentially points to the small number of students who reported living within two miles of the campus may indicate a lack of supply of housing oriented toward Mason students near the campus, although private sector developers are currently developing projects to address demand.

ICONS PLACED
50,684 icons placed

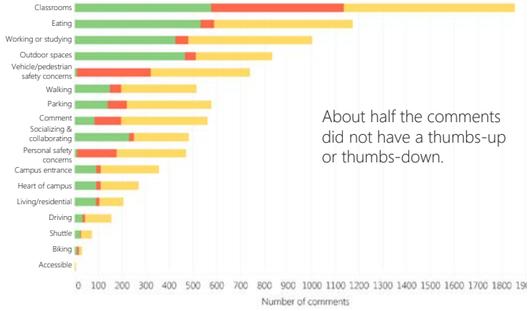


ICONS PLACED

The CoMap survey generated a significant amount of information – almost 51,000 icons. These icons were placed by participants to indicate activities like where they live, where they eat, etc., with the option to give a thumbs up or thumbs down (or neutral). The bar chart to the left shows the number of icons placed for different categories.

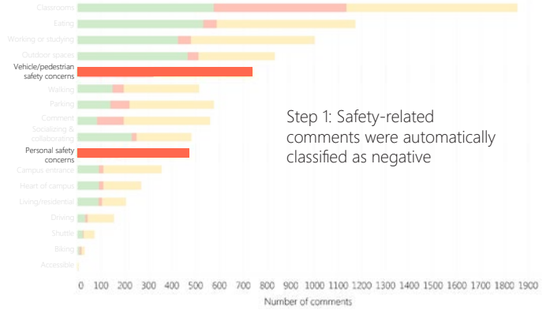
As shown to the left, the most frequent topics were working or studying, and eating. Classroom spaces also received a significant number of comments, addressing both positive and negative feelings. Participants also placed a good number of icons to mark outdoor spaces.

PROCESS

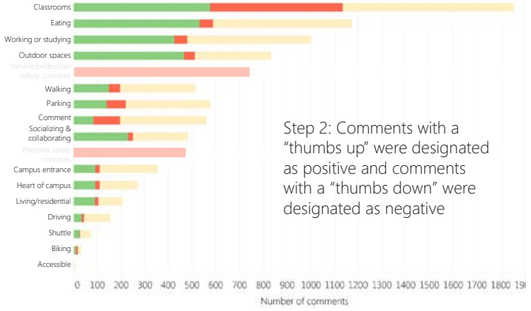


About half the comments did not have a thumbs-up or thumbs-down.

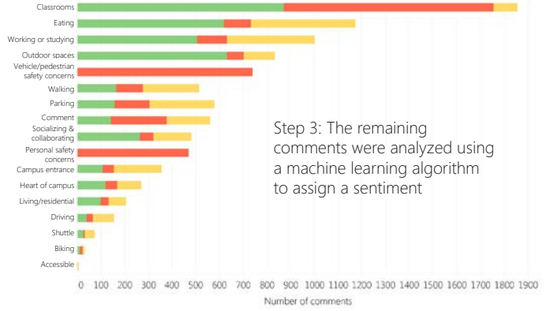
9,275 valid comments received



Step 1: Safety-related comments were automatically classified as negative



Step 2: Comments with a "thumbs up" were designated as positive and comments with a "thumbs down" were designated as negative



Step 3: The remaining comments were analyzed using a machine learning algorithm to assign a sentiment

SENTIMENT ANALYSIS

The 51,000 icons were accompanied by over 9,000 comments. To analyze this data, we used text-mining machine learning algorithms to classify the content of the comments as positive, negative, or neutral. Our method was:

Step 1 – By their nature, the two categories of personal safety and vehicle/pedestrian conflicts naturally highlight problem areas on campus. Given this, we did not apply the sentiment analysis algorithm to these categories, and manually classified them as negative.

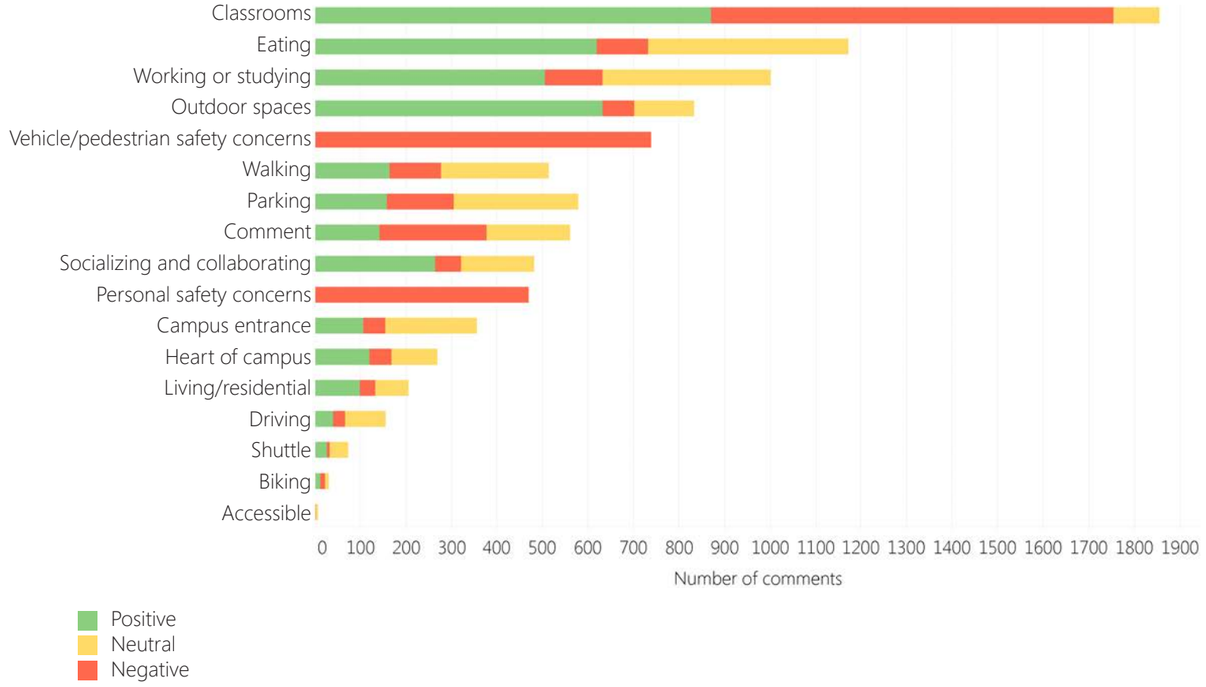
Step 2 – For the other categories, comments which had an accompanying thumbs up were classified as positive. Comments with thumbs down were classified as negative.

Step 3 – We then selected a sample of the remaining comments (those without a thumbs up or thumbs down) and manually provided a positive, negative, or neutral designation so that the sample could be used as a training set for the machine learning algorithm. After fine tuning the training set, we then used the algorithm to classify all remaining comments..

The charts on the following pages show the sentiment of comments from different groups as determined by this analysis.

ICONS WITH COMMENTS (SENTIMENT ANALYSIS APPLIED)

9,279 comments received



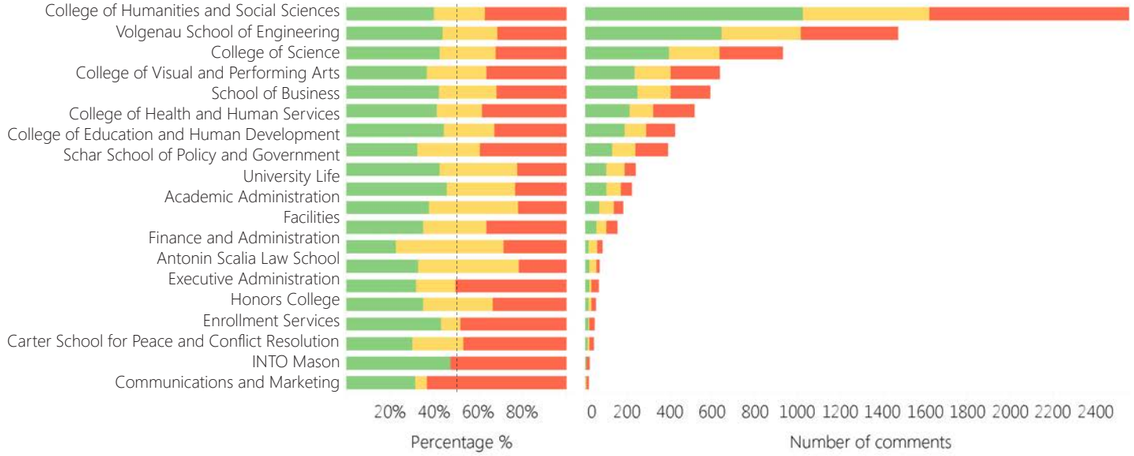
SENTIMENT FROM DIFFERENT GROUPS

Student, faculty, staff and others

In the chart above, the bars to the left show a normalized version of the total number of comments received for each category, and the bars to the right show absolute number of comments. The normalized version allows for a direct comparison between each group, but the absolute number shows the total number of responses which can be helpful in judging the priority of an issue. For example, the comments from community members show a negative sentiment (50%), but the number of participants for the group is relatively small (99 participants providing comments) (this doesn't negate the importance of the respondents' issues but does provide context when judging relative to other topics). Note that the data provides some evidence for the traditional "sophomore slump" with second-year students generally providing more negative feedback, and potentially, some issues with graduate students expressing dissatisfaction with not having graduate student lounge.

SENTIMENT FROM DIFFERENT GROUPS

College and organizations (top 20)

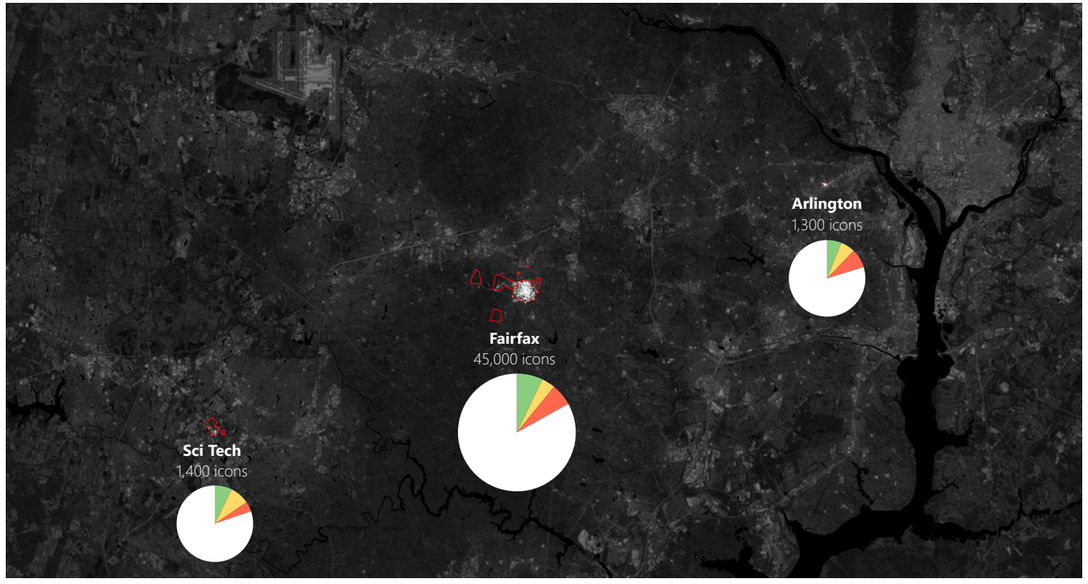


Positive
Neutral
Negative

SENTIMENT BY CATEGORY

This chart shows the breakdown of comments across the various categories. The top chart shows the normalized scores and the bottom chart shows the absolute number. Students are most concerned about classroom space, and tend to express strong feelings, both positive and negative. Social, dining, and outdoor space are also hot topics among students, while community members are most concerned about driving, getting to campus, and parking.

ICONS PLACED FOR THE THREE CAMPUSES

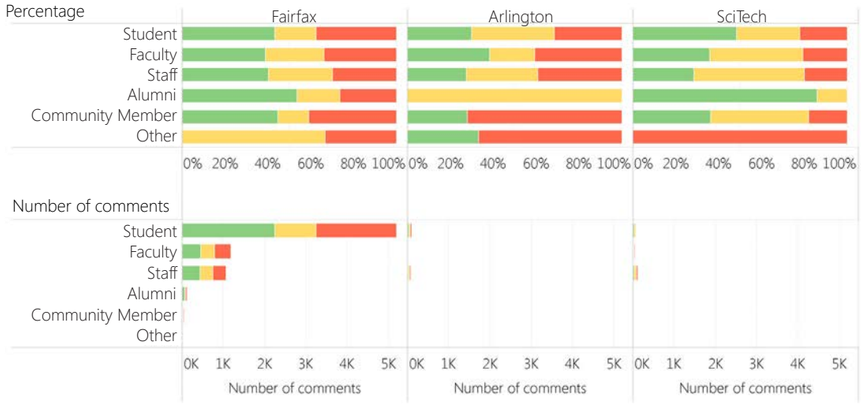


Positive
Neutral
Negative
No comment

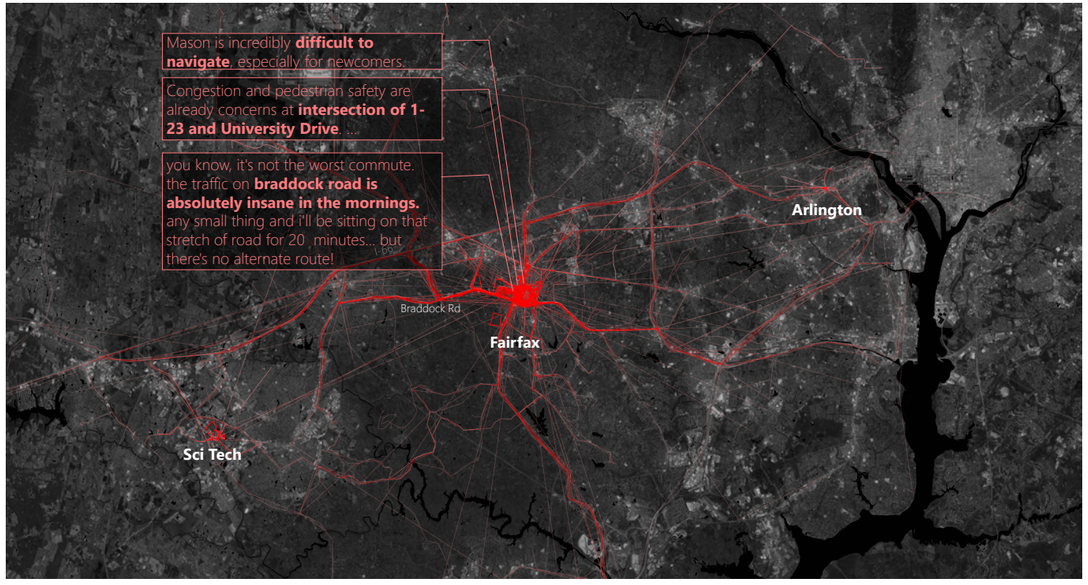
REGIONAL OBSERVATIONS

The CoMap survey helps paint the regional picture across and between Mason's campuses. All three campus received a number of icons and a mix of positive and negative comments. Fairfax received the most icons, with the vast majority of participants identifying it as their primary campus. The Arlington and SciTech campuses received about equal commentary. These rates of participation generally reflect the overall balance, particularly the student population, across the campuses.

The chart below shows the normalized and the actual number of participants for the three campuses. The relatively small number of participants for Arlington and SciTech should be weighed when judging their representative validity.



DRIVING



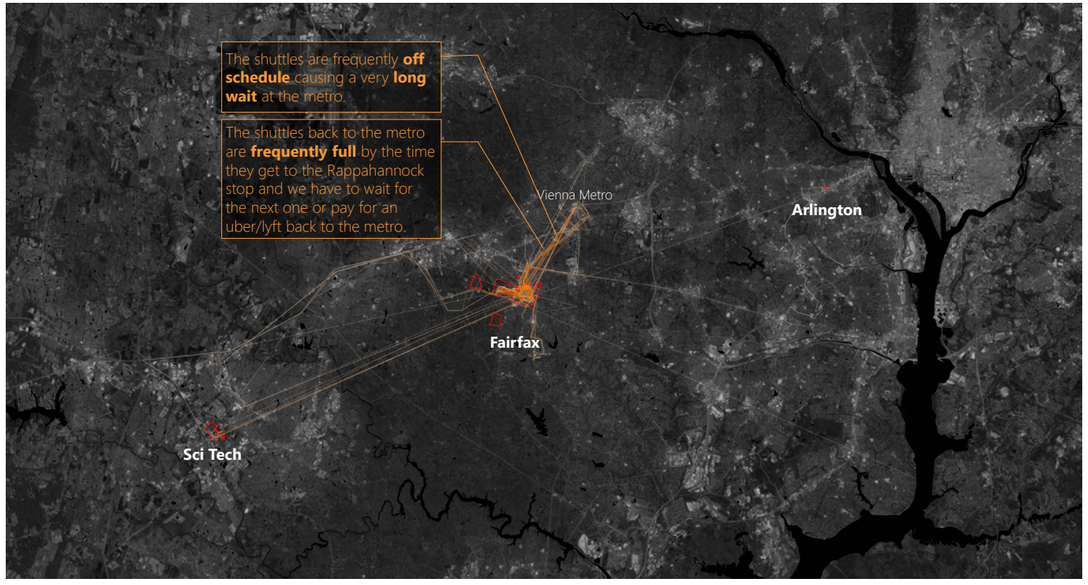
The survey provided an opportunity to better understand the relationship between the campuses. The maps to the left, and on the following two pages, illustrate the aggregated data of how people get to and from each campus, as well as between the campuses. Each line was drawn by a participant to show their main route of driving, shuttling, and biking. When aggregated together, a dark line indicates that a route is important to many people, while the thinner lines represent routes of fewer people. Some representative comments from participants are shown on the maps.

In the map to the left, the red lines are the driving routes drawn by survey respondents. One notable dynamic is that very few participants drive between the campuses; the data instead indicates that people mostly drive from where they live to a specific campus.

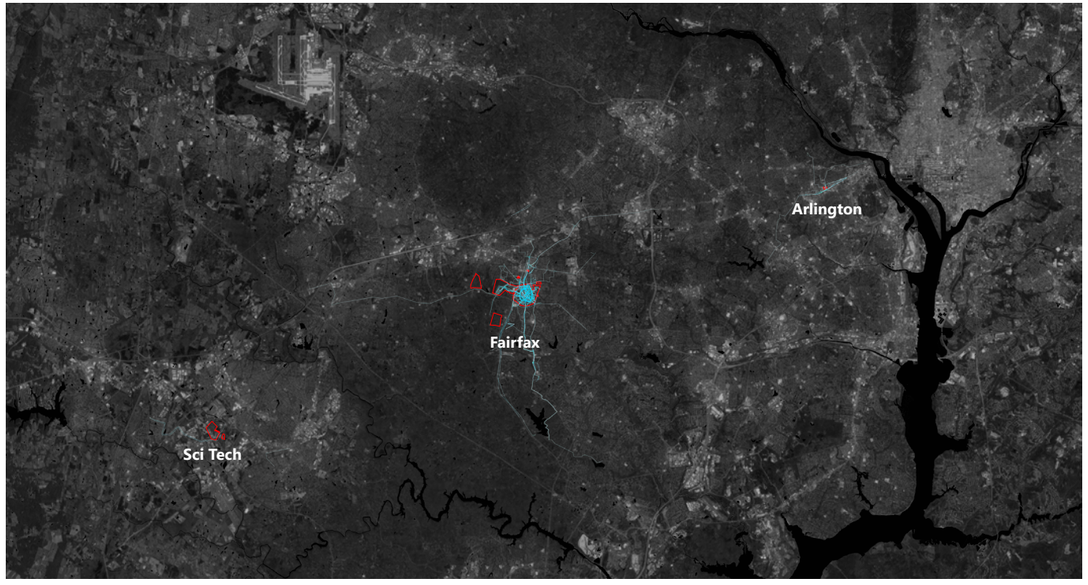
On the next page, increased shuttle service frequency between Fairfax and Arlington was viewed as positive, although several comments weren't necessarily about inter-campus shuttles but instead focused on the connection between the Fairfax campus and the Metro system.

Bicycling is a crucial component of a sustainable campus. The map on the following page suggests that this dynamic today is fairly localized and contained to the Fairfax campus, but is a topic the plan can look to promote.

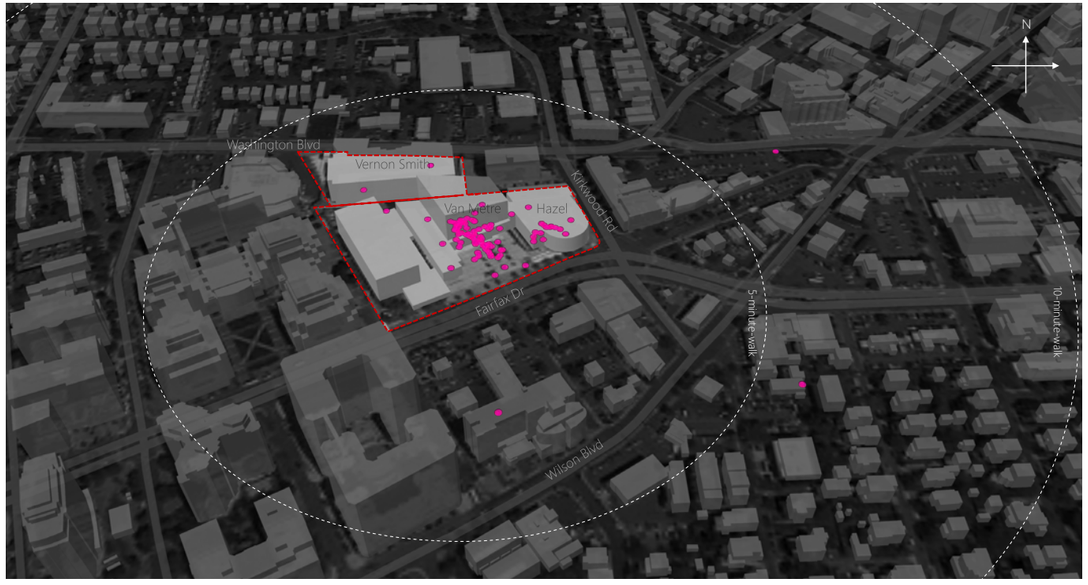
SHUTTLE



BIKING



HEART OF CAMPUS



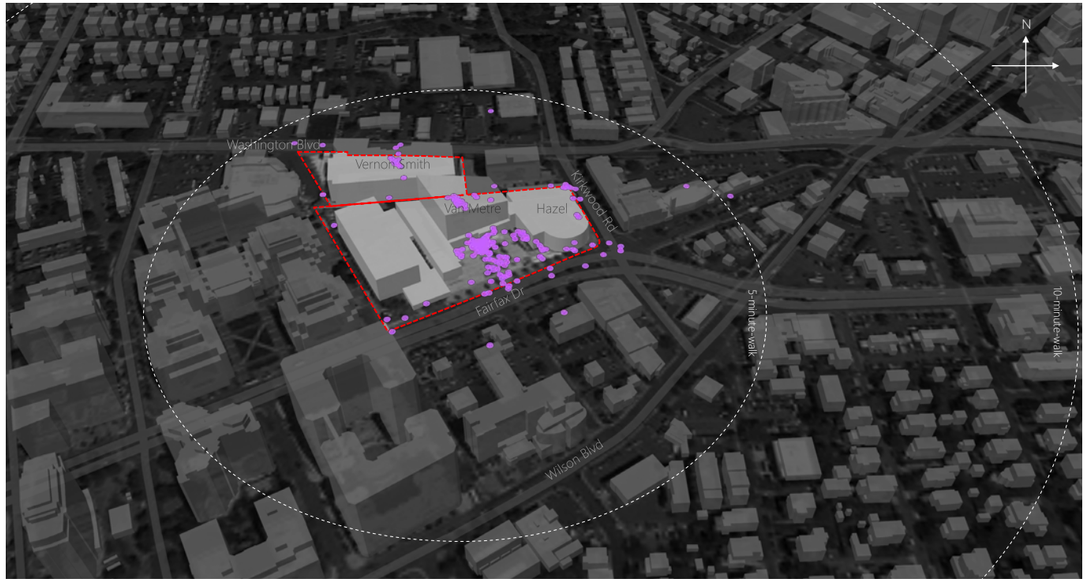
The arrival plaza and the front entryway of Van Metre Hall are identified as the heart of the Arlington campus. Additionally, some law students view the Law Library as the heart of campus.

ARLINGTON CAMPUS

The Arlington campus is viewed very differently from the other two campuses because of its compactness and urban setting. Key findings of the CoMap survey are as below.

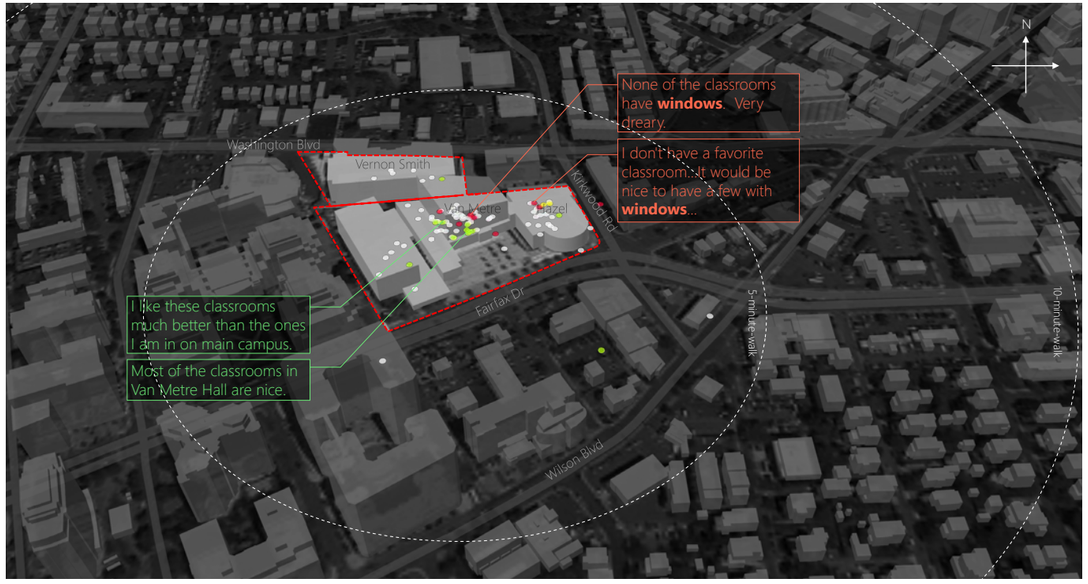
- The front plaza is perceived as the main entrance, the major open space, and the heart of campus.
- Comments on classroom space are generally positive.
- People in general work or study on the Arlington campus, but go off-campus to take advantage of local restaurants, and thus eat and socialize in surrounding private venues. The campus' urban context is therefore seen as a positive by respondents.
- Vehicles access the campus from both the front and back. The vehicular traffic at the back is mostly to access the parking garage.
- Pedestrians predominately use the sidewalks along Fairfax Drive and the arrival plaza. Because of high traffic volumes on Fairfax Drive, vehicle-pedestrian conflicts become a safety concern for people.
- For parking, two key concerns expressed by respondents are the cost of parking and finding the entrance to the garage via Founders Way.

CAMPUS ENTRANCE



For the majority of respondents, the arrival plaza is the front door of the campus. It is also notable that a number of people identify the back side as the entry to campus, mostly due to where they park.

CLASSROOMS

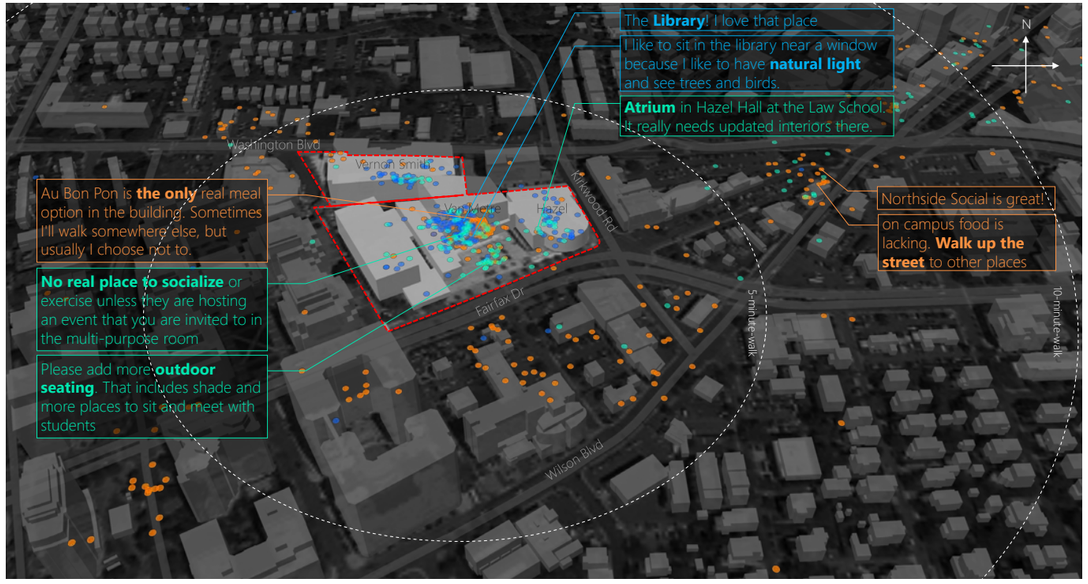


- Positive
- Neutral
- Negative
- No comment

Comments on classroom space are generally positive, although some people raised concerns over a lack of natural light in some classrooms.

EATING, WORKING, STUDYING, AND SOCIALIZING

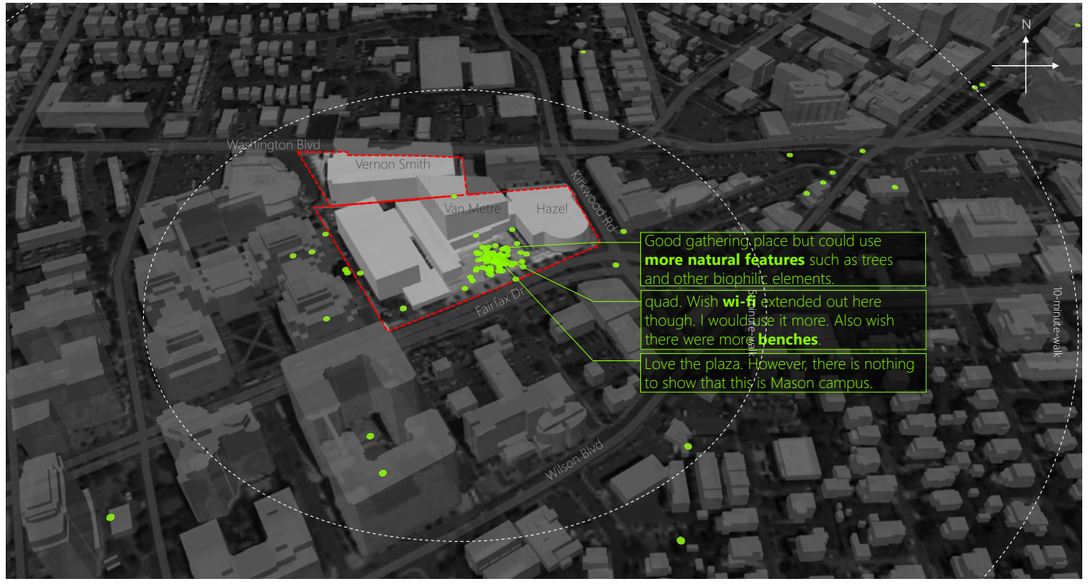
By category



- Eating
- Working or studying
- Socializing and collaborating

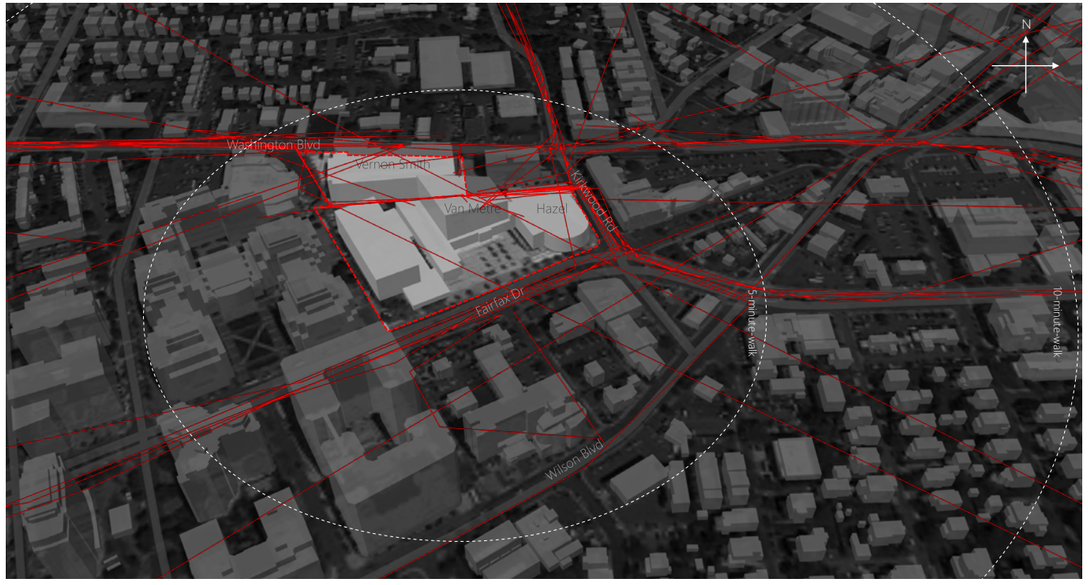
Located in an urban context, the pattern for eating, working, studying, and socializing is very different from the other two campuses. People in general work or study on the Arlington campus, but go off-campus to take advantage of local restaurants, and thus eat and socialize in surrounding private venues. The campus' urban context is therefore seen as a positive by respondents.

OUTDOOR SPACES



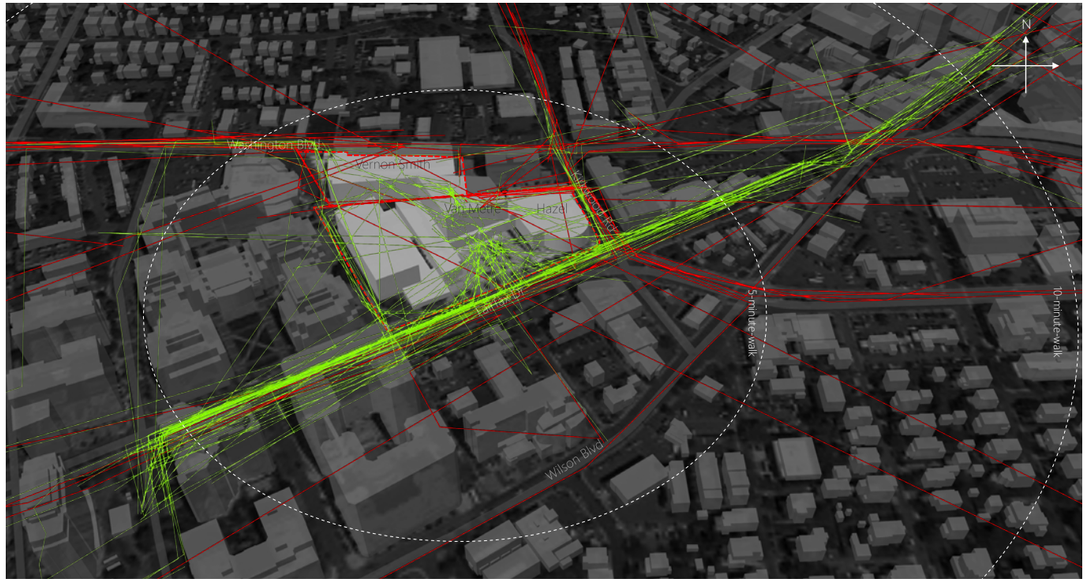
The arrival plaza is viewed as the most important outdoor space on the Arlington campus. Respondents would like more trees, benches, and WiFi, and also suggested the plaza could help establish more of a unique identity for the Arlington campus.

DRIVING



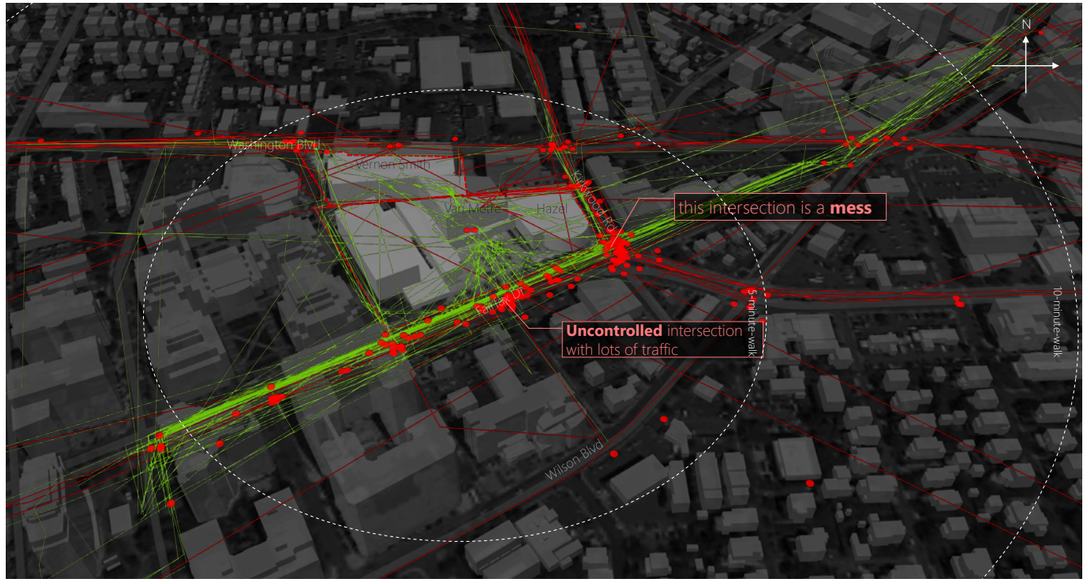
Although most people view the arrival plaza as the front door of the Arlington campus, respondents drive to the campus from both Fairfax Drive and Washington Boulevard. Access to the garage makes Founders Way, the alley at the center of the campus, the busiest route for cars.

WALKING



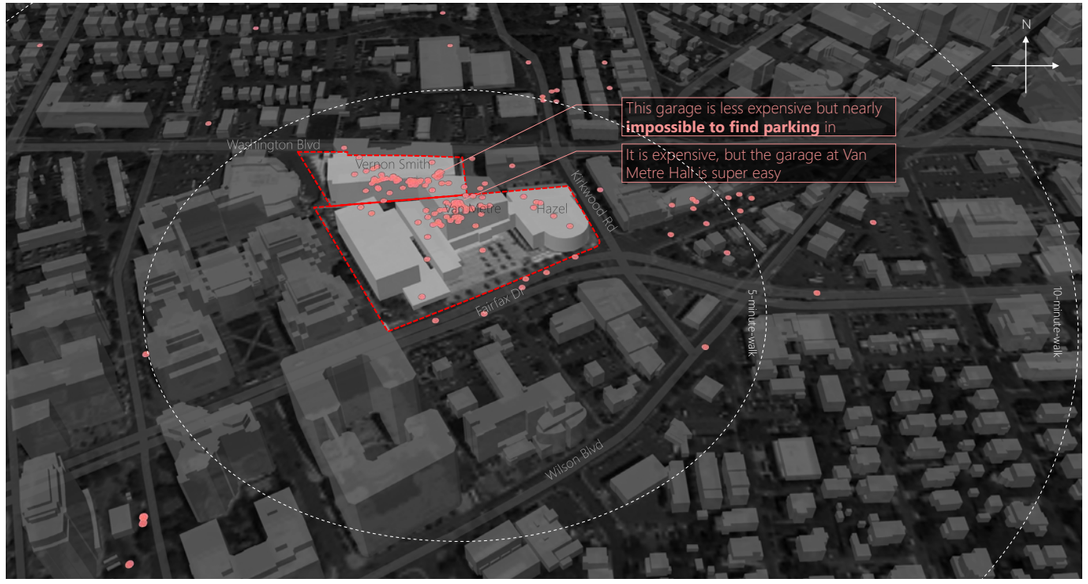
Pedestrians predominately use the sidewalks along Fairfax Drive and the arrival plaza.

VEHICLE/PEDESTRIAN SAFETY CONCERNS



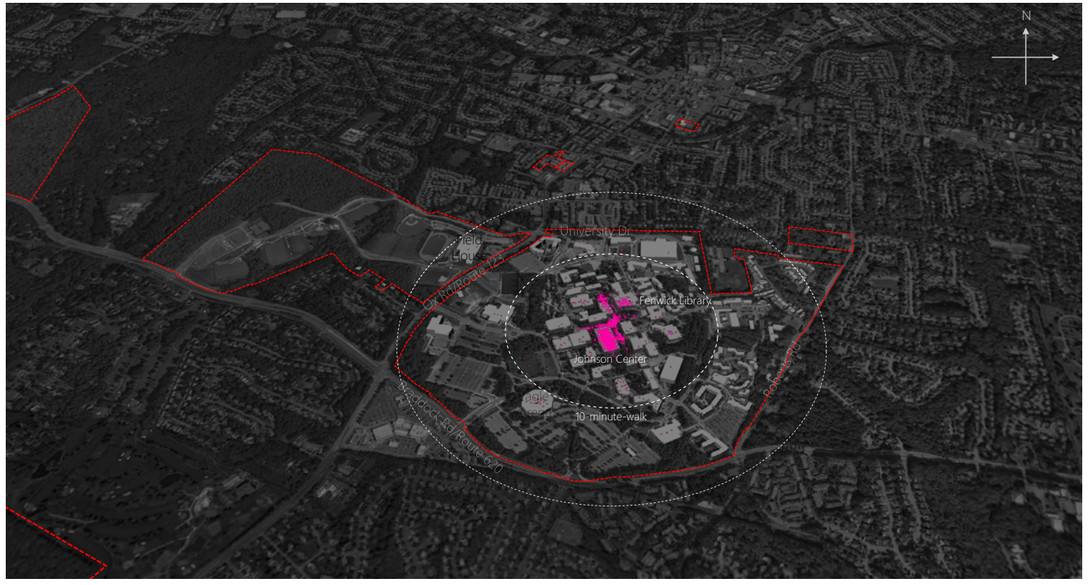
For the Arlington campus, people's safety concerns are largely associated with vehicle-pedestrian conflicts, especially along Fairfax Drive. Fairfax Drive is a relatively busy road, with multiple un-signaled intersections, which makes crossing a challenge for pedestrians. The intersection of Fairfax Drive, Kirkwood Road, and 10th Street is complicated and respondents find it extremely difficult to cross.

PARKING



Two key concerns expressed by respondents are the cost of parking and finding the entrance to the garage via Founders Way tricky to access.

HEART OF CAMPUS



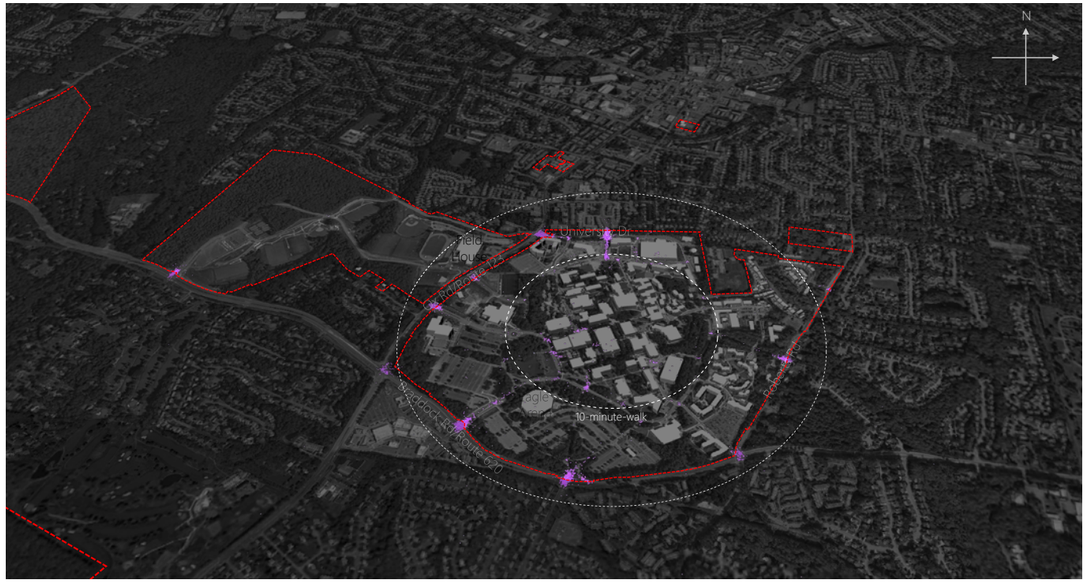
The survey asked respondents the open-ended question of where they believe the heart of the campus is. The pink dots show the responses to this question. The Johnson Center and its surrounding open space are clearly perceived as the heart of campus by the majority of respondents.

FAIRFAX CAMPUS

Key findings for the Fairfax center include:

- The Johnson Center is the heart of the campus. It is not only the geometric center, but also the intersection of various uses like eating, working, studying, and socializing. People view it as an important place to meet friends and collaborate with others.
- Most learning activities happen along a north-south academic corridor, which runs from the Peterson Hall in the north down to the Nguyen Engineering Building in the south. Newer active learning classrooms are viewed very positively, while older classrooms, especially those in basements or without access to natural light, were viewed negatively.
- The Fairfax campus has important open spaces that are appreciated by a number of people. Mason Pond and the series of small quads along the north-south academic corridor are the most popular. To many respondents, trees, water, and other natural resources are highly valued, and create a beautiful, enjoyable, and sustainable campus.
- Building condition is a key issue, and was mentioned repeatedly. The newly-constructed buildings are toward the periphery of the campus, with the more aged academic buildings at the center. The majority of concerns focus on lighting, ventilation, and other deferred maintenance issues.
- Fairfax is a ring-road campus, with multiple entrances. In general, parking and vehicular traffic are at the periphery, providing the opportunity for the inner core to be more pedestrian-friendly. However, the relatively complicated intersections along Patriot Circle make pedestrian crossings a crucial safety concern for many respondents. Other personal safety concerns focused primarily on campus lighting.

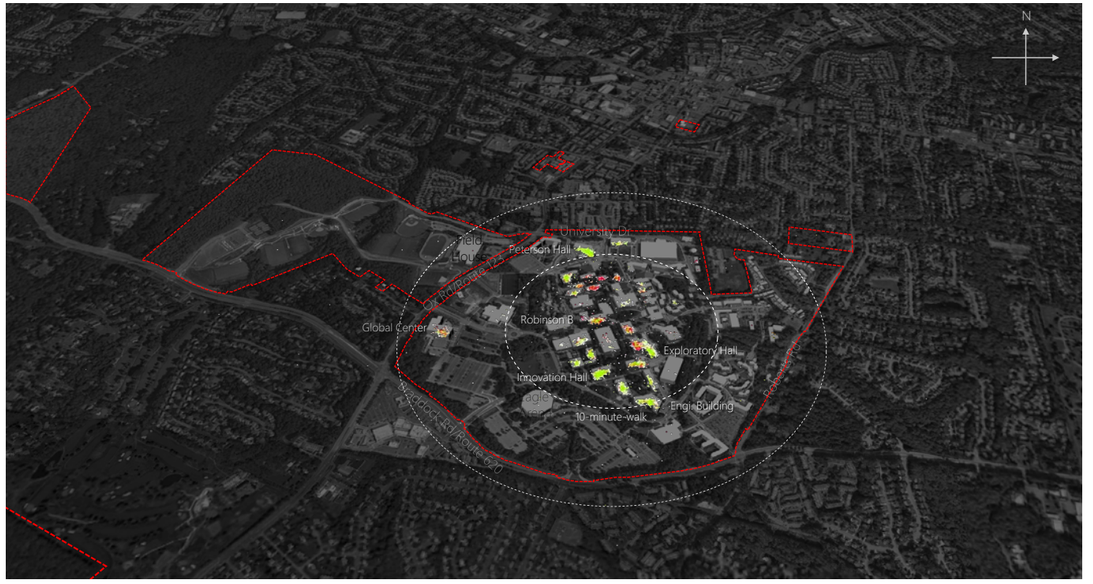
CAMPUS ENTRANCE



The purple dots on the map indicate where people believe the "front door" of the Fairfax campus is. There are more than ten entry points identified by people and most of them are widely used. Based on the number of dots aggregated, the three most frequently used entrances are: in the north at University Drive (the campus' primary connection to downtown Fairfax), in the south at Mattaponi/Nottoway River Lanes and Braddock Road, and the intersection of Roanoke River Road and Braddock Road (which connects campus to University Mall).

The distribution of entry traffic helps to minimize traffic impact and allows people to enter the campus in the way that makes the most sense to them. At the same time, it is also crucial to keep the entrance experience accessible and clear for first-time visitors.

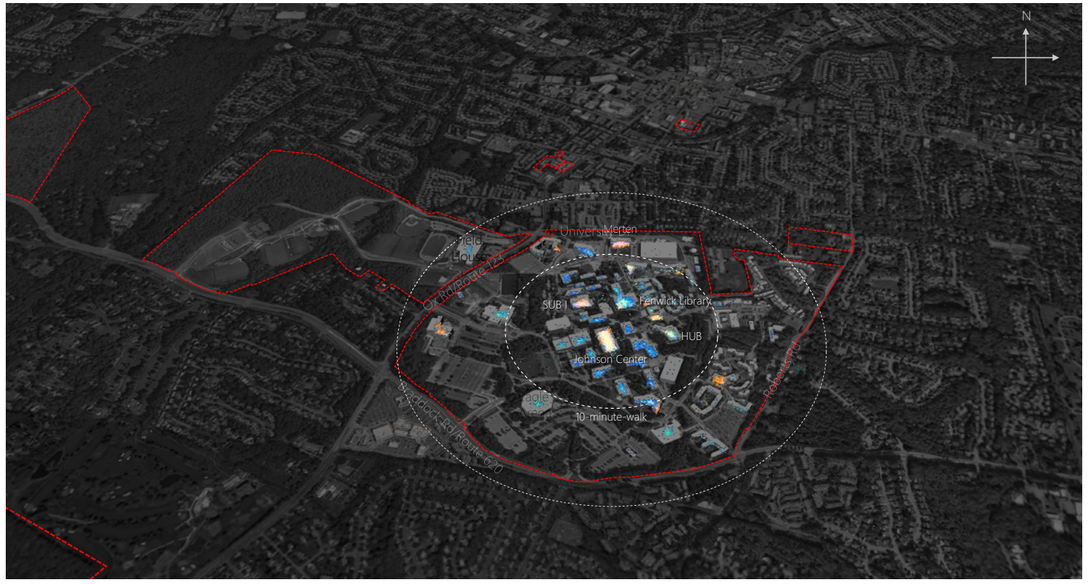
CLASSROOMS
By sentiment



- Positive
- Neutral
- Negative
- No comment

The green dots on the map show where respondents feel positive about classrooms, and the red dots indicate where concerns were expressed in comments. As shown in the map, the classroom activities are concentrated in a south-north pattern from Peterson Hall to the Nguyen Engineering Building. Respondents' attitudes toward the buildings are largely associated with their age and maintenance concerns, with the older facilities being seen as negative. The new active-learning classrooms and modernized learning environments have been particularly well-received.

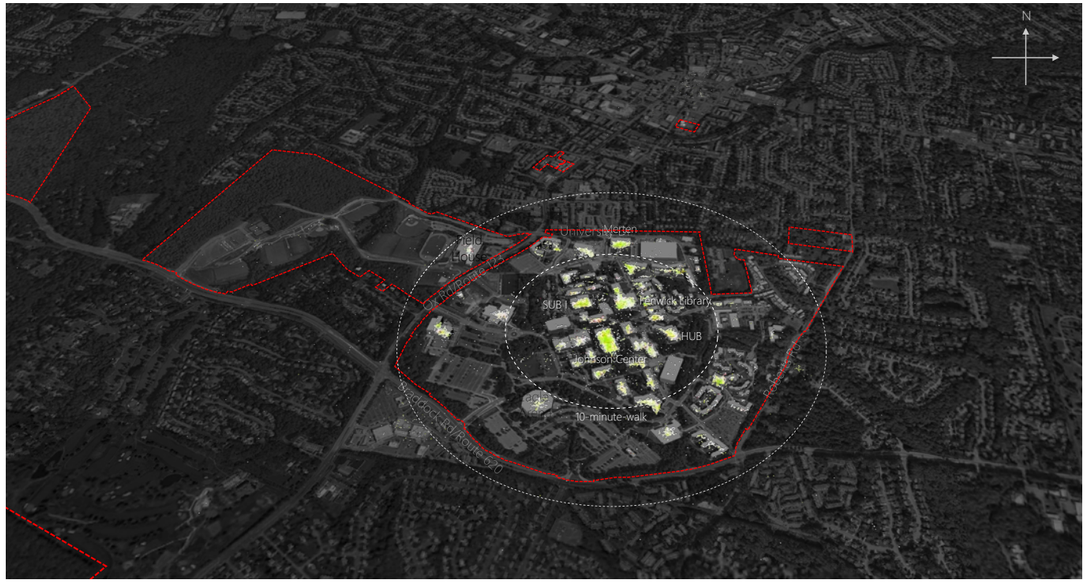
EATING, WORKING, STUDYING, AND SOCIALIZING
By category



- Eating
- Working or studying
- Socializing and collaborating
- ○ Eating + working or studying + socializing and collaborating

Above is an aggregate map of several components of the student's social experience. Orange dots are where respondents indicate they eat, blue dots are where respondents indicate they work or study, green dots are where respondents indicate they socialize, and white dots show all three activities. The Johnson Center and Fenwick Library are two hubs for the student experience. SUB I and The Hub are two other important buildings that play a part in student life.

EATING, WORKING, STUDYING, AND SOCIALIZING
By sentiment



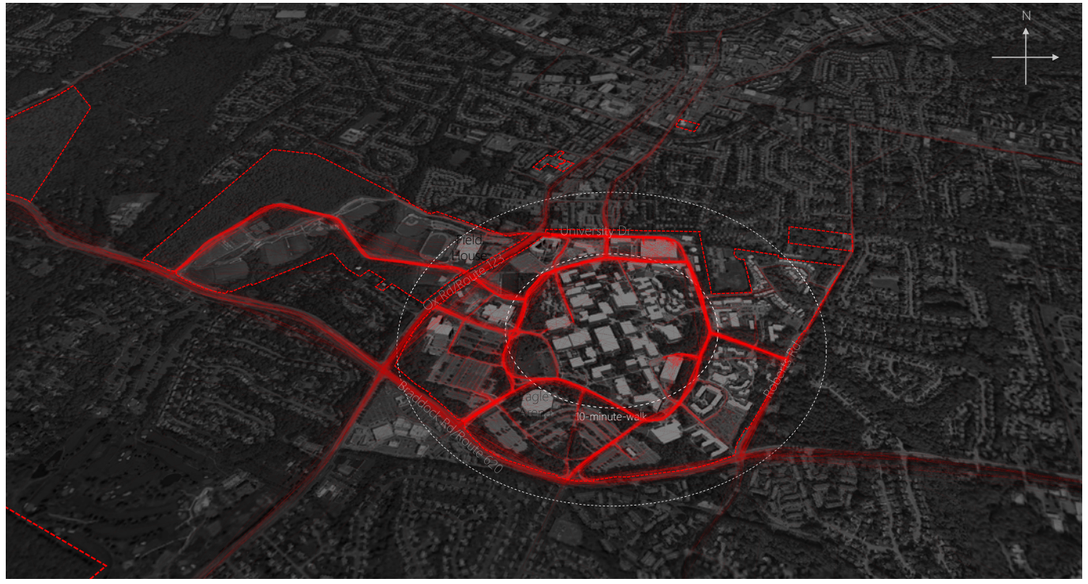
- Positive
- Neutral
- Negative
- ○ No comment

This map shows the same dot pattern, but with dots colored by sentiment. Green dots are where respondents provide positive comments, yellow dots are neutral comments, and red dots are negative comments. Most of the comments are positive, especially for the Johnson Center, the Fenwick Library, and SUB I, where a lot of collaboration and activities take place.

OPEN SPACE

The survey suggests two open spaces have the most impact and are most frequently enjoyed. One is Mason Pond, which is a beautiful area that is loved by many people as shown in the comments—but is also located on the periphery of the ten-minute walk circle. The second is the series of small quads along the south-north corridor, from the courtyard south of Krug Hall down to the Innovation Food Forest, next to the Johnson Center. These spaces are located at the center of the campus, and are surrounded by academic activities. (Note that the ongoing construction work did impact people's responses.) In general, ponds, trees, grass and other landscape elements are valued and welcomed by the Mason community, and providing diverse open spaces as part of the core campus experience will be a key component for the master plan.

DRIVING



The Fairfax campus, in general, is a ring-road campus. Most of the traffic is on Patriot Circle, on the Braddock Road at the south, Route 123, and Campus Drive which connects to the west campus.

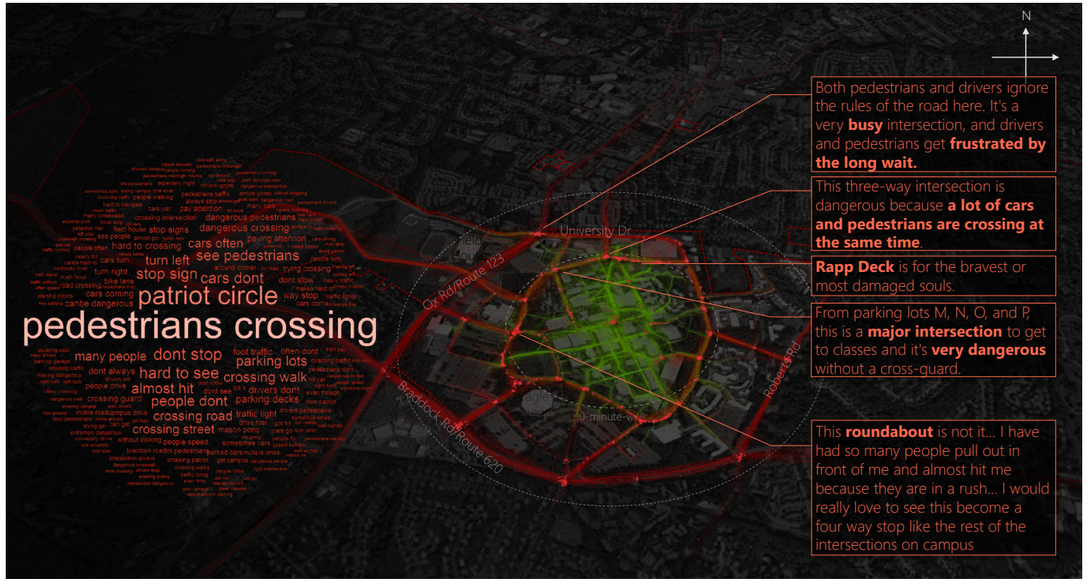
CIRCULATION AND SAFETY

The Fairfax campus has a tremendous diversity of modes of travel, from walking, cycling, and driving, to shuttles, carts, and scooters. In addition, automated delivery robots are in competition with these various modes of transportation for circulation space. Fairfax is a ring-road campus, where vehicular traffic and parking are largely located at the periphery area, allowing the center part of the campus to be largely pedestrian friendly. Although this organization has greatly separated vehicular traffic from foot traffic, the occasional penetration of cars (mostly to parking facilities), as well as the numerous complicated intersections on the ring, makes pedestrian crossing a reported challenge. These crossings, along with some lighting concerns, represent the biggest reported safety issues for the campus.

WALKING

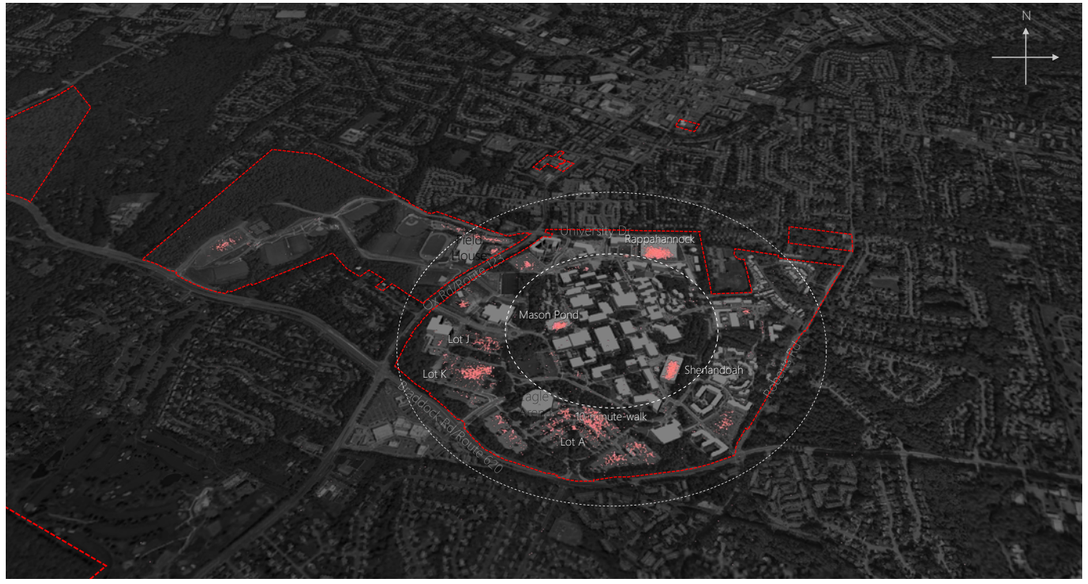
Patriot Circle forms a ten-minute walk circle zone that is nearly vehicle free. Two important walking routes, one south-north connecting Peterson Hall with the Nguyen Engineering Building, and one east-west from the Mason Pond to The Hub, intersect at the Johnson Center.

VEHICLE/PEDESTRIAN SAFETY CONCERNS



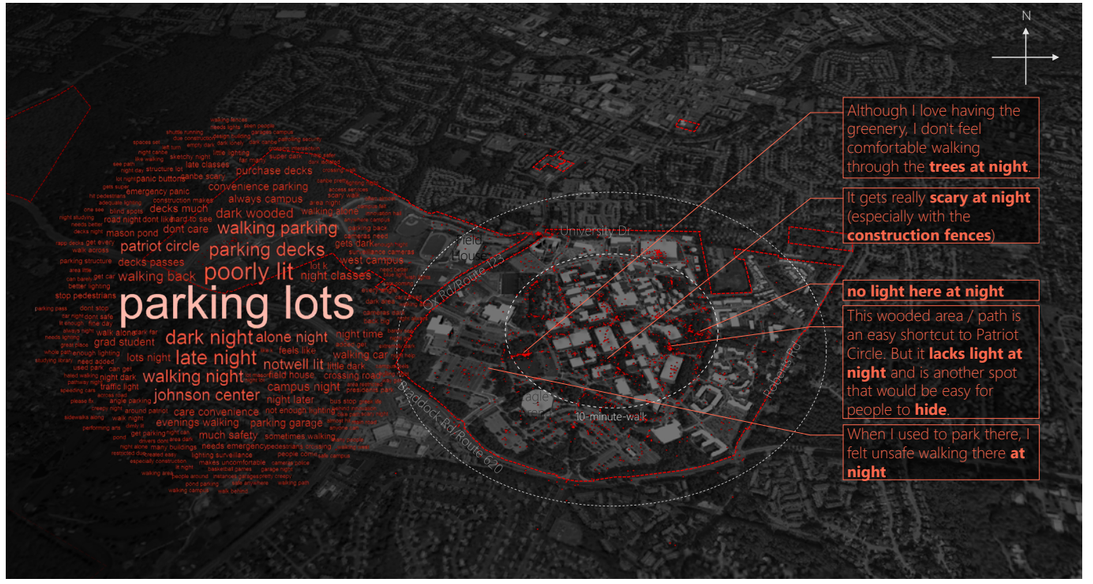
Points where the driving and walking patterns intersect are where respondents reported safety concerns. The relatively large number of intersections on Patriot Circle, along with their complexity (like roundabouts, three-way intersections, etc.), makes them potential conflict points for pedestrians, bicycles, cars and scooters.

PARKING



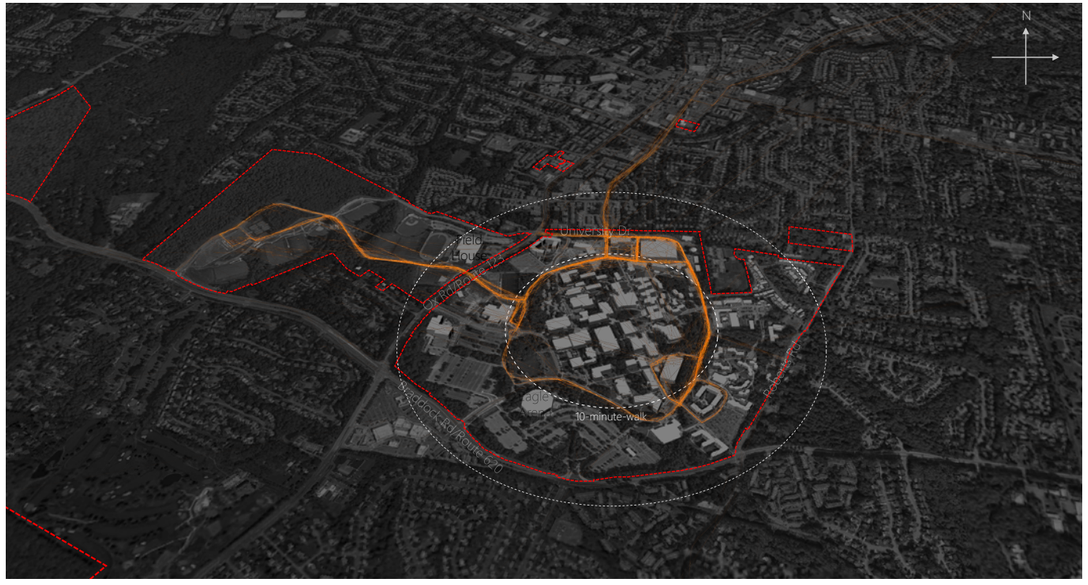
Mason has a number of parking lots and parking decks that are distributed evenly around the campus core. Pedestrian flows into the campus core therefore come from multiple directions. In general, parking is not perceived as a major challenge for the campus.

PERSONAL SAFETY CONCERNS



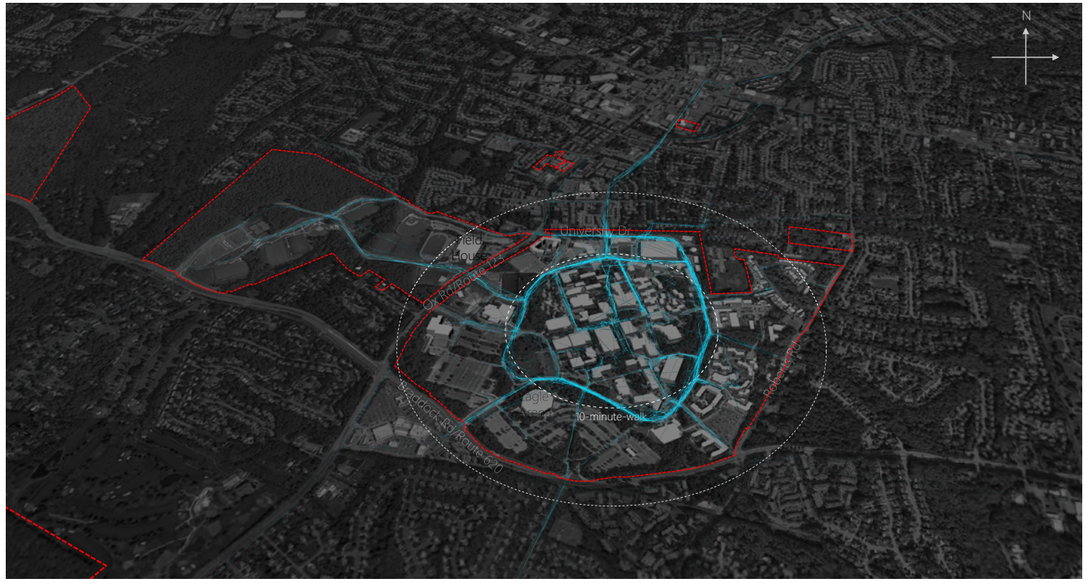
Concerns about personal safety mostly revolve around a lack of lighting and moving around campus at night, particularly when walking across parking lots.

SHUTTLE



The orange lines show how use of the Mason shuttles is reported by participants. The routes to the west campus and connecting to the Metro are utilized most often.

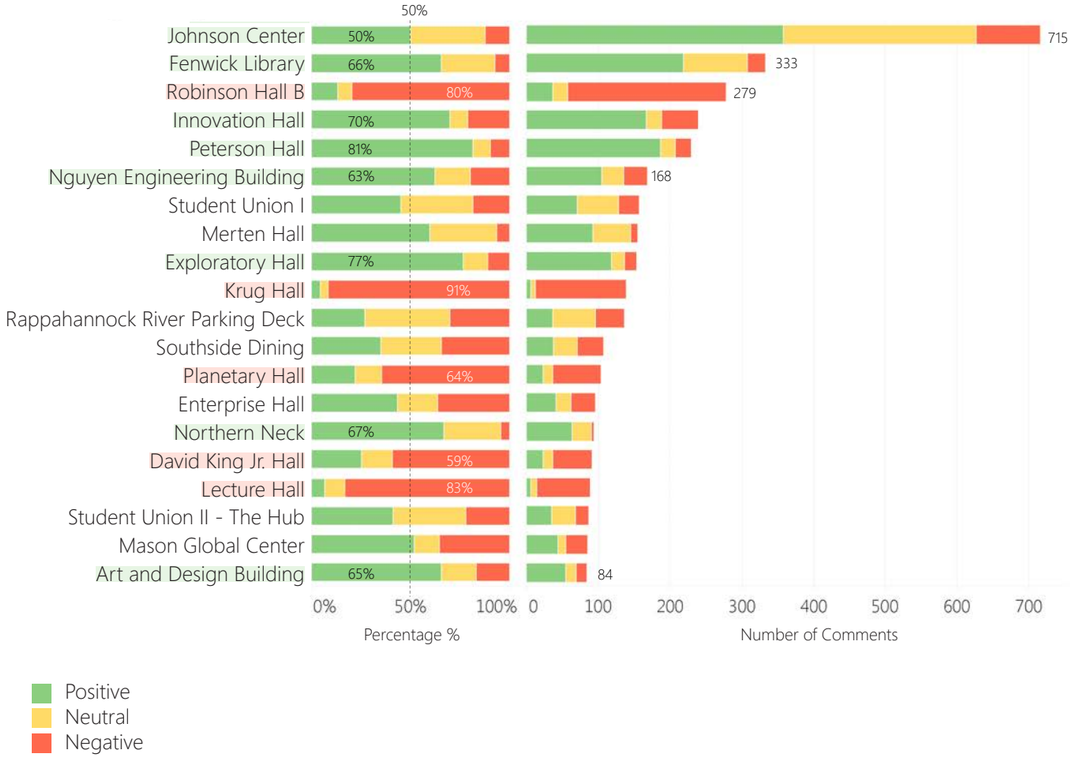
BIKING



Cyclists also actively use Patriot Circle, which has dedicated bike lanes or is marked as a shared road around the campus core. In addition, cyclists also enter at the north part of the ten-minute walk circle, through informal paths that are not marked for bikes.

SENTIMENT FOR BUILDINGS

"Top" 20 building received the most comments



Top 20 based on the number of comments classified for sentiment analysis.

COMMENTS ON BUILDINGS

The abundant data received for Fairfax enabled a more detailed look at individual buildings.

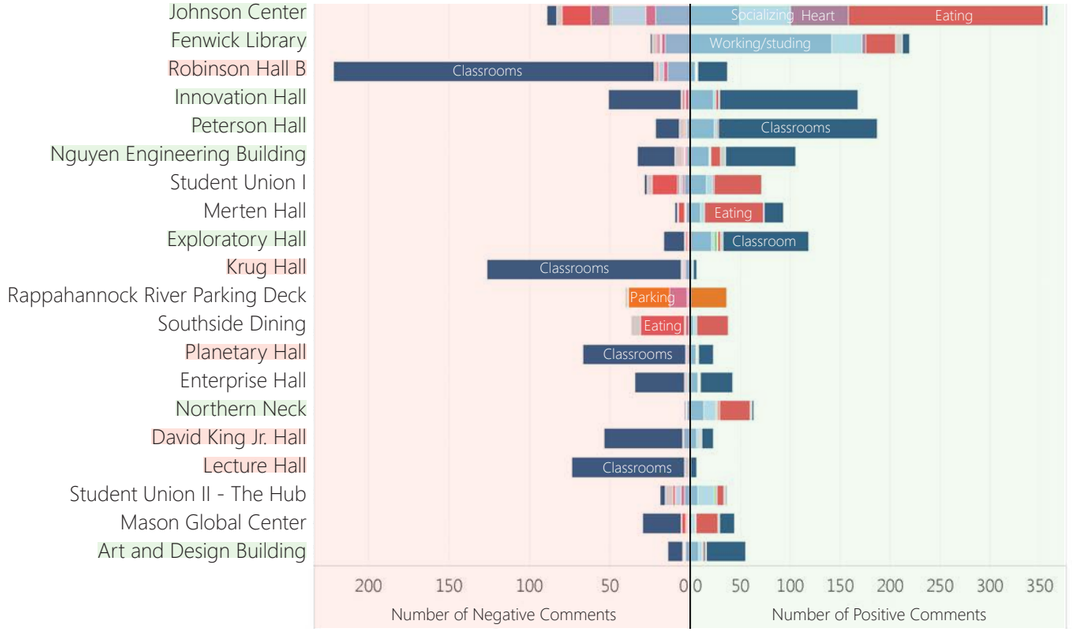
We assigned comments to a specific building by geolocating the comment's associated icon relative to our GIS dataset of building footprints. To the left is a chart showing the 20 buildings that received the most comments. The right bars show the absolute number of comments received, and the left bars show the normalized versions of this data.

Fairfax is the most mature of the three campuses with buildings' conditions varying widely. In general, respondents' feedback is closely associated with the age, configuration, and overall condition of each building. Older, smaller spaces without natural light which are in poor condition tend to get negative comments, and modern spacious facilities are positively reviewed by most people (and in particular active learning spaces are well-perceived by respondents).

As shown in the left chart, the Johnson Center and the Fenwick Library are the two buildings with the most student activities and are largely positively reviewed by respondents. Robinson Hall, on the other hand, has almost 80% of its comments marked as negative. Peterson Hall and the Nguyen Engineering Building are two newer buildings that are well-liked by many. Innovation Hall, which is not as new as Peterson and Nguyen, is appreciated for the third-floor renovation which provided quality active learning spaces.

SENTIMENT FOR BUILDINGS BY CATEGORY

"Top" 20 building received the most comments



Classrooms
Working or studying
Socializing and collaborating
Eating
Live/residential
Heart of campus
Outdoor spaces
Walking
Biking
Accessible
Campus Entrance
Shuttle
Parking
Driving

Top 20 based on the number of comments classified for sentiment analysis.

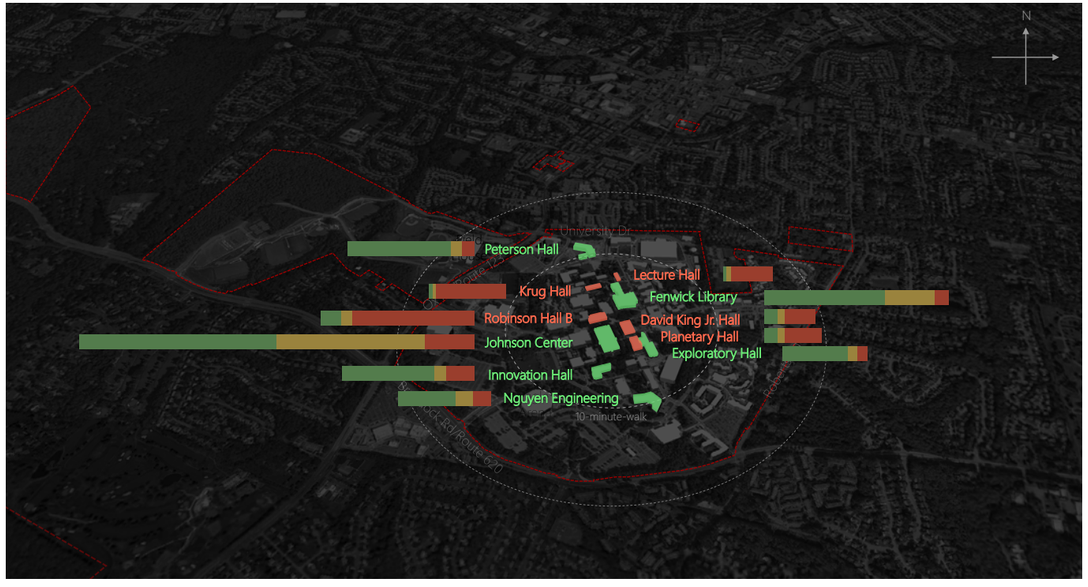
The analysis also looked at the relationship between buildings and the different use categories. The chart to the left shows the positive and negative comments broken down by use category for each building. The bars to the left of the center line are negative comments, and the bars to the right are positive comments.

Classrooms and eating space are the two categories about which respondents expressed the most strong feelings.

For food, the key themes are diversity of choices, availability of certain brands, taste, and price. For classrooms, key themes are natural lighting, room size, active learning capabilities, accessibility, and noise level.

Selected representative and substantive comments for each of these buildings are shown on the following pages. More comments can be found in the Appendix.

KEY BUILDINGS FROM COMMENTS

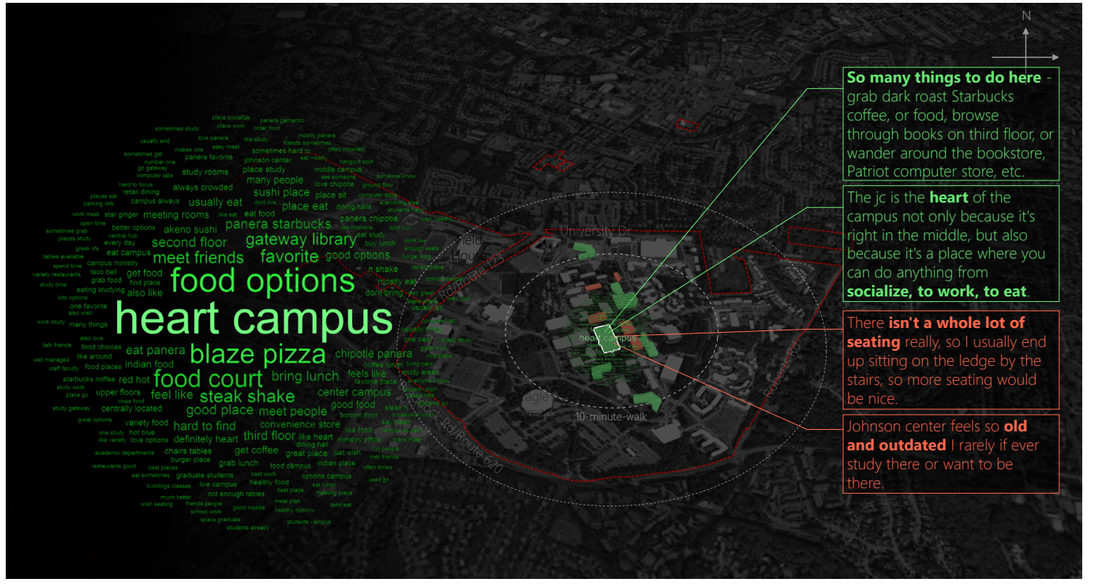


Positive
Neutral
Negative

Above is a map showing the buildings with the most comments received. The bars show the breakdown of comments received, with green representing positive feedback, red representing negative feedback, and yellow for neutral comments. The color of the buildings on the map illustrate whether the building received more positive or negative comments. Note how the buildings with the most comments are concentrated along the north-south corridor of academic activity.

Bar shows the number of comments with different sentiment for the building.

JOHNSON CENTER



Positive
Neutral
Negative

The Johnson Center is largely viewed as the heart of campus, and people most frequently commented on food. Respondents generally like the active environment which is condusive to meeting people. There are also some concerns about the building's age.

Same as the bars on the left page, the bar under the title (the building name) shows the number of comments with different sentiment for the building.

FENWICK LIBRARY

- Positive
- Neutral
- Negative

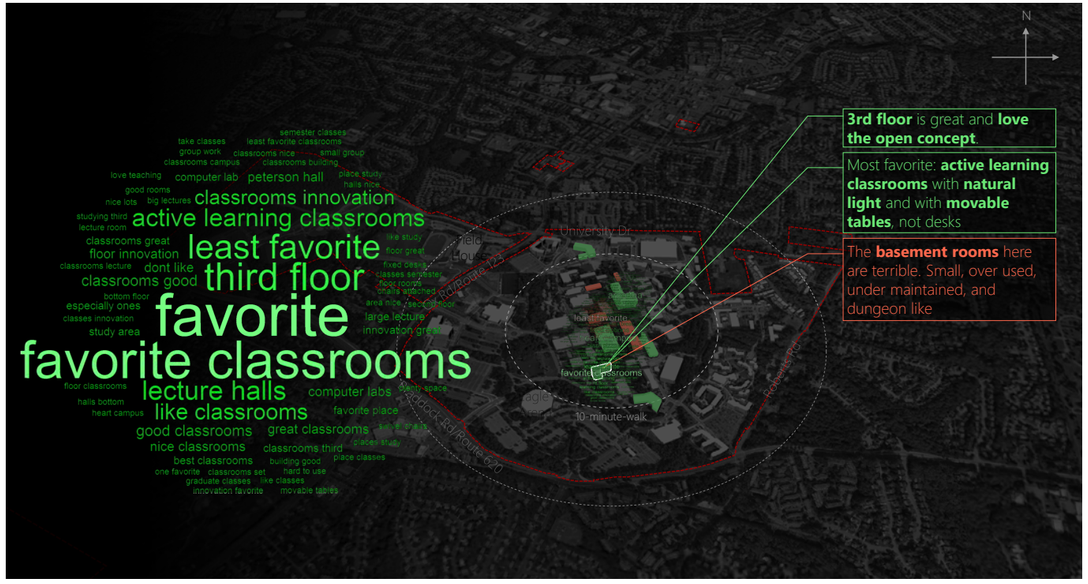
The MIX, the newly renovated addition to the Library, is welcomed by respondents. People speak highly of its collaboration and study space. Food, again, is a hot topic. It is also interesting to see how people frequently mentioned the Johnson Center when commenting on Fenwick Library.

ROBINSON HALL B

- Positive
- Neutral
- Negative

Although located at the center of campus close to everything, this outdated building and the small, uncomfortable classrooms which lack windows make Robinson Hall B the least favorite building for many people. This vindicates the decision to demolish the building.

INNOVATION HALL



- Positive
- Neutral
- Negative

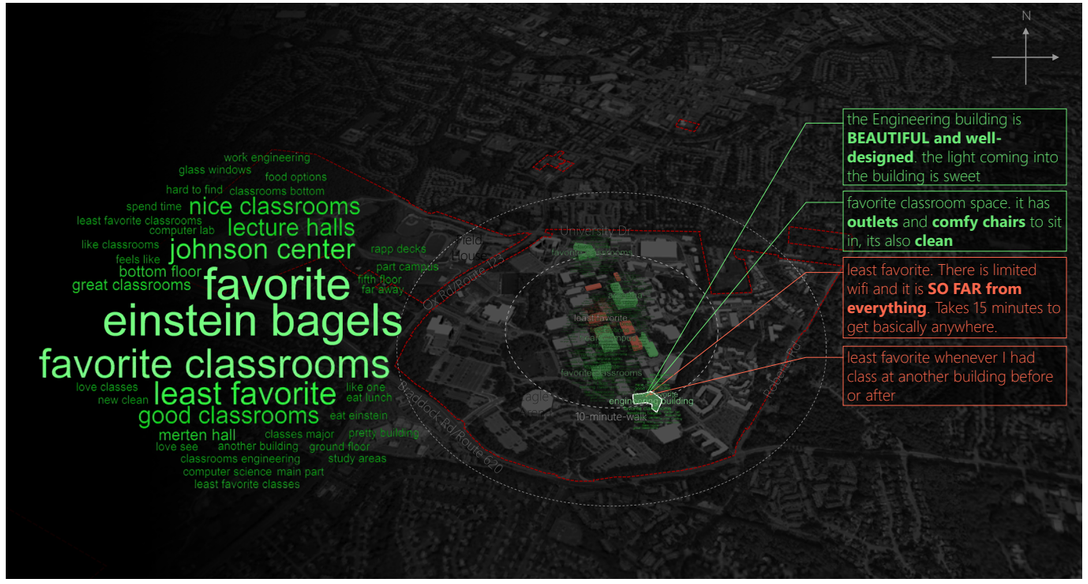
Innovation Hall is not the newest building on the Fairfax campus, but the new active learning space on the third floor makes it a popular destination for study and collaboration.

PETERSON HALL

- Positive
- Neutral
- Negative

Located at the north end of campus, Peterson Hall is the newest building at Fairfax. Respondents enjoy the spacious rooms, modern equipment, and its flexibility to accommodate all types of learning activities. The only drawback posed is about its location relatively far from the heart of campus.

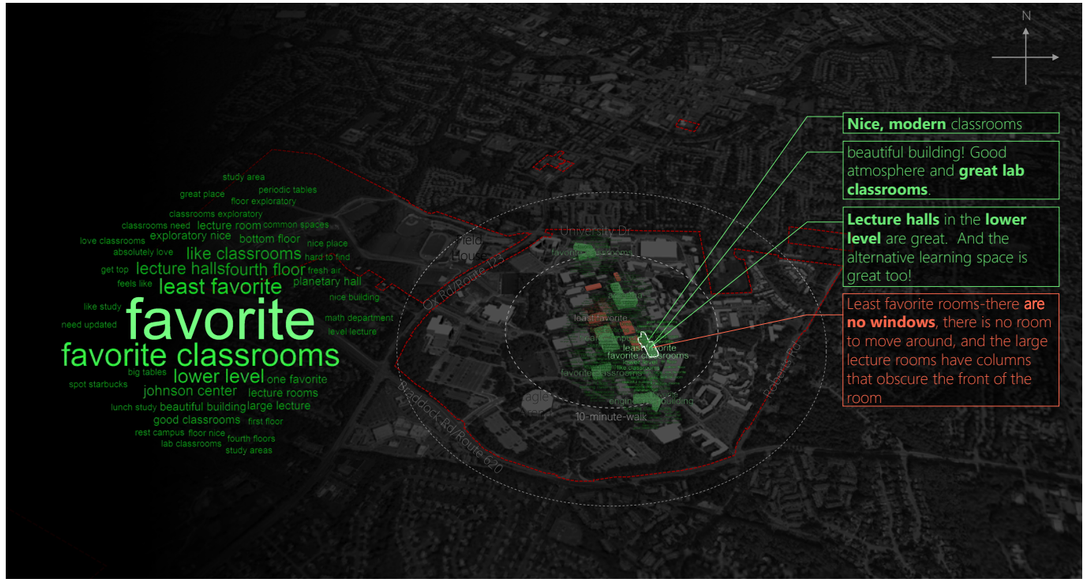
NGUYEN ENGINEERING BUILDING



- Positive
- Neutral
- Negative

This is another new building on campus. Respondents like the clean and comfortable classrooms in this building. The food venues, with the open lobby, provide the chance to meet and collaborate. However, its location at the south end of the campus, and the perceived distance from the center of campus, are viewed negatively by some respondents.

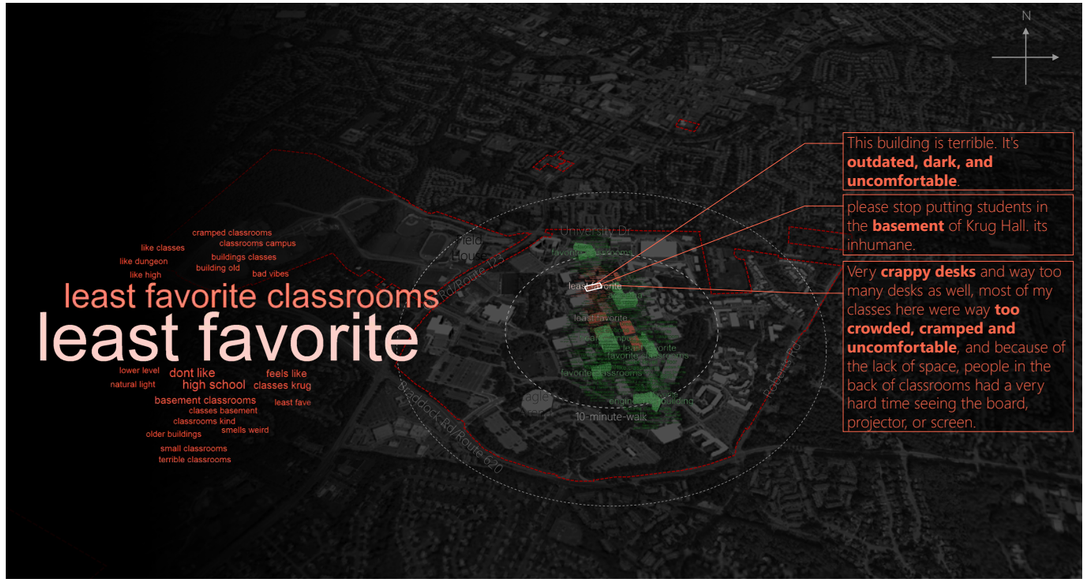
EXPLORATORY HALL



- Positive
- Neutral
- Negative

People enjoy the nice and modern lab and classroom facilities, which were renovated relatively recently. Also, its proximity to the Johnson Center and Planetary Hall is brought up by some respondents as a bonus for the building.

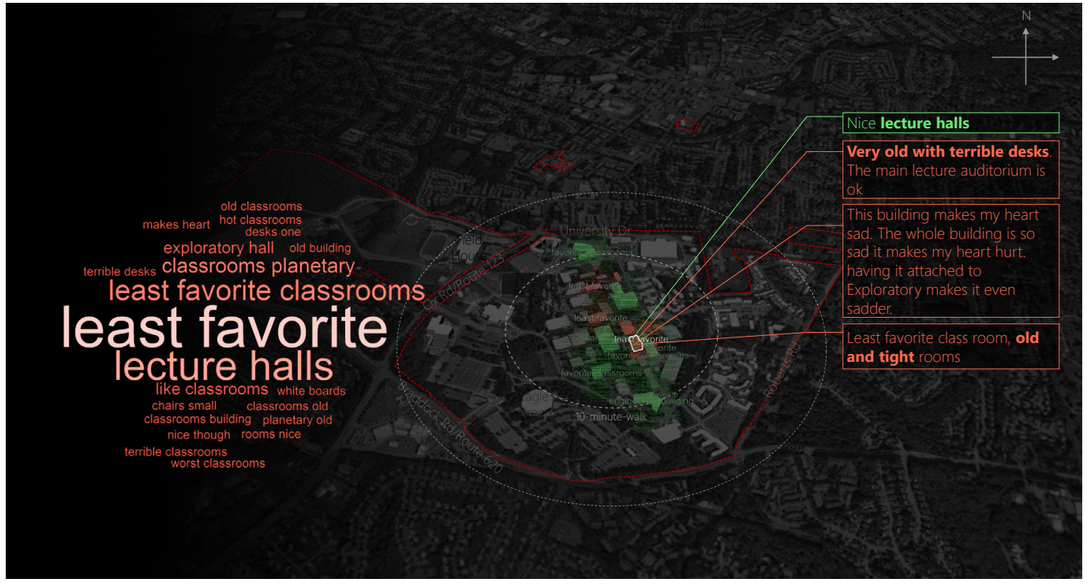
KRUG HALL



- Positive
- Neutral
- Negative

One of the oldest buildings on campus, Krug Hall is in poor condition. People find the small, dark, and outdated classrooms uncomfortable. The building is therefore viewed negatively by respondents.

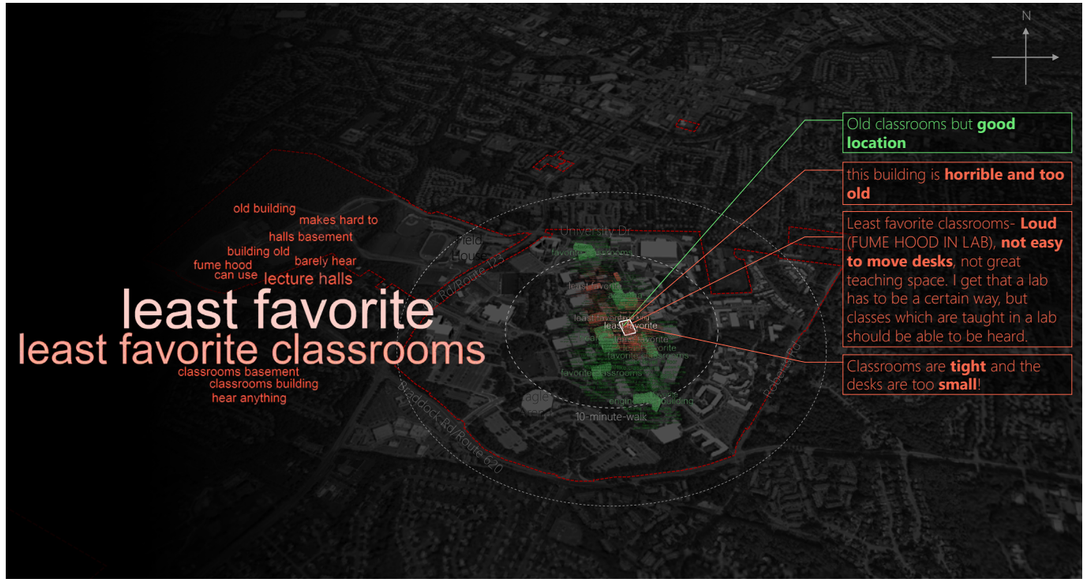
PLANETARY HALL



- Positive
- Neutral
- Negative

Adjacent to Exploratory Hall, Planetary Hall was built at the same time as Exploratory, but has not yet been renovated. The lack of renovation and central location means many respondents have a love-hate relationship with this building. People hate the aged building, the tight layout, and outdated furniture, but some like its closeness to the center of campus.

DAVID KING JR. HALL



- Positive
- Neutral
- Negative

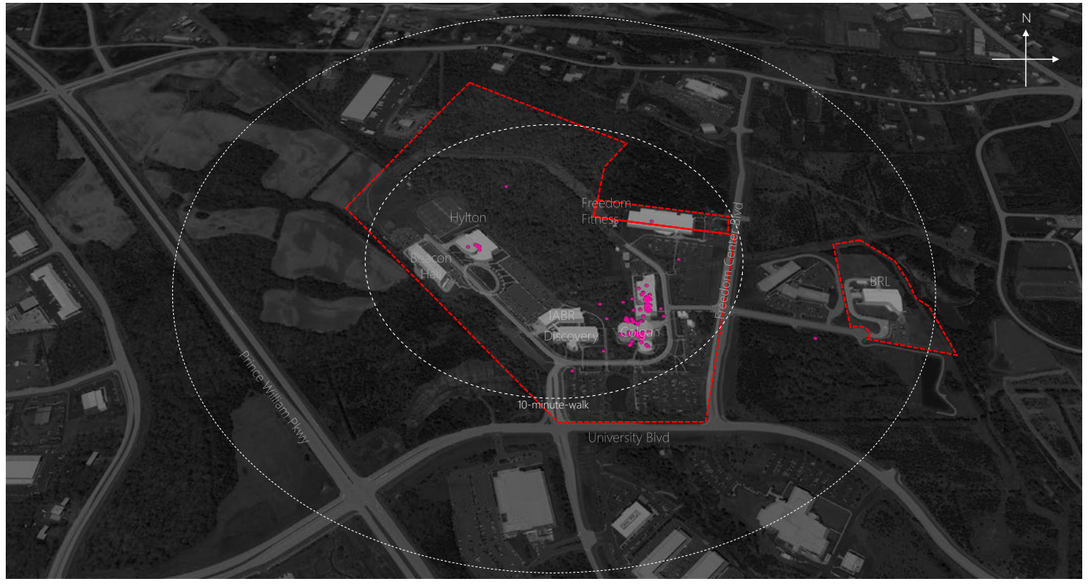
David King Jr. Hall is another building with outdated facilities but a good location. In addition to issues of age, lighting, and tightness of classroom space, noise is another concern brought up by some respondents.

LECTURE HALL

- Positive
- Neutral
- Negative

Similar to Krug Hall, the age of this building makes it the least favorite for some respondents.

HEART OF CAMPUS



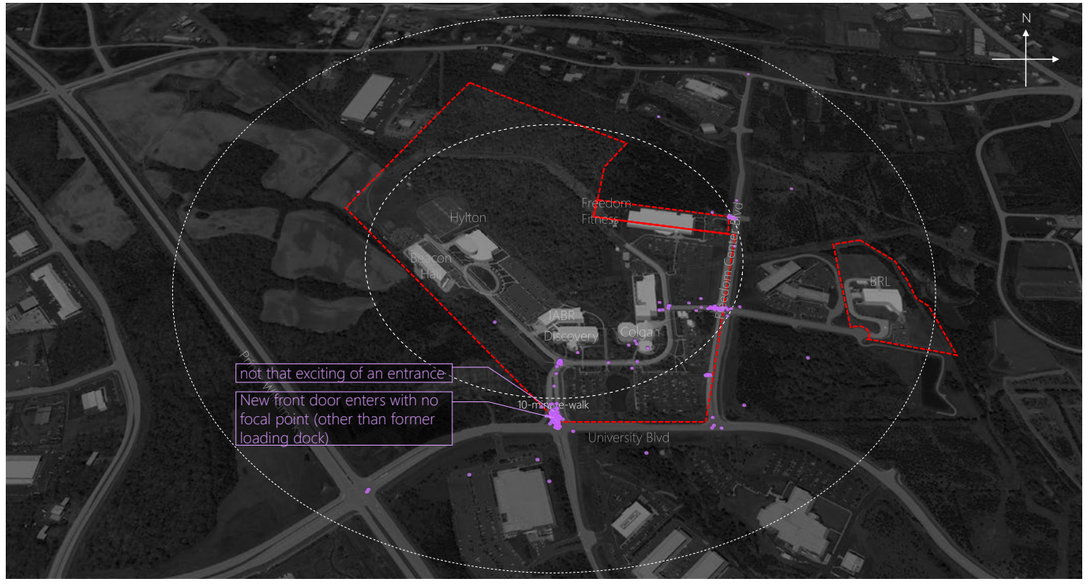
Katherine Johnson and Colgan Halls are perceived as the heart of the SciTech campus. This is likely because most classes take place in Kathrine Johnson Hall, while most student life activities happen in Colgan Hall.

SCITECH CAMPUS

The SciTech campus received a similar number of icons and comments as Arlington. Key findings include:

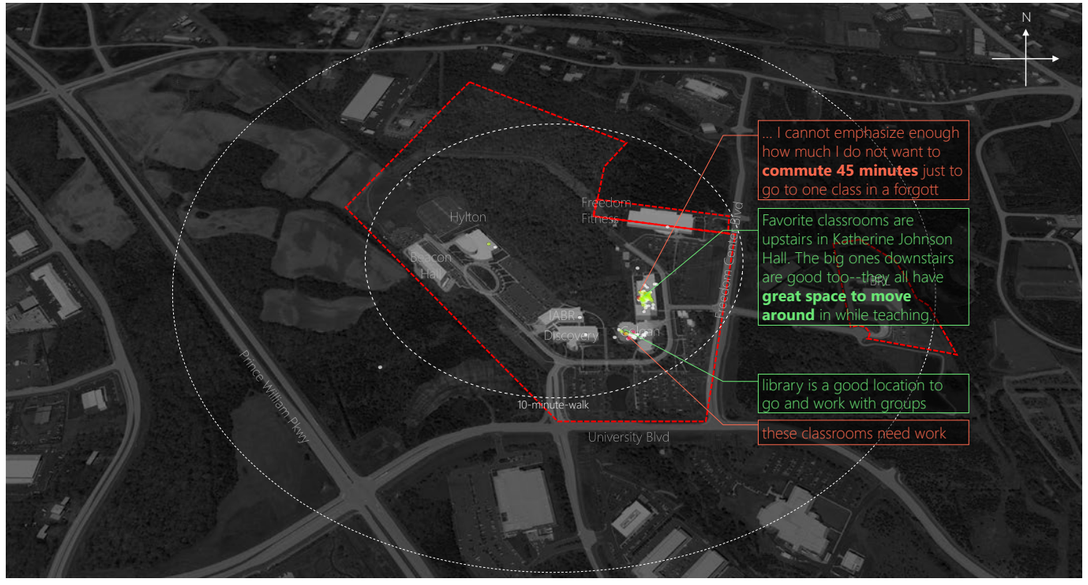
- A singular campus heart is not as clear as for the other two campuses. Katherine Johnson and Colgan Halls are perceived as the heart of the SciTech campus.
- Classroom experiences are largely identified at Katherine Johnson Hall and viewed as positive.
- Outdoor spaces are identified across the whole campus. People enjoyed the ponds, creeks, forest, and particularly the Piedmont trail.
- Foot traffic significantly overlaps with vehicular traffic on the south side of campus. Apart from the loose routes around the forest, two walking corridors begin to emerge. One is the east-west path between Discovery and Colgan Halls, and the other one is the north-south connection west of Katherine Johnson Hall.
- Respondents are not generally concerned with the availability of parking, but are more concerned about the cost of parking, especially those respondents who only come to the campus once or twice a week, but pay full price for parking.
- There are fewer concerns about pedestrian-vehicle conflict at SciTech compared to Fairfax. Lighting is again the major concern relative to personal safety.

CAMPUS ENTRANCE



People access the campus primarily from the south and east sides. The majority of people enter from Prince William Parkway via University Boulevard. Many respondents suggested the arrival experience could be improved.

CLASSROOMS

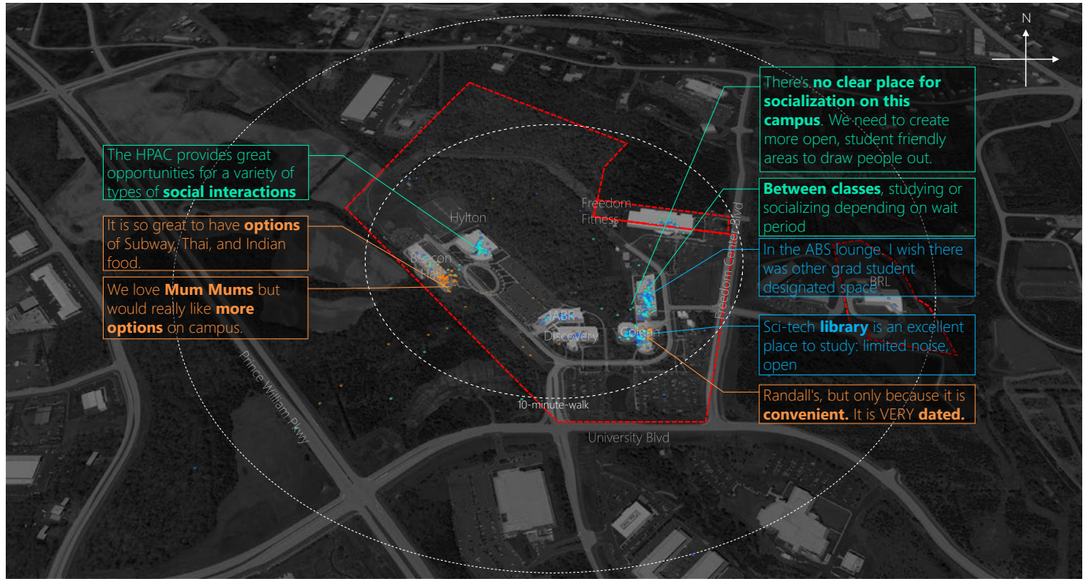


- Positive
- Neutral
- Negative
- No comment

Almost all classroom experiences identified by respondents are at Katherine Johnson Hall. The building elicited primarily positive comments, although people expressed some reluctance to commute "long distances" for one class at the SciTech campus if taking only a single class at SciTech..

EATING, WORKING, STUDYING, AND SOCIALIZING

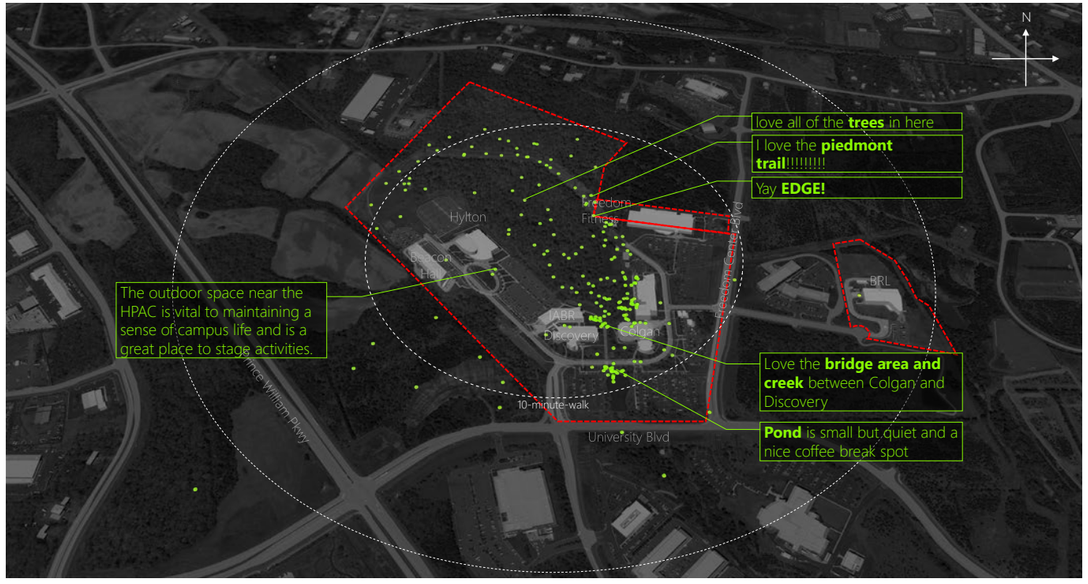
By category



- Eating
- Working or studying
- Socializing and collaborating

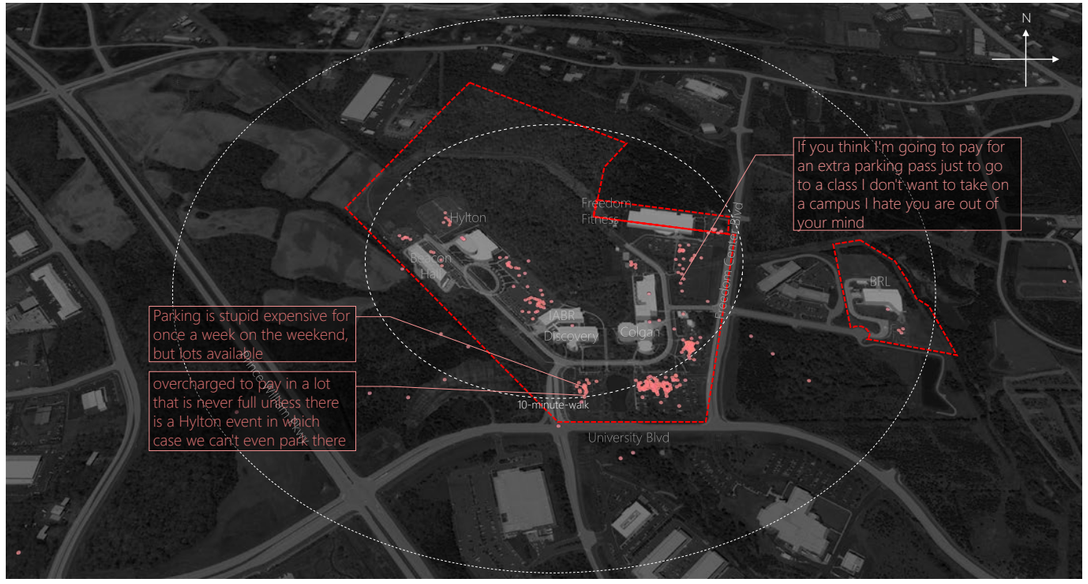
The student life experience for the SciTech campus is identified at the two ends of the campus – working, studying and socializing at the southeast part, and dining and residential in the northwest part. How the town center development will shift this dynamic is a key question for the future of the SciTech campus.

OUTDOOR SPACES



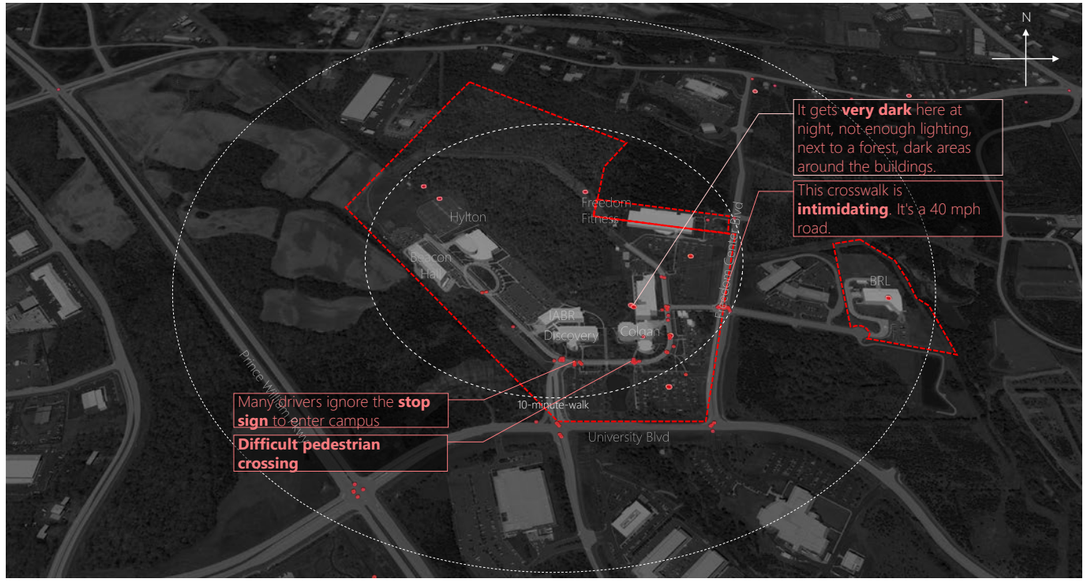
Outdoor spaces are located across the whole campus. Historically a wetland, the SciTech campus has a large number of beautiful outdoor amenities like ponds, creeks, and forest. The trail, in particular, received many positive comments regarding appreciation of the scenery, the ecological value, and potential integrated learning opportunities.

PARKING



Large parking lots are located at the periphery of campus. Respondents are not generally concerned with the availability of parking, but are more concerned about the cost of parking, especially those respondents who only come to the campus once or twice a week, but pay full price for parking.

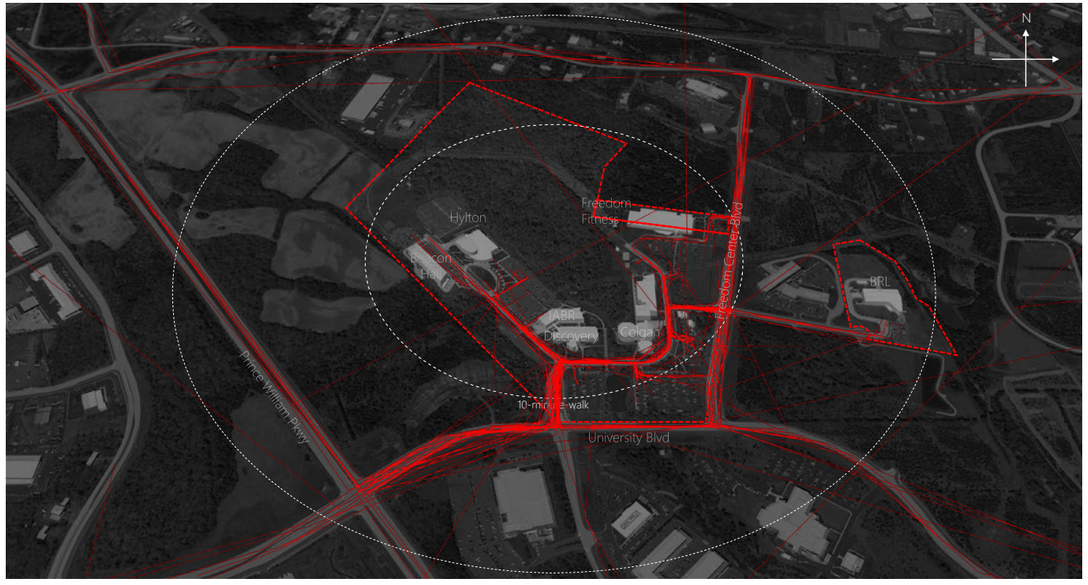
VEHICLE/PEDESTRIAN SAFETY CONCERNS AND PERSONAL SAFETY CONCERNS



- Vehicle/pedestrian safety concerns
- Personal safety concerns

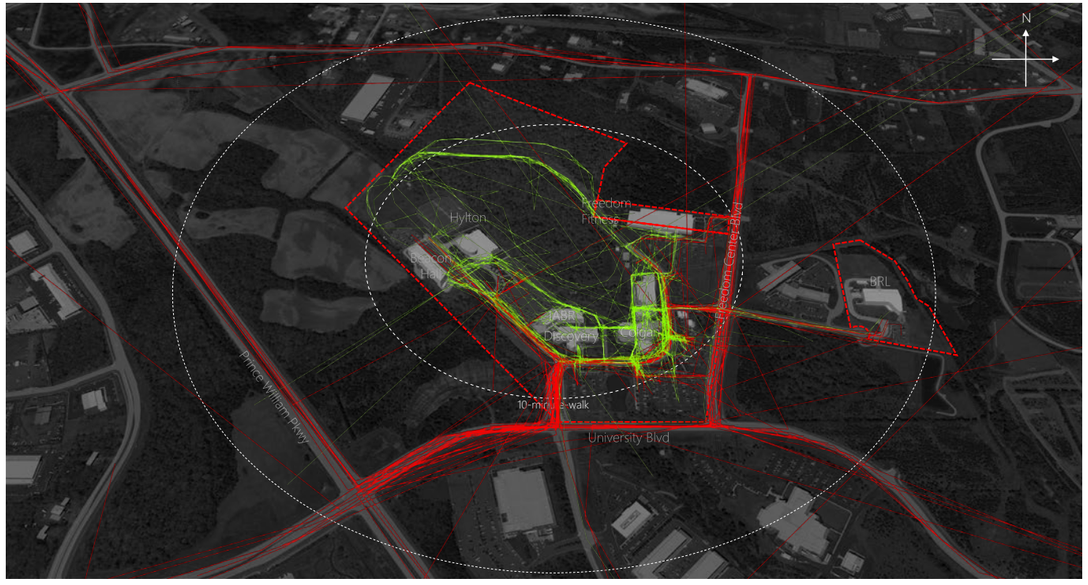
There are fewer concerns about pedestrian-vehicle conflict at SciTech, compared to Fairfax, primarily because the campus is smaller. However, the intersection at the entry drive where pedestrians move back and forth is an area of potential conflict. Lighting is again the major concern relative to personal safety.

DRIVING



Vehicular traffic is highly concentrated in the southern part of the campus.

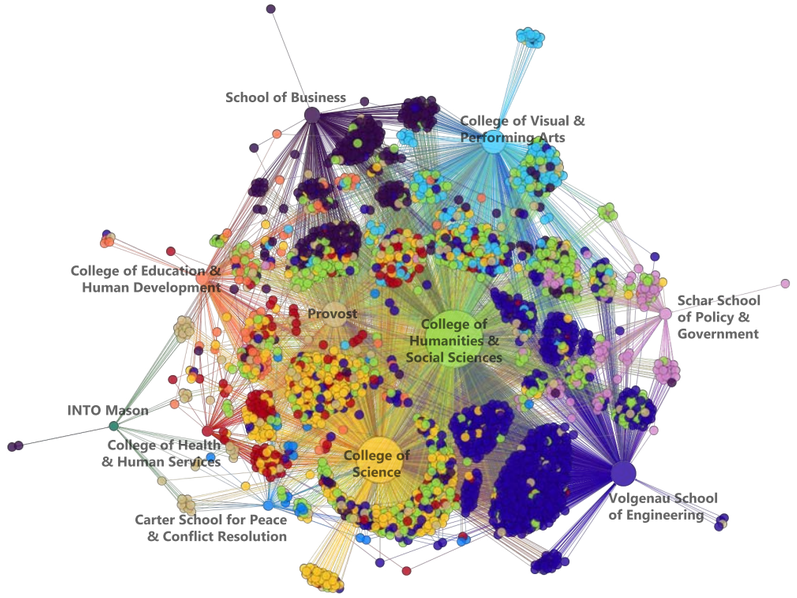
WALKING



Foot traffic significantly overlaps with vehicular traffic on the south side of campus. For the pedestrian-only part of campus, apart from the loose routes around the forest, two walking corridors begin to emerge. One is the east-west path between Discovery and Colgan Halls, and the other one is the north-south connection west of Katherine Johnson Hall.

PROGRAM CONNECTIONS

COURSE ENROLLMENT
First-Years



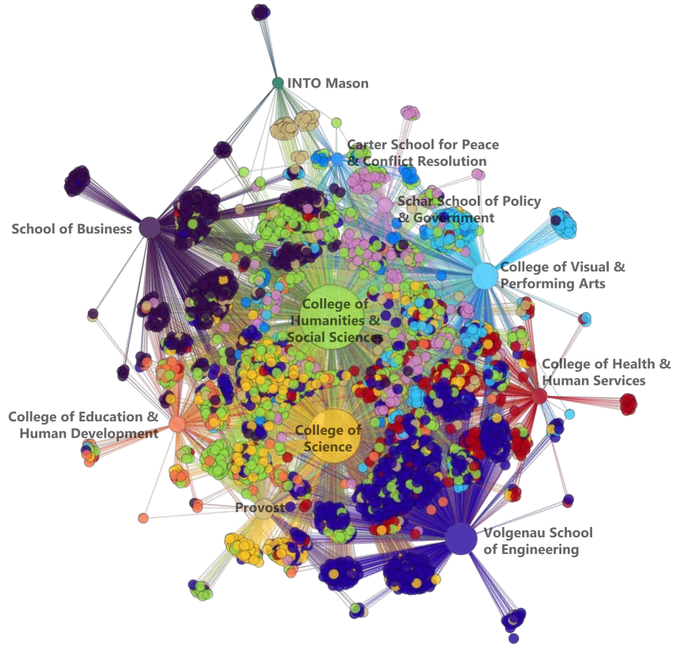
- Antonin Scalia Law School
- College of Visual & Performing Arts
- College of Science
- Carter School for Peace & Conflict Resolution
- College of Education & Human Development
- Executive & Professional Education
- External Institution
- College of Health & Human Services
- College of Humanities & Social Sciences
- INTO Mason
- Schar School of Policy & Government
- School of Business
- Honors & Provost
- Volgenau School of Engineering

PROGRAM CONNECTIONS

The university provided information on students, their majors, and the courses in which they enrolled for the Fall 2019 semester. These five "galaxy diagrams" were constructed using an open-source network visualization package and this course-enrollment information. The diagrams consist of nodes (dots) and edges (lines connecting the dots). The smallest nodes in the diagram represent students, colored by the home division of their major of record. The larger colored nodes represent the various divisions across Mason. An edge between a student node and division node means that the student is enrolled in at least one course within that division, and these edges are weighted by the actual number of courses. The size of a division node is determined by the number of students enrolled in its courses. Clusters and closeness of nodes—the "gravity" of the graph—shows high-degrees of connection or interaction, and are therefore suggestive of interdisciplinary relations between departments and divisions.

The diagram on the left shows the resulting social graph for first-year students. The following pages have the same social graphs for sophomores, juniors, seniors/seniors plus, and graduate/law students. As expected, students' activities tends to become more focused on their home department as they progress through their studies, but the key finding of the analysis is how central the College of Humanities and Social Sciences and, to an extent, the College of Science are to the experience of all students. These diagrams therefore highlight the challenges associated with relocating programs across the three campuses given how interconnected the divisions are. It is only at the graduate level that programs become somewhat self-contained, but even for these programs, relocations are potentially challenging because Mason does not have a separate graduate faculty, and so most professors teach both undergraduate and graduate students.

COURSE ENROLLMENT
Sophomores



- Antonin Scalia Law School
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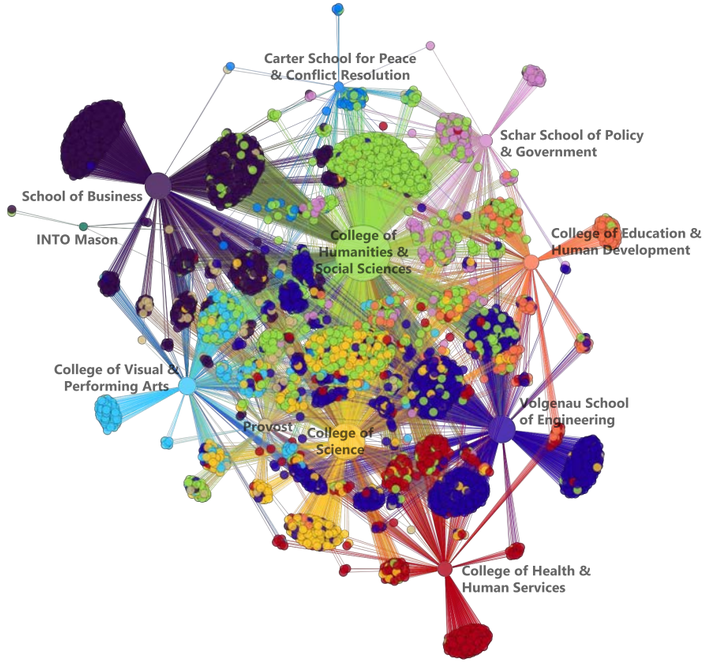
- Volgenau School of Engineering

COURSE ENROLLMENT
Juniors



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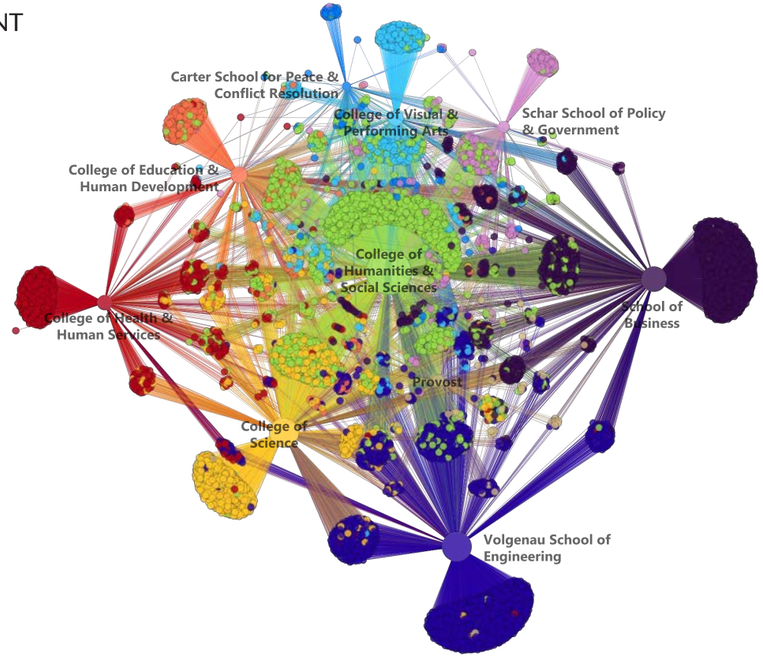
- Honors & Provost
- Volgenau School of Engineering

COURSE ENROLLMENT
Seniors & Seniors Plus



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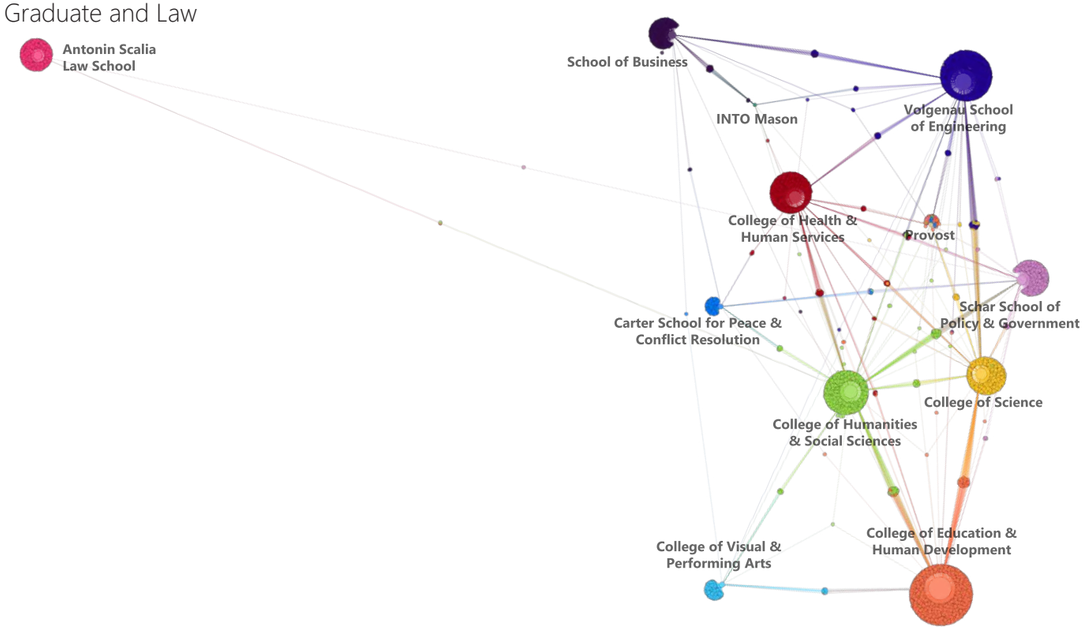
COURSE ENROLLMENT
Graduate and Law



- Antonin Scalia Law School
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- College of Humanities & Social Sciences
- INTO Mason
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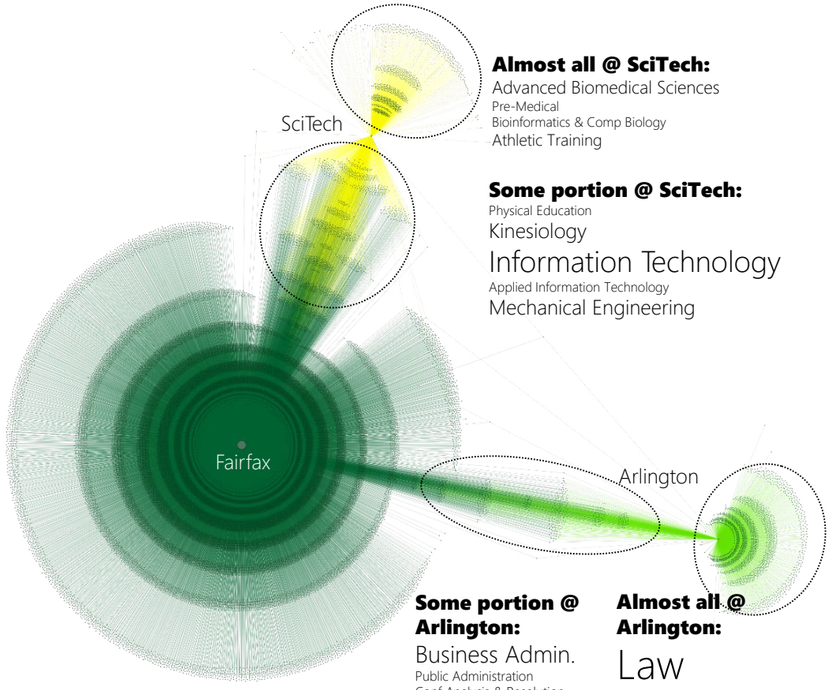
- School of Business
- Honors & Provost
- Volgenau School of Engineering

CAMPUS POPULATIONS

1,085
Fairfax students
take courses
at SciTech

755
students only
take courses
at SciTech



Fairfax
Arlington
SciTech

CAMPUS DYNAMICS

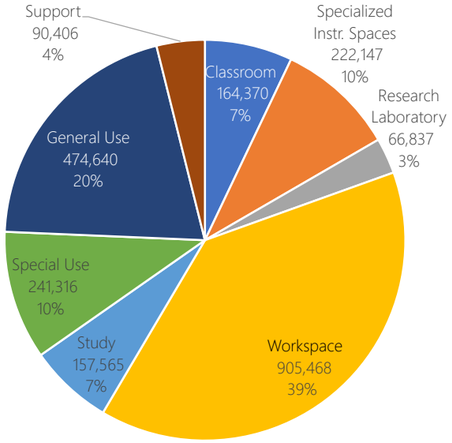
This social graph shows the relationship of students to the three campuses, with edge weightings determined by the number of courses a student takes on a particular campus, and nodes and edges colored by a student's "predominant" campus.

Fairfax is clearly the primary campus for most students, with Arlington having a somewhat self-contained identity, particularly with respect to the Antonin Scalia School of Law. SciTech certainly has a dedicated student population, but we note that there are more students who travel from Fairfax to take a course at SciTech than there are students who only take courses at SciTech.

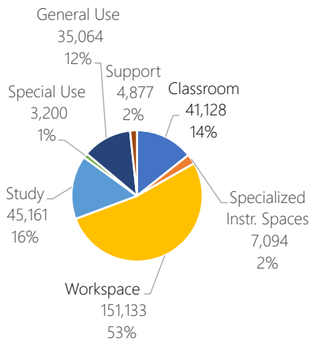
CAMPUS SPACE USE

ASSIGNABLE SQUARE FOOTAGE BY SPACE TYPE

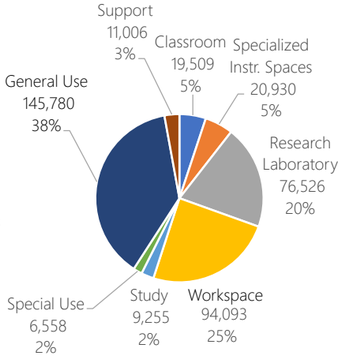
Fairfax Campus – Total: 2.32 mil ASF



Arlington Campus – Total: 288K ASF



SciTech Campus – Total: 384K ASF



Note: Pies' relative sizes indicates total assignable square footage. Totals include spaces leased by the university as of the point-in-time snapshot of the university space inventory, taken in February 2020. Excludes residential (FICM 900 – Fairfax: 1.02 mil ASF, Science & Technology: 54K ASF) and vehicle storage/vehicle storage support (FICM 700 – Fairfax: 1.56 mil ASF, Arlington: 205K ASF). The special use category consists of armory, athletics, media production, clinic, demonstration, animal facilities, and greenhouse spaces. The general use category consists of assembly, exhibition, food, day care, lounge, merchandising, recreation, and meeting spaces.

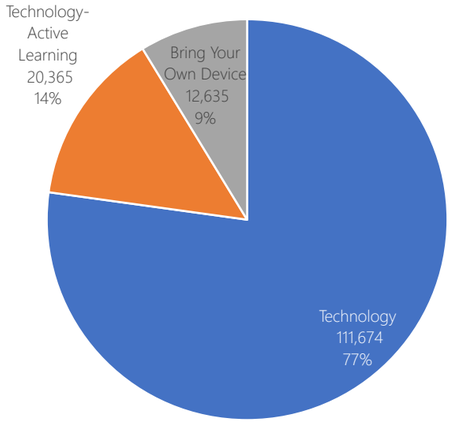
OVERVIEW

We analyzed the use of existing university space at Mason's Fairfax, Arlington, and SciTech campuses to explore potential opportunities for improved space management, identify potential areas of need or excess, and inform future capital investment priorities. This was a point-in-time analysis based on the building inventory as captured on February 2020 and the Fall 2019 course schedule.

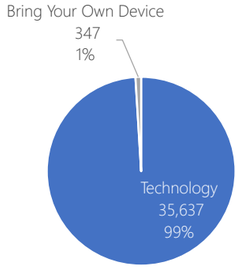
The university maintains nearly three million assignable square feet of non-residential space for its use across its three campuses (residential space will be studied separately in more detail in Phase Two of the master plan), with the space distributed across several categories, including classrooms, specialized instructional spaces, research laboratories, workspace, study, special use, general use, support, and health care facilities. The special use category consists of armory, athletics, media production, clinic, demonstration, animal facilities, and greenhouse spaces. The general use category consists of assembly, exhibition, food, day care, lounge, merchandising, recreation, and meeting spaces. The university's distribution patterns for each campus, as shown in the charts to the left, are appropriate for a large public research university, and given the areas of focus/specialties located on each campus. Note the significant percentage of spaces dedicated to workspace uses at the Fairfax and Arlington campuses, which underlines the importance of optimally using this space category. The more broadly-termed general use and special use categories encompass several different space types that don't fit within other classifications. Special use spaces include athletics facilities, media production, clinic, animal facilities, and greenhouses. General use spaces include assembly, exhibition, dining, lounge, retail, recreation, and meeting rooms. The large share of general use space at SciTech mostly consists of space within the Freedom Aquatic & Fitness Center and the Hylton Performing Arts Center, both large facilities used by both the Mason and surrounding communities. Note that these charts reflect the conditions at the point in time of our analysis, before the demolition of Robinson B and the bringing online of Horizon Hall at Fairfax.

ASSIGNABLE SQUARE FEET & COUNT OF UNIVERSITY CLASSROOMS BY TYPE

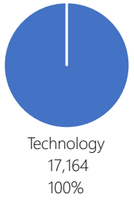
Fairfax Campus – Total: 145K ASF



Arlington Campus – Total: 36K ASF



SciTech Campus – Total: 17K ASF



	Fairfax	Arlington	SciTech
Bring Your Own Device	22	1	0
Technology	110	38	16
Technology-Active Learning	18	0	0
TOTAL	**150**	**39**	**16**

10 BYOD, 14 technology, and 2 active learning classrooms (26 total) will be taken offline with demolition of Robinson Hall
27 active learning classrooms are projected for its replacement in Horizon Hall

Note:
Pies' relative sizes indicates total assignable square footage. Totals include spaces leased by the university as of the point-in-time snapshot of the university space inventory, taken in February 2020. Totals do not include associated service spaces.
Bring Your Own Device Classrooms require that the instructor bring their own machine should they need it for instructional purposes.

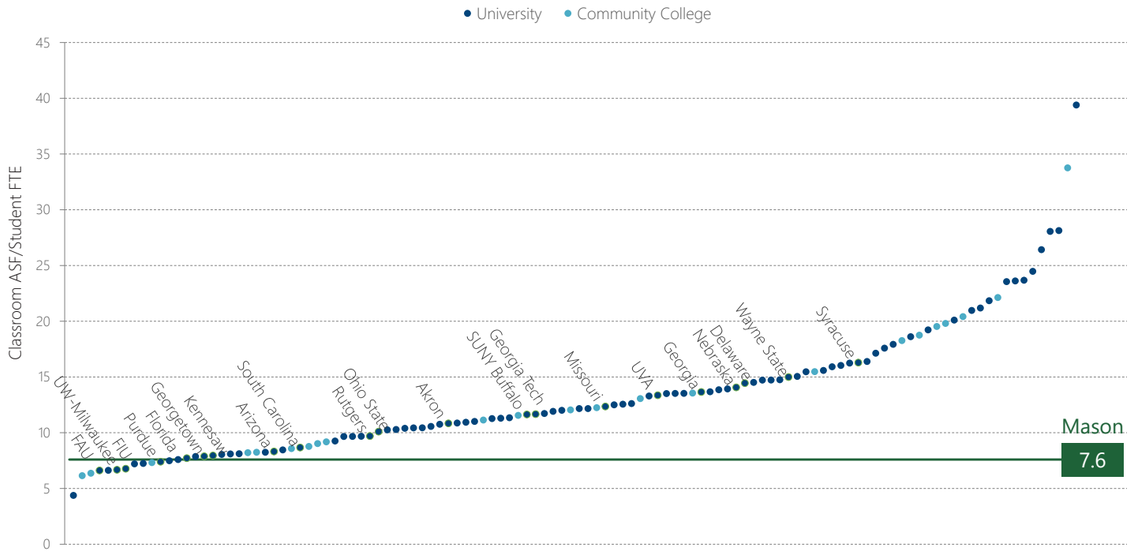
CLASSROOMS

Classrooms across Mason's three campuses make up nearly 200,000 ASF of the university's space portfolio. Beyond simply designating spaces as classrooms, the university gives classrooms a designation of "technology," "technology-active learning," and "bring your own device." Both technology and technology-active learning classrooms contain various types of equipment and systems for the use of instructors including interactive whiteboards, classroom capture, web conferencing, and advanced projection/display systems, with the latter laid out to promote collaboration. These classrooms typically consist of large tables around which groups of students sit and can easily engage in group work, and also move around the room to facilitate interactions. Bring-your-own-device classrooms will typically contain a projector or monitor to which instructors can hookup their own devices in order to share content. Mason's strategic plan emphasizes the need to increase the number of active-learning classrooms.

The accompanying charts show the distribution of the various classroom types across the three campuses. Technology classrooms make up the majority of classroom spaces across all campuses. At Fairfax, the distribution will shift slightly as several classrooms are to be taken offline upon demolition of Robinson B, being replaced with new technology-active learning classrooms in the now-completed Horizon Hall. It is expected that the share of technology-active learning classrooms will continue to grow over time as more instructors receive training in and adopt active learning modalities.

Note that much of our analysis is quantitative, but as Phase Two of the master plan considers specific design interventions, it will also be crucial to consider qualitative concerns, not just with respect to condition (see for example some of the feedback received via our CoMap survey), but also on layout and ability to support innovative pedagogies. It may therefore be important to invest in existing classroom spaces, and not just consider additional spaces.

CLASSROOM ASF/STUDENT FTE BENCHMARKING



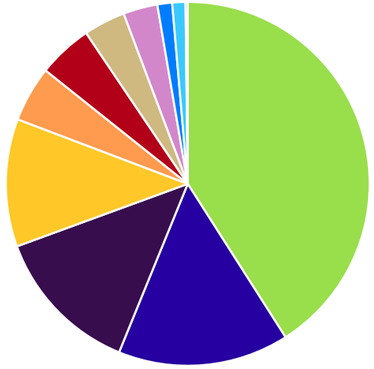
We generally find benchmarking to be of limited utility because no two universities are exactly alike in approach and certainly not in data-collection methods, and hence, cannot easily be compared apples-to-apples. That said, high-level benchmarking can help identify potential areas for future study or highlight potentially problematic space distributions. This chart shows the assignable square feet of classroom space per student full time equivalent (on the y-axis) of universities and community colleges with whom we have collaborated in the past, with several peer institutions labeled. The chart shows that Mason lies at the lower end of the distribution. This is largely explained by the more detailed investigations described below which show the relatively heavy use of existing Fairfax classrooms.

It is important to note that if there were a formulaic, "one size fits all" approach to determining an "ideal" amount of classroom space (or in fact any university space type given that the distribution in other categories is similar) at given enrollment levels, we would likely see clustering around a specific y-value. The data instead follows a nearly linear distribution, which highlights the fact that there is no right answer and what works at one institution, may not work at another. This data is therefore most helpful in determining priorities amongst competing space needs given limited resources, and highlights why space management is therefore key.

WEEKLY ROOM HOURS (WRH) BY SCHOOL/COLLEGE

Scheduled instruction taking place in university classrooms ONLY

Fairfax Campus – Total: 7K WRH



Arlington Campus – Total: 780 WRH

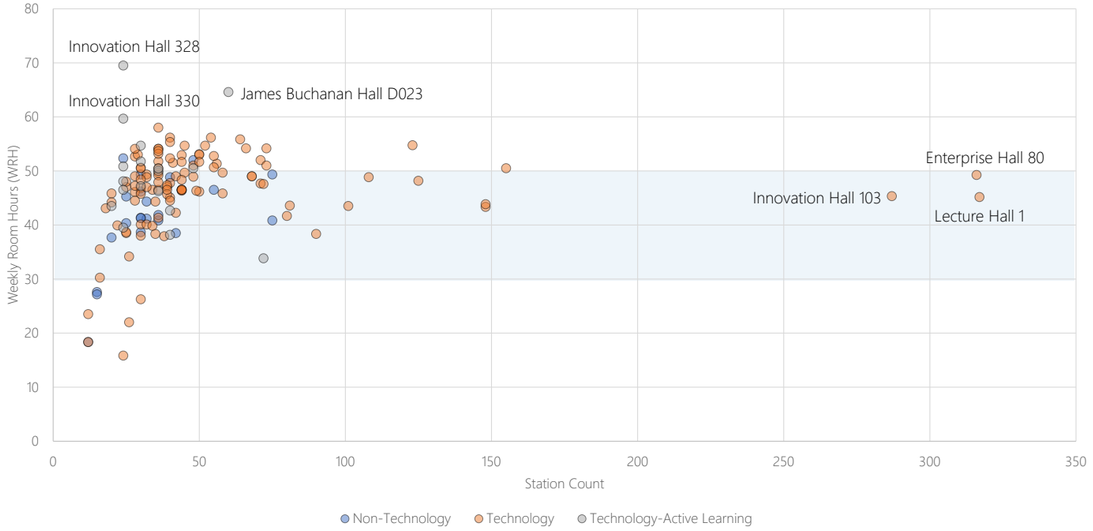
SciTech Campus – Total: 390 WRH

	Fairfax		Arlington		SciTech	
College of Humanities & Social Sciences	2,829	41%	23	3%	32	8%
College of Science	784	12%	5	1%	126	33%
Volgenau School of Engineering	1,049	15%	11	1%	155	40%
College of Visual & Performing Arts	81	1%	44	6%	-	-
School of Business	915	13%	116	15%	-	-
College of Education & Human Dev	342	5%	8	1%	73	19%

	Fairfax		Arlington		SciTech	
College of Health & Human Services	335	5%	5	1%	-	-
Honors College & University (Provost)	256	4%	-	-	-	-
Schar School of Policy & Government	211	3%	243	31%	-	-
Carter School for Peace & Conflict Resolution	91	1%	76	10%	-	-
Antonin Scalia Law School	-	-	229	29%	-	-
INTO Mason	14	0%	17	2%	-	-

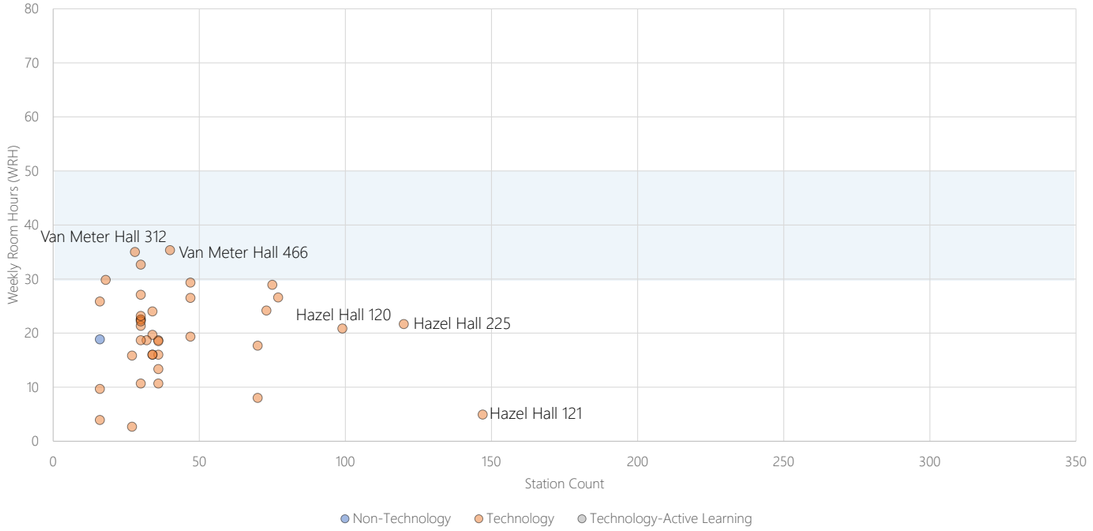
This chart shows the distribution of hours of scheduled instruction taking place in classrooms across all three campuses by school/college. The relative size of each pie chart represents the total weekly hours of scheduled instruction in a classroom or specialized instructional space (WRH) taking place during the busiest week of the Fall 2019 semester. These charts highlight the distribution of WRH across the three campuses, with the vast majority taking place at Fairfax. Additionally, they show the schools and colleges at each campus generating the most number of hours.

UNIVERSITY CLASSROOM STATION COUNT TO WEEKLY ROOM HOURS SCATTERPLOT
Fairfax Campus

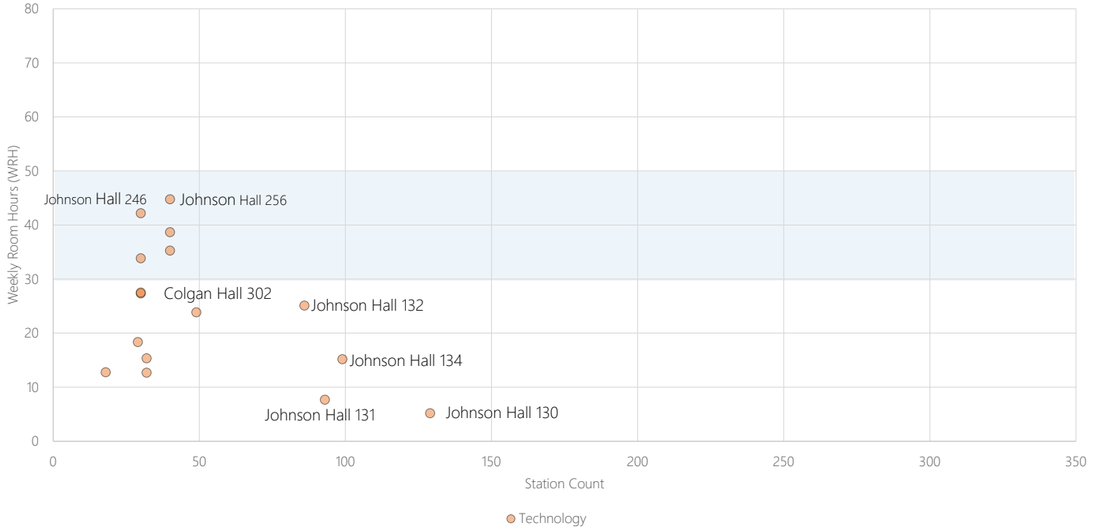


This scatterplot, as well as those on the following two pages, show how many hours in the week classrooms are used for scheduled instruction. Each dot represents a specific classroom which is colored based on the classroom-type designation. The y-axis denotes the number of hours in the week the room is used for scheduled instruction (WRH), and the x-axis shows the number of stations in the room. SCHEV suggests a minimum target of 40 WRH for general-purpose classrooms. The majority of classrooms at the Fairfax campus are either meeting or exceeding this target. Of particular note, the three busiest classrooms at Fairfax are active learning spaces, demonstrating a high demand for spaces suited to these modalities (some of this need should be met with the introduction of Horizon Hall). On the other hand, classrooms at the Arlington and SciTech campuses mostly do not meet the 40 WRH standard. Hence, these diagrams suggest that Fairfax would benefit from a small increase in classroom capacity while classrooms at Arlington and SciTech could support additional instruction.

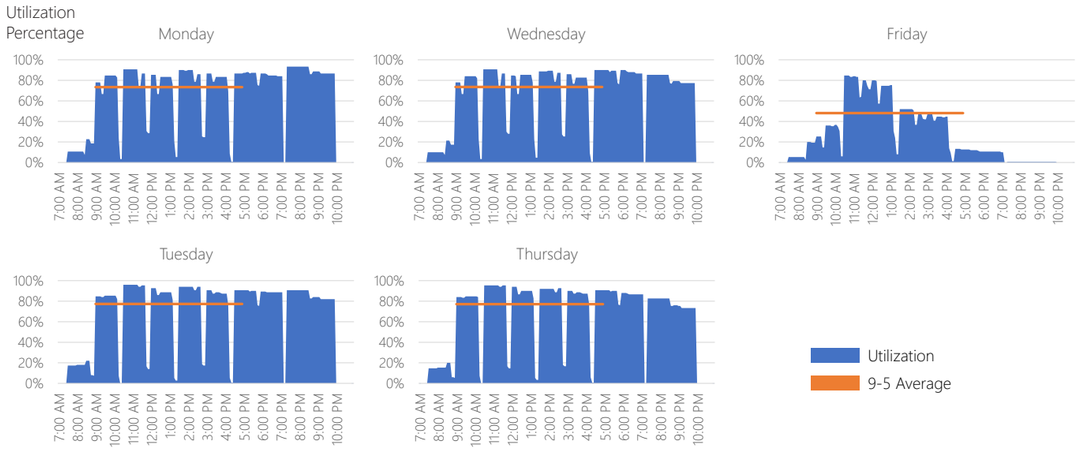
UNIVERSITY CLASSROOM STATION COUNT TO WEEKLY ROOM HOURS SCATTERPLOT
Arlington Campus



UNIVERSITY CLASSROOM STATION COUNT TO WEEKLY ROOM HOURS SCATTERPLOT
SciTech Campus



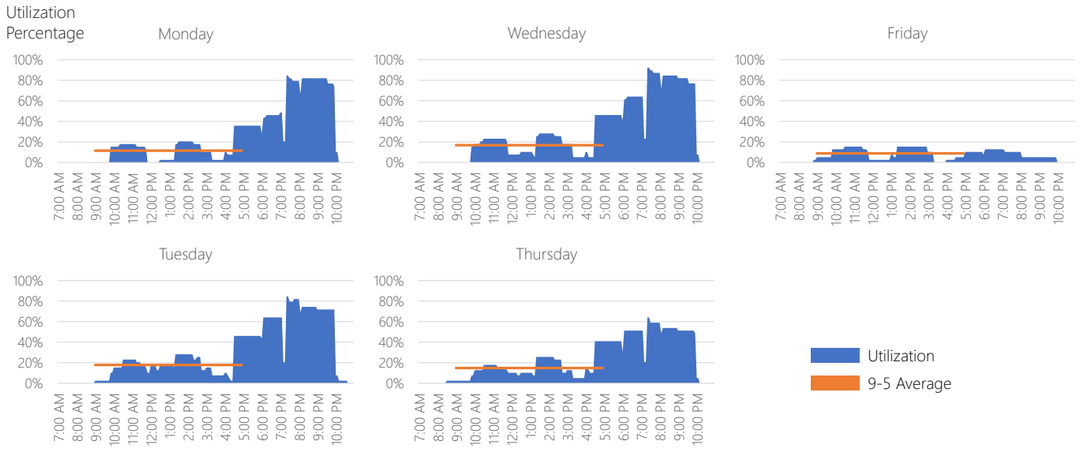
UNIVERSITY CLASSROOM HISTOGRAMS
Fairfax Campus



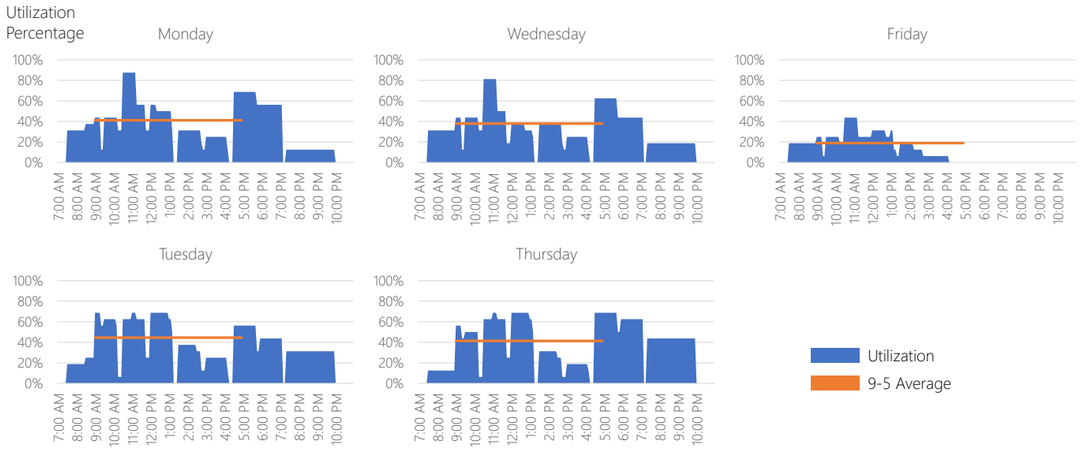
In these charts, the blue area represents the percentage of Fairfax classrooms hosting instruction by time of day for each day of the week. The orange line is the average percentage of classrooms being utilized on a given day of the week from 9 am to 5 pm. At peak times, utilization hovers between 90% to 100% of all classrooms. The analysis shows there is little opportunity for increased utilization. Many large research universities show a similar utilization profile of their classrooms at peak times, but this data does support a small increase in the Fairfax classroom portfolio.

The following two pages show the classroom utilization profiles for the Arlington and SciTech campuses. Arlington's classrooms show light utilization during the day, with the bulk of instructional activity taking place after 4:30pm. This is largely consistent with Arlington's positioning as a professional campus where students with day jobs take classes in the evenings. Because of this pattern, classrooms at the Arlington campus have significant capacity during the day, with limited additional capacity in the evenings (especially in the 7:20-10:00pm time slot). SciTech's classrooms show a more equally distributed utilization profile. At peak times, the campus reaches 80% utilization of available classrooms, but these are confined to one time slot on Mondays and Wednesdays. In general, SciTech has additional capacity to host classroom-based instruction with its existing classroom inventory.

UNIVERSITY CLASSROOM HISTOGRAMS
Arlington Campus

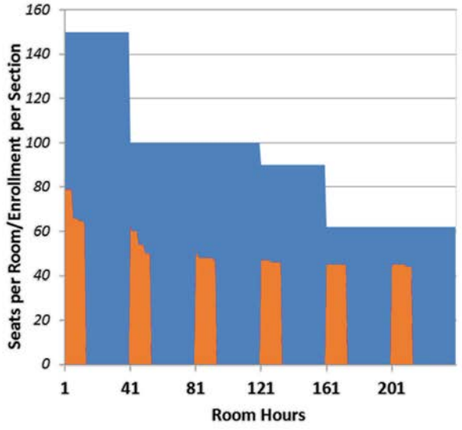


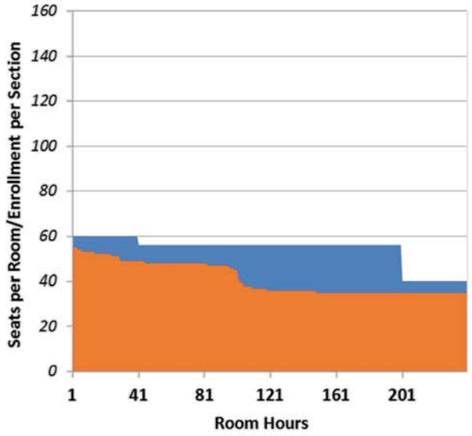
UNIVERSITY CLASSROOM HISTOGRAMS
SciTech Campus



CLASSROOM METRIC (EXAMPLE)

Not Mason data!





To better understand classroom utilization, we use a technique developed for the University System of Georgia (and now adopted in several other states). The goal is to represent the two most important aspects of classroom utilization—how often in a week a room is used and a sense of the overall fit between the range of classroom sizes and section enrollments—in a single diagram.

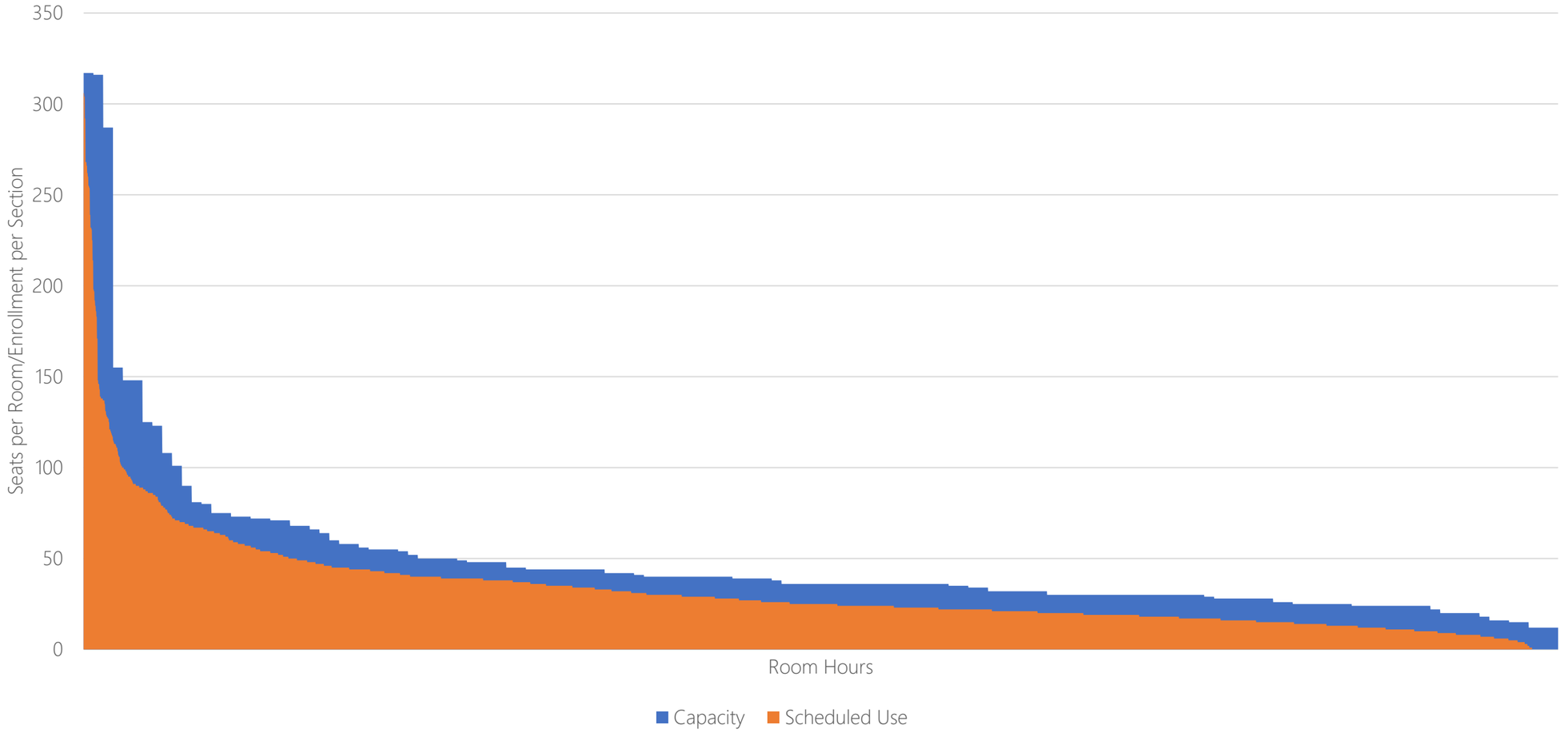
In the two diagrams to the left, which are examples and do not represent conditions at Mason, the blue area shows classroom supply—each classroom is represented by a blue rectangle, the height of which is determined by the number of seats in the room and the width by the number of weekly hours a room can be scheduled for instruction (for these purposes we set a target of 40 hours of scheduled instruction per SCHEV guidelines).

The orange area represents all scheduled classroom instruction during the busiest week of a semester. The number of students enrolled in a given section determines the orange bar's height while the number of weekly hours a course is scheduled determines its width. Courses are not necessarily placed in their actual classrooms, but are distributed evenly across the x-axis, arranged from largest to smallest enrollment. The graph gives a sense of how many empty seats are in a room while a class is in session (any blue area that lies above an orange block) and how often rooms are vacant and available for use (any blue area that lies between orange blocks). This diagram can be concisely summarized using the classroom metric score, which is the proportion of the orange area (demand) to the blue area (supply).

The classroom metric diagrams for the three campuses are on the following pages. For Fall 2019, Fairfax's classroom metric was .678, Arlington's was .209, and SciTech's was .288. For context, those systems which have adopted this methodology typically recommend scores between .500 to .700. This analysis further suggests the university may benefit from a small number of additional classrooms at Fairfax, but could accommodate additional classroom instruction at Arlington and SciTech, or could repurpose some classroom space on these campuses for other uses.

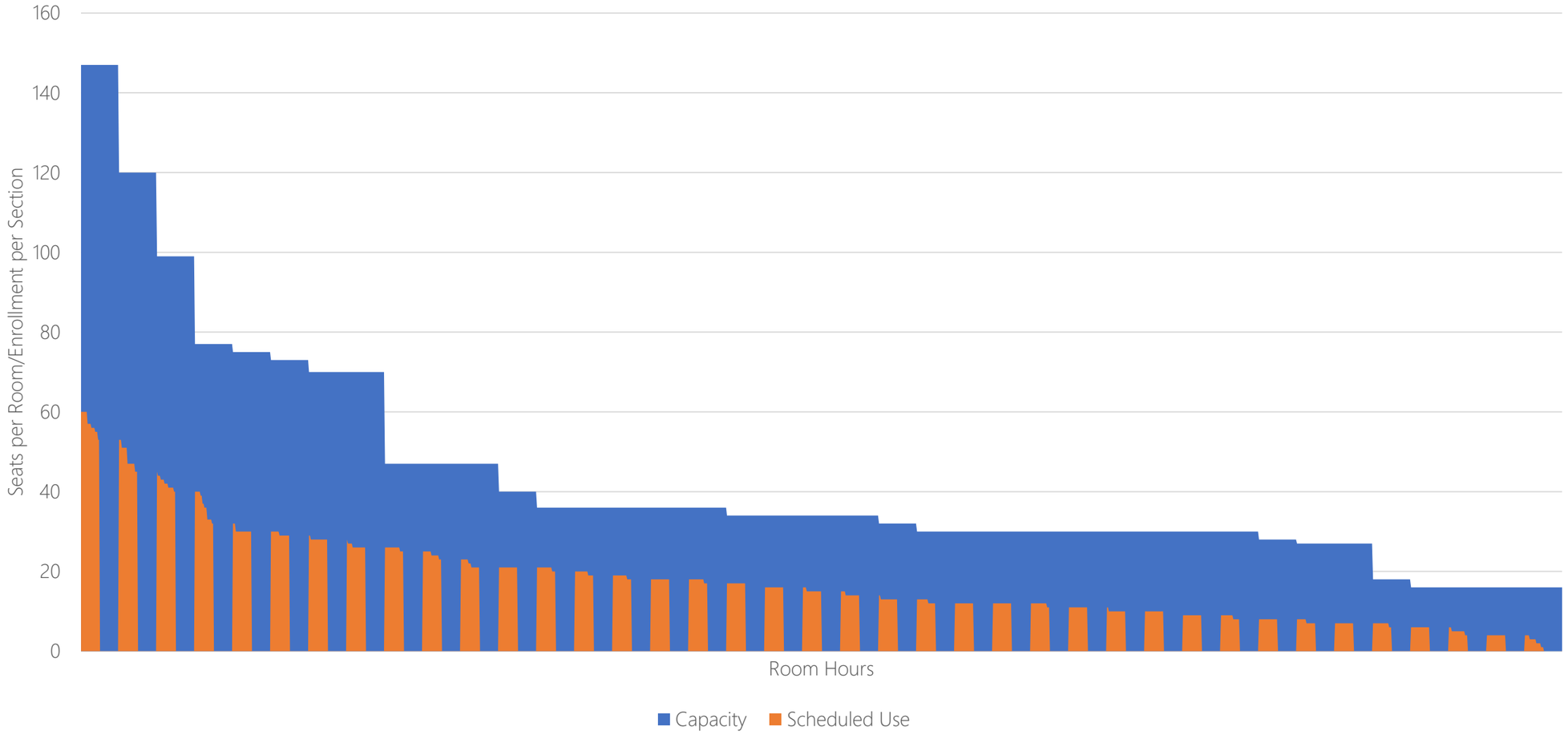
UNIVERSITY CLASSROOM METRIC

Fairfax Campus – Score = 0.678



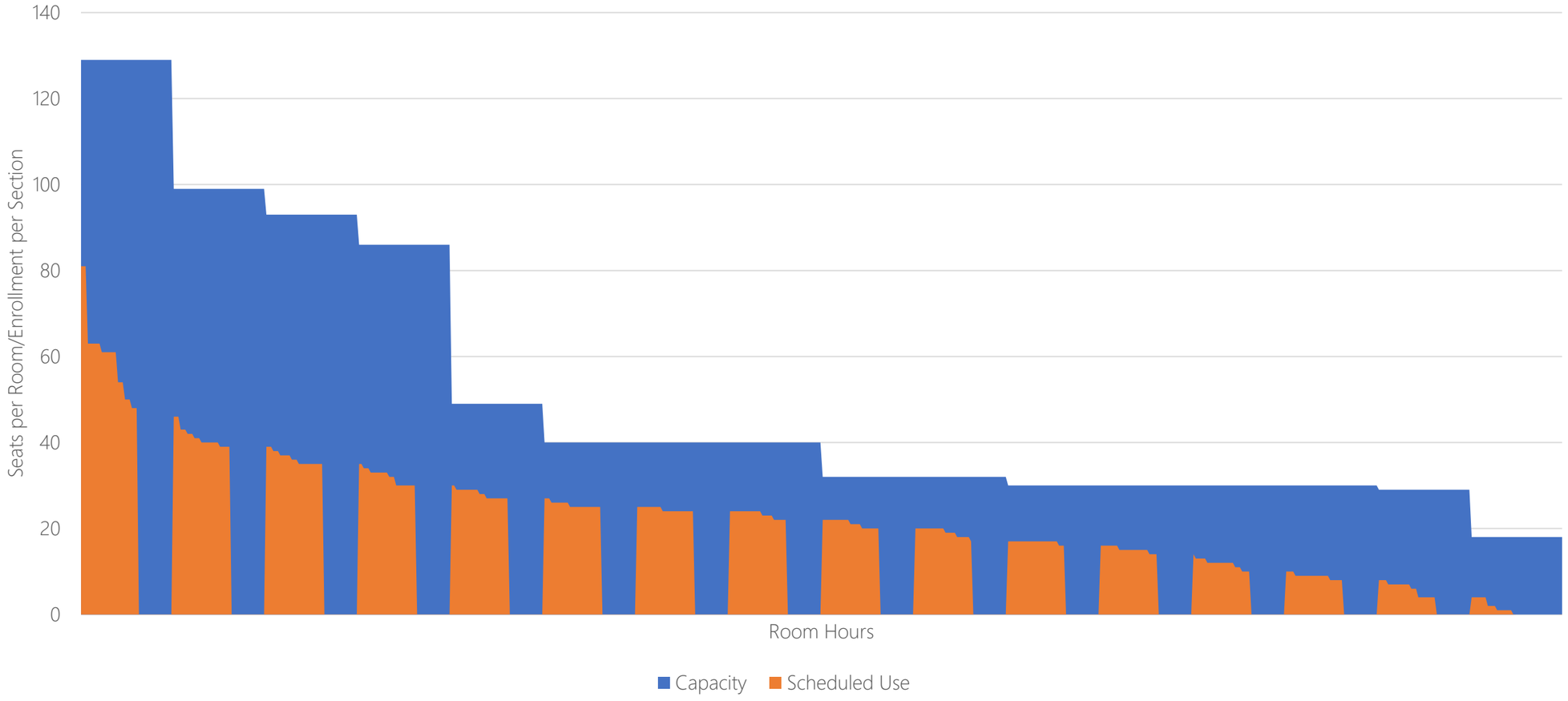
UNIVERSITY CLASSROOM METRIC

Arlington Campus – Score = 0.209



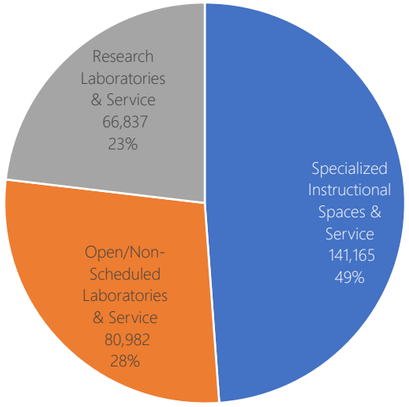
UNIVERSITY CLASSROOM METRIC

SciTech Campus – Score = 0.288

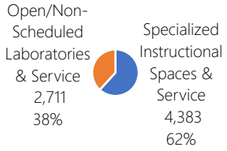


LABORATORY ASSIGNABLE SQUARE FEET BY TYPE

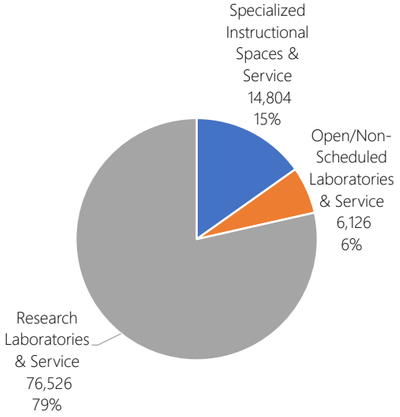
Fairfax Campus –
Total Laboratory Space: 289K ASF



Arlington Campus –
Total Laboratory Space: 7K ASF



SciTech Campus – T
otal Laboratory Space: 97K ASF



Note:
Pies' relative sizes indicates total assignable square footage. These totals include associated service spaces, which include projection rooms, prep rooms, closets, and other similar facilities. Totals include spaces leased by the university as of the point-in-time snapshot of the university space inventory, taken in February 2020.

LABORATORY SPACE

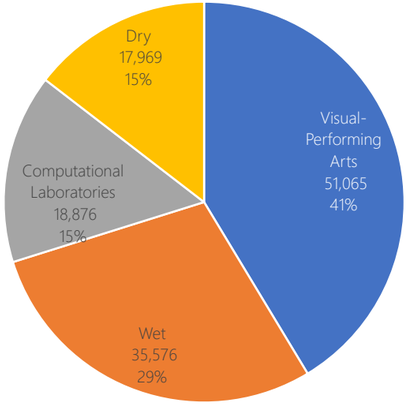
Specialized instructional spaces and research laboratories make up approximately 13% of all space at Mason. This category of university space traditionally has several subcategories: specialized instructional spaces, open/non-scheduled laboratories, and research laboratories. The charts on the left show the breakdown of these space types by campus, which largely highlights the current predominant uses at each. In particular, Fairfax and Arlington are more focused on instruction, while SciTech hosts more research.

SPECIALIZED INSTRUCTIONAL SPACE

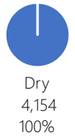
Specialized instructional spaces at Mason are categorized based on the types of learning modalities they support. These categories are dry laboratories, wet laboratories, computational laboratories, and visual-performing arts. These pie charts show the share of assignable square feet of each type of specialized instructional space at each campus. The chart at the bottom shows the count of each type of specialized instructional space.

ASSIGNABLE SQ FEET & COUNT OF SPECIALIZED INSTRUCTIONAL SPACES BY TYPE

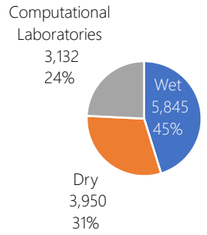
Fairfax Campus – Total: 123K ASF



Arlington Campus – Total: 4K ASF



SciTech Campus – Total: 13K ASF



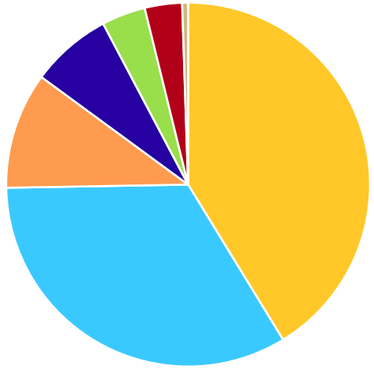
	Fairfax	Arlington	SciTech
Dry	16	6	4
Wet	32	0	5
Computational Labs	21	0	3
Visual-Performing Arts	34	0	0
TOTAL	**103**	**6**	**12**

Note:
Pies' relative sizes indicates total assignable square footage. Totals include spaces leased by the university as of the point-in-time snapshot of the university space inventory, taken in February 2020.

WEEKLY ROOM HOURS BY SCHOOL/COLLEGE

Scheduled instruction taking place in specialized instructional spaces ONLY

Fairfax Campus – Total: 3K WRH



Arlington Campus – Total: 90 WRH

SciTech Campus – Total: 180 WRH

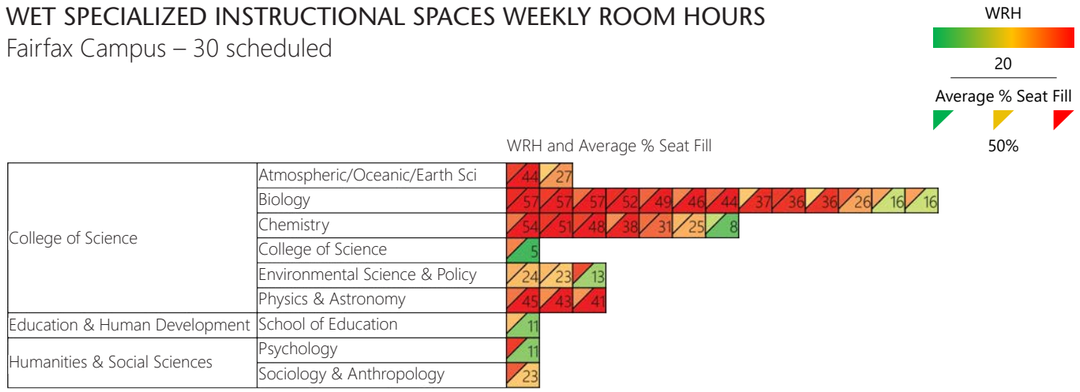
	Fairfax		Arlington		SciTech	
College of Humanities & Social Sciences	124	4%	-	-	-	-
College of Science	1,312	41%	-	-	83	46%
Volgenau School of Engineering	229	7%	-	-	51	28%
College of Visual & Performing Arts	1,064	34%	-	-	-	-
School of Business	-	-	-	-	-	-
College of Education & Human Dev	329	10%	-	-	45	25%

	Fairfax		Arlington		SciTech	
College of Health & Human Services	106	3%	-	-	-	-
Honors College & University (Provost)	17	1%	-	-	-	-
Schar School of Policy & Government	-	-	-	-	-	-
Carter School for Peace & Conflict Resolution	-	-	-	-	-	-
Antonin Scalia Law School	-	-	88	100%	-	-
INTO Mason	-	-	-	-	-	-

The diagrams show the distribution of hours of scheduled instruction taking place in specialized instructional spaces across all three campuses by school/college. The relative size of each pie chart represents the total weekly room hours taking place during the busiest week of the Fall 2019 semester. These charts highlight the distribution of WRH across the three campuses, with the vast majority taking place at Fairfax. Additionally, they show which schools and colleges generate the most hours at each campus.

WET SPECIALIZED INSTRUCTIONAL SPACES WEEKLY ROOM HOURS

Fairfax Campus – 30 scheduled



Note:
Our suggested target utilization for this space type is 20 weekly room hours of scheduled instruction due to setup and breakdown time. Note that SCHEV uses a single target of 24 weekly hours for all lab types.

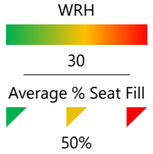
To understand the utilization of the university's specialized instructional spaces, we explored the weekly use and average seat fill of each space on a discipline basis. The picture on the left records our findings for Fairfax. Each rectangle represents an individual room, the number in the rectangle is the number of hours in the week the room was used for scheduled instruction, and the rectangle is colored using a heatmap (red indicates high utilization, green indicates lower utilization) based on identified targets for weekly room use. Each rectangle has a triangle in the top-left corner which represents the average seat fill percentage for courses taking place in that specialized instructional space (red indicates that a majority of seats are being filled, green indicates fewer seats are being filled). Science-intensive wet specialized instructional spaces typically have a target of 20 hours of weekly use for scheduled instruction (this is lower than the target utilization of classrooms to allow for project work and setup time); other types of specialized instructional spaces typically have a target of around 30 weekly room hours of scheduled instruction*. Usually, the most pressure is seen in the intensive introductory sciences, primarily biology, chemistry, and to an extent, physics/astronomy. At Mason, this holds true, and suggests these core science teaching laboratories are likely the single biggest chokepoint with respect to future growth.

Specialized instructional space use at Arlington and SciTech, as with classroom use, is generally significantly lighter than at Fairfax. This use is detailed below.

* Note however that SCHEV uses an undifferentiated target of 24 hours for all lab types.

DRY SPECIALIZED INSTRUCTIONAL SPACES WEEKLY ROOM HOURS

Fairfax Campus – 16 scheduled

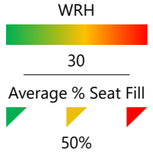


		WRH and Average % Seat Fill
College of Science	Atmospheric/Oceanic/Earth Sci	24
	College of Science	14
	Mathematics	31
Education & Human Development	Mason Life	28 19 18 15
	School of Education	11
Health & Human Services	Nursing	38
	Nutrition & Food Studies	5
	Social Work	53
Humanities & Social Sciences	Communication	18
University (Provost)	Military Science	30
Volgenau School of Engineering	Bioengineering	8
	Electrical & Comp. Engineering	20
	Info Sciences & Technology	35

Note:
Our suggested target utilization for this space type is 30 weekly room hours of scheduled instruction. Note that SCHEV uses a single target of 24 weekly hours for all lab types.

SPECIALIZED INSTRUCTIONAL SPACES WEEKLY ROOM HOURS

Fairfax Campus – Computational Laboratories – 21 scheduled



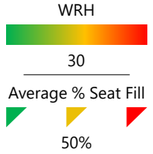
		WRH and Average % Seat Fill
College of Science	Geography/Geoinformation Sci	31 31 25
	Physics & Astronomy	38 36 33
Education & Human Development	School of Education	41 40 29 28 22 13
	School of Sport/Rec/Tour Mgmt	23
Health & Human Services	Health Administration & Policy	9
Humanities & Social Sciences	Modern & Classical Languages	38 34
Volgenau School of Engineering	Computer Science	54 43 30
	Electrical & Comp. Engineering	28 11

Fairfax Campus – Visual-Performing Arts – 34 scheduled

		WRH and Average % Seat Fill
College of Visual & Performing Arts	Coll Visual & Performing Arts	46 33 30 21
	School of Art	47 45 43 43 37 37 37 36 32 32 29 29 24 22 21 21 21
	School of Dance	28 26 24 22
	School of Music	40 40 38 37 37 29 23
	Theatre	33 18

Note:
Our suggested target utilization for this space type is 30 weekly room hours of scheduled instruction. Note that SCHEV uses a single target of 24 weekly hours for all lab types.

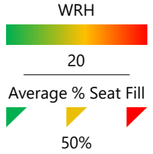
DRY SPECIALIZED INSTRUCTIONAL SPACES WEEKLY ROOM HOURS
Arlington Campus – 6 scheduled



		WRH and Average % Seat Fill
Antonin Scalia Law School	Law	24 / 23 / 21 / 10 / 6 / 4

Note:
Our suggested target utilization for this space type is 30 weekly room hours of scheduled instruction. Note that SCHEV uses a single target of 24 weekly hours for all lab types.

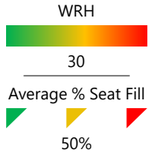
WET SPECIALIZED INSTRUCTIONAL SPACES WEEKLY ROOM HOURS
SciTech Campus – 5 scheduled



		WRH and Average % Seat Fill
College of Science	Biology	14 / 4
	Chemistry	17 / 14
Volgenau School of Engineering	Mechanical Engineering	8

Note: Suggested target utilization for this space type is 20 weekly room hours of scheduled instruction due to setup and breakdown time

DRY SPECIALIZED INSTRUCTIONAL SPACES WEEKLY ROOM HOURS
SciTech Campus – 3 scheduled



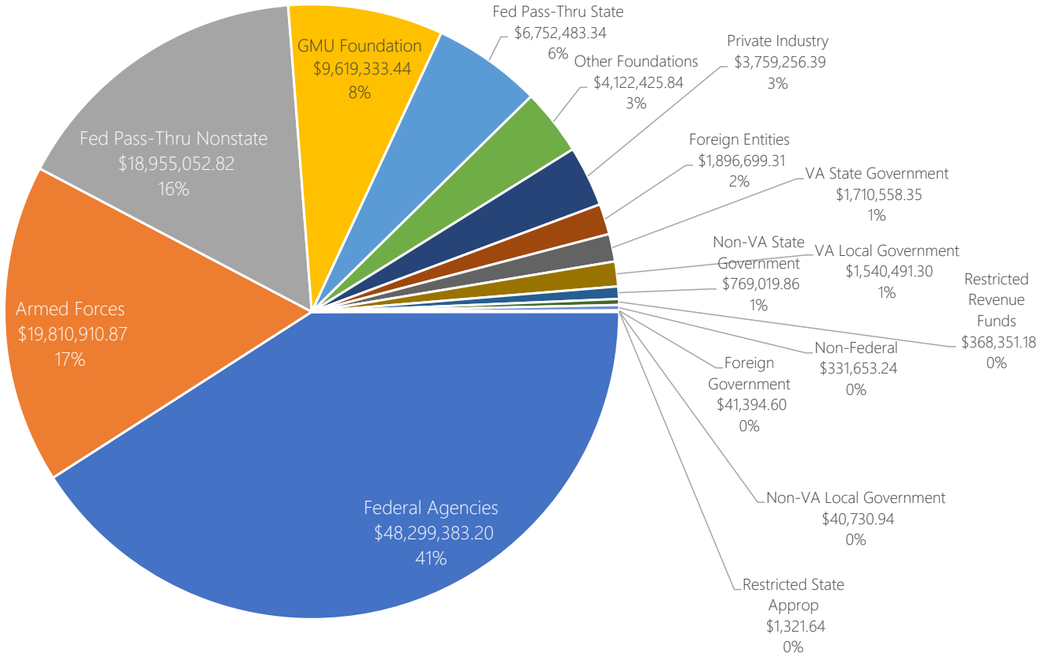
		WRH and Average % Seat Fill
College of Science	Physics & Astronomy	14
Education & Human Development	School of Kinesiology	24 / 21

SPECIALIZED INSTRUCTIONAL SPACES WEEKLY ROOM HOURS
SciTech Campus – Computational Laboratories – 3 scheduled

		WRH and Average % Seat Fill
College of Science	School of Systems Biology	21
Volgenau School of Engineering	Info Sciences & Technology	27 / 16

Note:
Our suggested target utilization for this space type is 30 weekly room hours of scheduled instruction. Note that SCHEV uses a single target of 24 weekly hours for all lab types.

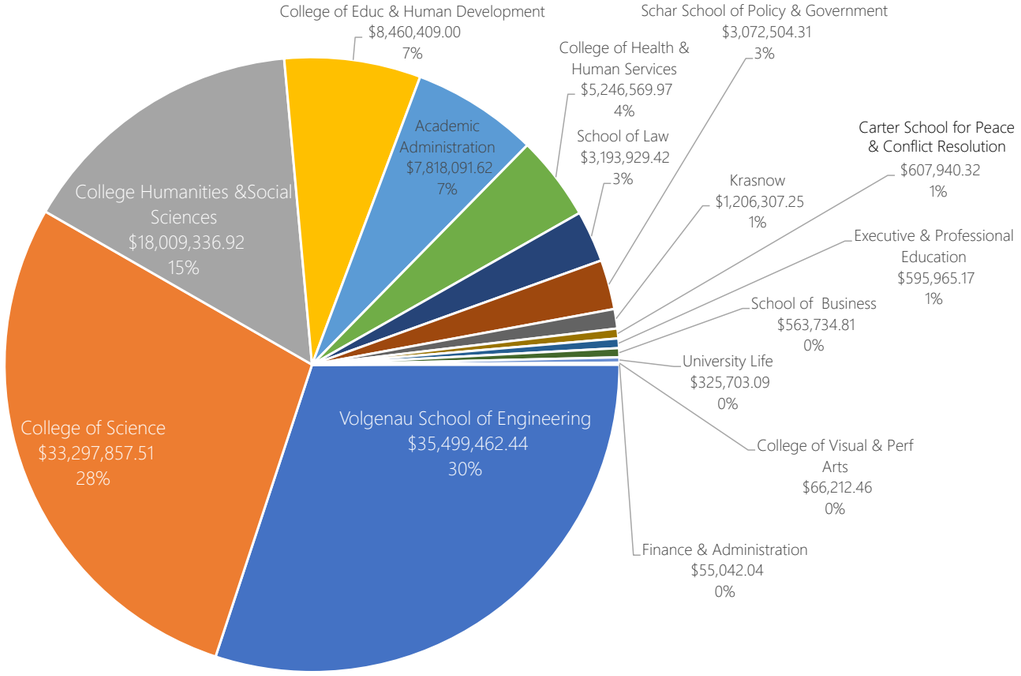
FY17-FY19 RESEARCH EXPENDITURE AVERAGE BY FUNDING SOURCE



RESEARCH SPACE

For the period FY17-FY19, Mason had an average of $118 million in research expenditures. This chart shows the breakdown by funding source. Nearly three quarters of all research was sponsored by federal agencies, the armed forces, and federal pass-throughs, eight percent was internally funded (GMU Foundation), and the remaining fifth was funded by other entities. As Mason continues to grow its research enterprise, the focus will be on externally sponsored research.

FY17-FY19 RESEARCH EXPENDITURE AVERAGE BY DIVISION



This chart shows the breakdown of average research expenditures for FY17-FY19 by division. About three quarters of all research expenditures originate with the Volgenau School of Engineering, the College of Science, and the College of Humanities and Social Sciences.

LABORATORY SPACE ASSIGNMENTS

Fairfax

	Research Laboratories		Other Research Space		Total	
Category	Space Count	ASF	Space Count	ASF	Space Count	ASF
Assigned to an investigator	166	54,488	148	26,568	314	81,056
Unassigned/Vacant/Growth	8	2,884	38	6,867	46	9,751
Affiliate	3	667	4	527	7	1,194
Support	-	-	67	9,465	67	9,465
Total	**177**	**58,039**	**257**	**43,427**	**434**	**101,466**

Arlington

	Research Laboratories		Other Research Space		Total	
Category	Space Count	ASF	Space Count	ASF	Space Count	ASF
Assigned to an investigator	-	-	478	96,173	478	96,173
Unassigned/Vacant/Growth	-	-	9	1,254	9	1,254
Affiliate	-	-	4	597	4	597
Support	-	-	-	-	-	-
Total	-	-	**491**	**98,024**	**491**	**98,024**

SciTech

	Research Laboratories		Other Research Space		Total	
Category	Space Count	ASF	Space Count	ASF	Space Count	ASF
Assigned to an investigator	98	45,845	335	61,284	433	107,129
Unassigned/Vacant/Growth	37	5,307	46	5,720	83	11,027
Affiliate	1	388	3	350	4	738
Support	-	-	142	25,374	142	25,374
Total	**136**	**51,540**	**526**	**92,728**	**662**	**144,268**

The accompanying chart to the left shows the space count and assignable square footage of all research laboratory space as well as all other spaces that are categorized as research space (at the point-in-time of our analysis) for the three campuses. The chart at the bottom shows the breakdown of research lab spaces which are owned and leased by the university. Note the significant amount of research space currently leased. This is because of a misalignment between available research space and the type of research space required (primarily by engineering investigators). The university should therefore consider increasing its space of research portfolio to include more of these desired types of spaces.

RESEARCH LABS LEASED VS. OWNED SPACE

Assignable Square Feet by use type

	Owned	Leased/Use Agreement
Sponsored Research	58,232	18,231
Internal Research	20,990	6,713
Affiliates	9,029	
Vacant/Growth/Unassigned	4,328	4,140
Total	**92,579**	**29,084**

Note:
Research laboratory occupancy status is based on available data from the space inventory database captured in February 2020.

ASF BY DIVISION

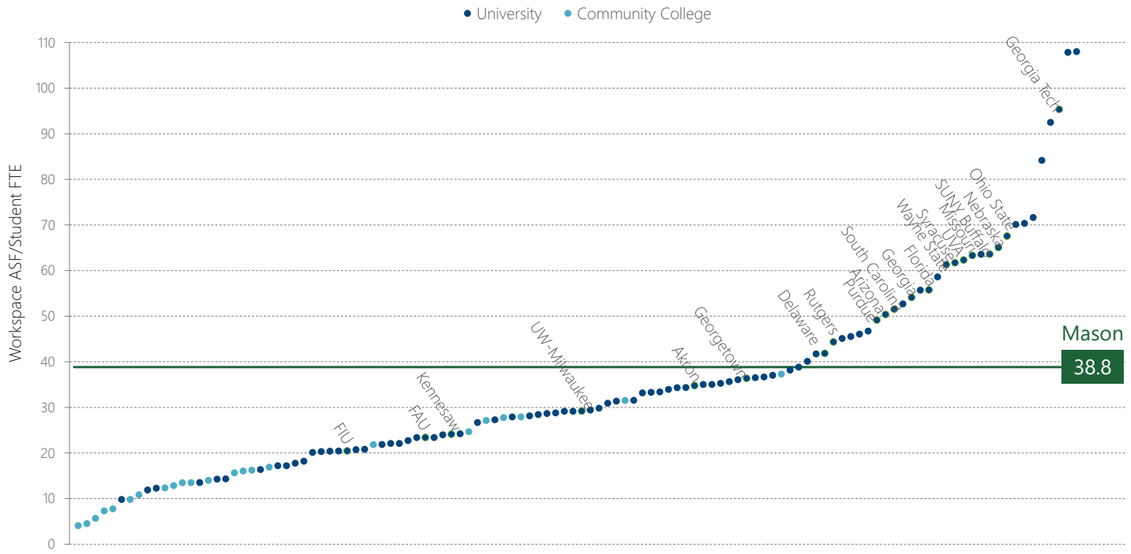
Division	Laboratories	Other Research ASF	Total
Academic Administration	20,412	20,469	40,881
Affiliates	11,769	-	11,769
Antonin Scalia Law School	-	10,123	10,123
College of Humanities & Social Sciences	12,530	48,426	60,956
College of Education & Human Dev	4,124	11,757	15,881
College of Health & Human Services	5,937	5,950	11,887
College of Science	70,569	63,683	134,252
College of Visual & Perf Arts	-	5,136	5,136
Krasnow	3,628	7,144	10,772
Schar School of Policy and Government	-	9,660	9,660
Carter School for Peace and Conflict Resolution	-	2,277	2,277
School of Business	-	502	502
Volgenau School of Engineering	32,500	28,878	61,378

AVERAGE EXPENDITURE (FY17-FY19) PER RESEARCH ASF (ALL) BY DIVISION

Division	Sponsored	Internal	Overall
Academic Administration	$187.37	$3.87	$191.24
Antonin Scalia School of Law	$22.21	$293.30	$315.51
College of Humanities & Social Sciences	$210.52	$84.93	$295.45
College of Education & Human Dev	$528.63	$4.11	$532.74
College of Health & Human Services	$439.60	$1.77	$441.37
College of Science	$247.38	$0.64	$248.03
College of Visual & Perf Arts	$12.89	-	$12.89
Krasnow	$110.80	$1.18	$111.99
Schar School of Policy & Government	$241.57	$76.49	$318.06
Carter School for Peace and Conflict Resolution	$252.07	$14.93	$266.99
School of Business	$852.97	$270.00	$1,122.98
Volgenau School of Engineering	$574.77	$3.60	$578.37

These charts describe the assignable square feet of research spaces by division (both research laboratories and other spaces categorized as being for research purposes) and the average expenditure for the period FY17-FY19 per assignable square foot of research space by division. The university does not currently have a target expenditure per square foot, but may want to consider appropriate discipline-specific guidelines in the future to help manage research lab space, and to incentivize collaboration.

WORKSPACE CATEGORY ASF/STUDENT FTE BENCHMARKING



WORKSPACE

The chart to the left shows the assignable square feet of workspace per student full time equivalent (on the y-axis) of various universities and community colleges. The chart shows that Mason lies toward the middle of the distribution. This suggests the total available square footage of workspace at Mason is likely in an acceptable range, but more detailed investigation is certainly warranted, as overall square footage may not adequately capture the number of available workspaces, or their condition.

WORKSPACES

	All Workspace Count	Private Office Count	Station Count	Total ASF	Average Station Size (private)	Average Station Size (shared)
Fairfax	3,290	2,565	5,359	590,860	132	97
Arlington	463	371	646	83,875	149	108
SciTech	335	268	537	55,974	131	87

Note:
This excludes service space, and spaces under affiliate agreements/MOUs or leases. Some shared stations include reception areas.

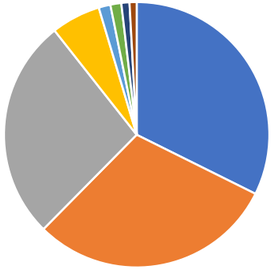
This table shows an overview of workspaces at each campus with a distinction between private offices and shared workspaces. We considered any space coded as a workspace with a listed occupancy limit of one to be a private office. Any space coded as a workspace with a listed occupancy limit of greater than one is designated as a shared workspace. Average station sizes for both private offices and shared workspaces are larger than most guidelines. We typically suggest that private offices have an average station size in the range of 80-120 assignable square feet, while shared workspaces should have 40-60 assignable square feet per occupant.

The university does not currently have a regular process to monitor workspace assignments. This may represent a high-value opportunity for future investment, as workspace represents the single largest category of non-residential university space.

In Phase Two, we will further examine the university's workspace guidelines.

WORKSPACE ASF BY TYPE

Fairfax Campus – Total: 591K ASF



Arlington Campus – Total: 84K ASF

SciTech Campus – Total: 56K ASF

	Fairfax				Arlington				SciTech			
	ASF	%	Avg ASF/Station (private)	Avg ASF/Station (shared)	ASF	%	Avg ASF/Station (private)	Avg ASF/Station (shared)	ASF	%	Avg ASF/Station (private)	Avg ASF/Station (shared)
Office - Staff	191,102	32%	129	78	24,800	30%	134	90	15,476	28%	123	72
Staff – Workstation Area	177,610	30%	171	133	20,509	25%	279	217	12,930	23%	422	153
Office – Faculty-Instructional	159,370	27%	132	79	24,345	29%	154	58	11,096	20%	130	70
Graduate Research Assistant	35,512	6%	102	62	7,063	8%	122	64	10,111	18%	48	64
Graduate Teaching Assistant	8,469	1%	110	70	137	0%	-	46	-	-	-	-
Adjunct Faculty	7,842	1%	116	69	1,559	2%	120	50	1,407	2%	120	86
Office – Fellow-Visit Schlr-Affil	5,848	1%	126	65	3,604	4%	124	52	1,206	2%	86	-
Office – Faculty-Research	5,107	1%	132	71	1,858	2%	145	41	3,748	7%	144	-

Note:
This excludes spaces under affiliate agreements/MOUs or leases. Some shared stations include reception areas. Totals do not include associated service and support spaces.

These charts show the distribution of various internal workspace designations across the three campuses. The table at the bottom of the page shows the total amount and percentage of assignable square feet each workspace designation makes up on each campus, as well as the average assignable square feet per station for private offices and shared workspaces by designation. Calculations were made based on the best available workspace assignment data, although as noted above, the university could potentially improve this aspect of its data collection. An improved dataset of this kind would be a crucial component of any new workspace guidelines, and could also allow for better management of workspaces.

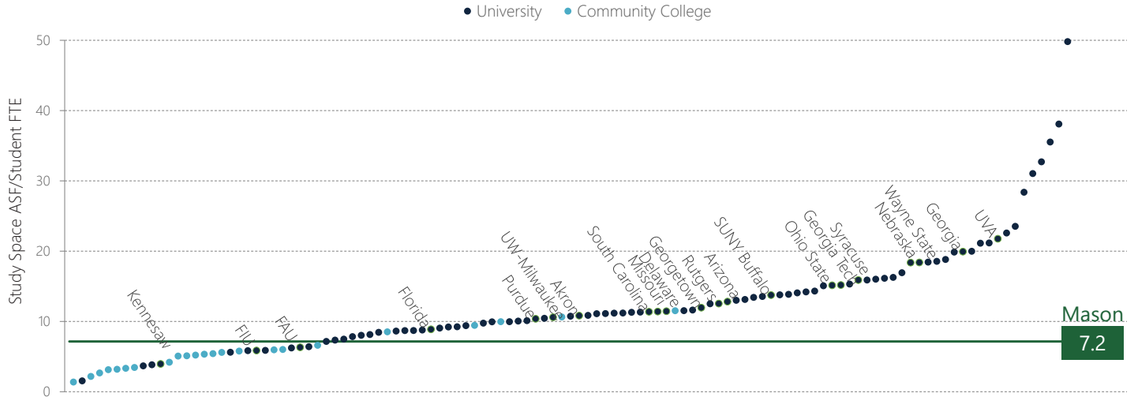
AFFILIATE/MOU/LEASED WORKSPACES

Fairfax Campus—35,350 ASF

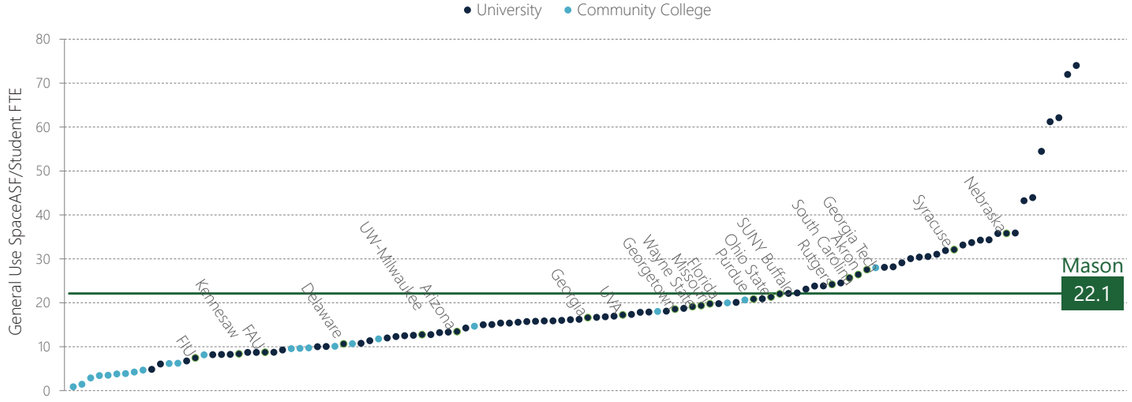
	Workspace Count	Station Count	Total ASF
Fairfax	38	73	7,072
Arlington	119	221	17,731
SciTech	30	105	10,547

This chart shows the breakdown of the 35,000 assignable square feet of workspaces across the three campuses that are either in use by affiliates, under a memorandum of understanding, or being leased out to external entities. This helps us understand how much workspace capacity we own which could become available if needed, subject to a renegotiation of agreements with affiliate/external users of these spaces.

STUDY ASF/STUDENT FTE BENCHMARKING



GENERAL USE ASF/STUDENT FTE BENCHMARKING



STUDY/COLLABORATION SPACE

Mason has nearly 900,000 assignable square feet in the study and general use space categories. Study spaces include study rooms, stack space, open-stack study rooms, and processing rooms. General use spaces include assembly, exhibition, dining, lounge, retail, recreation, and meeting rooms. These two charts provide benchmarking data for these space types. They show the distribution of the assignable square feet of each respective space category per student FTE at different universities (dark blue) and community colleges (light blue) with which we've had the pleasure of working. Labeled are institutions which could be considered peers of Mason. In the distribution of study ASF per student FTE, Mason lies on the lower end, while it is more in the middle of the pack when it comes to general use space. It is important to note that if there were a "correct," formulaic manner in which to determine the ideal amount of study or general use space based on enrollment, we would see clustering on these distributions around a specific value on the y-axis. These distributions reinforce that there is no "right" answer, but they help to visualize how Mason compares. The following two pages provide a more detailed accounting of the exact makeup of study and general use space across Mason's three campuses. Study and general use space will undergo more detailed study in Phase Two.

STUDY SPACE

Fairfax Campus – Total: 158K ASF

Arlington Campus – Total: 45K ASF

SciTech Campus – Total: 9K ASF

	Fairfax		Arlington		SciTech	
Open or Stack Study Area	111,037	70%	36,225	80%	7,816	84%
Study Room	20,533	13%	3,880	9%	1,439	16%
Study – Service	14,060	9%	1,372	3%	-	-
Stack Area	9,074	6%	2,551	6%	-	-
Collaboration Area/Breakout	2,465	2%	983	2%	-	-
Library Processing/Sorting	396	0%	150	0%	-	-

Note:
Pies' relative sizes indicates total assignable square footage. Totals include spaces leased by the university as of the point-in-time snapshot of the university space inventory, taken in February 2020.

GENERAL USE SPACE

Fairfax Campus – Total: 475K ASF

Arlington Campus – Total: 45K ASF

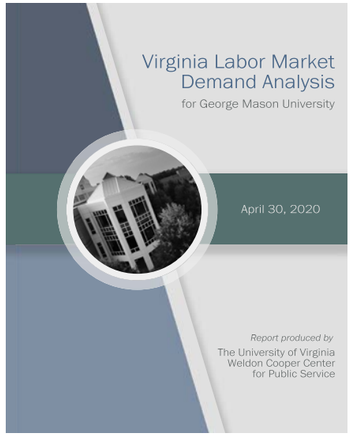
SciTech Campus – Total: 146K ASF

	Fairfax		Arlington		SciTech	
Recreation	113,387	24%	-	-	69,397	48%
Food Facility	95,968	20%	5,980	17%	3,676	3%
Assembly	92,282	19%	9,415	27%	53,014	36%
Lounge-Open Study/Collab	88,294	19%	9,925	28%	5,722	4%
Meeting Room	46,264	10%	4,592	13%	9,409	6%
Retail-Merchandising	30,091	6%	5,152	15%	1,651	1%
Day Care	5,410	1%	-	-	2,481	2%
Exhibition	2,944	1%	-	-	430	0%

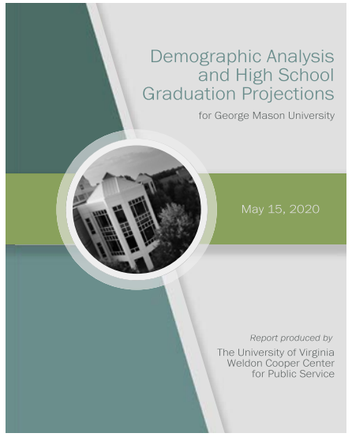
Note: Pies' relative sizes indicates total assignable square footage

FUTURE NEEDS

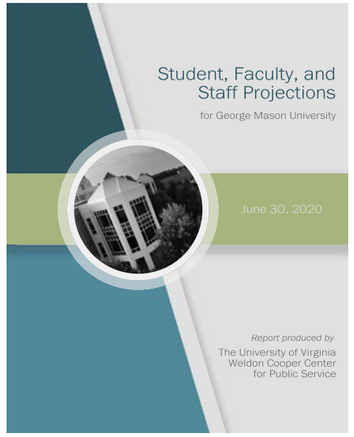
THE THREE REPORTS
By The Weldon Cooper Center for Public Service



Virginia Labor Market Demand Analysis



Demographic Analysis and High School Graduation Projections



Student, Faculty, and Staff Projections

ANALYSIS OF FUTURE DEMOGRAPHICS AND ENROLLMENTS

The Weldon Cooper Center for Public Service performed an independent analysis of likely future workforce needs and demographic trends in Virginia, and then calculated potential enrollments for five-year (at the program level) and twenty-year (at the division level) timeframes.

Mason's current and planned programs align well with Virginia's likely future workforce needs, with no obvious large gaps in offerings. The Commonwealth's recent rapid increase in population is not likely to continue over the next ten plus years with a resulting plateau in high school graduates. Mason should therefore not expect the same rapidly increasing in-state student demand as it experienced over the last two decades.

Weldon Cooper devised a baseline future enrollment scenario, then explored various high and low scenarios relative to this baseline. Adjusting Weldon Cooper's baseline scenario to include Mason's commitments to the state to develop "Tech Talent" in computer science essentially aligns enrollments with Weldon Cooper's high-end enrollment scenario. Details on Weldon Cooper's work can be found in their reports which are available in the Appendix.

COMPARING PROJECTIONS

Weldon Cooper Projections and Mason's internal projections

Students

	Headcount			FTE		
	Total	On-campus	Online	Total	On-campus	Online
Fall 2019 Census (Korea excluded)	37,863	36,873	12,210	29,256	25,366	3,890
Weldon Cooper 'Baseline' Scenario 2025	40,116			31,040		
Weldon Cooper 'Tech Talent' Scenario 2025	43,674			34,468		
Internal SCHEV FY30 (Korea excluded)	50,551			43,001		
Internal 'Strategic Growth' Scenario	49,863	40,873	20,210	39,556	28,866	10,690

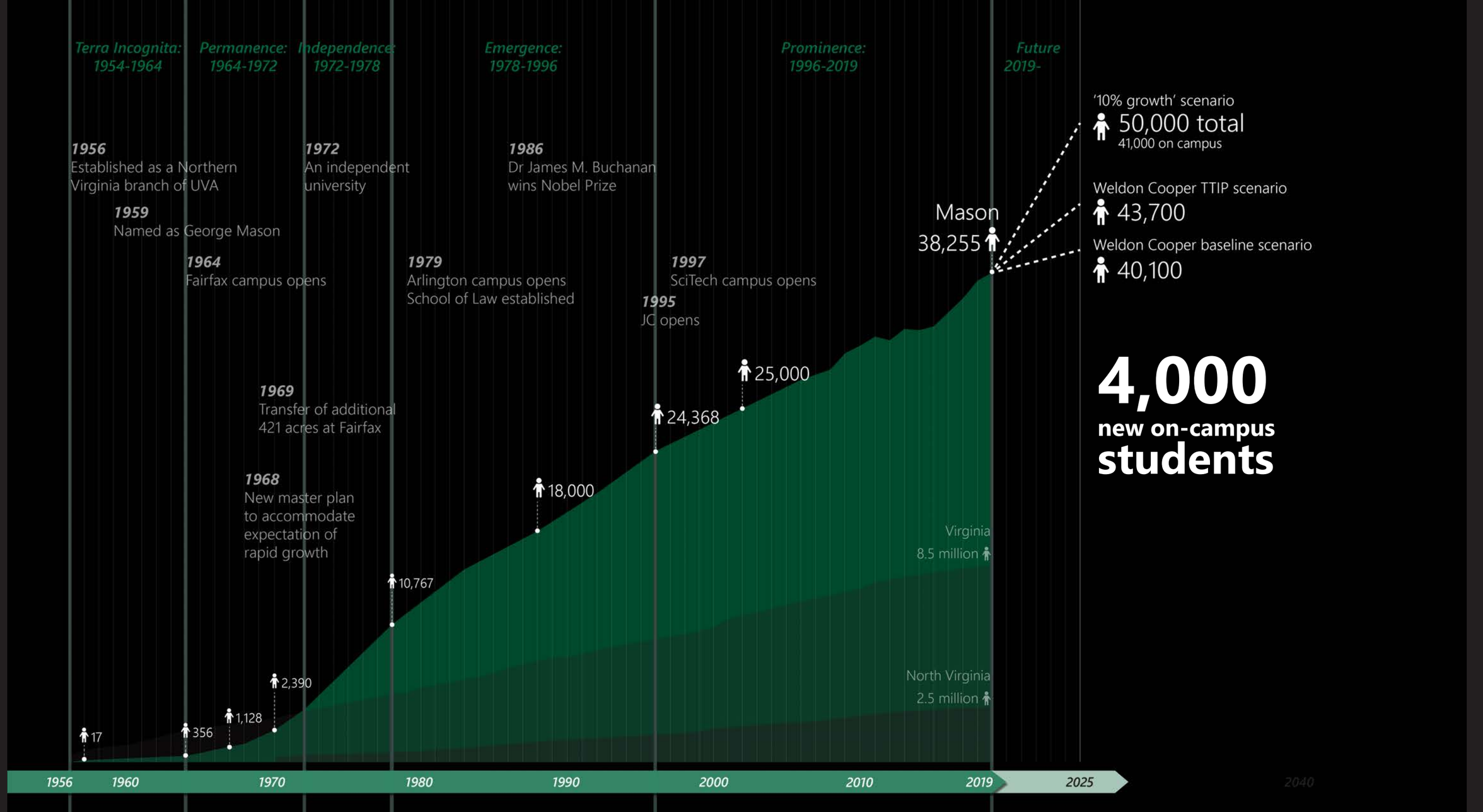
Faculty and staff

	Headcount	FTE
Fall 2019	7,410	4,882
Weldon Cooper 'Baseline' Scenario 2025	7,676	5,065
Weldon Cooper 'Tech Talent' Scenario 2025	8,057	5,282
Internal 'Strategic Growth' Scenario	8,060	5,532

Notes:
Mason Korea number is excluded. For Korea, the FTE for Fall 2019 census is 377, and the headcount is 392. If including Korea, the total Mason headcount is 29,633, and the FTE is 38,255.
Internal projections primarily derived using budget model. They assume ADVANCE can significantly change Mason's share of college-age population, significantly increase out-of-state enrollment, and grow non-traditional students.
For the internal 'Strategic Growth' scenario, the on-campus headcount for the three campuses (36,873) is calculated as the sum of the headcount of each campus in Fall 2019 Census. The growth (10%) is calculated as 4,000 new on-campus students for the three campuses. We started with the student FTE to HC ratio of 0.85, which is the average ratio for SCHEV FY20 to FY30, then modified slightly based on 'Tech Talent' goals. For faculty and staff, this scenario includes 500 new faculty and 150 new staff with 1:1 HC:FTE ratio. For the scenario, we assumed 50 are research faculty, 190 for IDIA, and 260 distributed to other colleges using existing ratios. Because some students are both on-campus and off-campus, the headcount of on-campus and off-campus does not equal the total headcount.

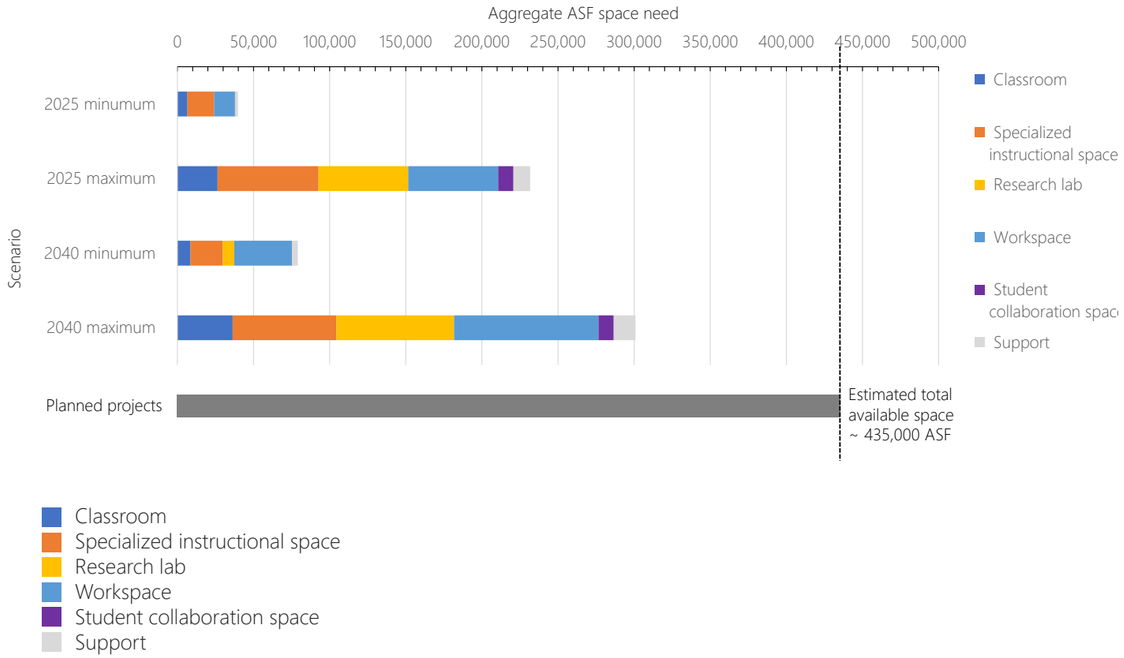
In addition to the work completed by Weldon Cooper, Mason has undertaken significant internal investigations of future enrollment scenarios. While Mason's internal calculations generally show higher projections than Weldon Cooper, the various models are in fact consistent with respect to in-state students. Differences arise because Mason's internal models place increasing emphasis on online, out-of-state, and international growth, which are factors that will depend on strategic investment by Mason, and were therefore not part of Weldon Cooper's work (which instead focused on extrapolating historical trends). Mason also believes that, through programs like ADVANCE, the university can sustantially grow its community college pipeline.

For the purposes of Phase Two master planning, we will investigate a 50,000 total enrollment scenario, with the majority of this growth occurring online. Our planning assumption will be for 4,000 additional in-person students.



4,000
new on-campus students

SUMMARY AGGREGATE ASF SPACE NEED BASED ON WELDON COOPER SCENARIOS



Note:
Planned projects include Horizon Hall (221,757 GSF), Life Science and Engineering (132,000 GSF), IDIA (225,000 GSF for Mason), Academic VIII (200,000 GSF), and demolition of Robinson B (91,585 GSF). This equates to ~435,000 ASF.
Excludes campus-specific considerations, residential, recreation, dining, athletics, other special use spaces (for now!)

FUTURE SPACE NEEDS BASED ON WELDON COOPER SCENARIOS

We investigated potential space needs using technical methods detailed in the Appendix, looking in detail at various space types, given the various enrollment scenarios. On an aggregate basis, considering only quantitative needs based on the Weldon Cooper enrollment scenarios, the university could likely accommodate the projected growth in this scenario through a combination of the better use of existing space and the construction of the various future building projects already under consideration. As a thought exercise, this is important because it suggests that strategic initiatives, program relocation, and most importantly, building condition should likely be the compelling factors in future capital investment decisions.

FUTURE SPACE NEEDS BASED ON THE ‘STRATEGIC GROWTH’ SCENARIO

4,000 new on-campus students

	Total ASF needed (net of IDIA)
Health & innovation-focused strategies	366 K to 550 K
STEM-focused strategies	547 K to 880 K
Program consolidation-focused strategies	343 K to 515 K

FUTURE SPACE NEEDS BASED ON ‘STRATEGIC GROWTH’ SCENARIO

To better understand space needs associated with strategic objectives, including increased out-of-state and other growth assumptions, we explored a series of program scenarios consistent with each campuses’ program identity. For clarity, specific scenarios tended to focus on a specific campus, but no one scenario is intended as an actual recommendation. Instead, the scenarios should be considered holistically as a group that provides a reasonable estimate on the likely range of future square footage needs.

Initial investigations of new square footage based on these factor estimate new construction needs could range between an additional 340,000 GSF and 880,000 GSF once the IDIA project is completed (not including residential, recreation, dining, retail, or structured parking) depending on various scenario assumptions. These estimates do not include capital renewal, which will be an important component of Phase Two considerations. Further technical details of the estimates are available in the Appendix.

PROGRAM IDENTITY

ARLINGTON

2K students

800K GSF

900 hours in classrooms per week

42 years campus age

FAIRFAX

32K students

6.4 Million GSF

10K hours in classrooms per week

HIGH usage of specialized instructional spaces

6K residential beds

49 years campus age

SCITECH

2K students

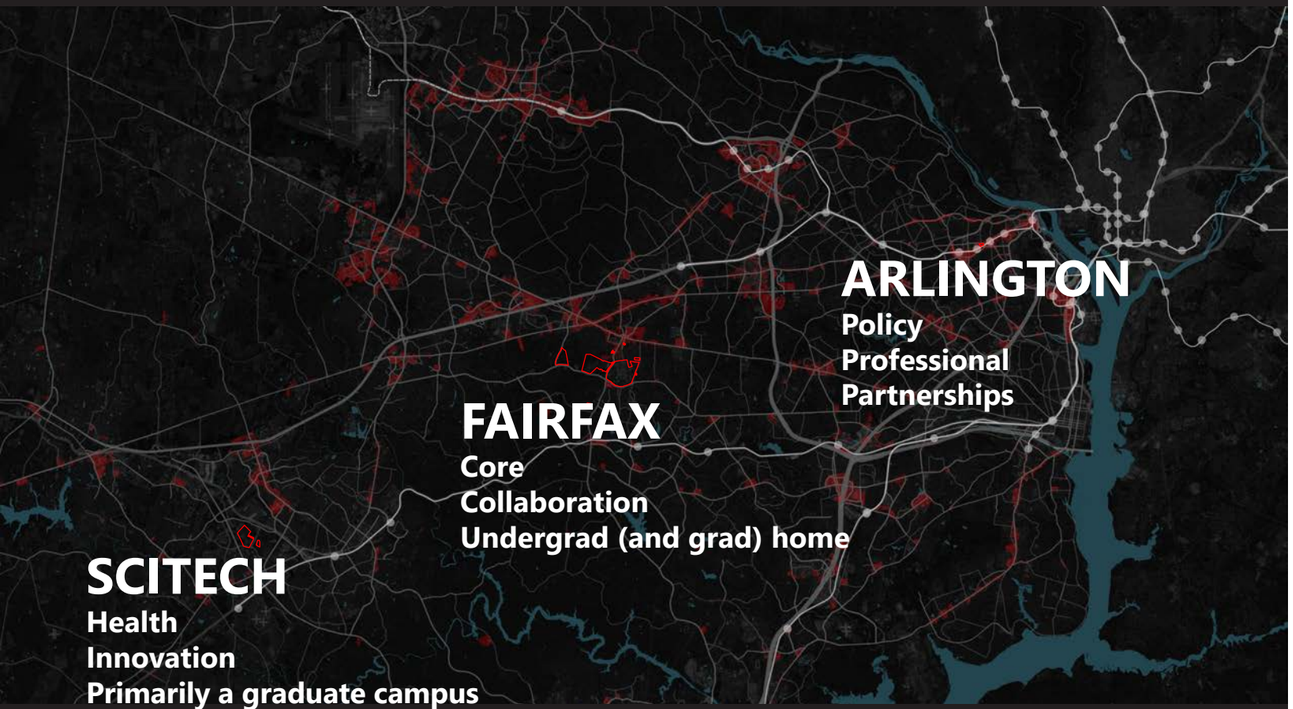
650K GSF

600 hours in classrooms per week

LIGHT usage of specialized instructional spaces

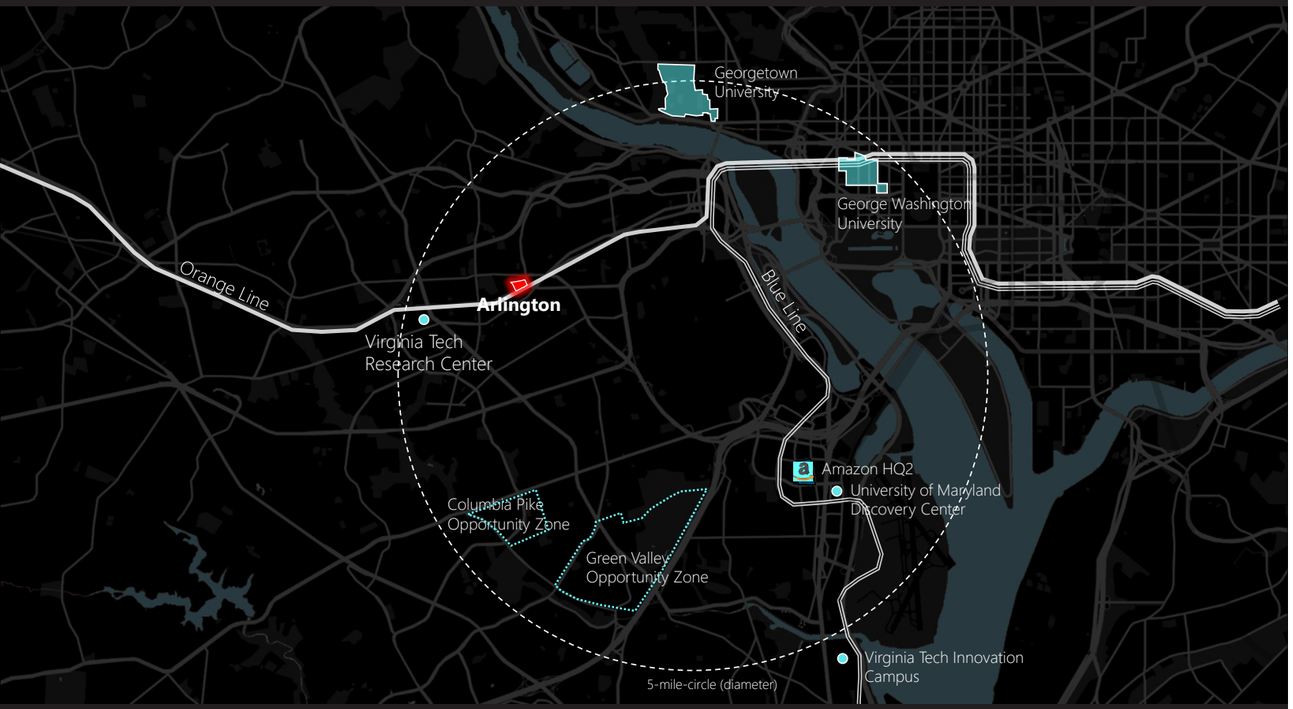
150 residential beds

24 years campus age



PROGRAM IDENTITY

The purpose of providing a programmatic identity for each of Mason's three primary campuses is not to dictate the future location of every academic program. Rather, consistent with the master plan's broader ethos, it is to build a guiding frame to support future decisions on program location. By providing a "big picture" strategy, the master plan empowers the university to sensibly determine where synergies for a given program can be optimized, and help to ensure necessary resources are provided, while avoiding, where possible, duplication. These program identities are therefore crucial to ensuring mission drives the physical environment, and will therefore be key guides during Phase Two master plan development.



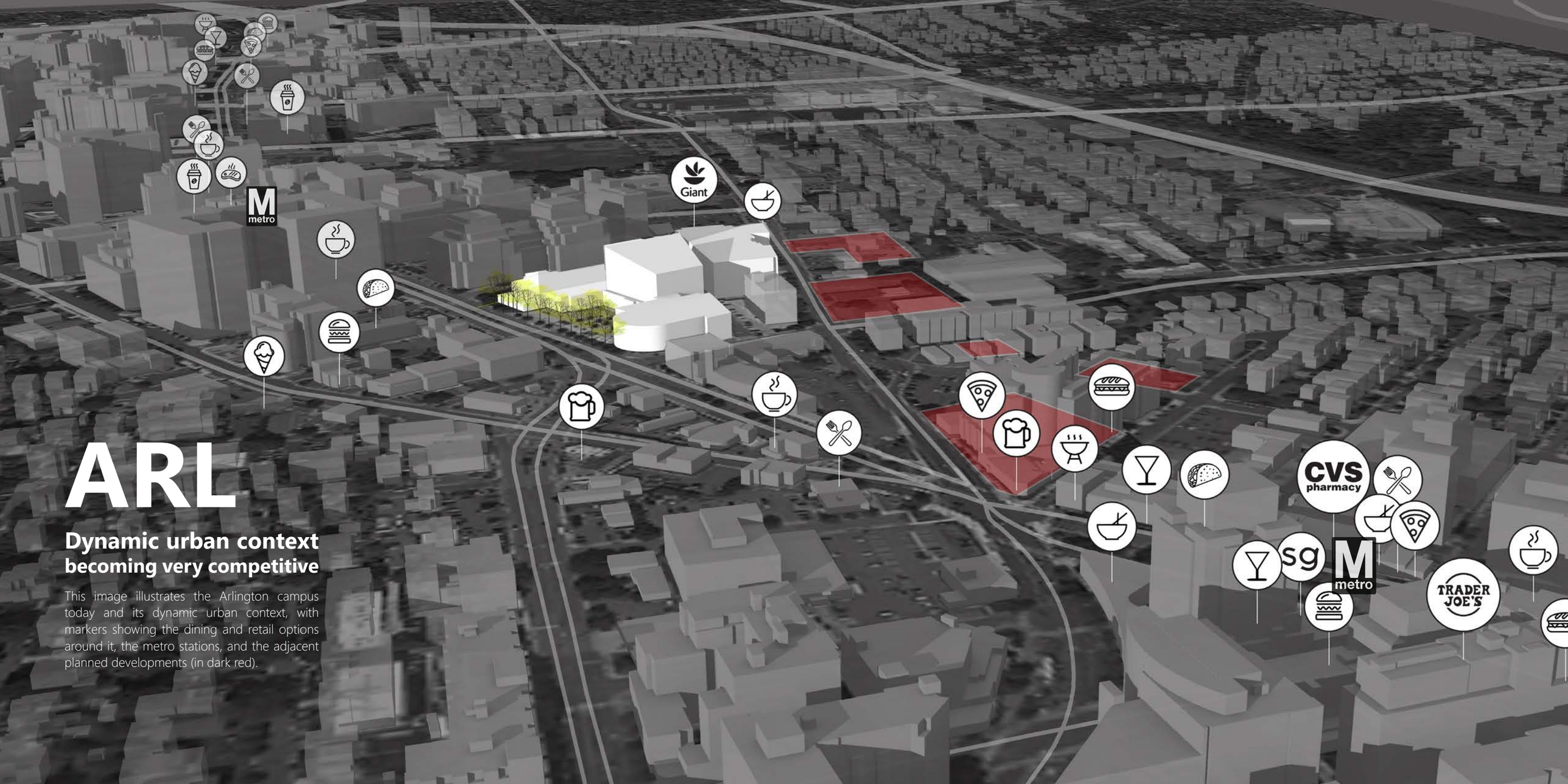
ARL

Dynamic urban context becoming very competitive

A number of projects, apart from Amazon HQ2, are happening within the Arlington region, making this area both exciting and competitive.

ARLINGTON CAMPUS

The Arlington campus is located in an exciting, if increasingly competitive, urban context. It will focus on law and policy programs that benefit from the proximate location to DC; on other professional programs including information and data-science; and on partnerships.



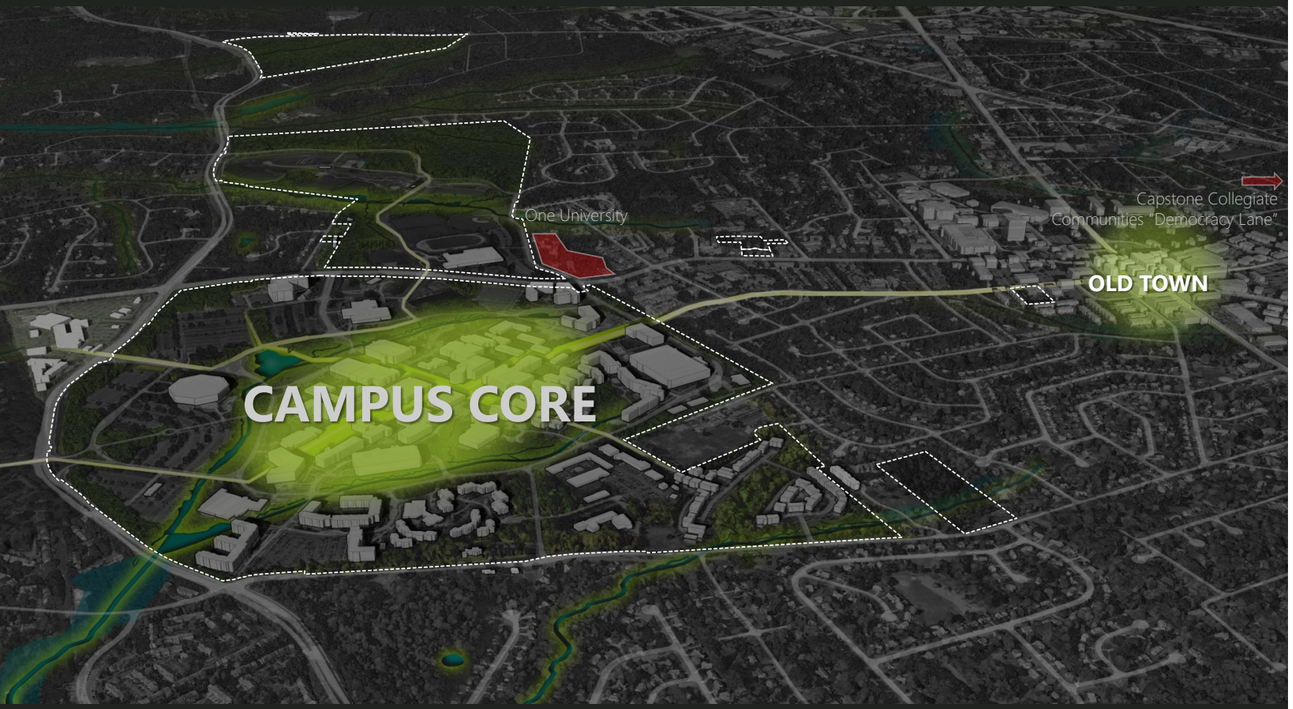
ARL

Dynamic urban context becoming very competitive

This image illustrates the Arlington campus today and its dynamic urban context, with markers showing the dining and retail options around it, the metro stations, and the adjacent planned developments (in dark red).

Policy
Professional
Partnerships

IDENTITY



FAIRFAX

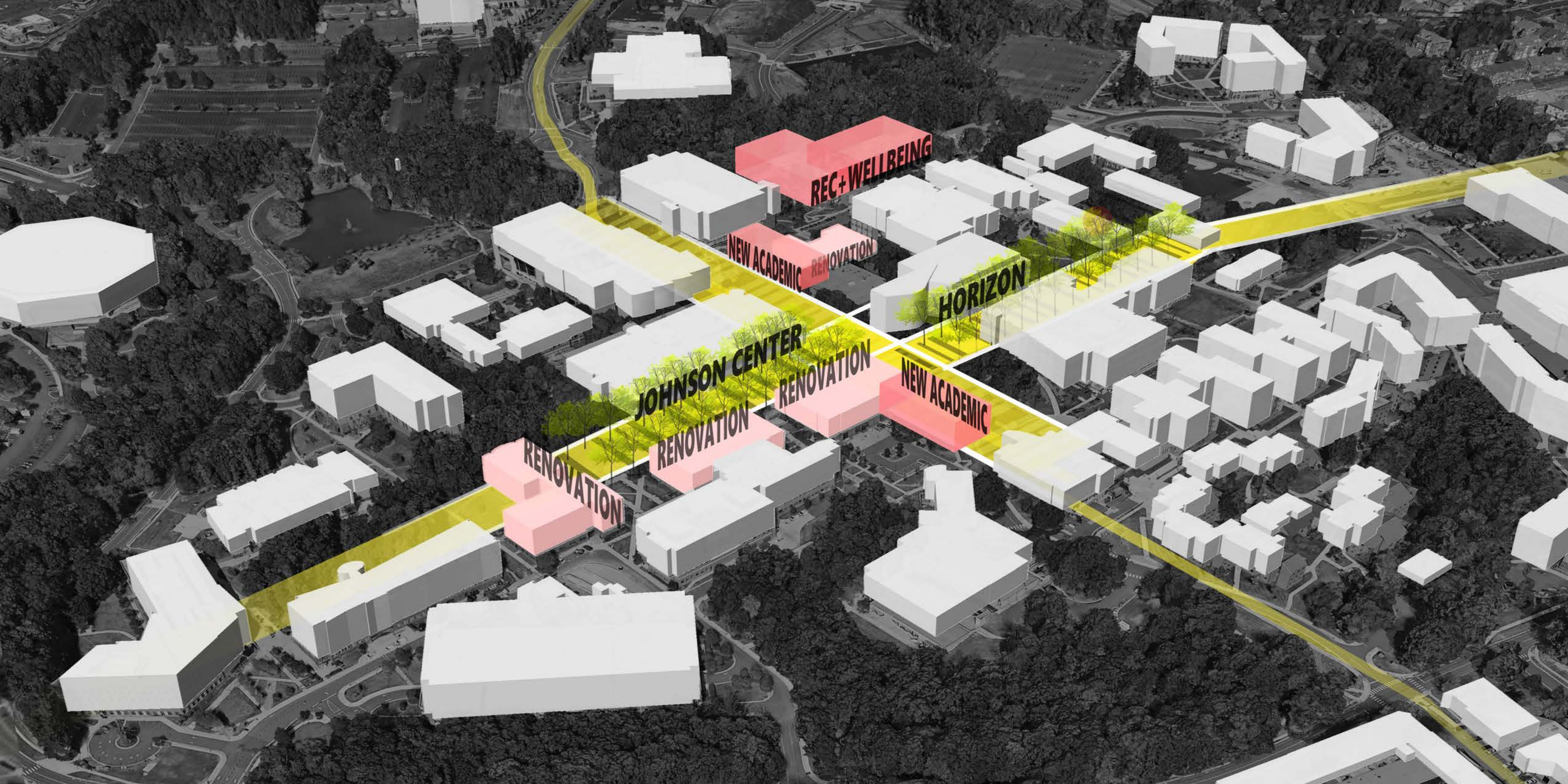
Renewal and connection

with large real estate portfolio

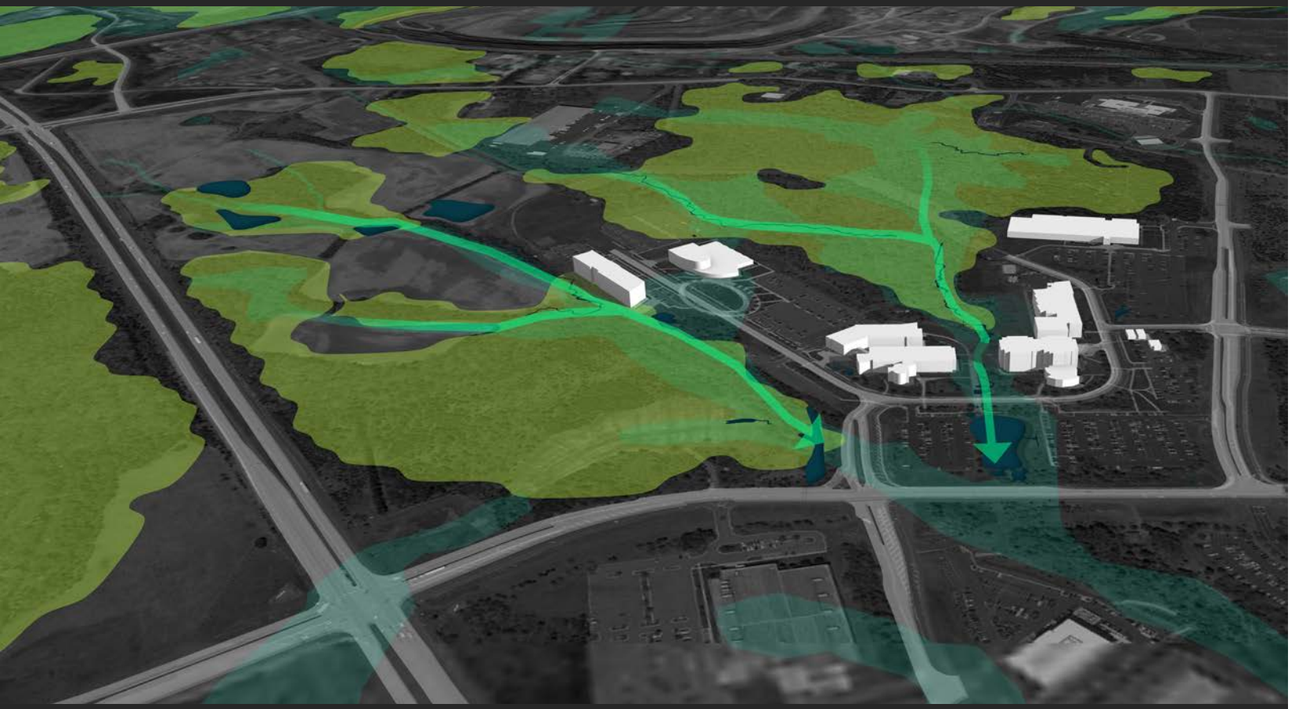
FAIRFAX CAMPUS

The Fairfax campus, given its size, scale, and history, will retain a core role in Mason's identity with a significant emphasis on collaboration—collaboration will necessarily occur wherever Mason exists, but given the sheer number of scholars in Fairfax it offers unique opportunities for interdisciplinary connections and critical mass. Similarly, Fairfax must emphasize the student experience, both undergraduate and graduate, and again because of the concentration of existing facilities, will continue to provide a unique "home," particularly for undergraduate students.

Because of its scale, Fairfax also offers a larger spectrum of possible future development patterns, from more minimal schemes that emphasize the clarity of a potential north-south and east-west cross axes with related renovations and limited new construction located to bolster the axes' intersection, to an ambitious vision which could establish a series of linked quads cascading north-south down the campus, and supporting significant growth.


REC+WELLBEING
NEW ACADEMIC
RENOVATION
HORIZON
JOHNSON CENTER
RENOVATION
RENOVATION
NEW ACADEMIC
RENOVATION


PETERSON
WELCOME
NEW ACADEMIC
HORIZON
FENWICK
LIBRARY
JOHNSON CENTER
ACADEMIC
LABORATORY
ACADEMIC
VISUAL + PERF ARTS
RESEARCH HALL
ENGINEERING



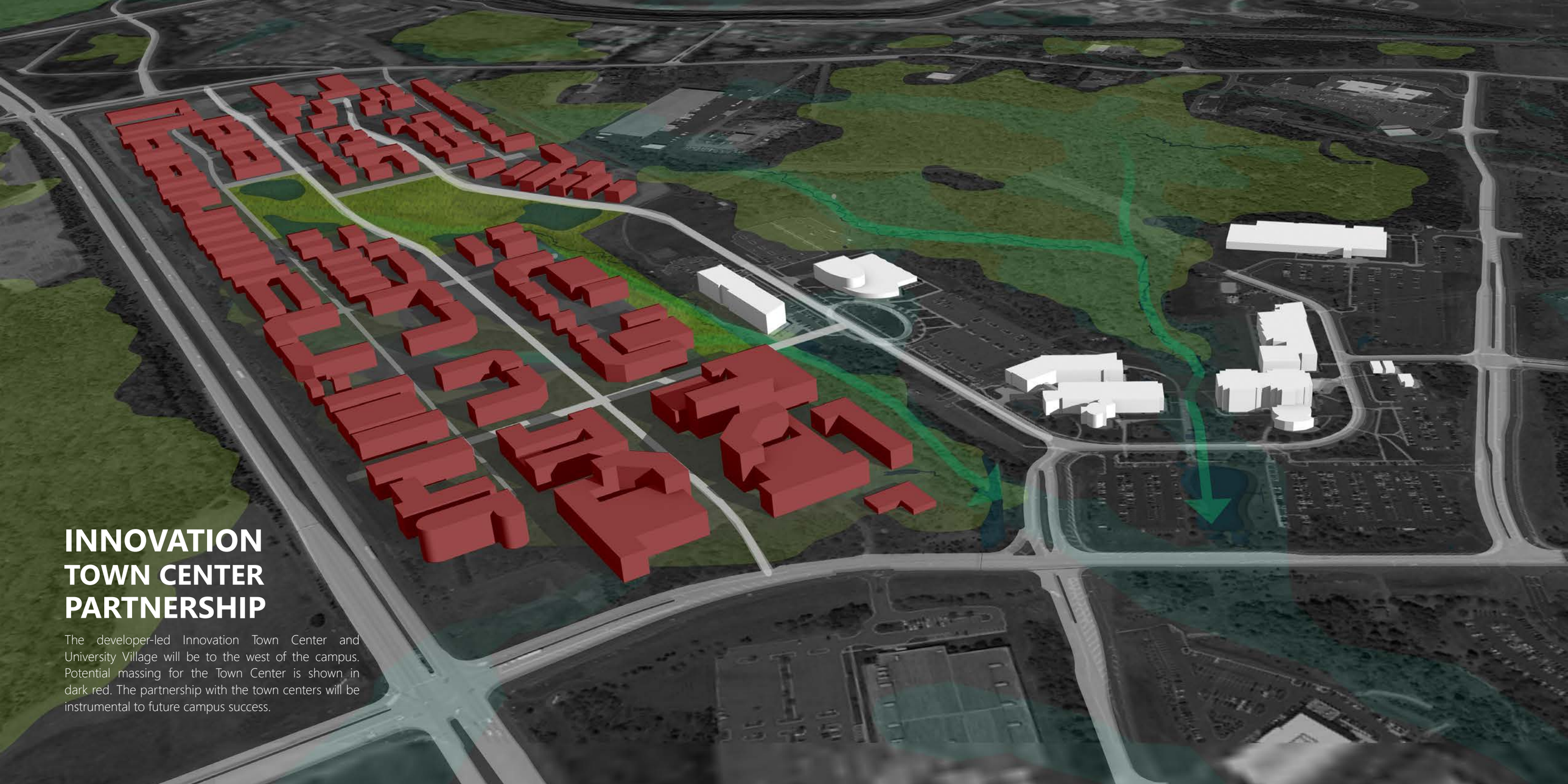
SCITECH

Emerging context with ecologically rich opportunities

SCITECH CAMPUS

The SciTech campus will continue to take unique advantage of both its natural ecological resources and its emerging surrounding innovation district and research park. A partnership with the developer-led Innovation Town Center and University Village will be instrumental to future campus success, and future campus development should be organized to ensure seamless integration between campus and town centers with the possibility of establishing a mixed-use “Main Street” with academic uses on the north side and residential and retail opportunities on the south side. The western arm of George Mason Circle is a perfect candidate for this purpose.

From a program identity perspective, SciTech will focus on health, particularly the potential for a future medical school (note there are no current plans to relocate existing health-based programs currently in the Peterson Building on the Fairfax campus), innovation and research (including partnerships with the growing regional industry presence), and will likely be primarily (although not exclusively) a graduate campus. The Hylton Performing Arts Center and the Freedom Center will continue to be important and defining elements of the SciTech campus.



INNOVATION TOWN CENTER PARTNERSHIP

The developer-led Innovation Town Center and University Village will be to the west of the campus. Potential massing for the Town Center is shown in dark red. The partnership with the town centers will be instrumental to future campus success.

Health
Innovation
Primarily a graduate campus

IDENTITY

The SciTech campus will continue to take unique advantage of both its natural ecological resources and its emerging surrounding innovation district and research park, and has the possibility of establishing a mixed-use "Main Street" with academic uses on the north side and residential and retail opportunities on the south side. Specific goals include:

- Establishing a research park where Mason can relocate large research centers
- Provide infrastructure to support upskilling, reskilling and, retraining in data center operations, cloud computing (applications, infrastructure, security, and services), and cybersecurity via continuing education
- Deliver entrepreneurship services related to SMEs that support data centers, cloud, and cyber activities. Note that Continuing Education will maintain their primary location at Arlington, but will also maintain multiple locations based on existing operations, including provisions to expand into SciTech.

DUMONTJANKS
LEE PARTNERS
WELDON COOPER CENTER FOR PUBLIC SERVICE