1 CONTEXT
2 GROWTH PROFILE
3 INDUSTRY & INNOVATION
4 CAMPUS FRAMEWORK
5 CAMPUS PRECINCTS
6 SYNTHESIS
1 CONTEXT
Regional Context

UW BOTHELL

UW SEATTLE

UW TACOMA
enrollment trends
space needs model
benchmarking
industry case studies
enrollment trends
Enrollment Trends by Student Population

- Overall Student Population (FTE)
- Undergraduate Student Population (FTE)
- Graduate Student Population (FTE)
- Professional Student Population (FTE)

Source: Office of Institutional Analysis, UW Seattle FTE Enrollment by Level
Faculty and staff FTE grew by 16% between 2006 and 2014 (3,160 FTE).

Trend line suggests a future overall faculty and staff population of between ~24,500 and ~27,100 FTE in 2024 and between ~28,500 and ~31,500 FTE in 2034.

Source: HRIS, numbers are Seattle Campus and UWMC and are FTE Sums.
Enrollment Summary

Current Enrollment
- Students: 46,100 FTE, Fall 2015
- Faculty/Staff: 20,600 FTE, Fall 2015

Significant growth projected across all populations
- Students: Range from about 50,000 FTE by 2024; 57,500 FTE by 2034
- Faculty: between 7,100 and 7,700 FTE by 2024; between 8,100 and 9,000 FTE by 2034
- Staff: between 16,600 and 18,200 FTE by 2024; between 19,400 and 21,400 FTE by 2034

The CMP will test a range of growth projections
space needs model
Overall Existing Space

Total UW Seattle Built Space ~18,300,000 GSF

98% (17,600,000 GSF) Owned by UW

92% (16,600,000 GSF) Inside the Major Institutional Overlay (MIO)

Source: Capital Planning and Development
Existing Space Breakdown

**CORE SPACE**
- Classrooms (454,000 ASF): 10%
- Teaching Labs (322,000 ASF): 7%
- Research Labs (1,083,000 ASF): 5%
- Office (2,492,000 ASF): 18%
- Study/Library (682,000 ASF): 11%
- Recreation (540,000 ASF): 9%
- Student Life (596,000 ASF): 11%
- Support (5% of ALL SPACE)

**ALL SPACE**
- Housing (16% of ALL SPACE)
- Health (6% of ALL SPACE)
- Support (5% of ALL SPACE)
- Office (2,492,000 ASF): 29%
- Study/Library (682,000 ASF): 13%
- Recreation (540,000 ASF): 4%
- Student Life (596,000 ASF): 5%
- Research Labs (1,083,000 ASF): 7%
- Teaching Labs (322,000 ASF): 6%
- Classrooms (454,000 ASF): 5%

Legend:
- Classrooms (454,000 ASF)
- Teaching Labs (322,000 ASF)
- Research Labs (1,083,000 ASF)
- Office (2,492,000 ASF)
- Study/Library (682,000 ASF)
- Recreation (540,000 ASF)
- Student Life (596,000 ASF)
Methodologies for Assessing Space Need

1. Space Needs Model

2. Development history / Projection analysis

3. Benchmarking

4. Industry and Innovation
Space Needs Model

Background and Inputs
- Projects space need for a number of higher education space categories
- Model is based upon national space guidelines
- Inputs include:
  - UW student, faculty and staff counts
  - WSCH for instructional spaces
  - Best practices for station sizes
  - Assumptions around utilization and occupancy levels
- Does not assess industry and innovation spaces

Existing Space
- Captures a 2014 snapshot of existing space
- Excludes all parking facilities, both underground and structured
- Represents assignable square feet, not gross square feet
Deficit at 50,000 Student FTE (3,400,000 ASF / 5,200,000 GSF)*

Existing Space (Includes space outside MIO)

Current Need

Need at 50,000 FTE

Research SF by year 2024

Need at 57,500 FTE

Research SF by year 2034

Deficit at 50,000 FTE

*Research assumes 2.5% growth annually. Research is not dependent on FTE but is included as part of the ASF/GSF totals for the purpose of this exercise.
Deficit at 57,500 Student FTE (4,800,000 ASF / 7,400,000 GSF)*

Assignable Square Feet (ASF)

Classrooms Teaching Labs Offices Study / Library Space Recreation Student Life

Research Labs*

Existing Space (Includes space outside MIO) Current Need Need at 50,000 FTE Research SF by year 2024 Need at 57,500 FTE Research SF by year 2034 Deficit at 57,500 FTE

*Research assumes 2.5% growth annually, Research is not dependent on FTE but is included as part of the ASF/GSF totals for the purpose of this exercise.
Housing

1,000 beds @ 350 GSF per bed = 350,000 GSF

*Allocation assumes suite dormitory configuration*

78% efficiency

**TEST AT CURRENT RESIDENTIAL RATIO (20% of Student FTE):**

- For a population of 50,000 Student FTE at current ratio: 700 beds @ 350 GSF per bed = 245,000 GSF
- For a population of 57,500 Student FTE at current ratio: 2,200 beds @ 350 GSF per bed = 770,000 GSF
Development history reflects periods of growth and restraint.

On average, the UW introduced roughly:

- **250,000 Net GSF per year**, taking into account buildings that were demolished.
- **290,000 GSF per year of new construction**.

If the University was to grow by the same rate it has over the last 10 years, it would suggest a need for ~5.8M GSF of new construction over the next 20 years.

Source: Capital Planning and Development
benchmarking
Benchmarking

Another lens to situate the University’s existing space relative to other higher education institutions, including **peers institutions**: University of Michigan, University of Texas at Austin, Ohio State University, Rutgers University, Johns Hopkins University.

Draws upon an institutional database of **more than 100 institutions**.

Benchmarks UW’s space for the following categories on an **ASF per Student FTE basis**:
- Classrooms
- Teaching and Research Labs
- Offices
- Study and Library Space
- Athletics and Recreation
- Student Life Space
Peer benchmarking comparisons, 2014-15 Common Data Set

- **Rutgers University - New Brunswick**: 48,378 FTE
- **University of Washington**: 44,784 FTE
- **Ohio State**: 44,741 FTE
- **UT Austin**: 51,313 FTE
- **Johns Hopkins University - Homewood**: 7,216 FTE
- **University of Michigan - Ann Arbor**: 43,625 FTE
Space Needs Summary

Model projects the potential need for 5.6M GSF (at 50,000 FTE) to 7.8M GSF (at 57,500 FTE with research and housing projections) of space in the future.

If the University was to grow by the same rate it has over the last 10 years, it would suggest a need for ~5.8M GSF of new construction over the next 20 years.

Across all categories UW’s ASF per student is low compared to the peers evaluated.

Projections do not account for industry & innovation space.
3

INDUSTRY & INNOVATION
Why University Related Innovation Districts

Federal funding in academic research is waning and institutions are finding new ways to adjust to this continuing trend by engaging allied industries in the private sector.

Urban institutions are leveraging their proximity to economic centers, access to transit, and an educated workforce to develop long-lasting partnerships with cities and corporations and secure continued research growth in the future. The physical relocation of key innovation assets has now become a critical competitiveness strategy for companies, universities, and even states.

Companies also realize the benefits of partnering with research-intensive institutions as a way to develop new ideas. More and more companies are outsourcing research to universities and realize the benefits of a captive talent pool.
<table>
<thead>
<tr>
<th>Institution</th>
<th>% of institutional land allocated to industry partnerships</th>
<th>District Site Area</th>
<th>Total GFA potential</th>
<th>Total GFA executed</th>
<th>Land Use Mix</th>
<th>Development Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIT</td>
<td>75 Acres 30% of MIT-owned land</td>
<td>420 Acres</td>
<td>6 mil sf</td>
<td>1.5 mil sf (+8% in office, +10% in residential)</td>
<td>4% Retail 16% Housing 40% Industry 35% Institutional 5% Non-Building</td>
<td>MITIMCO (MIT Endowment)</td>
</tr>
<tr>
<td>UC - San Francisco</td>
<td>1.5 Acres 2% of UCSF-owned land</td>
<td>300 Acres</td>
<td>2.67 mil sf</td>
<td>1.9 mil sf</td>
<td>6% Retail 5% Housing 34% Industry 20% Institutional 35% Non-Building</td>
<td>Traditional university Development</td>
</tr>
<tr>
<td>Cortex (St Louis U, Wash U, etc.)</td>
<td>Approximately 10% of university-owned land</td>
<td>200 Acres</td>
<td>4.5 mil sf</td>
<td>1 mil sf</td>
<td>10% Retail 5% Housing 50% Industry (tech) 20% Institutional 15% Non-Building</td>
<td>Joint nonprofit institutional collaboration</td>
</tr>
<tr>
<td>University of Pennsylvania</td>
<td>23 Acres 8% of Penn-owned land</td>
<td>23 Acres</td>
<td>1.5 mil sf</td>
<td>52,000 sf</td>
<td>60% Industry 20% Institutional 20% Non-Building</td>
<td>P3 + PIDC</td>
</tr>
<tr>
<td>Drexel University</td>
<td>12.1 Acres 17% of Drexel land</td>
<td>20 Acres</td>
<td>6.4 mil sf</td>
<td>528,000 sf</td>
<td>5% Retail 4% Housing (not incl. P3) 15% Industry 50% Institutional 26% Non-Building</td>
<td>P3 - American Campus Communities + State Funding (KIZ)</td>
</tr>
</tbody>
</table>
Current Innovation Landscape in Seattle

![The Seattle Tech Universe](image-url)
Current Innovation Landscape at UW

UW ranked as the most innovative public university by Reuters (Sept 2015)

UW is the top recipient in the nation among public universities for federal research dollars and second overall; it generates $12.5 billion in economic impact for the state and ranks among the top universities for tech startups

Establishment of Comotion

Global Innovation Exchange opening in Fall 2016

In 2014 18 new startups based on UW research technologies were launched

Totally 103 startups launched
Innovation districts primarily focus on production by capitalizing on programmatic synergies and fostering collaboration.
Schools with the most Research Funding

GRANT AND CONTRACT AWARDS BY COLLEGE/DEPARTMENT, IN MILLIONS, FY 2015

- School of Medicine: $635
- College of the Environment: $129
- College of Engineering: $114
- College of Arts and Sciences: $107
- School of Public Health: $103
- Office of Research: $44
- College of Education: $33
- Health Sciences Administration: $28
- Graduate School: $20
- School of Pharmacy: $19
- School of Social Work: $14
- School of Nursing: $14
- Office of Minority Affairs & Diversity: $8
- Other (see below): $33
- Total: $1,440
Innovation District Potential at UW

U-District
72 ACRES

University Avenue
Active Corridor with Mixed Use, Retail, Commercial

Burke Gilman Trail
10 Minute Walk

UNIVERSITY VILLAGE
E-1
22 ACRES

Fluke Hall
10 Minute Walk

West Campus
60 ACRES

West Campus Housing
Active Urban Edge with grocery, restaurants, maker spaces, UW Farm

I-5

COMOTION
Future Transit

Burke Museum
School of Public Health

College of Arts + Sciences

College of Engineering

School of Medicine

Cities with the most Research Funding
Innovation District Ingredients – Public Realm

PUBLIC SPACES
- PLAZAS
- GREEN SPACES
- PLAYGROUNDS
- RECREATION
- WATERFRONT

ACCESS
- PEDESTRIAN FRIENDLY STREETS
- BIKE LANES
- COMPLETE STREETS
- RELIABLE TRANSIT CONNECTIONS
- ACCESSIBLE ROUTES

SAFETY
- EYES ON THE STREET
- LIGHTING
- ACTIVE STREET EDGESE34
Innovation District Ingredients – Innovation

LEARNING SPACES
- High quality teaching + research spaces
- Faculty spaces
- Student mentoring
- Entrepreneurship spaces

WORK PLACES
- Industry office spaces
- Co-work spaces

COLLAB SPACES
- Industry interaction spaces
- Core labs
- Start-up spaces
- Student spaces
- Innovation center
- Maker spaces

MANUFACTURING SPACES
- Advanced manufacturing
- Fabrication labs
- Testing spaces

INDUSTRY SUPPORT
- Work hoteling
- Conference spaces
- Work-study
- Business incubators
Innovation Districts Ingredients

**PUBLIC SPACES**
- Plazas
- Green spaces
- Playgrounds
- Recreation
- Waterfront

**ACCESS**
- Pedestrian friendly streets
- Bike lanes
- Complete streets
- Reliable transit connections
- Accessible routes

**SAFETY**
- Eyes on the street
- Lighting
- Active street edges

**HOUSING**
- Live/work
- Multi-family
- Proximity
- Student housing mix

**FOOD**
- Cafes
- Bars
- Food trucks
- Restaurants

**CULTURAL AMENITIES**
- Performances
- Public art
- Studios/galleries
- Installations
- Game day

**COMMUNITY SPACES**
- Schools
- Daycares
- Recreation centers
- Youth centers

**LEARNING SPACES**
- High quality teaching + research spaces
- Faculty spaces
- Student mentoring entrepreneurship spaces

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**INDUSTRY SUPPORT**
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- Conference spaces
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- Business incubators
UW Initiatives To-Date

PUBLIC SPACES
- Plazas
- Green Spaces
- Playgrounds
- Recreation
- Waterfront

ACCESS
- Pedestrian Friendly Streets
- Bike Lanes
- Complete Streets
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INDUSTRY SUPPORT
- Work Hoteling
- Conference Spaces
- Work-Study
- Business Incubators
<table>
<thead>
<tr>
<th>Institution</th>
<th>Industry Focus</th>
<th>Innovation Center</th>
<th>Program</th>
<th>IC Size (sf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIT</td>
<td>Biotech</td>
<td>Deshpadne Center for Innovation</td>
<td>Hoteling spaces, offices, conference rooms - on MIT Campus</td>
<td>-</td>
</tr>
<tr>
<td>Cortex</td>
<td>Technology</td>
<td>TechShop</td>
<td>TechShop – Maker spaces (membership system) CIC St. Louis - Workspaces, kitchen, conference rooms Venture Café – programmed café for start-ups and existing area companies and employees</td>
<td>16,000 to 22,000</td>
</tr>
<tr>
<td>Drexel University</td>
<td>Technology</td>
<td>Excite Center</td>
<td>Classrooms, Technology/Maker spaces, Offices</td>
<td>11,000</td>
</tr>
<tr>
<td>UC - San Francisco</td>
<td>Health Sciences</td>
<td>Various: QB3, CoLaborator, US Innovation Center</td>
<td>Private office suites, labs, conference rooms, event spaces, co-working spaces with 200 desks for startups</td>
<td>15,000 SF each</td>
</tr>
<tr>
<td>University of Pennsylvania</td>
<td>Science &amp; Health Science</td>
<td>Pennovation Center</td>
<td>Bio-tech incubator spaces, labs, office space, access to QB3 network</td>
<td>52,000</td>
</tr>
<tr>
<td>University of Washington</td>
<td>Hybrid</td>
<td>New Ventures Facility + Start Up Hall</td>
<td></td>
<td>35,000</td>
</tr>
</tbody>
</table>
Innovation Centers
Multidisciplinary Innovation District

80% Biotech
70% Tech
90% Tech
90% Health

Health Sciences
Architecture
Law
Humanities
Arts + Culture
Environmental Studies
Business
Engineering

BioTech
Biotech
Tech
Health
Mission Bay
UW
Kendall Square
MIT
Wash U
St. Louis
Cortex
Exide
Drexel
UCSF
UW
Components of the Innovation District at UW

West Campus
60 Acres, 3.7 million GFA

East Campus (E1)
22 Acres
CAMPUS FRAMEWORK

big ideas
public realm framework
circulation framework
built environment framework
infrastructure
Opportunities

- Pedestrian Connections
- Major Road
- Stevens Way
- Burke Gilman Trail
- Retaining Wall
- Building Edges
- Waterfront
- Steep Slope
Guiding Principles

- Academic (Teaching + Learning)
- Research
- Industry Partnerships
- Innovation
- Collaboration
- History
- Economy
- Energy
- Environment
- Culture
- Identity
- Community
- City
- Open Space
- Accessible
- Integrate
- Connect
- Public Realm + Placemaking
- Core Mission
- Innovation
- Industry
- Stewardship + Sustainability
- Connectivity
big ideas
Conceptual Strategies

Organizational Axes
Existing Primary Open Spaces
Primary Open Space Interventions

Connecting to the Shoreline
Integration with the City
Activating the Public Realm
public realm framework
Existing Primary Open Spaces
Proposed Primary Open Spaces
Proposed Waterfront Park

Waterfront Park – 7.0 acres

Parrington Lawn – 7.8 acres
Significant Landscapes
Preserving Significant Trees
Pedestrian Circulation
built environment framework
Rationale for Development Sites

- Building Condition
- Deferred Maintenance
- Low Density Buildings
- Sites from Previous Planning Studies
- Stakeholder Conversations
- Remaining 2003 CMP Sites

Potential Development Sites
Rationale for Development Sites: Deferred Maintenance & Building Condition

Source: Facilities Services Data
Proposed Development Areas
Proposed Development Parcels
Overall Campus Framework
Existing Massing
Proposed Massing

West Campus: 3,700,000 GSF
Central Campus: 2,200,000 GSF
South Campus: 7,100,000 GSF (including UWMC)
East Campus: 4,800,000 GSF
Total: 17,800,000 GSF
2003 Building Height Limits

Shoreline Overlay 30ft

- H1 37ft
- H2 50ft
- H3 65ft
- H9 80ft
- H5 105ft
- H6 107ft
- H7 160ft
- H8 240ft
Proposed Building Height Limits

Shoreline Overlay 30ft

- H1: 37ft
- H2: 50ft
- H3: 65ft
- H4: 80ft
- H5: 105ft
- H6: 107ft
- H7: 160ft
- H8: 240ft
- H9: 300ft

Colors indicate height limits:
- Light blue: 300ft
- Blue: 240ft
- Yellow: 200ft
- Green: 160ft
- Brown: 130ft
- Red: 105ft
- Orange: 65ft
- Pink: 50ft
U District Proposed Zoning
2003 Height Limits vs Proposed Height Limits

- Capacity within 2003 height limits
- Capacity within proposed height limits

- 60 feet
- 126 feet
- 238 feet
- 240 feet
- 294 feet
- 102 feet
- 105 feet
- 126 feet
- 56 feet
- 60 feet
- 65 feet
- 168 feet
- 126 feet
2003 Height Limits vs Proposed Height Limits

U-District zoning changes - for Illustrative Purposes Only

- Capacity within 2003 height limits
- Capacity within proposed height limits
Existing Utility Facilities

- Central Campus
- East Campus
- South Campus
- West Campus

- Hospital Chilled Water and Generator Plant

- WCUP and West Receiving Station

- Power Plant
CAMPUS PRECINCTS

west campus
south campus
east campus
central campus
west campus
West Campus Concepts
south campus
South Campus – Big Moves
South Campus – Integrated Massing
South Campus Framework
east campus
East Campus Today
East Campus Concepts
Integrated Massing
East Campus Framework
central campus
Central Campus Today
Central Campus – Big Moves
Integrated Massing
SYNTHESIS
Campus Transformation

**SITE**

**EXISTING**

100% 620 ac

**PROPOSED**

100% 620 ac

**STREET NETWORK**

10.5% 65 ac

9.8% 61 ac

**SURFACE PARKING**

10.1% 63 ac

3.7% 23 ac
Campus Transformation

**EXISTING**
- BUILT FABRIC: 17.2% 107 ac
- DEVELOPABLE AREA: 21.7% 134 ac
- PRIMARY OPEN SPACES: 19% 118 ac

**PROPOSED**
- BUILT FABRIC: 22.7% 141 ac
- DEVELOPABLE AREA: 26.3% 163 ac
- PRIMARY OPEN SPACES: 26.6% 165 ac