TRANSPORTATION AND PARKING

# Transportation Demand Management Plan

## Strategy Dashboard

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# Transportation Demand Management Plan (TDM)

## Strategy Dashboard

**MARCH 2018**

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# Introduction

The Oregon Health & Sciences University (OHSU) Transportation Demand Management (TDM) Plan summarizes the year-long planning process to develop a comprehensive set of strategies to guide investment in campus mobility over the next decade.

The TDM plan synthesizes the project approach, stakeholder input, key issues and opportunities, goals and metrics, and data analysis. It also describes the framework for achieving OHSU's mobility vision via the Playbook, the Plays, and the package of 34 Strategies.

# The Playbook

The OHSU TDM Plan Playbook includes five primary initiatives or "levers" to reduce single-occupancy vehicle trips and improve the overall travel experience to, from, and within OHSU.

All of these elements are required to ensure long-term success. Too much emphasis on one, or ignoring some altogether, will reduce the efficiency of OHSU's mobility program and trip reduction efforts.

| PLAYBOOK INITIATIVES | |
|---|---|
|  | **CULTURE**<br>Adopt consistent policies campus-wide that integrate the six Plan goals into daily life at OHSU. |
|  | **PRICE**<br>Use parking pricing to achieve desired outcomes and fund multimodal travel. |
|  | **REWARD**<br>Provide incentives and rewards to make it easier to take non-SOV modes. |
|  | **COMMUNICATE**<br>Make it easy to find information. Inform about travel behavior. Promote benefits and outcomes. |
|  | **INFRASTRUCTURE**<br>Invest in new infrastructure that cost-effectively supports access to, from and within OHSU. |

# The Plays

OHSU will implement the Playbook via seven categories, or Plays. All of the Plays and their strategies should work in tandem and mutually support one another. For example, OHSU's ability to price parking effectively is dependent upon not only the price of parking itself and parking technology, but also the larger policy and communication strategies around why OHSU charges for parking and how it benefits campus access and mobility.

**The seven Plays include:**

- POLICY (PO)
- TRANSIT (T)
- PEDESTRIAN (PN)
- BIKE (B)
- SHARED MOBILITY (SM)
- PARKING (P)
- PROGRAMS + COMMUNICATIONS (PC)

| | PO | T | PN | B | SM | P | PC |
|---|---|---|---|---|---|---|---|
| **THE PLAYBOOK** | **THE PLAYS** | | | | | | |
| CULTURE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| PRICE | ✓ | | | | ✓ | ✓ | ✓ |
| REWARD | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| COMMUNICATE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| INFRASTRUCTURE | | ✓ | ✓ | ✓ | ✓ | ✓ | |

## The Strategies

The seven Plays and their respective strategies are summarized below. A total of 34 strategies are included in the Plan.

While every strategy is important, not every strategy is "equal." The TDM Plan categorizes each strategy into one of three implementation categories.

- **High-Impact + High-Priority:** A strategy that has proven ability to reduce SOV trips and parking demand substantially and/or improve the travel experience in dramatic ways. A strategy that should be implemented in advance of other strategies and/or to address an immediate or short-term challenge, such as the aerial tram shutdown.
- **Support:** A strategy that facilitates, enhances, or supports one or more of the other strategies.
- **Long-term + Regional:** A strategy that requires significant additional evaluation, planning, or analysis. These strategies are long-term efforts that will likely require regional partnerships and funding.

## The Strategy Dashboard

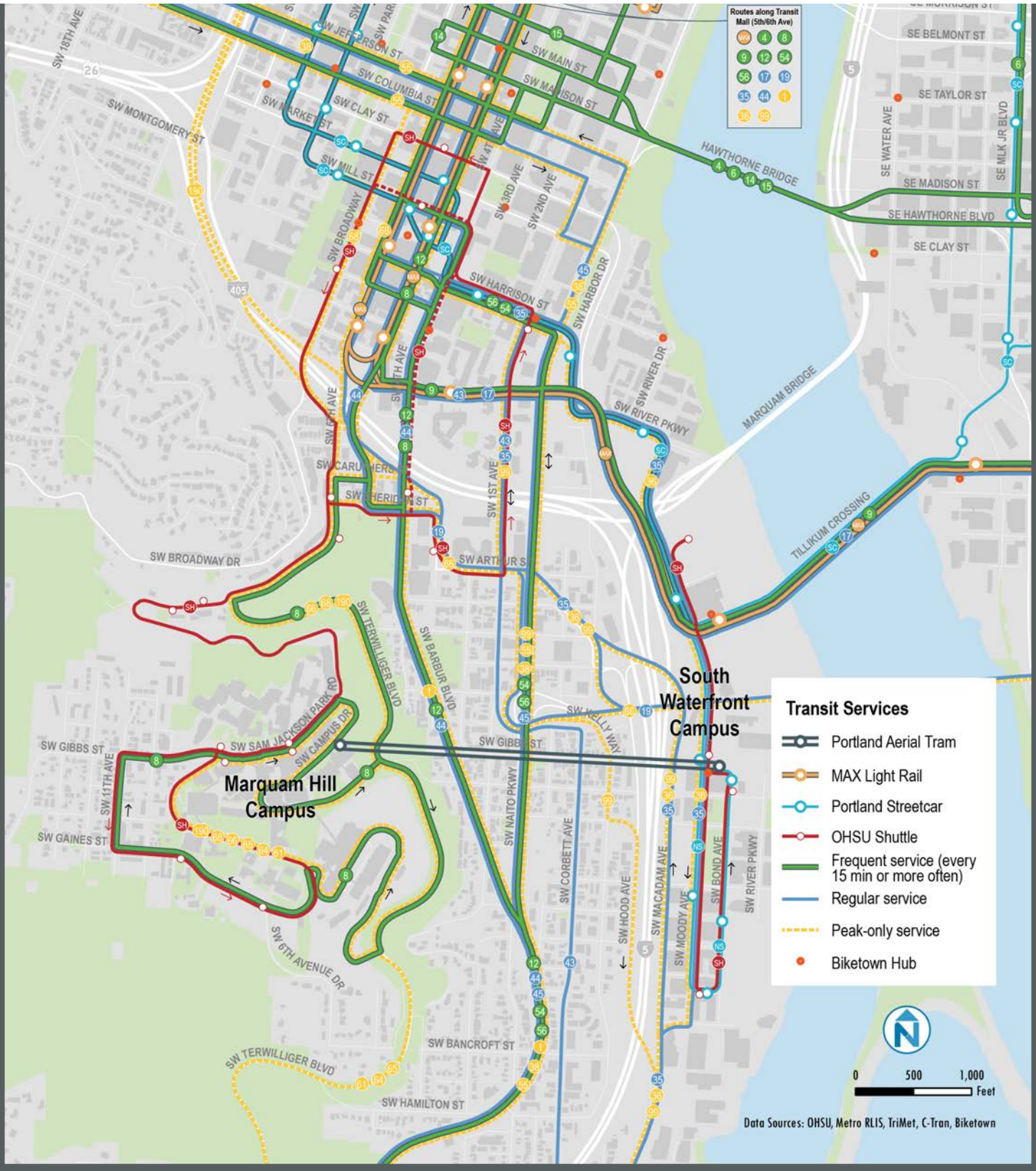
The Strategy Dashboard provides additional detail on each of the 34 recommended strategies. The Dashboard provides additional guidance to OHSU staff and leadership as it moves forward with implementation of the Plan. The Dashboard also serves as a user-friendly and digestible resource for employees, patients, neighbors, and other stakeholders, highlighting the specific improvements OHSU will be making over the next ten years.

For each strategy, the following information has been provided.

- **Summary Statement:** A brief overview of the strategy and its required action(s).
- **Scoring Summary:** Strategies were scored against a set of evaluation criteria, which were derived from the goals of the TDM Plan, to identify the highest priorities. Scores, on a scale of "1-5," are shown by evaluation criteria.
- **Description:** A summary of the strategy's rationale and intent.
- **Next Steps:** Details specific "Next Steps" towards implementation.
- **Cost Estimate:** Planning-level estimate of the costs to implement the strategy. Cost estimates were utilized in the modeling exercise described in Chapter 6 of the TDM Plan.

Some strategies also have:

- **Quick Fact:** Key data point from the existing conditions assessment.
- **Stakeholder Input:** Sample of feedback from the Plan's outreach efforts.




**What was the study area for this Plan?**

The study area for this Plan primarily focuses on employee commutes at the Marquam Hill and South Waterfront campuses. However, the analysis and strategy development carefully considered all OHSU facilities and users. Its implementation will offer benefits to all employees, students, patients, and visitors.

## PO.1 – Goals, Performance Measures, and Monitoring

Adopt official goals, objectives, and metrics to guide the implementation of the TDM Plan, as well as future mobility investments.

## Scoring Summary

This strategy was not "scored" as it focuses on baseline policy and operational improvements.

### Description

OHSU is an institution that values progress. In order to uphold this value, campus wide initiatives such as the TDM Plan, need a strategic approach for guiding implementation and measuring success. Adopting official mobility goals and performance measures will not only facilitate implementation of the TDM Plan, but will also allow OHSU to better track the impacts of its programs and investments. Enhanced data collection efforts will complement and support program assessments.

### Next Steps

Specific actions include:

- Adopt an official set of mobility goals, objectives, and performance measures. Chapter 4 provides a strong starting framework. As described, a single-occupancy vehicle (SOV) mode share target should be a primary measure, but additional measures will allow for a more comprehensive assessment.
- Update and expand existing data collection methods and reporting. Priority areas include:
  - » Parking inventory and occupancy counts, allowing for a better understanding of peak demand by user group and variations throughout the day by facility.
  - » Travel surveys, allowing OHSU to better capture student, patient, and visitor travel information and preferences. Survey non-employees every two years. Work with TriMet to update the ECO survey to better capture TNC and drop off use versus carpooling, vehicle occupancy for TNCs and carpools, and qualitative assessments of programs.
  - » Work with TriMet to collect transit ridership by stop and route.
  - » Bicycle parking inventory, occupancy, and quality.
  - » Collisions by corridor and intersection.
  - » Rideshare drop offs and pick ups.
  - » Car share activity on campus.
- Leverage new data feeds provided by the Luum commute platform (Strategy PC.4) and parking access control (Strategy P.8) to consistently capture and report travel/parking trends.

### Cost Estimate

No incremental cost, as costs are included in existing and future staff time.

## PO.2 – Active Workplace Culture and Training

Adopt official policies that support an active and flexible work environment to make it easier to walk, bike, share rides, or take transit. Enhance executive and management training to ensure that OHSU leaders fully and consistently integrate mobility programs and policies into their departments.

**(High-Impact + High-Priority)**

### Scoring Summary

This strategy was not "scored" as it focuses on baseline policy and operational improvements.

### Description

OHSU promotes health and well-being for all Oregonians, including their employees. The workplace culture should reflect and emphasize the role of mobility in health. Consistent policies and dynamic leadership from OHSU executives and managers will be essential to successful implementation of this TDM Plan. A vibrant and reinvigorated culture is needed around non-SOV commutes.

### Next Steps

Key elements include:

- Adopt a more flexible dress code policy that supports biking, walking, and transit.
- Plan for flexible workspaces that support active movement and an increase in telecommuting. Flexible workspaces will also reduce employee space needs as OHSU grows.
- Explicitly tie non-SOV commute modes to OHSU's overall mission of health and wellness via policy, branding, and communications.
- Reward and market campus "mobility" leaders. Identify and leverage OHSU executive "champions" to drive a culture change.
- Coordinate a bike ride, walk day, or transit day led by OHSU executive leadership to demonstrate management's commitment to reducing the drive alone rate.
- Provide additional information and mandatory training to executives and managers to ensure that mobility programs and policies are actively promoted and consistently applied.
- Evaluate a system where employees who log active commutes benefit from lower health insurance premiums.
- Start an annual OHSU bike week and promotional commute ride involving key executive leaders and champions.

### Cost Estimate

No incremental cost, as costs are included in existing and future staff time.

### Stakeholder Input

Participants of the employee focus groups identified "Dress code adjustments" and "Flexible dress code" as an outcome they would like to see from the TDM Plan.

**Best Practice**

According to the Northwestern Health Unit, adopting a workplace physical activity policy can help shift cultural norms and promote active lifestyles for employees. Cost-effective recommendations include:

- Offer flex-time or flexible work arrangements for physical activity
- Introduce policies that aim to reduce prolonged sitting (e.g. walking or standing meetings)
- Promote a casual-dress day to encourage physical activity
- Promote and create awareness of these programs and policies through training for all staff

## PO.3 – Staffing Support

Attract and hire staff to fulfill existing and future staffing needs. Reassess vendor and contract agreements on a consistent basis.

## Scoring Summary

This strategy was not "scored" as it focuses on baseline policy and operational improvements.

### Description

As the campus continues to grow and develop, OHSU will likely need to hire new staff to meet demand for services. In addition, as implementation of the TDM Plan occurs additional skill sets may be necessary.

OHSU should also regularly evaluate staffing resources, and effectiveness of external vendor agreements, as the TDM program is implemented and travel behavior changes.

### Next Steps

Potential areas of focus for staffing support include:

- Marketing, branding, communications
- GIS and graphic design
- Leadership training and/or employee on-boarding
- Transit planning and shuttle operations
- Shared and emerging mobility services

### Cost Estimate

$90,000 per new FTE (includes salary and benefits), plus 3% annual increase.

### Quick Fact

As of 2016, the OHSU Transportation & Parking Department had 111 employees — 29 full-time employees and 82 contract staff to support parking and valet operations, Go By Bike, and the aerial tram.


EXIT
EXIT

## PO.4 – Telecommuting

Further develop and adopt robust policies and consistent training to increase the share of employees telecommuting one or more days a week.

(High-Impact + High-Priority)

### Scoring Summary

| | |
|---|---|
| ●●○○○ | PATIENT-FIRST |
| ●●●●● | EMPLOYER OF CHOICE |
| ●●●●● | MULTIMODAL |
| ●●●○○ | SAFE & HEALTHY |
| ●●●●● | INNOVATION/ADMIN |
| ●●●●● | COST EFFECTIVENESS |
| ●●●●○ | IMPACT |

### Description

Telecommuting refers to a work arrangement that allows employees to work from home or another off-site location. It can be a permanent work option, but is typically done a few days a week in most companies or institutions. Telecommuting can provide flexibility to both the employer and employee, as well as reduce person/vehicle trips and the need for on-site workspace.

A small share of OHSU employees currently telecommute. Many patient-facing positions do not allow for telecommuting, but the employee survey indicates than many positions could easily support telecommuting at least one day a week. There is an untapped market for telecommuting at OHSU.

### Next Steps

In 2016, OHSU created an internal committee to address existing telecommuting challenges and adopt campus-wide policies and guidelines. OHSU needs to go beyond the recommendations of this committee and make telecommuting culturally acceptable by focusing on:

- Consistent IT guidelines and security protocols.
- Probationary requirements for new employees.
- Management training for supervisors to ensure consistent implementation across different departments and teams.
- Requirement of an employee plan that specifies which days the employee will work remotely and what work is expected on those days.
- Review performance review processes and promotion criteria to identify and remove any bias for or against telecommuters.
- Identify funding to support telecommuting set up costs, about $1,000 per employee.

### Cost Estimate

$63,000 per year, based on estimated growth in telecommuting.

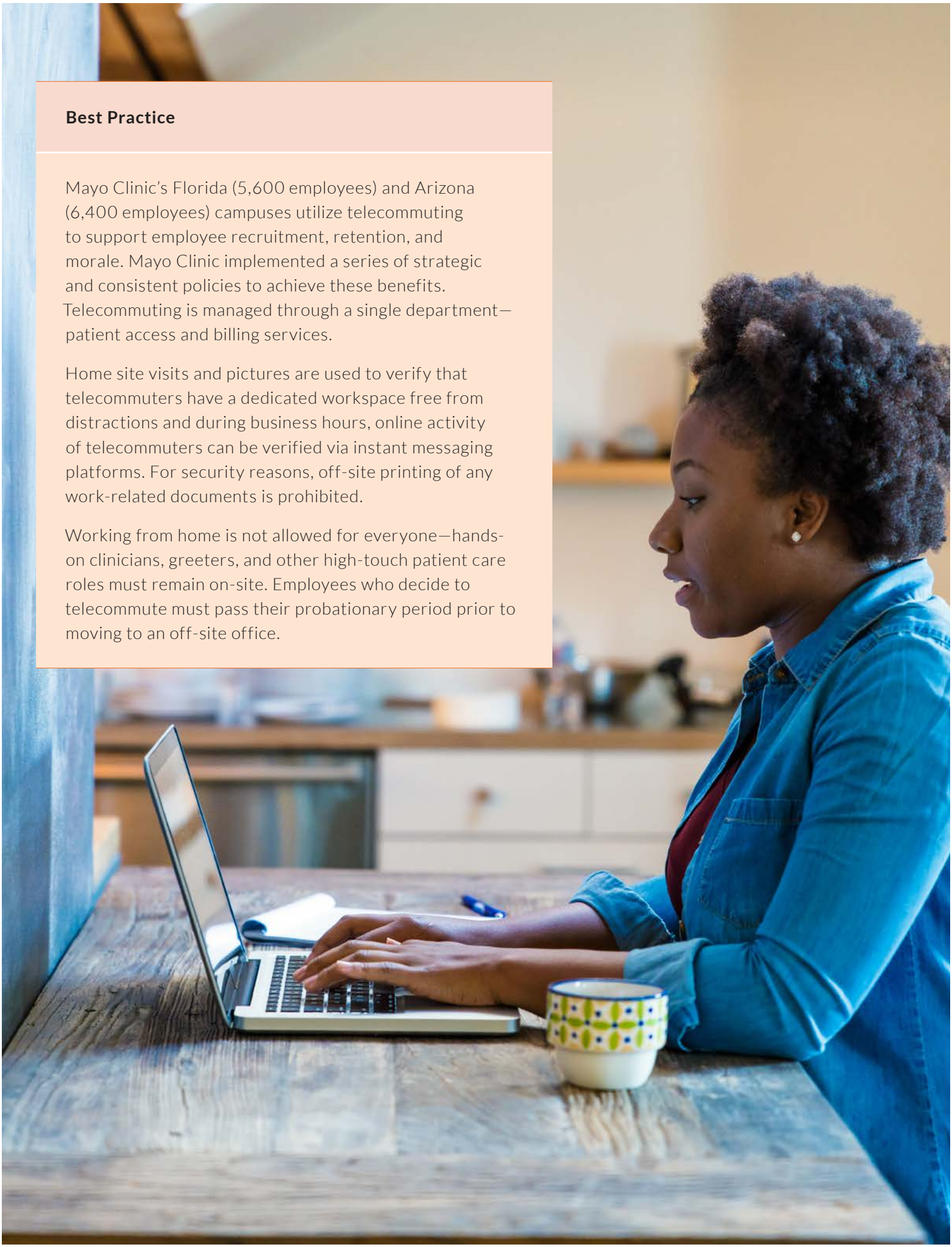
### Quick Fact

Less than 1% of OHSU employees telecommute. In the last decade, no more than 3% of employees have reported telecommuting.

### Stakeholder Input

"I telecommute one day a week and have had to fight hard to do so. It is silly that I have a dedicated desk. I would be interested in a daily telecommute option, but culturally, it is not supported."

"I would prefer to work from home, but our team has implemented a new policy where working from home is only approved up to four hours at a time. It is less convenient as it would still require me to commute part of the day. It defeats the point entirely."



**Best Practice**

Mayo Clinic's Florida (5,600 employees) and Arizona (6,400 employees) campuses utilize telecommuting to support employee recruitment, retention, and morale. Mayo Clinic implemented a series of strategic and consistent policies to achieve these benefits. Telecommuting is managed through a single department—patient access and billing services.

Home site visits and pictures are used to verify that telecommuters have a dedicated workspace free from distractions and during business hours, online activity of telecommuters can be verified via instant messaging platforms. For security reasons, off-site printing of any work-related documents is prohibited.

Working from home is not allowed for everyone—hands-on clinicians, greeters, and other high-touch patient care roles must remain on-site. Employees who decide to telecommute must pass their probationary period prior to moving to an off-site office.

## PO.5 – Housing Assistance

Work with local and regional partners to support the development of more housing at or near OHSU campuses. Evaluate an OHSU housing subsidy and/or assistance program as part of employee recruitment and retention.

**(Long-term + Regional)**

### Scoring Summary

| | |
|---|---|
| ●○○○○ | PATIENT-FIRST |
| ●●●●● | EMPLOYER OF CHOICE |
| ●●●●○ | MULTIMODAL |
| ●●●○○ | SAFE & HEALTHY |
| ●●○○○ | INNOVATION/ADMIN |
| ●●●●○ | COST EFFECTIVENESS |
| ●●●○○ | IMPACT |

### Description

Housing that is close to an employee's workplace can provide significant savings in time and money. Long commute distances directly correlate to high SOV rates, and have been shown to reduce employee satisfaction and production.

In the Portland region, rising housing prices continue to push low- and middle-income households farther and farther from the city center and OHSU. Increasing commute times and costs can have negative impacts on attracting and retaining talented employees.

### Next Steps

Developing affordable housing on or near OHSU campuses would allow employees to maintain a more stable work-life balance. A housing subsidy program and/or housing assistance program could also address housing challenges faced by employees. Additional evaluation of such a program is required over the life of this 10-year plan.

Both of these approaches are supportive of the OHSU Night Access Plan[1], created in 2016, (Strategies OL.1 and OL.2) and could help boost recruitment efforts and strengthen employee retention.

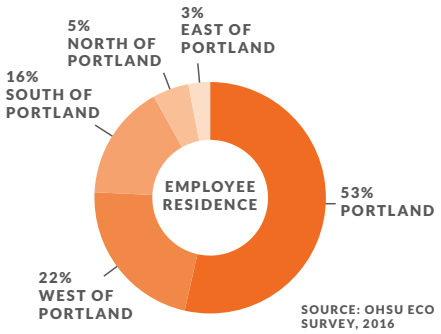
### Cost Estimate

No incremental cost at this time, as initial planning costs are included in existing and future staff time.

### Quick Fact

Just under 47% of OHSU employees live outside the City of Portland.

Housing costs increased by 226% in the City of Portland between 1996 and 2016. The average price increase was 132% in the other cities where most OHSU employees live.




### Stakeholder Input

"As housing costs close in soar, employees are going to be commuting from farther and farther away. You will not be able to attract talented people if you expect them to spend hours riding buses and trains (or paying a small fortune to park). It is a pay cut and they will work somewhere closer to their homes."

"I live too far away to walk to work because I cannot afford any of the housing that is close enough."

"Provide subsidized housing, so that I could afford to live within walking distance."

1. WWW.OHSU.EDU/XD/ABOUT/SERVICES/TRANSPORTATION-AND-PARKING/NIGHT-ACCESS.CFM


**Best Practice**

In 2003, the University of Chicago and University of Chicago Medicine launched an Employer-Assisted Housing Program (EAHP) to strengthen connections to surrounding neighborhoods, retain valuable employees, and help staff optimize their work-life balance.

EAHP provides $2,500 to $10,000 in forgivable loans for home purchases and up to $2,400 in rental assistance to eligible employees who move to one of the nine communities surrounding campus. The program has helped more than 240 employees purchase homes in a neighborhood near campus.

## PO.6 – Daily Services and Amenities

Support the development and provision of on-campus daily services and amenities to reduce non-commute vehicle trips and improve affiliate satisfaction.

**(Long-term + Regional)**

### Scoring Summary

| | |
|---|---|
| ●●●●○ | PATIENT-FIRST |
| ●●●●○ | EMPLOYER OF CHOICE |
| ●●●●○ | MULTIMODAL |
| ●●●●○ | SAFE & HEALTHY |
| ●●●○○ | INNOVATION/ADMIN |
| ●●●●○ | COST EFFECTIVENESS |
| ●●●○○ | IMPACT |

### Description

Many commuters who drive alone do so for additional trips before and after work, as well as throughout the day. This may include dropping off and picking up children at childcare and school, or running errands to the grocery store or the dry cleaners.

Providing some of these services on campus would reduce the need for these additional trips and, therefore, reduce the need for driving alone.

### Next Steps

If OHSU chooses to provide daily services on campus, they should be at a comparable cost to receiving these services elsewhere.

Potential services include additional childcare options on or near campus, grocery store, additional gym and locker room facilities, dining options, banking and business services, or others.

### Cost Estimate

No incremental cost at this time, as initial planning costs are included in existing and future staff time.

### Stakeholder Input

Nearly 25% of employee survey respondents indicated that more daily services on or near campus would improve their commute.

"I know a lot of people drive because they have kids to pick up from school or after-care. I don't carpool because of that."

"A grocery store or other amenities on the waterfront that would allow people to run errands would reduce the number of people trying to leave all at once at the end of the work day."

## T.1 – Transit Service Improvements

Continue to work with regional partners to expand transit service to OHSU. Key priorities include additional express service that increases the convenience of transit for OHSU's dispersed employee and patient population.

(High-Impact + High-Priority)

### Scoring Summary

| | |
|---|---|
| ●●●●○ | PATIENT-FIRST |
| ●●●●○ | EMPLOYER OF CHOICE |
| ●●●●● | MULTIMODAL |
| ●●●○○ | SAFE & HEALTHY |
| ●●●○○ | INNOVATION/ADMIN |
| ●●●●○ | COST EFFECTIVENESS |
| ●●●●○ | IMPACT |

### Description

- A variety of local and regional transit options provide access to Marquam Hill and South Waterfront, including TriMet bus and rail, the Portland Streetcar, the Portland Aerial Tram, C-Tran, and OHSU shuttles.
- OHSU offers annual transit passes at a reduced rate to anyone with an OHSU badge - TriMet Universal passes cost an employee $80 per year on average (versus retail cost of $1,100 per year) and C-TRAN Express passes cost an employee $385 per year (versus retail cost of $1,500 per year). OHSU spends approximately $3.5 million per year on its transit pass program.
- Despite existing services and OHSU's ongoing pass investment, employees indicate a strong desire for further transit improvements. For many, transit does not conveniently connect to their home and/or travel by transit is not time competitive with driving. OHSU does not operate the vast majority of transit serving its campus, so securing additional investment will require ongoing partnerships.

### Next Steps

Recommended improvements to further evaluate include:

- Work with TriMet and C-TRAN to increase the number and frequency of express bus routes to OHSU campuses. Priority routes could include Routes 8, 61, 64, 66, and 68.
- Work with TriMet and C-TRAN to evaluate routing changes to provide more direct and intuitive service to OHSU campuses.
- Work with TriMet, Portland Streetcar, and C-TRAN to facilitate automatic trip logging for OHSU employees and integration with Luum.
- Restructure OHSU shuttle service to minimize duplicative services. Increase the shuttle service frequency and explore long-term service models as the campus footprint and intra-campus demand increases.
- Explore a new shuttle vendor and contract to improve service and vehicle quality. Ensure shuttles allow for automatic trip logging for OHSU employees and direct integration with Luum.
- Develop a campus-wide vision to shape long-term transit investments and service at OHSU. Develop a consistent and strategic engagement process with TriMet, C-TRAN, and other regional partners to advocate for OHSU interests. A key long-term consideration for OHSU is the pros and cons of continuing to serve "two" campuses versus "one" campus with enhanced internal distribution.
- Work with TriMet, Metro, and regional partners to develop and support connections between future high capacity transit (HCT) projects—especially the SW Corridor Light Rail (LRT) project—and Marquam Hill and South Waterfront campuses.

### Cost Estimate

$615,000-$700,000 per year for enhanced OHSU shuttle service.

Transit planning support is assumed as part of existing/future staff time.

TriMet/C-TRAN service improvements are funded independent of OHSU.

### Quick Fact

The Portland Streetcar, TriMet Route 8, and MAX Orange Line have the highest average daily boardings for stops that directly serve Marquam Hill and South Waterfront.

As of February 2017, 7,927 affiliates have an active OHSU TriMet pass and 257 affiliates have an active C-Tran Express Pass.

The SW Corridor LRT project would provide a pedestrian connection between a proposed light rail station on either SW Barbur Boulevard or SW Naito Parkway. Four connection options are under consideration as part of the planning process and environmental review. The alternatives utilize a combination of elevators, stairs, bridges, and walkways to connect between the station(s) and Kohler Pavilion. One option includes a pedestrian tunnel.

This pedestrian and bike connection is crucial for maximizing OHSU's benefit from the project. If done correctly, a new light rail service has the potential to greatly improve employee and patient/visitor access from the southwest. However, if the connection to/from the light rail station is too difficult or takes too long, its vehicle trip reduction impact at OSHU will be limited.

### Stakeholder Input

"I would absolutely love to take transit into OHSU. However, from where I live (north Portland) it is a crazy amount of time spent a day on the bus."

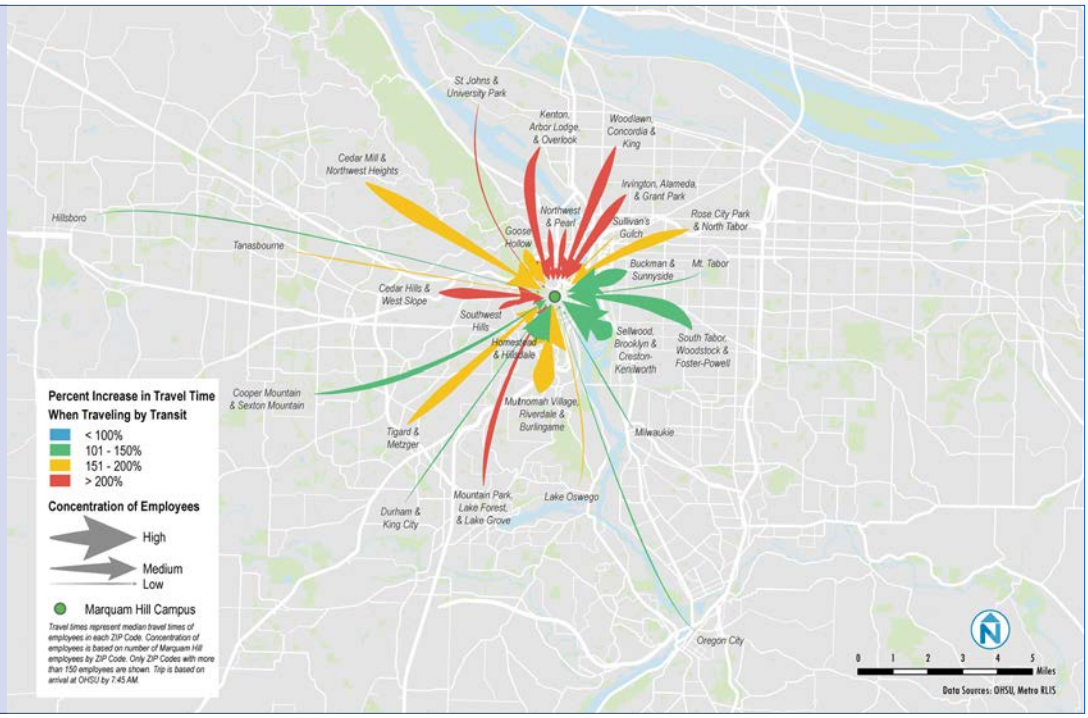
"The #8 is the most direct to my home, but there are too many stops and it is too subject to traffic (especially just getting off the hill) to make it a practical alternative to driving myself."

"The express buses are usually fine, but the times they are available are limiting and if a bus is canceled or over-crowding is severe, it is VERY challenging."

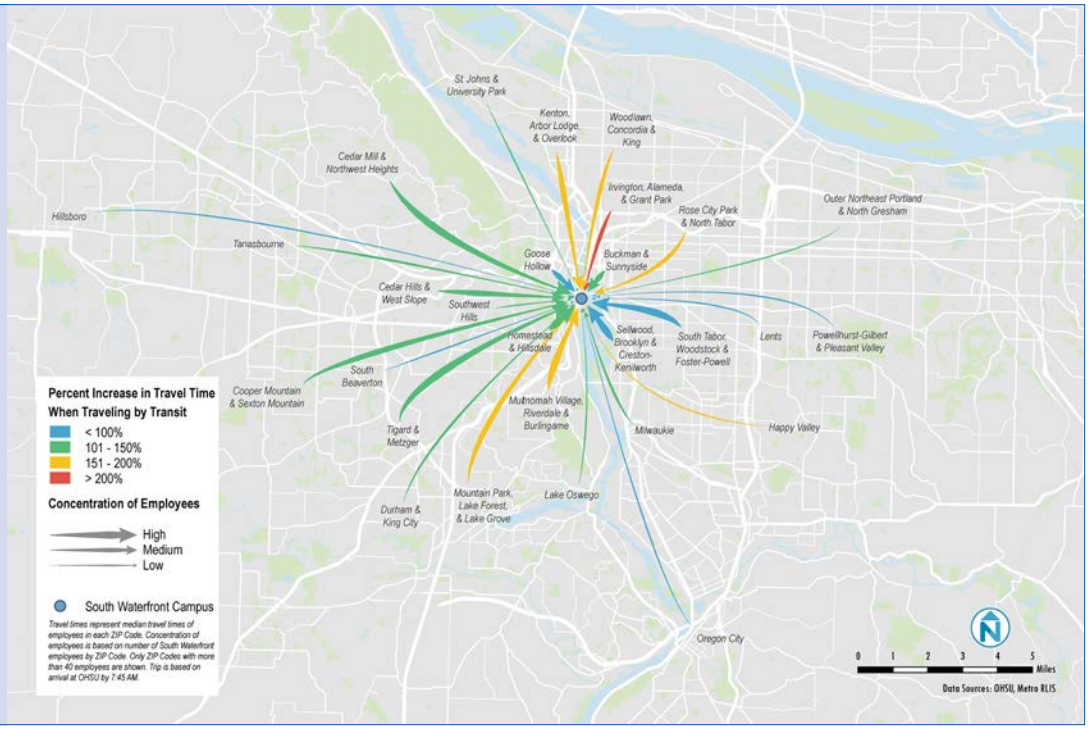
"I would love earlier express bus times in the afternoon. The first 64 doesn't come to OHSU until 3:51 p.m."

"It would be beneficial to have more times for the C-TRAN buses."

Comparison between transit and driving AM travel time from home to Marquam Hill




Comparison between transit and driving AM travel time from home to South Waterfront




Driving is still faster than transit for more employees. More direct service would improve the convenience of transit.

## T.2 – Access to Transit Improvements

Continue to invest in infrastructure improvements that enhance connections to key transit corridors and stops.

### Scoring Summary

| | |
|---|---|
| ●●●●○ | PATIENT-FIRST |
| ●●●●○ | EMPLOYER OF CHOICE |
| ●●●●● | MULTIMODAL |
| ●●●○○ | SAFE & HEALTHY |
| ●●●○○ | INNOVATION/ADMIN |
| ●●●●○ | COST EFFECTIVENESS |
| ●●●●○ | IMPACT |

### Description

Additional infrastructure can further support connectivity and access to transit services. Employees indicate the need for improved stop amenities to make waiting for the bus more comfortable. Another consistently identified challenge is the impact of congestion on buses getting off Marquam Hill during the afternoon and evening peak. At peak congestion, many employees get off the buses and walk.

### Next Steps

Key improvements include:

- Work with TriMet and PBOT to evaluate and implement transit priority treatments on key corridors. Potential treatments include HOV lanes, dedicated transit lanes, transit signal priority, and/or queue jump lanes. Evaluate peak-only versus all day operations.
- Identify and lease underutilized parking spaces near key transit centers, and other appropriate locations, to facilitate OHSU affiliate use of transit.
- Enhance bus stop amenities such as benches, lighting, and shelters at key transit stops on campus. Expand deployment of real-time transit arrival screens. Prioritize locations and stops identified in Night Access Plan.
- Create on-campus mobility hubs, where multiple modes (transit, shuttle, rideshare, and bike) are integrated and information is centralized to facilitate easy access and transfers. Prioritize locations identified in the Night Access Plan and near rideshare drop-off/pick-up locations.

### Cost Estimate

$75,000 – 150,000 to support and leverage transit infrastructure investments.

$100 – 250 per space per month in leasing costs for remote/park-and-ride parking.

### Stakeholder Input

"I would love for OHSU to lobby on behalf of their employees for dedicated TriMet transit lanes."

"Please work with TriMet and the City of Portland to address the awful afternoon bottlenecks down Terwilliger and Sam Jackson that result from the I-405 back-up."


OPENS SEPT 12
FIRST RIDE!
MAX

## T.3 – Regional Water Taxi Service

As a long-term strategy, support a regional feasibility study of a water taxi service that would connect OHSU's South Waterfront campus to major destinations along the Willamette River.

**(Long-term + Regional)**

### Scoring Summary

| | |
|---|---|
| ●●●●● | PATIENT-FIRST |
| ●●●●● | EMPLOYER OF CHOICE |
| ●●●○○ | MULTIMODAL |
| ●●●○○ | SAFE & HEALTHY |
| ●●●○○ | INNOVATION/ADMIN |
| ●●●○○ | COST EFFECTIVENESS |
| ●○○○○ | IMPACT |

### Description

OHSU's proximity to the Willamette River offers a unique opportunity to diversify access to the campus and provide affiliates another east-west and north-south connection. Many water-oriented cities utilize water taxi or ferry services to support transit accessibility and reduce congestion on key corridors or bridges.

In 2006 the City of Portland conducted a formal feasibility study of service on the Willamette River. The study recommended that commuter ferry service "…should not be pursued at this time due to high cost premiums over other modal options and expensive terminal construction that would be required to initiate service." A seasonal circulator service was determined to be more cost-effective and potentially viable, yet was not pursued.

In the last decade, much has changed in Portland and there is renewed interest from various stakeholders and community groups for revisiting transit service on the Willamette River. Given the potential benefits to OHSU and its affiliates, it is recommended that OHSU participate in and support further study of water taxi service as a long-term transit strategy.

### Next Steps

A new feasibility study, led by the City or a regional partnership, is the first step. As identified in the 2006 study, the key challenges and issues to fully analyze and consider include:

- Size of passenger market, determined by a combination of time-competitiveness of water taxi versus other modes, population and employment density, and development patterns near the river and at home-end terminal sites.
- Operating costs, which are typically much higher than bus and light rail.
- Operating models, such as commuter versus seasonal circulator.
- Required infrastructure, including terminals, park-and-ride facilities, and multimodal access improvements to stations.
- Fare structures.
- Fleet type and operating requirements.

### Cost Estimate

None at this time, as planning support is assumed as part of existing and future staff time.

**Best Practice**

In Vancouver, B.C., two water taxi companies provide commute and visitor service along False Creek – the Aquabus and False Creek Ferries.

Aquabus has a fleet of seven aquabuses and four cyquabuses. Aquabuses can accommodate up to 12 passengers, while cyquabuses can carry up to 30 passengers, as well as bicycles, strollers, and wheelchairs. Aquabus serves eight dock locations, seven of which they share with False Creek Ferries.

Aquabuses arrive every 15-minutes and more frequently (every five minutes) at some docks during peak hours. Fares for adults range from $3.50 to $5.50 depending on the origin and destination. Regular commuters can purchase a variety of passes, including a day, monthly, 3-month, 6-month, or one year pass.

False Creek Ferries operates four routes and serves nine dock locations. Ferries are available at least every 15 minutes between 7 a.m. and 9 p.m. year round. The fleet includes a mix of 20-passenger and 12-passenger ferries. One-way fares and day passes are available for short-term riders. Commuter tickets, monthly passes, and a student ferry pass are also available for those who use the service more regularly. Commuter ticket costs vary depend on age, origin, and destination.

## T.4 – Downtown Tram/Gondola Connection

As a long-term strategy, support a regional feasibility study of a second tram or gondola that would provide a direct connection from Marquam Hill to downtown.

**(Long-term + Regional)**

### Scoring Summary

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| ●●●●● | IMPACT |

### Description

The Portland Aerial Tram has been particularly influential in OHSU's development and evolving transportation system. Since its opening in 2006, the Tram has improved connectivity for OHSU affiliates and helped catalyze growth on the South Waterfront campus. The new Tilikum Crossing and MAX Orange Line have also increased access to the South Waterfront, further leveraging the Tram's connection to Marquam Hill.

The success of the Tram, however, has created new challenges. Tram ridership has increased substantially in recent years to the point where there is a capacity problem during peak periods. Down time due to maintenance or weather also creates significant ripple effects throughout the system.

As discussed in the Night Access Plan, a new aerial tram or gondola connection to Downtown would provide substantial benefits to OHSU, including direct access to the Downtown Transit Mall and robust transit service in downtown, system redundancy for the existing Tram, and a way to avoid bottlenecks on Marquam Hill.

### Next Steps

A second aerial tram is a major undertaking and significant financial investment. The existing Tram cost $57 million to design and build, of which OHSU contributed $40 million. A detailed study of a new tram is required to assess its feasibility from both a technical perspective, as well as a political and funding standpoint.

Given the potential benefits to OHSU and its affiliates, it is recommended that OHSU support a feasibility study of a second tram as a long-term transit strategy.

### Cost Estimate

None at this time, as planning support is assumed as part of existing and future staff time.

### Quick Fact

The Aerial Tram will shut down for track rope maintenance from June 23 to July 30 of 2018.

The Tram cabins travel 3,300 linear feet from the South Waterfront to Marquam Hill.

The two cabins each have a capacity of 79 people. The Tram regularly has more than 10,000 riders each day.

## PN.1 – Pedestrian Access Improvements

Work with local and regional partners to complete pedestrian network gaps to, from, and within campus. Continue to invest in a connected street network and roadway improvements that prioritize safety, comfort, and access for all pedestrians.

**(High-Impact + High-Priority)**

### Scoring Summary

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### Description

A safe and convenient pedestrian network is the foundation of any accessible transportation system. Every trip, regardless of mode, begins and ends with at least a short walk. Many OHSU employees already walk part of their commute, whether it's their primary commute mode or to connect to the Tram, their place of work, a transit stop or parking.

### Next Steps

Improvements to pedestrian infrastructure will facilitate easy access to, from and between OHSU facilities and campuses, making walking trips safer and more enjoyable, while reducing congestion on campus. Key improvements include:

- Prioritize infrastructure improvements at locations identified in the Night Access Plan and Portland Vision Zero Action Plan[1], such as SW Terwilliger Boulevard and SW Condor Avenue.
- Enhance ADA access along pedestrian routes by removing obstacles, maintaining common corridors and pathways, and installing curb ramps. Priority locations include remote parking facilities and transit stops at off-site work locations.
- Ensure a comfortable experience on corridors to, from and within campuses by widening sidewalks and installing lighting, landscaping and other safety measures, such as high-visibility crosswalks.
- Work with PBOT, Metro, TriMet, C-TRAN, and local jurisdictions to prioritize improvements on pedestrian corridors to and from transit stops that are well-utilized by OHSU affiliates.
- Continue to keep clearly separated pathways for pedestrians. Work with PBOT to prioritize consistent maintenance.
- Collect, map, and utilize collision data on an annual basis to identify and address high-priority safety "hot spots."

### Cost Estimate

$75,000 – 150,000 per year to support and leverage local/regional investments.

### Quick Fact

OHSU employees cited infrastructure improvements such as complete sidewalks, improved staircases, lighting, and landscaping as one of the most important factors in deciding to walk to work more frequently.

### Stakeholder Input

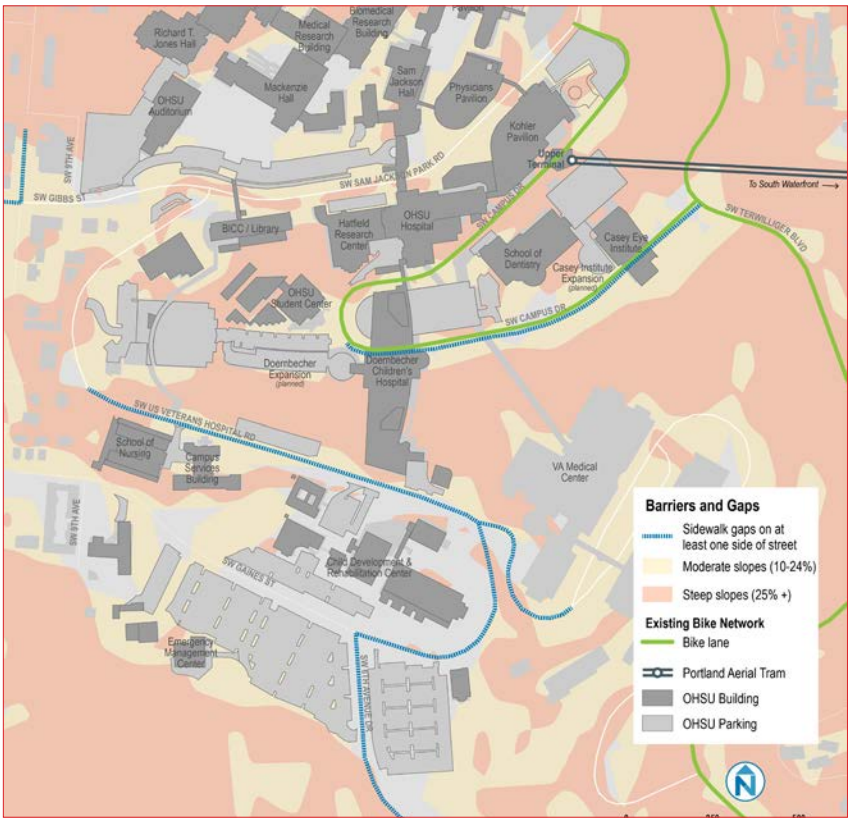
"It would be extremely helpful if a safe pedestrian crossing could be developed or installed across Barbur Boulevard near the pedestrian bridge across I-5."

"Provide better short-cut walking paths to/from Marquam Hill. Following sidewalks can add 10 minutes to the walk time."

"The paving at the top of Sam Jackson Park Road is a huge improvement, but there are a lot of places that need connections between buildings that are difficult for bikes and wheelchairs."

1. WWW.PORTLANDOREGON.GOV/TRANSPORTATION/71730


South Waterfront barriers and gaps




Marquam Hill barriers and gaps

Existing network gaps present a barrier to bike and pedestrian travel.

## PN.2 – Pedestrian Safety Program

Implement pedestrian-focused safety programs that decrease the risk of collisions and increase pedestrian comfort and safety on or near OHSU campus.

### Scoring Summary

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### Description

People walking to, from, or at OHSU can face challenges from inattentive motorists and high volumes of vehicular traffic. In addition, many employees indicate that they felt unsafe navigating campus, especially on certain trails and sidewalks, empty parking garages and lots, and key corridors.

### Next Steps

Three safety programs that could further encourage walking commutes and increased pedestrian activity on campus include:

- Develop and implement an annual "Be Seen, Be Safe" promotional campaign to promote pedestrian safety. Partner with PBOT and TriMet to target education and enforcement efforts on key collision behaviors for people both walking and driving. Give away blinking lights and reflective stickers, armbands, and other materials to increase visibility for pedestrians. Communicate key messages to both drivers and pedestrians.
- Implement a program that facilitates walking groups as part of a first- and last-mile connection, as well as to improve safety and access within campus. Potentially utilize the Luum commute platform (Strategy PC.4) to connect people who live near each other, are within the same departments, and/or have a similar work schedule to form walking groups.
- Expand security patrols around OHSU, prioritizing off-street paths and trails where low pedestrian traffic can make walking routes feel unsafe. Adopt a safety escort program, potentially supported by a smartphone app that allows people to request safety escorts through campus.

### Cost Estimate

$65,000 per year for a safety escort program, increased security patrols, and annual "Be Seen, Be Safe" campaign materials. One-time cost of $25,000 to develop a smartphone app.

### Quick Fact

Between 2004 and 2013, four crashes occurred along Barbur Boulevard near OHSU campuses that resulted in pedestrian injuries or death.

### Stakeholder Input

"We need a pedestrian safety campaign aimed at motorists, not pedestrians."

## PN.3 – Pedestrian Rewards Program

Create a pedestrian rewards program that incentivizes and encourages walking trips through giveaways and friendly competition. This program would complement the daily financial incentive for pedestrian commuters (Strategy PC.2).

### Scoring Summary

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### Description

To support additional mode shift to walking, OHSU should create a rewards program to provide extra encouragement to potential and existing pedestrian commuters. Such a program could provide the extra incentive needed to those employees considering walking as their primary commute mode, and reward dedicated walkers with consistent prizes and drawings.

### Next Steps

The program would be facilitated through the Luum commute platform (Strategy PC.4). Key features of the rewards program could include:

- Automatically log walking trips through Luum.
- Qualify for gift cards, drawings, and discounts towards walking gear and apparel, and fitness trackers such as FitBits, based on walking trips and mileage recorded.
- Establish individual and group reward/prize thresholds based on the number of trips logged, miles walked, percentage of trips per month made by walking, highest departmental totals, and/or other desired metric.
- Enable participation in challenges between departments or individuals to log the most trips or mileage walked.
- Tie walk trips and walking incentives to OHSU health and wellness goals and programs.

### Cost Estimate

$10,000 – 20,000 per year.

### Quick Fact

In 2017, 6% of South Waterfront and Marquam Hill employees said they walk as their primary mode of commuting to work. Marquam Hill walking rates have roughly doubled since 2007.

### Stakeholder Input

"I'd like to see rewards for people like me who walk to work, similar to the bike incentive program."

## B.1 – Bike Access Improvements

Work with local and regional partners to complete gaps in the bicycle network to, from, and within campus. Continue to invest in a connected network of bike facilities that is comfortable and accessible for a range of bike riders. As feasible, prioritize physically separated facilities on key corridors.

**(High-Impact + High-Priority)**

### Scoring Summary

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### Description

Safe and connected bicycle infrastructure, especially physically separated bike lanes and paths, have proven to be the best way to get people riding bikes. Improving existing bicycle facilities, and installing new ones to fill gaps in the network, will facilitate additional bike trips to, from, and within OHSU, thereby reducing vehicle congestion and parking demand.

### Next Steps

Important next steps include:

- Prioritize first- and last-mile gaps to key transit nodes and key corridors identified in the Night Access Plan, 2030 Portland Bike Plan, and the Portland Vision Zero Action Plan. Prioritize separated bicycle lanes where feasible. Key corridors include SW Terwilliger Boulevard, SW Sam Jackson Park Road, SW Marquam Hill Road, SW Gibbs Street, SW Barbur Boulevard, SW Macadam Avenue, and SW Naito Parkway.
- Create robust bike facility standards for all new buildings and bike facilities.
- Use Luum's automatic trip logging capabilities with RFID or badge swipes to encourage bicyclists to use the safest routes.
- Continue to keep clearly separated pathways for people biking. Work with PBOT to prioritize consistent maintenance of bike facilities, especially during fall and winter. Identify key mitigation areas, especially as South Waterfront continues to redevelop.
- Enhance ADA access along bicycle routes.
- Develop and implement an annual "Be Seen, Be Safe" program to promote bicycle safety (in coordination with Strategy PN.2). Target education and enforcement efforts at key collision behaviors for both bicyclists and motorists.
- Create a route from Terwilliger Blvd./Campus Dr. to the Student Center with no more than 8% incline.

### Cost Estimate

$75,000 - $150,000 per year to support and leverage local/regional investments.

### Stakeholder Input

"Safety improvements are greatly needed along Gibbs St/Marquam Hill Road…it is incredibly dangerous."

"Most employees tell me it is lack of safety that keeps them from biking to work. It would be great to have a dedicated bike lane from downtown to a large bike parking facility on Marquam Hill."

"I want to bike but do not due to safety."

## B.2 – Bike Parking Improvements

Continue to invest in a diverse and high-quality bike parking program at OHSU. Prioritize expansion of bike parking to meet increasing demand. Plan for and invest in major new facilities, such as expanded bike valet on South Waterfront and a bike station on Marquam Hill. Require high-quality bike parking facilities for all new development.

**(High-Impact + High-Priority)**

### Scoring Summary

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### Description

OHSU must expand and upgrade bike parking facilities to meet increasing demand at both South Waterfront and Marquam Hill. New facilities should provide not only provide a safe, secure space for parking, but also incorporate and/or easily connect with showers and locker rooms.

### Next Steps

Specific next steps include:

- Expand the existing Go By Bike valet facility at the South Waterfront and consider installing additional valet facilities in high demand locations.
- Expand the hours of the bike valet services for early/late shifts and/or coordinate schedule with tram service hours.
- Provide covered valet parking option. Such a facility would have to be located outside the path of the tram cabins.
- Install three bike "stations" equipped with bike parking, showers, lockers, services, and bike tools for approximately 600 bike commuters on Marquam Hill. Consider potential locations identified in the Night Access Plan, such as Kohler Pavilion, Garage C, Student Center, or Casey Eye Institute.
- Install additional bike racks at Marquam Hill and South Waterfront locations for several hundred more bicycles. Ensure that racks allow both front and rear wheels to be secured. Replace old bike racks on an annual, rolling basis.
- Ensure that bicycle parking and trip-end facilities meet minimum city code requirements. Augment city requirements for OHSU as needed.
- Work with the City as they update their bike parking code.

### Cost Estimate

$257,000 - $357,000 in ongoing costs for bike valet and bike rack replacement.

$745,000 one-time capital cost for Marquam Hill bike stations.

### Quick Fact

OHSU employees bike to work at a rate two times higher than the typical worker in the City of Portland.

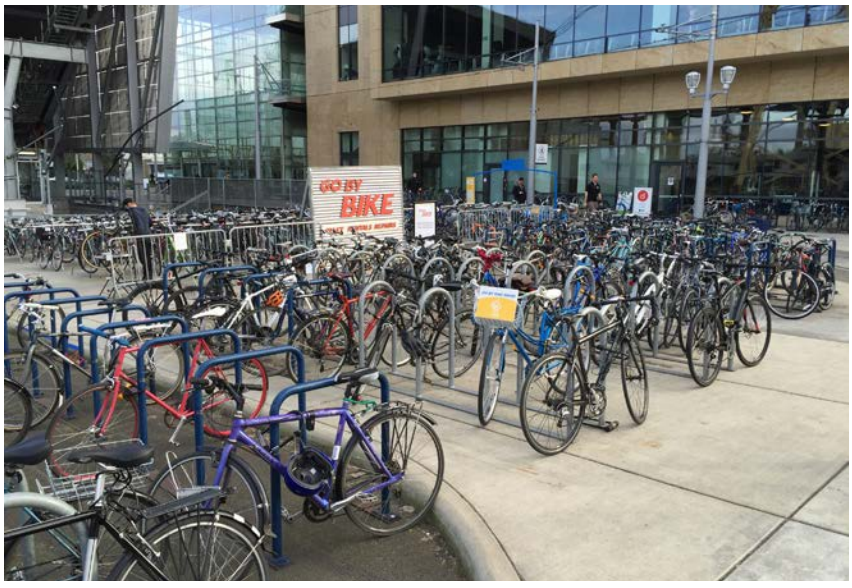
The rate of biking for OHSU employees more than tripled since 2007, but bike parking capacity on Marquam Hill has recently decreased due to the closure of two facilities.

More than any other proposed improvement, employees indicated that upgraded and expanded shower, locker, and bike parking facilities would encourage them to bike more to OHSU.

OHSU has almost 1,600 bike parking spaces on campus — 1,042 at South Waterfront and 530 at Marquam Hill.

### Stakeholder Input

"It would be very helpful to have more permanent lockers in bike facilities because it takes so much time and effort for me to bring all my shower stuff to my work location every day."




**Top/Middle:**
Many bicycle parking facilities on Marquam Hill are inadequate to meet increasing demand, and a large share are not covered or secured.

**Bottom:**
The existing Go By Bike valet is often at capacity, especially during the spring and fall.

## B.3 – Bike Share Program

Simplify, expand, and subsidize access to bike share for employees, students, patients, and visitors.

### Scoring Summary

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### Description

Both Go By Bike and Biketown bike share services are well-utilized at OHSU. Upgrading bike share access for employees and students and creating a bike share program for patients and visitors would make bike share options even more useful and attractive.

### Next Steps

Key elements of an enhanced bike share program would include:

- Work with local partners to expand bike share on campus, especially to Marquam Hill. Subsidize or fully fund additional Biketown stations on campus in high volume locations.
- Consider consolidating existing bike share systems (Go By Bike and Biketown) to ensure system efficiencies and reduce user confusion.
- Work with Biketown to offer discounted memberships and/or trip subsidies for OHSU staff and students.
- Provide free patient and visitor access to bike share system(s).
- Explore partnerships with vendors to integrate e-bikes into bike share program.

### Cost Estimate

$30,000 – 90,000 to install new Biketown stations.

$40,000 in annual ongoing subsidies for employee, patient, and visitor Biketown rides.

### Quick Fact

The Biketown station located at the lower aerial tram terminal has the second-highest ridership of any station in the city.

Between July 2016 and June 2017, nearly 10,000 Biketown trips were recorded to or from this one station, an average of 26 per day.


Multiple bike share systems provide choice, but may also create user confusion and system inefficiencies.

## B.4 – Bike Rewards Program

Create a rewards program to encourage more employee bike trips, promote safe riding, and incentivize ongoing bicycle commuting. This program would complement the daily financial incentive for bicycle commuters (Strategy PC.2).

### Scoring Summary

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### Description

Similar to the pedestrian rewards program (Strategy PN.3), employees would automatically log bike commute trips through Luum, the mobile commute app.

### Next Steps

The key elements of the rewards program could include:

- Establish individual and group reward thresholds based on the number of trips logged, miles ridden, percentage of trips per month made by biking, highest departmental totals, or other desired metric.
- Rewards could include biking gear and safety equipment. Explore partnerships with local bike shops.
- Consider a bike giveaway and/or a "rent-to-own" program. Explore partnerships with vendors to offer e-bikes as part of the program. Condition participation to a required number of bike trips or share of commutes per month and/or year.
- Implement a bike buddy program that connects first-time/novice bicycle commuters with experienced riders in their neighborhood. Potentially utilize the Luum commute platform (Strategy PC.4) to connect bikers who live near each other, are within the same departments, and/or have a similar work schedule.
- Provide free and/or reduced cost helmets to employees and better promote OHSU's existing community helmet program.
- Provide all employees one free bike tune up per year and free flat fixes.

### Cost Estimate

$15,000 – 30,000 per year in rewards and prizes.

$12,500 per year for bike giveaways.

### Stakeholder Input

"I really do think that cyclists do so much for decreasing the number of cars on the road. OHSU needs to incentivize and encourage people to ride their bikes more."

"Electric assisted bikes would give incentive to those who can ride but need help getting up the hills on the southwest side. Just think of all the parking spaces that could be vacated!"

"Having a free tune up every year with new brakes would be very helpful with the cost of bike maintenance."


**Best Practice**

Sonos, located in Downtown Santa Barbara, CA, offers the SmartRide program. Employees have two options to choose from: Fast Cash Commuters or Flexible Commuters.

Both the Fast Cash and Flexible Commuter benefits provide employees with up to $600 that can go towards the purchase of a new bike. All commuters must complete the required number of bike commutes (60 for Fast Cash Commuters and 80 for Flexible Commuters) within one year to earn this benefit. Sonos has partnered with local bike shops, allowing employees to go to one of five designated bike shop partners for a discounted bike.

Another key element of these two programs is that Fast Cash Commuters choose to give up their parking permit and get paid $5 every day they bike, walk, or skate to work. Flexible Commuters keep their parking permit and get paid $2 every day they bike, walk, skate, carpool, or motorcycle to work.

Approximately 400 people are employed at Sonos in Santa Barbara. A total of 197 employees are participating in the SmartRide program and 85 employees have earned a bicycle through the Earn-a-Bike program.

## SM.1 – Employee and Patient Lyft Program

Partner with Lyft to implement an employee ride hail solution that partially subsidizes certain trip types to encourage a reduction in parking demand and congestion. Enhance the patient experience by partnering with Lyft to provide non-emergency medical trips.

(High-Impact + High-Priority)

### Scoring Summary

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### Description

A priority for an OHSU rideshare program is to reduce both parking demand and congestion. Leveraging on-demand ride-hailing services, such as Lyft, could help achieve these goals and improve access to campus for both employees and patients.

Many **employees** who now drive alone would consider taking transit or another mode if they had the option to take subsidized Lyft rides when necessary. To help minimize congestion, employee Lyft programs should be structured in a way that minimizes the shift of existing transit, bike, or pedestrian commutes to a rideshare vehicle. Programs should also prioritize high-occupancy trips, as moving an existing single-occupancy driver to a rideshare vehicle would double the number of vehicle trips to and from campus for that employee. Therefore, the target employee markets for rideshare at OHSU include off-peak employees and those for whom having better first- and last-mile connections would encourage transit use.

A **patient** Lyft program could help improve the patient experience and possibly reduce missed appointments. With access to a flexible on-demand option, such as Lyft, rides could be requested on behalf of patients who have no other transportation options, whether they do not drive, do not have access to a vehicle, have mobility challenges, and/or are not well-served by transit.

More details about these programs can be found in the OHSU Lyft/ Rideshare Program Development report, completed in October 2017.

### Next Steps

OHSU is currently working to develop new employee and patient programs. Key elements for an **employee program** would include:

- Launch an "Off-Peak" program to help employees who work off-peak hours get to and from work without driving alone. Access for off-peak employees was identified as a key issue in the OHSU Night Access Plan. Using Lyft codes, the "Off-Peak Lyft Program" provides one-way Lyft rides to employees whose shifts either start or end when transit is not in service. It is assumed that the employee takes transit (or other non-SOV mode) either to or from OHSU for the portion of their commute that is during normal business hours.
- Provide an Emergency Ride Home program using Lyft to reward employees who are already not driving alone. This program will provide up to three free Lyft rides per year to non-driving employees who need to get home in the event of an emergency. This program would replace the existing Emergency Ride Home program administered via TriMet, which uses cab vouchers.
- Launch a "Transit Connector" program that connects employees to transit stops. In 2016, OHSU invested over $3.5 million in subsidized transit passes for employees. However, some employees live just

outside the reach of transit. To leverage its transit pass investment, OHSU can provide a limited number of partially subsidized Lyft rides to employees to connect to and from a transit stop or station near their home. Employees who currently drive alone to work would be targeted for this program.

- Establish internal guidelines and processes for considering and developing additional Lyft programs that meet specific departmental needs across OHSU.
- Make Lyft Concierge available during the Tram shutdown, which is scheduled to take place during June and July of 2018.

Key elements for **patient program** would include:

- Explore a partnership with Lyft and/or other vendors to replace existing cab rides with subsidized Lyft rides for patient (inpatient and outpatient) non-emergency medical trips in an effort to provide a better experience for the patients.
- Analyze effects of program by looking at average cost per ride, wait times, patient satisfaction and missed appointments. Review lessons learned and determine how to expand program to more patients if deemed to be a successful strategy.
- Engage with OHSU Government relations to work at getting TNC's to be approved ride providers at the state level covered by Medicaid and Medicare.

For both the **employee and patient programs**:

- Streamline rideshare loading on campus by designating and developing pick-up, drop-off, and vehicle staging policies and locations throughout campus.

### Cost Estimate

$1,300,000 per year for Lyft Transit Connector, Off-Peak Lyft Program, and Emergency Ride Home Lyft Program.

Patient Lyft Program costs are to be determined. Costs are expected to be comparable to current costs of providing patients with taxi rides.

### Stakeholder Input

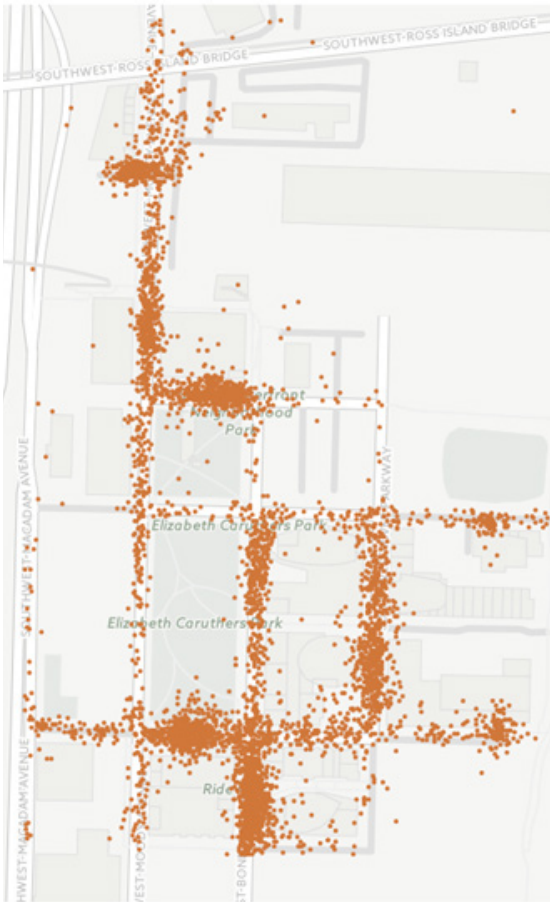
"I would like to have access to subsidized rideshare to be able to pick my child up in case of an emergency."

"I wish I had the option to take a free or subsidized Uber or Lyft ride to my home for emergencies."

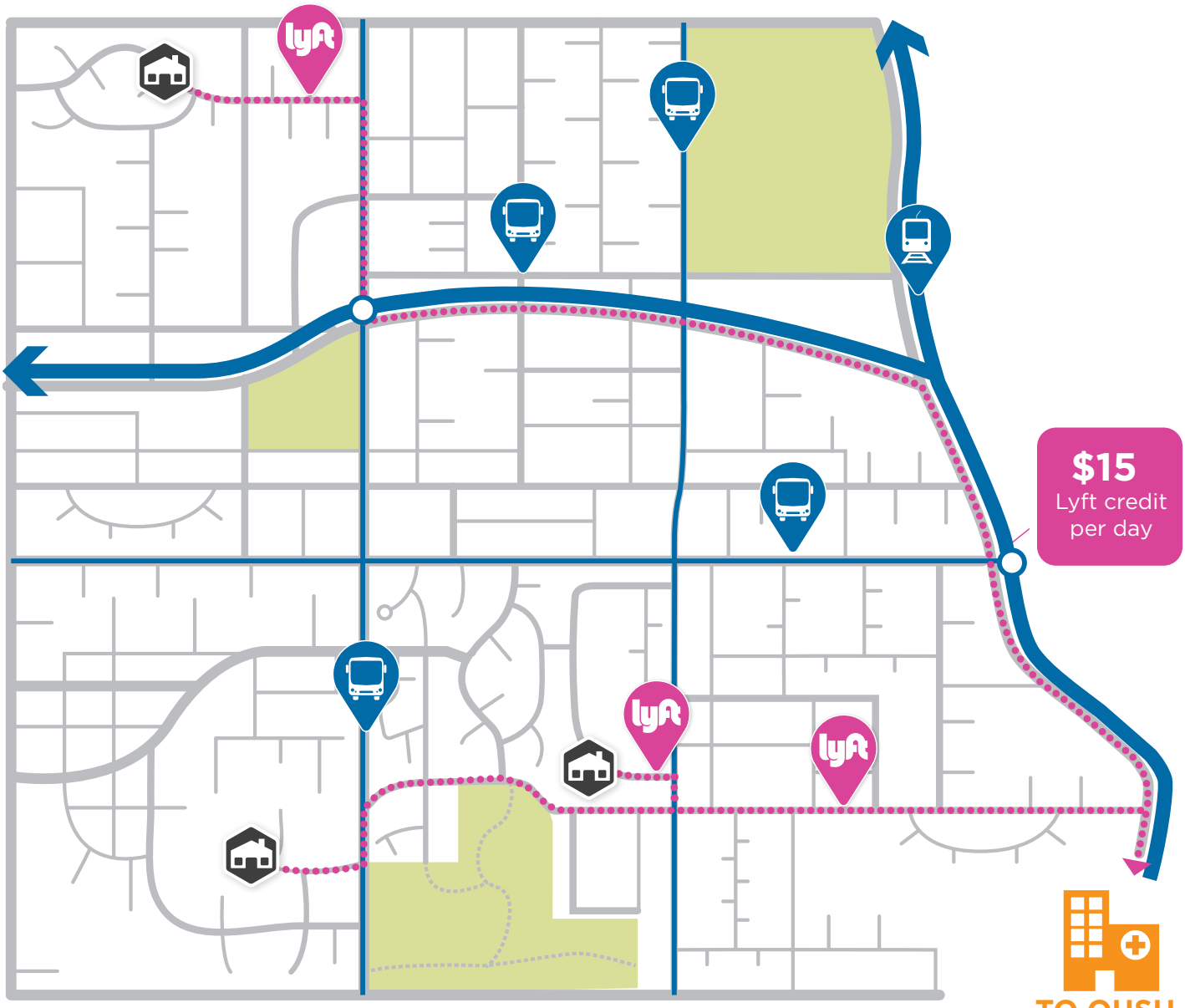
"I would walk home most days if I could Uber or Lyft at a discounted rate to work."

A passenger loading strategy for rideshare, including designated loading locations, will minimize congestion and traffic impacts.


Lyft Pick-ups and Drop-offs at South Waterfront (October 2016 – May 2017)

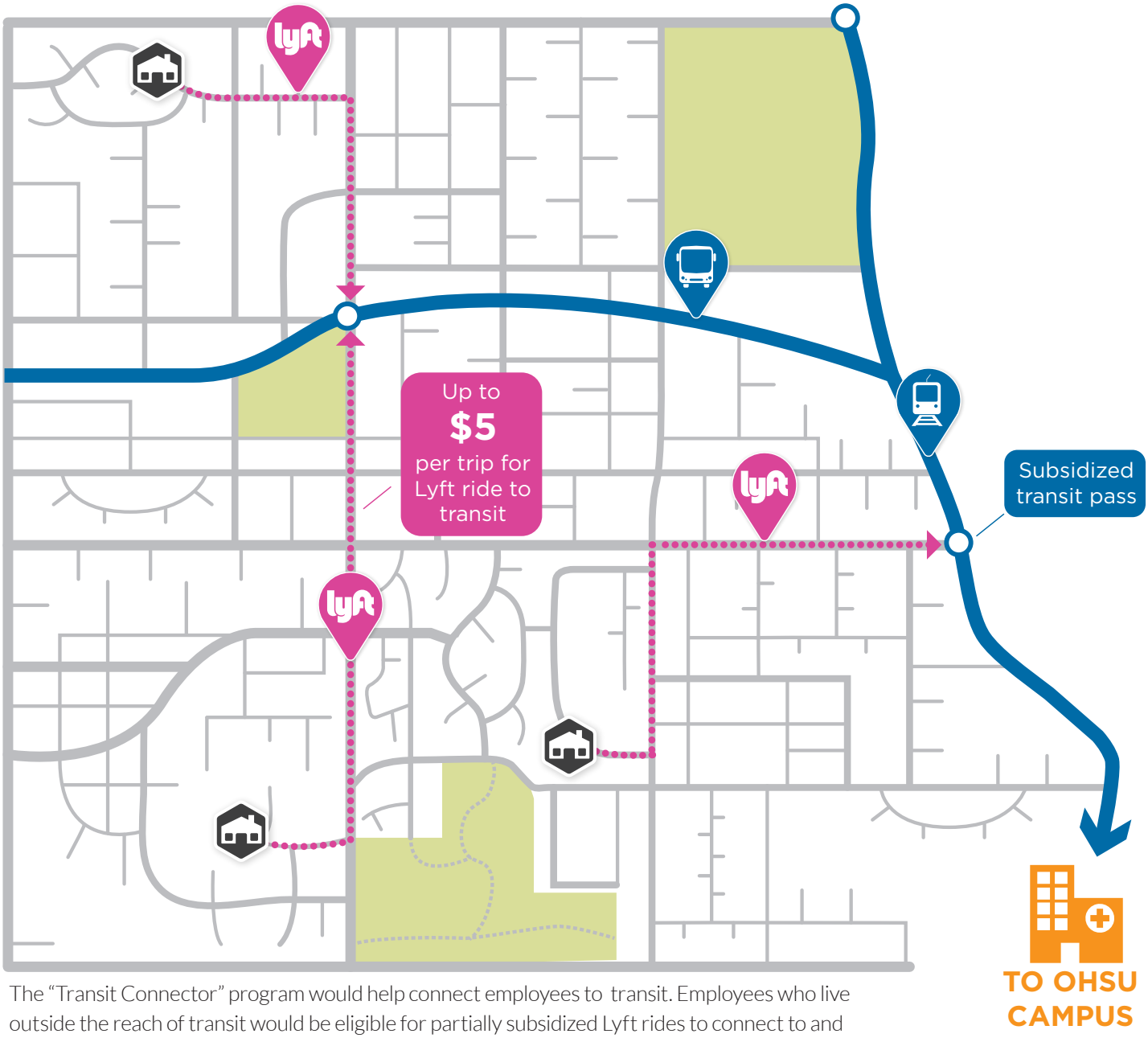


## Off-Peak Lyft Program




The "Off-Peak" program would provide one-way Lyft rides to employees whose shifts either start or end when transit is not in service. It is assumed that the employee takes transit (or other non-SOV mode) either to or from OHSU for the portion of their commute that is during normal business hours.

## Lyft Transit Connector




The "Transit Connector" program would help connect employees to transit. Employees who live outside the reach of transit would be eligible for partially subsidized Lyft rides to connect to and from a transit stops or stations near their home.

## SM.2 – Internal and Dynamic Carpooling Program

Launch a dynamic carpooling service internal to OHSU employees. Provide subsidies for employees who share a ride. Peer-to-peer, on-demand ridesharing would match OHSU co-workers and neighbors based on home location, route, predicted traffic, and user feedback.

**(High-Impact + High-Priority)**

### Scoring Summary

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|---|---|
| ●●○○○ | PATIENT-FIRST |
| ●●●●● | EMPLOYER OF CHOICE |
| ●●●●○ | MULTIMODAL |
| ●●●○○ | SAFE & HEALTHY |
| ●●●●● | INNOVATION/ADMIN |
| ●●●●● | COST EFFECTIVENESS |
| ●●●●○ | IMPACT |

### Description

For some employees, transit, biking, and walking are not feasible commute modes. These employees either live beyond a reasonable bike/walk distance or live in areas without convenient transit service.

An enhanced carpool program could provide many of these employees a more cost-effective solution, while substantially reducing parking demand and congestion at OHSU.

### Next Steps

Key elements of a new program include:

- Institutionalize a more robust rideshare culture by providing a flexible peer-to-peer rideshare solution. One solution with particular promise is Scoop. Scoop is an app-based carpool vendor that works with employers to build a rideshare culture, find the right balance of drivers and passengers, and ultimately provide a dynamic system that can be added to the employee's suite of options. Scoop matches co-workers and neighbors into carpools the night before to get to work and on the same day to get home.
- OHSU would pay Scoop on a monthly basis based on the actual number of rides matched (estimated to be around $4 per match). Scoop would utilize those funds to reimburse OHSU employees who drive a certain dollar amount per trip. Passengers would also reimburse drivers a certain amount per trip. The pricing structure varies depending on the supply and demand of drivers and passengers.
- The current state run ridematching system, Drive Less Connect, is not dynamic/on-demand nor mobile-friendly, and has been underutilized. If Scoop is implemented, OHSU should consider whether to continue to promote and advertise the regional program to employees.
- To support carpooling, OHSU should enable automatic trip logging and splitting of parking fees through the Luum employee commute platform (Strategy PC.4).

### Cost Estimate

$75,000, first-year to help cover the cost of program set up and marketing.

$486,000 ongoing annual cost, at full implementation with more than 10,000 matched trips a month.

### Quick Fact

Approximately 4% of OHSU employees at Marquam Hill and South Waterfront carpool to work in 2017. In 2007, more than 10% of employees at Marquam Hill carpooled.

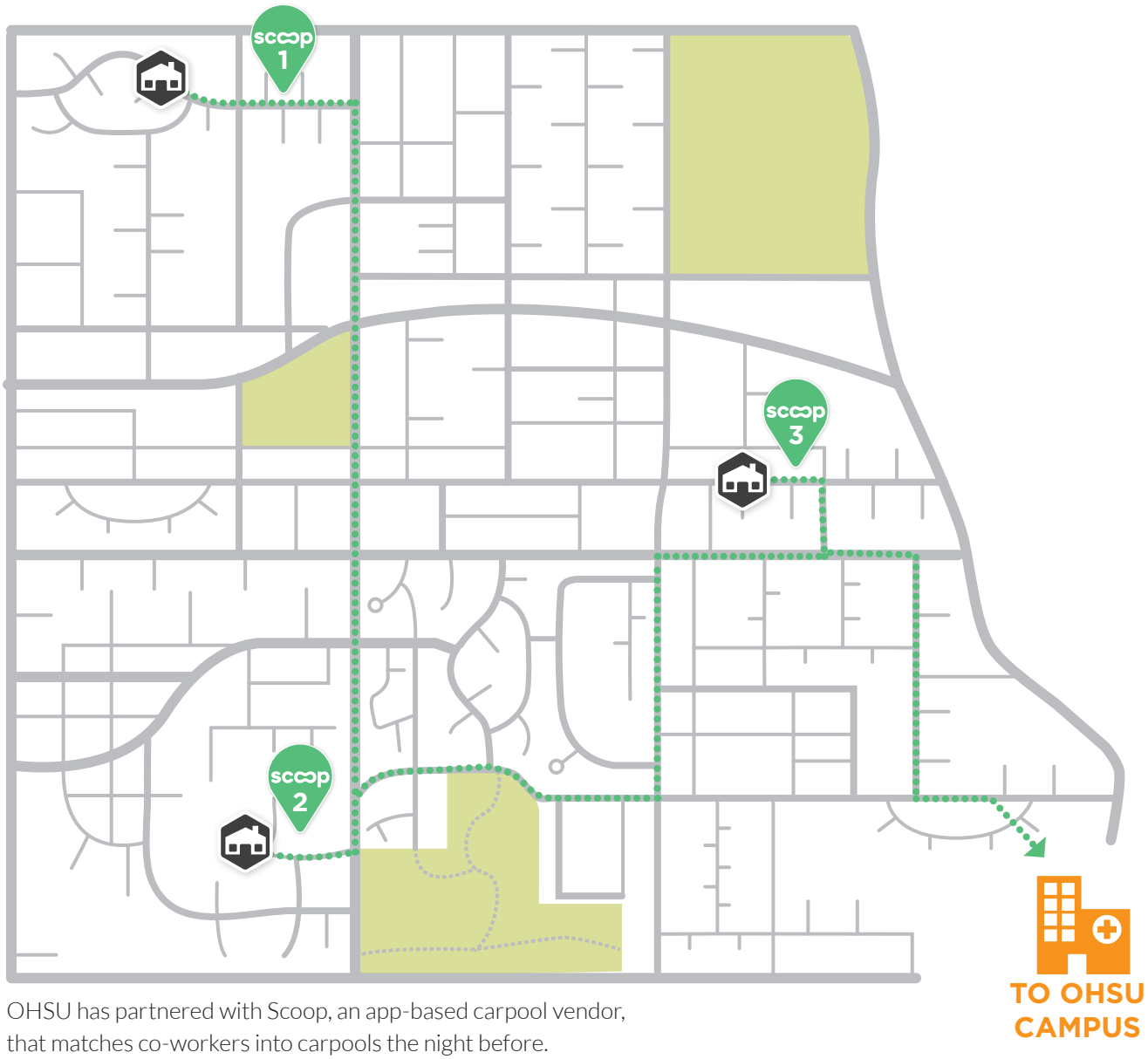
Almost 700 Marquam Hill and South Waterfront employees are registered on OHSU's site for Drive Less Connect, but there are only 61 active members.

### Stakeholder Input

Over 30% of employees said that having a tool that facilitates carpool matching with other OHSU employees would encourage them to consider carpooling to work.

"I wish there were more carpool options specific to OHSU. I tried the regional carpool option but no one lives close to me."

# SCOOP




OHSU has partnered with Scoop, an app-based carpool vendor, that matches co-workers into carpools the night before.

## SM.3 – Enhanced Car Share Program

Subsidize car share trips and increase the number of car share services and vehicles on campus to allow non-driving employees the flexibility to better manage midday or unplanned trips.

### Scoring Summary

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| ●●●●○ | EMPLOYER OF CHOICE |
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| ●●●●○ | IMPACT |

### Description

Car sharing services offer a convenient, low-cost option that pairs well with transit, biking, walking, and carpooling to reduce the need to drive alone. Both the one-way flexibility of Car2Go and ReachNow, and the predictable round-trip availability of Zipcar, provide employees with the ability to make quick, unplanned trips for occasional personal errands or emergencies. Car sharing can also reduce parking demand by allowing employees to use vehicles for work trips.

### Next Steps

Key elements include:

- Promote Zipcar to all OHSU departments and encourage them to create departmental accounts. Consider creating a single OHSU account with Zipcar that provides access to all OHSU employees.
- Enhance marketing of car share options to employees. Work with departments to encourage more employee utilization of car sharing for midday work trips instead of personal vehicle use.
- Expand the number of Zipcar pods and vehicles available on campus. Work with Car2Go and ReachNow to expand their service areas so that employees can use these services to get to, from, and between most OHSU locations.

### Cost Estimate

$25,000 - $75,000 per year in employee car share subsidies.

### Quick Fact

One Zipcar vehicle is located on Marquam Hill at the Gaines Street Lot and four are located on the South Waterfront.

Zipcar provides OHSU employees a 50% discount on Zipcar membership costs and 10-30% off weekday hourly and daily rates.

### Stakeholder Input

"I ride the bus, and I wish I had more alternatives for emergencies and mid-day errands."

## P.1 – Permits and Daily Pricing

Transition away from annual parking permits to daily parking at all employee facilities, allowing employees to pay for parking only on the days they drive.

(High-Impact + High-Priority)

### Scoring Summary

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| ●●○○○ | PATIENT-FIRST |
| ●●●●○ | EMPLOYER OF CHOICE |
| ●●●●● | MULTIMODAL |
| ●●●○○ | SAFE & HEALTHY |
| ●●●●● | INNOVATION/ADMIN |
| ●●●●● | COST EFFECTIVENESS |
| ●●●●● | IMPACT |

### Description

OHSU manages its employee parking through a mix of annual permits and daily parking charges. The permit system and pricing is largely based on location, with higher cost permits close to the campus core. The existing permit system has developed over years, and while it has helped manage parking, it has several key drawbacks.

- Annual permits are a sunk cost for employees. Once an employee has spent $50 – 100 per pay period for their permit, the incentive exists to drive every day to get their money's worth.
- Annual permits offer a significant discount over the "market" rate for parking. For example, the prorated daily cost for a 2D permit on Marquam Hill is about $6 versus the cost of the $14 daily rate. This "subsidy" further incentivizes driving.
- Given the length of the waitlist, employees do not want to give up their permit, even if they no longer need it, for fear of not being able to park again.
- Employees who may telecommute and drive to OHSU only one or two days a week have limited parking options.
- The permit system has a high administrative burden for OHSU staff, requiring significant operational resources.
- Employees continually express frustration and resentment with the existing system.

To improve parking management and reduce employee parking demand, OHSU should transition from its current permit system to one that allows people to pay for parking by the day. Under a daily fee system, the employee makes a conscious decision about whether it is worth paying the daily parking fee or whether a non-SOV alternative might be a better option. Switching to daily parking fees allows employees to save money when they do not drive and take advantage of the other financial incentives and rewards.

### Next Steps

A transition to all daily parking for employees would represent a significant change for OHSU. To ensure successful implementation of daily pricing, the following key steps should be considered:

- Create a multi-tier daily designation.
  - » "Permitted daily" parking would assign employees to certain facilities. Employees would get an assigned facility to reduce cruising, but they would pay a higher price for the convenience of having a "reserved lot" and not having to go online to purchase a permit each night.
  - » "Advanced open daily" parking would allow non-permitted employees to park in certain facilities for a day. Employees would be required to reserve a space in advance through Parkmobile.
  - » "Pay on-site open daily" parking would allow non-permitted employees to park in certain facilities for a day. Upon arrival to OHSU, employees would be required to pay for parking at a pay station.
- Establish a target occupancy rate. Set a target occupancy rate for lots and garages, typically 90-95%.
- Establish payment and monitoring systems. Use parking data feeds to collect occupancy data. Ensure that Luum and access control systems are in place to facilitate data collection, rate adjustments, convenient payment, proper enforcement, and distribution of program information on multiple platforms.
- Set and adjust the daily price to meet the target occupancy rate. Vary price by location so that the most convenient spaces cost more. Vary price by time of entry so that if an employee arrives at off-peak hours, they will pay less. Adjust parking prices on an annual basis at minimum to reflect parking trends, new development, changes in inventory, or upcoming events.
- Make it easy to not park by improving non-SOV modes. Invest in improvements to transit, biking, walking, rideshare, and carpooling as outlined in this Plan first. Make sure the system can absorb a large shift in demand. Implement Luum and test the daily incentive first (Strategy PC.2).
- Test with a pilot. Start small and test the approach and pricing levels with a specific facility and set of employees. Potential candidates are the KCRB and Rood Family Pavilion parking garages set to open in 2018 and 2019.
- Communicate. Develop a communications and marketing plan to educate OHSU employees about the program prior to full rollout.
- Evaluate a shift to more "advanced open daily" facilities over time to maximize flexibility within the system.

### Cost Estimate

None at this time, as incremental costs are assumed as part of existing/ future staff time and other strategies.

### Quick Fact

OHSU currently operates about 6,900 parking spaces at its Marquam Hill and South Waterfront campus. About 73% of those spaces are for employees.

There are approximately 18,600 entries on the annual permit waitlist, representing roughly 4,900 unique employees.

On average, OHSU sells about 1,200 daily permits each day.

### Stakeholder Input

"I have to park a half mile away at an OHSU lot and still pay the same cost as someone who parks just feet away from the building."

"Probably my number one desire would be the option to only pay for parking on days I use it and not have to pay for the days I bike."

"It would be great if I could offer up my parking pass for the days I am not on campus to recoup some of the cost I pay for my annual pass."

**Best Practice**

Seattle Children's Hospital made a commitment to support a multimodal commute program through its 2008 Comprehensive Transportation Plan. Changes to parking policy played a huge role in this effort.

A first step was adopting a strict institutional policy that required that all employees pay to park, regardless of position or status. Second, the hospital discontinued monthly parking passes for employees, recognizing that those permits encourage people to drive. Instead, employees now pay for parking only for the days they drive, with daily rates varying from $2 to $15 a day depending on location, arrival time, and duration of stay. Rates are highest for those who arrive during peak commute hours.

Another key decision was to make it as easy, convenient, and financially beneficial to walk, bike, carpool, or take transit. Employees who commute by train, bus, carpool, vanpool, bicycle, or walk are paid $4.50 per day. This incentive is automatically deposited into employee paychecks through the Luum commute platform.

Between 1995 and 2010, Seattle Children's decreased its employee drive alone rate from 73% to 38%.

**"You pay by the day. That monthly pass is really a 30-day investment. It sends a signal to somebody to optimize that investment by getting as much parking as possible by driving."**

**— Jamie Cheney**
DIRECTOR OF TRANSPORTATION SYSTEMS
SEATTLE CHILDREN'S HOSPITAL

## P.2 – Employee Parking Operations

Revise key employee parking policies to improve and support parking management.

### Scoring Summary

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|---|---|
| ●●○○○ | PATIENT-FIRST |
| ●●●○○ | EMPLOYER OF CHOICE |
| ●●○○○ | MULTIMODAL |
| ●●●○○ | SAFE & HEALTHY |
| ●●●●○ | INNOVATION/ADMIN |
| ●●●●● | COST EFFECTIVENESS |
| ●●●●○ | IMPACT |

### Description

Revise key employee parking policies to improve and support dynamic parking management.

### Next Steps

- As a condition of employment, require employees to register all potential license plate numbers to support the management and enforcement of the parking system.
- Revise departmental parking policies to be strictly for employees that need parking as an essential part of their job. Strictly limit the number of departmental and priority permits that can be purchased per department and per year. Increase the cost of priority permits to manage demand.
- Limit the number of times an employee can move their vehicle between parking facilities during the day. Charge an additional parking fee to employees who exceed this limit.
- Enhance and expand the special/ADA parking program within employee parking facilities. Develop system to maximize utilization of special/ADA parking stalls.

### Cost Estimate

No incremental cost, as costs are included in existing and future staff time/parking operations budget.

### Quick Fact

There are about 160 ADA parking spaces on the OHSU campus. Employees can purchase ADA permits at a discounted rate.

### Stakeholder Input

“Better handicapped parking enforcement. You can’t imagine the stress of finding a spot.”

## P.3 – Patient Parking Experience

Continue to invest in a high-quality and convenient parking experience for patients and their visitors. Prioritize consistent availability and a seamless experience linked to appointment scheduling.

### Scoring Summary

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| ●●●●● | PATIENT-FIRST |
| ●●●○○ | EMPLOYER OF CHOICE |
| ●●○○○ | MULTIMODAL |
| ●●●○○ | SAFE & HEALTHY |
| ●●●●● | INNOVATION/ADMIN |
| ●●●●○ | COST EFFECTIVENESS |
| ●●○○○ | IMPACT |

### Description

Continue to invest in a high-quality and convenient parking experience for patients and their visitors. Prioritize consistent availability and a seamless experience linked to appointment scheduling.

### Next Steps

- Improve the patient parking experience by providing facility options and step-by-step information/guidance upon confirmation of appointment.
- Transition away from validation at all facilities.
- Allocate additional RV parking spaces in key facilities. Continue to restrict RV parking to patient families and their visitors.
- Ensure that wayfinding and parking information improvements are promoted to patients via smartphone apps and regional trip planners.
- Enhance wayfinding with simplified naming conventions and clear signage at key locations.
- In support of the employee and patient Lyft program (Strategy SM.1), enhance patient pick-up and drop-off areas to accommodate more patients using ride hailing services and non-emergency medical transportation. This includes:
  - » Designate pick-up zones for both employees and patients that are clearly marked.
  - » Ensure pick-up zones are located along curb-side areas with ample space for a vehicle to get out of the general-purpose traffic lane with no bike lane conflict points. Future facility planning should include a loading area for 2-3 vehicles.
  - » Clearly mark ride hailing pick-up zones with OHSU branded signage and bollards.

### Cost Estimate

$25,000 in technology upgrades to support parking integration with patient scheduling.

Approximately $5,000 per conversion of every 20 parking spaces to RV spaces.

### Quick Fact

There are a total of 12 RV parking spaces available at the Marquam Hill and South Waterfront campuses. RVs may arrive up to 48 hours before treatment begins and must vacate within 48 hours of when active treatment ends. Patients are regularly turned away from RV parking areas due to capacity limitations. The next closest RV parking areas are in Wilsonville or Jantzen Beach.

## P.4 – Valet Parking Service

Expand and enhance valet parking services for employees, patients, and visitors.

### Scoring Summary

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| ●●●○○ | PATIENT-FIRST |
| ●●●○○ | EMPLOYER OF CHOICE |
| ●●●●○ | MULTIMODAL |
| ●●●●● | SAFE & HEALTHY |
| ●●●○○ | INNOVATION/ADMIN |
| ●●●●○ | COST EFFECTIVENESS |
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### Description

OHSU provides a robust set of valet parking services. Patients can utilize valet parking at a number of valet stands throughout campus, such as Doernbecher Children's Hospital. Valet services are also utilized for employee parking in certain facilities, such as the Schnitzer lot on the South Waterfront.

Valet parking provides a convenient amenity for patients, facilitating front-door access at popular locations. Valet parking also boosts parking capacity, as vehicles can be double- or triple-parked when busy.

### Next Steps

To better capture the benefits of valet parking, OHSU should:

- Rollout a marketing program for OHSU's universal valet services, which allow users to drop-off and pick-up at any location (within Marquam Hill or South Waterfront exclusively). Utilize print and multimedia collateral at all patient clinics.
- Expand electronic valet to all patient locations so that users can text or call to retrieve their car prior to departure.
- Install vehicle-tracking monitors at each patient valet location so patients can track their vehicle retrieval status.
- Provide 24/7 staffing of OHSU valet operations so late-night healthcare staff no longer have to manage patient keys.
- Offer patient transport options from more remote valet stands to clinical front doors.
- Expand staffing at parking lots with both medical transportation and valet parking to ensure that these two functions do not impact one another.

### Cost Estimate

$75,000 for expansion of electronic valet and tracking monitors.

$150,000 for 24/7 staffing in order maintain control of patient vehicle keys.

### Quick Fact

There are about 160 ADA parking spaces on the OHSU campus. Employees can purchase ADA permits at a discounted rate.

## P.5 – Parking Safety and Security

Improve safety and security at parking facilities, especially more remote parking facilities.

### Scoring Summary

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| ●●●●○ | PATIENT-FIRST |
| ●●●●○ | EMPLOYER OF CHOICE |
| ●●○○○ | MULTIMODAL |
| ●●●●● | SAFE & HEALTHY |
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| ●●●○○ | COST EFFECTIVENESS |
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### Description

Employee focus groups and the employee travel survey indicated that safety and security was a concern in some of the parking facilities. More remote locations, such as the Riverplace lot, were identified as particularly in need of safety improvements.

### Next Steps

Key improvements could include lighting upgrades, emergency call boxes or alert systems, increased security patrols, and a safety escort program. Another potential strategy is a mobile safety app allowing users to notify police of incidents and request a security escort.

### Cost Estimate

$25,000 per year in ongoing safety improvements.

## P.6 – Carpool Parking Program

Support and incentivize carpooling by offering free or more deeply discounted carpool parking. Designate carpool-only spaces at key facilities.

### Scoring Summary

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| ●●●●○ | PATIENT-FIRST |
| ●●●●○ | EMPLOYER OF CHOICE |
| ●●○○○ | MULTIMODAL |
| ●●●●● | SAFE & HEALTHY |
| ●●●○○ | INNOVATION/ADMIN |
| ●●●○○ | COST EFFECTIVENESS |
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Designated spaces in convenient locations could further incentivize carpooling. Spaces could be restricted only during certain times to maximize their utilization.

### Description

OHSU currently offers split parking rates for employees who carpool. Cost varies by the permit type and the size of the carpool. A limited number of parking spaces on campus are designated specifically for carpools.

Strategy SM.2 proposes a significant investment in an internal and on-demand carpool matching service for OHSU employees.

### Next Steps

To support this investment, further incentivize carpooling, and meet demand for increased carpool activity, OHSU should:

- Evaluate free parking for all carpools.
- If carpool parking remains priced, simplify by providing one discounted carpool rate for two-person carpools. Facilitate automatic rate splitting between carpools of two people via the Luum commute platform. Parking for carpools of three or more will be able to park for free.
- Explore additional designation of convenient carpool-only spaces at key facilities. Restrict such spaces for carpools only during designated times, allowing general access if spaces go unused.

### Cost Estimate

No incremental cost, as costs are included in existing and future staff time/parking operations budget.

### Quick Fact

As of March 2017, there are 181 annual carpool users that share 85 carpool permits.

OHSU has only eight designated carpool spaces on campus, three in Lot 10 and five in Garage D.

## P.7 – Expand Parking Supply

Strategically invest in new and/or replacement parking facilities to support short- and long-term growth. Explore additional opportunities for remote parking.

### Scoring Summary

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| ●●●●● | PATIENT-FIRST |
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| ●●●○○ | SAFE & HEALTHY |
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| ●●○○○ | COST EFFECTIVENESS |
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### Description

Additional parking supply is part of the solution at OHSU. Given its anticipated growth and current parking crunch, new supply is needed to ensure that OHSU remains accessible for employees, patients, and visitors. Parking also generates revenue for the campus to support all of its mobility programs.

New parking, however, comes with significant trade-offs. Parking is extremely expensive to build, operate, and maintain. Use of resources on parking limits OHSU's ability to invest in and support its core mission areas. Parking also ultimately facilitates more vehicle trips to and from campus, which increases OHSU's congestion challenges.

Therefore, OHSU must carefully evaluate the trade-offs and make strategic investments in new parking. Finding the "right" amount of parking is a delicate balancing act. OHSU will need to make ongoing adjustments as it plans its campus, monitors its population growth, assesses the impacts of its TDM investments, and responds to regional investments and macro-level mobility trends.

### Next Steps

OHSU should consider stacked parking and building parking with higher ceiling heights to accommodate potential future retrofits. In the event that the amount of parking needs to be reduced, stacked parking and high ceilings will allow for parking garages to be converted into another use. Stacked parking will also reduce the cost per stall and result in a more efficient use of space. It has already proven to be successful on the South Waterfront in the Mirabella building.

As discussed in Chapter 6, this TDM Plan recommends a "moderate" investment in new parking, coupled with trip reduction strategies. Under the Recommended Scenario, the Plan estimates 945 spaces of net new parking between 2018 and 2027. These include the already planned or under construction facilities and two potential additional facilities.

- Knight Cancer Research Building Garage.
- Rood Family Pavilion Garage.
- DOT Marquam Lot.
- Garage C Replacement and lot 10 Garage.
- Hospital Tower Garage.

To the greatest extent feasible, OHSU should continue to identify and enter into leasing arrangements with privately owned parking facilities near campus and/or near major transit stops/corridors. Leasing arrangements provide an immediate and cost-effective way to increase supply. Depending on the extent of such arrangements, OHSU may need to evaluate a park-and-ride shuttle to support employee access.

### Cost Estimate

Based on the Recommended Scenario, an average of about $5.7 million per year in construction, debt service, operations, and maintenance for new parking between 2018-2027.

## P.8 – Facility Access Control and Enforcement

Continue to upgrade access control at all parking facilities to support enforcement and parking management.

### Scoring Summary

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| ●●●●○ | EMPLOYER OF CHOICE |
| ●●○○○ | MULTIMODAL |
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OHSU currently uses LPR in a limited number of facilities, such as Physician's Pavilion. Expansion of LPR would facilitate enforcement and employee parking management.

### Description

OHSU currently controls access to parking facilities through a combination of license plate recognition (LPR) cameras, gates, and parking enforcement. Access control is essential in managing the system, as it ensures that the right users are in the facility. Access control can also streamline enforcement and generate vital parking data.

### Next Steps

To further improve access control and enforcement, OHSU should:

- Install LPR technology at every parking facility.
- If needed, utilize gates with automatic vehicle identification (AVI), or other similar technology, to supplement access control.
- Ensure all new investments in access control are compatible with the Luum commute platform.
- Establish and track key metrics related to common citations and parking officer performance to target key behaviors and system performance.
- Create automated process for employees to notify the Transportation & Parking department for each "Do Not Ticket" trip.

### Cost Estimate

Approximately $70,000 per year over a 10-year period to install LPR in all remaining facilities.

No incremental cost for enforcement, as costs are included in existing and future staff time/parking operations budget.

### Quick Fact

OHSU has four to five active parking patrol staff. Up to five staff patrol at one time between the hours of 8 a.m. to 5 p.m.

From April 2016 to April 2017, OHSU distributed 4,586 warnings and 2,963 tickets. The most common violations were for lack of a valid permit (3,068) and non-patients parking in patient spaces (2,450).

## P.9 – Data Collection/Reporting

Enhance parking data collection and reporting to facilitate management and transparency of the system.

## Scoring Summary

This strategy was not "scored" as it focuses on baseline policy and operational improvements.

### Description

OHSU has adopted other technology to support its parking program, such as the "Parker" mobile app. Parker allows drivers to see the availability of parking spaces by facility. Two SP+ staff drive through each facility and conduct utilization counts to update facility information. Staff conduct these counts each weekday throughout the day, prioritizing lots that receive higher daily permit sales. The current counts capture the "daily peak" — once a lot is full, staff does not return to the lot to count the number of available spaces.

### Next Steps

While valuable, the existing parking data is limited. Enhanced data is crucial to OHSU implementing more advanced and dynamic management of its system, such as daily pricing with varied rates. Specific improvements include:

- Expand occupancy counts beyond just "daily peak" to capture parking demand variations throughout the day.
- Implement a consistent methodology for collecting and reporting occupancy data. Automate occupancy data through integration with the Luum commute platform, providing staff with a real-time data feed of occupancy.
- Link occupancy data to real-time information tools. Better promote existing (Parker) and future real-time data feeds to all affiliates.

### Cost Estimate

No incremental cost, as costs are included in existing and future staff time/parking operations budget, as well as Luum cost estimates.

## PC.1 – Mobility Communications

Create a unified and comprehensive communications program that provides information on mobility policies, programs, and services to employees, students, patients, visitors, leadership, and the community at large.

### Scoring Summary

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| ●●●○○ | PATIENT-FIRST |
| ●●●●● | EMPLOYER OF CHOICE |
| ●●●○○ | MULTIMODAL |
| ●●●○○ | SAFE & HEALTHY |
| ●●●●○ | INNOVATION/ADMIN |
| ●●●●● | COST EFFECTIVENESS |
| ●●●●○ | IMPACT |

### Description

An effective communications program should not only describe the basic "how to" information, but also help articulate the rationale and benefits of OHSU's mobility program.

### Next Steps

Key elements would include:

- **Branding**: Re-brand the "Transportation & Parking" department to better message and reinforce a multimodal culture. Ensure department brand reflects adopted goals and objectives.
- **Marketing**: Integrate brand into a marketing plan and collateral that promotes benefit and value of non-SOV modes. Publicize and celebrate program achievements in an annual report and monthly newsletter. Widely publicize the annual ECO survey results to all OHSU affiliates. Develop employee commuter "profiles" that describe different types of commuters and communicate key messages/information by mode.
- **On-boarding**: Enhance employee on-boarding processes to respond to projected increases in new staffing. Utilize Luum platform to streamline administrative processes and facilitate a virtual on-boarding as part of the hiring process.
- **Trip Planning**: Conduct targeted outreach and trip planning to encourage the use of non-SOV modes. Target employees and students that drive, but have access to other modes. Further evaluate integration of regional trip planning systems into Luum commute platform (Strategy PC.4).
- **Outreach**: Organize bi-annual transportation fairs and mobile workshops to answer questions, distribute maps/FAQs/information, connect users with resources, and strengthen messaging around non-SOV commute options. Conduct recurring and required educational presentations/trainings to OHSU management and employees to communicate the benefits of non-SOV commuting.
- **Alerts**: Set up an electronic notification system via Luum commute platform to inform OHSU affiliates of key incidents/events. Give employees greater access to regional traffic systems so they can better plan their routes and avoid incidents.

### Cost Estimate

$25,000 per year for ongoing marketing and outreach. Additional operational costs are included in existing and future staff.

### Stakeholder Input

"I would appreciate traffic alerts when there are numerous events on weekends that affect getting to Marquam Hill."

"Provide more options for commuting in bad weather or when the tram goes down, including dedicated walking or biking maps from the east side."

## PC.2 – Daily Financial Incentives

Develop and implement a daily financial incentive program to reduce SOV mode share and promote biking and walking to campus.

**(High-Impact + High-Priority)**

### Scoring Summary

| | |
|---|---|
| ●●●○○ | PATIENT-FIRST |
| ●●●●● | EMPLOYER OF CHOICE |
| ●●●○○ | MULTIMODAL |
| ●●●○○ | SAFE & HEALTHY |
| ●●●●○ | INNOVATION/ADMIN |
| ●●●●● | COST EFFECTIVENESS |
| ●●●●○ | IMPACT |

### Description

One of the best ways to change commute patterns is to reward employees for desired behavior. Such programs often take the form of gift cards or prizes based on meeting certain thresholds. While this approach is valuable and recommended for OHSU (see Strategies PC.4, PN.3, and B.4), a direct financial payment is often more effective.

### Next Steps

Key elements would include:

The TDM Plan recommends that OHSU evaluate and implement a daily financial incentive program. This program would complement daily parking pricing (Strategy P.1) and employee commute platform (Strategy PC.4), offering a strong "carrot" to incentivize non-SOV travel. Key elements include:

- The initial phases of the daily incentive program should focus on biking and walking trips only – every employee who commutes to OHSU by bike or walking would receive a direct financial credit per day.
- Activity would be tracked via the Luum platform and the Commute Calendar. Daily payments would be deposited into an employee's "account" via the Luum platform. Employees could use the incentive as desired — pay for parking when needed, cover transit pass costs, or simply keep the money.
- Transit riders, telecommuters, carpoolers, and rideshare riders already receive, or would be eligible to receive, significant incentives and/or subsidies from OHSU as part of this Plan. Therefore, to ensure equality and financial sustainability of the TDM program, bicyclist and pedestrian commuters would be the initial focus of the program. Depending on its effectiveness, popularity, and financial impact, the program could be expanded to other modes in future phases.
- The amount of the daily payment is still to be determined, yet will likely fall within $1.50-$3 per day.
- A potential issue is employees trying to "cheat" the system and get the incentive even when they do not walk or bike. This problem can be significantly minimized via Luum, which will be able to track and record parking events, rideshare and carpool trips, transit activity, and telecommuting. Those commutes would supersede a walk/bike trip and make the employee ineligible for the reward that day. Installing LPR technology in every garage would also help minimize this problem. This would require all drivers to register their license plate prior to obtaining the rights to park at OHSU.
- To minimize the administrative burden for OHSU, it is strongly recommended that all daily payments be consider "post-tax". While not ideal for employees, this approach would reduce significant administrative and operational challenges for OHSU.

In anticipation of the June 2018 tram shutdown, OHSU is working with Luum to rollout a modified version of the daily incentive program to incentivize biking and walking trip to and from campus. The five-week shutdown will provide a pilot program and test case for full rollout of the strategy in 2018 and 2019.

### Cost Estimate

2018: $800,000 in 2018.

2019-2027 annual average: $2.1-3.2 million per year, depending on incentive level and mode shifts to biking and walking. Based on OHSU's estimated employee growth.

### Stakeholder Input

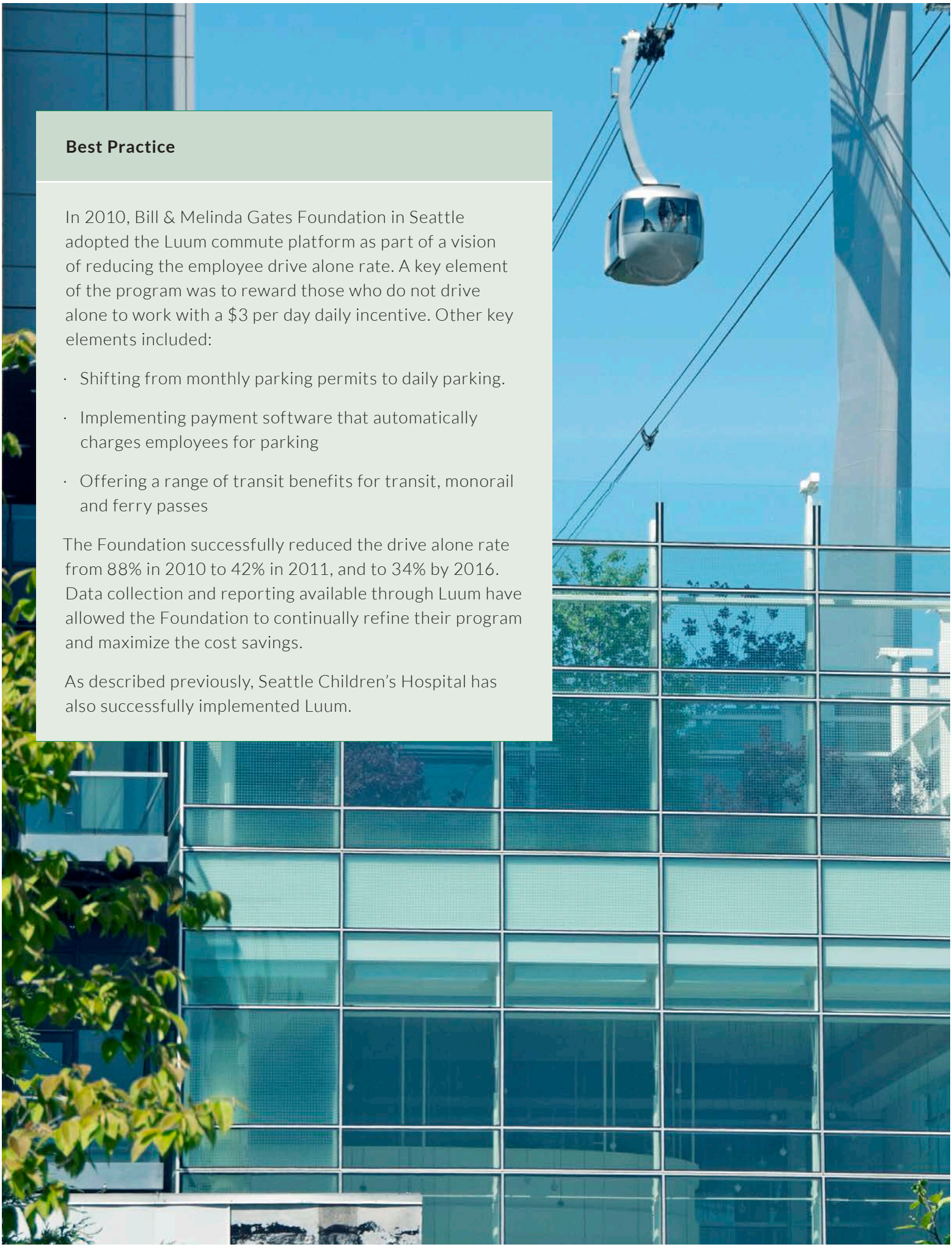
"I would be most motivated by higher financial incentives to bike to work."

"In good weather I often walk from OHSU, and would enjoy incentives to encourage me to do it more often."

"A direct financial payment needs to actually be a sufficient amount to make it worth our while."

"Provide more options for commuting in bad weather or when the tram goes down, including dedicated walking or biking maps from the east side."

| | DIRECT INCENTIVE | SUBSIDY |
|---|---|---|
| MODE | ALLOCATION PER TRIP | |
| Parking | N/A | $2.50 – 12.50 |
| Transit | N/A | $2.30 – 2.64 |
| Rideshare - Lyft Transit Connector | up to $10 | N/A |
| Rideshare - Lyft Off-peak | up to $15 | N/A |
| Carpool | $6 – 7 | $3.75 |
| Bike | $1.50 – 3 | $1 (up to $20) |
| Walk | $1.50 – 3 | N/A |
| Telecommute | N/A | N/A |



**Best Practice**

In 2010, Bill & Melinda Gates Foundation in Seattle adopted the Luum commute platform as part of a vision of reducing the employee drive alone rate. A key element of the program was to reward those who do not drive alone to work with a $3 per day daily incentive. Other key elements included:

- Shifting from monthly parking permits to daily parking.
- Implementing payment software that automatically charges employees for parking
- Offering a range of transit benefits for transit, monorail and ferry passes

The Foundation successfully reduced the drive alone rate from 88% in 2010 to 42% in 2011, and to 34% by 2016. Data collection and reporting available through Luum have allowed the Foundation to continually refine their program and maximize the cost savings.

As described previously, Seattle Children's Hospital has also successfully implemented Luum.

## PC.3 – Commute Challenges

Host commuter challenges via the Luum commute platform to encourage the use of non-SOV modes and promote friendly competition within and between departments.

### Scoring Summary

| | |
|---|---|
| ●○○○○ | PATIENT-FIRST |
| ●●●●○ | EMPLOYER OF CHOICE |
| ●●●○○ | MULTIMODAL |
| ●●●○○ | SAFE & HEALTHY |
| ●●●●○ | INNOVATION/ADMIN |
| ●●●●● | COST EFFECTIVENESS |
| ●●●○○ | IMPACT |

### Description

Commute challenges can encourage people to try a new mode or use their existing mode even more.

### Next Steps

Via Luum (Strategy PC.4), participants can sign up as an individual or in teams with their department/office and compete against others for "badges." Luum streamlines and automates the challenges, eliminating the administrative burden for staff.

Each challenge and badge could be specific to one mode, such as the Bike Commute Challenge, or could include multiple modes, such as an "active commute" challenge that includes walking or biking.

To encourage participants, challenge winners could also receive a reward or gift certificate. OHSU should also host an annual commuter "champions" luncheon to recognize challenge winners and promote the mobility culture at OHSU.

Consistently reporting the results will allow participants to continue to make progress towards their goals and reinforce messaging around non-SOV commutes.

### Cost Estimate

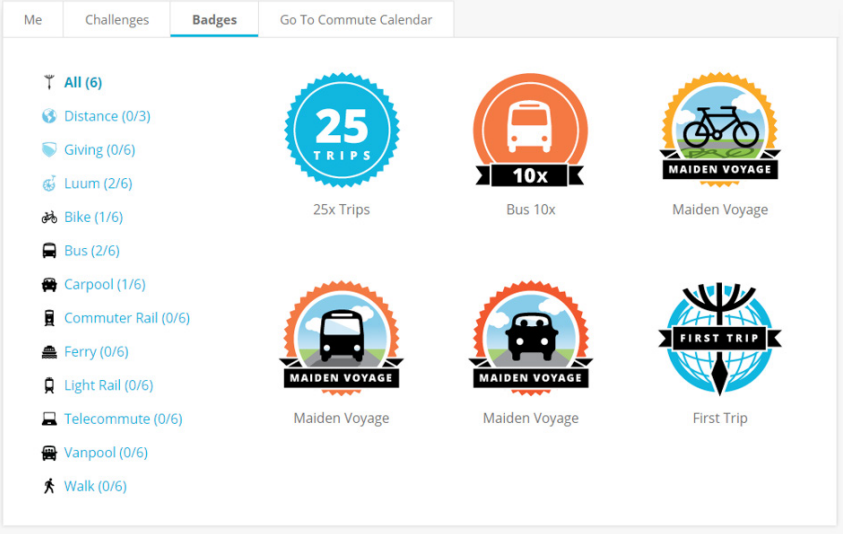
$10,000 per year for materials and events.

### Quick Fact

OHSU has demonstrated high participation in the regional Bike More Challenge, winning two years in a row (500+ employee category).

### Stakeholder Input

"OHSU should implement some type of commute challenge that is tied to fundraising with matched donations or other related prizes for all those who participate."




Luum facilitates and tracks virtual commute challenges, allowing employees to set goals, compete with coworkers, and win rewards.

## PC.4 – Employee Commute Platform

Unify all mobility related information and services in a mobile commute platform, including a dashboard with modal information, commuter trip stats, and payment/incentive integration with OHSU HR and Payroll departments. Integrate real-time data feeds and other 3rd-party mobility apps into the platform.

(High-Impact + High-Priority)

### Scoring Summary

| | |
|---|---|
| ●●○○○ | PATIENT-FIRST |
| ●●●●● | EMPLOYER OF CHOICE |
| ●●●●● | MULTIMODAL |
| ●●●○○ | SAFE & HEALTHY |
| ●●●●● | INNOVATION/ADMIN |
| ●●●●● | COST EFFECTIVENESS |
| ●●●●● | IMPACT |

### Description

OHSU currently provides a wide variety of commute services and information to its employees. However, these services and programs, and their administration, are distributed across many departments and internal websites/platforms.

This high impact strategy influences some of the other high impact strategies, therefore, OHSU started implementation work ahead of the plan being finalized. OHSU is currently working with Luum to create a mobile commute platform for all OHSU employees, students, contractors, vendors and volunteers (CVVs). Luum's platform creates an integrated solution for both users and administrators. Luum is available as a web-based tool and app for all smart phones.

Luum will allow OHSU to recognize significant administrative efficiencies, transform and streamline the employee commute experience, and set the stage for many of the strategies proposed in this Plan. In fact, Luum's platform is fundamental to implementing most of the parking, shared mobility, bicycle, pedestrian, programs and communications strategies.

### Next Steps

As of late 2017, the Luum platform is being developed and calibrated for OHSU. OHSU estimates a Phase I "soft" launch of Luum in May 2018 to facilitate improved mobility during the June/July 2018 Tram shutdown. A Phase II would start in August 2018 with the installment of the Tram gates and implementation of Hop pass (dependent on TriMet). In November 2018, Phase III will include a daily parking pilot program (dependent on Knight Cancer Research Building opening). Key features will include:

- **Commute Calendar**, allowing employees to log and track their trips. At full launch, certain types of trips can be automatically logged. Automatic trip logging is dependent on integration with third-party apps and regional partners (i.e. Scoop and TriMet Hop Fastpass).
- **Payroll/HR Integration**, allowing OHSU staff to streamline administration of transit passes, parking payments, and incentives. Integration of these system will provide an efficient TDM program management system.
- **Incentives, Gamification, and Rewards**, allowing OHSU to:
  - » Provide a direct financial incentive to employees for certain behaviors; and
  - » Create games, badges, and rewards based on mode and trip activity.
  - » Badges and rewards can be calibrated based on any number of factors (mode, distance, number of trips, share of trips, etc.) or periods (by week, month, or year). This feature directly supports Strategies PC.2, PC.3, PN.3, and B.4.
- **Parking Pricing**, allowing OHSU to integrate payment of parking by employees directly into the platform. The Luum platform is crucial

"Luum gave us the tools to make the right commute choices simpler and more convenient for our employees. Cultural change is notoriously difficult and slow moving, but in just a few months Luum has help us completely transform our commute culture."

— Becky Masters
**DIRECTOR OF COMPENSATION, BENEFITS, AND HR TECHNOLOGY DELTA DENTAL OF WASHINGTON**

During the development of the TDM Plan, Luum was selected as the preferred vendor for the commute platform. A review of the existing vendors was conducted. Vendors were assessed for their strengths and weaknesses, and ability to launch by spring of 2018.

After several months of negotiation, OHSU entered into a contract with Luum to build the platform. OHSU staff have been working closely with Luum to create a workplan for 2018 and beyond.

to transitioning employees to daily parking pricing, as described in Strategy P.1.

- **Carpool Matching**, allowing employees to connect with others to share a ride. Luum's ridematching feature will be evaluated and implemented to ensure efficiencies with a potential third-party carpool matching service, such as Scoop (Strategy SM.2).
- **3rd Party App Integration**, allowing OHSU to bring all mobility solutions into one place for employees. For example, employees will be able to access Lyft credits for emergency ride home via Luum (Strategy SM.1). Numerous others apps can be integrated, such as Scoop, Strava, and Map My Ride.
- **Transit Information**, including real-time tracking of OHSU shuttles and arrival times, as well as status of their TriMet and C-TRAN transit passes.
- **Shuttle/Transit Activity Tracking**, via OHSU badge swipes on OHSU shuttles. Integration with TriMet and the Hop Fastpass is also being evaluated.
- **Trip Alerts and Information**, allowing OHSU to communicate key events, incidents, and information to employees.
- **Data Feeds**, providing OHSU staff with a robust and comprehensive stream of data for all modes. For example, Luum can provide up-to-date occupancy data for parking facilities based on integration with parking payment and access control systems.

### Cost Estimate

2018: $294,000, based on a May 2018 launch.

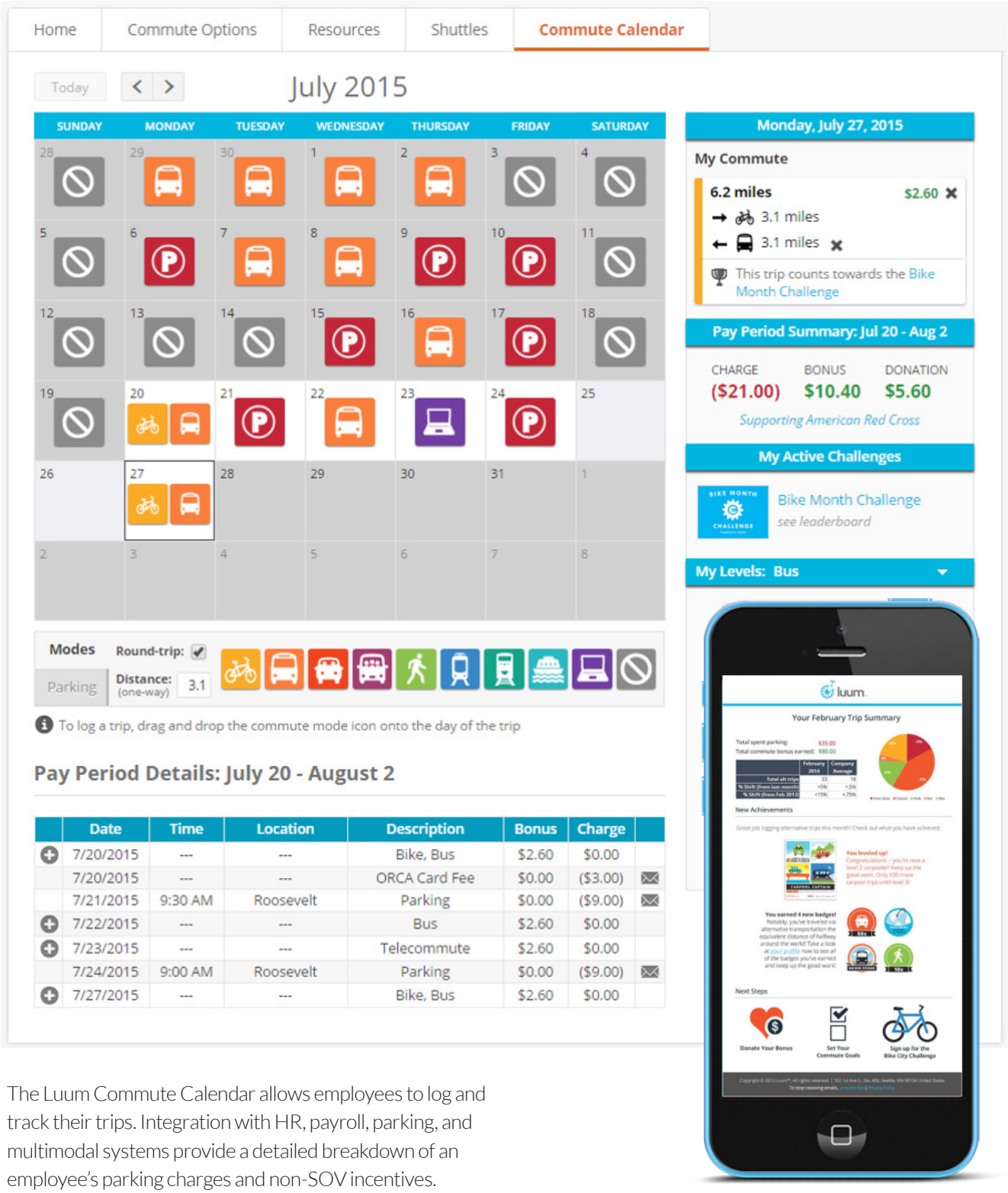
2019-2027 annual average: $560,000, assuming OHSU's projected employee growth.

### Stakeholder Input

"Because each day is different, there should be plenty of information for all varieties of commuting to help people plan accordingly."

"Allow me to retroactively mark what days I biked in for the ride tracker for the payout. At present, I have to track which days I forgot to log my ride, and use those on days when I don't bike. I know others have to do this as well."

"I want to be able to track shuttles to/from the OHSU parking lot, so I know when the next one will be there."




The Luum Commute Calendar allows employees to log and track their trips. Integration with HR, payroll, parking, and multimodal systems provide a detailed breakdown of an employee's parking charges and non-SOV incentives.

## PC.5 – Wayfinding Improvements

Improve wayfinding for users of all modes to improve navigation to, from, and within campus. Prioritize the wayfinding recommendations included in the OHSU Night Access Plan.

### Scoring Summary

| | |
|---|---|
| ●●●●○ | PATIENT-FIRST |
| ●●●●○ | EMPLOYER OF CHOICE |
| ●●●○○ | MULTIMODAL |
| ●●●○○ | SAFE & HEALTHY |
| ●●●●○ | INNOVATION/ADMIN |
| ●●●●● | COST EFFECTIVENESS |
| ●●●○○ | IMPACT |

### Description

Wayfinding is particularly important for OHSU, an institution that serves a large number of one-time or infrequent visitors. Navigating to, from, and within campus can be particularly challenging for those who are unfamiliar with the layout and topography of campus. Clear and consistent wayfinding can help ensure a positive visitor experience, while raising awareness about existing campus facilities for everyday employees and students.

### Next Steps

Key elements include:

- Patient wayfinding. The opening of Center for Health and Healing 2 in 2019 provides an opportunity to establish a new precedent with patient wayfinding on the South Waterfront campus, which can be applied to the expansion of the Casey Eye Institute in 2020 and opening of Hospital Tower in 2022. Key priorities should include simplified naming conventions, clear signage at key locations, and vehicular signage.
- Bicycle and pedestrian wayfinding. Installing wayfinding that calls attention to bicycle and pedestrian facilities may raise awareness about these facilities and encourage some people to walk and bike to, from, and within campus more. Work with PBOT and SW Trails PDX to install signage that better communicates local and regional connections to OHSU campuses.
- Prioritize wayfinding recommendations that were included in the OHSU Night Access Plan (Strategies NE.7, WB.4, WB.5, WB.6) .
- Parking signage, especially integrating real-time parking availability at each lot/garage. Real-time data can direct motorists to available spaces and reduce congestion related to parking searches. OHSU should work with PBOT and other regional partners to integrate real-time data into trip planning apps, as well as parking availability signage on major corridors approaching OHSU.
- Transit screens that provide real-time transit information, such as the ones in the Collaborative Life Sciences Building (CLSB), should be installed in all major buildings. OHSU should also work with TriMet to install real-time arrival information at major transit stops on or near campus.

### Cost Estimate

Up to $140,000 per year to support and leverage wayfinding investments.

### Stakeholder Input

"Making the parking system more user-friendly includes wayfinding from the parking spot to the hospital room."

"There's no regional signage for people walking and biking about how to get to OHSU."



Real-time parking signs could supplement existing wayfinding to direct motorists to available parking spaces. UC Davis Medical Center (above) has installed real-time information at many of its facilities.


Additional real-time transit information screens, such as the ones in CLSB, should be installed throughout campus.

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