

Cultivating the Campus

Productive Strategies for the University of Washington's Educational Landscape

Jennie Li

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Committee:
Branden Born
Julie Johnson

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University of Washington

Abstract

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Jennie Li

Supervisory Committee Chairs

Julie Johnson

Landscape Architecture

Branden Born

Urban Planning

With the urban population forecasted to continue expanding, simultaneously distancing individuals from the environmental impacts of their consumption, two fundamental priorities are becoming clear: how will we sustainably provide for ourselves, and how will we educate each other? This thesis explores what a campus-wide manifestation of a productive and educational ethic might look like in the landscape of the University of Washington, Seattle campus. It synthesizes the needs of the UW Farm, a grounded, practicing organization that grows food in multiple locations on the campus, and makes the case for broad cooperation in innovative education. Using a Participatory Action Research approach and interdisciplinary theories, this thesis examines project precedents, identifies opportunities, and suggests potential pathways to realize productive educational projects on the campus landscape.

Acknowledgments

This piece of work could not have been possible without a vast network of people supporting me to this point in my life, my education, and my projects.

My first thanks are to my parents, who have always had unquestioning confidence in my abilities to pursue my own educational pathway.

Thank you to my advisors for believing in my thesis and consistently encouraging me to pursue my interests in a way that felt authentic to my goals.

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Lastly, thanks to the UW Farm with especial regard to Farm Manager Sarah Geurkink and the UW Farm volunteers for being the original source of inspiration behind this thesis. The hard work, creative energy, and willingness to experiment in this community is unfaltering kindle against project fatigue and a dependable source of refreshing optimism.

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1 Introduction

GROWING POTENTIAL

The newly constructed Mercer Court apartments had just opened when I began my studies in Autumn 2013, and I first discovered the University of Washington Farm through news that agricultural terraces had been integrated into the apartments' design. The terraces were designed by Gustafson Guthrie Nichol (GGN), a locally and internationally renowned landscape architecture firm, and I wanted to know how the Farm was fitting into an urban space tailored for this purpose. From an interest in supporting the continued development of the UW Farm, a unique campus entity with a crucial role in representing campus food, this project emerged.

The UW Farm developed over many years, pioneered by dedicated key faculty whose persistence cleared the way for embracing an education beyond the classroom - a lived ethic (Arlein, 2010). The Farm provides a place for exploration and interaction, complex discovery and learning. Yet it remains conceptually understandable – the goal, after all, is to grow food in the best way possible. From pollinator rows to chicken tractors, the Farm hosts various student-driven projects and initiatives. As a juncture between economic production, human nutrition, and environmental health, the Farm enables students to engage in this fundamental aspect of urban living that has been experientially divorced from the urban landscape: the production of food.

I was surprised to see the University of Washington embracing on-campus food production as part of its sustainable future. In contrast, my friends and colleagues at

“I begin with the proposition that eating is an agricultural act. Eating ends the annual drama of the food economy that begins with planting and birth. Most eaters, however, are no longer aware that this is true.”

Wendell Berry

“The Pleasures of Eating,” What Are People For?

the University of California, Berkeley have been protesting the development of the land-grant college's agricultural research field - the East Bay's last open parcel of class I soil – since 2012 (Roman-Alcalá, 2013). I was curious: what were the possibilities of the UW Farm with continued, broad, institutional support? What might a campus-wide manifestation of a productive ethic look like in the landscape?

The UW Farm is one of the few organizations on campus exploring use of the campus landscape for production. How might the UW Farm maximize the use of its current resources? How could its needs be matched with campus and community partners to further sustainable, experiential educational opportunities on the UW campus? Rich in passionate



**ERNA GUNTHER
ETHNOBOTANICAL GARDEN**



**INTELLECTUAL HOUSE
NATIVE EDIBLE LANDSCAPING**



**UW FARM
MCMAHON TERRACE**



**UW FARM
CENTER FOR URBAN
HORTICULTURE**



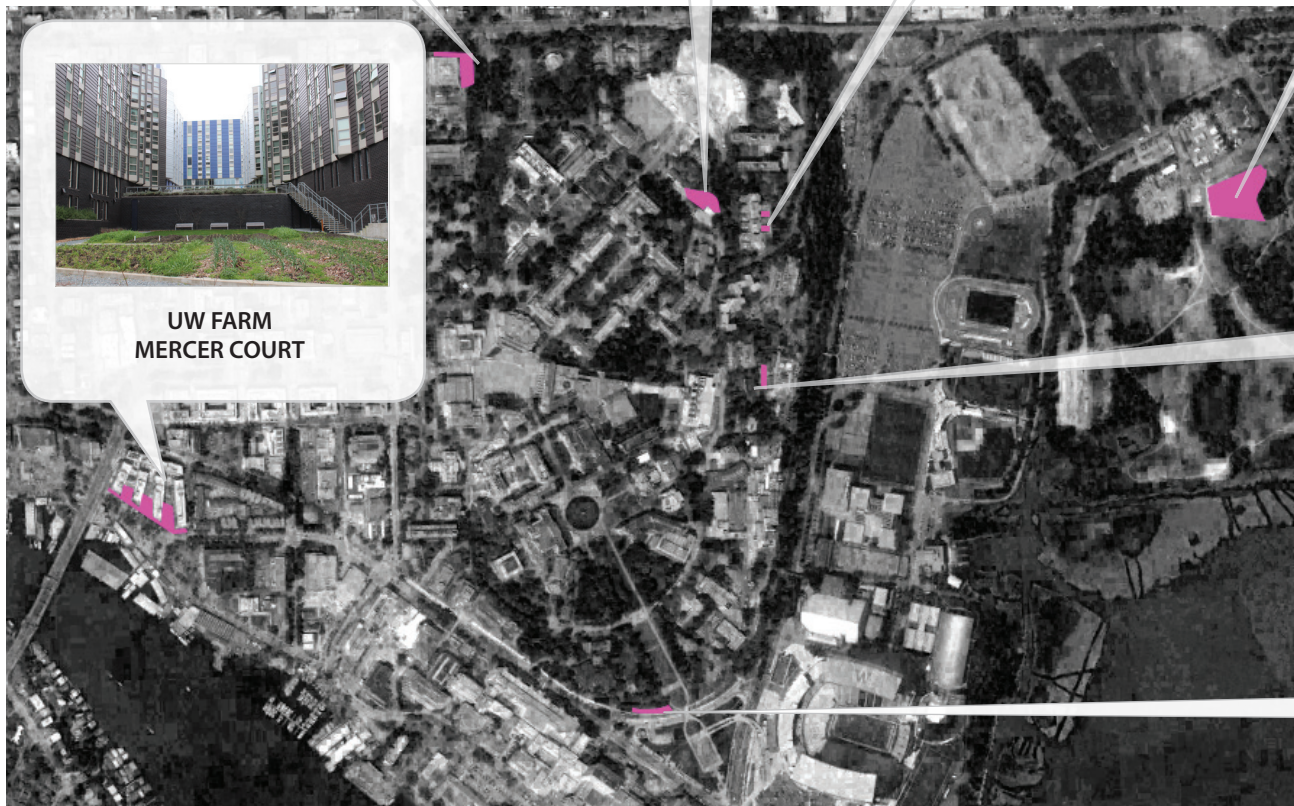
**UW FARM
MERCER COURT**



**FLUKEHALL
STUDENT P-PATCH**



MEDICINAL HERB GARDEN



1.1 Edible Landscapes at UW (as of May 2016) Base Image: Google Earth, Images: Erna Gunther Ethnobotanical Garden, Medicinal Herb Garden

volunteers and having just hired a staff member, the Farm is growing and establishing itself as a stable institution on campus. Despite this, it continues to lack the funding resources to effectively investigate this valuable inquiry.

As a graduate student in the Landscape Architecture and Urban Planning and Design departments, I wanted to explore and imagine how the UW Farm's educational and productive model could be expanded throughout the campus. Long-term planning and broad visioning across property lines and organizational scopes is a luxury that small organizations cannot often afford. In this particular situation there is unique potential for this broad visioning, as UW itself exists an organizational umbrella for these efforts as well as the physical connective tissue in the form of the landscape.

This project has been an important exercise synthesizing the needs of a grounded, practicing organization to a larger audience, and it has evolved into a pitch for broad cooperation in innovative education. My hope is that some of the ideas presented here will allow the Farm and other similar organizations to adapt, expand, or shift operational models while maintaining fundamental relevance to the campus.

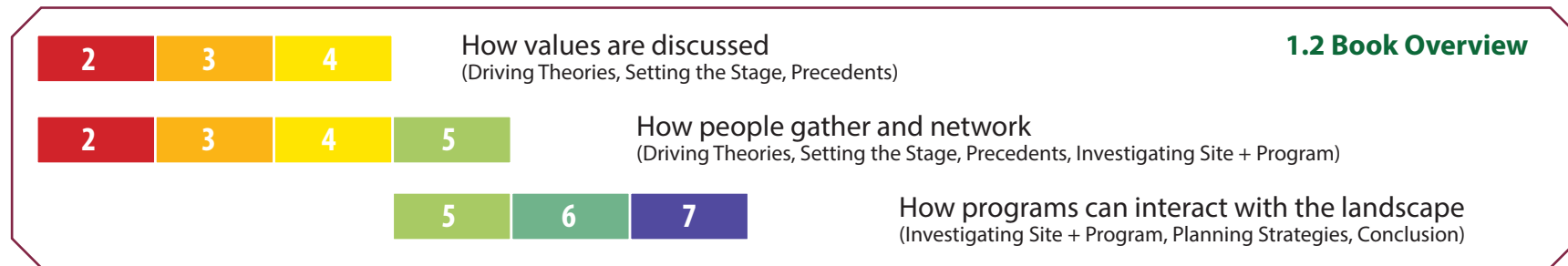
Who is This For?

This is first and foremost a book of ideas for the campus-wide audience on growing the UW campus landscape to better serve its students, faculty, staff, and administrators in the current urban food environment. In my investigations, I've interviewed and worked with those staff and students changing the existing food system on the UW campus. They are passionate, full of curiosity, and ready to explore the boundaries of urban production on campus. These characteristics are the driving inspiration behind this work; if acknowledged and fostered, these valuable qualities can continue to drive the legacy of the University of Washington as an institution of academic excellence in applied research.

This project is a first step, coalescing resources and ideas advanced on campus with inspiration from other like-minded projects to encourage collaboration and cohesion across the campus in meeting today's challenges with the fundamental resource of food. The project considers educational programming and the campus landscape as integrated paths for academic life in the urban environment.

Using This Book: Overview

This book is organized into chapters that explore different facets of productive educational landscapes in the university context:



2 Approaching Educational Landscapes lays out the theoretical framework and methods used to collect information. Additionally, a section introduces the guiding principles and theories informing my analysis and driving the suggested interventions in this document.

3 Seeds at UW reviews foundational initiatives for productive outdoor educational spaces at UW, including current activities and campus documents which demonstrate institutional interest in investigating food systems related problems. This overview evidences the need for these projects and can be referenced by similar projects seeking broader institutional or financial support.

4 Productive Educational Landscapes Then and Now samples some edible food projects that have been implemented at UW, on other campuses, and within an urban context. These case studies provide both lessons to learn from as well as successes to inspire.

5 Sprouting Opportunities from the UW Farm presents a baseline analysis of the UW Farm and extracts relevant organizational concerns. It then transitions to presenting systemic tactics with three areas of interest: campus visibility, educational programming, and productive programming.

6 Pathways to a More Sustainable Campus Landscapes offers a selection of sketches for sequencing programs and physical interventions on the campus. These projects range from very feasible to boundary-stretching. Many of these ideas will certainly require a champion in order to come to fruition, but I believe that both the passion and resources to explore these projects or variants of these ideas already exist at UW.

7 Lastly, Next Steps aspires to continue dialogue and advance action around shaping the campus landscape for educational needs and the role of local production at UW beyond this thesis. Additional useful resources are included in the appendices of the book.

2 Theories Driving the Project APPROACHING EDUCATIONAL LANDSCAPES

With over 50% of the world's population living in urbanized areas since 2007, as reported by the United Nations, increased demand for food has been met largely by the global production of a few key food crops, which has become the norm (Marttine, 2007). However, the practices of large-scale wheat, soy, corn, and beef production contribute to environmental damage including, but not limited to, landscape and soil nutrient degradation, reduction of biodiversity, pollutant and chemical runoff affecting human and animal health, and global climate change (Peters, 2008). With the urban population forecasted to continue expanding, simultaneously distancing individuals from the environmental impacts of their consumption, two fundamental priorities are becoming clear: how will we sustainably provide for ourselves, and how will we educate each other?

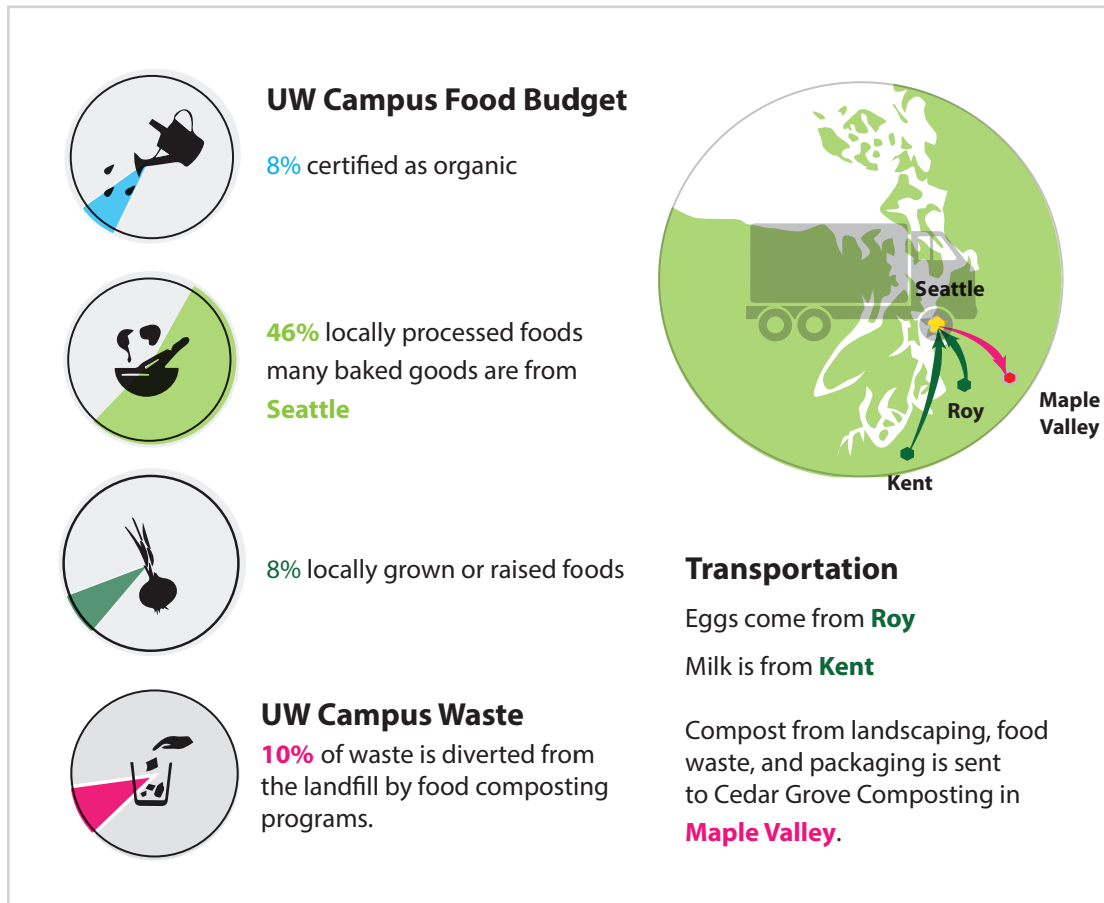
In order to foster resilient cultural practices to sustain the next generations, educational strategies are needed to deeply connect people to places. David Orr refers to the competency in reading and adapting to ecological and social signals as ecological literacy (Orr, 1992).



2.1 Global Urban Food Production Components

Base Map: Wikimedia Commons

The urban foodshed provides an obvious framework for investigating these connections. Similar to a watershed, a foodshed is the geographic region where food is produced to serve a specific population. A hybrid construct of human socio-cultural practices and landscape management processes, the foodshed includes the place encompassing where food is grown, the routes along which it is transported, the market where it is sold, the table onto which it is served, and the compost or landfill where its waste is deposited.



While this project initially investigated the potential productive use of the UW Seattle campus to mitigate its ecological footprint within the urban foodshed context, complex conversations opened up questions about the role of broader community values and layered productive use of the landscape. Taking the premise that productive educational landscapes result from organized communities enacting values on the landscape through sustained cultivation and programming, I explore three intertwining concerns as they might appear on the food landscape at UW:

1. How are educational and sustainability values around food expressed at the campus?
2. How do organizations and individuals network in the food community at UW? and lastly
3. How can existing or proposed sustainability programs interact with the campus community and campus landscape?

The nature of these questions dictated my approach, methods, and theories used, which this chapter overviews.

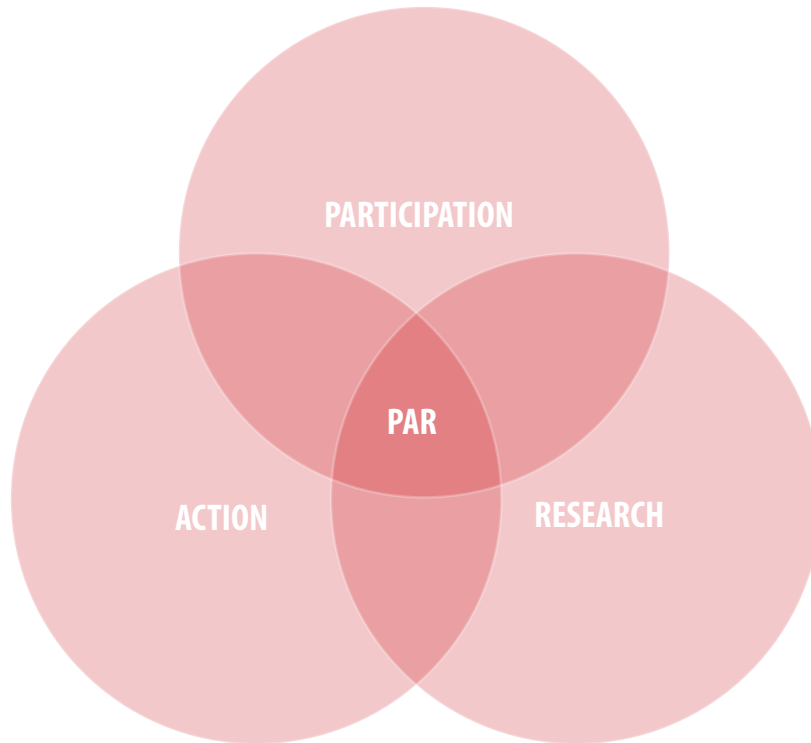
2.2 A Slice of Food Sustainability at UW

Data: UW Housing and Food Services

Local production and waste exchange reduces transportation mileage in the campus food system

PAR Approach

A Participatory Action Research (PAR) approach affirms that knowledge is pluralistic and focuses on partnering with a community to co-produce knowledge on an issue they face. Although the methodologies for PAR may vary, three overlapping principles of participation, action, and research guide the practitioner. This section overviews my immersion in the campus community, actions taken to support the UW Farm in addressing some core concerns, and the body of knowledge that I engaged in exploring the issue.



2.3 Components of PAR

Concept: Chevalier and Buckles 2013

14

PARTICIPATION

My participation and observations were shaped by my experiences as a community member, a student in UW's Landscape Architecture and Urban Design and Planning professional graduate programs, and a volunteer for the UW Farm. I additionally engaged with various levels of administration and campus life as President of the American Society of Landscape Architects - UW Chapter, and as student liaison to the Landscape Architecture faculty.

ACTION

I offered my skills in participatory design and interdisciplinary collaboration to help the UW Farm apply community planning facilitation for their projects. I facilitated two charrettes of site-specific designs, which consisted of structured activities and discussion resulting in implemented projects. These activities revealed that the longevity of the UW Farm, in relation to the larger University of Washington community, relied on being able to plan beyond specific sites. This piece of work arises from that need, articulated by the UW Farm.



2.4 Spring 2015 UW Farm Charrette

RESEARCH QUESTIONS

1. How are educational and sustainability values around food expressed by the UW Seattle campus community?
2. How do organizations and individuals network in the UW campus food community? and lastly,
3. How can existing or proposed sustainability programs interact with the campus community and campus landscape?

These questions are concerned with how values are discussed, how people gather and network, and how people interact with their landscapes. I gathered information as a participant observer through the charrettes with the UW Farm (see Appendix A-E) generated thematic content analysis with which to base research interests and proposals. This was supplemented by further research into campus history, academic, and exploratory and experiential research conducted through internships.

Today, major urban agriculture projects are firmly rooted in Burlington, Philadelphia, Detroit, Milwaukee, Chicago, Oakland, Los Angeles, San Francisco, and dozens of other American cities. Sales of vegetable seeds have skyrocketed across the country. Backyard chickens have become a new norm, and schoolyard gardens have sprung up across the nation and beyond since Alice Waters began Berkeley's Edible Schoolyard Project almost two decades ago. Organic farms and farmers' markets have proliferated, and for the first time in many decades the number of farmers is going up instead of down.

Though those things can be counted, the transformation of awareness that both produces and is produced by all these things is incalculable.

*Rebecca Solnit
Revolutionary Plots*

Methods

The majority of my research occurred on the University of Washington, Seattle campus from Winter 2015 through Spring 2016. Exploratory research on other community-driven urban agricultural precedents was conducted in Copenhagen, Oslo and Stockholm during Summer 2015.

Using the PAR approach as a participant-observer in the urban agriculture community, I conducted informal interviews, facilitated charrettes, attended organizational meetings, participated in work sessions and activities, and mentored undergraduates. I documented various interactions through a field journal, audio recordings, and in a blog.

Because this project is not meant to be a broad community assessment, but rather to identify networks of resources and opportunities for broader collaboration, it was necessary to identify and work with community leaders and organizers who have stake in the campus landscape. These individuals were identified through a snowball sampling method based on recommendations from the UW Farm Manager and from faculty advisors. The subsequent semi-formal and semi-structured interviews were documented through audio recordings and written notes.

Finally, various textual sources were referenced over the course of this project, including informal internal documents, academic journal articles and books, and official statements published by organizations.

Informing Theories

In seeking programmatic approaches and physical interventions to improve the productivity of urban landscapes, this research draws from interdisciplinary theories along three main lines of inquiry:

- theories on place-based learning
- social theories that explore human relationships to social and physical environments which can be easily applied to spatial analysis
- theories that advocate for action-oriented frameworks within the urban planning and landscape architecture professions

This section discusses some influential theories in each of these three lines of inquiry relevant for this project.

THEORIES ON PLACE-BASED LEARNING

Prominent theories advocating for place-based learning are grounded in critiques of traditional concepts of education and the individual. These are exemplified by Capra, Moore and Wong, all educational practitioners that derive theory from classroom practice.

Capra identifies the friction between the linear nature of Western intellectual and educational traditions and the complex reality ecological systems, evolving relationships between people, resources, space and time (Capra 2005). A linear problem-solving view precludes an understanding of the embeddedness of systems thinking, often resulting in overly simplified policies or actions which may trigger chain-reactions of unintended consequences or be overly focused on symptoms rather than root causes. Reaching sustainable outcomes will require a shift educational programming towards complex systemic approaches and individualized understanding of personal and collective action.

Moore and Wong remind academics and practitioners that the predominant conceptualization of learning is limited, and emphasize the learning processes that also occur outside of the traditional classroom model. They identify three distinct ways that children learn: formal, informal, and nonformal (Moore and Wong 1987). Formal education is the kind of learning that we normally associate with academic

traditions, such as lessons taught by teachers, usually indoors in classrooms. Informal education encompasses all the learning that children absorb through daily social interactions with their community and environment outside of the school classroom. Lastly, nonformal education is a way of bridging formal and informal education through learning that occurs in settings that occurs outside of the classroom. The tendency to overly focus on formal learning leads to a neglect in cultivating valuable informal and nonformal educational opportunities, and severs the place-based mindset needed for sustainable stewardship.

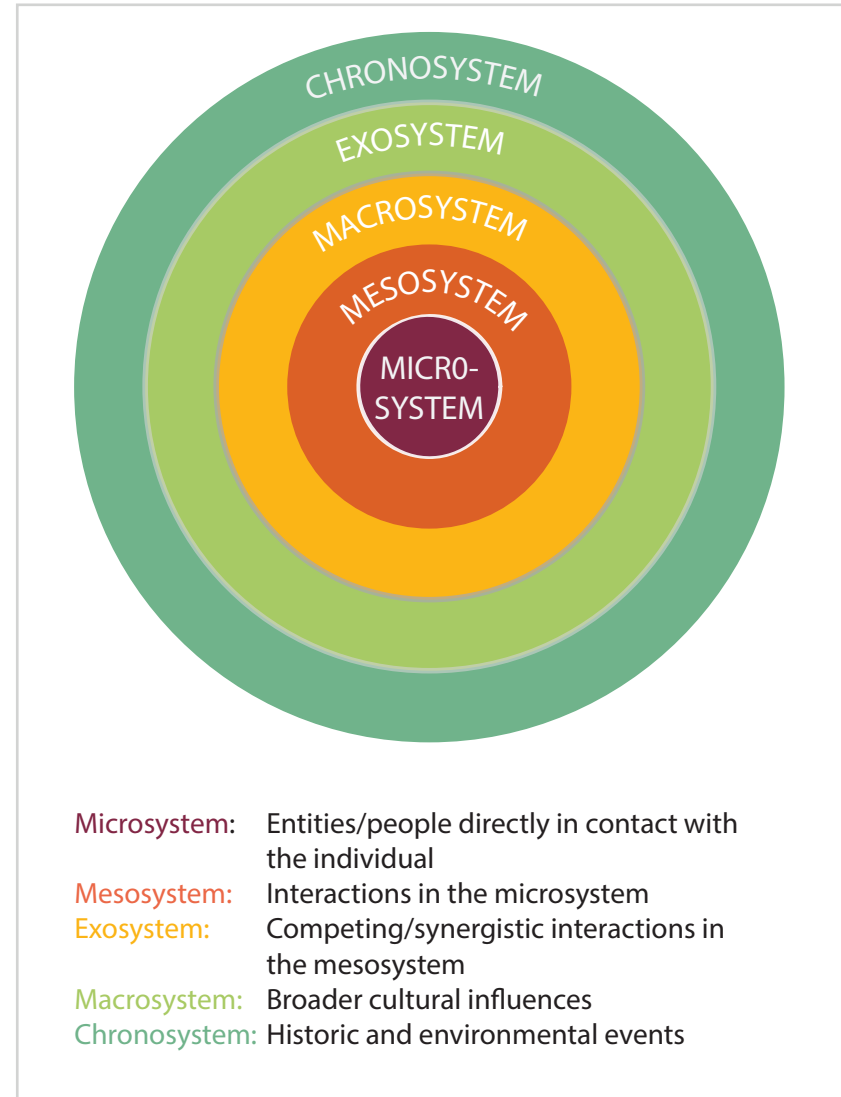
In recognizing a wide range of learning processes to supplement traditional models, these theories emphasize the value and need for place-based educational programming. Informal and nonformal models can additionally enhance traditional learning outcomes by accommodating diverse student strengths, weaknesses, abilities and needs.

APPLYING SOCIAL THEORIES TO PLACE-BASED LEARNING + DESIGN

Recent social theories respond to traditional tendencies of focusing on the individual by re-embedding individuals in their social and cultural contexts. For the purposes of place-based interventions this could be logically extended to encompass an individual's physical or environmental context.

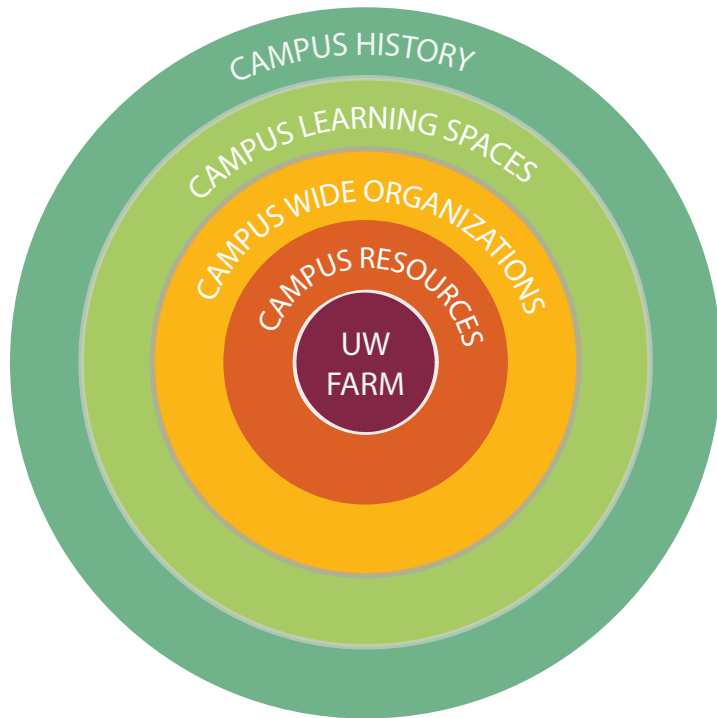
With child development in mind, Bronfenbrenner developed an ecological framework for human development. This model maps a child or individual in concentric, scaling systems of relationships, providing a useful tool for understanding an individual's relationship to their social and cultural environment (Bronfenbrenner 1999). While his original theory lacks a spatial component, I adapted this model of scaling relationships for space-based analysis where appropriate of an individual organization, the UW Farm (fig 2.6). This was invaluable in identifying, prioritizing and strategizing for the organization's concentric, scaling systems of relationships, needed to identify broader collaborative opportunities for the UW Farm on the UW campus landscape.

Lam (2000) offers an integrated framework from an organizational studies perspective that matches the expression of knowledge types (explicit or tacit) to individual or collective learning. Lam promoted the integration of tacit knowledge into organizational frameworks as a way to enhance innovation practices. Inspired by this locating of explicit and tacit knowledge types, I employed a spatial analysis to identify where these types of learning occur on the UW campus. This demonstrated that although various forms of knowledge are and spatially privileged (*fig. 3.2*) with libraries and classrooms dominating the central campus. By contrast, tacit knowledge



2.5 Ecological Framework for Human Development

Concept: Bronfenbrenner 1999



- Microsystem:** UW Farm (program + people)
- Mesosystem:** On-site resources (food, water, compost, transportation, food production spaces)
- Exosystem:** Campus wide organizations (student organizations, faculty + other partners)
- Macrosystem:** Learning spaces (classrooms, landscapes for research, teaching entities + programs)
- Chronosystem:** UW Campus + Farm History

2.6 Framework for Analyzing the UW Farm

production was limited to the campus periphery. Inspired by this locating of explicit and tacit knowledge types, I employed a spatial analysis to identify where these types of learning occur on the UW campus. This demonstrated that although various forms of knowledge are expressed at UW, embraced knowledge production is structurally and spatially privileged (*fig. 3.2*) with libraries and classrooms dominating the central campus. By contrast, tacit knowledge production was limited to the campus periphery. This led to a focus on identifying opportunities to connect these peripheral opportunities to central knowledge production through educational programming, as well as adapting central landscapes for layered uses which could integrate tacit knowledge production.

In planning and designing, I extended these social theories to encompass place in order to identify and understand social relationships in the educational environment. I focused on enhancing diverse learning opportunities through designing collaborative, multi-use environments and corresponding educational programming.

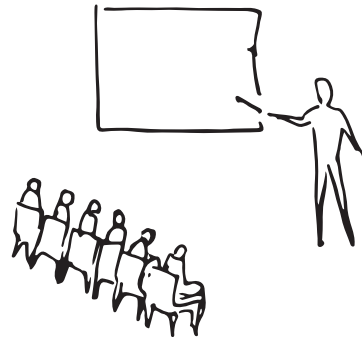
MOVING FROM THEORY TO ACTION

Trends in urban planning and landscape architecture urge theorists and planners away from utopian daydreaming and towards constructive engagement and action. With a focus on designing implementable outcomes, this section reviews obstacles and lessons learned from fields involved in resource management that would enable informed implementation of sustainable practices. This section examines the various roles of spatial design, from the aesthetic purposes of curating individual experience of the landscape to functional purposes of resource management. It discusses obstacles and lessons

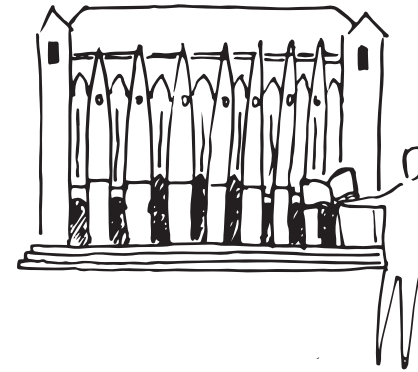
INDIVIDUAL

COLLECTIVE

EXPLICIT

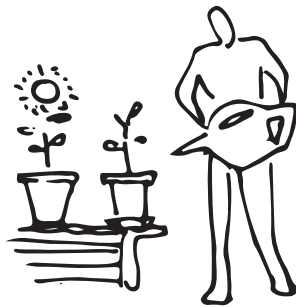


Embrained: formal, abstract knowledge (ex. scientific theory)



Encoded: codified information (ex. written documents, signs)

TACIT



Embodied: learning by doing (ex. independent projects)



Embedded: collective routines and norms (ex. farming)

2.7 Spatial Manifestation of Knowledge Types: Student Experience at UW Farm

Concept: Lam 2000

expressed by landscape architects and urban planners who design and program productive landscapes.

It is widely accepted that the role of the designer is to aid in the understanding and valuing of the landscape through orderly framing. Beyond superficial orderliness, aesthetic framing provides a physical cue to the audience that there is cultural value in the landscape. Applied to sustainability, this means aiding in the viewer's understanding and valuing of the "messy ecosystem" (Nassauer 1995). A more expansive view extends the designer's role to consider functional spaces in relationship to the surrounding environment. In urban environments where landscapes are often essentialized into their aesthetic or economic manifestations, it is easy to forget that the landscape also has potential as a productive, natural resource.

Agroecology and integrated watershed management are highly functional lenses, centering the management of a specific resource at the center of planning, be it food or water. Approaches to natural systems must also consider and value human and cultural inputs into the environment and how they must be considered when understanding how much of a resource we can extract and use. Sustainable resource management, such as integrated watershed management and agroecology, recognize this and focus on practices that are resource regenerative. Therefore, when considering interventions and programs for the campus, I used the lens of natural resource availability to inform potential for functional landscape use, and the concept of resource management as providing sustained educational opportunities.

Landscape design does not exist in a silo, thus functional and aesthetic needs must also consider maintenance through effective design and programming strategies. The production of food in public spaces is often stigmatized, associated with higher maintenance costs and attracting nuisances. Nordahl (2014) demonstrates that productive landscapes are not necessarily more costly than non-productive ones. He suggests some guiding principles for designing productive landscapes with an eye to long-term maintenance and aesthetics. His principles directly inform some of my strategies, included in the following figure.

2.8 Nordahl's Principles for Productive Landscapes

- carrying capacity: manage crop yield to expected population
- waste management is linked to visibility
- find people already involved with translatable skills
- develop gleaning as a skill/focus
- accessibility to water is key
- edible plantings can be mixed with ornamentals

With consideration to the above theoretical and practical concerns, I also understood that implementation of projects is conditioned to limiting circumstances such as time. Now Urbanism (Hou et al. 2015) critiques the future-bias in planning and suggests that the most interesting innovation occurs in the friction between utopian planning dreams and the unexpected results of their implementation. It urges a shift from future-looking design, to vigorous investigation in current innovations and immediate substantive actions. Using Now Urbanism's Pathways approach (Karvonen 2015), I have included a chapter of tools, skills, and relevant fun projects that can be enacted immediately or in the short-term, followed by a chapter that strings them into long-term project narratives implemented over time.

3 Setting the Stage SEEDS AT UW

There seem to be inherent contradictions in UW's enactment of sustainable values in the campus landscape. While UW identifies as an urban campus dedicated to the study of urban issues, only the peripheral swathe of the Union Bay Natural Area has been integrated into the formal academic curriculum. At the same time, the campus is flourishing with numerous seed projects prioritizing applicable, implementable research on improving the sustainability of the urban campus landscape.

While sustainability is often vocalized as a strong, shared campus value, a lack of coordination and prioritization in educational programming and landscape interventions discounts the full potential that can be unlocked by better coordination and use of landscape and human resources. This chapter overviews the current campus climate, with a focus on institutional approaches to integrating sustainability into the educational agenda and practice. Next, it examines educational spaces and identifies a strong bias towards the indoors specifically on the campus.

Setting the Agenda for Sustainable Food Systems

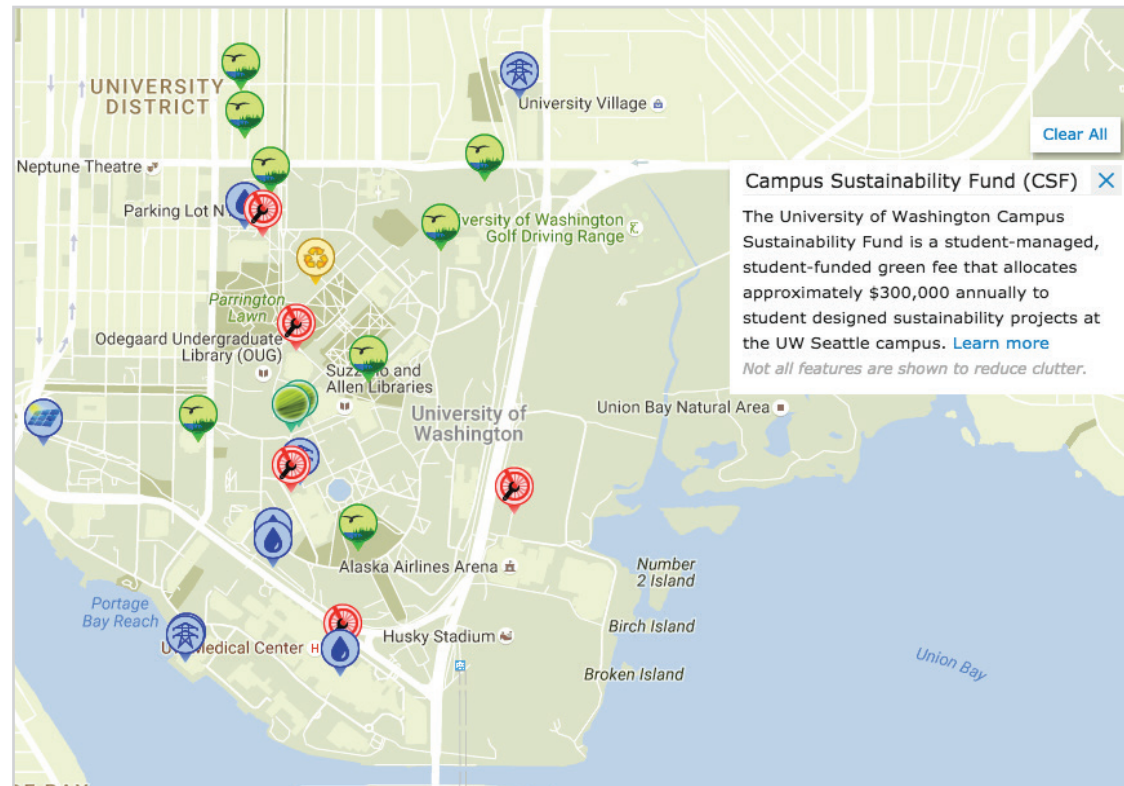
There is a climate for the realization of sustainable urban food systems apparent in the dialogue and actions surrounding sustainability. This can be seen through both institutional agenda-setting as well as operational practices of food ethics on campus. This section overviews some of the main campus initiatives and demonstrates that sustainable urban food systems are a growing interest for the institution.

IMPLEMENTED SUSTAINABILITY

UW's Campus Sustainability Fund

The Campus Sustainability Fund gives small and large grants, awarded by a panel of students, to student-led sustainability projects on campus. As evidenced by a projects map on the website, it has had a significant impact on the campus landscape with over 72 projects funded since 2010. Sparked by a campus-wide grassroots campaign to “have a more substantive engagement with the University of Washington’s sustainability efforts,” the fund emphasizes student empowerment (Campus Sustainability Fund, 2016, “About Us”).

Devised to only require initial funding, short-term student driven projects are largely independent of each other and require a larger context for sustained relevance and use. While some built/ installed objects continue to be used, others gradually fall to disrepair without adequate maintenance plans, or become irrelevant due to a lack of continual post-installation review.



3.1 UW Campus Sustainability Fund Mapped Projects

Image: UW Sustainability Map

RESEARCH & CURRICULA

Sustainability Curriculum

Tasked by Provost Ana Mari Cauce in 2012 to improve undergraduate curriculum in sustainability, the UW Sustainability curriculum committee identified food security as an issue (Sustainability Across the Curriculum Committee, 2013). The report broadly examined models for administrative programming behind sustainability degrees at other campuses but, significantly, gave a particular focus to addressing food insecurity as a specific point of interest. A follow up report conducted two years later (Mackenzie et al., 2015) demonstrated institutional commitment to address issues of sustainability specific to the campus. The committee held focus groups or “world cafes” consisting of students, faculty and staff to brainstorm weaknesses and opportunities with incorporating a sustainable agenda. They conducted individual group sessions and a final joint visioning session. As an institution, UW is clearly interested in uniting campus stakeholders in developing a curriculum for sustainability, and there are ample human resources and momentum for collaborative efforts in this vein.

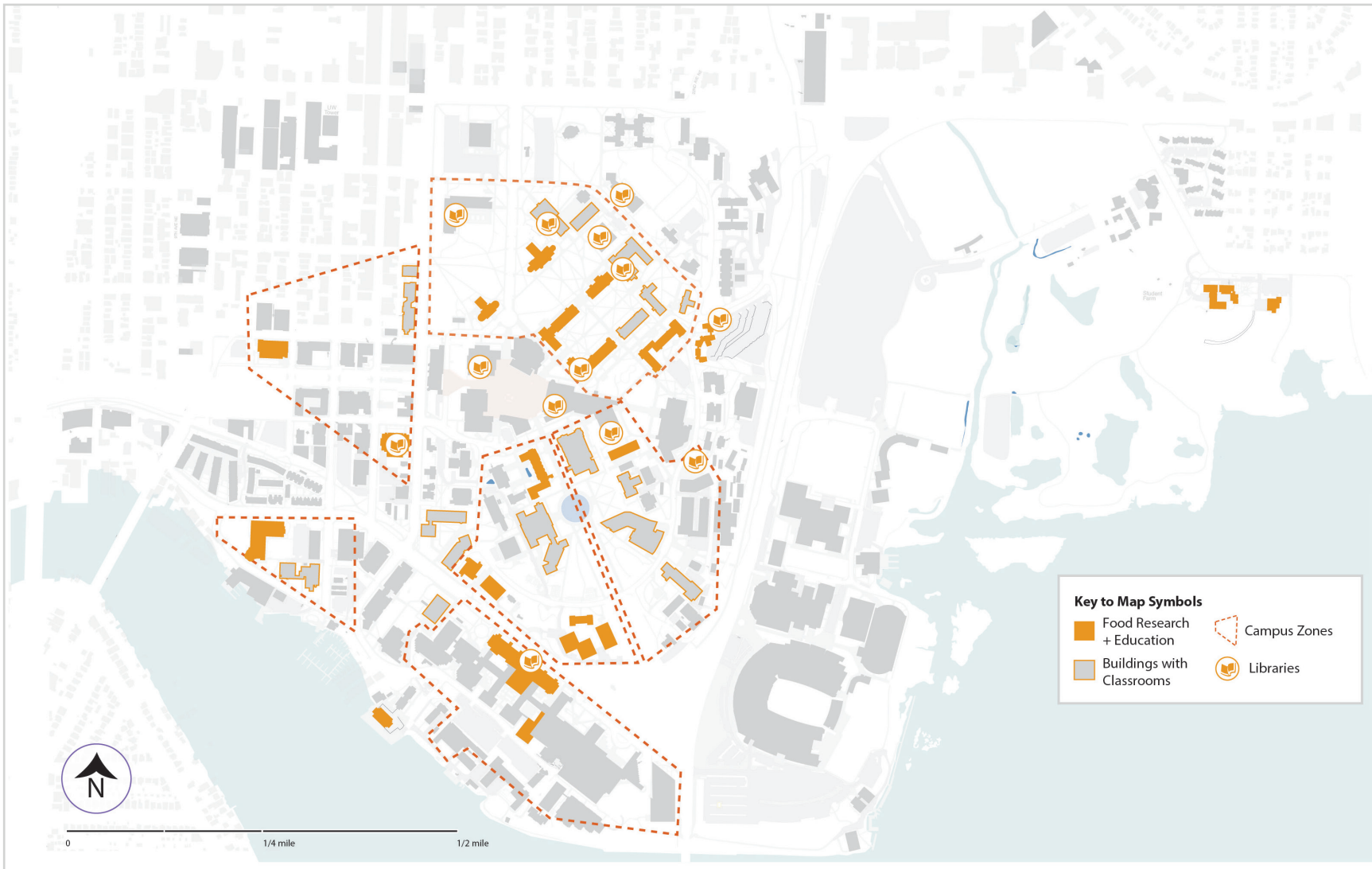
“Urban@UW” Collaborative Research Initiative

Established in 2015, the “Urban@UW” research initiative generates educational innovation by promoting collaboration between campus researchers on urban issues. Spanning diverse issues from advocacy and civic engagement, to policy and law, and natural resources such as food and water, these topics have a meaningful and direct contribution for civic life, and showcase how the research of an academic institution such as UW can connect to larger community concerns. Uniting under the broader topic of urban research, the

initiative encourages diversification of contributing academic fields and cohesion for a broad, understandable impact. The research showcased at Urban@UW website for Food demonstrates the initiative of researchers and centers widely exploring issues in public health and nutrition, livable communities, ecology and conservation, and infrastructure planning and landscape architecture.

Food at UW

Sponsored by the College of Built Environments and Housing and Food Service with support from the School of Public Health, this is an amalgamation of food-related activities and resources on the UW campus. It lists existing and future opportunities for students with regards to initiatives led by numerous campus actors. Students can explore resources about food on campus through browsing posted events, learning more about the residential hall program “Food Exploration Living Learning Community”, getting information about growing food, and browsing locations for finding food on campus, and connecting to the UW Farm’s homepage. Additionally, formal and nonformal academic opportunities are listed, with an index of people and organizations who study and regulate food on campus, classes available that discuss food and sustainability, and the announcement of a proposed interdisciplinary food minor. This demonstrates the wide existing food community already established at the UW campus and the staff and faculty dedicated to continuing and growing campus food initiatives that engage students academically and practically.



3.2 Buildings with Food at UW Classes/Faculty
 Base Map: UW Creative Communications, UW Facilities Services 2012
 Data: Food at UW, UW Learning Space Assessment 2013

ETHICAL FOOD PRACTICES

Campus Food Security and the UW Food Pantry

Following a broader trend by campus administration to support realities faced by their students and staff outside of academic needs, food insecurity has been identified as a prominent issue in the student and staff population. In response, the Office of the VP of Student life partnered with the ASUW Student Food Cooperative, Kelly Ethnic Cultural Center, Student Life, and the HUB to launch a Food Pantry in February 2016 (University of Washington, Office of the VP for Student Life, 2016). This is a unique demonstration of the potential for collaboration between student-led initiatives and the administration to address focused campus issues.

UW HFS and Driscoll's

The UW Housing and Food Services (UW HFS) consistently makes efforts to source and provide sustainable campus dining options, often as a result of initiatives by well-educated and well-organized constituents or activism. In one such example in 2015, the campus's sole grocery store, the District Market, dropped Driscoll berries from shelves owing to concerns about fair labor practices. The decision was broadcast via notices at the cash register (still present in Spring 2016), which in turn educates and models ethical daily decision-making, heightening student awareness of the issues with the potential to affect behavior beyond the campus.

UW CAMPUS MISSION STATEMENT EXCERPT

The primary mission of the University of Washington is the preservation, advancement, and dissemination of knowledge. The University preserves knowledge through its libraries and collections, its courses, and the scholarship of its faculty. It advances new knowledge through many forms of research, inquiry and discussion; and **disseminates it through the classroom and the laboratory, scholarly exchanges, creative practice, international education, and public service**. As one of the nation's outstanding teaching and research institutions, **the University is committed to maintaining an environment for objectivity and imaginative inquiry** and for the original scholarship and research that ensure the production of new knowledge in the free exchange of facts, theories, and ideas.

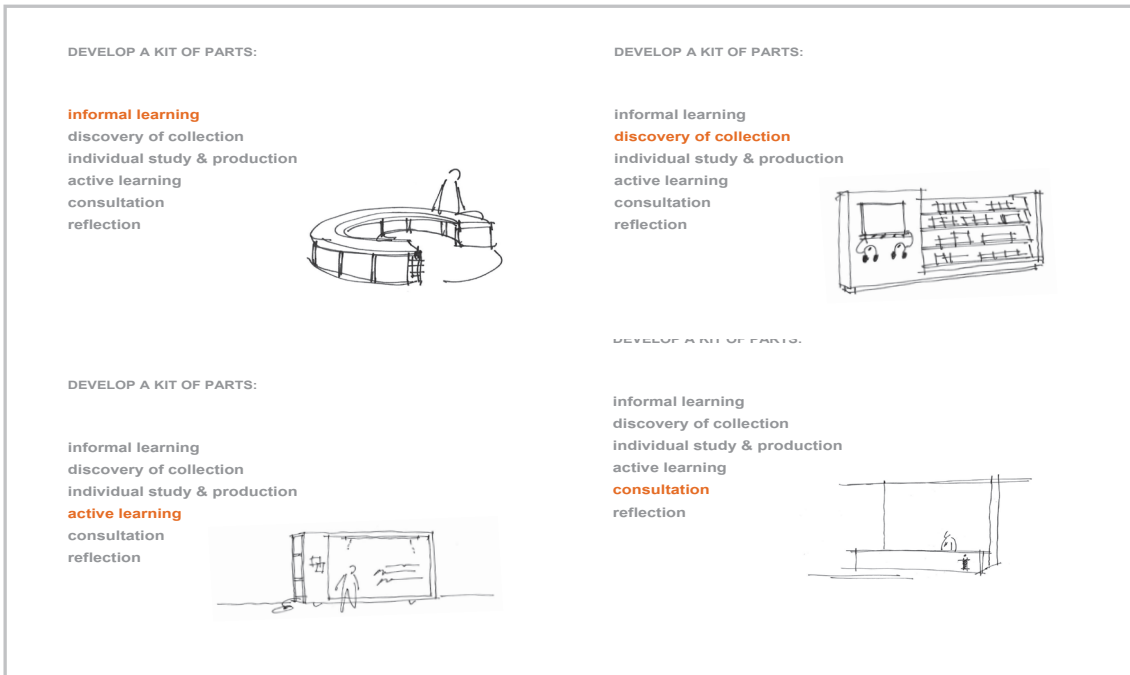
*Board of Regents
University of Washington
emphasis added in yellow*

Designing Educational Spaces

Experiences located external to the classroom environment are critically important in the understanding of food systems. Currently, food systems issues are discussed in a variety of curricula primarily developed for and implemented within the classroom environment, a particularly challenging setting for translating theory into tacit, living reality. Active learning within a productive space is crucial to understanding the complex processes and transitions between people and land.

While there is a significant historical and institutional bias towards indoor spaces as educational spaces particularly on the UW Seattle campus, there are efforts being made to integrate different types of learning into indoor spaces, and interest by design students and researchers into possibly incorporating outdoor spaces. While the University of Washington's mission statement explicitly lists "classrooms," "libraries," and "laboratories" as traditional places of learning and knowledge, it also implicitly gestures to the importance of educational experiences outside of the classroom, such as "creative practice," "international education," and "public service."

While innovative learning space design has led to better formal academic spaces, such as the award-winning re-design of Odegaard Library (see fig. 3.3), the campus landscape has not been regarded similarly. In the Office of Planning and Budgeting's Learning Space Assessment, only interior spaces were assessed, suggesting that funding towards improving learning spaces will only consider interior spaces.



Odegaard Library

The successful redesign of Odegaard library identified and integrated a variety of spatial qualities for learning experiences (Baleiko et al. 2014).

These educational experiences were catalogued as informal learning; discovery of collection; individual study & production; active learning; consultation; and reflection. Although these criteria were applied to an indoor environment, they are also relevant to outdoor classrooms and may serve as a precedent for UW's educational programming preferences.

3.3 Odegaard Undergraduate Library Educational Space Design Principles

Source: SCUP presentation Baleiko et al. 2014

While the criteria for learning spaces was created with an indoor design in mind, these qualities are also applicable to the design of outdoor learning environments.

Education in the Landscape

Although there is a primary understanding of learning space as being indoors, some programs at UW do use outdoor spaces as active educational environments. In fact, the developmental history of the campus landscape, as published on the UW Grounds website, provides rich examples of spatial development as educational opportunities for the fields of Forestry, Biology, and Landscape Architecture. Classes in Environmental Science and Resource Management (ESRM) engage in ecological restoration at the Union Bay Natural Area, and the UW Chapter of the Society for Ecological Restoration (UW-SER) removes invasive species in Kincaid Ravine and Whitman Walk along the north end of campus.

Further from Seattle, UW has hosted and facilitated many imaginative place-based learning opportunities and collaborations. Friday Harbor Labs, a marine station located in a 453 acre preserve on San Juan Island, generates abundant collaborative research. Closer to the main campus, the UW Botanic Garden (UWBG) manages the Fiddleheads Forest School Nature Preschool program for children ages 3-5 at the Washington Park Arboretum. These unique programs deploy the outdoors environment for imaginative inquiry, but are limited by the resources of those spaces. Additionally, these examples highlight that landscapes outside of the Seattle campus are seen and invested in as educational opportunities, overlooking the potential of urban on-campus landscapes, and by default, the potential depth of educational opportunities arising from studying the landscapes of urban food production and food systems.



3.4 Friday Harbor Labs, 1/3 of Biological Preserve

image: State of Washington, Department of Ecology

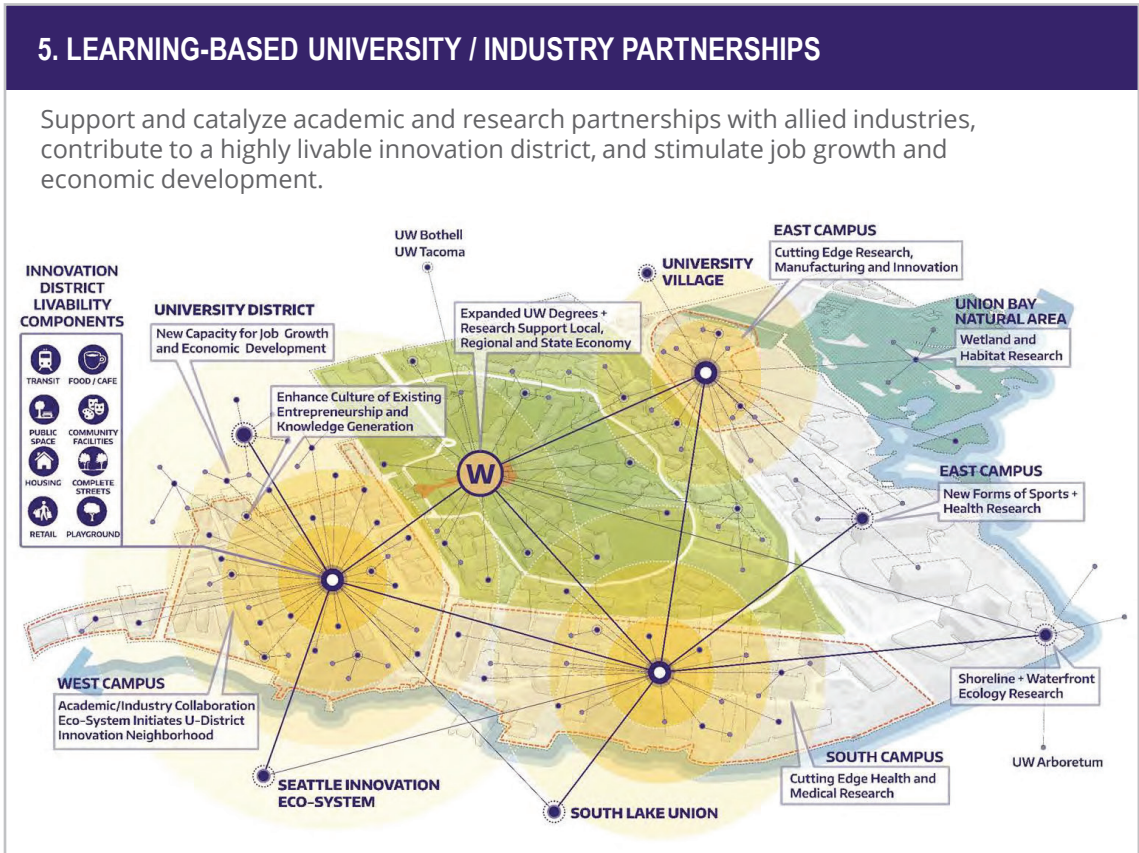
Seeds for Planning Educational Landscapes

Campus planners and students have recognized the key potential for landscapes in the productive and educational campus experience. The following two studies highlight the possibilities that have been identified for the campus and can be additionally referenced as tools and inspiration in developing campus projects.

Campus Landscape Framework:
a toolkit for identifying learning spaces

Prepared by the UW Office of Budgeting and Planning, this is a document unique to campus planning as it prioritizes landscape use to drive development strategies rather than viewing it as a blank space. This re-framing of the landscape allows for strategic, sustainable and site-appropriate planning, by promoting an understanding existing resource opportunities and limitations. The user-friendly document frames the campus as a mosaic of landscape types, including a description of appropriate programmatic use and guideline strategies for development for each type.

While this document gives a clinical overview of the campus landscape, it neglects the everyday use experience of the campus landscape. Effective use of the landscape would further require an understanding of user experience and holistic programming,



with particular attention to the connectivity between smaller sites.

3.5 Campus Landscape Framework Update

Source: UW Office of Budgeting and Planning
February 23, 2016 Online Open House

Models for Productive Landscapes at UW

A graduate of the UW Landscape Architecture program, Justin Martin (2008), investigated modes of applicable production on the UW campus in his thesis, *Small-Scale Agriculture on the College Campus: Models for Productive Landscapes at the University of Washington*. He catalogued experiential qualities and matched appropriate forms of production to the character of campus (landscape types), campus catalysts (modes for implementation and/or maintenance of a project), and goals (listed to the right). While overly-simplified, his matrix representing the relationships between these categories and their varying intensities does showcase the diversity of production possibilities in the landscape.

Table 3.1: Productive Campus Landscape Matrix. This matrix illustrates the relationships between the various categories and elements of productive campus landscapes described in this chapter. Darker shading represents a stronger link between elements.

		Covers			Vessels			Plantings					
		Orchard	Field	Vineyard	Garden beds	Raised beds	Containers	Greenhouse	Food Forest	Herb Garden	Flower Garden	Ethnobotanical	Mushroom garden
Landscape Types	screen or visual border												
	open space												
	iconic site												
	transitory/transitional												
	buildings												
	connection/network												
	natural/wild												
Campus Catalysts	housing & food services												
	students: RSO/activism												
	students/faculty: research												
	faculty/staff/students: personal												
	general public												
	administration												
Goals of Intervention	make a statement												
	education												
	production												
	respite/recreation												
	habitat												

Key

- weak relationship
- moderate relationship
- strong relationship

3.6 Campus Productivity Matrix

Image: Martin 2008

3.7 Campus Productivity Components

Landscape Types

- Screen/Visual Border
- Open Space
- Iconic Site
- Transitory/Transitional
- Buildings
- Connection/Network
- Natural/Wild

Landscape Goals

- Statement piece
- Education
- Production
- Respite/recreation
- Habitat

Campus Catalysts

- Housing & Food Services
- Students: RSO activism
- Students/Faculty: Research
- Staff/Students/Faculty: Personal
- General Public: Leisure/Service
- Administration

Production Types

- Covers
 - Orchard
 - Field
 - Vineyard
 - Garden beds
- Vessels
 - Raised beds
 - Containers
 - Greenhouse
- Plantings
 - Food Forest
 - Herb Garden
 - Flower Garden
 - Ethnobotanical
 - Mushroom

4 Precedents

PRODUCTIVE LANDSCAPES THEN AND NOW

Productive educational landscapes are not a novel concept. At the University of Washington, such landscapes date as far back as World War II when plans for the Arboretum, designed as a collection, were waylaid to focus on contributing to the war effort. Production took two forms: growing biomass for building material, and demonstrating food production in the form of a victory garden. While these were clearly temporary plans spawning temporary landscapes, they represent historical contributions of UW's campus landscape to local industry and civic life. Since then, additional projects have sought to draw the productive landscape further into the urban academic heart of the campus.

This chapter examines projects resulting in productive educational landscapes as precedents for lessons learned, with a particular focus on methods, challenges and results. In the first section, I will review two small-scale projects at UW that demonstrated the potential for innovative learning experiences, but eventually failed without institutional support in the form of on-going maintenance. In the second, I review projects that have been sustainably implemented on other educational campuses in the US. In the last section, I explore urban agricultural projects in Scandinavia that encourage civic participation, as explored in a research trip during the summer of 2015. Lessons learned from these precedent examples will inform strategies discussed in later chapters.

After nine weeks of site work, the cistern collecting 4,000 gallons of water was in place, the green living walls of grapes, hops, honeysuckle and kiwi were installed, the ADA ramp made of recycled plastic "lumber" was built and the tiles grouted. As the students gathered ... they marveled how they finally understood the relationship of a flat two dimensional drawing to a three dimensional environment.

*UW Department of Landscape Architecture
Garden of Eatin' Design/Build Project 1997*

Previously at UW

THE GARDEN OF EATIN'

The Garden of Eatin' was designed and built in 1997 as a project in the Landscape Architecture design/build studio class series. Located in the garden courtyard of the CBE Community Design Building on University and 40th, the space was designed using only edible plants. The Landscape Architecture website describes a lush edible space with recycled site materials and an artful storm water feature, showcasing the accomplishments of engaged learning. Professor Julie Johnson recalls children from the local child care center, the UW Children's Center, being entranced by the drama of the water features on particularly rainy days. A current student in the Landscape Architecture student remembers this site as an embodiment of the Landscape Architecture program's values, inspiring her to enroll several years later.

Unfortunately, the garden succumbed to administrative tension regarding a transient community member using the crawlspace underneath the ADA ramp. The project was completely removed, as per the decision of the college administration. The space today remains largely empty, used as a temporary space for staging materials, but the story of its initial success persists on the Landscape Architecture Department's official website.



4.1 Garden of Eatin' Design Build, Before and After

Images: UW Landscape Architecture Department

Lessons Learned

Within a class agenda, realizing a project on the UW campus landscape can be an integrated and fulfilling educational experience for students. However, the continued existence of a project post-construction is ultimately subject to the decisions of the administrative bodies in charge. Through anecdotal conversations it became clear that this space was valued by community members and embodied the possibilities of engaged landscape architecture, but without visible, continued programmatic use, this was not apparent. Perhaps if in the planning process the child care center had been engaged and supported in incorporating lesson plans at the site, they would also have grown into advocates for the space, ensuring its resilience through various political climates of the administration.

UW STUDENT P-PATCH

Located between Hall Health and Fluke Hall, this space allotting individual garden bed space to students living in campus dorms was established as an 2009 environmental studies capstone project modeled after Seattle's city-wide P-Patch program. UW campus newspapers reported wildly successful engagement for the first few seasons.

The student organization Students Expressing Environmental Dedication (SEED), the UW farming group (the pre-incarnation of the UW Farm), and the UW Grounds Department all offered continued support for the project. However, by the time the current UW Farm manager was hired by Housing and Food Services to continue maintaining the space, the momentum of student engagement had significantly decreased and the space was largely in disuse.

As a result, plans for the space were presented at a Dirty Dozen meeting in spring 2016 and individual raised beds were broken down to allow larger plots for production for UW Housing and Food Services.



4.2 SEED P-Patch in 2012

image: Becca Pirwitz, The Daily, UW

Lessons Learned

Students are a great force for initiating students and mobilizing administrative support, however their projects suffer from longevity issues due to high student turn-over. Hiring paid staff members is a way to support the sustained maintenance of actively productive spaces.

The UW Student P-Patch has shifted from the original vision of its intended use, but it persists as a site of edible production. Although changes in priority may lead to the decline of a site's original spatial program, re-envisioning the space to match the needs of current users is worthwhile. There may be other opportunities or new ideas that can enhance its potential as a resource.

On Other Campuses

UNIVERSITY OF MASSACHUSETTS, AMHERST PERMACULTURE INITIATIVE

The UMass Amherst Permaculture Initiative is run by a joint committee of student and staff members, whose initial motivation was to convert low-use grass lawns into multifunctional permacultural gardens. The initiative consists of permacultural garden spaces, educational courses, and annual conferences. The Franklin Permaculture Garden, located on a 1/4 acre plot directly adjacent to the Franklin Dining Commons, was the first site created as an inclusive and functional setting for gathering and learning, in addition to production.

The White House recognized the UMass Amherst Permaculture Initiative committee as a special campus model at a public university that integrates educational agendas and productive outputs directly sources to UMass Dining. UMassDining supports other initiatives similar to UW's Housing and Food Services, such as the Real Food Challenge, a national campaign powered by



4.3 Franklin Permaculture Garden

Image: UMass Dining



Franklin Permaculture Garden Final Design Rendering by RDG

4.4 Franklin Permaculture Garden Site Plan

Image: Regenerative Design Group

youths and universities “to create a healthy, fair and green food system” (UMass Dining, Sustainability, 2016). The model has been replicated with four gardens on the UMass campus and two at local elementary schools.

Lessons Learned

Projects that engage in diverse coalition building to find the right partners and networks, such as the joint committee running the UMass Amherst Permaculture Initiative, appear more likely to succeed. Furthermore, the initiative demonstrates a clear understanding of human spatial interaction as a driver for creative programming. A highly integrated educational agenda generated sustained value, enabling the project to be further expanded into additional spaces.

UC DAVIS, OLIVE OIL PRODUCTION

The development of the UC Davis Olive Center, which provides leading research on olive oil, arose from an instance of creative maintenance in a non-production designated area. The row of olive trees lining Russell Road created a yearly oil slick, posing a traffic hazard. The grounds keeper re-imagined the landscape as a productive, educational asset rather than a maintenance problem, and contracted a feasibility study for a possible olive oil production program (UC Davis Media 2015). This fit with the educational values of UC Davis which specializes in agricultural research and already had campus areas designated for different types of production (UC Davis Long Range Development Plan 2003).

The Center was formed in 2008, a unique university/industry coalition that became economically self-sufficient in 2011 through production of olive oil, course revenue, research grants, and donations. The UC Davis brand of olive oil became so popular that areas for new campus groves have been designated to fulfill production demand.



4.5 Organic Orchard (1 of 3 groves)

Image: UC Davis Olive Center



4.6 UC Davis: Campus olive trees

Image: UC Davis Olive Center

Lessons Learned

This example demonstrates the power of perception for non-traditional productive spaces. Collaborative relationships, such as UC Davis's partnership with its grounds keeping department, enable creative problem-solving opportunities for an educational agenda.

Of particular note is that the large scale of demand for olive oil eventually outgrew the capacity of the productive space. This is primarily due to a change in purpose; what began as a problem-solving maintenance project evolved into a demand-based research and income generating sustainability project. Unlike the SEEDS student garden discussed prior, which resulted in minor changes to the design of the original location, this project required further space dedicated to production.

Civic Urban Agriculture in Scandinavia

TAGTOMAT: TEMPORARY VESSELS < EMERGENT COMMUNITIES

TagTomat, a design firm from Copenhagen, Denmark focuses on building community through storytelling and tactile engagement with its modular products made from recycled materials. The design-build firm seeks to “create green communities between houses” through a do-it-yourself framework of products, workshops, and video tutorials heavily advertised through social media (TagTomat website, 2014).

The firm is successful and growing, in part due to income generated by renting planters and furniture out for private/public events in urban locations such as public spaces, building rooftops and interiors. Their temporary installations, hands-on demonstrations and workshops for making seed-bombs or co-building planters have high community turnout rates.

Lessons Learned

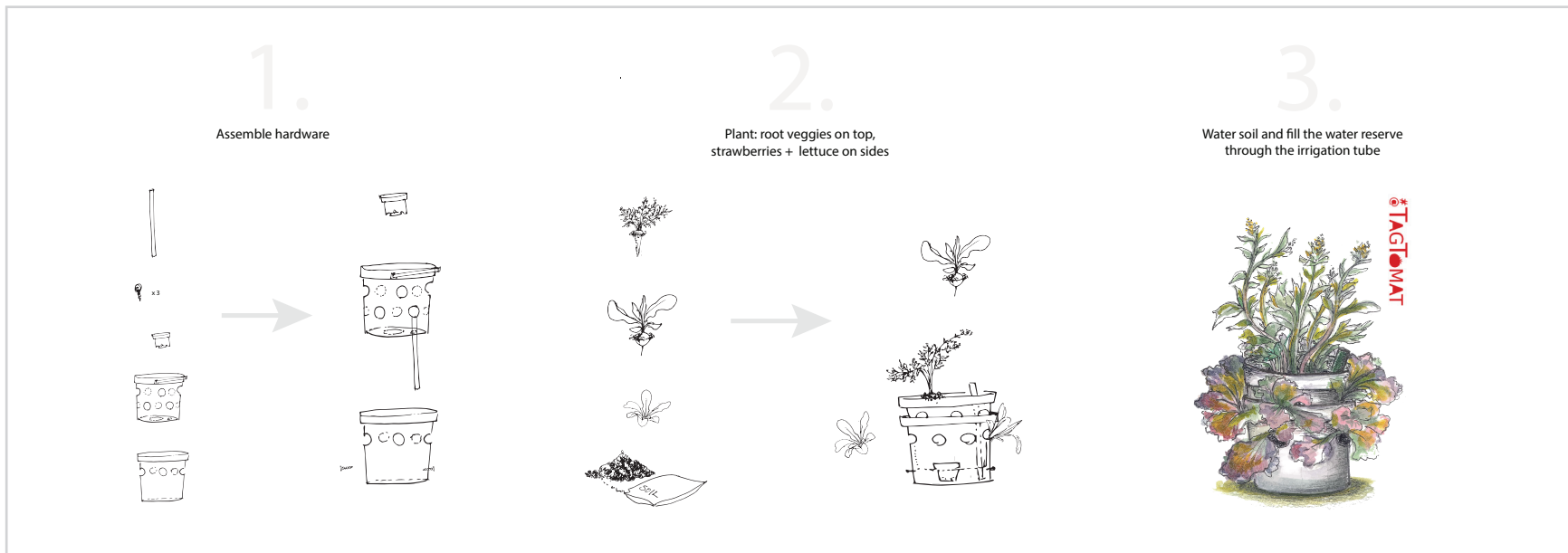
In workshops and promotional materials, the firm compellingly narrates the previous lives of the locally made, recycled materials that make up its sub-irrigated planter. This is an example of how a good story-telling object, made relevant to its context, can cultivate community attachment to a place and increase local participation as a result.

The strategy of container-based cultivation has clear advantages in an urban environment. The ability to transform commercially plentiful and cheap resources into portable, modular pieces allows their company to interact dynamically with the urban environment and operate as a growing for-



4.7 TagTomat Installation: Capillary bed and benches

profit green business. Additionally, TagTomat reported only having to re-fill their sub-irrigated containers twice during the summer of 2014, noted by the National Oceanic and Atmospheric Administration (NOAA) as one of the hottest years on record in Denmark.



4.8 TagTomat's Sub-Irrigate Planter Template - Bucket Model

A key component of TagTomat's practice revolves around growing food in the city through the use of low-technology, sub-irrigated planters. These vessels for growing plants in the urban environment are built from recycled commercial, food-grade industrial containers, ranging from a 350 gallon Intermediate Bulk Liquid Container to a gallon-sized ice cream tub. Pictured above is the Food Bucket, a hand held gallon-sized model.



4.9 TagTomat Planters for Majobo's Sjakkplassen

MAJOB0: NETWORKING FOR COLLABORATIVE PUBLIC IMPACT

In Spring 2015, Oslo's urban environmental agency initiated a urban agriculture-focused call for re-vitalizing Vaterslandparken, which was seen as a problematic public space. While not explicitly stated, it was generally understood that this regarded the loitering of the gypsy population which dominated use of the park.

A site-based intervention proposal by MAJOB0, a Scandinavian urban agricultural network organization whose primary goal is to promote the production of localized and urban organic food, was selected. The project would install a parklet called Sjakkplassen (or Chess Plaza), and MAJOB0 engaged local collaborators to both address the interests of the existing park users and invite participation by wider



4.10 TagTomat Workshops for Majobo

demographics. The actual installation of the site also brought in diverse participants drawn through lectures, workshops, and facilitated discussions. Additionally, a good portion of the labor was completed by a steady stream of people who stopped by out of curiosity. While many of those involved were global travelers who were unlikely to return to the space in the long run, the building process also found long-term stakeholders in the local users of the park, nearby residents, and students from the city's university.

Lessons Learned

Despite having only a couple months for turnaround from proposal to implementation, the success of this vibrant public space can be attributed to the network's ability to effectively engage existing human resources locally. Partnership with local organizations ensured enthusiastic implementation, while strong programming for local participation helped to identify committed community stewards and stakeholders. Short-term installation projects can be made sustainable, and one way of accomplishing this is to engage local collaborators in the planning process and program for site-based community participation.

The creation of inclusive public space can simultaneously address the and social/political issues that concern administrators and public officials while maintaining a focus on environmental sustainability and urban agricultural production.

5 Investigating Site + Program

SPROUTING OPPORTUNITIES FROM THE UW FARM

In support of UW's institutional agenda, ecological literacy is a great way to introduce people to larger sustainability issues by fostering place-specific connections and cultivating local community stakeholders. It promotes the mindset and appreciation of complex or nested systems required for future sustainability. Layering formal educational opportunities and nonformal tacit experiences helps to cultivate individual relationships with the land and a stewardship mentality that can plug back into larger civic and research conversations.

The UW Farm demands special attention as an educational productive organization that currently cultivates on the campus landscape in a very visible way, provoking spatial discourse over public space usage and functional aesthetics on a limited urban campus. Productive landscapes are visually differentiated, noticeably changed through human labor. Unlike sites of ecological restoration work, this unique visibility provides an orderly, visual frame for ecological learning that is accessible to the general public. Crop rows, plots, tractors, barns, greenhouses, and other farming paraphernalia are iconic symbols familiar to many people, but are often miniaturized and surprising to find in the urban context. The familiarity of these symbols is powerful. Remixing familiar icons in a new environment can provide an exciting and accessible gateway for engaging the wider public in conversations about sustainability, and the practical aspects of food systems.



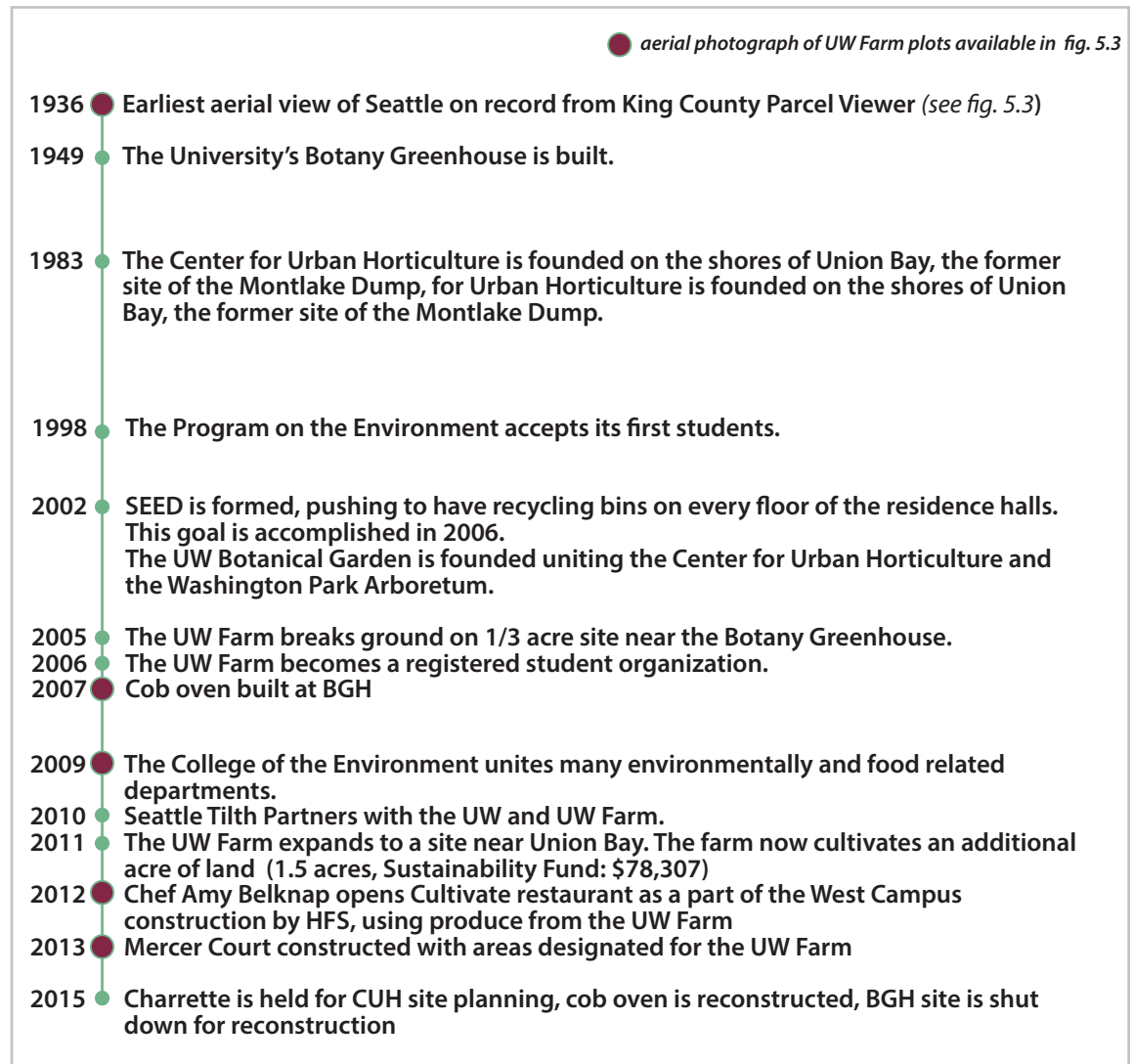
5.1 UW Farm Mercer Court Clubhouse Before and After

UW's currently positive climate towards innovative educational programming and sustainability initiatives signify an opportune moment regarding constructive and engaged work with the abundant existing natural and social resources available in the limited campus space. In particular, the recent hiring of the UW Farm manager provided incentive for collaborative visioning work through Participatory Action Research. This chapter introduces the UW Farm, overviews the organization's needs, and presents tools for future visioning.

Getting to Know the UW Farm

I first engaged with the Farm at the suggestion of a fellow graduate student living at Mercer Court its opening year. At the time I was co-running the Landscape Architecture student group (UWASLA) and wanting to benefit from my classmate's passion for making things, suggested that we mural the new indoor space dedicated to the Farm at Mercer Court. The mural developed into an educational experience, as we hosted a design charrette for the first stage. Installed in Spring 2015, the mural inspired me through the collaborative process and fuelled my interest for working with the Farm community. (See Appendix B for documentation of some of these activities).

The UW Farm is a campus organization rooted in a long history of campus activism. The organization charts its history back to the building of the Botany greenhouse in 1939, although the first ground broken for farming purposes there did not occur until 2005. It was formally registered as a student organization in 2006, with a paid Farm Manager hired in 2013.



5.2 UW Farm History

Data: UW Farm Primer

The Farm has since expanded cultivation from the original Botany Greenhouse, and currently cultivates numerous sites of varying scales in diverse environments, generally located on the campus periphery. As is typical of urban farming these sites are constantly in flux, with the UW Farm acquiring new sites while others are being torn down. The first site was recently shut down in 2015 owing to the the construction of the new Life Sciences Complex, but the Farm was able to procure additional spaces in the form of the planters on the back terrace of the McMahon residential dorms and the student P-Patch in front of Fluke Hall, although the P-Patch was closed at the end of 2016 owing to disuse.

The UW Farm is a volunteer, grassroots organization supported by a dedicated and longstanding group of core campus members, mainly faculty and staff and students from the College of Arts and Sciences as well as the College of the Environment. Many of these core members have invested a great deal of time and energy to the project without compensation, continuing their formal involvement



5.3 UW Farm Plots: Historic Aerial Compilation

Images: King County Parcel Viewer

University of Washington
BOTANIC GARDENS

COME VISIT THE UW FARM

an educational, community-oriented resource for people who want to learn about building productive and sustainable landscapes

5 min. walkshed
5 min. walkshed

McMahon
CUH
Mercer Court

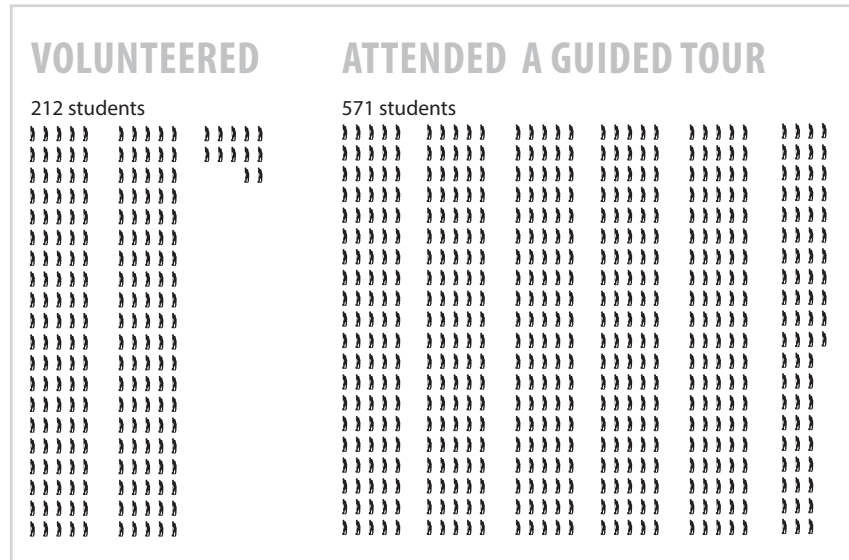
**SP 2016
VOLUNTEER HOURS**

Monday	2:30 - 5:00	CUH
Tuesday	11:30 - 4:00	Mercer Court
Wednesday	1:00 - 5:00	CUH
Thursday	11:30 - 4:00	Mercer Court
Friday	10:00 - 12:00	McMahon
	1:30 - 5:00	CUH
Saturday	10:00 - 3:00	Alternating Mercer + CUH

Curious about growing food on campus?
Come by and help out!

THEUWFARM@GMAIL.COM FOOD.WASHINGTON.EDU/ FACEBOOK.COM/UWFARM

5.5 UW Farm Volunteer Hours + Sites, Spring 2016



5.6 UW Farm Student Involvement 2015

Data: UW Farm Annual Report 2015



5.7 UW Farm Increases Sales 2013-2015

Data: UW Farm Annual Report 2015

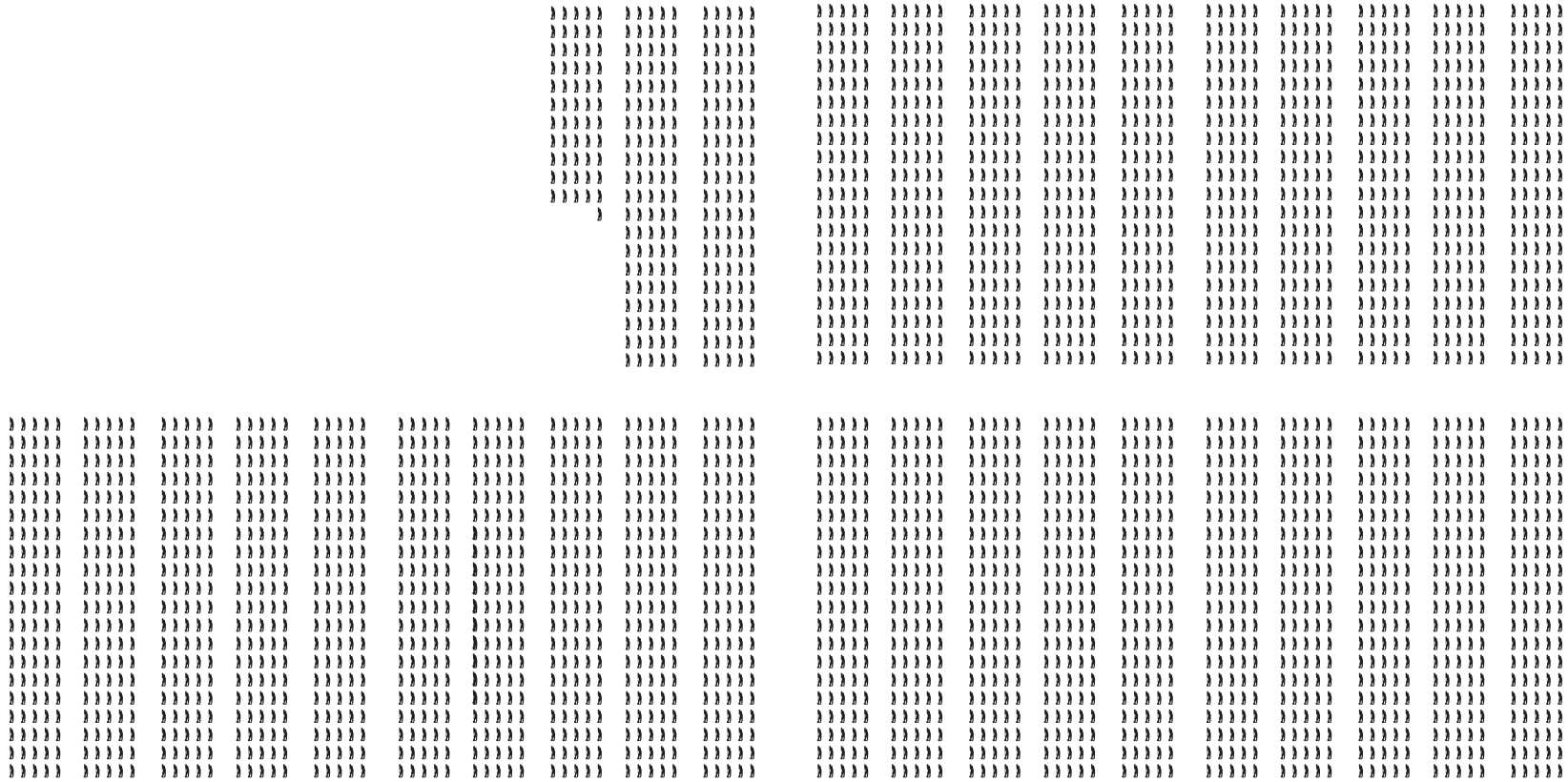
QUANTIFYING CSA PRODUCTION

UW Farm had 37 subscriptions in 2016

1 subscription = 1 box for 22 weeks (June -September)
 1 box = vegetables for 4 people/week



22 weeks of CSA production = **1 week of food for 3,256 people**



5.8 UW Farm CSA Production 2016

Data: UW Farm Annual Report 2015

The Farm's primary activities are cultivating vegetables for Food and Housing Services and a Community-Supported Agriculture program during the summer months, where members pick up a weekly box of food. The UW Farm also make donations to local food banks and are in dialogue with the student Food Pantry regarding their efforts in campus food security. They put out a weekly schedule outlining daily opportunities for volunteering at the different farm sites, which are often attended by student and staff community members. On a monthly basis, leadership meetings called the "Dirty Dozen" invite anyone interested in the farm to join in conversation and to organize.



5.9 UW Farm Event Frequency

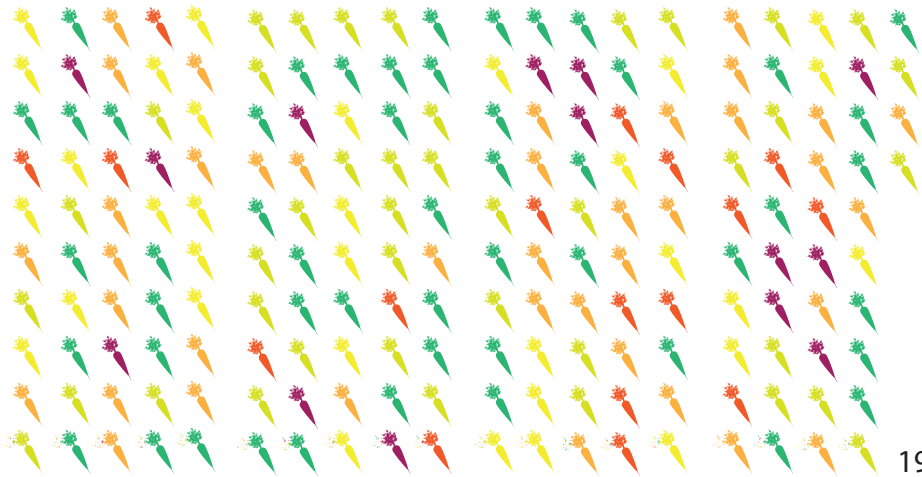
Data: UW Farm Annual Report 2015

CROP VARIETIES GROWN

2014



2015



5.10 UW Farm Increases Crop Varieties

Data: UW Farm Annual Report 2015

AMOUNT OF FOOD DONATED

a bushel of apples = 45 lb.



5.11 UW Farm food donations in 2015

Data: UW Farm Annual Report 2015

Assessing Opportunities

UPDATING THE UW FARM SWOT

Before the hiring of the UW Farm Manager, advocates for the Farm conducted a SWOT (Strengths-Weaknesses-Opportunities-Threats) analysis which was passed along as an informal document and can be found in *Appendix A*. Here, I've removed items that have since been addressed (such as the need for a functional website) and developed three categories: **PEOPLE**, **PROGRAM**, and **VALUES**.

Confirming what has been generally acknowledged and outlined in previous sections, the SWOT identifies the UW Farm's strengths in its passionate, diverse volunteer base. It further benefits from interdisciplinary alliances across diverse campus populations, due to strong shared values around sustainability.

The SWOT identifies two consistent weaknesses regarding working with the student population and general campus awareness of the UW Farm. Given that the program will continue to exist on a university campus, the issue of the student turnover has limited mitigation strategies. Solutions

STRENGTHS PEOPLE High-energy membership base Faculty support Ability to draw in leaders	WEAKNESSES PEOPLE Student turnover Campus recognition
PROGRAM Integration into the curriculum History of productivity and responsibility Research opportunities	PROGRAM Summer break coincides with high productivity Limited organizational structure
VALUES Multidisciplinary Flexibility Stewardship	VALUES Public health precautions Total sustainability is impossible
OPPORTUNITIES PEOPLE Collaboration with student groups Community outreach (local and national scale) Collaboration with UW programs	THREATS PEOPLE Student turnover Campus recognition
PROGRAM Favorable climate for year-round production Production of food for sale Contribute to UW campus zero waste goal Expansion of media to attract attention Funding through grants	PROGRAM Summer break coincides with high productivity Limited organizational structure Limited access to land Cool climate limits certain types of production
VALUES Current food movements, increased popularity Urban agriculture as aesthetically pleasing	VALUES Public health precautions and liability Total sustainability is impossible Urban agriculture as unaesthetic Security

5.12 Updated UW Farm SWOT Analysis (SWOT)

Data: see Appendix item UW Farm SWOT Analysis for original

towards improving campus recognition bear more potential. Consequently, in the “Improving Campus Visibility” section, I explore campus recognition through two main lenses:

- (1) visibility in the landscape and
- (2) visibility and accessibility of programming.

Furthermore, as both a planning and landscape architecture student, I wanted to address the potential threats listed, with specific regard to programming. I noted these as falling either into threats related to production (limited access to land, and cool climate limitations) or programming threats that could be addressed through educational programming. This latter concern is derived from the hope that improved educational access will help foster discussion and action around values perceived as threats to the current program.

COLLECTING NEW VISIONS

To supplement the updated SWOT analysis, it was important to also capture a snapshot of the current visions held by the active members of the Farm. During the monthly Dirty Dozen Farm Leadership meeting in March 2016, I conducted a twenty minute exercise with nine participants to collect their thoughts on the future of the UW Farm as well as their campus use patterns and perceptions of the campus landscape (see Appendix E for documentation).

A postcard exercise invited participants to envision the future of the Farm. On the first side, participants were invited to depict their ideas graphically. On the second side, they were invited to list three ideas. The broadness of this prompt helped encourage the sharing of big, abstract ideas in graphic and written forms. This provided information about current concerns and hopes which could then be compared to past concerns from the SWOT. Many of the members wanted to see the Farm and its activities expanded, including a more visible presence on the landscape and a larger productive and educational impact.



5.13 Postcard Visioning Spring 2016

Image: see Appendix E: UW Farm Campus Visioning Workshop

SIMPLIFYING THE GOALS

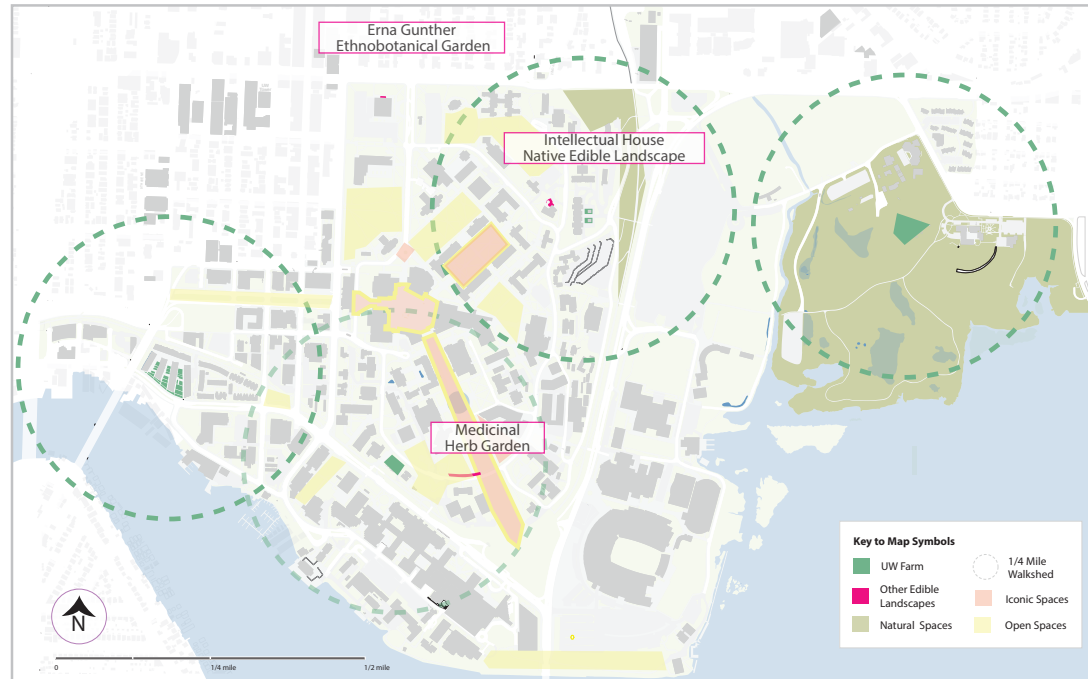
The current members’ desire to see the Farm’s presence and activities amplified on the campus supported the SWOT analysis’ identification of campus recognition as a weakness. Both also saw educational programming and productive outputs as a high priority, confirmed through informal conversations with the Farm and its stakeholders. Using inductive and deductive content analysis, three goals which can be addressed through a planning approach were identified:

1. Improving Campus Visibility
2. Programming for Education, and
3. Programming for Production.

Identifying Tools

This chapter presents tools and opportunities that could benefit the Farm for each of the identified categories of

- V** Improving Campus Visibility (p. 51)
- E** Programming for Education (p. 66)
- P** Programming for Production (p.68)



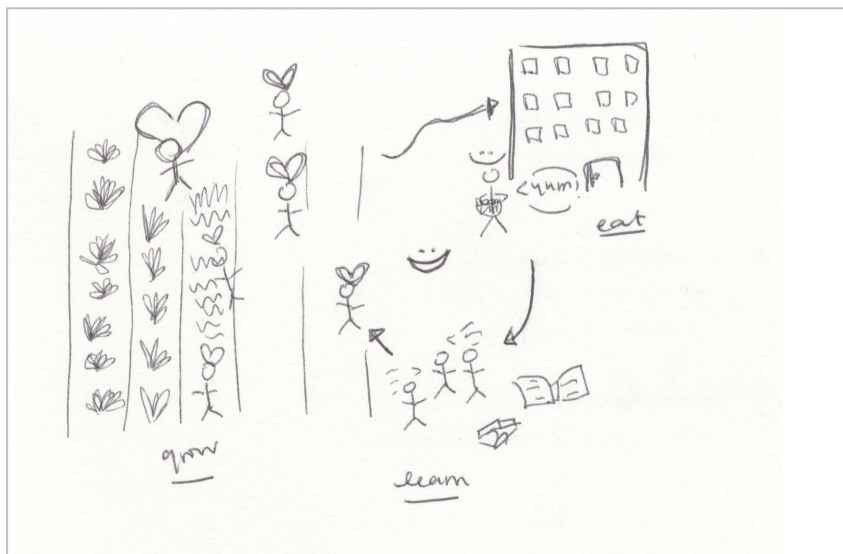
5.14 Current Productive Spaces on Campus

Base Map: UW Creative Communications, UW Facilities Services 2012

The UW Farm plays a key role activating the productive potential of the campus landscape using both open and interstitial spaces, as well as urban and natural spaces.

[I] would like to make sure that every student that comes to UW knows they can farm... [I] would like for the UW Farm to be a big part of UW's image.

Postcard Response
UW Farm Visioning Workshop



5.15 Postcard: Vision of the UW Farm
Image UW Farm Visioning Workshop Participant



IMPROVING CAMPUS VISIBILITY BY ANALYZING CAMPUS USE

The concept of campus visibility has a dual aspect: social and physical. On one hand, the Farm is a physical landscape. On the other hand, it is also experienced within the social and educational context of UW, such as signage at District Market marking that the salad greens originate from the UW Farm.

How do you improve the visibility of an organization that is best represented within a specific spatial context? First, it is important to better understand the context within which the Farm's educational and productive programming exists. I analyzed the thematic uses of existing buildings and key campus features, and developed the following maps in this section to visually express the formal core of campus, and four zones that I identified based on their thematic uses:

5.16 Campus Zones Key

These symbols will be used as shorthand to describe where interventions take place or are appropriate for.



Formal Core



Residential Zone



East Campus

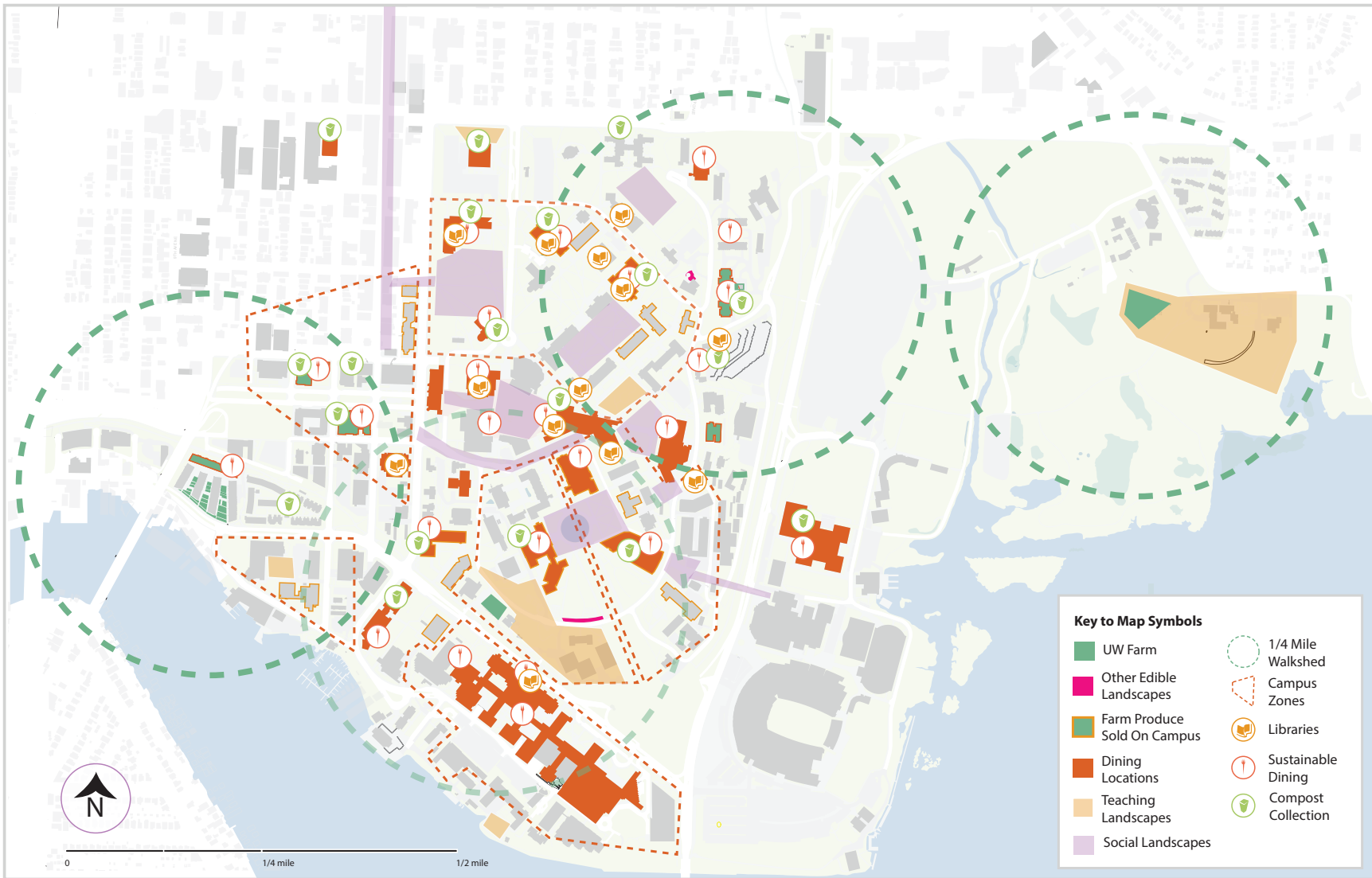


Waterfront Zone



South Campus

When considering a new project, these maps are a spatial, analytical resource to help understand the character



5.17 Resources for Food System Educators and Stakeholders

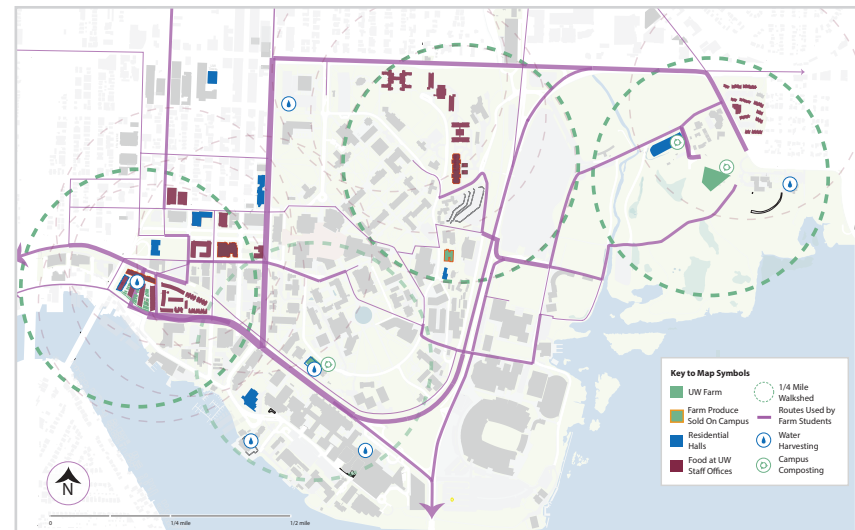
Base Map: UW Creative Communications, UW Facilities Services 2012

Data: Martin 2008, UW Learning Space Assessment 2013, Food at UW

of a site and inform site design. For example, what classes related to food are being taught nearby, and might there be opportunities to collaborate with the class (see fig. 3.2)? Proximity to a bike trail or bus stop might invite prioritizing large visual indicators and provide them with an area to park or stop. Which people work or live nearby who might be able to help care for a space?

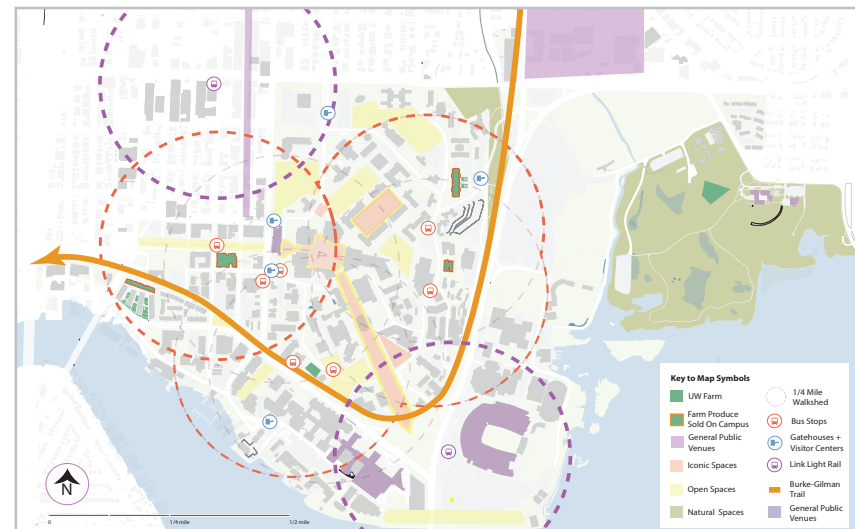
These maps are intended to represent the various influences that could shape or affect an individual's relationship to a site. The maps are a curated collection of information from sources including Google Earth, the UW Planning Office, and Justin Martin's prior thesis on small-scale agriculture at UW. The information used ranges from being point specific locations to more broadly defined areas. Quarter-mile walksheds identify nearby features within within a five minute walk and help prioritize what the closest opportunities are.

While these analyses have been separated into various categories on these two pages, later maps are simplified for readability. The items retained include resources and points of potential interest on the landscape to the food community, such as transportation and perceptions of campus landsc. Transportation features include bus stops, gatehouses and visitor centers, the link light rail and the Burke-Gilman trail. Resources specific to the food community are also noted, such as buildings which host food research and education, the Food at UW staff offices, the UW Farm, and edible landscapes.



5.18 Resources Available for Campus Growers

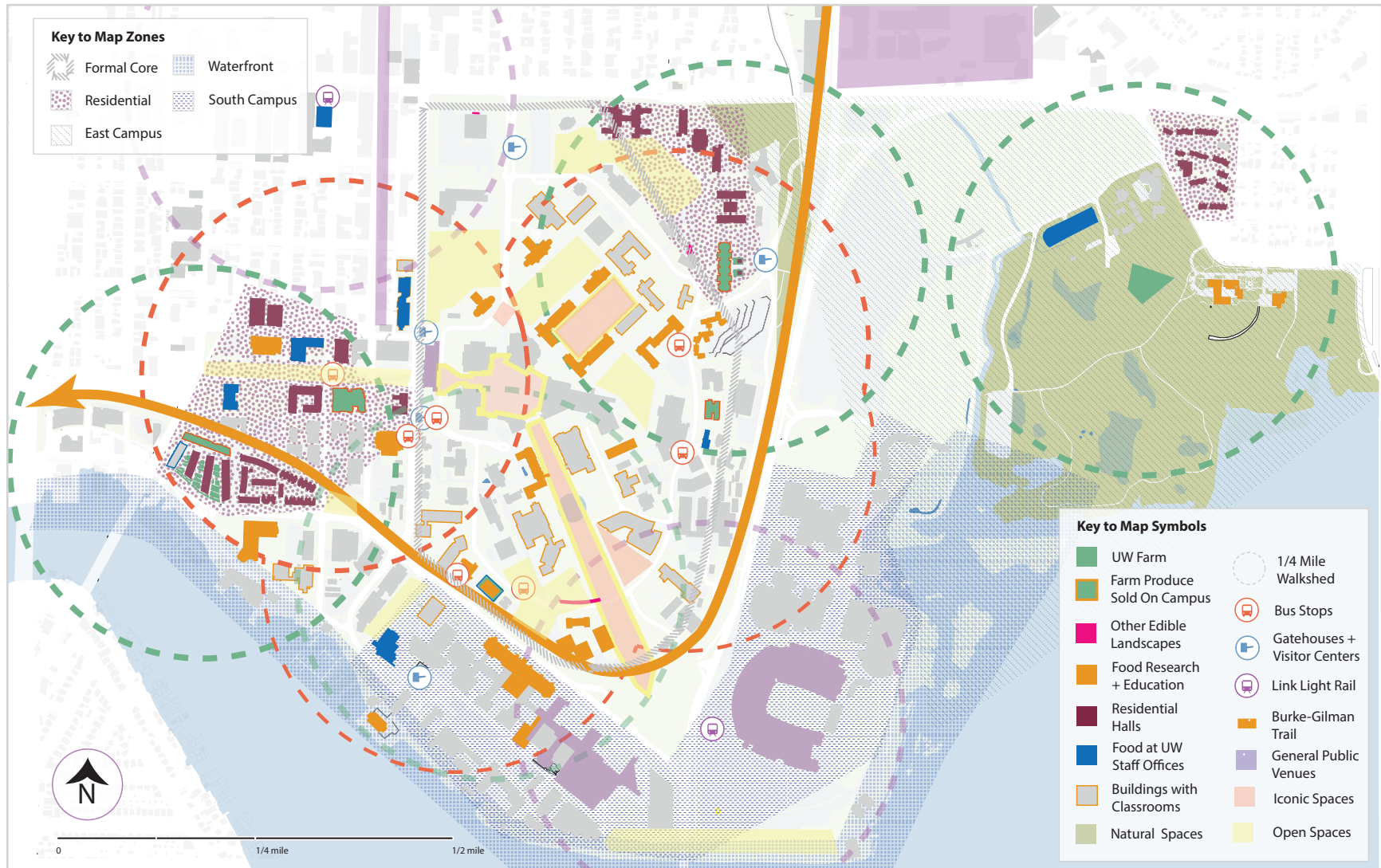
Sources: see 5.17



5.19 Potential Resources for General Visitors to the Campus

Sources: see 5.17

CHARACTERIZING THE CAMPUS



5.20 Overlaying Zones on Campus Resources

Base Map: UW Creative Communications, UW Facilities Services 2012

Data: UW Creative Communications, UW Facilities Services 2012, Food at UW, Martin 2008



5.21 Formal Education Zone

Sources: see fig. 5.20



5.22 Residential Zones (2 of 3)

Sources: see fig. 5.20



5.23 East Campus Zone

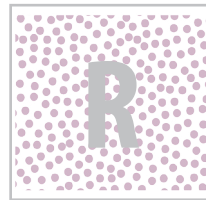
Sources: see fig. 5.20



Formal Education as the Campus Core

The campus core is dominated by the buildings that house classrooms, research labs, and administrative activity where the majority of UW's formal academic activities occur. The outdoor landscapes here range from interstitial passing corridors to iconic landscapes which draw the general public onto the main campus.

Well-celebrated spaces include the ceremonial north entrance of Memorial Way, the iconic view of Mt. Rainier over Rainier Vista, and the blooming cherry trees in the Quad.



Residential Zones: Slow Food, Daily Life

From the UW Farm site at Mercer Court to the District Market and Cultivate, the West Campus is defined by valuing high quality, sustainable food for campus residents. Housing and Food Services (HFS) drives food sustainability development with a focus in the West Campus, but its influence also extends to the residences north

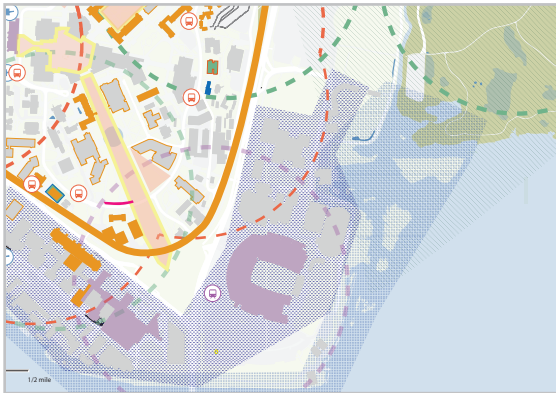
of campus and the Bay Laurel Catering company. Not directly included within the purview of HFS's food supply mentioned are the residents of family housing in the northeast Laurelhurst Village. These residents, however, are within walking distance of the UW Farm's CUH site, where CSA box pickups are scheduled.



East Campus: Food in the Urban Wilderness

The East Campus is characterized by natural areas held by the Center for Urban Horticulture, the Union Bay Natural Area (UBNA), and Yesler Swamp. The UW Farm's largest site is located within UBNA, with a unique pastoral character more typically found in rural farms and the most room for experimentation and production.

Adjacent programs include on-going habitat restoration activities and Seattle Tilth's program for at-risk youth, which tends an adjacent farming plot and sells the produce at the U-District Farmer's Market.



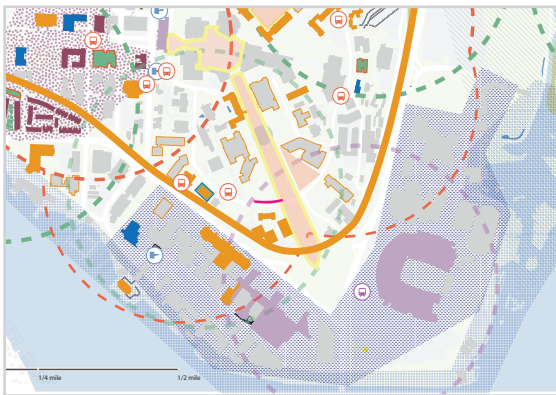
5.24 (East) Waterfront Zone

Sources: see fig. 5.20



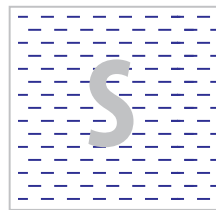
Waterfront: Recreation and Transportation

A unique aspect of the campus is the waterfront, which wraps around the southern and eastern perimeters. This zone is a unique habitat, considered by the Campus Landscape Framework as its own space. The waterfront area is surrounded by heavily trafficked areas, from the well-used waterways to the congested Montlake Cut and the Montlake and University Bridges in the south with a generous riparian area along the Union Bay Natural Area in the east. Development of such infrastructure disrupts uniform pedestrian access to the waterfront. The majority of UW's recreational facilities are also located on the Eastern and Southeastern edge, including Husky Stadium and the Waterfront Activities Center.



5.25 South Campus Zone

Sources: see fig. 5.20



South Campus: Health

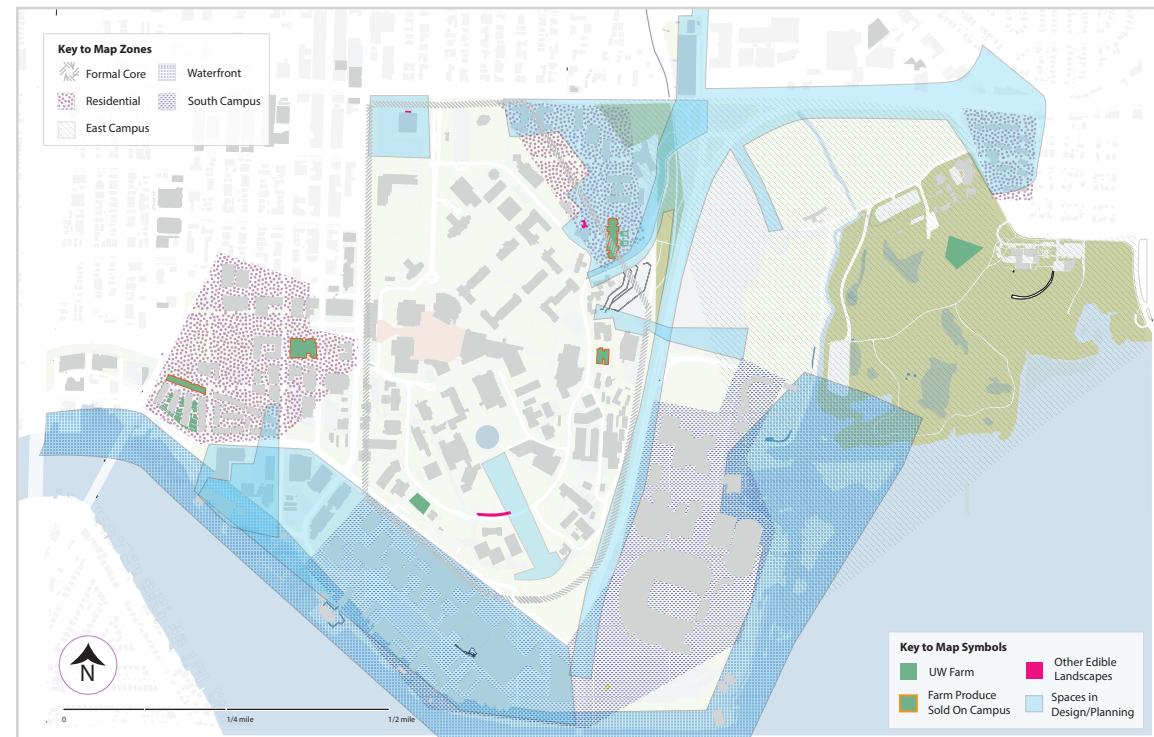
The south campus overlaps with the waterfront zone, including the areas between the Montlake and University Bridges and along the Montlake Cut. The entrance to the South campus is flanked by the UW Medical Center and Husky Stadium. With the recent completion of the U-District light rail station anchors the space as an urban transit hub for pedestrians.

CHARACTERIZING THE CAMPUS

Future spatial opportunities

Advocating for spatial design on campus is best accomplished via continued dialogue with the University during the planning and design phases. This section overviews some future campus space plans that are clear opportunities to advocate for productive functions to university planners before final decisions are implemented. Some projects in various planning phases are in proximity to existing edible spaces, and dialogue could incorporate planning that increases the visibility and use of these edible spaces, such as by facilitating pedestrian activity or incorporating edible plantings into the design of the upcoming project.

The projects listed in this section were identified through UW's online open house prior to the Campus Framework Plan's release, investigation of the UW Office of Planning and Budgeting's listed projects, and discussion of campus projects with members of the UW faculty and staff. The current publication of the Campus Landscape Framework has since amalgamated a more complete list of existing projects in planning phase,

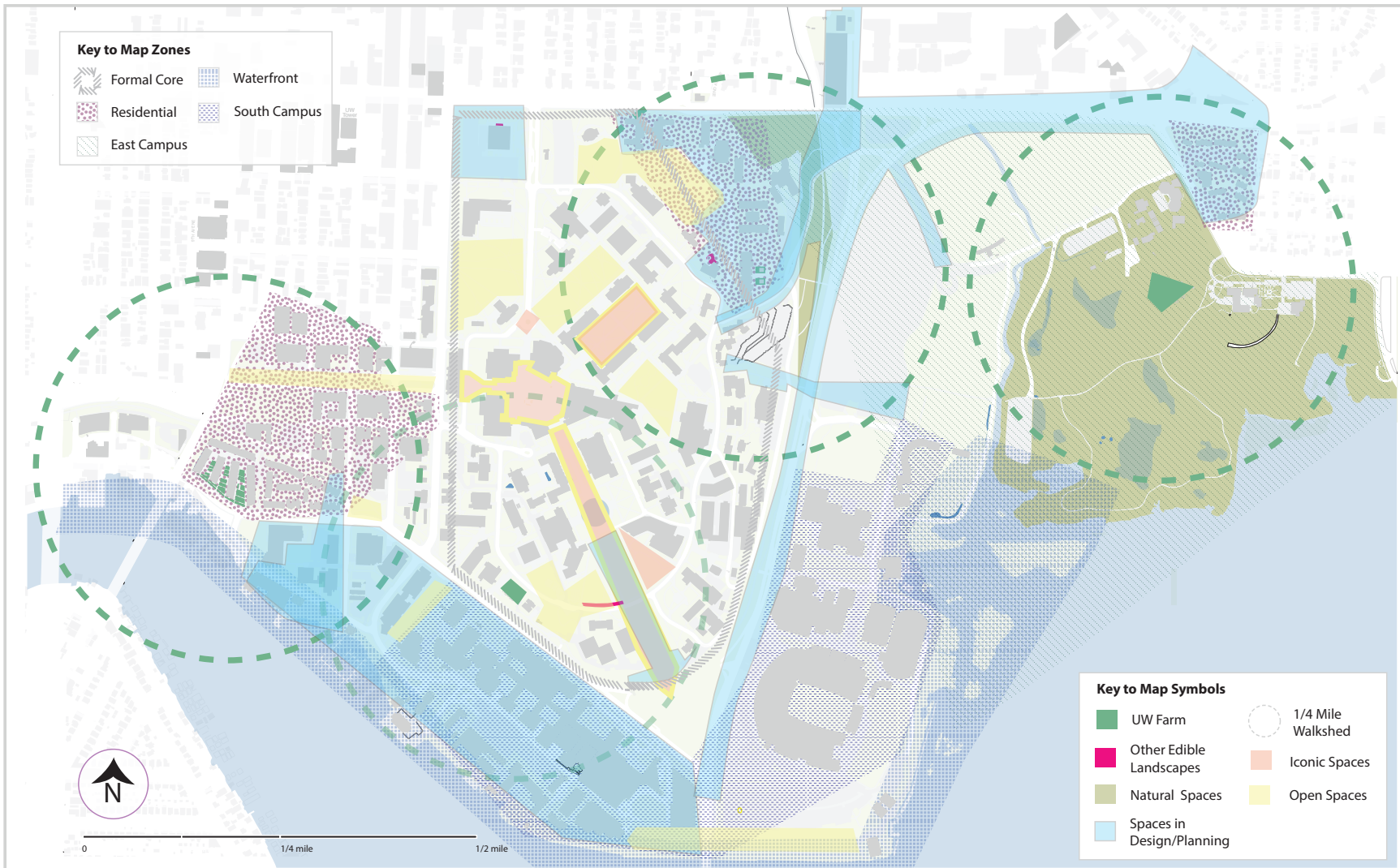


5.26 Future Spatial Opportunities in the Campus Zone Context

Base Map: UW Creative Communications, UW Facilities Services 2012

Data: Food at UW, UW Office of Planning and Budgeting

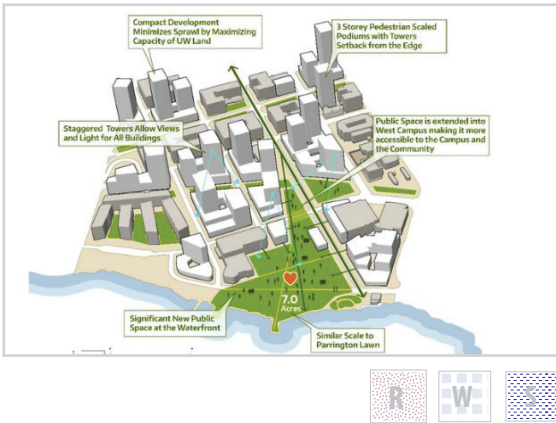
design phase, construction, and recent completion that could be referenced for additional opportunities.



5.27 Future Spatial Opportunities in Relationship to Productive Landscapes and Campus Zones

Base Map: UW Creative Communications, UW Facilities Services 2012

Data: UW Creative Communications, UW Facilities Services 2012, UW Office of Planning and Budgeting



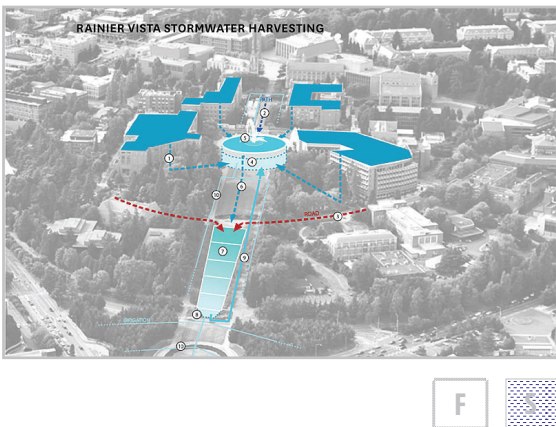
5.28 West Campus Waterfront Park

Image: UW Office of Planning and Budgeting 2016



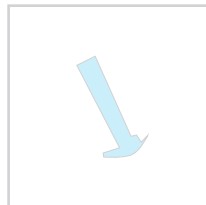
West Campus Waterfront Park

A 7 acre park is being proposed in proximity to the Mercer Court Farm site, 4 acres of which are designated as one of several mitigation projects for the construction of the SR 520 to I-5 highway. At minimum, future planning should include signage directing users to visit the nearby Farm.



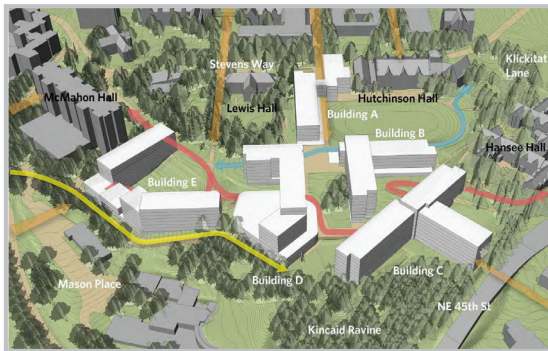
5.29 Rainier Vista Proposed Design

Image: Michael Van Valkenburgh Associates



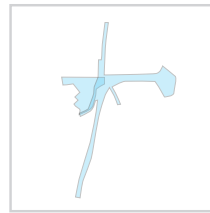
Rainier Vista

The iconic Rainier Vista area including Drumheller Fountain and surrounding buildings is in a transitional phase design-wise, and with a pedestrian bridge to connecting UW light rail station, the stadium and the vista. 2008 design plans (see fig. 5.29 left) focus on urban stormwater management, ground plane/sub ground plane plans. While the above ground area provides an expansive field area not often found in urban spaces, some additional considerations regarding its location on the formal campus core must be sensitive to campus culture, current uses, and management practices by UW Facilities. Additionally, as Rainier Vista's core significance lies in its iconic framing of Mt. Rainier as viewed from the center of campus outwards, plans must consider the historical and cultural legacy of formal outdoor spaces by the first campus planners, the Olmsted Brothers.



5.30 North Campus Massing and Landscape

Image: Kieran Timberlake, Olin



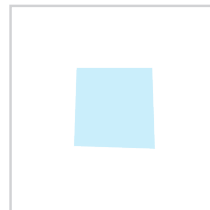
North Campus Residences + Pend Oreille Entrance

The Office of the University Architect in Planning & Budgeting has published proposals for the Pend Oreille entry. This includes the extension of connective landscape to the North campus residences (see fig. 530 left) whose landscape is currently in development by Olin Partnership Landscape Architects. As in the example of McMahon Hall, students at the residence halls would be good stewards of a productive space, with the additional benefit of being close to a campus entrance for visibility.



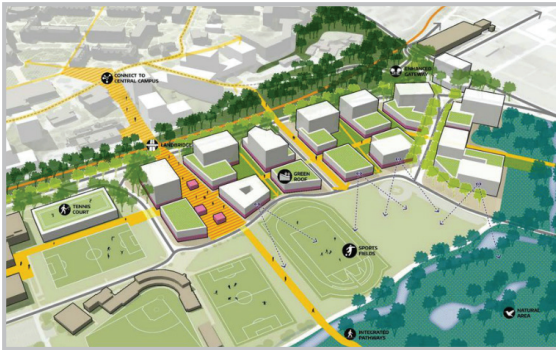
5.31 Burke Museum Camus Field

Image: GGN



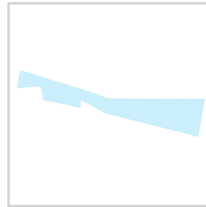
Burke Museum

The redesign of the new Burke Museum landscape by GGN includes a proposal for a camas field on the south side of the project site. This will be a noteworthy landmark as camas is a native plant that is of significant edible value to indigenous tribes in the Pacific Northwest. All of the plants for the landscape are being grown and donated by Oxbow Native Plant Nursery, located in the nearby Snoqualmie Valley. Oxbow is a unique organization that has a dedicated educational mission, and is seeking to turn this collaboration with the Burke Museum into an educational opportunity by documenting the growth of the plants via social media.



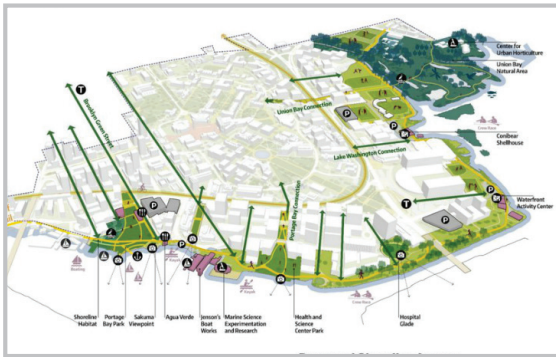
5.32 Land Bridge + E12 Parking Lot

Image: UW Office of Planning and Budgeting 2016



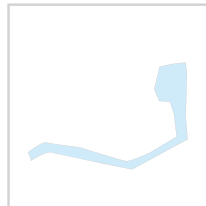
East Campus Land Bridge + E12 Parking Lot

The proposed land bridge is a move to create better lateral connection from the central campus to the Center for Urban Horticulture (CUH), in close proximity to the UW Farm, in the Campus Framework Plan. The current parking lot is also seen as opportunity for future development with some open space to be developed on. At minimum, future planning should include signage directing users across the bridge to the Farm.



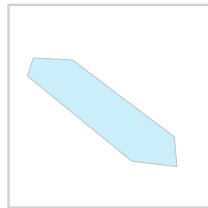
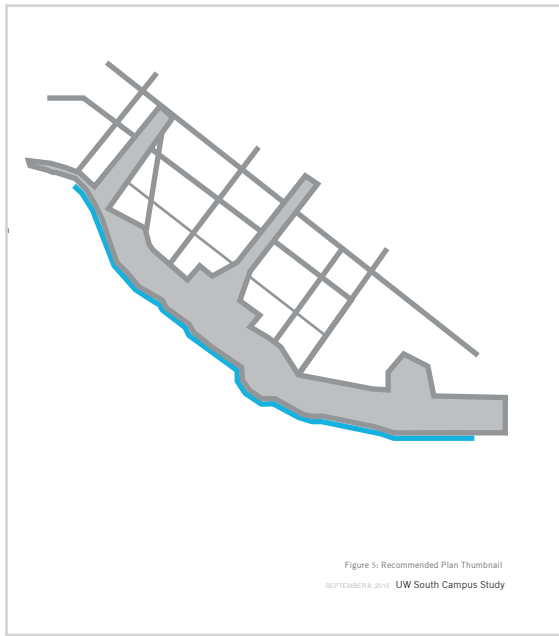
5.33 Shoreline Access Planning

Image: UW Office of Planning and Budgeting 2016



Shoreline Access Connective Planning

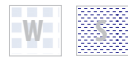
Connective planning for the shoreline is on the radar for the Office of Planning and Budgeting, although the projects may appear piecemeal. These projects should be monitored, as the shoreline could provide an opportunity to connect the Mercer Court site to the CUH site. As a connective experience, the concept of “agri-leisure” advances the notion of production and recreation activities as having similar environmental and recreational incentives, such as productive spaces along the waterfront.



South Campus Study Phase 2 (Planning)

This project continues planning work to modernize and upgrade the existing Health Science facilities in the South campus, looking at more specific issues including phasing, shared facilities, and site connectivity. The easternmost edge of the Medical facilities is right next to the Montlake triangle, making it a dynamic entrance with great potential. Using the lens of productive landscapes to connect the athletic and medical facilities, the theme of health as expressed through plant-based food and medicine in the landscape offers a thematically appropriate connective juncture and intriguing pedestrian experience. With the Medicinal Herb Garden hugging the inner edge of campus and the Montlake Bridge on the other side, there is a clear gradient of access both visually and physically.

Especially with the recent opening of a Link Light Rail station at the UW stadium, a connected transportation network has the potential to increase general public access along the southern waterfront edge as well as up into the campus. This has the potential to shift from a car-oriented strip with swathe landscape plantings designed for observation through a quickly moving vehicle, into a productive and sensory urban public space for slower moving pedestrians and bicyclists.



5.34 South Campus Recommended Plan

Image: Perkins + Will 2015

SIGNAGE ON CAMPUS

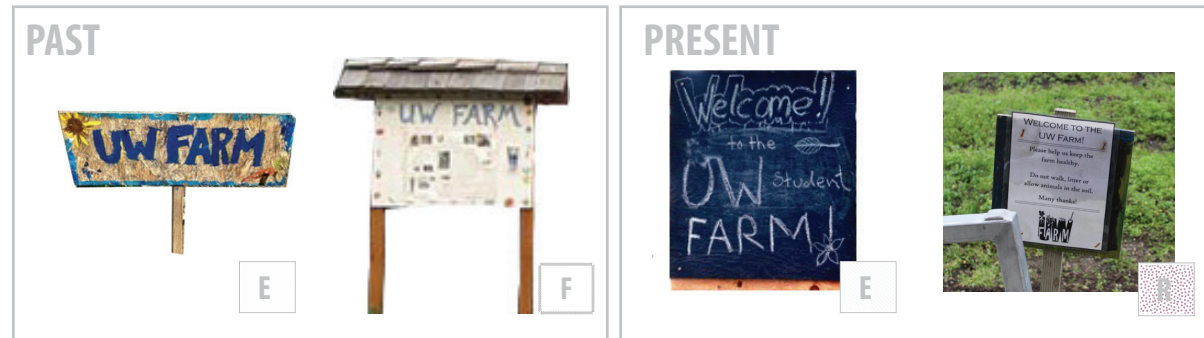
How Encoded is the UW Farm's Presence?

Signs demarcate what we should notice about the identity of a physical space, especially unfamiliar ones. They may serve many purposes, such as giving direction, marking entrances, providing safety or hazard warnings, or providing information.

With regards to the Farm's goals of improving both campus visibility and educational programming, signage provides three important functions. Firstly, it attracts pedestrians. Secondly, it can provide information and educate about initiatives happening in the landscape. And thirdly, it can be used in programming for public visitors, guiding and directing people through the landscape in a tour fashion with physical

signs or digitally, such as the Brockman Tree Tour or through QR codes.

In this section, I classify existing signage by organization and by landscape character, demonstrating the variety in current UW Farm signage. In surveying this variety, I hope to highlight an important question for future projects: what are the appropriate forms (physical and/or virtual) for representing edible spaces on campus? What kinds of landscape educational experiences should formal, informal or nonformal, and what prior knowledge do each of these experiences require?



5.35 Signage at the UW Farm

UW Farm

Signage on the Farm is generally hand crafted and sparse, containing temporal information such as crops being grown, and showing varying degrees of use and wear.

programming and ecological restoration, and addressing public health issues such as food safety.

Additional signage could be used to increase the [informal] educational programming and also increase visibility and appreciation for the farm's work. Similar organizations such as Marra Farm, located in South Park Seattle (see *fig. 5.36*), model the possibilities for delivering a depth of information, such as illustrating site histories, detailing current



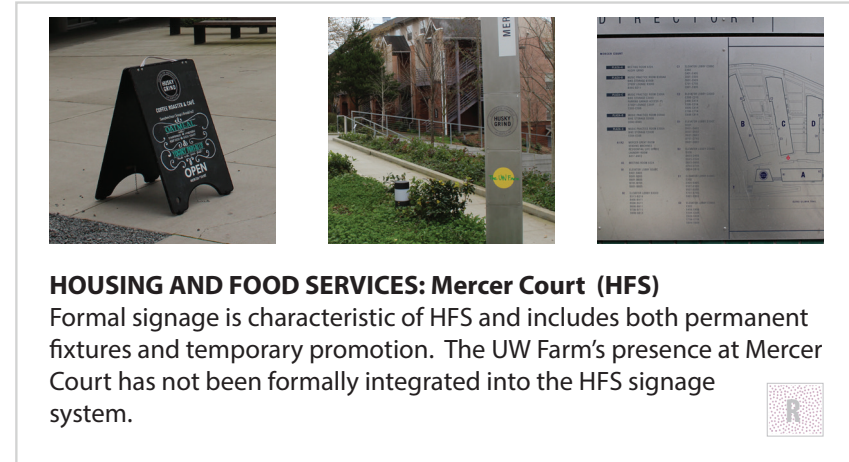
5.36 Signage at Marra Farm in Seattle

Partner Organizations

Housing and Food Services (HFS) and the UW Botanic Gardens (UWBG), both institutional partners of the UW Farm, each express a unique brand through their signage. Signage is generally limited to way-finding with some exceptions of promotion, such as a signboard used to attract customers inside HFS and the large educational board at the entrance to Union Bay Natural Area (UBNA).



5.37 Signage at the CUH



5.38 Signage at Mercer Court

Landscape Restoration: Signage in Context

Signs impact the visibility of landscape interventions. The three images shown right (see fig. 5.39) demonstrate three different markers for signalling landscape interventions, with only the far right being marked with a sign. Located on central campus just southeast from the Quad, the signed intervention guides expectations for proper behavior on site, likely due to management practices by the UW Grounds.



5.39 Signage in the UW Landscape



PROGRAMMING FOR EDUCATION

Needing to establish itself as financially stable and sustainable organization, the UW Farm currently invests more attention to economic and productive improvements rather than to developing educational opportunities. However, the operational and productive functions of the UW Farm offer unique formal, informal and nonformal learning opportunities, exemplified by the paid internship positions which train students into skilled, efficient laborers, and provides necessary experience and skills to further academic curiosity in this field.

Educational programming was also self-identified as a goal for the UW Farm through the SWOT and visioning exercises, and has great potential to align with larger campus values to enrich educational experiences on campus. It is important to also understand that facing economic depression, educational institutions are likely to cut programs which do not automatically show financial returns or which are deemed non-essential. By offering educational opportunities, the UW Farm can ensure its continued relevance and value to UW as an academic institution both in the present and the future.

An ideal way to accomplish this would be through securing funding for an educational program manager. Alternatively, this chapter identifies some educational programming tactics to develop “quick wins” and attract specific demographics. By using and building upon pre-existing resources, these strategies are sensitive to the realities of university faculty who often juggle various professional responsibilities, in which education is only one aspect.

QUICK WINS

Mirror existing models

The Brockman Memorial Tree Tour is an excellent example of a virtual, self-guided educational resource that interacts with the landscape and requires minimal maintenance after the initial implementation. The precedents section of this book also lists programs which can be referred to for inspiration.

Reinforce existing programs

Programs seeking tacit opportunities for students could be excellent partners for the UW Farm, which is constantly in need of volunteers. At Lander Hall, nearby the Mercer Court farm operation, the Food Exploration Living Learning Communities is an untapped resource which could be an excellent partner in recruiting participants to maintain the planting beds. Service learning courses that tie coursework to community-identified problems have matched volunteers to the UW Farm, many of whom stayed on beyond the duration of their courses. Finding new courses and coordinating with instructors of existing courses could be ways of integrating these tacit educational experiences into formal academic courses.

ATTRACTING SPECIFIC DEMOGRAPHICS

Gaining Recognition as an Educational Opportunity


Very much linked to the UW Farm's visibility on campus, the on-site opportunities and their educational value require more consistent messaging and promotion. This can be done through the usual methods of PR and outreach, both through physical signage, social media and digital communication, and networking with individuals and organizations on campus.

Designing Complementary Spaces for Specific Populations

When a landscape is designed for a specific population in mind, it becomes easier to advocate for its relevance and search for programs that might find overlapping uses. The recently installed children's garden at the UW Farm's CUH site has low-raised beds and a key-hole design to allow younger children an immersive experience without compromising the actual production site.

Attract action-oriented volunteers through tactile experiences on the formal campus


Hosting project workshops, such as developing container plantings, is one way to get people excited and involved in growing things while promoting action-oriented interventions in campus zones more heavily dominated by buildings, such as residence halls and the medical center.



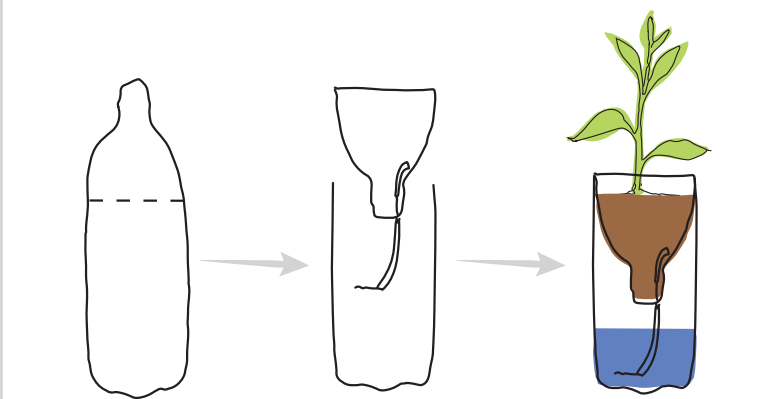
Virtual information can be linked physically on an object in a location.

Class outreach draws in those with relevant academic interests.


Consistent use of the existing logo helps stabilize identity.



5.40 Strategies for attracting target demographics



Sub-irrigated planters can be easily made from recycled materials - the design reduces both water use and maintenance needs for cultivation.



5.41 Recycled bottle sub-irrigated planters

P

PROGRAMMING FOR PRODUCTION

Ultimately it is both the available space and limited labor that constrains the possibilities for production and landscape programming. Concentrated areas of open space have predominated conceptions of productive landscapes, due to commercial practices seeking to maximize profit. However, it is important to recognize that productive landscapes have other outputs. Native edible plantings, soil building, and fuel production exemplify the potential for different landscapes to give back.

This section seeks to broaden the scope of productive landscapes by introducing a variety of interventions based in traditional methods. Experimental resource management and production represent an excellent educational opportunity while creating new landscapes not traditionally considered for production in a dense urban context, and modeling sustainability principles by closing food systems loop from waste to inputs for production.



The Botany Greenhouse yearly grows scarlet runner beans in containers alongside the building entrance, creating a unique, seasonal green tent.

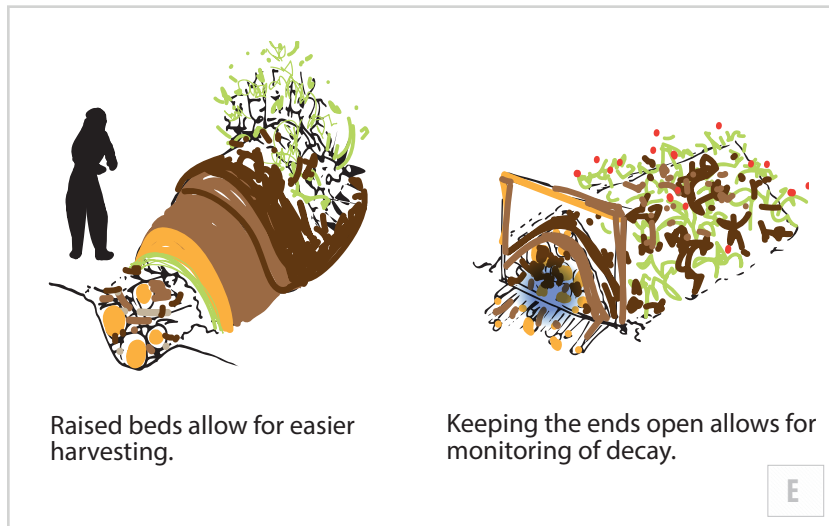


5.42 Temporary, seasonal production using vertical space

HUGELKULTUR

Building soil with green waste

German for hill culture, the Hugelkultur is a permacultural method that builds raised beds on top of slowly decaying large woody debris. It is especially good for areas with compacted or poor soil quality. Owing to the porosity of the woody debris slowly releasing liquids and nutrients, it requires very little watering maintenance once established. Hugelkulturs can range in size and height, up to five feet tall. The hugelkultur below is approximately two feet by ten feet long, and was installed using green yard waste.



5.43 Hugelkultur: Benefits

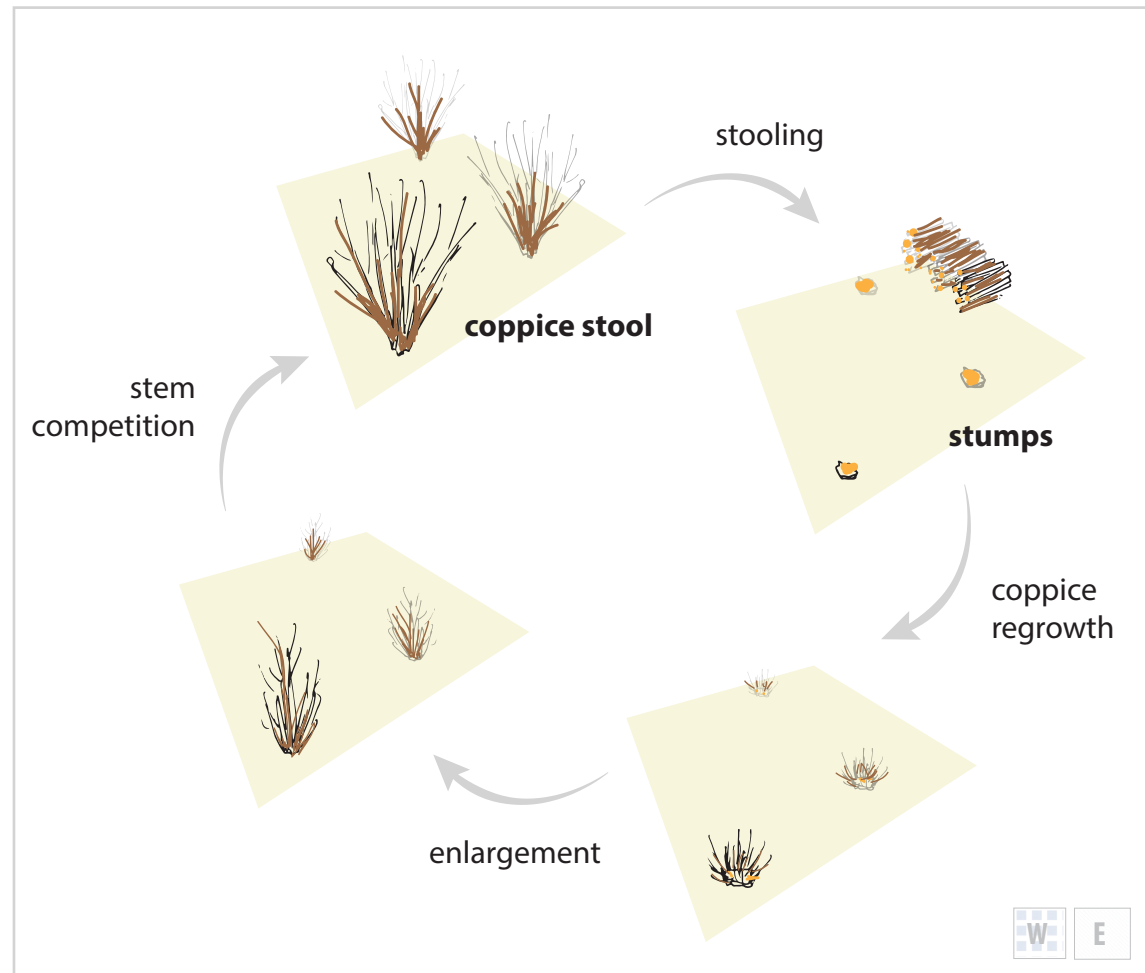


5.44 Hugelkultur: Installation

COPPICING

Growing and managing fuel production

UW hosts biofuel research for industrial production and although production of such biofuels are not appropriate to the campus landscape, some localized forestry practices of growing fuel such as coppicing are feasible. Coppicing is a method of harvesting wood from trees that can be done with a variety of tree species, traditionally practiced in segments which provides biodiversity in the habitat with differently aged and harvested trees. A limited coppiced woodlot would be able to meet a small demand, such as the UW Farm's wood burning pizza oven which is only occasionally used.



5.45 Coppicing: Wood production and management

CHINAMPAS

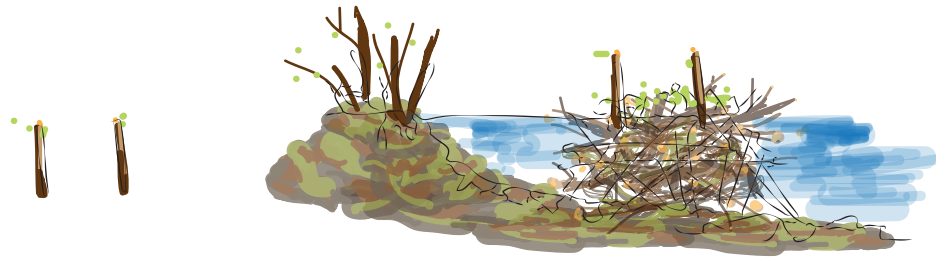
Creating productive spaces along the waterfront

Practiced by the Aztecs, chinampas are artificial islands in shallow lake beds fenced off by stakes and filled with wattle (Van Turenhout 2005). These beds were part of an extensive aquatic agricultural system, typically measuring 2.5 meters across by 30 meters long. Used to grow crops such as maize, squash, beans, amaranth, chillies, tomatoes, and peppers, this system benefits from a consistent water source owing to capillary action of the bed immersed in water, and lake sediment as a source of fertilization. This concept of cultivation has been experimented with nearby on the Bullock's Permacultural Homestead, a learning farm located on Orcas Island.

1. Mud and wood are layered.



2. Willow stakes stabilize edges.



3. Willows can be coppiced.



5.46 Chinampas: Components and benefits

6 Planning Strategies

PATHWAYS TO A MORE SUSTAINABLE CAMPUS LANDSCAPE

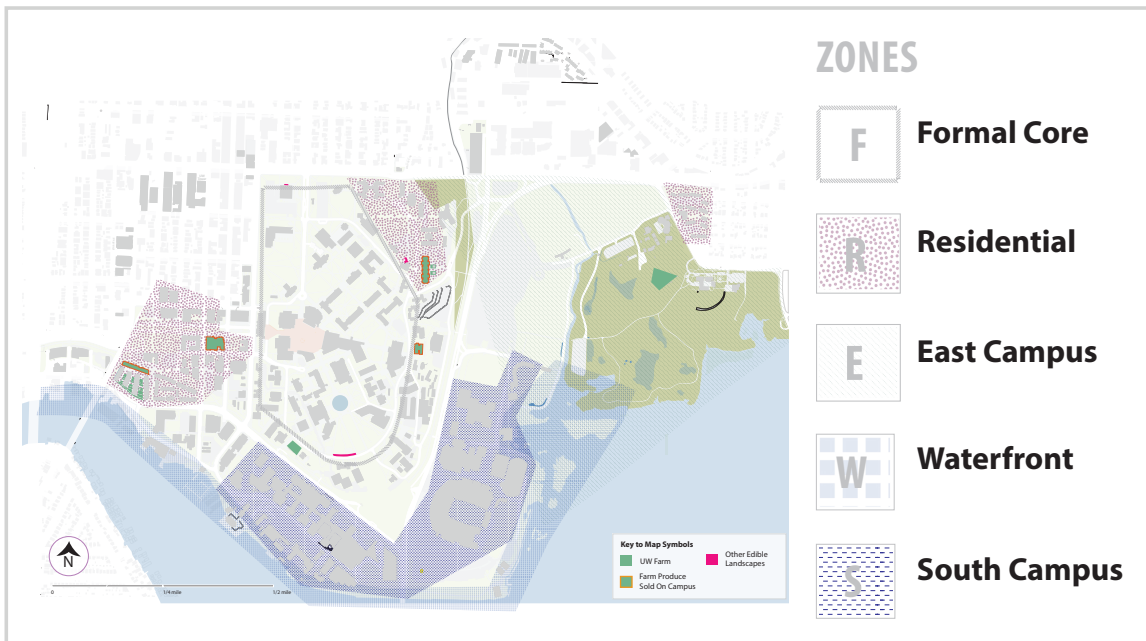
Pathways are useful for identifying key actors and their perceptions of improved urban futures with an emphasis on the means by which they frame and enact their particular visions in specific social and physical contexts. Pathways serve as a heuristic tool to structure and assess the various approaches to urban greening that are shaped by particular cultural and political pressures.

Andrew Karvonen
Pathways of Urban Nature: Diversity in the Greening of the Twenty-First Century City

This thesis has sought to highlight the value of productive, educational landscapes, as is currently embodied by the UW Farm, and the potential of such programs to diversify and broaden educational opportunities for the local campus community regarding sustainability in the urban landscape. Previous chapters established a foundation by documenting how values are discussed, how people gather and network, and how programs can interact with the landscape. They have identified key actors, assessed the campus climate, examined precedents, and explored challenges and opportunities regarding educational productive landscapes.

Using the aforementioned resources and documentation, this chapter formulates potential action via three pathways. These are:

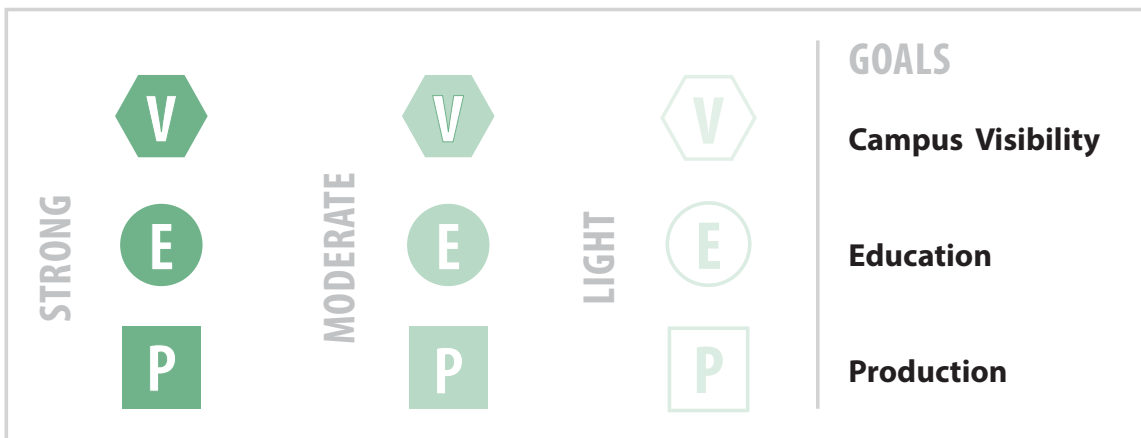
- cultivating sustainable participation,
- temporary installations, and
- re-imagining campus landscapes



6.1 Campus Zones Key Map

Base Map: UW Creative Communications, UW Facilities Services 2012

Sited in the zones delineated in the prior chapter under Characterizing the Campus (*fig. 6.1*), projects range from very feasible to boundary-stretching and are intended to jump-start conversations around developing productive educational landscapes on campus. These pathways loosely sketch out tactics and tools and demonstrate the potential programs and partners involved in the use and stewardship of a productive site.



6.2 Pathways Goal Key: Degree to which campus goals are addressed

Using the same symbols as used in Chapter 5, pathway suggestions indicate the degree to which they further the original goals of campus visibility [V], educational programming [E], and productive programming [P] (*fig. 6.2*).

Cultivating Sustainable Participation

Productive landscapes have great educational value. However, incorporating an educational agenda into the daily and yearly rituals of productive farming while managing a temporary workforce with varying levels of skill requires a developed plan and organizational structure that falls outside of typical farm planning and management. At the same time, such programming is essential to the long-term sustainability of the UW Farm program.

One suggestion, as previously mentioned in Chapter 5, is to divide the current manager's duties into two separate positions: a production manager and an educational coordinator. Robust educational programming could also help relieve the labor demands of production by scaling volunteer participation to address the unique rhythms of the academic and agricultural calendars. An educational coordinator could also match opportunities from the previously outlined campus zones, outlined in Chapter 5, with different campus needs to develop edible food programming.

The following suggestions can be sequenced as a good way to start and frame a planning process, with the possibility of overlap or repeating in a cycle.



Regular communication with allied disciplines and programs

Regular communication with allied disciplines and programs is required to identify how a space might be able to serve multiple functions, by identifying key partners (both current and potential) and assessing potentially overlapping uses. The UW Farm currently broadcasts immediate opportunities to students and staff through a weekly newsletter, but should expand their communications agenda to increase campus visibility. For example, the annual report could be sent to distant supporters such as faculty and administration listed on the Food at UW website.

Formal incorporation of a campus-wide steering committee with robust representation by students could ensure access to campus decision making bodies and mediate student dialogue with campus planners and decision-makers, especially regarding educational programming and spatial planning. Less centralized initial communication efforts could include outreach to individual organizations soliciting comments and suggestions before developing a unified agenda.



Developing curricula by seasons

After possible overlapping uses are identified, curricula can be developed to bridge education and production. Farming needs and campus demographics change with the seasons, thereby providing different learning opportunities throughout the year. For example, during the winter season which is traditionally low in production needs, the Farm could dedicate more time to educational programming related to assessing and improving farm operations. During the summer months, when the campus population is low, the UW Farm could outreach to the larger Seattle community, for example through summer activities for children.

One way of harnessing volunteer work to its maximum economic efficiency is by mapping different tasks related to seasonal requirements for production to relatable academic curriculum, tying service-learning to practical outcomes. This aspect can also be grown beyond the UW community to coordinate with other educational systems in Seattle.

Farmers don't have an "off season."

No matter what type of farming someone does, farming is almost always a year-round job. As someone who is primarily growing vegetables, my winters are much slower, but I am still active. I sell some veggies year round, in addition to the meat and eggs that I partner with my in-laws to raise and market. I harvest some produce during the winter, and I care for many flats of seedlings. I do record keeping from the previous year, planning for the year to come, ordering and picking up supplies, creating a marketing plan, researching, etc. I also attend conferences and workshops during the winter in order to improve my business.

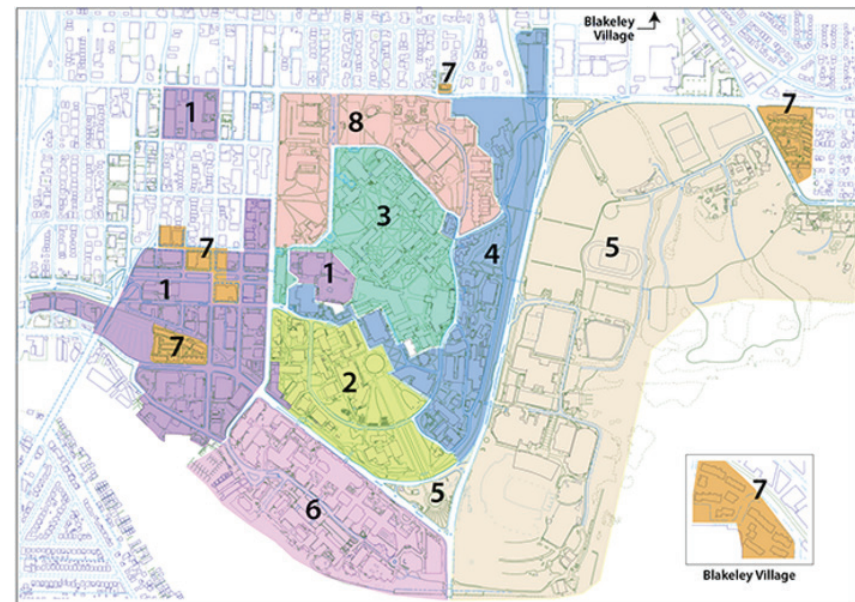
*Maggie Bowling, Old Homeplace Farm
Here's What I Need You to Know About Farming*

VEP

Campus landscape maintenance partnerships

Considering longevity and maintenance, appropriate partnerships must be identified to care for the unique needs of the spaces that host these programs. For any possible sites, maintenance responsibilities must be negotiated between the Farm, UW Grounds Management, and other partners. One way of meeting maintenance needs would be to build it into the seasonal educational curriculum.

The Farm should also familiarize itself with its partners to understand their operations and the limitations of what is reasonable to request. For example, UW Grounds Management is structured into separate crews which are assigned different parts of the campus.



6.3 Campus Maintenance Map

Image: UW Grounds Management

Temporary Installations

The concept behind the idea of temporary installations and “quick wins” is to create new, quick projects that stimulate the community into tactile participation, as exemplified by TagTomat in Chapter 4.

TagTomat’s first project was a workshop funded by the local government that took place in a housing courtyard. 15-20 families from the housing complex built a small garden on the courtyard shed roof consisting of 20 sub-irrigated planters. This generated local interest from another neighborhood council funding climate-mitigation projects, which resulted in a subsequent larger-scale sidewalk installation. Through a series of workshops, residents installed 30 1,000 liter planters, creating a lush seating area with flowers and food crops fed by rainwater funneled from the drain pipe of the building. This scaling of projects and moving from private space to public space demonstrates how effective programming and education can involve the community at a low-level of pre-required knowledge, cultivating the constituency that is interested in and demands larger-scale opportunities or projects.

Geared towards the temporary student population, the temporary installations in this section represent a sequential pathway, each growing slightly in scale, and moving students from the privacy of the residence hall rooms to involvement in a public landscape intervention. This pathway gradually encourages and sanctions tactile participation in public space, with each location as a stepping stone that draws participants further into the public.



6.4 Seed Bombs: Community space activation technique

Product: TagTomat

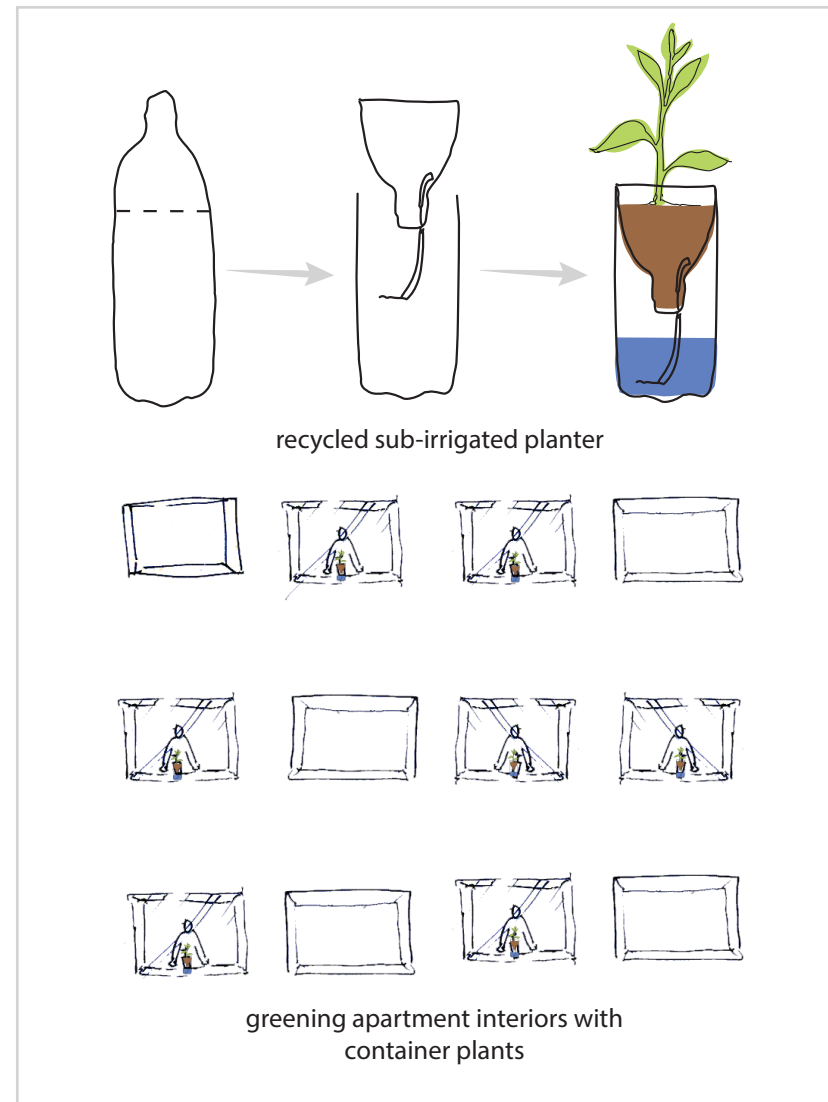
The temporary nature of the installations is advantageous in a campus environment. Natural degradation of the plants precludes the need for maintenance, and allows for replication of the activity throughout the year. They require minimal costs, recycling easily accessible materials without any major or permanent investment in space. As a gateway experiential educational opportunity, it whets the interests of students in urban food systems and productive landscapes with an eye towards the larger goal of building public eco-literacy and a sense of stewardship.

Some of the most creative project ideas come from inspirations close to home, which inspire enthusiasm and excitement. For example Mads Boserup Lauritsen, founder of TagTomat, drew inspiration for the foundational model of a sub-irrigated planter from a similar craft project that his parents did with him as a young child. This tool is best used in a flexible way, and should not feel like a chore! Scaling up fun, participatory activities, this pathway is highly flexible and encourages using creativity and collaboration to generate community excitement and discovering the visions people have for changing their environment.



Mobilize the community through small workshops

Initial interventions should focus on meeting potential participants in their locations of residence, work or study, encouraging spontaneous participation and requiring low levels of commitment. For example, a workshop transforming recycled plastic bottles into sub-irrigated planters could be held in the residence halls, which they can then take back to grow food in their rooms. Similar container planting workshops have been held in the past by the registered student organization SEED (Students Expressing Environmental Dedication) jointly with Housing and Food Services. Location-specific interventions have the added benefit of creating contact with local management and organizations, possible future partners. Partnering with the right organizations or people can make substantive educational programming possible. For example, for the container plantings, the Farm would be able to provide materials (such as seeds for edible plants) and knowledge (information on how to grow and care for the plants).



6.5 Indoor Container Planting Workshop

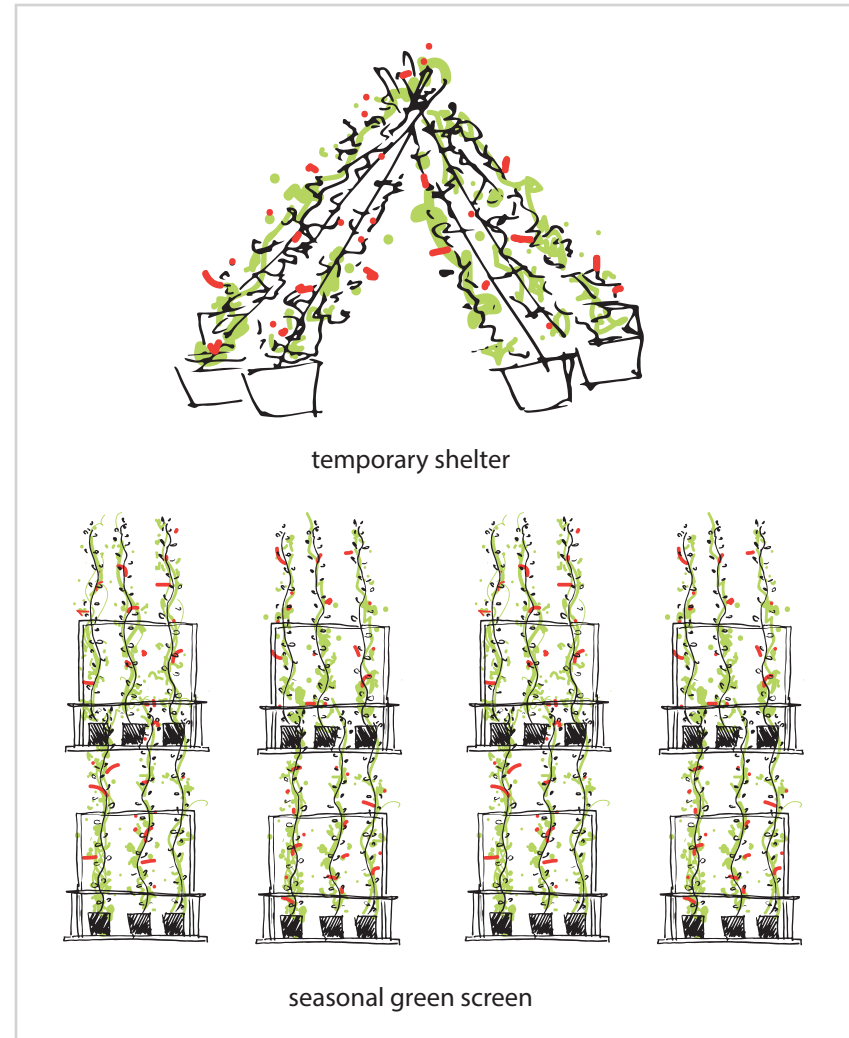


Offer blueprints for individual, local interventions

This second intervention intends to provide additional resources for people who are already interested in the ideas to take on more ownership through easy installations which they maintenance themselves. Building from the momentum and enthusiasm of initial workshops, offering blueprints empowers students with an accessible next step. Distribution of blueprints and ideas can help establish the organization's identity as an educational resource and improve its campus visibility.

Larger versions of the previously mentioned sub-irrigated planter can be used to build a seasonal green screen. Seasonal, aesthetic, and edible, showy scarlet runner beans can highlight vertical spaces as a unique opportunity to grow food in the urban environment while requiring minimal watering. This project has been implemented for many years along the Botany Greenhouse by manager Doug Ewing, who also suggests stringing biodegradable hemp between apartment balconies as building community through sharing in shaping the growth of these vines.

Conceptually, these project can help students expand their pre-existing conceptions of urban space, demonstrating the possibilities of layering landscape use to meet aesthetic, food, privacy, and environmental needs.



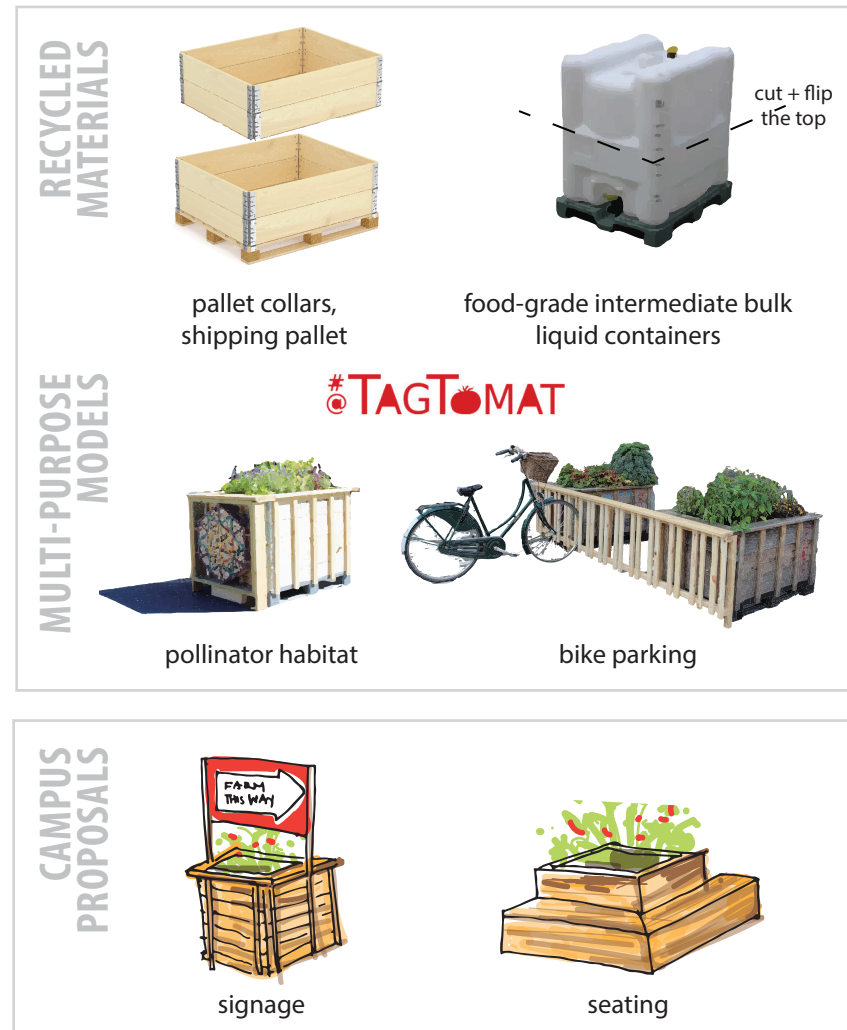
6.6 Outdoor Container Planting Interventions



Launch projects into public space

Dovetailing with the energy and interest generated in the local community, pilot projects use experimental, moderate scale interventions to initiate public conversations around values and space with a focus on community empowerment and action. Encouraging a community consciousness around eco-literacy and stewardship helps to mobilize the understanding of and demand for wider-scale sustainability initiatives. Some questions to be posed at this stage are: What are the community's values? How does the community wish to see a space transformed?

Because these public space projects will be developed in conversation with the community and administration, the pathways approach acknowledges that the final project will be transformed through these conversations. Here, the greater creative requirements of these projects present a unique, advanced educational opportunity for students, researchers and professionals in related fields. Continuing in the vein of sub-irrigated planters, one possible public space intervention could be installing versions of TagTomat's capillary planters, which can be modified into endless permutations as seen in figure 6.7.



6.7 Public Space Container Planting Models

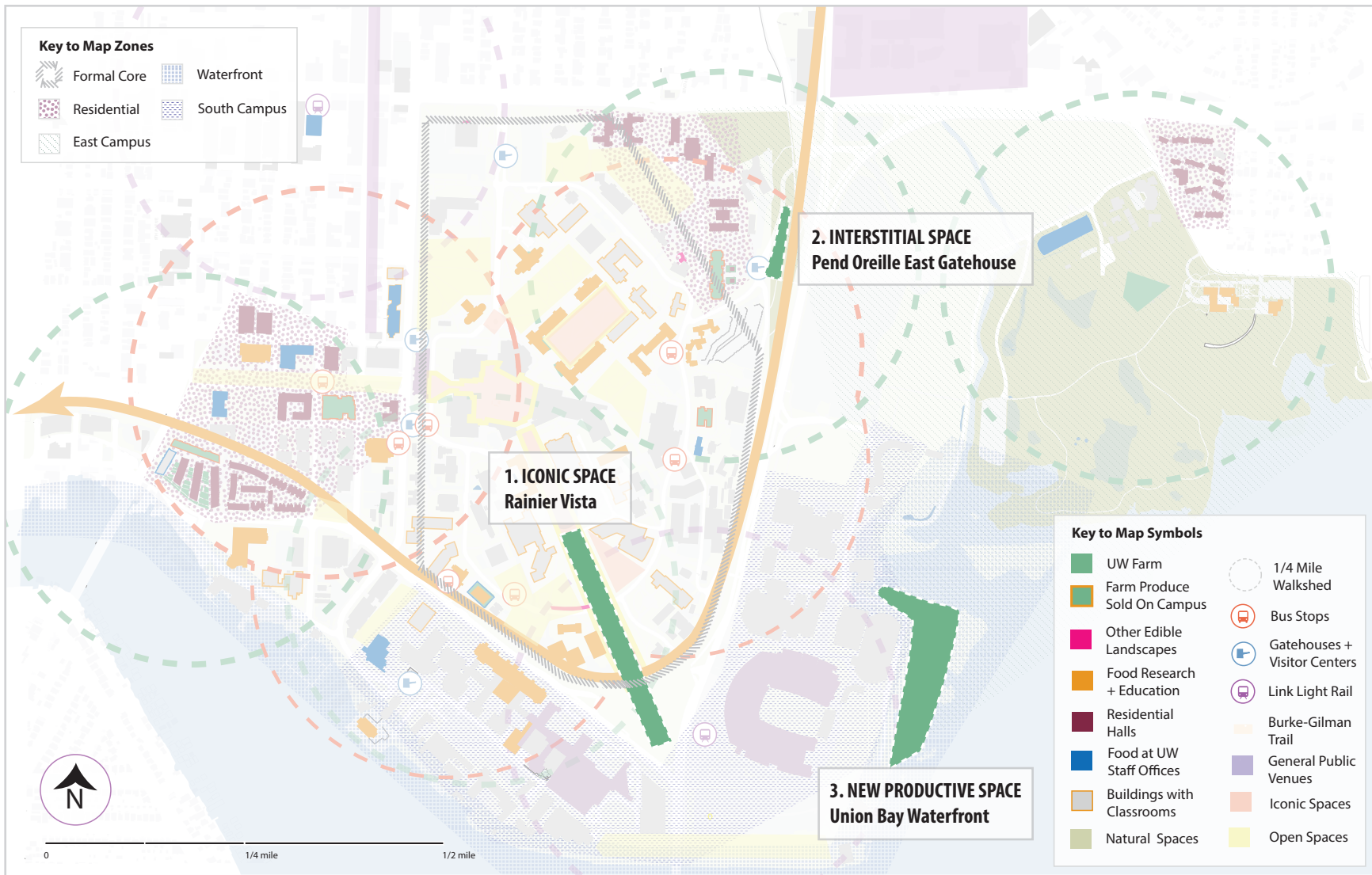
Re-imagining Productive Campus Landscapes

Landscapes mature and develop at a much different rate than human perceptions may account for. For areas with high population turnover, each year new residents will enter a space and have no pre-existing conception of its development over time. Without witnessing the changes firsthand, it can be challenging to remember that landscapes are not immutable, but always changing. This sense of seeming immutability is reinforced by landscape design and urban planning processes which are often top-down and administrative in nature. Constant engagement with the community is needed to identify shifting societal needs. Perpetual imagination and re-imagination is needed to shape the landscape to meet those needs.

The historical efforts of UW's motivated student body and faculty paved the way for claiming campus space, re-imagining and designing spaces to serve the campus in a new, productive way. The UW Farm embodies the sustainable values of this grassroots organizing.

This last section focuses on forming pathways for developing proposals through encouraging imaginative thinking, and establishing relationships with the right partners and stakeholders. Some of the proposals build on opportunities identified in Chapters 3, 4 and 5, demonstrating that it is possible to piggy-back on existing projects to promote a more specific interest or focus. By thinking broadly about possible interventions, it becomes possible to find ways to create a significant impact on the campus landscape through from the initial stages of planning to the post-installation maintenance of a space.

The main purpose of this chapter is to illustrate how planning can examine the constraints and opportunities of urban landscapes for programming productive spaces, using the example of the current UW campus. In this section, I examine three different sites for three different productive interventions in the landscape. The sites chosen on campus to illustrate the potential for these concepts are Rainier Vista, which examines the challenges of working with iconic landscapes, Pend Oreille East Gatehouse, which demonstrates use of connective interstitial spaces, and the Union Bay waterfront, which forms entirely new spaces for production in a mixed-use area.



6.8 Productive Site Interventions: Baseline Map Analysis

Base Map: UW Creative Communications, UW Facilities Services 2012

Data: UW Creative Communications, UW Facilities Services 2012, Food at UW, Martin 2008

PRODUCTIVE ICONIC SPACE

Prior to the 1909 Alaska-Yukon Pacific Exposition, the UW campus was a primarily forested area with few built structures and little intentional design regarding the landscape (Jones 1972). Under the leadership of the Olmsted brothers, the landscape underwent rapid development for the exposition, establishing many of the iconic features which have become core features of the campus. The process of designing the landscape transformed wilderness into a planned space with social and cultural significance. Even from the time of the exposition itself, postcards and photographs featured Rainier Vista, Drumheller Fountain, and the fairgrounds (see fig. 6.9). When landscape becomes an iconic place, there are people who are maintaining the status of its iconicism by ensuring that the character of the place endures, or is “fixed” for various motivations. So, should iconic landscapes continue to be completely fixed given the increasing needs of space in urban environments? Is it possible to site and fit production into those sites while preserving their character?

From a sustainability perspective, as we learn more about the impact of our built structures or landscapes on the environment, there is an ethical responsibility to amend impacts through improvements and update them so that they are in tune with current needs. Consequently, while the historic and cultural attachments to iconic space are important, these in and of themselves should not automatically exempt these landscapes from change. The manicured looks of many iconic spaces often require the most labor and resources to maintain, and it is worth re-assessing those ecological and financial



6.9 Alaskan-Yukon-Pacific Exposition, 1909

Image: UW Library Special Collections

costs. Furthermore, iconic spaces like Rainier Vista uniquely preserve open space in the urban setting, important real estate in quickly densifying cities.

New proposals for iconic spaces require extensive research and planning, and are strengthened when presented by a broad coalition. This section considers how a proposals might address “fixedness” and effectively negotiate for stacked uses of iconic space.

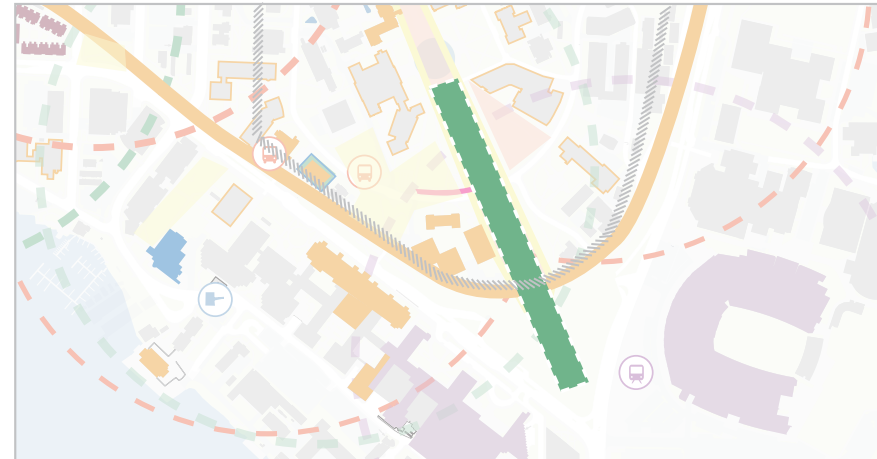


VISIONS OF RAINIER VISTA

Two designs to transform Rainier Vista were proposed in Justin Martin's thesis: one of a uniform field crop, and the other a set of formally designed productive gardens. When presented with Martin's designs in the postcard visioning exercise, current students were excited about the idea of seeing their values regarding sustainability and production imbued into an iconic landscape, so I wanted to re-examine this opportunity further.

While formal gardens are a more typical designer response, the concept of a monocultural field is intriguing because of the opportunity of productive and educational programming that could maintain it. While monoculture has a striking visual impact, it does present many ecological issues that have been well documented.

This proposal suggests that the site could be used for experimental research plots, which would manifest the innovative, research identity of UW. The sheer scale of the available space presents interesting productive and educational opportunities because, as noted by Professor Jennifer Ruesink in a seminar on agroecology, the plot size for one intercropping experiment was as big as the entire current Mercer Court Farm space. Rainier Vista holds enough room to allow replication of test plots, but being an iconic space requires additional considerations that are detailed here.



6.10 Rainier Vista: Map Analysis Closeup

Sources: see fig. 6.8

Maintaining Iconic Sightlines

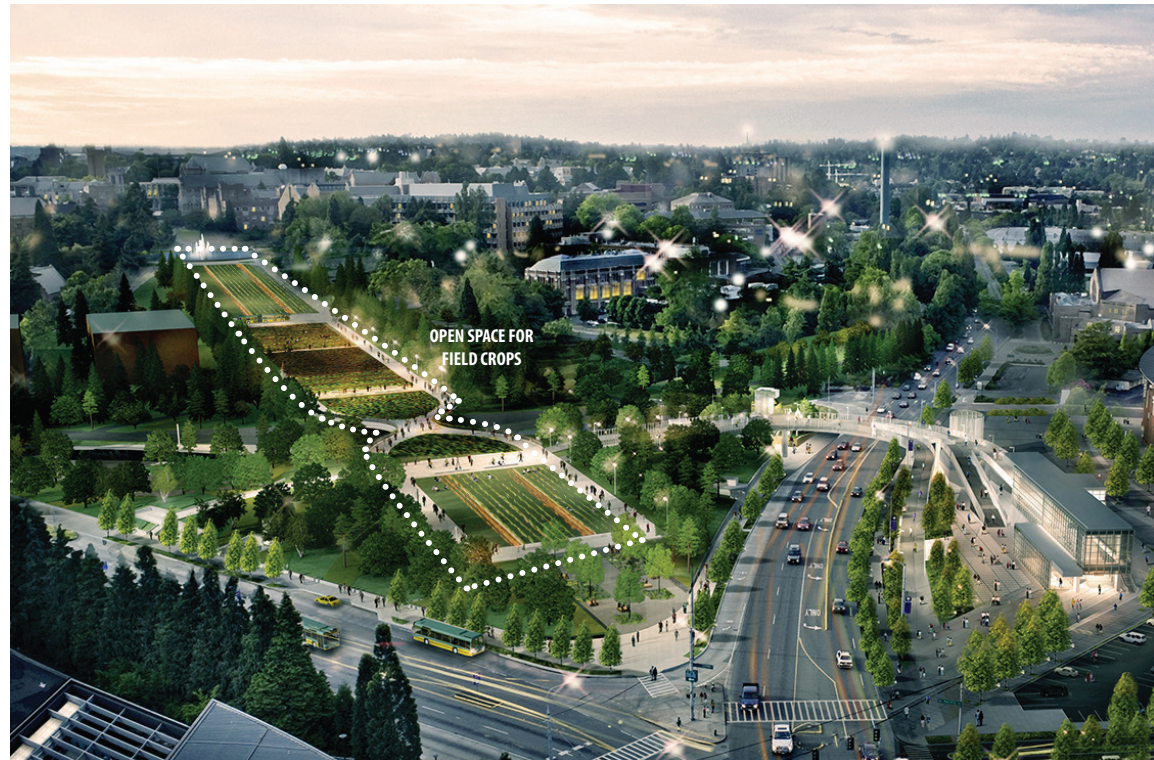
What are the features that make Rainier Vista iconic? On a sunny day at the heart of campus, Drumheller Fountain is packed with photographers taking in the view of Mt. Rainier and the fountain. Most of the site's iconicism is directed outwards from the center of the campus. On the central path from the heart of campus to the heavily trafficked UW's Link Light Rail station, Rainier Vista's lengthy lawns and grand allée of evergreen trees frame the view of Mt. Rainier.

The largest concern for this site is thus retaining the view over Rainier Vista, which is supported by roughly 2 acres of lawn beds. The view of the monumental landscape should be easily preserved regardless of the planting choices, given the slight downward incline from Drumheller fountain.

Thematically Updating Iconic Spaces

Research plots represent and showcase current values of learning, praxis, and sustainability, augmenting the identity of the iconic space with additional layers. Manifesting these values in the visible, well-trafficked landscapes of the campus core gives them prominence and reflect UW's identity as a public research institution that can nimbly adapt to sustainable practices. It also creates a thematic bridge to other productive spaces which have generally occupied the campus periphery, thereby increasing their value.

This site is bounded on the campus edge by major transit hubs heavily trafficked by pedestrians, bikes, and car commuters from the Link Light Rail station, the Burke Gilman Trail, and the Montlake Bridge. There is therefore an opportunity to re-examine and design the social experience of entering campus via its formal entrances. The experimental plots exist at an accessible, human scale and ensure that the space is being actively used at all times. The space invites the public inwards to experience a slower exploration of the plots, culminating in an iconic view back out.

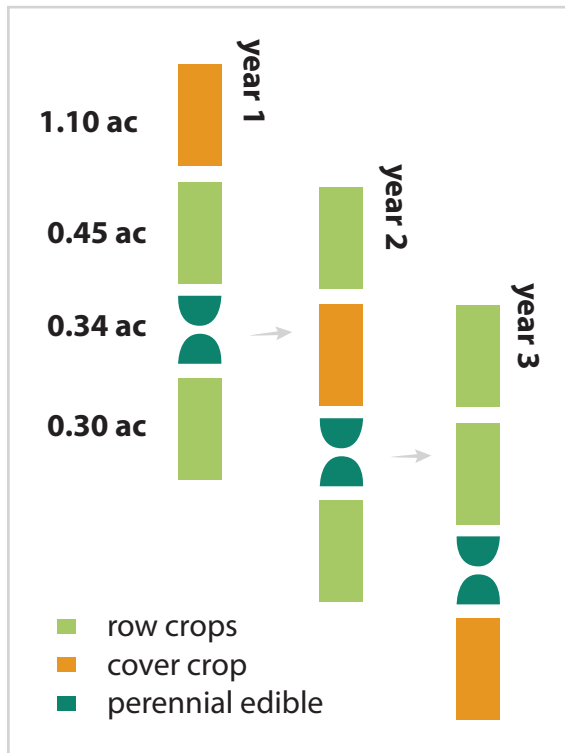


6.11 Modifying Rainier Vista for stacked functions

Base Image: LMN Architects

Seasonal Management for Production

The experience of these experimental plots could create a continuous draw for the public as the crops are seasonally rotated. The sustainable management of production can be easily showcased by rotating soil management practices between the three beds while retaining perennial food production centrally for contrast.



6.12 Showcasing Varying Seasonal Crop Management

Data: Rough acreage calculated from Google Earth



Figure 4.29: Site 4 - Rainier Vista Seasonal Field perspective. Photo collage illustrating how a field of wheat might appear planted in Rainier Vista.

6.13 Rainier Vista: Martin's Prior Vision of a Seasonal Wheat Field

Image: Martin 2008

PRODUCTIVE INTERSTITIAL SPACES

When looking for usable space in the urban environment, even small or awkward spaces can be valuable assets. Interstitial spaces, the smaller spaces between buildings and features, provide unique opportunities for programming connective transitions. This series of three interventions demonstrates multiple short-term and long-term possibilities with different management intensities. They are not mutually exclusive and may occur independently, simultaneously, or even in succession.



6.14 East Gatehouse Greenway: Map Analysis Closeup

Sources: see fig. 6.8



6.15 Visual Connectivity from the McMahan Terrace

PEND OREILLE EAST GATEHOUSE: RESIDENTIAL BACKYARD

Strategically located between the east campus and the formal campus, this site has some visibility due to its proximity to differently paced transit routes (a low traffic gatehouse, the Burke Gilman Trail, and a pedestrian bridge across the heavily trafficked Montlake Boulevard). From McMahan Terrace, where UW Farm tends a culinary kitchen bed for Housing and Food Services, the site has a direct visual connection as well. These interventions focus on a flat area bisected by a staircase on a sloping hillside bordered by the various transit routes and framed by rows of trees. This interstitial space is along the most direct route from McMahan Terrace to the UW Farm.

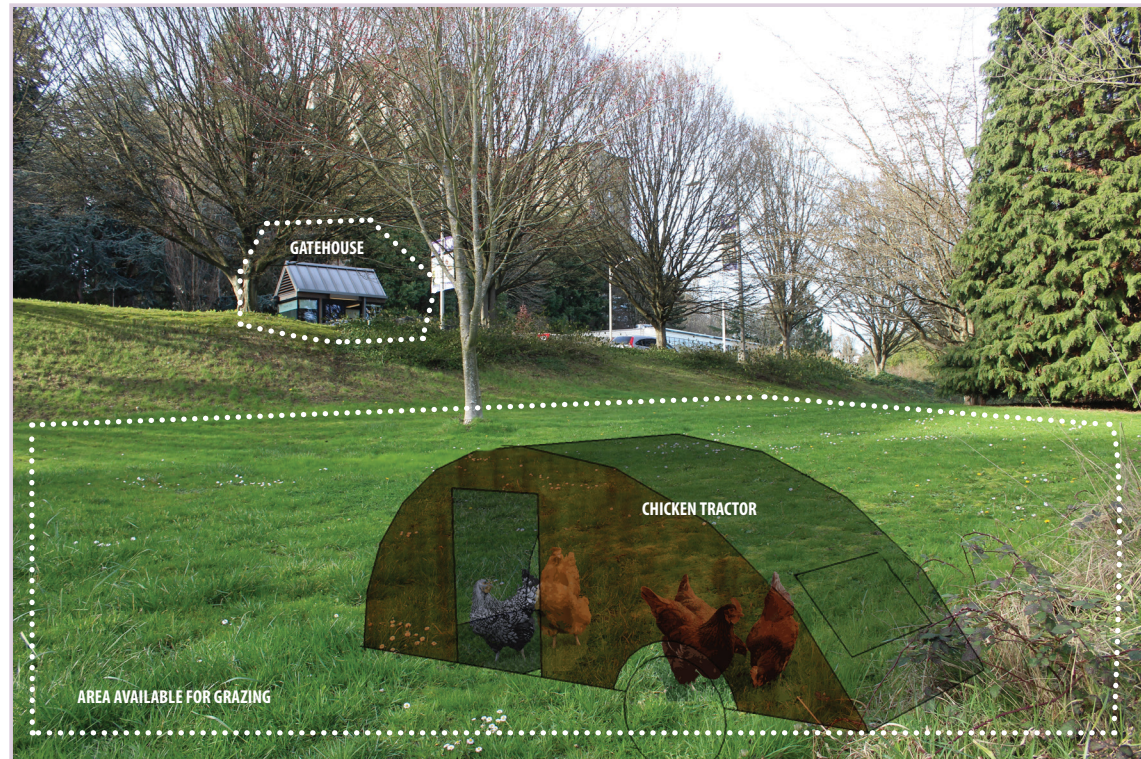


Site Preparation: Chicken Grazing

As of Summer 2016, the UW Farm is in the process of acquiring chickens as part of a capstone project by a senior student in the Program on the Environment. Pictured in *fig. 6.16* to the right is the trailer that has been designed and constructed for the UW Farm. The mobile chicken pen has an open bottom to allow for contained grazing.

The UW Farm could consider seasonally grazing the chickens on this site. This can be easily done given the chickens' mobile container and the site's proximity to the trails. Bringing them closer to the campus core and the dorms increases their visibility and contact with the public, also increasing the accessibility of educational opportunities.

Chickens grazing is an excellent way to demonstrate and educate about close looped food systems. There are two different aspects to their contributions: they can be fed many scrap vegetable ends from the kitchen, and their manure, once treated/aged, can then be used for growing food.



6.16 Site Preparation: Grazing with the UW Farm's chicken tractor

Additional benefits are the production of eggs, which may provide an additional source of income and diversify farming outputs. When pastured and moved, chickens can be a source of pest control by grazing and scratching/turning the top layer of soil. Also, animals naturally attract attention and engagement from passers-by, activating this generally unnoticed interstitial space.

V E P

Transitioning with Hugelkultur

As evidenced by woody debris trimmed from the nearby woods, there is an opportunity to merge maintenance with production through Hugelkultur in this space. Since the hugelkultur has a relatively short lifespan, it is possible to intermittently develop hugelkultur as part of maintenance while also improving soil quality by retaining green material on site. While the site does not have evident access to water resources, hugelkultur developed with a reasonable decay rate will have low maintenance and water requirements.

The construction and programming of the hugelkultur can accommodate different educational opportunities. If the hugelkultur is constructed with open ends, it is possible to monitor the decay rate of the internal logs and the communities of decomposers that develop. High density, intermixed annual and perennial crops can be grown effectively, increasing the habitat value and experimentation opportunities for the UW Farm and HFS's Food Exploration Living Learning Community. The School of Environment



6.17 Hugelkultur: Building soil with on-site materials

and Forest Science (SEFS) may also be interested in the wood harvesting and construction and maintenance of the beds.

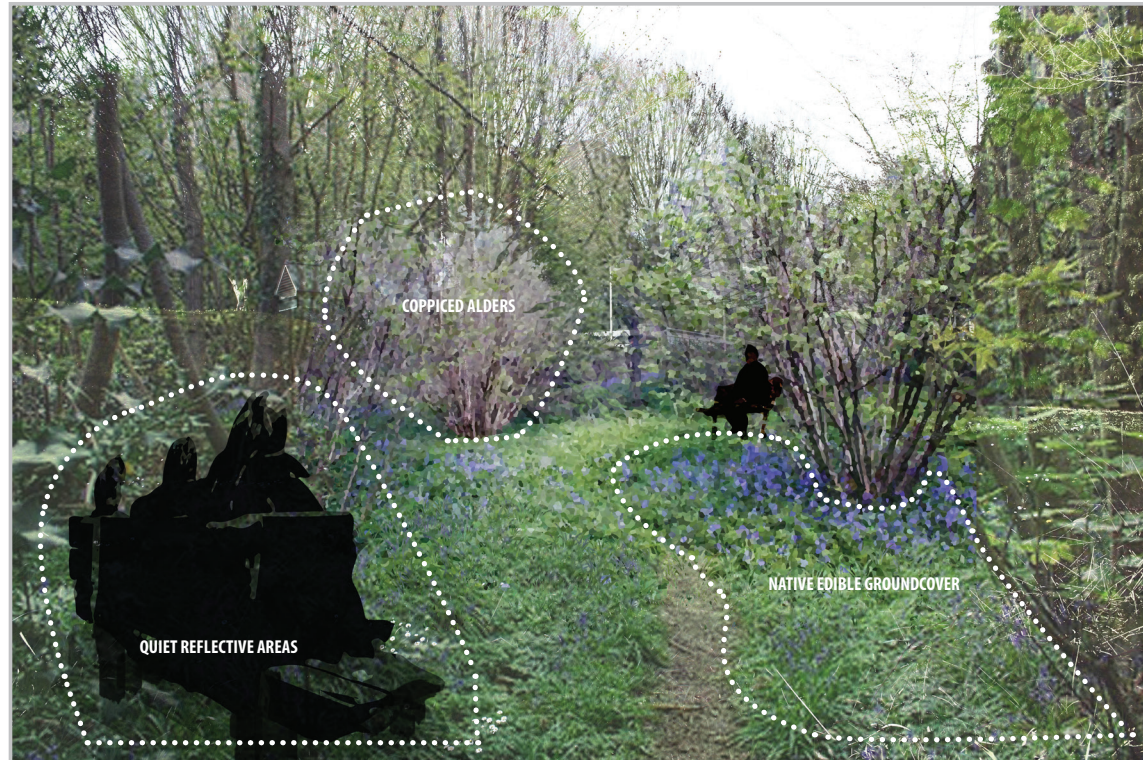
V E P

Food Forest: Coppiced Woods, Edible

This space could be developed into a food forest with edible native plants, coppiced for fuel production. This scale of landscape intervention would be cultivated over a much longer period of time.

Coppicing results in open forests that provide good habitat for a variety of native plants. By curating to feature native edible and medicinal plants, this location may serve as a unifying landscape transition between the edible native garden at the Intellectual House and the Union Bay Natural Area.

Taking inspiration from the Odegaard library's design to include quiet, reflective spaces to relax, this outdoor site could provide that this kind of reflective environment. In contrast to the more dramatic, public interventions on the iconic landscapes, this intervention would provide a quieter, more individual experience and appeal to a different demographic.



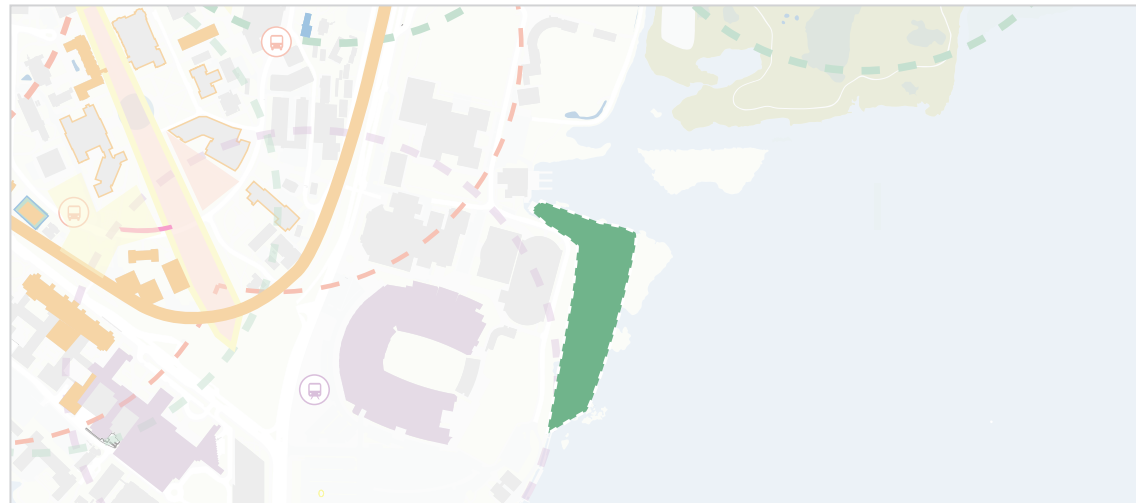
6.18 Native Food Forest and Wood Harvesting Landscape

Featuring red alder (*Alnus rubra*) and early blue violets (*Viola adunca*)

NEW PRODUCTIVE SPACES

The burgeoning tiny house movement and new productive technologies, such as green roofs and green walls, seek to maximize limited spatial resources in the compact urban environment. Although many efforts to innovate also prioritize reproducibility, there is also great value to site-specific interventions that can reduce maintenance requirements while making the most of the site's unique opportunities. Specific features of the landscape and uses of the space can be matched to precedents and techniques used by others.

One consideration of new productive spaces is the availability of necessary resource inputs that must be consistently available, such as water and sunlight. Waterways are an excellent location for these resources, and have been utilized in various cultural technologies such as diking from the Netherlands, rice paddy cultivation from China, and food production through artificial islands in Mexico.



6.19 Union Bay Natural Area Map Analysis Closeup

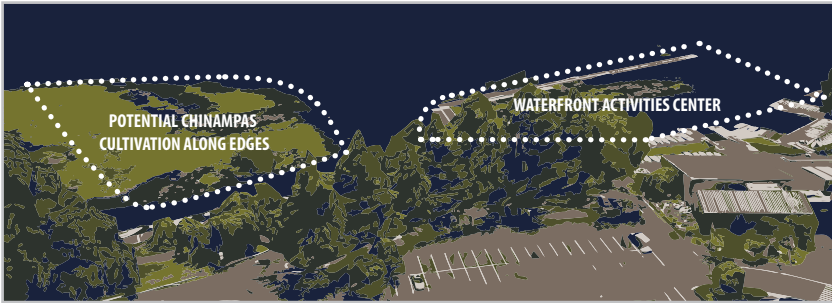
Sources: see fig. 6.8

UNION BAY NATURAL AREA

The Green Futures Lab (GFL) from the College of Built Environments was awarded a grant from the Campus Sustainability Fund for 2015-2016 to investigate the feasibility of installing floating wetlands at the Union Bay Natural Area. The developed prototype is intended to create habitat by allowing light penetration and partial submerging the wetland structure, with a specific focus on juvenile salmon.

The lab's extensive background in research, design, and implementation of floating wetlands enables it to advocate for the educational, research and ecological value of an experimental habitat on the campus. Furthermore, the project has support from various academic departments, campus groups, and municipal groups, included as partners and consultants. There may be an opportunity to advocate for additional forms of aquatic production.

V E P



6.20 Waterfront Recreation Center Productive Islands

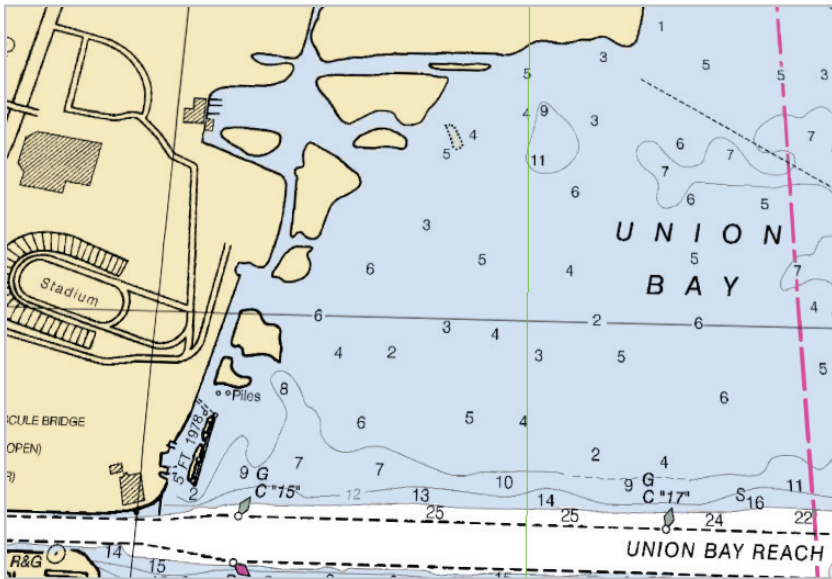
Base Image: Google Earth

Productive Artificial Islands

Currently host to an abundance of wildlife and recreational purposes such as kayaking, the edges of the UBNA have the additional capacity to host productive purposes. Incorporating this functional layer of food production onto the shoreline by the Waterfront Recreation Center could augment recreational experiences with tacit educational experiences, creating a potentially rich programming partnership between the recreational and the natural area. These visible experimental interventions could also raise the reputation of UW as a progressive school engaging in innovative sustainability.

On the one hand creating artificial islands may seem like a dramatic, comprehensive intervention. However, much larger interventions have historically been used to regulate the land and water, such as the Montlake Cut which lowered the waters and the Ballard Locks, which artificially regulate the water level yearly. This chinampas intervention, by contrast, mimics the natural forms of small islands that are already there and uses the existing resources (hard woody materials from green waste available on campus and mud) so that not many new inputs would be needed.

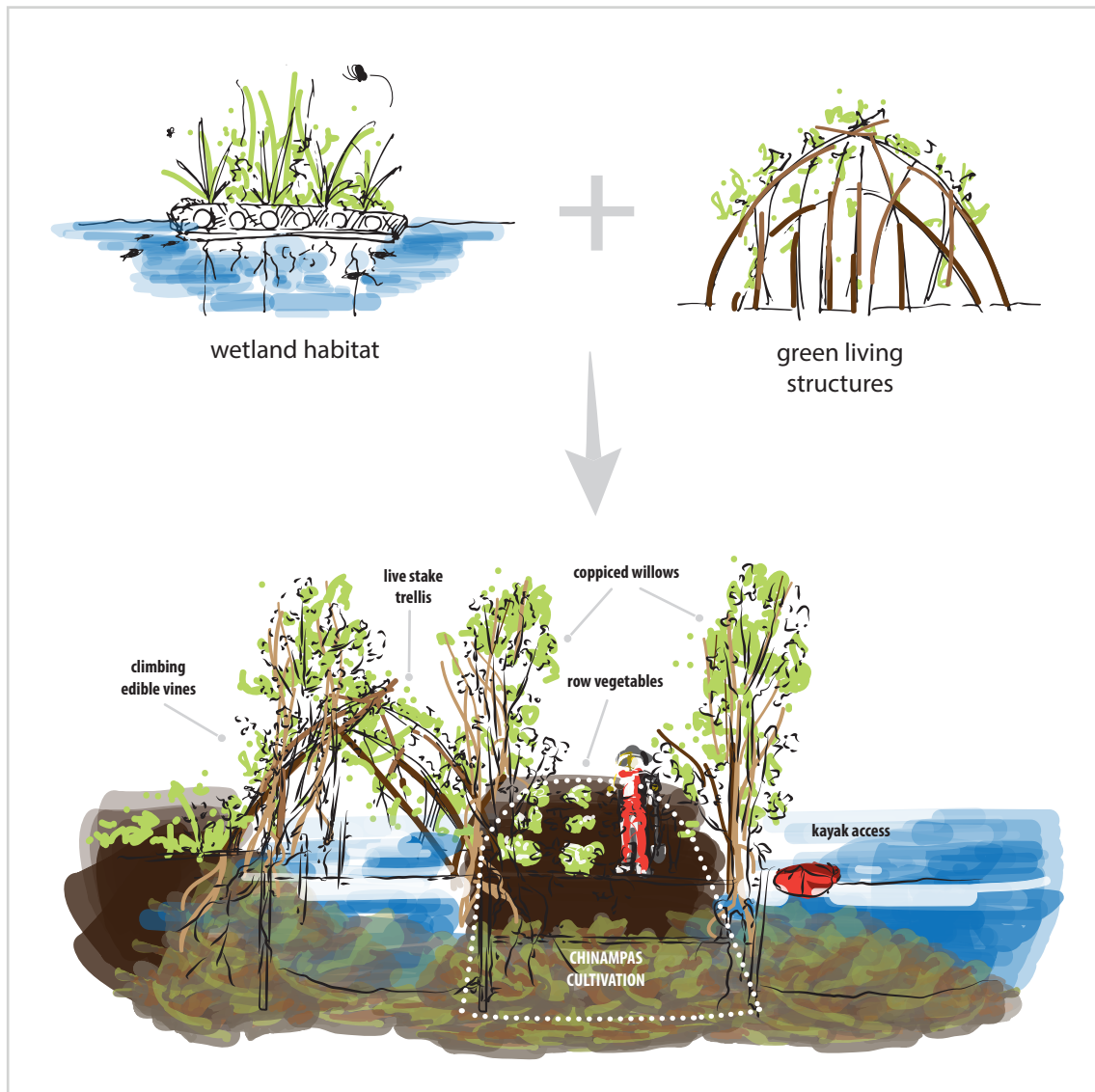
While producing food crops to consistently meet market standards and economically sustain the farm is an on-going experiment in itself, these artificial islands bear potential to enhance the Farm’s capacity for production. Two aspects of these chinampas are of particular value to urban production:



6.21 NOAA Union Bay Depths

Image: NOAA

Nautical chart of Union Bay can be used to loosely determine size and amount of material needed to create artificial islands.



creating new spaces specifically for production instead of searching for limited areas with less than ideal conditions, and providing direct access to water minimizing both labor and money spent on infrastructural resources needed to tend to the crops.

There are so many educational partnerships possible. This brief introduction could not address them all, aiming only to highlight how such partnerships might be identified and formed. For example, this intervention might be developed in conjunction with existing robust restoration programs at the CUH. The addition of the Society for Ecological Restoration (SER) - UW Chapter's native production nursery at the CUH in 2015, which is further supported by a Native Plant Production class (ESRM 412) could provide an ideal academic organizational partner pursuing this notion, as there is appropriate demand for the production of riparian plants for restoration in Washington owing to policies supporting environmental mitigation.

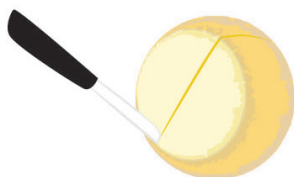
6.22 Productive Wetland Habitat

Willow stakes can be used as live structures to great experiential effect, and are also important species in riparian habitat.

7 Conclusion NEXT STEPS

VISION

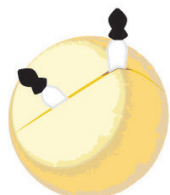
Set a course, define a purpose



1. Score a path around the form

INVENTORY ASSESSMENT

Identify strengths and weaknesses



2. Make cuts in the strongest and the weakest points

PLANNING STRATEGIES

Project ways of realizing the vision by using strong points as anchors and intervening in weak areas - let the framework loosely guide the final form.



3. Use knives as anchors in the strong points



4. Guide the anchor points towards the weak center



5. Let the form break naturally between the guiding points

7.1 Process Visualization: Opening a wheel of parmesan

From protected bike lanes to street parklets, the city of Seattle is implementing innovative projects in the city landscape around the campus edge. Where is UW in matching these efforts? Shouldn't the academic institution be setting the precedents for innovating sustainable urban food systems, instead of working to meet the city's standards?

The campus landscape has great potential for pilot projects which can enhance both educational and productive value. This will require further partnership to explore the relevance and feasibility of innovative ideas, some suggestions for which have been put forth within this thesis.

The university was built to grow students into professionals, researchers, active citizens and more, and therefore the students must be considered at the heart of the campus community. As discussed, many students are striving to take a central role in campus programs and policies. While high turnover limits student participation in long-term conversations with administrators about broader physical changes to the campus, when landscape is discussed regarding its educational qualities it becomes clear that students have a clear interest and voice in advocacy.

To those students who wish to engage administrators in

conversation, there are some additional topics which should be considered that are important logistical details. By anticipating these details and preparing for them in a proposal from the outset, students are much more likely to succeed in pitching your overall vision. These include:

- Organizational mapping (scoping allies and building partnerships)
- Measures for public health and safety
- Feasibility of installation and costs (money, time, and labor)
- Longevity of the project
- Capacity to maintain the project to an operational standard

Students should allow their vision to grow and change. The same idea transforms when sited in different places and to meet different needs. This is where innovation begins. The logistics of implementation will end up driving many, if not the majority, of the project's specific outcomes. These concerns and investigations naturally question the appropriateness of installing edible landscapes on a project site. The possibility of an altered project is natural, and should not be viewed as a deterrent but rather as an evolution. Testing the boundaries requires creativity and imagination, but the best solutions come from learning about and working with those parameters.

Inspiration comes in many forms, and there are passionate people on the UW campus who share these values of sustainability and education. Finding them and speaking with them will hopefully inspire others to work with the

campus landscape, administrators, and other stakeholders, as it has for me. Seeing a project through its ups and downs is easier with allies and partners who share a vision and bolster each others' stance.

By first considering how to use the campus landscape in productive ways, we allow ourselves the opportunity to re-evaluate whether we are maximizing the benefits of our relationship with the landscape. The concept of productive landscapes clearly frames the need for an on-going relationship with the land, as there is both a clear yield and a clear mandate for management: the quality of the input will appear in the harvest.

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APPENDIX A: UW FARM SWOT ANALYSIS

Excerpt from “Old UW Farm Strategic Plan”, an internal organizational document

STRENGTHS -internal

- High-energy membership base: Students and faculty work hundreds of hours per week, high meeting and seminar attendance, grassroots support.
- Faculty support: Biology Department, College of the Environment.
- Integration into curriculum: Examples with course #'s.
- Ability to draw in leaders: List of important farm lunch speakers and where they are from.
- History of productivity and responsibility: Positive relationships with Biology Department, College of the Environment and Greenhouse Manager.
- Research opportunities: Faculty and students.
- Diversity of leaders: Policy makers, researchers, urban planners, farmers, biologists and soil scientists.
- Flexibility: ability to work within our structure and around constraints.
- Stewardship: Practices that build soil and may improve surface water runoff.

WEAKNESSES -internal

- Student turnover: Graduation, transfer, etc.
- Campus recognition: Many students do not know about the farm.
- Limited organizational structure: Almost totally grassroots.
- Public health precautions: Need to establish food handling and safety protocol training.
- Summer Vacation: Low student attendance coincides with high volume food production.
- Website: Unfinished information source.
- Total sustainability impossible: Difficult to be 100% sustainable in the urban environment.

OPPORTUNITIES -external

- Collaboration with other student groups: P Patch, Food group, etc.
- Collaboration with other UW programs: Built Environment, Program on the Environment, Urban Planning, Public Health, Nutrition.
- Student outreach: Work parties, increased student involvement and enhancement of UW's extracurriculars.
- Community outreach: Possible site for local school field trips, etc. Possible connection to Public Health-Seattle & King County. Connection with other local, urban farms.
- Attraction of national and community leaders: Guest lectures from food policy leaders and urban agriculturalists.
- Production of food for sale: Possibilities include HFS, farmers markets and Community Supported Agriculture.
- Current food movement: Recent increase in the popularity of local sustainable food production, Community Supported Agriculture, and the Slow Food movement.
- Compete as a sustainable university: Draw for incoming students, decrease carbon footprint, etc.
- Media: Expansion will attract positive media attention for the farm and UW.
- Opportunity for grants: Opens the doors for money through foundations, individuals and grants. IGERT possibilities.
- Contribute to UW's zero waste goal: Possibility of composting some of the UW's food waste on site.
- Favorable climate: Maritime influence allows year-round production for many crops.
- Aesthetics: Urban agriculture can be a beautiful thing.

THREATS -external

- Liability: Insurance for student injury and food safety. Food handling permits.
- Access to land: Space on campus is limited and regulated. Future building projects may threaten land.
- Security: Theft of produce and tools, vandalism, etc.
- Cool climate: There are certain crops that we cannot grow.
- Aesthetics: The visual of a farm may be unappealing for some or block views.

APPENDIX B: UW FARM MURAL DESIGN CHARRETTE

Pomegranate Center Charrette Facilitation: Mural Design

As a part of a UWASLA and UW Farm co-initiated and co-sponsored project, I invited Milenko Matanovic from the Pomegranate Center to lead and facilitate a design charrette with farm volunteers and landscape architecture students. The Pomegranate process, briefly outlined in the agenda below, informed future charrette processes at the UW Farm.

FOOD at UW
UWASLA & UW Farm
present a

Mural Design Charrette
facilitated by:
Milenko Matanovic, Pomegranate Center

Location: Mercer Clubhouse
Date: January 27, 3:30-5:30 PM

RSVP by January 20
light refreshments provided

What is a charrette?

A charrette is a collaborative workshop to draft a solution to a problem. In this charrette, we will be designing a mural for the Mercer Clubhouse space at the Mercer Court farm site, which will then be installed in subsequent workshops.

Please RSVP to aslauw@uw.edu with the subject: Mural Design Charrette and your full name, major, and year in school.



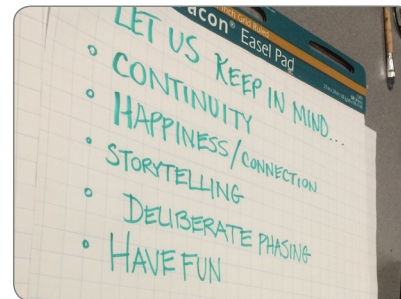
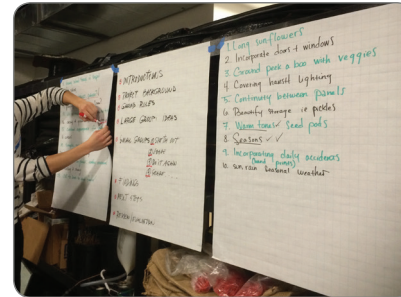


Milenko Matanovic,
Founder and Executive Director

Milenko is a self-described "recovering artist." He founded Pomegranate Center in 1986 believing that magic happens when art, creative thinking, and community join forces.

Since then, he has worked with hundreds of communities across the country and abroad; collaborated with communities to build more than 50 gathering places; spoken at more universities, community gatherings and conferences than he can remember; and trained hundreds of remarkable individuals in the Pomegranate Center model of community building. He has been honored with the Home Shelter Award, Legacy Leadership Award from the Center for Ethical Leadership, an honorary professorship at the University of Vladivostok, Russia (it's a long story), and other awards

Flyer design: Christel Game



AGENDA

1. INTRODUCTIONS
2. PROJECT BACKGROUND
3. GROUND RULES
4. LARGE GROUP IDEAS
5. SMALL GROUPS
 - Sketch out ideas
 - Share
 - Do it again
 - Share
6. FINDINGS
7. NEXT STEPS
8. REVIEW/EVALUATION

SUMMARY OF RESULTS

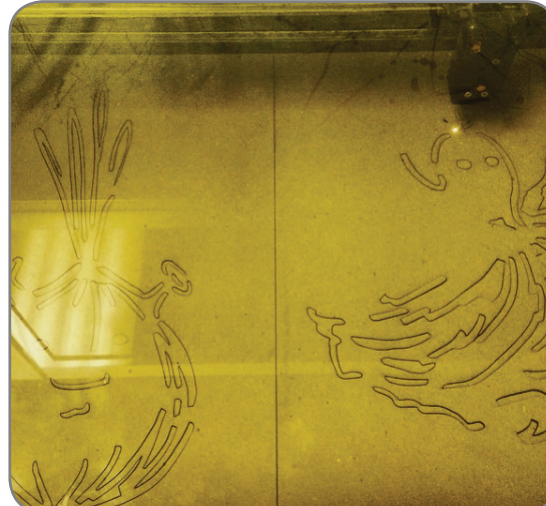
Mural design premise:
a seasonal wind of vegetables
blown around the room)

Installation method: laser cut
stencils of vegetable characters
stamped on a colored background

APPENDIX C: MERCER COURT CLUBHOUSE MURAL INSTALLATION

2015 Spring Quarter

Continuing the work started from the mural design charrette, the Mercer Court Clubhouse mural was installed over the course of five sessions in the 2015 Spring quarter. Sessions were open to all UW students and advertised through both the UW Farm and UWASLA newsletter as well as the UW school calendar. Participation included students from the Landscape Architecture and Urban Planning departments, as well as UW Farm volunteers, and Mercer Court residents.



APPENDIX D: UW FARM CUH SITE DESIGN CHARRETTE

Creative Facilitation for Group Site Planning

I co-planned and coordinated a charrette for multiple stakeholders at the UW Farm's Center for Urban Horticulture site to discuss its planning and future development. I was primarily responsible for the design and facilitation of the charrette exercises, as well as post-event documentation and reporting. This report has been included in the UW Farm's 2015 Annual Report, and a summary report has been published on the UW Farm blog.

What Do We Love

- Bring the landfill back to life
- Education and student opportunities
- Excellent logistics

Learning - Student engagement
Wardell - excitement to the farm
Marti/Physical health & tropical ridge air of the city

Education

- comprehensive food sys perspective
- intimate working space
- mental escape from campus
- good food
- many can take ownership
- lasting impact on people's lives
- growing staff/student collabor
- aesthetically pleasing landscape

What Do We Love

EDUCATION

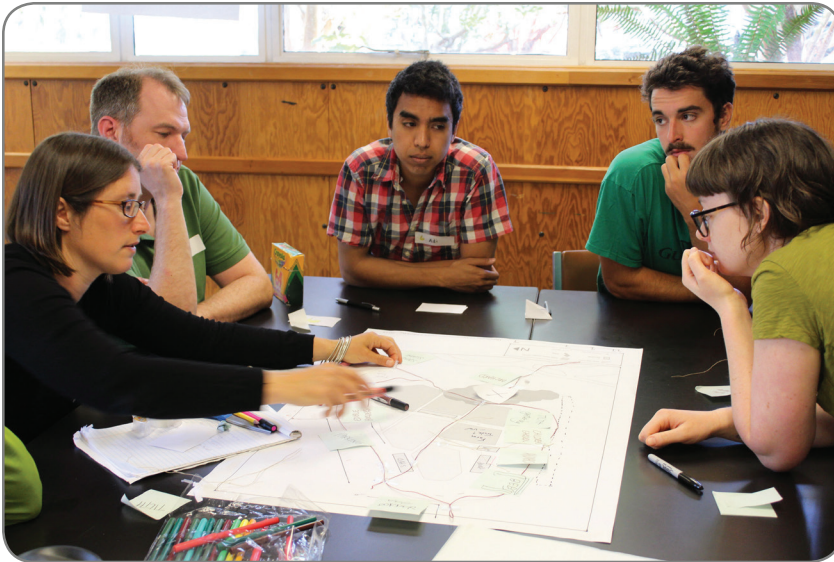
- > UW students
- > K-12 students
- > Community members
- > Making accessible to all these without interrupting production

THE LAND FILL

- > Farming boundaries
- > Soil health -> production
- > Logistics - Structures

Limited Space Planning to USDA
Soil - Slope - Erosion

Scale: from 1/4 acre (1/4 acre) to 1/2 acre (1/2 acre) to 1 acre (1 acre) to 2 acres (2 acres) to 4 acres (4 acres) to 8 acres (8 acres) to 16 acres (16 acres) to 32 acres (32 acres) to 64 acres (64 acres) to 128 acres (128 acres) to 256 acres (256 acres) to 512 acres (512 acres) to 1024 acres (1024 acres) to 2048 acres (2048 acres) to 4096 acres (4096 acres) to 8192 acres (8192 acres) to 16384 acres (16384 acres) to 32768 acres (32768 acres) to 65536 acres (65536 acres) to 131072 acres (131072 acres) to 262144 acres (262144 acres) to 524288 acres (524288 acres) to 1048576 acres (1048576 acres) to 2097152 acres (2097152 acres) to 4194304 acres (4194304 acres) to 8388608 acres (8388608 acres) to 16777216 acres (16777216 acres) to 33554432 acres (33554432 acres) to 67108864 acres (67108864 acres) to 134217728 acres (134217728 acres) to 268435456 acres (268435456 acres) to 536870912 acres (536870912 acres) to 1073741824 acres (1073741824 acres) to 2147483648 acres (2147483648 acres) to 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CO-FACILITATORS: Hailey Mackay, Britton Shepard
ADVISOR: Dr. Lynne Manzo, UW LArch
DATE: June 5, 2015 Friday 9-1PM

AGENDA

8:30 AM SET UP

Set up group tables, charrette materials, and presentation
 Set out name tags and group assignments

9:00 AM INTRODUCTION PRESENTATION (20-30 min.)

Introduce Facilitators	HAILEY
Charrette Process: What is a charrette?	JENNIE
Site Context: Mapping and historic overview of CUH/UBNA	BRITTON
Seattle Tilth: History and scope of interests on site	JENNIE
Agenda/Goal Setting	HAILEY
Group Introductions: Group assignments and ground rules	HAILEY

9:30 AM EXPLORING GROUP VALUES (45 min.)

Split into groups + Rules for group process	
Warm-up: Demonstrating work flow process	
What do we love?	SMALL GROUP
What is important?	SMALL GROUP
Prioritize and present key ideas	EVERYBODY
Pitch why it matters	EVERYBODY

10:15 AM BREAK (15 min.)

10:30 AM MAPPING GROUP PRIORITIES (80-90 min.)

Priority placement exercise	15 min.
Circulation exercise (entry/exit)	15 min.
Priority placement exercise	15 min.
Circulation exercise (entry/exit)	15 min.
Synthesize and present back to large group	20 min.

12:00 PM WRAP UP (10-20 min.)

Final thoughts: What to keep in mind?	JENNIE
Charrette process de-briefing	JENNIE

12/12:30 PM INFORMAL FARM LUNCH



APPENDIX E: UW FARM CAMPUS VISIONING WORK

Envisioning the UW Farm 's future and mapping its place on campus

I conducted a 20 minute workshop on February 3, 2016 with nine UW Farm core volunteers at the monthly "Dirty Dozen" check-in meetings held by the farm manager. Following is the written correspondence and exercise instructions (which were printed out for each person) as well as scans of the collected post-card exercise and a collated map of results from the second exercise.

PRE-WORKSHOP EMAIL CORRESPONDENCE

Hey all,

I'm Jennie and I've met a couple of you in the past on farm-related meetings and projects. I'll be leading a couple of quick exercises on Thursday as Sarah mentioned, so I thought I'd just give you a little bit more of a heads up on what to expect!

So I'm working on my thesis project, which is about creating and testing a planning and design strategy for the UW Farm to expand its influence on campus. We're going to do 2 quick 10 minute drawing and sharing exercises that will help us all understanding how everybody who attends the meeting is currently viewing and using the farm. Since the information is going to be the basis for any designs or planning strategies that I will propose in my project, I'll be asking your permission to take pictures and record our session as references on Thursday morning. Please feel free to let me know if you have any objections, and see you all soon!

Best,
Jennie

DAY-OF PRINTED INSTRUCTIONS

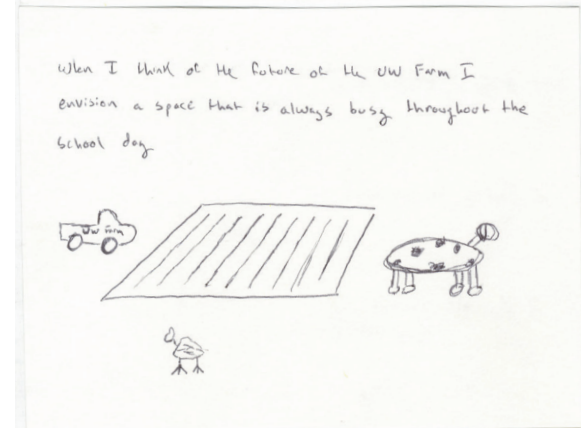
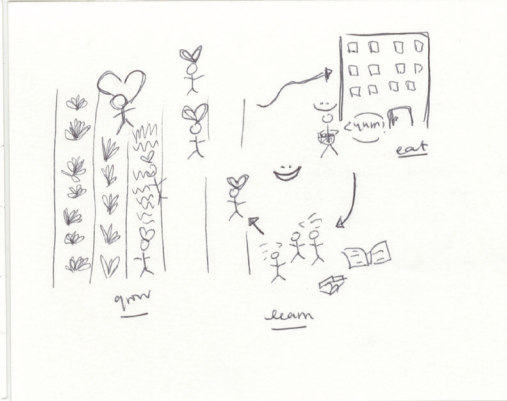
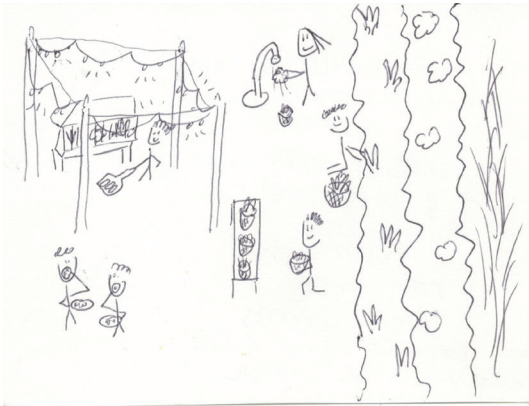
A workshop for envisioning the UW Farm and mapping its place on campus.

1. Postcard exercise (*5 min. to draw, 5-10 min. to share*)

FRONT	Draw/write your vision for the UW Farm
BACK	List the top three things you would like to realize for the UW Farm

2. Mapping your path to the UW Farm (*5 min. to draw, 5-10 min. to share*)
 - A. Draw out the different ways you get to the farm and label where you are coming from (home/work/school. between farm sites, etc.)
 - B. Using that same pen, mark the place you think the farm could make an impact.
 - C. With a different color, mark important or iconic spots on campus

POSTCARD EXERCISE RESULTS (FRONT)



- Student Fellow tiny house on the farm "farm caretaker"
- ① - Food Care boxes with 50% of our production to food insecure students or staff
- ② - Fully functional chicken, worm, micro-livestock systems on the farm
- ③ - Maximize production for feeding more people

POSTCARD EXERCISE RESULTS (BACK)

1. raise awareness, bring in new student farmers
2. bring in more \$ to enable further farm expansion
3. have more social events - emphasize green & eco friendly activities & teach

To:

1. Would like to make sure every student that comes to UW knows they can farm.
2. Would like farm to be big part of UW's image
3. Rainier water

To:

- 1.
- 2.
- 3.

To:

1. more pupes / deeper connections
2. simple educational programs that get people talking
3. ~~more~~ ^{grow} produce in → more food to students

To:

1. Rooftop locations in some of the new buildings?

To:

2. ~~lots of~~ ^{touches all of UW (everyone knows about it in some way)}
- eat / work / see it
- class on the farm?
3. GOATS?

1. A strong student base
2. Feeding the campus
3. Multiple animal varieties

To:

1. CHICKENS!
2. LOTS + LOTS OF ORGANIC PRODUCE
3. MORE STUDENT RESEARCH / PROJECTS (GOATS)

To:

1. Many happy farmers!
2. Infrastructure to support education!
3. Space for (reasonable) expansion and efficient plant successions!

To:

- 1.
- 2.
- 3.

To:

COLLATED MAPPING EXERCISE RESULTS

Each map response was logged individually. For important campus spaces, some responded with drawn areas, others were marked as points (indicated as stars in the results below).

