DOWNTOWN SEATTLE 2009

PUBLIC LIFE

GEHL ARCHITECTS



City of Seattle Seattle Department of Transportation Department of Planning and Development







FOREWORD

BY MAYOR OF THE CITY OF SEATTLE, MIKE MCGINN

Seattle's Center City neighborhoods are the heart of the region and showcase much of what makes the Pacific Northwest unique—natural beauty, economic vitality, an ethic of environmental stewardship and social equity, and a strong and engaged community. These values have provided the guideposts for Seattle since the first Seattle Comprehensive Plan was developed in 1994 and have focused our efforts to improve the urban environment while planning for growth. In the Center City neighborhoods, the challenge of creating and sustaining vibrant and healthy streets and public spaces becomes increasingly important to our climate and business vitality.

At the City, we recognize the ongoing need to forge strong partnerships and find creative ways to make our streets more attractive to pedestrians and cyclists—as well as people who want to enjoy and linger in our public spaces to take in all that Seattle has to offer. With this in mind, the City of Seattle entered into a partnership with the International Sustainability Institute, the University of Washington Green Futures Lab and the Scan Design Foundation to assess the critical role walking and vibrant public space play in sustaining the health of people, our communities, and our environment. The assessment was developed with the help of world-renowned urban quality consultants, Gehl Architects. Seattle now boasts the most comprehensive Public Spaces & Public Life study of any city in America. This study helps us better understand how Seattleites—and the visitors Seattle attracts from around the region spend their time in the city. We counted how many people walked, how many people were using our parks and other public spaces, and observed the kinds of activities in which people were engaged. We also examined the routes people used to get where they were going.

The Public Spaces & Public Life study contained in this document is the result of the effort to look specifically at the Center City's public spaces, better understand the patterns and qualities that make walking, biking, and enjoying the city desirable, and recommend both near and long term actions to make this plan a reality. A number of exciting new initiatives are moving forward this year such as the Bell Street Park Boulevard, the McGraw Streetcar Plaza at Times Square, and the Summer Streets program.

It's no accident that the Downtown Seattle Association and Great City are strong partners in this effort as they recognize that a strong and healthy public realm—a walkable, bikable downtown—is key to our economic vitality and sets us apart from other cities. Creating invitations for people to walk, bike, and spend time outdoors makes the city a more attractive place to be. The Seattle Public Spaces & Public Life study recommendations have been integrated into other planning and project work already underway, including the Seattle Pedestrian Master Plan and Center City Public Realm Framework. Each of these efforts aims to strengthen our communities and businesses, to connect our neighborhoods to each other and to our world-class waterfront, and to be an essential component of the City's overall sustainability strategy.

In a world environment struggling to stay healthy, these changes cannot come soon enough. This keen interest in sustainability, economic vitality, and community health gives everyone at the City of Seattle a sense of urgency and interest in making this shift.

Michael Mc Gi

Michael McGinn Mayor

FOREWORD

BY INTERNATIONAL SUSTAINABILITY INSTITUTE,

It took a lot of courage for Seattle's leaders to embark on this project. Bringing in outside experts - no matter how confident we are - can create challenges. And studying our city in excruciating detail has the potential to lay bare vulnerabilities. It is a testament to Seattle City leaders' commitment to making Seattle more environmentally sustainable and a more inviting place that they faced these challenges and made the study you hold in your hands.

And, oh, what a study it is. When ISI first started to gather the team to study Seattle's public life, we knew it would be a big undertaking. But we didn't know the full extent. After it was all over, the skilled hands of Gehl Architects had met with city staff and leaders all around the city. They had corralled nearly four dozen committed University of Washington graduate students through Nancy Rottle's Green Futures Lab and hiked every street and every alley in the downtown core. And, through the generosity of the Scan|Design Foundation, it led two UW students to Copenhagen to assist with this in Gehl Architect's office. Gehl Architect's analysis of the collected data along with its forty years of experience working in more than 400 cities around the globe gives us a fresh eye on the workings of public life in Seattle.

TODD VOGEL

The results show a city with stunning opportunity. They show us a city that is thriving and has the promise to be even more magnificent than it already is. Gehl Architects have laid out a vision for Seattle that includes both quick wins and some recommendations that will take more time - and, likely, generate much debate among our citizens. Nevertheless, data has been collected, the analysis made and the walk down the path to making Seattle still more environmentally sustainable and livable has begun. It is a combination of courage and commitment that all of Seattle should be proud of.

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Todd Vogel Executive Director

CLIENT

City of Seattle Seattle Department of Transportation Director, Peter Hahn

Project Team: Barbara Gray Darby Watson

Department of Planning and Development Director, Diane Sugimura

Project Team: Robert Scully Liz Martini

PROJECT MANAGER



International Sustainability Institute

314 1st Avenue South Seattle, WA 98104

www.ISISeattle.org Contact: Todd Vogel info@ISISeattle.org 206-381-1630

CONSULTANT



GEHL ARCHITECTS ApS Gl. Kongevej 1, 4. tv. DK-1610 Copenhagen V CVR-nr.: 25 30 95 29 Tel.: + 45 32 950 951 Fax: +45 32 950 958 mail@gehlarchitects.dk www.gehlarchitects.dk

GEHL ARCHITECTS URBAN QUALITY CONSULTANTS Interns: Helle Søholt - Architect, MAA / Partner / Director contact: helle@gehlarchitects.dk

Louise Grassov - Architect, MAA / Associate contact: louise@gehlarchitects.dk Lærke Jul Larsen - Architect, MAA Liz Stenning - Master of Urban Planning, MA Johanna Enhörning - Stud. Arch

Annika McIntosh - graduate student, Landscape Architecture Szu-Yu Huang - graduate student, Landscape Architecture Olivia Allen Carrie Barnes Margaret Chang Riisa Conklin Benn Engelhard Brian Fabella Ro Hohlfeld Szu-Yu Huang Selina Hunstiger Katherine Idziorek Tom Jamieson Levi James Jette Gifty John Eriko Kawamura Karen Kennedy Julie Khorsand Lance Kollmann Jennifer Lail Nate Lamdin Li Leung Julia Lindgren **Caroline Majors** Yegor Malinovsky

Liz Maly Annika McIntosh Erin Montgomery Alyse Nelson Liz Nixon Yuko Okamura Anneka Olson Andria Orejuela Kristi Park Bradley Pavlik Mike Pickford Christian Rusby Angie Salicetti Rie Shintani Gus Sinsheimer **Emily Slotnick** Josho Somine Liz Stenning Orion Stewart Maria Taylor Mackenzie Waller Katherine Wimble

STUDENTS INVOLVED

Without the very enthusiastic help and efforts of the students from the University of Washington Scan Design Interdisciplinary Master Studio (2008), and Associate Professor Nancy Rottle from the College of Architecture and Urban Planning at University of Washington, we would not have been able to collect all the "public life" data represented in this report, including information on pedestrian movement, stationary activities, and the demographics.

These students, listed in alphabetical order, participated in the following;

Winter survey, February 2008

Summer survey, July 2008

Demographic survey; July 2008

Survey coordinator on site:

Liz Stenning

USE OF STUDENT WORK

In the chapter on Strategies/Public Space Programs /Alleys we have used illustrations produced in the University of Washington Scan Design Interdisciplinary Master Studio (2008) taught by Associate Professor Nancy Rottle and Assistant Professor Kathryn Merlino. In the document all illustrations are credited to the authors. PRELUDE

GOAL

This document offers an introduction to a new way of recording and understanding the importance of public life in an urban context.

Public life recordings are used as the basis for proposed strategies and reconfigurations of the space between the buildings and to prioritize people activities, which, in turn, make our streets and cities lively. Encouraging this liveliness pays another dividend. It increases the number of pedestrians and bicyclists, who play a vital role in moving people out of their cars and onto the sidewalks where they can interact with one another.

Seattle is a gifted city with a stunning landscape, engaged citizens and city officials who yearn to make the city still more livable. It is in the spirit of nurturing these remarkable resources - and inspiring its leaders still further - that Gehl Architects offers these visions, analyses, and strategies.

We hope that it will serve its purpose well.

Helle Søholt, Partner, Gehl Architects

TASK

The actual tasks were defined in a process between Director Grace Crunican, Seattle Department of Transportation, Director Diane Sugimura, Seattle Department of Planning and Development and Partner Helle Søholt, Gehl Architects, through various meetings, visits and telephone conferences during Autumn 2007.

The team decided to focus on a specific area within Downtown Seattle plus on three specific smaller areas; King Street Station, the intersection of Mercer Street and Aurora Avenue and parts of First Avenue. In a year -long process, Gehl Architects conducted analysis, recorded public life during Winter and Summer and illustrated overall recommendations for the identified areas.

HOW TO READ

The **INTRODUCTION** reflects on the overall Center City potentials, challenges and achievements.

The **ANALYSIS** is divided in three sub-chapters: The City describes the quality of the public realm the network, the urban landscape and the culture. The People describes the public life taking place in selected areas, where and when do people walk, sit and interact. The Summary gives a brief "hands-on" overview of problems and potentials.

The **RECOMMENDATIONS** illustrates

visions, "blue sky thinking", and concepts on different levels, divided in three sub-chapters: **The Strategies** identifies six overall Center City approaches to strengthen public life. The **Public Space Programs** illustrates how to apply these strategies to the focus areas. It establishes programmatic approaches to pedestrian needs and places for citizens to interact. These are not public space designs. The **Quick Wins** are solutions that could be applied within a very short time frame. They may be temporary or permanent. But each Quick Win helps build awareness for the long-term process of creating more people spaces in the Center City.

The **INSPIRATION** describes the process of how Barcelona, Lyon, Melbourne, Copenhagen and New York have been turning their focus and goals towards "better people places". It also describes three waterfront examples where great inspiration regarding human scale, active and mixed-use functions and successful public life can be found. Returning to this data and collecting new data in the years ahead will be crucial steps in Seattle's path to becoming still more livable and vibrant.

The **REFLECTIONS** describe how the Public Spaces Public Life Survey can be used as a tool and reflects on the process ahead.

As an appendix to this document the **DATA COLLECTION** contains all the collected data from the public life surveys and the demographic survey. CONTENT



The **INTRODUCTION** reflects on the overall Center City potentials, challenges and achievements.

INTRODUCTION THE LIVABLE CITY POTENTIALS & CHALLENGES

ACHIEVEMENTS





THE CITY...

THE "EVERGREEN" STATE AND THE "EMERALD CITY"

Mountains, water, and climate have had an unmistakable influence on the physical development of cities in Washington State. This ingrained conversation between the built world, water bodies, and unique topography is a large part of the region's identity and appeal. The Seattle region offers many opportunities for enjoying the forests, mountains, and water that give Washington State its "evergreen" reputation.

Time can be measured with a calendar of activities, from sailing to hiking to skiing. Outdoor activities are an important part of Seattle's lifestyle.

A CITY WITH A BEAUTIFUL SETTING

Seattle is the urban heart of the western "evergreen state," and downtown is the heart of Seattle.

Downtown has a classic American grid system of streets and blocks, with a fantastic and challenging topography that gives the city its own unique character. The setting on the Puget Sound lends a distinct flavor to the city, and views from the steep streets to the water and mountains are breathtaking.

...AND ITS PEOPLE

CREATIVITY & DIVERSITY

Seattle is widely recognized for its many neighborhoods. Each has distinct qualities and identity, and many have particularly creative, playful atmospheres. The neighborhoods, often once townships of their own, attract a diverse mix of residents, businesses, recreational activities, and visitors.

Seattle is also known for its cultural contributions. A few that put Seattle on the map worldwide are: The Seattle Art Museum, music festivals at Seattle Center, the Symphony, Opera & Ballet, the Seattle International Film Festival, all supported by the modern/alternative/ independent music, film, art, dance and theater scenes.

Other cities long for a reputation as a "creative" city, and Seattle already has this identity with a great potential to strengthen this further.

A UNIVERSITY CITY

Seattle ranks as the one of the nation's best-educated big cities. There are many higher education institutions located in Seattle. This contributes a great deal to the atmosphere of Seattle. Students inhabit and activate the public realm and add a dynamic element to city life.



THE LIVABLE CITY

The livable city is one that offers a variety of attractions and opportunities to citizens and visitors.

A livable city puts public life at the center of planning, strengthened by an overall focus on liveliness, health, attractiveness, sustainability and safety.

The human, cultural and social aspects should be carefully taken into consideration to deliver truly sustainable developments for the future. In other words, the planning process needs to have a holistic approach.

Or, as the international lifestyle magazine, The Monocle puts it, when rating the most livable cities in the world:

"...a combination of good ideas, good planning and manageable scale, plus a sound grasp of environmental issues, regional transport and a variety of subjective but nonetheless important elements like food culture, housing design and a sunny disposition..." that "...you have to get out on the streets and experience."



LONG TERM STAYS MAKE LIVELY CITIES

The activity level will rise remarkably when pedestrians or people indoors are tempted to spend time in inviting and comfortable public spaces. The extent of staying activities has the largest impact on the activity level in a public space.

BALANCE BETWEEN ROAD USERS CREATES LIVELY CITIES

When traffic volumes are low and traffic moves slowly there tends to be more public life and more opportunities to meet in the public spaces. A good balance between the road users can often be achieved by inviting people to walk, cycle or take public transport instead of the car.

SUCCESSFUL PUBLIC LIFE

WHAT ARE THE KEYS TO SUCCESSFUL PUBLIC LIFE?

A good indicator of successful public life is people's use of the public realm for a variety of activities during the course of a typical day. Two factors that can be observed and recorded readily are:

1) Number of people in a public space;

2) The amount of time people spend in the public realm.

Spaces where a large number of people linger for a long period of time tend to be more successful. Spaces with few people walking slowly or lingering for long periods of time are perceived to be less successful.

This observation underlies the principles stated at left that are the basis for the work described in this report.

• A VARIATION OF PLACES CREATE LIVELY CITIES

Smaller gestures inviting people to stay in nice places can tempt passers-by to linger for awhile. Informal spaces people can visit during breaks or outdoor serving areas can invite people to dwell in public spaces with possibilities for recreation and refreshments. An inviting space offers good comfort, sun, views, other people, shelter, and a respect for human scale. A balance between active and calm places is important to invite many user groups.

• A STRONG PEDESTRIAN NETWORK MAKES LIVELY CITIES

Walking should be simple and attractive. A network that connects destinations, lovely promenades, good climatic conditions, interesting things to look at, safety throughout the day all contribute to walking.

Walking activities need to be concentrated in a network of lively, attractive and safe main streets following the principle "to concentrate" as opposed to "spread out," to ensure an active public realm.

MANY USER GROUPS CREATE LIVELY CITIES

When a city is able to invite many different groups to use the public spaces - the elderly, disabled, children, families, young people, working people etc. - a more varied use of the city can be obtained both in terms of activities and time of day, week or year. A lively city does not rule out specific user groups to invite others, but invites a great variety of all users to get the balance right.

• PLANNING FOR OPTIONAL ACTIVITIES CREATE LIVELY CITIES

All cities, regardless of the quality of the public realm, have people engaged in necessary activities; walking to and from, waiting for the bus etc. The quality of the public realm can be measured in how many people choose to visit for optional reasons because the city offers a variety of experiences to enjoy the public realm, look at other people, meet friends and engage in urban activities.

DOWNTOWN POTENTIALS





FANTASTIC SETTING

POTENTIAL

Seattle has a magnificent setting. The mountains and the water are great elements of Seattle's identity. Even in the inner city it is possible to catch a glimpse of these treasures. The natural amenities situated near the city give an extra dimension to urban life in Seattle.

EXPLORING POTENTIAL?

The magnificent setting is not explored to its fullest potential and the city's waterfront is still a hidden treasure.

DOWNTOWN PLACED IN THE CENTER

POTENTIAL

Seattle is famous for its many appealing neighborhoods. Downtown is well situated in the center of multiple neighborhoods, and therefore plays an important role in connecting the various parts of Seattle.

The grid structure makes it easy to orient oneself and the fairly flat and wide streets and sidewalks that run north and south form the perfect base for a potential culture of more walking and biking in downtown.

EXPLORING POTENTIAL?

Downtown tends to serve as a connector between the surrounding neighborhoods or a place you go with specific purposes, such as to work, rather than a recreational destination or an urban hub with its own pulse. Making downtown more livable and inviting more people to walk and bike would ways to get more out of its prime location.



DISTINCT SURROUNDING NEIGHBORHOODS

POTENTIAL

The urban life of Seattle is characterized by "urban villages" or neighborhoods located around downtown, in which much of the city's social activities take place.

EXPLORING POTENTIAL?

Neighborhoods play an important role in characterizing the identity of Seattle as a city. Strengthening downtown districts with a neighborhood-like character of their own would explore this potential even further.

DOWNTOWN POTENTIALS



FINE BASE FOR WALKING

POTENTIAL

In general, downtown has wide and easy accessible sidewalks of good quality. Very few intersections lack a marked crossing or pedestrian signals. Together this provides a fine base for walking in the city.

EXPLORING POTENTIAL?

To invite more people to walk, extra layers can be added to the experience of walking, such as traffic signals timed for pedestrian speed, attractive ground floor facades, invitations to sit and rest along the streets, pedestrian scale streelighting and clear organization of the sidewalk space to enable unobstructed walking.



ACTIVE DURING WORK HOURS

POTENTIAL

Seattle is active during work hours. Many people commute into downtown for work, which creates activity.

The city has a fair number of visitors and tourists, who spend time in downtown during the day.

EXPLORING POTENTIAL?

It is encouraging that downtown already has a lot of regular visitors. This can be explored further to make downtown more inviting and make people stay even longer.



GREAT COFFEE CULTURE

POTENTIAL

Seattle has a significant coffee culture. There is a coffee shop on almost every third corner. Starbucks is famous around the world, and the fact that it originated in Seattle is not surprising when you visit the city. A lot of activity is taking place around and within the coffee shops; for instance, it is common to meet for business in a coffee shop. The coffee culture seems to be an integrated part of everyday life in Seattle.

EXPLORING POTENTIAL?

A distinct urban culture has not developed along with the coffee culture. Explore ways to use the coffee culture as a starting point to generate more outdoor public life.

DOWNTOWN CHALLENGES







DISCONNECTED WATERFRONT

CHALLENGE

Downtown has a beautiful setting at the water's edge that is not fully embraced.

CONSEQUENCES

Downtown and the waterfront are poorly connected in terms of pedestrian links, functions, views and vistas, mainly as a result of the Alaskan Way Viaduct.

The waterfront itself could be much more vibrant and interesting, and less dominated by traffic structures. The waterfront has under-utilized potential.

WEAK PUBLIC LIFE PATTERNS

CHALLENGE

Downtown is placed in the center of Seattle yet there is a fragile pattern of urban life, with few informal recreational activities taking place, compared to other similarly sized cities. It is an anonymous city center having a hard time competing with the active and lively neighborhoods around it. Most of the activities taking place are considered necessary activities" such as offices and commercial operations.

CONSEQUENCES

All the other neighborhoods in Seattle have a distinct character, but downtown is less defined.

There is a great deal of important destinations in downtown, but they are poorly connected, and the destinations can fail in generating public life activities. Downtown is not a place that succeeds in inviting people to go to for informal activities such as strolling, window shopping and hanging out.

MINIMAL OPEN SPACE IDENTITY

CHALLENGE

The public space network is unclear, since downtown tends to lack interesting, inviting and varied public spaces. The public space hierarchy is unclear - where are the hearts of the city? Where are the places for quiet reflection or the places for physical activities and play?

CONSEQUENCES

The poor public spaces and the office/retail focused activities in downtown cause fragile user patterns. A strong public life culture demands a city with more invitations throughout the day, week and the year.



OFFICE FOCUSED DOWNTOWN

CHALLENGE

Overall, Downtown is dominated by offices and retail and lacks residential units, especially for families. Furthermore, there are some downtown areas where either offices or retail shops dominate.

CONSEQUENCES

The lack of diversity and mix in functions has a number of side effects. There are generally fewer attractions and unique experiences in each area leading to a lack of mixed user groups. This results in more uniform populations with similar patterns of use. In terms of public life, downtown is only highly active during office and retail hours. This leads to a perceived lack of safety in downtown in the evenings and weekends and also impacts the use of public spaces.

DOWNTOWN CHALLENGES



FRAGILE URBAN CULTURE

CHALLENGE

The coffee culture is great, but it does not translate into a city culture. Downtown does not seem to be a place where you just spend time or even enjoy your coffee in the public spaces. Downtown open space has lost its important role as a preferred meeting place.

CONSEQUENCES

The public spaces seem underutilized. Few public spaces in downtown manage to invite people to spend time for informal recreational purposes and leisure. The outdoor city culture is generally underdeveloped in Seattle and the city needs more instantly appealing and inviting public spaces. Lack of public life is a selfperpetuating process. Higher levels of public life tend to generate more life while lack of public life has the opposite effect.

UNBALANCED TRAFFIC SYSTEM

CHALLENGE

Downtown is bound on two sides by two major traffic arteries by I-5 to the east and the Alaskan Way Viaduct to the west. - These highways create barriers and lower the quality of downtown in general, particularly for outdoor public life.

CONSEQUENCES

In downtown, the car tends to be 'king,' meaning that vehicular traffic flows are highly prioritized, at times compromising pedestrian and bicycle flow. Part of the problem is that downtown acts as an bottleneck for through-traffic, which means that rebalancing the traffic in downtown demands changes in the overall traffic system of Seattle.

ACHIEVEMENTS

A MULTI-PRONGED STRATEGY

Seattle has developed and strengthened its public realm through a multi-pronged strategy, putting focus on, and getting tangible results in, four important areas:

- Public Transport initiatives
 - Introduction of light rail and more streetcar lines
 - Development of bicycle- and pedestrian master plans
- Densification
 - Belltown
 - South Lake Union
 - Denny Triangle
 - South Downtown
 - Yesler Terrace
- Public Realm Improvements
 - The Olympic Sculpture Park
 - Bell Street Park Boulevard
- New Public amenities
 - The Central Library
 - Expansion of Seattle Art Museum Downtown

These strategies need to be taken further to achieve the right synergy, a change of behavior and a permanent effect on the public realm of downtown.

With the potential opportunities along the downtown waterfront, now is the time and the opportunity to put focus on the quality of the public realm in downtown, inviting more people, getting them to walk, bicycle, and stay longer.



INTRODUCTION OF LIGHT RAIL

Downtown is well connected with adjacent neighborhoods and the Seattle area, with the light rail running from the international airport to downtown.



TRANSFORMATION OF BELLTOWN Belltown has undergone an impressive transformation and is now one of Seattle's blooming neighborhoods.



THE OLYMPIC SCULPTURE PARK Turning a brownfield into the Olympic Sculpture Park has resulted in a city wide attraction.



THE CENTRAL LIBRARY With the opening of the Central Library in 2004, downtown got an amazing public amenity inviting more than 2 million visitors in 2005.



The **ANALYSIS** is divided in three sub-chapters: The City describes the quality of the public realm the network, the urban landscape and the culture. The People describes the public life taking place in selected areas, where and when do people walk, sit and interact. The Summary gives a brief "hands-on" overview of problems and potentials.

ANALYSIS THE CITY THE PEOPLE

THE STUDY AREA

The main focus of this study is the area of Downtown Seattle defined by King Street to the South, Bell, Lenora and Steart Streets to the North, I 5 Freeway and 4th Avenue (south of Yesler Way) to the East and the Waterfront shoreline to the West. (See map to the right)

Three specific focus areas have been selected; King Street Station Area, 1st Avenue, and the Mercer Street and Aurora Avenue intersection.

These areas encompass the city core, more or less within a walkable distance, which allows for a study of network and coherence as well as connections to the bordering areas.

The study area comprises approximately 398 acres/1.610.000m² and the outline has been determined in close coordination with City of Seattle.

The same approach for selecting the study area has been used in a number of previous studies including San Francisco 2008, Sydney 2007, Melbourne 2004 and Copenhagen 2006, which allows for comparable studies and analysis.





SYDNEY

23,680,800 ft² / 2,200,000 m²
15,000 residents in the study area (2006)
68 residents per hectare in study area
(4 million residents in the metropolitan area)



MELBOURNE

24,757,200 ft² / 2,300,000 m²
12,000 residents in the study area (2006)
52 residents per hectare in study area
(3.5 million residents in the metropolitan area)

CITY COMPARISONS



SEATTLE

17,330,000 ft² / 1,610,000 m² study area
4,300 residents in the study area (2008)
27 residents per hectare in study area
(3,424,000 million residents in the metropolitan area)



COPENHAGEN

12,378,600 ft² / 1.150.000 m²
7,600 residents in the city center (2005)
66 residents per hectare in study area
(1.2 million residents in the metropolitan area)

SAN FRANCISCO- FISHERMAN'S WHARF

6,996,600 ft² / 650,000 m²
582 residents in the study area (2008)
9 residents per hectare in study area
(7 million residents in the metropolitan area)



NEW YORK - LOWER MANHATTAN 19,900,000 ft² / 1,850,000 m² 300,000 residents in the study area (2008) 1620 residents per hectare in study area (19 million residents in the metropolitan area)

THE ANALYSIS

Based on quality criteria established by Gehl Architects, students from the University of Washington took to the streets in the study area to inventory features of the urban environment, observe people's interactions with the urban environment and surveyed people on their use of space in the downtown area. Quantitative and qualitative data were collected in both winter and summer of 2008. The results of this analysis are summarized and illustrated on the following pages.





QUALITY CRITERIA FOR A GOOD CITY NETWORK

INTRODUCTION

CONNECTS DESTINATIONS & PLACES • ensures access to transport hubs, visitor destinations and city services	ENSURES BALANCE BE- TWEEN ROAD USERS • prioritizes soft road users i.e. pedestrians and bicyclists • new road types with shared space	 IDENTIFIES A HIERARCHY OF STREETS AND LINKS activates main streets by concen- trating pedestrian flows, rather than spreading them out 	THE IMPORTANCE OF NETWORK The urban grid of downtown forms the base for a high quality city network. The network ensures connectivity and mobility, hierarchy of streets, legibility and safety,
 ensures access to public squares and parks 	and pedestrian priority	 identifies transport corridors 	and improves the quality of the experience of moving around the downtown grid. The figure to the left summarizes a set of key principles
INVITES ALL AGES FROM CHILDREN TO SENIORS	IS LEGIBLE, ACCESSIBLE & SAFE FROM ACCIDENTS	ENSURES A FEELING OF SECURITY - DAY AND NIGHT	for achieving a good city network and serves as a guide for assessing Seattle's public space network.
• ensures wide sidewalks and traffic signals for pedestrians	 clear division between soft and hard road users 	• pedestrians and bicyclists concen- trated on main routes at night	HUMAN SENSES IN PLANNING
 enforces low vehicular traffic speeds provides bicycle tracks 	 human scale signage - 3mph applies guidelines and measures for disabled 	 network well linked to main public transport hubs 	Human beings have not changed through modern times, and the basic needs and senses of humans remains consistent across the globe.

HUMAN SENSES



GOOD NETWORK & HUMAN SENSES

The way we as human beings perceive and experience places is tied to our senses. The five most well-known are the Aristotelean senses of sight, hearing, taste, touch, and smell. 75% of all sensory impressions are perceived through eye sight.

The human is a walking being, moving with an average speed of 3 mph. We experience the city from an average height of 57". The human brain needs approximately 1000 new stimuli per hour in order to remain alert.

This is why we enjoy walking along city streets with facades that vary about every 30 feet: they keep our brains stimulated. Likewise, when we sit in public spaces we want to sit so that we can look at other people walking by or engaging in activities.

WALKING IN THE CITY

STEEP TOPOGRAPHY

In Seattle the topography is both a blessing and a challenge. It gives the city a beautiful setting and creates magnificent views. But the topography is a challenge for pedestrians and bicyclists.

In downtown everything is within reasonable reach for people walking. A rule of thumb is that people are willing to walk 0.6 mile, and it will take approximately 10-15 minutes. This rule is challenged by Seattle's topography, but fortunately the east-west blocks tend to be shorter than those running north-south.

The hills pose a challenge for walking, and even walking downhill is difficult for certain groups, for example wheelchair-users or people with baby carriages or similar loads.

75% are willing to walk more than **9** blocks*

SUMMARY

CHALLENGE ON EAST-WEST STREETS

The east-west connections are a challenge, especially where the topography is steepest.



The purpose of the Demographic survey was to explore issues like:

DOMNHILL

100

400

1000

500 m

1500 ft

6 MIN.

- Who visits downtown
- When they visit
- Their purpose in visiting
- The distances people travel
- The means of transportation used
- The feeling of safety in Downtown
- Where people like to spend time
- What uses people would like to have
- Age
- Ethnicity
- Employment
- Gender



PEDESTRIAN NETWORK

A good pedestrian network invites people to walk along appealing, comfortable, and uninterrupted links that bring people from one end of the city to the other.

A pleasant streetscape can be characterized as being comfortable and interesting to walk along, with transparency and activity on the ground floor, interesting paving and other street elements that create a cohesive design.

A high quality pedestrian network also consists of well connected, pleasant pedestrian routes. In downtown there is no continuous high quality pedestrian network. There are some stretches of streets with a pleasing walking environment, but no links connect these streets into a network of high quality pedestrian routes. For instance, there are sections with activity and active façades along First Avenue, but its total length and side streets do not function as one complete high quality walking link. A good network is also related to hierarchy and variation in the different streets. This makes the experience of walking more interesting but also the city more legible since it is easier to navigate.

The pedestrian entrances to downtown are also important. Are they welcoming? In general, the entrances do not invite pedestrians into downtown when arriving from the east and the waterfront.

SUMMARY

DISCONTINUOUS

downtown need improvement.



 \geq

A well-functioning and inviting pedestrian entrance to downtown is found on 1st Avenue by King Street. You are welcomed by an inviting streetscape in human scale, easy pedestrian access on wide sidewalks and a good balance between vehicular traffic and pedestrians



PEDESTRIAN ACCESSIBILITY

Pedestrian accessibility covers a number of issues. In downtown the fairly wide sidewalks are a positive aspect of the city's accessibility. However, accessibility may be decreased in some places by the organization of the sidewalks, including the sidewalk interruptions, bus stops, and other street elements.

The analysis on this page shows where the pedestrian flow on sidewalks is interrupted by cars crossing, either in or out of alleys or entering and exiting parking garages.

Cars driving in and out of garages must cross the sidewalk; the question is, how is this organized? Who is prioritized - the pedestrian or the car?

In most cases the downtown sidewalks are kept at a consistent level, which is positive. But the choice of pavement material at the interruptions, the width of the entrances and exits to garages, and the poor visibility mean that cars are ultimately prioritized. Pedestrians must be alert and often have to stop and wait for cars. This is a difficult situation especially for the elderly, children, or people with disabilities. It is important that pedestrians feel safe on the sidewalk. Ideally, sidewalk organization should always give pedestrians the right of way, so it is clear to cars that they must wait for pedestrians.

SUMMARY

FREQUENT **INTERRUPTIONS**

The interruptions of the pedestrian flows occur all over downtown, but are concentrated in some areas. Entrance/exits of parking garages are an issue.

PEDESTRIAN CROSSINGS

The design of crossings has a lot to do with pedestrian accessibility: the type of signals, the level of safety and the legibility for people with disabilities

 Lack of pedestrian crossing signals or markings makes for a dangerous situation and should be avoided in an inner city area.

Pioneer Square has high pedestrian activity and it is surprising that there are no pedestrian crossing signals especially since it is heavily trafficked with more than 17,000 average weekly daily traffic (AWDT).

2. Flashing stop lights may work on streets with low traffic volumes, but should be avoided in downtown. While the pedestrian has the right-of-way in these situations, this type of crossing still involves an element of negotiation between driver and pedestrians. For instance, a pedestrian would be wise to make eye contact with the driver to ensure they are seen.

Push-buttons are crossings where the walk light is only activated by the pedestrians. However, this may invite jaywalking when no vehicular traffic is present.
 In crossing, curb ramps are crucial for people with disabilities. The way the ramps are placed is also of significance so wheelchair users and others do not have to take a detour at intersections. This becomes even more important with free right-turns for cars.

SUMMARY

POOR CROSSING QUALITY IN SOME AREAS

Some areas lack pedestrian signals and markings. Major pedestrian destinations such as Pike Place Market and Pioneer Square could benefit from improved pedestrian crossings.



ADA ramps are crucial for people with disabilities, but they ought to be placed in line with the crossing and not in the corner.

Confusion about when to walk and when to wait occurs when the there's no designated signal for pedestrians.

For children, crossings without a traditional signal are a challenge.



WALKING FLOW

When walking down 1st Avenue, how much time do you spend waiting at crossings? The walking and waiting time is calculated based on a "normal" walking speed of approximately 3 miles per hour (MPH). In order to keep the walking speed as even as possible throughout the studied routes, the calculation on the east-west routes is based on walking downhill.

Waiting times are shorter along the north-south routes than on the east-west.

The fastest route is Western Avenue with almost no waiting time at all. This has to do with low traffic volumes and the fact that only a few crossings are regulated by signals, making it possible to cross the street if there are no cars.

3rd and 5th Avenues have the longest waiting times. It is worth noting that 3rd Avenue is a major transit corridor and therefore has many pedestrians. On most of the studied east-west routes, pedestrians spend a long time waiting at crossings. This means that the time it takes a person to walk from point A to point B is increased by more than 30%.

A negative side effect of long wait times is that people tend to resort to jaywalking which creates dangerous situations.

SUMMARY

AN AVERAGE OF 20% TIME SPENT WAITING

One may spend a long time waiting when walking in downtown. East-West connections present the longest waits. (see map to the right)

1500 ft

500

1000

est

One way to lower wait times is to regulate crossings based not only on vehicular flow but on pedestrian and bicycle flow as well.

In Copenhagen "green waves" (traffic signal timing that minimizes stopping) for bicyclists has been introduced on the most important bicycle routes.

BICYCLING IN DOWNTOWN

Bicycling is like walking - it is about invitations. Does downtown invite people to use bicycles as daily transportation? Does downtown invite all age groups to ride bicycles?

Unfortunately, it does not. The type of people choosing to cycle reveals a lot about the system. Mostly "tough" cyclists ride in downtown. The east-west steep topography presents a challenge for cyclists. However, this could be addressed with signage indicating more gradual routes (e.g., The Wiggle, a bicycle route in San Francisco).

Aside from the issue of topography, the network is incomplete, making it difficult to bike, since a cyclist may ride on a bike lane for a few blocks only to find themselves riding in vehicular traffic again. These factors hinder many people from using the bicycle for daily activities.

The existing bicycle routes suffer various problems:

- Bike lanes are placed between parked and driving cars, rather than next to the sidewalk.
- For sharrows to be effective drivers need to be educated about the meaning and the value of sharing the roadway with cyclists. If drivers are not aware of the sharrow, the cyclist may easily end up competing with cars for the road.
- Bicycling is also about enjoyment and attractive routes. There are few, if any, bicycle routes of this quality in downtown. The waterfront bike path is a fairly continuous bike route but it is interrupted by crossing streets. The location of the waterfront bike route on the east side of Alaskan Way also limits the view of the water for cyclists.



USER GROUP





Most bicyclists in downtown are "tough" bicyclists, for whom biking is a lifestyle or a form of exercise. Seattle's bicycle network does not invite all age groups to cycle.

BICYCLE ROUTES



A "bike lane" is marked by a solid line. It is placed between parked cars and driving cars causing cars to drive across or open doors into the bike lane. This requires drivers and passengers to respect the bike lane so as not to open the car door and hit a cyclist.



Sharrows are an interim strategy in creating a cycle culture in Seattle. Drivers may not looks out for bikes, and it can be unclear on which side of the car cyclists are supposed to ride.



Topography is a challenge for bicyclists - but it is good exercise!

Sharrows do not provide enough space and can

comfortable riding between parked cars and

driving cars.

make travel challenging for cyclists who are not

BICYCLING IN DOWNTOWN

The bicycle network ought to invite more people to ride bicycles - a good bicycle network invites all age groups.

The type of bicycle routes and the way they are designed ought to be reconsidered. The present bike lanes and sharrows are a good start, but it would be good to aim for even higher standards creating a safer bicycle environment.



*result from Demographic Survey 2008

The shared walking and bike path along Alaskan Way has numerous crossing lights. A bicycle route located on the waterfront side would create a less interrupted path and provide views for users.

CLASH WITH PEDESTRIANS



When bicycle facilities are poor or simply non-existent, cyclists resort to using sidewalks, which while legal in Seattle can create conflicts with pedestrians.

LACK Signific

LACK OF BICYCLE NETWORK Significant improvement, consistent

with the Bicycle Master Plan is needed to make the city center attractive for cycling.

SUMMARY



THE WATERFRONT

Downtown Seattle is situated on the Puget Sound, yet the city hardly interacts with its waterfront. The waterfront is disconnected from downtown, and views of the water are blocked by the Viaduct in many places. Access routes to the water are unclear and uninviting in most cases. While conducting data collection along 1st Avenue, several tourists asked, "How do we get down to the water?" This demonstrates the lack of obvious invitations for access. There is only one place where those with disabilities can actually get to the waterfront from downtown without using an elevator.

Once at the waterfront, there are few recreational activities aside from the commercial spaces. Parks and public spaces along the water are generally run down and uninviting. Olympic Sculpture Park is a positive exception with numerous places to rest.

The promenade along the water has potential, but currently has heavy traffic volumes and high noise levels. The promenade has few inviting places to sit. The fence along the promenade makes it difficult to see the water for wheelchair users and others.

At the moment downtown is not taking advantage of it's spectacular natural setting.

SUMMARY

DISCONNECTED

Downtown is disconnected from its waterfront. The waterfront itself lacks invitations for public life and could become much more attractive.







VIEWS



The views of the water add quality to downtown streets and spaces.



While the Harbor Steps are an attractive place, it would be an even greater amenity to see the water.



The Viaduct takes away the good qualities from neighboring outdoor spaces, and impairs views to the water.

THE WATERFRONT

The waterfront is one of Seattle's great amenities and should be treated as such in future planning and design.

There are currently four main issues that detract from the waterfront environment:

- The traffic dominance of the Viaduct, the parking spaces and Alaskan Way. This will be discussed under the vehicular traffic theme.
- Views toward the water are blocked or unattractive in most cases due to the Viaduct.
- Access routes to the water are uninviting, unattractive, difficult to find and only a few are easily accessible for people with disabilities or people using strollers.
- The waterfront activities are mostly commercial with few recreational opportunities.





Stairways and paths to the water are unattractive and take visitors along and under highway structures.



There are routes to the waterfront that are not inviting, where pedestrians must walk down unkempt stairways and past garbage dumpsters.



It's important that elevators are safe, visible, and clean so people feel welcome and safe. The present elevators have room for improvement.

WATERFRONT



A majority of the existing activities along the water are commercial. The waterfront is in need of attractive non-commercial activities too.



When not in use for large summer events, this space space needs a sign for people to understand that it is a park. Other than the words on the sign, "This park is yours to enjoy...," there is little inviting about this space.



This is an example of what is offered for public seating. The espace is dominated by cars, which is not a good use of this setting by the water.

PUBLIC TRANSIT

The predominant bus routes in the downtown run north-south. Prioritizing 3rd Avenue as a bus corridor is a way to organize public transit which works well, but more of a public transit network is needed in order accommodate all potential users. The public transit network should cover more than the most used avenues and streets; adding more buses on the east-west routes all the way from the waterfront and ferry docks up to I-5 and further into the neighborhoods to the east. To further strengthen the network one, or two, bus lines could be added on Western and 5th Avenues.

The waterfront is a poorly connected link in the transportation system. Connections between downtown and the water are very limited and few routes currently operate on the waterfront.

A unique and very positive feature in the downtown area is a ride free zone, which invites people to take public transit, accommodating wheelchairs, bicycles, trolleys and pets!




THE SYSTEM



The free downtown transit zone is a positive feature of the public transit system.



Being able to bring a bike on the bus is a good idea, since it makes it easier to use environmentally friendly transportation, even for longer distances.



The lift is a very positive feature for wheelchair users.

PUBLIC TRANSIT

There are a number of positive features about the system and the buses today that should be retained in the future. The free downtown transit is a great feature. The buses also have lifts for people with disabilities and racks for transporting bicycles on the buses.

Waiting for the bus is an experience that could be improved. The lack of seating at bus stops on the avenues is a problem. Additional shelters or canopies at bus stops along the busiest routes would protect users from weather conditions. Bus stops on the east-west streets have the same problems, yet these places have the additional issue of entrances and exits of parking garages conflicting with bus stops.

The underground system is difficult to figure out at the street level, which is why signage and general legibility could be improved.

WAITING FOR THE BUS



On a warm summer day it is comfortable to stand in the shade. But on all the rainy days in Seattle, standing under a shelter/roof would be preferable.



Many bus stops lack true seating which could make waiting more pleasant.



Activities and ground floor façades along 3rd Avenue are generally inactive and closed at night. This is one reason that it is not comfortable to wait for the bus after dark in some locations, which is a problem in terms of inviting more people to use public transit.

LEGIBILITY



The entrance to the transit tunnel station is well integrated in the façade, but can be difficult to find if someone does not already know where it is.



The bus tunnel station in the Russell Plaza is hidden and tricky to find.



The transit tunnel station in International District/ Chinatown is easier to find. The entrances are located in a plaza with retail shops.

KING STREET STATION

King Street Station is the largest transit hub in downtown. Various modes of public transport, such as Amtrak, the Sound Transit commuter train, local and regional buses, and light rail meet and connect people to local and regional destinations.

Legibility should be emphasized to orient people to these transit modes. The public transit on and around King Street Station must work well for both daily commuters and visitors.

Today the King Street Station area does not function as the optimal transport hub getting the users connected between transportation modes or into the city.

A number of important issues are not addressed:

• Wayfinding: Getting from A to B

Do you immediately understand where you find the various means of public transit? Is it easy to understand what kind of public transit will take you to your destination?

• A "Welcome to Seattle"

When you get out of the station do you experience being welcomed to Seattle? What is the immediate experience of Seattle as a city? Do you instinctively understand what routes will lead you to the center of the city and beyond?

Accessibility

A transit hub must address a number of situations. Is it easy to escort your elderly relatives to the station? Are there good facilities for quick drop off? Is it easy to get to and from if you are in a wheelchair or have special needs?

• Waiting and passing through

If you have half an hour before the train leaves, are you offered convenient outdoor waiting facilities? Can you get a cup of coffee or sit on a public bench? How are the facilities if you travel with children?



LEGIBILITY



When approaching King Street Station, you experience the spaces around the station that prioritize vehicular traffic (e.g., signage relates to people in cars).

INVITATIONS



This is the entrance and exit of the station as it is today. It does not offer a welcoming feeling or give the visitor the desire to return.



King Street Station is a clear and legible landmark. The adjacent, renovated Union Station building is impressive, appearing to be a train station although its use has changed. This can be confusing. Accentuate King Street Station and its public spaces as the main facility for Amtrak and Sounder commuter rail.



The bus stops outside the station are not an enjoyable place to sit and wait. Upgrade the experience of using public transit by making the waiting areas inviting.



Walking from King Street Station to the bus tunnel is confusing and hectic. It is not obvious which route will lead to the tunnel. Better visual and physical connection between the station and the tunnel is recommended.



Next to the transit tunnel station entrance is a space that offers both commercial and public seats. The space is used by people waiting for public transport and people hanging out, creating a positive combination. The space invites you to sit and take a break.

KING STREET STATION

At a transportation hub, legibility is a key criteria to success. Public transit must be inviting for people to use. Invitation is the key. High quality open spaces at transportation hubs and waiting areas is necessary.

The legibility of the various means of public transit that meet at King Street Station is difficult. As a pedestrian it is not obvious where to go to reach your destination. Even the entrance to King Street Station is tricky to find with the current main entrance on the backside of the building.

The open spaces around King Street Station are lacking in quality, often without furniture or landscaping. These spaces are not a welcoming entrance for visitors to Seattle. However, the plaza behind Union Station with seats, benches, and landscape features has many of the qualities needed for inviting people to use public transportation. If the goal is for people to consider public transit as a viable alternative to the private car, then the rest of these spaces should be upgraded.

Legibility is not only about signage. It is about communicating hierarchy and relations in the way spaces are designed and organized. For instance, the relationship between King Street Station and the Union Station transit tunnel station could be stronger through streetscape design. Improved legibility of walking routes to the center of downtown and other nearby districts could better orient pedestrians.

SUMMARY

ATTRACTIVENESS



Currently, there is no entrance to King Street Station on the upper level. When future station upgrades are made, this open space should be emphasized to welcome visitors, and serve as an area to sit down comfortably and wait.



King Street Station may be seen from all angles, so it is important that the spaces around it are attractive.



The surrounding openings in the ground to the train tracks create barriers and lowers the quality of the open spaces due to visual lack of aesthetics, and air and noise pollution.

THE STATION AREA DOES NOT WELCOME YOU

Legibility and accessibility needs improvement in order to become an optimal transportation hub. The waiting situations are not very attractive. The public open spaces around the station do not communicate "welcome" to Seattle.

TRAFFIC STRUCTURES

Two dominant traffic structures are pressuring downtown from east and west. Both structures are mainly open-air structures which causes severe problems.

The large traffic structures lower the quality of downtown because of their effects on adjacent public space and buildings (eg. air pollution, noise pollution, visual quality, and both physical and visual barrier effects).

Alaskan Way Viaduct blocks off downtown from its waterfront, resulting in low quality public space on the ground. The Viaduct will be taken down for safety reasons in the near future. The question is, what will replace it? Will this window of opportunity be used to create an integrated downtown and waterfront, where both places are winners in terms of low vehicular traffic flow?

Interstate 5 is another large traffic structure to the east of downtown creating a barrier between adjacent neighborhoods. The highway blocks east-west connections and creates an environment with high noise levels and pollution.

SUMMARY

TRAFFIC STRUCTURES

The major freeway structures create restricted access

to adjacent neighborhoods and

AS BARRIERS

the waterfront.



DOMINANT STRUCTURES



I-5 creates a big scar in the city. It is very difficult, if not impossible, to create a high quality city fabric next to a large freeway.

SPACE LEFT OVER - NO QUALITY SPACE



Left over space is difficult to use, which is why it ends up being used for parking.



The barrier effect of I-5 is tremendous. It separates

and in terms of noise and air pollution.

neighborhoods and is a barrier both physically, visually,

Large traffic structures take up a lot of space. Pedestrians are forced to move under and along the Viaduct if they want to get to the waterfront.



The Viaduct blocks views and creates a barrier between downtown and the waterfront. Downtown will never be integrated with the water as this structure remains.



The Viaduct takes away the potential of surrounding buildings and spaces to activate the waterfront.

DESIGNED FOR CARS

While Downtown seems to have turned its back to Interstate 5 there are a number of good qualities on the waterfront that draw people in that direction. At the moment the Alaskan Way Viaduct seems to be an even bigger problem than I-5 since it is a visual, physical and psychological barrier to something people instinctively gravitate toward: the water.

Large highway structures create challenges on many scales and levels. The first striking problem is the massiveness and dominance of the structures. A closer look at the structures reveals a number of unfortunate "side effects": odd, unpleasant, and unusable spaces are created below and beside the structures. The pedestrian environment becomes an undesirable place; pollution and noise forces pedestrians to walk through all the "low quality spaces" that were left over after the construction of the highways.

It is the pedestrians and the people in a city that have to bear all the negative side effects of these types of structures. This happens when we plan for cars and not for people.

UNPLEASANT PEDESTRIAN ENVIRONMENT



This environment does not consider pedestrian needs.



An unpleasant environment along the water.



Highway infrastructure - access ramps - brings low quality structures into the downtown grid.

SURFACE TRAFFIC VOLUMES

"Quality" has to do with multiple factors: safety, comfort, and the possibility for public life to take place. A rule of thumb; the more traffic and the higher the speed, the lower the quality for pedestrians and bicyclists.

A majority of the Avenues in downtown have traffic volumes (AWDT) above 10,000. Particular sections of an avenue may be busier than others, but in general the traffic volumes (AWDT) are high. 1st Avenue is an important pedestrian connection, but unfortunately it is also very busy in terms of traffic. Pine Street and Pike Street have fairly low traffic numbers, and may become pleasant walking routes.

East-west streets have less traffic. Unfortunately the topography and the less active ground floor frontages are a challenge for public life to take place.

Streets that connect to highway entrance or exit ramps have increased traffic volumes.

2,600 1600 7,500 9,50 -600 100 MAJOR ARTERIAL 24 HOUR TRAFFIC VOLUME < 5,000 5,000 - 10,000 10,000 - 15,000 00 10 500 5,000 15,000 - 20,000 1900 ,700 200 ,400 308 20,000 - 25,000 5.400 2,700 ω 25,000 - 30,000,600 600 14,400 6 900 ONE WAY STREET SOURCE: CITY OF SEATTLE, SDOT MAP SHOWING: AWDT 2008 TRAFFIC CALCULATIONS: FEHR & PEERS / MIRAI \sim ,700 100 200 300 400 500 m 1500 ft 500

SUMMARY

HIGH VOLUMES RESULT IN LOW QUALITY

High traffic volumes and speeds in the downtown result in a low quality street environment for pedestrians and bicyclists.



STREETSCAPE



This is a highway intersection, and not a place for people. The layout and design of the intersection gives priority to vehicular traffic only.





This bench is placed next to a bus stop, but it cannot be called an inviting place to wait for the bus or take a break.



The space is undefined and too big and wide to have a comfortable pedestrian scale. The built fabric in this area is scattered, which does not define the streets with built edges. Constructing buildings up to the streets is a strategy to urbanize the area.



The current Mercer and Aurora intersection gives no room for bicyclists.



Fast moving cars and a narrow sidewalk provide little protection for pedestrians.

MERCER ST & AURORA AVE

The Mercer Street and Aurora Avenue intersection is located just to the north of downtown. Several neighborhoods and recreational destinations converge in this area. The Seattle Center and South Lake Union are both within walking distance from the intersection. The newly renovated South Lake Union Park offers access to the lake front.

The intersection is complicated with streets running under each other. Aurora Avenue is on the surface level. Mercer Street runs under Aurora Avenue and Broad Street again runs under Mercer Street. The pedestrian environment is very poor as people are forced to take long detours to cross streets, few places to rest or sit and the streetscape is uninviting, dull, and lacks human scale. The layout of the intersection as it is now makes it difficult to create a high quality neighborhood inviting people to walk and bicycle.

The Seattle Department of Transportation completed the South Lake Union Transportation Study in 2004 that recommends improvements for this intersection and others in South Lake Union. The Mercer Corridor Project that will reconfigure this intersection and other portions of Mercer Way in South Lake Union is partially funded and about to begin consruction.

SUMMARY





People want to move around in attractive spaces. They are even willing to walk down the stairs, and decorate the wall with flowers.



Some pedestrians must use the underpass to access

to access traffic island (see photo above). With fast

the bus stop. This bus stop is placed on a difficult

moving cars there is little to protect pedestrians when crossing the street. Access for the disabled is

limited.

The façades around Mercer and Aurora illustrate that streets facing heavy traffic arterials do not inspire opening façades to the street. On the contrary, business owners and residents attempt to block out as much of the noise and pollution as possible by closing façades. This lowers the pedestrian quality drastically as there are few "eyes on the street" from adjacent buildings.

UNATTRACTIVE INTERSECTION

Today the traffic intersection leaves no quality for pedestrians and bicycling is not an option. The area around Mercer St and Aurora Ave is scattered and the street scapes are dissolved and undefined.

MULTI-STORY PARKING

Multi-story parking garages are generally a good way of reducing and relocating surface parking lots, thus potentially making surface space for public amenities. The more parking accommodated in garages, the fewer surface parking lots should be found.

Seattle seems to be doing well with integrating parking garages into the built environment. But parking garages also involve a set of challenges. First of all, how do these parking garages meet the public realm. In several cases the parking garages are tall buildings that only communicate "parking garage" to the street. This gives a poor impression when analyzing the quality of a streetscape and subtracts from the feeling of safety at night.

Another question is, how is the ground floor organized? When you walk along it, do you look in on parked cars? Unfortunately the ground floors of the garages contribute to a poor pedestrian environment. In some cases the very wide entrances/exits create unpleasant "holes" in the façade. Finally, conflicts may occur when cars drive across the sidewalk to enter or exit a parking garage. This situation ought to be designed with the pedestrian in mind to minimize conflicts. Locating access from existing alleys is a better solution.

SUMMARY

CONCENTRATED IN THE EASTERN PART

Multi-story parking garages may be an efficient way to take parking off downtown streets, but in many cases parking garages meet the public realm in an unattractive way.





SURFACE PARKING

Off-street surface parking lots in a city center area may be functional, but unattractive. In downtown the surface parking spaces are generally run down and even less attractive when filled with cars. These spaces have potential for much more than parked cars. They may be transformed into interesting open spaces or buildings that add quality to downtown.

On-street parking is generally kept at a low level in downtown. For this reason, proposed additional onstreet parking is not recommended. Many leading cities around the world are creating strategies to reduce as much surface parking as possible - on-street as well as off-street.

On-street parking is currently placed next to the sidewalk which creates possible conflicts when combined with bicycles. Best practice examples from Copenhagen and Amsterdam allow bicycles to ride between the sidewalk and parked cars, rather than between parked and driving cars.

Today surface parking is concentrated in some areas. Reducing the amount of surface parking will help to improve the urban quality of Downtown.

SUMMARY

CONCENTRATED IN THE WESTERN PART

Where the concentration of surface parking is at the highest, it becomes dominant and lowers the quality of the pedestrian environment.



COLLISIONS

This map illustrates pedestrian and bicycles collisions with vehicular traffic. More pedestrian collisions occur at intersections than mid-block, while the number of bike collisions are about the same for mid-block and intersection collisions.

Most bike collisions occurred while the bicyclist was riding with traffic (55%) or entering or crossing traffic (30%). Although 64% of the bike accidents occurred while the bicyclist was riding in the roadway, 12% of collisions including one fatality occurred on "bike routes" including painted bike lines.

531 COLLISIONS WITH PEDESTRIANS IN 2007 354 COLLISIONS WITH BICYCLISTS IN 2007*

The many bicycle accidents (in the perspective of how few are bicycling) points at an incomplete and challenging bicycle network within downtown. Intersections still demand extra awareness from everybody. Note that 51% of the pedestrian collisions were while crossing at an intersection with signal.



SUMMARY

HIGH NUMBERS OF COLLISIONS

The number of accidents involving pedestrians and bicyclists are high compared with Copenhagen. Especially for the bicyclists since so few actually bike in Seattle.



Pedestrians involved in collisions while attempting to cross at intersections were most frequently crossing with the traffic signal.*



Failure to grant right of way was the most common reason for pedestrian/bike and car collisions.*



COMPARED WITH COPENHAGEN



*

COMPARING WITH COPENHAGEN

36% commute to and from work on bicycle. The number is based on an interview survey in 2005. An on spot survey was also conducted in 2005. On selected counting spots through out Copenhagen, more than 250,000 bicyclists were registered daily.

The number of accidents yearly with bicyclists involved are a bit higher than in Seattle. But when the number of people bicycling is far higher in Copenhagen, therefore the percentage of accidents with bicyclists involved are far lower in Copenhagen than in Seattle.

COPENHAGEN SOURCES:

trafiksikkerhedsplan for københavn 2006 (traffic safety plan for copenhagen 2006) vej & park, copenhagen municipality, www.vejpark.kk.dk







INTRODUCTION QUALITY CRITERIA

Attractive public spaces provide room for optional and social activities. How is it possible to transform the vision for an attractive and inviting public realm into actual physical spaces?

Analyses of existing well functioning public spaces throughout the world show that they share common characteristics. Gehl Architects has categorized and summarized these characteristics in the "Quality Criteria" on this page, described under the headlines "protection," "comfort," "delight" and "place."

Public spaces must be inviting, attractive, and provide room for recreation, pleasure, exercise, and play. They must act as urban meeting places and be able to attract and welcome a broad variety of people; children, teenagers, adults, the elderly, and people with disabilities.

If public spaces are very attractive one can, in fine weather, expect necessary, optional, and social activities to take place - and expect people to spend more time in those spaces.

Good public spaces reflect the majority, if not all, of the 15 quality criteria. As such the list of criteria provides a good design checklist.

In the following analysis these quality criteria have been the tool and method used to categorize the quality of the public spaces. A "ticking off" of the 15 criteria is reflected in three categories:

> Good quality = 11-15 Average quality = 6-11 Poor quality = 1-5

CITY FIGURE GROUNDS

Seattle has an iconic skyline that, along with the Cascade Mountain Range to the east, the Olympic Mountain Range to the west, Mount Rainier to the south and the Space Needle to the north, defines the city's visual identity.

Seattle's downtown skyline developed during the 20th century with a boom in the construction of high rise buildings of 20+ stories in the 1970s and 1980s.

The concentration of tall buildings is mainly found between I-5 and 2nd Avenue, and between Union Street and Columbia Street.

Today many buildings in downtown are 20+ stories and current construction projects, as illustrated on the map to the right, are planned for between 20-40 stories in height.

Tall buildings allow for increased residential and commercial density in downtown. How tall buildings relate to the public realm depends partly on when they were designed and built. Impacts of tall buildings on the public realm include the wind tunnel effect and shading, especially during the fall and winter seasons.

SUMMARY

THE TALL DOWNTOWN

Downtown is predominantly made up of tall buildings, which allows for higher density but also causes a wind tunnel effect and shading in some areas.



500

1000



The Seattle skyline from Puget Sound.



Streetscapes with lack of human scale and few invitations to enjoy and interact are the most common experience in downtown



A striking and varied mix of scale on 5th Avenue.





Human scaled streetscape: 1st Avenue South in the Pioneer Square Historical District



Invitations to sit on Occidental Avenue in the Pioneer Square Historic District

STREETSCAPE

However iconic the skyline may be, the downtown topography combined with the built form creates some very challenging streetscapes, characters, and changing experiences when walking in downtown.

In many parts of the Commercial Core the walking experience is influenced by the ground floor frontages of tall buildings. Many of these ground floors lack transparency or smaller storefronts open directly onto the street. This condition diminishes the human scale of the public realm and visual stimulation for walkers. In addition, "invitations" to stop and linger in the streetscape are few.

Walking in the Pioneer Historic District has an almost Parisian feel; the buildings are human scaled, the boulevard layout of 1st Ave is lined with trees and the streets are pedestrian oriented. In this part of downtown one feels invited to walk, as well as stay and enjoy the streetscape, the squares, the history and the ambience.

OPEN SPACES

Existing open spaces are distributed throughout much of downtown. However, a public space network connecting the spaces and the main pedestrian routes has not yet developed.

For example, the Olympic Sculpture Park is located in the north part of the waterfront. The park is very attractive and offers many opportunities for recreational activities. However, to get to the park you have to walk up to 3/4 of a mile along a part of the waterfront that has little street level activity and is oriented to vehicle movement. As a result, the Sculpture Park feels a bit disconnected from other public spaces.

In total, downtown has 456,390 square feet of public squares and public pedestrian priority streets. The only true pedestrian street in downtown is Occidental Avenue in Pioneer Square, with an approximate length of 490 ft.

SUMMARY

OPEN SPACE NETWORK

Downtown is in need of a public space network connecting streets and squares. The potential for an open space network to be developed lies in the existing open spaces distributed throughout the downtown area.



CAR FREE AREAS IN THE CITY CENTER OF COPENHAGEN



THE STORY OF COPENHAGEN

PUBLIC PARK

Copenhagen has turned a car oriented city into a people oriented city in a step by step process over 40 years. The development has involved stopping the through traffic, reducing the number of car parking spaces in the center, and increasing the amount of space set aside for pedestrian activities from 161,460 ft2, when the first pedestrian scheme was introduced in 1962, to the present day 1,076,400 ft2 of car free streets and squares. These streets and squares now form a coherent network of high quality walking links and public squares for recreation, all of individual quality and character.



GOOD QUALITY Victor Steinbrueck Park has public benches and secondary seating, lawn, plus opportunities to enjoy good climate, views, and play.



AVERAGE QUALITY Waterfront Park has issues with feelings of safety at night, because of the surrounding concrete wall, making it hard to survey.



POOR QUALITY City Hall Park lacks proper seating and invitations to interact. It is overshadowed by adjacent buildings and appears unpleasant and uninviting.

OPEN SPACE QUALITY

The central part of downtown has a fair amount of open space in the form of semi-private plazas. These plazas are privately owned with public access often limited to certain times of day.

In general all of the semi-private plazas are of good to average quality but add little variety to the public realm since they are all quite similar in size, function, and layout. Plazas are often adjunct spaces for officefocused buildings with little flexibility and restrictive rules for use and behavior.

Downtown has very few true public parks and three out of four of these currently deal with safety concerns due to a variety of reasons.

The actual public spaces tend to be of average to poor quality but have the potential to become the city's local meeting places, neighborhood squares and small pockets for families with children.

Despite the fair amount of open space there are no obvious gathering places for city celebrations or festivals, informal rendezvous or hanging out with a cup of coffee or tea.

SUMMARY

LOCATING THE GATHERING SPOTS

Little in the way of gathering places or nodes connected by a public space network. The quality of public spaces varies. There is potential for some private and public spaces to become gathering spots.



ALLEYS

The downtown grid, with blocks of 250 ft x 250 ft south of University Street and 260 ft x 400 ft north of University Street, has a secondary set of connections - north-south oriented alleys in almost half of the blocks. The total length of alleys is approximately14,500 ft.

Downtown alleys have the potential for strengthening the public realm and increased pedestrian invitations. Alleys in the Pioneer Square Historic District in particular are human scaled and have much potential for more active pedestrian use.

Today, around 85% of all the downtown alleys are treated as backsides, with closed facades, poor paving and inadequate lighting. Most alleys have functions that require vehicular access such as garbage collection, goods deliveries, and garage entry or exit gates and include trash dumpsters, ventilation shafts and air conditioning units.

Many of the downtown alleys are unattractive, underutilized and appear unsafe. The challenge will be to retain the utilitarian functions of alleys while providing improvements to accommodate pedestrian activity, retail and other uses.

SUMMARY

ALLEYS HAVE UNTAPPED POTENTIAL

15% of the alleys feel safe and have a good balance of uses
85% of the alleys lack activities and don't make people feel either comfortable or secure



GOOD QUALITY



AVERAGE QUALITY



ALLEYS

- Alleys rated as "good quality" are ones which feel comfortable to walk through, are clean, and offer added attractions such as interesting public art, nice landscaping, store entrances, or cafés. They offer a unique, positive pedestrian experience.
- "Average quality" alleys may be fairly clean and relatively comfortable, yet function as little more than a drive-through street for service vehicles. There is nothing that invites pedestrians to pass through or stay in these spaces, even if they might reduce the time of a walking trip. However these alleys have the most potential for improvement to create more usable, welcoming spaces in the downtown.
- Alleys that qualify as "poor quality" appear neglected, dirty, and less comfortable. These spaces often have unattractive garbage disposal and collection facilities. The pavement in these alleys is in disrepair. Dark service entries, loud ventilation shafts, and insufficient drainage contribute to the low quality of the spaces. Pedestrians are often presented with unpleasant smells and sights, and generally stay away from these places, even if they offer short cuts. The Clear Alleys Program mandated the removal of dumpsters in the study area. This program was implemented in April, 2009. This, along with other efforts, could help poor quality alleys be improved for both pedestrians and utilitarian functions.

POOR QUALITY







PUBLIC SEATING

When inviting people to walk and enjoy the public realm it is important that different opportunities for pausing and resting are provided.

Downtown has approximately 1900 seats on public benches and movable chairs, which is on par with other cities. Unfortunately, they are all located in open spaces and not on streets and avenues. This leaves few benches for those who need to relax or pause for a short while when walking.

Due to the very steep topography in Seattle, it is crucial that opportunities to sit are provided in the streetscapes. This will help to encourage people to walk, enjoy, and spend time in the center city.

> 14% WOULD LIKE TO BE ABLE TO SIT AND RELAX IN DOWNTOWN, BUT LACK THE OPPORTUNITIES

> > *result from Demographic Survey 2008

SUMMARY

MORE SEATING NEEDED IN THE STREETSCAPE

Public seating is plentiful in parks and squares. Little seating is located on streets. In general seating could be improved throughout the center city.







WANT TO SIT IN PIKE PLACE MARKET? There is no seating nearby so these people sat on the ground between parked cars.



PAUSING ON A STREET? There is no seating along the sidewalk so these people sit on walls.



TIRED FROM WALKING? There is no seating on the sidewalk so this person uses a planter to rest from his walk..





NICE OUTDOOR SERVING AREA Being able to enjoy the public realm is an important part of outdoor cafés; interacting and moving chairs around enhances the experience.



OUTDOOR SERVING PARTITION While city regulation requires a partition for businesses serving alcohol, this lessens the interaction with the street and the experience of the public interaction with the public realm. realm is somewhat compromised.



FENCING AS BARRIER This fence obscures the view of the street and the enjoyment of watching city life is lost. It is a hindrance to

OUTDOOR CAFÉ SEATS

The culture of outdoor café life has long existed in many countries around the world. This has significantly influenced the usage patterns of city centers. Drinking coffee is an uncomplicated way of combining several activities: being outdoors, enjoying pleasant views, and the ever present amusement of watching people pass by.

Seattle has a great coffee culture and there's a café or shop on almost every downtown corner. You can bring your own cup to your favorite place for coffee. But the step of "taking the culture to the public realm" has not yet fully developed. Drinking coffee is not associated with enjoying the public realm. The City has taken a big step recently by modifying the permit process for sidewalk seating, enabling an outdoor café culture to develop in the future.

SUMMARY

NEED FOR MORE OUTDOOR CAFE SEATING

Seattle has fewer outdoor café seats compared to other cities surveyed. Most of the existing outdoor seating is in areas with many tourists such as Pike Place Market and the Waterfront.



GROUND FLOOR FRONTAGES

The design of ground floor building frontages has a significant influence on the attractiveness of the public realm. They are the walls of the urban environment and contain the openings through which we see, hear, smell, and engage in the city's many-faceted palette of activities. On the ground floor and at eye-level we come into direct contact with the city.

Good ground floor frontages are active, rich in detail and exciting to walk by. They are interesting to look at, to touch, and to stand beside. High quality ground floor frontages create a welcoming sensation and encourage people to walk and stay in the city.

Other positive qualities include a high degree of transparency enabling interaction between activities inside the buildings and those occurring on the street. Also, frontages with many small units, many openings and a variety of functions make streets more diverse, stimulating and attractive. Frontages with small units also provide a predominantly vertical facade structure which has the important visual effect of making distances feel shorter.

In order to create an attractive, lively, and people friendly city, a high percentage of the ground floor frontages needs to be of high quality. A tool for evaluating ground floor frontages has been developed through previous Public Space & Public Life studies and is now used in many cities. The criteria presented on this page has been used in the evaluation of ground floor frontages in Seattle's downtown on the following page.



A ACTIVE

- Small units, many doors (15-20 units per 328 ft)
- Diversity of functions
 No closed or passive units
- Interesting relief in frontages
- Ouality materials and refined details



C SOMEWHERE IN-BETWEEN

- Mixture of small and larger units (6-10 units per 328 ft)
 Some diversity of functions
- Only a few closed or passive units
- Uninteresting design of frontages
- Somewhat poor detailing
- · Somewhat poor detaiting



E INACTIVE

- · Large units with few or no doors
- No visible variation of function
- Closed and passive frontages
- Monotonous frontages
- No details, nothing interesting to look at



B PLEASANT

- Relatively small units (10-14 units per 328 ft)
- Some diversity of functions
- Only a few closed or passive units
- Some relief in the frontages
- Relatively good detailing



D DULL

- Larger units with few doors (2-5 units per 328 ft)
- Little diversity of functions
- Many closed units
- Predominantly unattractive frontages
- Few or no details



- **F** PARKING GARAGE STRUCTURE
- Large units
- No attractive or engaging functions
- Closed frontages
- Dark spaces creating a less comfortable feeling at night
- No details, nothing interesting to look at



STREET FRONTAGES

Because of the steep downtown topography, northsouth avenues tend to have more active façades with entrances and windows relating to the streetscape than the east-west streets. On the east-west streets, parking garages and internally focused uses on the ground floor result in inactive façades that relate poorly to the street.

WHEN WALKING THE HUMAN BRAIN NEEDS NEW STIMULUS FOR EVERY 30 FEET TO KEEP US INTERESTED AND ENGAGED*

*GEHL research In general, downtown has few active and pleasant ground floor frontages. Most of the active frontages are located in clusters around the Pike Place Market, 1st Avenue South, Westlake Plaza and 5th Avenue.

The lack of active façades in downtown Seattle may influence people's willingness to walk, their feeling of safety - especially during night time - and the amount of time spent in the public realm.

SUMMARY

QUALITY OF FRONTAGES

There are many dull to inactive ground floor frontages throughout downtown. Few ground floor frontages are active and pleasant. They are mostly located in three areas and on north-south avenues.

STREET ELEMENTS

In general, downtown's accessible and fairly wide sidewalks form a good base for strengthening public life in the streetscape. The typical downtown sidewalk has a width of 12-15 ft and leaves space for natural pedestrian desire lines plus placement of urban furniture and street elements. Crowding on the sidewalks is in general not a problem in Seattle's center city.

Accessibility can be challenging in relation to bus stops where people walking by have to compete with bus shelters and waiting passengers. To avoid crowding in these situations bus shelters are gradually being replaced by overhead canopies integrated into building facades. Overhead canopies tend not to hinder transparency between ground floor spaces and streetscape so may also help create a more active streetscape.



SPACIOUS SIDEWALKS WITH GOOD ACCESSIBILITY. SPACE FOR A VARIETY OF STREET ELEMENTS AND URBAN FURNITURE.



BUS SHELTER IN DESIRE LINE Bus shelter placed in the middle of the pedestrian desire line.



WHEN NO ONE IS WAITING IT WORKS When no one is waiting for the bus there is enough walking width, but...



SIDEWALK IS BLOCKED When people crowd around bus stops, the sidewalk is blocked. The situation can be improved for both people waiting and walking.

SUMMARY

BETTER PLACEMENT & DESIGN OF STREET ELEMENTS COULD IMPROVE PEDESTRIAN ACCESSIBILITY

Careful organization of sidewalks can improve pedestrian accessibility, especially near public transit stops.



SPACE CONSTRAINTS A diagonal placed ramp is iused here to provide access in a tight space near utilities instead of matching the directinal ramp across the street.



PATCHWORK PAVING The large concrete surface of the sidewalk is difficult to maintain in an aesthetic way. Parking meter placed in pedestrian desire line.



WORN-OUT PATCHWORK PAVEMENT Pavement of various types and styles that also is poorly maintain does not leave the expression of a high quality sidewalk.



PUBLIC BENCHES VARY IN QUALITY AND DESIGN These long benches are not pleasant to sit on and are not placed in a location that is lively or inviting.



Armrests at each end would make these benches more comfortable and inviting.



A stone bench is uncomfortable to sit on and the backrest does not give proper support. Not inviting for the passerby.

Alaskan Way

NEWSPAPER STANDS A consolidated newspaper stand would make a more space efficient and elegant system for newspaper vending than the example illustrated above.



COMMERCIAL A-BOARDS A-board signs create clullter and should be better regulated so they do not block street crossings.



LIGHT POST Similar to privately placed newspaper boxes and A-board signs, mail boxes and lighting posts should be placed clear of the crosswalk.

STREET FURNITURE

Several sections of the sidewalks are overcrowded with street furniture, and the bus shelters occupy a large share of sidewalk. In many cases the leftover space at the rear of bus shelters is too narrow for pedestrians passing through.

Commercial A-board signs and newspaper boxes are usually located on the streets with the most pedestrian traffic, but often in clusters of 6-10 at a time, causing obstacles for pedestrian movement.

A set of guidelines for placement, amount, and design of street elements and furniture could help the visual impression and the accessibility on the sidewalks.

Well designed and placed street furniture can provide a more coherent streetscape. If the street furniture is within the same design family, it is easier to establish an elegant, well functioning and comfortable experience for pedestrians. It can also be less expensive to

SUMMARY



STREET LIGHT & COMMERCIAL A-BOARD The coffee drinking man is a fun reference to the "Hammering Man" located at the entrance to the downtown Seattle Art Museum which has become an icon for Seattle. Unfortunately here the added A-board blocks pedestrian access.



The parking meter is slim and elegantly designed, but placed in a group with bike rack, lamppost, signs and newspaper stands. While not an elegant grouping, the sidewalk is not blocked.



BIKE RACK AND BIKES Bike racks are essential when wanting to invite people to use bicycles. Bikes and rack locations should be carefully considered so they do not block the sidewalk.

OUALITY OF STREET FURNITURE

A high quality streetscape is due partially to how details are addressed. More attention could be givent to the quality and placement of street furnishings in downtown. Uncomfortable and poor quality seating tends to diminish opportunities for people to sit down.



GREEN NETWORK

The street trees and other vegetation in downtown function as a localized green infrastructure which is part of the larger "green" network of the city. Seattle's network of green space could be more cohesive especially in and around downtown.

Street trees and other vegetation substantially enhance the quality of urban spaces and the pedestrian experience. The downtown landscape is mostly defined by a hardscape consisting of stone, glass, concrete, high rise buildings, and paved surfaces. In some locations there is very little green to balance the hardscape.

There are gaps in the downtown green network especially along 1st, 2nd, 3rd, and 4th Avenues, parts of Pioneer Square and the northern study area. There are a number of streets with sporadic tree canopies as seen in the map to the right.

In parts of downtown, there are significant challenges to creating the green network especially where area ways under sidewalks make it difficult to place street trees.



SUMMARY

EXPANDING THE GREEN

NETWORK

The green network within the
study area could be developed further. Gaps in the network are indicated
on the map in grey.

EXPAND OR INCREASE GREEN NETWORK



Plantings provide some buffer to soften a harsh building-street interface and create a boundary between pedestrian and vehicular domains. The street would be further improved with larger trees.

SPATIAL QUALITIES



Street trees provide an important spatial transition between high rise buildings and the human scale of the street environment. Trees should be large enough or planted closely enough to be spatially effective.



The lack of street trees along some of Seattle's busiest streets create a place thatdoes not create a place that invites people to linger any longer than is necessary.



Certain places do not offer good growing conditions for street trees due to strong winds or lack of light or water. Often, small or sickly trees are indicators of places that are not pleasant for pedestrians.



Spaces around plantings in pocket parks or plazas become important social space. Trees offer supports and create appealing spaces to gather, wait or pause in conversation.

GREEN ELEMENTS

The green network created by street trees varies widely in quality. The southern end of 1st Avenue and a section of 5th Avenue have thriving street tree corridors that give those streets a distinct character. Interesting tree grates contribute an artistic flare to the street plantings along 2nd Avenue, although many of those trees are not thriving due to poor growing conditions.

There are many new plantings throughout the downtown, particularly near newer buildings, but the ecological, architectural, and urban quality benefits of these trees are not yet evident. The current downtown green network has gaps and there are sections of the downtown that do not have any trees.

Other green elements could enhance the overall green network including green roofs, trellises, green walls, rain gardens and bio-swales. In downtown Seattle there are already some examples of alternative green elements and there is potential for many more applications of innovative greenery on buildings and in street designs.

ALTERNATIVE PLANTINGS



There are many innovative ways to fit vegetation into the pedestrian environment. Green walls, trellises, and other streetscape vegetation give streets distinctive characters.



Trees, shrubs and vines add delight to the

character and identity.

downtown landscape, helping to build street

Missing links in the canopy due to poor growing conditions sometimes are patched using planters or hanging baskets. These are attractive but do not provide the same qualities for the pedestrian environment.



Building designed with ecological features often provide vegetation and landscape elements that benefit pedestrians, providing visual interest and a softer interface between buildings and the sidewalk space.

RAINWATER RUNOFF

The waterfront adjacent to downtown, although welltrafficked with commercial and recreational vessels, is still ecologically important. The near-shore waters of Puget Sound are vital for juvenile salmon and organisms that support and prey upon them.

The most significant impact of the downtown hardscape for local hydrologic conditions is the amount of impervious surfaces and the resulting inability of rain water to percolate into the soil. Rain water flows rapidly off streets and sidewalks into drains carrying contaminants and suspended sediments. During 100-year storms, pipes carrying both sewer and storm water can be overwhelmed and volumes that cannot be managed by the treatment plant are discharged directly into Elliott Bay in a "combined sewer overflow" (CSO) event.

The challenge is to capture as much of the rainwater runoff as possible before it reaches Elliott Bay and Puget Sound. This suggests that streetscapes and public spaces be designed for more permeable yet urban surfaces that can absorb runoff.



- AREAS THAT DRAIN STORM WATER TO A COMBINED SEWER LINER (ALL WATER IS TREATED AT A WASTEWATER TREAT-MENT PLANT UNLESS A CSO EVENT OCCURS, IN WHICH CASE STORM WATER AND SEWAGE ARE BOTH DISCHARGED TO PUGET SOUND, UNTREATED)
- AREAS THAT DO NOT DRAIN STORM WATER TO COMBINED SEWER LINES (STORM WATER IS DISCHARGED INTO PUGET SOUND, UNTREATED)
- STORM WATER DRAINAGE OUTFALLS
- O COMBINED SEWER OVERFLOW (CSO) OUTFALL
- BUILDINGS WITH EXISTING GREEN ROOFS

SUMMARY

IMPERMEABLE SURFACES AFFECT WATER QUALITY

Pipes carry both sewer and storm water, and when overwhelmed during 100-year storms, water is discharged directly into Elliott Bay. Worth considering when designing streets, buildings and waterfront improvements.





The steep east-west streets with impervious surfaces complicates the rainwater run off problems. Columbia St.



Some buildings and landscape features use pervious surfaces -such as green roofs- or small bio-filtration cells -such as vegetated swales or rain gardens. Green roof at 5th Ave. and Madison St. SHADOW STUDY



FEBRUARY 1ST, 10 AM

FEBRUARY 1ST, 5 PM

JULY 1ST, 10 AM

SOURCE: CITY OF SEATTLE PLANNING DEPARTMENT SHADOW STUDY, 2005

MICRO-CLIMATES

People crave sun during Seattle's winter months and seek shade in the bright summer months. Due to the orientation of Seattle's streets and its location on a steep hill, some sides of the downtown streets see only a brief period of sun as it shines between buildings at high noon. Often the only sun can be found in the middle of the street. The north-south orientation of the street grid makes it difficult to create sun banks or pleasant south-facing walls where people can stop and linger along a warm, sunny wall.

With little sun reaching the street level, plazas and parks often remain unused except during lunch hours, and often feel abandoned. Even streets with major transportation facilities or tourist destinations lack protected places with positive microclimates. It is often difficult to find shelter from wind and rain, or relief from the heat and glare generated by large amounts of pavement.

Winds sweep along Seattle's straight streets and height differences between skyscrapers and lower buildings exacerbate air turbulence. Street trees help to block strong winds, but in some areas it is difficult for even hardy street trees to thrive.

SUMMARY



JULY 1ST, 5 PM



Many north-south streets become wind tunnels. The waterfront receives the direct wind from Elliott Bay, but also direct sun. The waterfront is a prime location for enjoying the sun.

FIRST AVENUE

Historically 1st Avenue was the first avenue to be built in Seattle. When you ask people, 1st Avenue is considered to be the main street in Seattle. However, 1st Avenue has a quality unlike typical main streets found in other cities. The built environment and the activities along 1st Avenue have different characters, which creates a street with a varied urban pulse, and some challenges for a main street.

1st Avenue is a corridor that links many of Seattle's important downtown destinations including Belltown, Pike Place Market, Seattle Art Museum, Harbor Steps and Pioneer Square. The street is also lined with shops, cafés, and restaurants. All this activity creates the base for a main street. However, there is potential for more recreational activity along 1st Avenue.

A main street gives a city the opportunity to show the world how it wants to be perceived. The diverse character of 1st Avenue reflects the neighborhoods along its length that have developed uniquely over time. More main street qualities such as urban recreation (both commercial and public), high quality pavement, attractive façades, pedestrian amenities and connections to surrounding attractions could be developed in the future.



STREET PROFILE: 1ST AVENUE & UNIVERSITY ST. SECTION B-B / 1:400

Zone 1: Average sidewalk width.

Zone 2: Vehicle right of way. 3 lanes travel north and 2 lanes travel south. Onstreet parking at one side.

Zone 3: Average sidewalk width. Street trees and street furniture.

STREET PROFILE: 1ST AVENUE & VIRGINIA ST. SECTION C-C / 1:400 $\,$

Zone 1: Average sidewalk width. Street trees.

Zone 2: Vehicle right of way. 2 lanes travel north and 2 lanes travel south. Onstreet parking at one side.

Zone 3: Average sidewalk width. Street trees and commercial furniture.



STREET PROFILE: 1ST AVENUE & S. WASHINGTON ST. SECTION A-A / 1:400 $\,$

Zone 1: Average sidewalk width. Commercial furniture.

Zone 2: Vehicle right of way. 2 lanes travel north and 2 lanes travel south. Zone 3: Average sidewalk width. Street trees and street furniture.

STREETSCAPE



Attractive human scaled streetscape with strong historic identity. The median with large trees gives distinct character. High priority for vehicular traffic.

INVITATIONS



Invitations to stroll and look at the many small shops, but few invitations to sit down and rest.

ATTRACTIVENESS



The historic district has the potential to become more attractive for pedestrians. Upgrading the street (eg. paving and furniture) and adding benches would make this area be seen as a main street.



Urban and modern streetscape. Vehicular traffic dominance. Few small trees. The important destinations (Art Museum, Harbor Steps) could communicate more with the street. Active façades around Pike Place Market.



This part of 1st Ave needs more suitable benches to sit on. The secondary seating on the raised platform offer additional invitations to sit down. This area is in need of more active façades.

1st Avenue and University St.

Focus on the many important destinations along

1st Ave. Let them be a part of the everyday rec-

reational life in Seattle. For instance, the plaza

people hang out, drink a coffee and look at the

at Seattle Art Museum ought to be a place where

newest outdoor sculpture. Today no one is there, and therefore the museum is not as big a part of the everyday life in Seattle as it could be.



Trees give human scale to the streetscape that otherwise is dominated by very high buildings that detract from the feeling of a main street.



More active and attractive façades would invite people to stroll. The addition of benches would also improve the invitations to rest along the street.



1st Avenue and Virginia St.

Corner buildings are important to invite people walking on the side streets onto 1st Ave. There are already many good examples of inviting corners, but actually all corners along 1st Ave ought to have open and active ground floors.

FIRST AVENUE

For 1st Avenue to evolve further as a main street, three themes are worth looking into; streetscape, invitations and attractiveness.

The quality the streetscape affects the pedestrian experience. An exceptional pedestrian street communicates a sense of welcoming with active façades and intriguing activities. Important destinations and side streets leading to other places are marked along the route. This should all be communicated without the need to look at a map or ask for directions to a destination.

1st Avenue:

- Streetscape: How is it organized? What character does it have? How is it spatially scaled?
- Invitations: What activities does the street invite pedestrians to do? Does it invite you to stroll? Do active façades makes the experience of walking along the street interesting? Are you invited to sit down and rest for awhile? Is it possible to sit conveniently at an outdoor cafe?
- Attractiveness: How attractive is the street? What experiences are you offered as a pedestrian? How is the quality of the physical elements (paving, furniture, planting, etc.) Does the street celebrate the destinations opening up to it?

SUMMARY

1ST AVENUE AS THE MAIN STREET FOR SEATTLE'S CENTER CITY

1st Avenue has evolved into the main street for the center city. Improvements could help it become more attractive and inviting.

ANALYSIS / THE CITY - THE CULTURE







INTRODUCTION

SUSTAINABLE PUBLIC LIFE

A variety of factors must be taken into account when developing a sustainable public life; namely, the social, economic and environmental aspects of sustainability.

Sustainability, in people terms, relates to basic principles as assembling and integrating many activities and users in the same area; and reinforcing conditions for walking, cycling and long term, high quality-of-life in an urban area.

In city terms however, it is important to consider proximity as well as density. High density does not necessarily result in a more livable city. Tower blocks built with no consideration for life at ground level or movement between neighborhoods provide examples of how not to approach the issue of density.

Any function must be evaluated in terms of its contribution to the surroundings. For example, activating the street frontages with cafés, open shops, cultural institutions or other activities, will invite dialogue with the immediate surroundings and create social opportunities. A city or a neighborhood developed with an emphasis on proximity will provide better living conditions in terms of social awareness and responsibility.

HUMANISTIC VALUES

Social sustainability can be measured against a check list of humanistic values, when looking at the city and its spaces.

MAJOR DESTINATIONS

Seattle's destinations are scattered around downtown, and that creates the need for a strong network. Large parts of downtown - the central part in particular - have few destinations. This creates a gap, and makes it difficult for downtown to function as an organism.

The positive aspects of the way the destinations are spread out is that they may act as fixed points for a future network. It is easier to create a strong network if there are a number of popular destinations to connect. For instance, 1st Ave, the waterfront, and the important destinations along Pine St and Pike St.

If the goal is to create a lively city, some destinations will take priority over others. Destinations that people are eager to visit often are strong generators in a network, while destinations one only visits once or twice year are of less importance. Seattle is not a concentric city, and therefore downtown should not only have one center. It may make more sense in downtown to operate with several nodes.



SUMMARY

SCATTERED DESTINATIONS

Today the destinations are scattered in downtown, but in the future they may act as a base for the pedestrian network. Some areas have too few destinations (highlighted with grey).





FUNCTIONS

Downtown is divided into a number of areas, each with a special character or function.

The current challenge is that the areas tend to be dominated by single purpose activities - some more than others. The large office and governmental areas may have activities during weekdays, before and after business hours and during the lunch break, but the rest of the time, especially evenings and weekends, it is underutilized.

Commercial areas will be active during business hours, but will be without much life on evenings and Sundays.

One significant problem is that few people live in downtown. Dwellings have the positive effect of generating life at the times when other functions are closed. This can create a more lively city throughout the day, the week, and the year.

Overall, downtown would gain from more mixed uses. All areas would benefit to have a little of everything, even though there still should be concentrations of commercial activities for instance, in order to get downtown to function well.

SUMMARY

THE "WORKING" DOWNTOWN

The various areas in downtown tend to have a single focus. Downtown is primarily office and retail focused with few people making downtown their home.

EVENING ACTIVITIES

The number of evening activities and their locations are important factors for the vitality of the city and the perception of safety. If there are few activities, people perceive a deserted city and avoid going there, especially in the evening.

This map shows establishments that are open on a normal weekday evening in June. There is a concentration of evening activities along 1st Avenue and near the major hotels. But in the rest of downtown, one is very likely to feel alone with such little activity. For example: when waiting for the bus on 3rd Avenue, people would feel more safe if shops and restaurants were open, so there was some alternate activities.

Places that lack evening activities are the waterfront, Western, 2nd, 3rd, 5th, and parts of 4th Avenues and almost all the east-west streets.

69.4% FEEL UNSAFE IN DOWNTOWN AT NIGHT

*result from Demographic Survey 2008

SUMMARY

EVENING ACTIVITIES IN FEW AREAS ONLY

The lack of evening activities in downtown fails to keep the city active at night and adds to feeling unsafe at night. Areas in dark gray on the map have a lack of evening activities.






FEELING OF SAFETY

Security is an important factor for the development of public life. People need to feel comfortable during the day and the night to keep visiting downtown and to bring their children. Experienced and real security might not be the same phenomena, so making streets feel comfortable has much to do with creating a friendly environment that people find inviting.

From the demographic survey it was noted that almost 50% of the respondents feel ucomfortablein downtown, in different places and at different times, but mostly in the evening. The lack of activities, residents in downtown, dark alleys, areas with closed facades and poor lighting aggravate this feeling.

3rd Avenue in particular, has issues with lacking comfort and invitations. This needs to be addressed as 3rd Avenue is the public transit corridor and this perception may be keeping people from using public transport.

SUMMARY

PUBLIC PERCEPTION OF FEELING UNSAFE

Most of downtown is empty and quiet in the evening, creating areas where people feel less comfrtable. The dark gray areas on the map are those that feel uncomfortable.

ART & HISTORY

Public art, water fountains, and historic sites may increase the quality of being in a city. Billboards and large signs can have an impact on visual quality.

Public art is spread out in most of downtown. Though public art seems to get a little bit thin at the edges of the downtown area.

Apart from Harbor Steps and Benaroya Hall, most fountains (public or private) are placed in the office and governmental area.

Billboards and large signs are found in various places but there seems to be a concentration around 1st and 4th Avenues.

The southern part of downtown has the highest concentration of historic buildings and spaces. The historic districts ought to be celebrated in a way so everybody in Seattle is proud of them and wants to spend time there.

SUMMARY

IN REASONABLE BALANCE

Most of downtown seems to have art pieces though the edge of downtown seem under prioritized. The historic districts and elements in downtown ought to be celebrated even more.



EVENTS THROUGH OUT THE YEAR



NOTE: The events shown are within or close-by the study area. the events has taken or will take place in 2008-09

CULTURAL ACTIVITIES

The majority of events take place in spring and summer. Having more events spread throughout the whole year would be beneficial. All events do not have to be big. Many smaller events scattered throughout downtown would also have a positive effect. Autumn, spring and winter may have smaller and less expensive events.

Many small events supplementing the larger ones would also make it possible to include more of the public spaces in downtown.

A broader variety of events in downtown would invite many different user and age groups with different interests. For instance; skating festival, sing-along festival, fashion week, Seattle by night (lighting festival in public spaces), flea markets, historic walks in downtown, art festival for children etc.

The positive aspect of events is that they gather a lot of people, which adds life and bustle to the whole area in which they take place. Once people are in downtown for an event, they may have lunch, shop, or go for a coffee.

SUMMARY

FEW EVENTS DURING AUTUMN & WINTER

Most downtown events are large, and the main part of the events take place in the summer months. There could be smaller events spread throughout the year.





INTRODUCTION PUBLIC LIFE SURVEYS

The purpose of the Public Life Survey is to examine how public spaces are used. It provides information on where people walk and stay either as part of their daily activities or for recreational purposes. This can form the basis for future decisions, about which streets and routes to improve, and how to make them easy and pleasant places to visit, not simply traffic conduits.

The study also provides information on how and where people sit, stand, or engage in other stationary activities in the city. These stationary activities are good indicators of the quality of the urban spaces. A large number of pedestrians walking in the city does not necessarily indicate a high level of quality. However, a high number of people choosing to spend time in the city indicates a lively city with strong urban quality.

The demographic survey illustrates who uses the city, how they use and experience the city, and what modes of transportation they use to get there.

3 TYPES OF SURVEYS CONDUCTED

Gehl Architects has performed 3 types of surveys in collaboration with students from the University of Washington:

- 1. Counting pedestrian traffic
- 2. Stationary activity survey (behavioral mapping)
- 3. Demographic survey (questionnaires)

SUMMER WEEKDAY

Most pedestrians are on shopping streets and the busiest areas in downtown Seattle are Westlake Park and around Pike Place Market.

3RD AVENUE IS THE BUSIEST AVENUE

A comparison of the avenues reveals that 3rd Ave is busiest, especially around Pike Street. 1st Ave is also a popular route and busy all the way from Pike Place Market down to Pioneer Square.

PINE STREET IS THE BUSIEST STREET

Pine Street is the busiest of the counted streets. Pike Street is also busy, but only carries 1/3 the amount of pedestrians as Pine Street. Madison Street has only 1/10 of the pedestrians found on Pine Street.

LOW LEVEL OF EVENING TRAFFIC

after business hours.

Pedestrian numbers drop dramatically when shops and offices close down. Large sections of downtown become more or less deserted. Only the area around Westlake Park experiences a fair number of pedestrians.





2060

2670

2300



SUMMER WEEKEND

CHANGED USER PATTERNS ON SATURDAYS

Pedestrian volumes double in some areas, while decreasing dramatically in others.

COMMERCIAL AREAS ARE BUSIER

The areas around Westlake Park, Pike Place Market and Pike Street are busier on weekends. The waterfront also experiences an increase with 1/3 more pedestrians on a Saturday than on a weekday.

1ST AVENUE IS THE BUSIEST AVENUE

In general, 1st Avenue is the busiest avenue on weekends. But the use of the avenue changes. 1st Avenue has higher pedestrian numbers around Pike Street and in Belltown on a Saturday. But the number of pedestrians decreases in the southern end of the street compared with weekday numbers.

A SMALL INCREASE IN PEDESTRIANS IN THE EVENING

There are more people in downtown on a Saturday evening than on a weekday, but the numbers are still very low. The busiest place is Westlake Park.



office core is very quite. Parts of downtown are busier on Saturday evenings.

WINTER WEEKDAY

A REGULAR PATTERN OF USE

As in all cities, pedestrian numbers are lower in winter time compared to in the summer. Downtown is more evenly used during the winter.

WESTLAKE PARK AND 3RD AVENUE ARE BUSIEST

Westlake Park is still the busiest place, but the difference between Westlake and the rest of the city is not as dramatic as in the summer. 3rd Ave is the second busiest area, probably due to very low numbers in Pike Place Market during the winter.

THE WATERFRONT IS NOT USED

The waterfront is hardly used at all, and some of the lowest counts in downtown are found along the water.

ALL OF DOWNTOWN IS QUIET IN THE EVENING

Downtown has extremely low pedestrian numbers in the evening. This helps explain why some people interviewed in the survey feel less safe at night. Not even Westlake Park is busy in the evening in the winter time.



Lower numbers than in the summer. Pike Place Market is less visited, but Westlake Park is still busy. 3rd Ave is also a busy street. The waterfront is hardly used. WINTER WEEKDAY: 8 AM - 6 PM

E PRACTI PLANEER .

61,30

860

.440

15,060

9690

4110

4540

6580

4590

7000



920



2500

PEDESTRIAN MOVEMENT ON SUMMER WEEKDAYS & SATURDAYS IN SELECTED CITIES

CITY COMPARISONS ALSO ILLUSTRA TED ON PAGE 17.

COMPARED WITH OTHER CITIES

83,690

17,550

66,140



NEW YORK, BROADWAY

Seattle Pine Street 2008





SYDNEY, GEORGE ST

COPENHAGEN, STRØGET



SIGNIFICANT PATTERNS



Note: numbers covering both day and evening registrations

FROM WEEKDAY TO WEEKEND: +81%

Note: numbers covering both day and evening registrations

WESTLAKE PARK

- THE BUSIEST PLACE IN DOWNTOWN

Westlake Park is by far the busiest place in Seattle, at all times of the day, week, and year. The only place in Seattle with a similar amount of pedestrians is Pike Place Market. During the day on a summer weekend Pike Place Market actually attracts more pedestrians, but Westlake Park is busier if one considers the number of pedestrians for both day and evening activities.

Westlake Park is a multifunctional center where different types of flows and necessary and optional activities overlap.

It is a commercial center with adjacent offices, public transport, and a square for recreational purposes and events. Many other places in downtown Seattle have more limited use, and are often only busy on weekdays, in the summer, or other specific times.

PIKE PLACE MARKET

- A POPULAR DESTINATION

Pike Place Market has fairly high pedestrian numbers during the winter which increase by almost 223% during the summer. Likewise, the pedestrian traffic on a summer weekday increases by 81% on a summer weekend.

It is a place to shop, but also just to stroll, feel the atmosphere, and watch people. The dramatic increase from winter to summer, and from weekday to weekend indicates that this is a destination that attracts visitors in the city as well as people living in Seattle who go there for their weekend shopping.



Note: numbers from a summer weekend 8am - 6pm

THE WATERFRONT

- NOT A BUSY SUMMER DESTINATION

During winter the waterfront has some of the lowest registered pedestrian volumes. Volumes increase dramatically from winter to summer, but the pedestrian numbers in summer are still not remarkably high. Pedestrians are concentrated around the commercial piers south of the Waterfront Park.

On a nice, sunny summer weekend during the day the waterfront manages to attract only about half as many pedestrians as Pike Place Market and Westlake Center, and fewer pedestrians than 1st Avenue. But on a summer weekend during the evening, the waterfront is a fairly popular place compared with the rest of downtown.

The lower pedestrian volumes on the waterfront have something to do with the access to the water from the city, the activities people are invited to take part in, and the quality of the public spaces.



Note: numbers covering both day and evening in weekend counts

1ST AVENUE

- THE BUSIEST AVENUE IN SUMMER

1st Avenue is generally the busiest avenue during the summer, when people engage in more leisure activities and walk purely for enjoyment. People choose this route especially on a summer weekend. 1st Avenue is busiest near Pike Street. On a summer weekday, a part of 3rd Avenue is busier due to its function as a public transit corridor, but the same stretch is only half as busy as 1st Avenue during a summer weekend.

In the winter on an ordinary weekday during business hours, some of the other avenues have higher pedestrian volumes, probably due to the concentration of office buildings along these streets.

FROM WEEKDAY TO WEEKEND: -36%** FROM WEEKDAY TO WEEKEND: -68%* between Pike & Union / ** between Marion & Columbia

Note: numbers from a summer weekday and a summer weekend

3RD AVENUE

- BUSY STREET ON WEEKDAYS

3rd Avenue is the main public transport corridor in downtown, and therefore it naturally has high pedestrian volumes. Studying the patterns of pedestrian volumes on weekdays and weekends, it is clear that 3rd Avenue is used mainly for necessary activities during the week (eg., going to and from work). During the week 3rd Avenue is very busy. On weekends it is still busy but with a decrease in pedestrian numbers of 36% between Pike & Union and even 68% between Marion and Columbia. 3rd Avenue is consistently busy close to Pike Street, one of the busiest overall areas in downtown.



PINE ST. IS THE BUSIEST STREET

MADISON ST CARRIES 90% Less than pine st

Note: percentages of traffic between 8am-8pm on summer weekday

PINE STREET

- THE BUSIEST STREET

Pine Street is the busiest of the counted streets. Pike Street is also busy but it only carries 1/3 of the amount of pedestrians found on Pine Street. In general, the steeper the topography, the fewer people choose to walk a given street. For instance, Madison Street (an east-west street with a steep hill) carries 90% less people than Pine Street.

Pine Street is probably the busiest street since it connects two of the city's important destinations: WestLake Park and Pike Place Market. Pine Street does not have the topography challenges that other streets in downtown have.

STATIONARY ACTIVITIES

A vibrant city does not necessarily have the same amount of public life everywhere. Less populated spaces are important for getting some peace.

The survey of the stationary activities illustrates how the public spaces are used. Surveying what people do in the spaces is important since the number of people in itself does not tell much about the public spaces. Surveying what people are doing indicates which public spaces people choose to spend their time.

For example, comparing a public space, where many people sit on benches and socialize, with another public space, where many people are waiting for the bus but not sitting on benches, suggests that the former is a space people like to be in and choose to spend time in.

On a summer weekday in downtown, a few public spaces are very populated but most of the surveyed spaces do not have many visitors.

The popular public spaces are Pike Place Market, Post Alley, Victor Steinbrueck Park, Westlake Park, and the commercial area of the waterfront.

The moderately used spaces consist of the Olympic Sculpture Park, Occidental Park & Mall, east of Union Station, and City Hall Park.

The rest of the surveyed spaces in downtown are not frequently used.

The general low number of people in the public spaces is not only influenced by the quality of the spaces (understood as Gehl Architects 12 Quality Criterias), but a number of factors may influence the use of the public spaces. In parts of downtown the numbers of pedestrians are fairly low, and that minimizes the potential user groups. The public spaces might be poorly connected with other activities in downtown or have few activities. If few people use the space, this will not attract a great number of people.



232

STATIONARY ACTIVITIES





PIKE PLACE MARKET & POST ALLEY

- MANY PEOPLE STANDING

400

380

374

Pike Place Market has the highest registered number of people engaging in stationary activities. A closer look at what people are doing characterizes the type of space. In Pike Place Market most of the stationary activities taking place are people standing: looking at goods, buying things or waiting for each other. Commercial activities and people sitting on café chairs are also notable activities.

Of course many people are commercially active as they sell their goods at various market stalls.

Pike Place Market is also the space where many cultural activities are taking place in downtown, in terms of street performers and musicians.

WESTLAKE PARK

10 a.m.

60

MANY RECREATIONAL ACTIVITIES

12 p.m.

Westlake Park also scores high with regards to the amount of people spending time in the space. Compared with Pike Place Market, Westlake Park is used more as a recreational space with many people sitting down. Many people sit on public benches while another large portion of people find seats on secondary seating opportunities. There are also people standing in the space, but far fewer than in Pike Place Market.

2 p.m.

Time

55,270 ft2 (5,140 m2) 812 activities in total 0.015 activities per ft2

147

6 p.m.

8 p.m.

187

4 p.m.

173

165

37.790 ft2 (3,510 m2) 812 activities in total 0.021 activities pr ft2



VICTOR STEINBRUECK PARK

- PEOPLE USE EVERY SQUARE FOOT

Victor Steinbrueck Park is much smaller than Westlake Park, yet the same amount of people spend time in the space. Therefore, it is perceived as a much more intensely used space.

In Steinbrueck Park every square foot of space is used: people sit on benches and on secondary seating and they sit and lie on the grass. Steinbrueck Park is unusual in downtown because of the lawn that is popular to lie and sit on.

On a good summer day, Victor Steinbrueck Park is shared by a variety of users, including people who may be homeless. Accessibility and equity are important to achieving a good balance of user groups in a space and making all people feel welcome.

STATIONARY ACTIVITIES



LESS THAN 70 ARE PHYSICALLY ACTIVE

Note: percentage of all registered activities in all spaces

VERY LITTLE PHYSICAL ACTIVITY

Only 19 people (0.25%) in total were observed doing physical activities throughout all the spaces studied, over a period of 9 hours. Physical activities as a category may include activities such as playing ball, skate boarding, taichi and others.

The people doing physical activities used one of the three following spaces: Olympic Sculpture Park, Waterfront Park and Westlake Park. Exercising is a substantial part of most people's lives, and physical activities contribute positively to the public life in public spaces. But if people are to be physically active in the public realm, there must be spaces that invite these types of activities.

While there are few recorded physical activities in the stationary locations, quite a few people use the northern path of Alaskan Way for jogging. This activity is registered under "pedestrian movement" in the Alaskan Way data.





Note: percentage of all registered activities in all spaces

HARDLY ANY CHILDREN PLAYING

Children playing are good indicators of a city that has been created for all users. Public spaces require extra features in order to invite children and elderly people to use and enjoy them.

Downtown Seattle does not have a public playground. A public space can also appeal to children and invite them to play even though it is not organized as a playground. Downtown spaces currently do not have this quality.

Children play in the Olympic Sculpture Park throughout the day, but only between 1-4 children can be found there at any given time.

Waterfront Park also has a few children playing (even fewer than in the Olympic Sculpture Park), although frequent groups of children in day camp or on school trips pass by.

Downtown still has a long way to go in order to become a more inviting place for families and children.



PARKS BY THE WATER:

OLYMPIC SCULPTURE PARK & WATERFRONT PARK

The Olympic Sculpture Park is fairly evenly used throughout the whole day. Waterfront Park is especially popular around noon. More people use the Olympic Sculpture Park for recreational purposes throughout the day than Waterfront Park.

The moveable chairs seem popular in the Olympic Sculpture Park, but many people were observed standing in the Olympic Sculpture Park, a sizeable portion of which were waiting for long trains to pass by so they could cross the railroad tracks.

None of the parks manage to attract large crowds of people. It is worth noting though that the observations of stationary activities were made on a weekday while the Olympic Sculpture Park, for instance, is very popular on weekends.

NEW CITY HALL PLAZA



NEW FEDERAL COURTHOUSE



Note: total number of people in the space at selected times

ARE THE NEW PUBLIC SPACES POPULAR?

- NEW CITY HALL PLAZA & NEW FEDERAL COURTHOUSE

Unfortunately, the newly built public spaces in front of two of the city's major administration buildings are not frequently used. The squares in front of the new City Hall and the new United States Federal Courthouse both seem to have inviting designs. Their problem may lie in the fact that neither are located along popular walking routes, meaning that only a few people pass by. This emphasizes the importance of developing a good network to link the city's various destinations and public spaces.

The new City Hall Plaza seems to be popular during the lunch break, but the new Federal Courthouse is sparsely populated throughout most of the day when only between 10-15 people were seen to use the space at a time.

SEATTLE ART MUSEUM PLAZA AVERAGE OF 12 PEOPLE VELLS FARGO PLAZA AVERAGE OF 17 PEOPLE VELLS FARGO PLAZA AVERAGE OF 17 PEOPLE

Note: the average of people registered as "stationary" at a given time

ARE PEOPLE USING THE PLAZAS?

Numerous large buildings in downtown Seattle have a public or semi-public plaza at the street level. The majority of these plazas have very low numbers of registered activities, although some people use them around noon.

The plazas used the least include King Street Center Plaza and the Garden of Remembrance. These plazas had an average of 8-10 people present in the space at a given time. The Seattle Art Museum Plaza and Wells Fargo Plaza managed to attract an average of 12-17 people at a given time.

The most popular plaza seems to be the Russell Plaza with an average of 34 people present at a given time, but 43% of these people were standing or waiting for transport, which means they are not actually spending time in the space.

All in all, the number of people using the plazas are very low, and at some hours of the day many of the plazas are completely empty of people.

STATIONARY ACTIVITIES

SIGNIFICANT PATTERNS

PIONEER SQUARE

25% SITTING ON PUBLIC BENCHES

OCCIDENTIAL PARK

47% VISIT THE PLACE AROUND NOON

OCCIDENTIAL MALL

61% SITTING ON CAFÉ CHAIRS

Note: average numbers of all registered activities

THE HISTORIC PART OF THE CITY

 PIONEER SQUARE, OCCIDENTAL MALL & OCCIDENTAL PARK

In the historic part of the city the public spaces offer a different atmosphere than the more "modern" environments elsewhere in the city.

These spaces are used more often compared with the rest of the city. For instance, the total number of activities taking place in Occidental Park throughout the day is 25% higher than in the Olympic Sculpture Park. Occidental Park seems to be the most popular of the historic squares, especially around lunchtime.

Pioneer Square is dominated by people sitting on benches, waiting for transport or simply standing. Occidental Park and Mall have many commercial activities and people sitting in café chairs. (This is actually the only type of activity taking place in Occidental Mall aside from standing.)

DEMOGRAPHIC SURVEY

AGE & GENDEF

SEATTLE METROPOLITAN REGION: 3,424,400 INHABITANTS (2008)

CITY OF SEATTLE: 592,800 INHABITANTS (2008)

STUDY AREA: 4,300 INHABITANTS (2008) (CBD 2,000)

ADDITIONAL DAY TIME WORKFORCE POPULATION IN CITY: 160,000

The Demographic Survey is a Qualitative Investigative Interview Survey using a random sample of the total population, which consists of all potential users of downtown. In order to secure a representative sample size, a minimum of 1,100 interviewed people were necessary. A total of 1,304 people answered the questionnaire, thus providing a representative sample.

BACKGROUND INFORMATION ON THE RESPONDENTS:

01. GENDER Nearly as many men as women are represented, but there tend to be more men in Seattle.

02. AGE Only 12 of the respondents in the survey are older than 75 years, therefore it is difficult to say anything statistically reliable about this group. Children under the age of 15 do not appear in the demographic survey, since they were considered too young for interviews. The respondents are divided into groups depending on their age. Some groups cover a larger span of years than others, which influences the percentages of the various groups.

03. RACIAL/ETHNIC ORIGIN The White respondents (70.6%) are larger in terms of racial and ethnic background. The African American respondents (13.1%) are the second largest group.

04. EMPLOYMENT STATUS Almost 2/3 of the respondents are employed (72%). The last 1/3 of the respondents are more or less equally divided within the groups; student, non-employed and not-in-labor-force.

01. GENDER



Male

Female

44.4%





03. RACIAL / ETHNIC ORIGIN FOR SURVEY RESPONDENTS



DEMOGRAPHIC SURVEY

SIGNIFICANT PATTERNS

People travel long distances to get to downtown, which is worth noting when planning commuter transportation. Seattle's downtown is also popular among people "from out of town."

The majority of interviewees are in downtown because of work. Another large group are visitors. The high percentage of tourists may have to do with the time of the year (surveys were conducted in July), since the summer is tourist season. When people shop they choose to spend time in downtown. Cultural events and the category "other" also invite people to downtown. The stationary surveys draw the same picture, since downtown is mainly active and populated within business hours.

The demographic survey reveals that almost half of the respondents reported feeling uncomfortable in downtown, and for a large group of people this is an everyday experience. This is alarming news since it may be an increasing feeling unless measures are taken to make people feel more comfortable. Large parts of downtown tends to be deserted after business hours, which is a problem in terms of safety. Fewer people in the public spaces may cause potential users to avoid certain public spaces. Creating a lively and mix-used downtown could help to make the area more comfortable.

Note that when total percentages exceed 100%, it is because the interviewees gave more than one answer. This relates to questions about spending time in popular downtown places.



*Note: More than 10 miles from downtown covers people living in the Seattle Metropolitan Region and tourists..

PEOPLE TRAVEL FAR

Half of the respondents to the question "where do you live" reside in the City of Seattle and the other half are from out of town. 48.5% of the interviewees live more than 10 miles from downtown. It is worth noting that more than 10 miles from downtown covers people living in the Seattle metropolitan region and tourists. 17% live within 1 mile from downtown. 23% live between 1-5 miles from downtown. 11% live between 5-10 miles from downtown.



MAIN PURPOSE FOR BEING DOWNTOWN (COMBINED WITH AGE & GENDER)

When asked "what is the main purpose for you being in downtown," almost 1/3 of the respondents reported work as their main purpose. A little more than 1 out of 5 of the respondents are tourists.

AGE

For the 20-60 age group work is in most cases the main purpose for being in downtown. In the three groups (20-30 years, 30-45 years and 45-60 years) tourist activities are another important reason.

The 15-20 age group is mainly downtown for shopping, leisure, or other activities.

The 60-75 age group is mainly in downtown as tourists.

GENDER

There are not big differences between the genders. Women are more represented under "Tourist" and "Shopping" while the male respondents are more represented in the "Leisure" group.



SPENDING TIME IN DOWNTOWN (FREE TIME)

When asked "if you spend time downtown, what do you sometimes do," respondents said they mostly went downtown to go shopping during their free time. The second highest category is cultural events and many of the respondents chose the category "Other." Unfortunately, it is unclear what this category covers.

For the 15-20 age group shopping is still the highest category . "Meeting with friends" is the second biggest and "recreational walk" comes in third.

For the 20-30 age group shopping is once again the number one category. "Other" is the second, and "cultural events" is third.

For the 30-45 age group shopping is the primary reason for spending time downtown in their free time. For this age group Cultural events is second, while the "other" category is third.



63.3%

POPULAR PLACES IN DOWNTOWN

When asked "what places do you like to spend time," Pike Place Market gets mentioned by almost 1 out of 3 of the interviewees as a place they like to spend time. The Waterfront is also a popular place among the interviewees. The "other" category covers places such as Westlake Center, Pioneer Square, the Central Library and Pacific Place (shopping and entertainment center).

Examining the interviewees according to their age shows little difference between the different age groups. In all groups more than half of the interviewees mention Pike Place Market. For all groups the top three preferred places to spend time are the same. The only place where a particular age group stands out are the 15-20 age group who generally do not mention the Olympic Sculpture Park as a place they like to spend time.

DEMOGRAPHIC SURVEY

SIGNIFICANT PATTERNS



FEELING UNSAFE IN DOWNTOWN

When asked "are there places where you feel unsafe in downtown," almost half of the respondents experience feeling unsafe in downtown.

Taking gender into consideration it clear that the female respondents have a greater tendency towards feeling unsafe in the downtown. The male interviewees generally feel more safe.

When asked "what time of day," respondents tend to feel unsafe in the evening regardless of the day of the week. A large number feels unsafe all day and not just in the evening.

Feeling unsafe is more or less equally distributed among the age groups. The group that tends to feel less safe is the 15-20 age group.



ANALYSIS SUMMARY

Seattle has a fine physical base for inviting more people to walk, spend time, and bicycle in downtown. The streetscape and the public open spaces basically have the factors that are needed for creating a more lively city.

However the most important findings of the analysis, outlined in three overall themes below, need to be addressed in order to create a downtown that meets the demands, challenges, and aspirations of the 21st century.

SENSE OF IDENTITY

Downtown has strong competition from the surrounding neighborhoods when it comes to identity, strong character, and sense of place. The neighborhoods within downtown are not as distinct on the mental maps as the surrounding neighborhoods.

PEDESTRIAN NETWORK AND USE PATTERNS

Compared to other cities of similar sizes and importance, public life and use patterns are very fragile within downtown, with few people walking and engaging in activities in the open public spaces, the pedestrian network could be improved considerably and linked to a hierarchy of public spaces.

ATTRACTIVENESS, COMFORT AND FEELING OF SAFETY

Downtown has a 9-5 / monday-friday activity pattern, leading to a less attractive and less comfortable downtown outside of business hours. This affects the use patterns during the night time and on weekends.

On the following pages, more specific issues are listed, summarizing the two analysis chapters of this report; the city and the people.

SUMMARY OF "THE CITY"

THE NETWORK:

• Everything in downtown is within reasonable reach for pedestrians, but the steep topography on east-west connections presents a challenge when walking.

• The pedestrians are offered easy access on wide sidewalks but the pedestrian network could be developed much further, introducing more pedestrian priority and better balances between road users, thus linking destinations with interesting and inviting routes.

• The bicycle network in downtown could also be developed much further so that in future all user groups will feel invited to bike on a safe, coherent and legible bicycle network.

• The waterfront could represent a great amenity for downtown but appears somewhat neglected, dominated by vehicular traffic and barriers, and is not well linked to downtown.

URBAN LANDSCAPE:

• Downtown has many open spaces but they are not connected in an open space network or apparent hierarchy, leaving many of the spaces without function or apparent identity. The quality of the spaces also vary a lot not representing importance or use.

• Downtown has a system of alley ways that represents an unexploited potential to become an evident part of downtown identity

• Attractive ground floor facades makes the streetscape inviting and attractive. Unfortunately in downtown the majority of ground floor facades are either closed completely due to the steep topography or of poor quality being dull and inactive. Parking in structures presents a challenge when they face the street with parked cars on ground floor.

THE CULTURE:

- Evening activities are few and concentrated in specific areas.
- Outdoor cafe culture has much potential but could be strengthened.
- Public spaces for celebration or gathering are not obvious or well defined.

SUMMARY OF "THE PEOPLE"

Very fragile public life pattern:

- Few people walking during the day
- Very few people walking in the evening
- Few active streets
- Downtown has few pedestrians compared with other cities

(New York, Sydney, Melbourne, Copenhagen & San Francisco)

• Few active public spaces

- most public spaces have very little activity

- Little diversity in activities
- Hardly any children playing
- Very little physical activity
- Public perception of feeling unsafe, especially in the evening (demographic survey)
- Few age groups represented in downtown
- Most people go to downtown with the main purpose of work
- Quite a few people in downtown are visitors