

# URBAN ACTIVATION\_

the rebirth of downtown Pittsburgh through transit-oriented development



## PROPOSED ADVISORY TEAM

**Primary Advisors** - Rami el Samahy + Jonathan Kline + Jeff King

**Additional Advisors** - Christine Mondow + Jeremy Ficca + Kelly Nelson (DIS faculty)

## INFLUENCE

While I was studying abroad, I did considerable traveling in northern and central Europe. Most of my travel was by rail. In every city I visited, I waited at many metro and train stations. Something I noticed in each city was how the central train station played a huge role in activating the city, either the downtown area or the communities which bordered the city. In addition, all of the metro stations have a unique look to each city. Some cities, like Copenhagen, designed all of metro stations to have a uniform look. Stockholm is very different. Each stop has a unique look, meaning a passenger can identify a stop by just glancing out of the train.

I found myself often thinking about these train stations, and how masses of people move in and out of the stations each day in groups as trains roll in and out. It made me start to think about how one approaches the design of the space where large amounts of people move in and out, each with a different path and purpose. The location of each station in relation to the rest of the city had a significant impact on the life of the downtown area and the usefulness of the station.



## PROPOSAL

Today, most cities around the world, which have a thriving downtown area, operate a strong transit systems which allow for millions of people to navigate the area and utilize the cities to their potential. Public transit helps connect people to other people, employment, food and other things that are vital to their daily lives. Many forms of urban transit force people to brush shoulders with others and interact with the city in ways that cannot be done in a car. These simple encounters with strangers is a unique trait to urban living. In addition to facilitating travel within a city, the structures necessary for these systems act as an identity for the city. For many people, transit hubs are the first place visitors see when coming into a city and the last when leaving.

Even though there are many cities where the established transit systems are vital to the majority of people, there are still a number of cities, especially in the United States where transit systems are not used to their potential or do not exist. Most cities with under utilized downtown areas with a small number of residences often lack a transit system which is accessible to the entire city. These downtown areas often become isolated. If a part of a city is in isolation then it is accessible, but by connecting neighborhoods through out a city with a transit system, people can move from place to place more readily. These connection points are transit stations, and it is expected that economic growth

will occur around these hubs as well as creating jobs. In the 21st century, transit hubs must function as more than stations. According to a report done by Grimshaw Architects, transit hubs can provide synergy within the city. This synergy occurs when these hubs actively feed into adjacent parks, event spaces, gathering places and social attractions. It is then that the city is activated.

Pittsburgh is a city with a downtown area that is not used to its potential. Since the collapse of the steel industry in the late 1970s, the downtown area of Pittsburgh has been slowly trying to attract businesses and residents. In the 1950s, there was a population of approximately 12,000 people and dropped to its lowest in 2000 at 3,000 residents. Today the number of people living in the downtown area is roughly 6,000. The downtown area includes the North and South Shores and the Central Business District. Currently, 2,700 people live in the Central Business District, however, approximately 95,500 people are employed in the district. According to SNAPPgh, 55% of commuters drive alone, meaning that nearly 45,000 cars travel into the small downtown area each day. This is a considerable amount of people traveling to and from the downtown area. In addition to commuting to work, thousands of people travel to the downtown area every day for sporting events, concerts, dining, and many other events.

The goal of many developers and planners in Pittsburgh is to activate the downtown area and attract more people to live in the city. There is much infrastructure needed to bring these people in and to accommodate for the thousands of people traveling into the city each day and to provide them the necessary services. **By developing a multi-use transit hub in the downtown area in Pittsburgh, the center of the city is activated by more readily accessible public transportation and the necessary infrastructure to support significant population growth.** Downtown Pittsburgh is no longer the place where people go shopping and spend their Friday nights. You are often greeted by empty sidewalks when you are in downtown Pittsburgh after work hours. The implementation of a main transit hub in Pittsburgh would activate the area by allowing for a more efficient way for people in the surrounding neighborhoods and suburbs to come into the city.

For my thesis project, **Urban Activation**, I will research the current state of downtown Pittsburgh, identifying the transportation needs of the city and what key programmatic features would bring people to this area. Looking at MOVEPGH's mission to provide a blueprint for livable communities and sustainable systems, I hope to provide a design solution for downtown Pittsburgh that keeps with their mission.

## METHODS

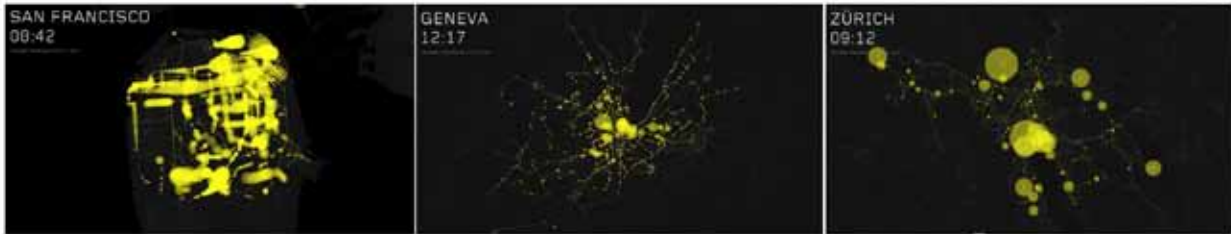
- 1. Data Analysis** - Collect and interpret data from my own research and existing research projects to identify and understand existing urban conditions and needs.
- 2. Community Interviews & Surveys** - Conduct community forums, discussions and surveys to establish what people see as urban transit issues relating to the downtown area and what they believe could be possible solutions to these issues.
- 3. Case Study Research & Analysis** - Look at existing and proposed transit systems to determine possible solutions to similar problems found during Research Methods #1 and #2. Identify forms of Transit Oriented Development that was and was not successful.
- 4. Iterative Design Process** - Once all problems are identified, I will begin an extensive iterative design process in order to establish a viable design solution.

## PRECEDENTS

At this point in my research, I have two working groups of precedent studies. The first group, **research precedents**, are examples of research projects that have looked at issues involving urban transit issues. These projects will help influence my research process as well as the way in which I visually communicate my findings. The second group, **design precedents**, is a set of case studies from previous built projects, past theses, and currently proposed projects.

### RESEARCH PRECEDENTS -

#### *Visualizing How People Utilize Cities* by Schema Design



In 2012, Schema Design created three videos which mapped public transit ridership over a 24 hour span in San Francisco, Zurich, and Geneva. All three cities generally have a heavily used public transit system. The videos show that each city has a unique transit pattern, with the varying stop locations and concentration of activity. These videos will act as both a potential way to communicate data collected on Pittsburgh as well as provide three unique cities to study. (<https://www.schemadesign.com/>)

#### *NETWORK\_LA transit* by Gensler Los Angeles

A team of planners and architects as Gensler's Los Angeles office studied the existing transit conditions the city and proposed viable solutions that are specific to this city. This project relies on graphic icons to convey ideas and can be easily understood by the general public. The format of the video is also a great example of how my own project can be presented.

(<http://www.humantransit.org/2011/07/los-angeles-gensler-architects-attack-citys-transit-future.html>)



### DESIGN PRECEDENTS -

#### *Transbay Transit Center* by Pelli Clarke Pelli

This new transit center in San Francisco is set to be completed in 2017. The project is part transportation hub, public park, urban space, and office & retail space. The Transbay Transit Center is a current project for a city that faces topographical issues similar to Pittsburgh and is an example of how a 21st transit hub functions as more than a station. Although the scale of this project is presumably larger than that of a proposed transit center in Pittsburgh, it acts an important case study of current transit development in an American city. (<http://transbaycenter.org/>)



## ***The Interchange* by Perkins Eastman**

Expected to be completed in 2014, the project is a new transit station in downtown Minneapolis. The scale of this project is closer to what may be proposed to in Pittsburgh. Because of the climate of Minneapolis, this mixed use development provides year round activated public space. The Interchange provides green space, parking spaces, urban neighborhood plaza, cultural + entertainment spaces, and community event space. The planners and architects hope to inspire a new civic identity and community pride by having a mix of uses, central location and iconic design.

([http://www.perkinseastman.com/project\\_3411736\\_the\\_interchange](http://www.perkinseastman.com/project_3411736_the_interchange))



## **SCHEDULE**

- 09.13 - 09.23** Final proposal research and revisions
- 09.24 - 10.12** Pittsburgh data analysis and interpretation w/ strong graphic representation
- 10.13 - 10.31** Preliminary community outreach & surveys  
First basic programming proposal  
Final thesis proposal book
- 11.01 - 11.30** Compile all community interviews & surveys w/ graphic representation
- 12.01 - 12.12** Compile final thesis book
- 12.15 - 01.12** Continue case study research  
Revise final thesis book  
Possible San Francisco Transbay Transit Center visit
- 01.13 - 01.31** Begin rigorous schematic design
- 02.01 - 02.15** Begin design development  
Submit design solutions to community groups for input
- 02.16 - 03.31** Design development
- 04.01 - 05.10** Design finalization, representation & documentation

## **BIBLIOGRAPHY**

Calthorpe, Peter, and Ruth Eckdish Knack. "The urban network: a radical proposal: a pitch for a new kind of transportation network." *Planning* 68.5 (2002): 10-15.

Writing about the urban growth in California cities, Knack and Calthorpe emphasize the importance of connectivity in urban planning. The transit areas are to not be isolated objects but at the intersections of these connectors.

Dittmar, Hank, and Gloria Ohland. *The new transit town: best practices in transit-oriented development*. Washington, DC: Island Press, 2004. Print.

This book begins by defining transit-oriented development and the parties involved. It then goes into the regulations that shape the results and how the development is financed. The last sections of the book are case studies from Dallas, Atlanta, San Jose, and San Diego.

**Gerdes, Felix. "What Stations Will Become: Opportunities in Future Urban Railway Infrastructure." Cisco Apr. 2013: 20-25.**

This journal article written by the Cisco corporation discusses the role of new business models to be incorporated in future transit development. The transit center must evolve to deliver a range of benefits necessary for the commuters and station workers.

**Grimshaw Architects. "Getting Around: The Transit Hub of the Future Must Support a Seamless Transportation Network." Metropolis 32.3 (2012): 56-59.**

A team of architects and urban designers at Grimshaw Architects discuss the future of transit hubs in the 21st century. These urban centers must activate the city and adapt to the unpredictable needs of the city.

**Jacobs, Brian D.. Strategy and partnership in cities and regions: economic development and urban regeneration in Pittsburgh, Birmingham, and Rotterdam. New York, N.Y.: St. Martin's Press, 2000. Print.**

This book provides information specific to Pittsburgh and a proposed strategy for the city's redevelopment. It covers the public and private sector organizations that are in play when addressing the city's future and the complexities that they resolve.

**Kreyling, Christine. "Hug that transit station." Planning 67.1 (2001): 4-9. Long, F.T.. "Crucial intermodal terminal design unveiled in Bay Area. (Transbay Transit Center) ." ENR 264.14 (2010): 14.**

The premise of this article is that by building transit stations in near housing and shops, developers and the government can increase ridership and rejuvenate surrounding communities. Kreyling looks at examples of this in New Jersey, Atlanta, and San Francisco.

**Renne, John. "The Transforming Power of Transit." American Planning Association 1 (2009): 61.**

This opinion piece expresses that it is of the United States' government's best interest to invest billions on public transit development. This development helps promote a more sustainable community and lifestyle.

**Taylor, Brian D., Eugene J. Kim, and John E. Gaubauer. "The Thin Red Line: A Case Study of Political Influence on Transportation Planning Practice." Journal of Planning Education and Research 29.173 (2009): 173-193.**

The authors write about the political powers and influences that exist in transit-oriented development.

**Thorne, Martha. Modern trains and splendid stations: architecture, design, and rail travel for the twenty-first century. London: Merrell, 2001.**

This book provides many built and proposed projects of train stations from the 21st century. The projects range in scale.

**Wortman, Marc. Public Transportation: on the move.... 2005: Visual Reference Publications, 2005. Print.**

Wortman documents the many different types of public transportation. Each type is clearly documented with high quality photos.