Case in Point Study

By

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Bike Lab at the University of Winnipeg

Practitioner

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Course

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Topic and Collaborator

Before describing my Case in Point it is important to understand my future thesis topic and the relationship between the two. My thesis will focus on exploring existing and new cycling routes through Winnipeg. This research will create a framework for the cycling community and look at alternative solutions for bike path implementation around the city, experiencing the efficiency of active transportation as well as a greater sense of other measurable joy. The shortest time or shortest distance will not be key factors in the criteria. The research will focus on cyclists who are both commuting to and from work as well as those recreational cyclists. The research will take into account the climate, and the seasonal differences which occur in Winnipeg.

By creating safe and varied cycling experiences, one can begin to explore the city in extraordinary ways. Cyclists can begin to learn their city from a completely different modal perspective. Re-directing cyclists through alternative, more pleasurable routes may result in increased ridership and more desirable bike paths. Alternative routes might not be faster, but would avoid high density areas in the city, resulting in a reduction of new costly bicycle infrastructure.

The topic for this Case in Point study will be to research portable, flexible space alternatives for bike storage, bike repair, cyclist shelter and rest stops along travelled bike routes. A similar, yet simplified example of this might be the Warming Huts that are placed on the frozen River Walk, allowing skaters and walkers to rest and get warm. For this study I am proposing to work with Peter Sampson, Principal and Architect with PSA Studio, Inc. In October of 2011, PSA Studio designed the Bike Lab, a bicycle repair facility and cycle friendly courtyard for the University of Winnipeg and their Students' Association. This year-round

innovative cycling hub was part of a commitment to promote active and sustainable transit options for students, staff and the surrounding community (UWSA, 2011).

Aside from the Bike Lab, PSA Studio has designed other award-winning architecture projects using recycled shipping containers. What can be learned from this design methodology and building type and further integrated with innovative cycling concepts and strategies, can then be directly applied to various aspects of cycling infrastructure.

Practitioner Interview

On March 11, 2016, I (ME) met with Peter Sampson (PS) in his office to learn about his firm's University of Winnipeg and their Students' Association Bike Lab project. The following discussion took place.

ME - *How did this project come to your office*?

PS - The project came to PSA Studio through an RFP from the University of Winnipeg.

ME - *Who were the primary stakeholders*?

PS - The University of Winnipeg and their Students' Association.

ME - *Who were the secondary stakeholders*?

PS - The local CBC office due to their proximity to the site and their potential use of the Bike Lab, Ice Rides of Winnipeg because of their year-round riding and Winnipeg Transit because of the project's integration as a transit hub with connections to other transportation modes.

ME – *Can you describe how the project programming worked?*

PS -The original program had included the Bike Lab for repair and maintenance, bike storage as well as a Bike Café. The storage component and café were both eliminated.

ME - *Lessons learned – What went right*?

PS - The most important thing that went right was that it actually got built. The University took risks. The project came in on schedule and on budget.

ME - *Lessons learned – What went not-so right?*

PS – The storage and café, two important functions, were eliminated from the program. There was very little coordination with other forms of transit in an effort to connect the Bike Lab to a larger network. Because the Bike Lab was placed in a more central location on campus, it had little connectivity and integration with outside community.

ME - *What would you consider to have been the planning issues you dealt with*?

PS - As somewhat described in the previous question, the city planning challenge was the integration of the Bike Lab onto the overall transit map of the city.

ME - *Were there challenges with the site?*

PS - The most site-specific challenge was accessibility past concrete barriers (blocks). We dealt with the location of these blocks and how users would walk past them as well as navigating the level changes leading up to the Bike Lab's entrance.

ME - *Can you describe the project schedule?*

PS –We had three (3) months to build the Bike Lab off-site and one (1) month to assemble and connect the structure to the site.

ME – *Can you describe the project budget?*

PS - $160,000, including hard and soft costs.

ME - *Is there a connection between your passion for cycling and your interest in shipping container architecture?*

PS - The challenge comes from the ability to transform an architectural component, the shipping container, which represents the heaviest and most impacting form of transportation – cargo ships, trains and trucking – and break it down and reuse it to represent the lightest, most nimble form of transportation, the bicycle.

ME - *What were your research methods?*

Anything and everything.

Background and Context

The concept of the Bike Lab might go far beyond one isolated location, but can extend to support the vast network of the cycling infrastructure. Before the planning of these structures and their strategic location and purpose for the biking community it is important to briefly understand the history of bike paths. How do other cities go about creating practical, affordable, maintainable bike path infrastructure? What is important to riders?

With the advent of the automobile at the turn of the twentieth century there began the conflict between the car and bicycle users. In 1934 the first dedicated roadside optional cycle track was built in the United Kingdom as an experiment for the Ministry of Transport. The first most notable North American examples of bike paths were the Ocean Parkway in Brooklyn, New York (1896) and the California Cycle-Way in Pasadena (1897). While in Brooklyn the pedestrian way was simply split to accommodate bicycles, in Pasadena there was a newly constructed wood-frame nine-mile corridor built connecting Pasadena and Los Angeles. Safety and the support of cycling became priority. Today, organizations such as the Manitoba Cycling Association and Bike Winnipeg promote the safety of cycling with different approaches. Bike Winnipeg presents background information and bike-friendly recommendations to cyclists and many government agencies.

A successful bike path network is dependent on many factors, far beyond the most obvious and often less important, being time and distance. The decision to ride can also be based on a desirable route, weather, a final destination, intensity of ride, exercise and participant make-up, to name a few. A rider might also want to incorporate additional tasks along the ride like shopping, eating, dropping or picking up something. Regardless of the rider's purpose it is essential that a route be properly supported to ensure safety, comfort, ease of direction, route connectivity and equipment support. Bike Labs can help this effort.

Equipment support has many different components which can be exemplified in the Bike Lab prototype. This specific building type could potentially incorporate functions such as bike storage and security, weather protection, repair and maintenance, retail, event programming and even education. Because of the flexibility that shipping container architecture offers, the concept of portable bike labs could be advanced in many ways. These bike labs could be transported and placed at various points along a bike path depending on the specific need (photo 17). In summer, where certain paths are more traveled than others, they could support that particular route. Where there are festivals and large gatherings these small buildings could act as meeting points and venues to promote bike advocacy. The expense to transport and operate these bike lab facilities might also be shared by public and private entities, depending on the function at that given time.

The Bike Lab for the University of Winnipeg Students' Association (UWSA) and the University of Winnipeg had the vision of creating a revolutionary cycling education and advocacy facility that would provide space, tools and support to allow students, faculty, staff and community members to keep their bicycles running smoothly all year long (University of Winnipeg, 2011). Programming, safety workshops, advocacy and networking are all coordinated through the university registry. "This student led initiative is a testament to the spirit and commitment of our students on campus and the importance of issues of sustainability that encompasses the entire university and broader community", said University of Winnipeg President and Vice Chancellor Dr. Lloyd Axworthy (University of Winnipeg, 2011). This is not the first university campus bike cooperative ever formed. In an article from the International Bicycle Fund, an NGO advocacy organization that promotes sustainable transport, there was a list of 28 action items or deliverables identified when creating this type of coop for a Colorado town (Brown, 2015). Advertising and brand design, guided cycling tours, memberships, workshops for bike repair and even the design and fabrication of furniture from recycled bike

parts were just a few of the offered services. The second item on the list, just after having a physical space for the coop, was making cycling fun and sexy so all the students will want one (Brown, 2015).

When considering scaled-down versions of the enclosed, full-service cooperative environments discussed thus far, there are countless examples of clever little repair stations popping up on university campuses, at train stations and even at gas stations, where automobiles have traditionally been the priority. The sustainability program at the University of Virginia created a single stand where everything a cyclist needs is easily accessible, including air pump and tools with anti-theft metal wires to prevent vandalism. A new bike repair station arrived at Union Train Station in New Haven, Connecticut, offering wrenches, screwdrivers and a bike pump, along with 10 new bike-storage lockers (photo 21). Nearby, another bike-repair stand is on its way as well as a neighbourhood bike shop that offers public-access tools during business hours. Statoil, a major Scandinavian oil company with petrol stations throughout Denmark, has embraced the long-lived bicycle culture (photo 18).

Ian Hall, Director at the Office of Sustainability at the University of Manitoba is leading an effort to maintain connectivity of the Crow Wing Trail, the longest section of the Trans Canada Trail in Manitoba. This assignment is important to the University because it touches a portion of the campus property. Not only have programs been initiated to "donate a metre" of trail or "donate a plank" of bridge, but recently a donor has come forward to donate two shipping containers for support along the trail.

Why the Interest

The combination of this interesting project type and how it relates to city planning is of great interest. The different functions seem to be endless for this re-used and recycled piece of transportation infrastructure. Even more fascinating is that this cubic structure was never intended to become architecture. With research and creativity, the ability to "think out of the

box" can begin to solve planning challenges for the cycling community. For this assignment various research methods were used. An interview with the practitioner, precedent studies examining how other active transportation routes are supported and funded, stakeholder (client) feedback and participant or community commentary.

Innovation is a key word with this Case in Point assignment. I recently heard of a team-building exercise structured around creating as many different functions for the typical "Binder Clip" – other than its assumed purpose of just keeping papers together. The results were fascinating. The same can be true with the shipping container. Just the uses for storage, maintenance, shelter, retail and education all to support cycling infrastructure are progressive.

Lessons Learned

What can be learned from the success of this project, as well as from other precedents that seek similar goals and objectives can be substantial. There are similar themes which connect the Bike Lab design intent with other projects that were considered in this case study. Whether it is a small stand-alone bike pump or an enclosed repair facility, a few themes remain constant. A concept that Peter Sampson refers to as being Supportive Infrastructure for Riding (SIFR) speaks to the ability that a bike route should continuously support its riders, not only with providing a physical strip of pavement but with certain amenities that ensure protection, shelter, well being and safety along the journey (Sampson, 2016). These structures can also serve as temporary components to strengthen portions of existing bike path infrastructure. According to PSA Studio a 20' container can be transported for less than $500. These could be placed along high traffic bike routes and at event locations during the summer months. In the winter months they could again be transported to high-density office locations for cyclists to shower and store their bikes, should their place of work not offer those amenities.

The City of Minneapolis sponsors Open Street events that allow locals of all ages to explore their neighborhoods with safety and support in mind. In 2015, more than 65,000 people attended one or all of the eight Open Streets Minneapolis events held all over the city (Giddings, 2015). Originally created by then-mayor Richard Riordan more than two decades ago, the Los Angeles Bike Tour gives Angelinos the opportunity to ride safely through the streets of their city, free from automobile traffic, hours before the scheduled Los Angeles Marathon. More than 20,000 cyclists ride in this event each year. The use of bike labs could easily and flexibly support participant riders during these cycling events.

Another theme that is equally important yet far less tangible is the ability to attract riders through marketing, social interaction and a sense of belonging to a greater cause. Many other examples of container architecture which are for retail or community functions have certain "coolness" factors about them. Strong graphics, bright colors and glass storefronts all add to their ability to attract (photo / Lessons Learned Power Point Slide). Private and public partnerships could also begin to promote the growth of this concept (photos 11 and 12). Municipal funds could support the fabrication of each unit and private funds from local bike shops, retailers and advocacy organizations could support the ongoing operations. Adopt-A-Highway and Sponsor-A-Highway are U.S. programs that focus on the on-going maintenance of designated stretches of public highways. Using this example, these Bike Lab support stations could be sponsored by companies that are related to cycling and could benefit from advertising.

Conclusions and Recommendations

Regardless of how successful a project appears to be and what problems the architecture may have solved, the benefits of speaking directly to the designer and learning firsthand of the behind-the-scene decision-making and experiences is invaluable. The evolution of the Bike Lab did address issues of community, sustainability, connectivity and active transportation. Aside

from just being another pretty building, the architecture became a tool to help create awareness and improvement in these very important urban conversations.

However, the reality of economics, politics and stakeholder objectives quickly enter in to the picture and begin to shape the ultimate project. Although the total budget of $160,000 created 480 square feet at an average cost of $333 per square foot, which is not out of line, it still was not enough to fulfill the intended program. Café, retail space, water closets, showers, lockers and bike storage had to be eliminated. How political and stakeholder priorities influenced the outcome of the project may be less clear. The decision to imbed the site location into the campus footprint rather than at the perimeter limited the opportunities for connection to the community and to transit.

There is no doubt that this building type can and has been used for purposes far beyond what was ever imagined. It seems as if every industry has taken advantage of this re-use opportunity. However, the question now is how these simple geometric enclosures transform cycling infrastructure. For this to occur, the interior and exterior form must remain flexible and adaptable. The final design product must be transportable and be able to be easily connected to existing infrastructure – foundations, utilities, transportation. Although perceived as a very simple transformation, the cost to make these modifications can be substantial. To create something great from these containers, private participation through corporate sponsorship, advertising and retail partnerships would fuel this development

As part of the topic proposal, a number of email conversations occurred in order to define the Case in Point practitioner and subject matter. Below is a summary of that dialogue and how Peter Sampson and the Bike Lab project were selected.

Martin and Martin

…….I had a thought (or four) regarding the Case in Point Assignment. After listening to Peter's involvement in "Planning" assignments - coming at them from the architect's perspective - I thought he might be a good practitioner (although not a planner) to work with. My thesis topic focuses on developing a cycling framework which takes into consideration one's enjoyment for riding, in addition to a form of mere transportation. This led me to exploring his Bike Lab (shipping container) project for the University of Winnipeg as a case study. If you both are in agreement, this might be a very interesting planning case study which could feed my thesis research, as well….Michael.

Peter

…..After listening to your involvement in "Planning" assignments - coming at them from the architect's perspective - I thought you might be a good (victim) practitioner to work with. My thesis topic focuses on developing a cycling framework for Winnipeg which takes into consideration one's enjoyment for riding, in addition to a form of mere transportation. This led me to your Bike Lab (shipping container) project for the U of W as a case study. Although you are not a planner by profession, I think the two Martins would be agreeable for me to explore this very interesting planning case study……Michael

Martin and Martin

I spoke briefly with Peter briefly about working on this assignment with me and he is all in. I just need your nod of approval…….Michael.

Hey

If it's no trouble for Peter [we usually let practitioners beg-off cases-in-point if they've done an in-class session] then I'm on board…..Martin.

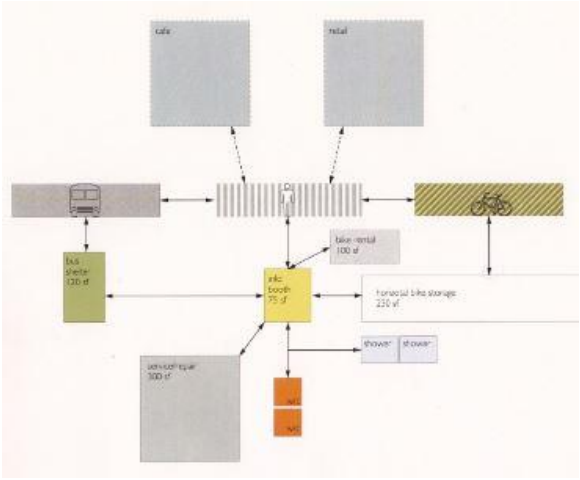
Appendix B – Photos and Images

1. Bike Lab Exterior (PSA, 2016)

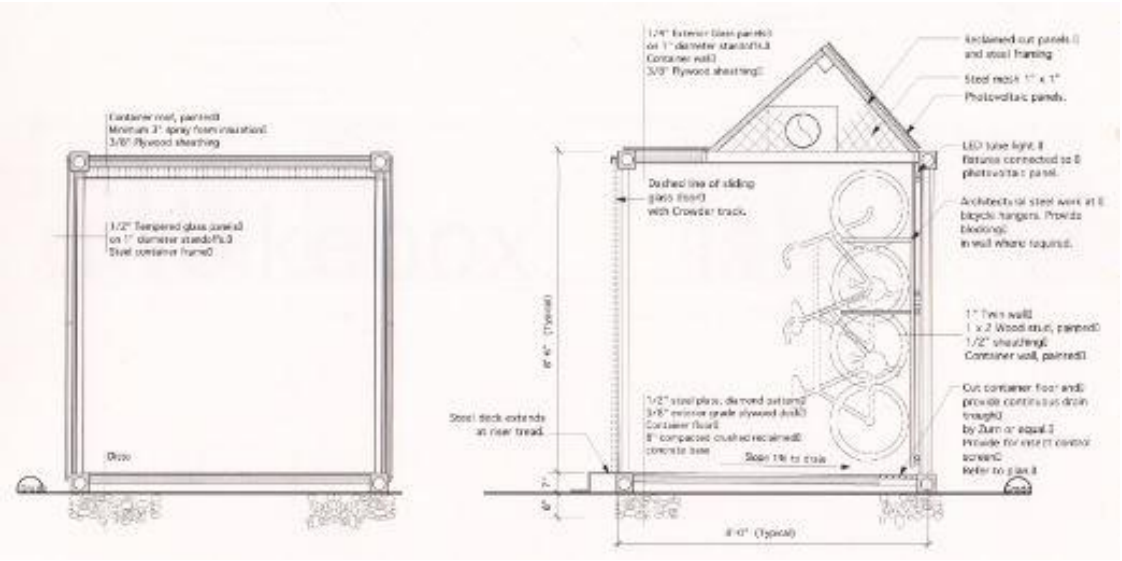
2. Bike Lab Interior (PSA, 2016)

3. Bike Lab Exterior (PSA, 2016)

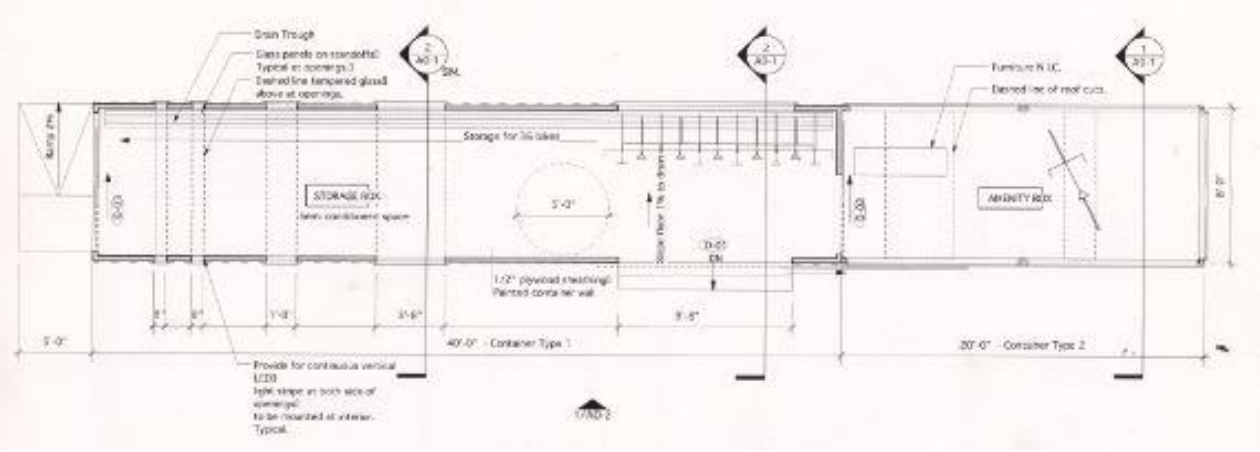
4. Bike Lab Interior (PSA, 2016)



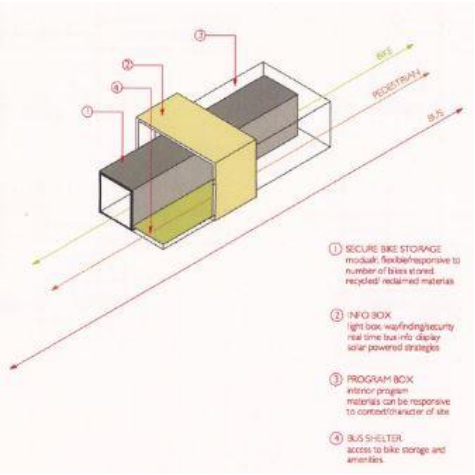
5. Bike Lab Needs and Program Adjacencies (PSA, 2016)



6. Bike Lab Section (PSA, 2016)

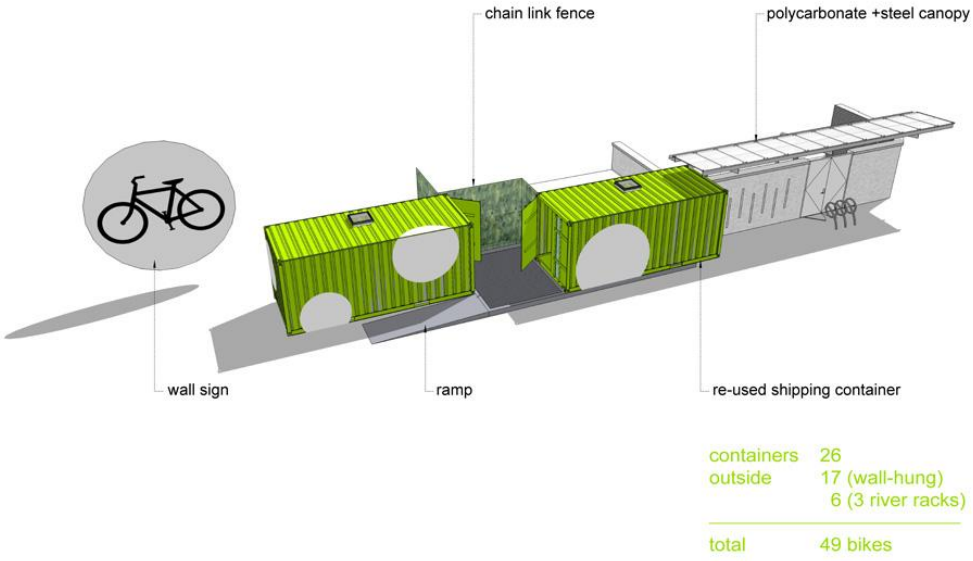


7. Bike Lab Plan (PSA, 2016)



8. Bike Lab Prelim. Study-Concept (PSA, 206) 9. Bike Lab Energy Opportunity (PSA, 2016)

components



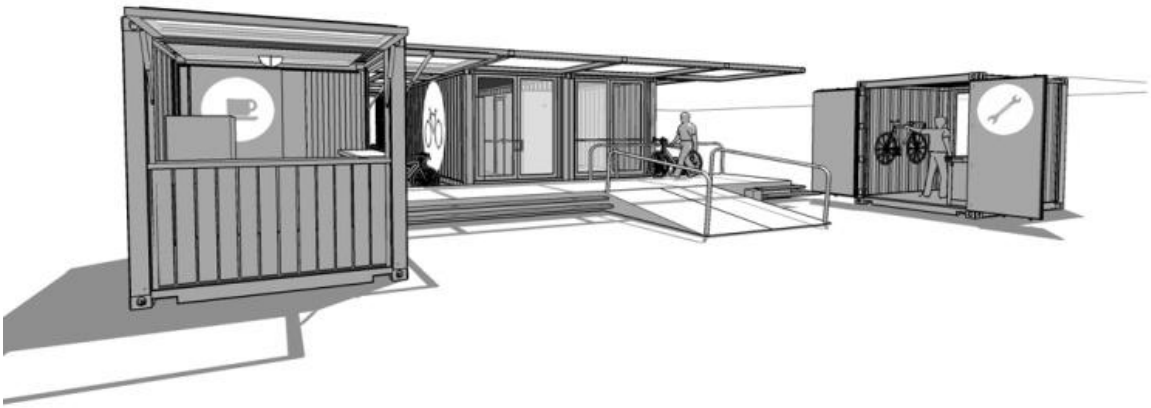
10. Container Configuration / Bicycle Commuter Center, (PSA, 2016).

11. UNI Store, (Google Images).

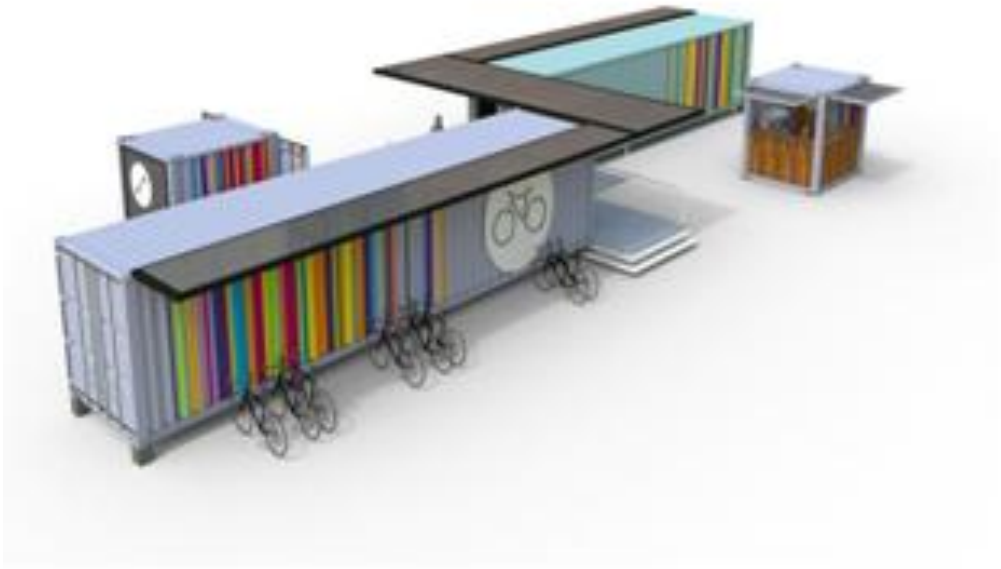
12. Puma Retail Outlet, (Google Images).

13. Pittsburgh Bike Storage, (Google Images).

14. External Bike Storage, (Google Images).



15. Whitecrate - Company Bike Hub, (http://whitecrate.com).



16. Whitecrate - Company Bike Hub, (http://whitecrate.com).

17. The moving of a Uni Store Container Store, (Google Images).

18. Norwegian Statoil Energy Company bicycle care stations in Copenhagen, (Google Images).

19. Repair Station at the University of Virginia, (Google Images).

20. Canada, Steam Whistle Brewery has installed bike repair stations, (Google Images).

21. Bike Repair Stand and Bike Lockers at New Haven Union Station, (Google Images).

Appendix C - References

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