

Applied Research Consortium Proposal

Team:

Student ARC Fellow:

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Firm Advisor:

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Project Abstract:

Starting at the beginning, the high-level topic I would be working on for NBBJ is “encouraging movement through design.” Starting this project during the summer, Ryan was open and provided space for me to figure out how I wanted to frame and scope this broad idea of encouraging movement through design. After a summer of investigation, reading, and two charrettes the research project is focused on designing for active transportation as the form of designing for more movement. Active transportation is a means of getting around that is powered by human energy, primarily walking and bicycling. Unlike exercise or other forms of leisure physical activity. Active transportation has a range of design decisions that nudge and encourage people to move more. The research project will catalog the best practices and innovations and showcase them in a design toolkit for active transportation. Overall, my research question is how can the built environment fields better design for active transportation? This research project intends to provide a toolkit that designers in firms like the ones in this consortium can refer to in order to add designs that encourage movement through active transportation, in more of their projects.

Background:

A challenge NBBJ was thinking about is that most spend an enormous time of their day sitting, a radical change from the 14 miles our far ancestors used to walk per day. The impact of this sedentary state – exacerbated by remote work – is highly detrimental to our physical and physiological states, relating directly to our stress and creativity levels. Through this NBBJ is interested in exploring ways to encourage movement through design. The benefits of movement are probably most prominent in the research of how movement benefits health. Physical health benefits from movement or physical activity at certain intensities include weight management, reduction of health risk to lifestyle diseases (cardiovascular, t2 diabetes, metabolic syndrome, some cancers, etc.), strengthening muscles and bones, balance and stopping from falling, lower risk of disability from aging, and increase chance of living longer (CDC, 2021; Haskell et al., 2007; Ogilvie et al., 2007). Movement and physical activity also help with thinking, focus,

creativity, and cognition. It also helps reduce risk of depression, anxiety, and helps one sleep better.

Starting with the topic of movement I had to think about how to define movement for the research. As an urban planning student and as someone who generally thinks about systems and environments. From my perspective, I found the most holistic, beneficial, and interesting form of movement to be active transportation. Active transportation brings a whole set of co-benefits in addition to the health benefits mentioned above. Active transportation brings social equity benefits, environmental sustainability benefits, safety benefits, and economic benefits (Sallis et al., 2015).

Project Proposal:

In partnership with NBBJ, in exploring the topic of designing for more movement. The research scope will focus on design that encourages active transportation. The setting or context in which most of this research happens is thinking about urban highly populated areas. I will be researching and finding the best practices and innovations in design for active transportation. I will be collecting and cataloging designs that encourage movement through active transportation, document why these designs work, and then create a graphic design toolkit as the final deliverable.

Research Questions:

1. What is movement?
 - a. How do I want to frame movement for this research?
2. What are the benefits of movement?
3. What are the benefits of active transportation?
4. Are there barriers or considerations not connected to design that impact active transportation?
5. How can the built environment fields better design for active transportation?

Research Methods:

- Literature review: The literature review will provide background for the existing research related to the topic. As well as identify possible gaps in the current research and help scope my research.
- Case study and Precedent Analysis: Collecting and cataloging design best practices for active transportation and precedents showcasing good design.
- Design Toolkit: Graphic representation of research

Project Outline:

Fall Quarter: 2021

- Literature review
- Graphics for presentation

Final Deliverable – Presentation focused on the benefits of active transportation and the considerations that impact active transportation that are not as directly connected to design. Also, literature review.

Winter Quarter: 2022

- Precedent collection and evaluation
- Callouts and graphics of case studies and precedents for presentation.

Final Deliverable – Presentation focused on showing results of precedents and why they encourage movement.

Spring Quarter: 2022

- Finish design toolkit
- Write up final document
- Put together final presentation

Final Deliverables – Digital and maybe physical copy of design toolkit. Final write up and documentation of research project. Final presentation focused on results and toolkit.

Work Cited:

- CDC. (2021, April 5). *Benefits of Physical Activity*. Centers for Disease Control and Prevention. <https://www.cdc.gov/physicalactivity/basics/pa-health/index.htm>
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- Sallis, J. F., Spoon, C., Cavill, N., Engelberg, J. K., Gebel, K., Parker, M., Thornton, C. M., Lou, D., Wilson, A. L., Cutter, C. L., & Ding, D. (2015). Co-benefits of designing communities for active living: An exploration of literature. *The International Journal of Behavioral Nutrition and Physical Activity*, *12*(1), 30–30. <https://doi.org/10.1186/s12966-015-0188-2>