The Impact of COVID-19 on Active Transportation

A Senior Project

presented to

the Faculty of the City & Regional Planning Department

California Polytechnic State University, San Luis Obispo

In Partial Fulfillment

of the Requirements for the Degree

City and Regional Planning; Bachelor of Science

By

Timothy Scott Mc Birney

June, 2021

© 2021 Tim Mc Birney
Contents

Abstract and Introduction ....................................................... (pg. 2-4)
Research Methods .............................................................. (pg. 5-7)
What Has Changed and Why ................................................ (pg. 8-11)
Using the Opportunity and Assessing Challenges .................... (pg. 12-14)
Case Studies ........................................................................... (pg. 15-20)
San Luis Obispo ....................................................................... (pg. 15-17)
Seattle .................................................................................... (pg. 17-19)
UC Davis ................................................................................ (pg. 19-20)
Best Practices .......................................................................... (pg. 21-22)
Moving Forward ........................................................................ (pg. 23)
Conclusion ................................................................................ (pg. 24)
References .............................................................................. (pg. 25-26)
Appendix A: Design Strategies .............................................. (pg. 27-32)
Appendix B: Interview Samples .............................................. (pg. 33-47)
Abstract

This research project examines the impact the COVID-19 pandemic had and will continue to have on active transportation, in particular, cycling. This research was initiated by my own interest in cycling for both recreational and utility purposes as well as articles I had read on the rise in recreational cycling over the course of the pandemic. I wanted to understand and summarize the best practices for converting the increase in cycling for recreation into a meaningful, long-term shift toward active modes in urban transportation in the future. This paper explores how the pandemic has impacted active transportation around the country and brings together several strategies which are being implemented to make sure this unique moment in transportation history is not wasted.

Introduction

Few events in modern history have so thoroughly changed daily routines, in particular transportation habits, as much as the COVID-19 pandemic. Unlike a major war, market crash, or natural disaster, this period has forced people away from each other and suppressed modes of transportation which were previously taken for granted as parts of the greater network. This was not an external crisis in which people could go about their lives normally while working to deal with the problem but rather an internal one which disrupted the very methods by which we could defeat the challenge. Despite this upheaval, the pandemic provided a unique proof of concept for transportation theories and programs which have been floated around for decades. Workplaces became remote and for many the travel for anything other than essential daily needs fell off sharply. With a lack of commuting and other activities to fill in the day, recreation time increased on average, helping to trigger a new wave of people walking, biking and getting outside in
general. At the same time, public transit ridership dropped off and rates of individual vehicle use as a share of total trips taken rose significantly.

The acute crisis of COVID-19 has created a forced disruption in the transportation system. The chronic climate crisis has necessitated a shift in transportation modes for environmental reasons. For decades, increased rates of active transportation such as walking and cycling have been the target for cities as they work toward sustainability goals. Urban designers and transportation activists have put forward a variety of ideas and pushed for substantial change in how transportation happens in our cities (O’Toole, 2020). These changes have been dismissed as too radical, too expensive, and excessively disrupting automotive traffic. The pandemic has provided a unique window in American life where urban design and use concepts which previously seemed infeasible are now not only possible, but also improve the flow of people through the city in a safer and healthier way. As life returns to normal, residents are seeing the positive impact of changes in how their streets operate and who gets priority of use. This is a golden opportunity for American cities to turn the necessary changes which sprung from COVID and use it to reinvigorate the transportation side of climate goals as we adjust to new realities of densifying cities and the accompanying necessity of an increasingly car-free lifestyle.

Around the country cities are already making moves toward active transportation projects, in some cases extending their temporary infrastructure changes and in others making budgetary adjustments to ensure that new projects and goals receive appropriate funding from the start. Other municipalities are recognizing the significant increase in walking and cycling for recreation and transportation and taking a programs-based approach toward converting those increased rates of recreational walkers and cyclists into people who are walking and cycling for everyday trips and, at least in an immediate urban context, are relying less and less on their cars
for transportation. Even though tax revenue and funding for public projects has decreased in many cities over the course of the pandemic, low-cost approaches can still be employed to meet and shape this unique moment in urban transportation. If cities are able to successfully support the new wave of walkers and cyclists and convert them into a meaningful piece of their transportation networks, that will have a positive future impact in how cities are designed. This will work hand in hand with enabling climate conscious planning and setting the next generation of climate focused design. Active transportation modes support new designs rather than work in opposition to them. COVID-19 has permanently affected our lives, but out of the tragedy of loss of life and economic struggles, the forced transportation shakeup and chance to trial infrastructure modifications are a silver lining and an opportunity to launch a new wave of active transportation-centric projects, enabling the success of much needed climate focused urban design.

This paper explores the changes in transportation and recreational habits around cycling in particular over the course of the pandemic and the variety of strategies and ideas on how the bicycling boom of 2020 can be harnessed to drive a new wave of commuting change in the years to come. From city transportation planning departments, to academic institutions, large corporations, and advocacy groups, these strategies and the challenges they face vary widely but often coalesce around the same general approaches and policy interventions. Our changing world demands both a shift in how we think about transportation, but also realistic and easily enacted policy and programs to ensure that organizations are able to experiment and grow with active transportation from where they are right now.
Research Methods

Active transportation networks are a collection of numerous stakeholders in both the public and private sectors. Because of this, I wanted to make it a principal component of this project to get a range of views on the Impact COVID-19 is having on active transportation and what opportunities and improvements can be made going forward. The primary research method for the analysis and best practices section of this project was interviewing people in different professions which interacted with some level of active transportation, advocacy, planning, programs, or consultancy. The interview questions surveyed the issues of COVID and transportation but generally focused on how the interviewees work has been impacted, what their organization is doing, and what opportunities they see for active transportation as we move out of the pandemic. By collecting real world experience from industry professionals, I felt I was able to get a broad understanding of how transportation is changing, but even more importantly, the strategies which are successful in getting a better transportation mode split, increased infrastructure usage, and more favorable community reactions.

The questions were as follows:

1. *Tell me about your role and its connection to transportation planning?*

   This question speaks for itself and helped establish the interviewees credentials and which aspect of transportation planning they specialized in.

2. *How has COVID changed your job or work priorities in the last year?*

   Early on in the interviews I wanted to assess the degree to which the pandemic had impacted their work or capabilities.

3. *What alternative transportation patterns did you notice before the pandemic vs. now?*
I wanted to get a baseline before and after comparison on what they saw as emerging trends over the past year which tied directly into the goal of this project to figure out best practices for improving active transportation.

4. *Do you think transportation trends are changing on a large scale or within your jurisdiction? Why/why not?*

Much like the previous question, this one was more targeted at their specific area of work and sphere of influence.

5. *What is your organization doing to address this opportunity/challenge?*

Again, this was aimed at understanding what they were doing within their organization and which methods in particular were successful.

6. *Do you think public transit (bus/train specifically) will come back as we knew it before COVID? If not, will alternative modes be able to make up the difference?*

While not the main focus of the project, public transportation makes up a massive portion of urban mobility infrastructure and existing transportation networks. I wanted to get a brief assessment of the interviewees observations on how public transportation habits were changing and how that may be impacting the rise in behavior like recreational and non-recreational cycling and walking. The relationship between public transit such as trains and busses and active transportation with regards to COVID-19 would be a fascinating area of study for future projects.

7. *What do you think are the key policy/implementation interventions which local governments can make to increase active transportation rates?*

This was arguably the most important question in the interviews as it went down to the root of this project; what works and what doesn’t. I wanted in particular to see the approaches being taken by public sector organizations versus those in the private sector who frequently work with a smaller sphere of influence but greater financial support for the work they are doing.
8. What do you think is the single best infrastructure change to increase active transportation rates?

This was an elaboration on question seven and was geared toward identifying the best practices which went into the conclusion and design recommendations of this project.

9. Do you think that increased walking and cycling as a result of COVID can be converted into a long term transportation mode shift?

The increase in recreational cycling and other transportation activities has been undeniable, but turning that behavior into a real change in wide-scale transportation modes looks different to different people which is why I included this question

10. Any closing thoughts or general observations?

Another self-explanatory question to sum up final thoughts or governing principles which the interviewees were applying to the situation with active transportation and the pandemic or even their overall philosophy towards planning.

These interview questions produced surprisingly similar results among the people I talked to. Their specific strategies changed somewhat based on what type of influence they had or what their work environment looked like, but as a whole, their assessments of active transportation and the pandemic were remarkably similar. Being able to get a range of opinions helped me get a better understanding of the situation and to my surprise, gave me a fairly unified viewpoint on how transportation has changed in the last year and what lies ahead.
What Has Changed and Why

With so many factors of daily life changing all at once, transportation is a difficult variable to isolate. Working from home, fewer social trips, less travel in general, and more recreation time skew the data and point to trends which may not be representative of transportation habits once the pandemic is over. Work from home mandates eliminated commuting as a significant share of daily trips in many communities and had a disproportionately high impact on public transit ridership numbers (Day, 2021). Even in the early months of 2020, it was clear that there were impacts on recreation as well. As gyms and outlets for traditional sports and recreation closed. People, particularly in denser urban areas, looked to walking and cycling as a safe and socially distant form of recreation. Bike paths and trails which typically saw moderate use were flooded with a wave of new recreators and active transportation infrastructure within cities saw an exponential increase in use (Kraus, Koch, 2021). According to Christina Goldbaum of the New York Times, “In March, nationwide sales of bicycles, equipment and repair services nearly doubled compared with the same period last year, according to the N.P.D. Group, a market research company. Sales of commuter and fitness bikes in the same month increased 66 percent, leisure bikes jumped 121 percent, children’s bikes went up 59 percent and electric bikes rose 85 percent (Goldbaum, 2020).” Walking and cycling have seen steady growth in recent years as infrastructure has improved and the relative affordability and health benefits have been realized by a greater number of people. Bike SLO County representative Rick Ellison observed that, “as vehicle traffic on the roads decreased, people began to get more comfortable riding out and about especially with young children……a whole new group of people who would not have considered cycling before became riders in 2020 (R. Ellison, personal communication, May 13, 2021).” This rapid growth taxed existing
infrastructure such as bike paths and lanes, pointing out gaps in transportation networks that had previously gone unnoticed or unprioritized on project lists.

According to Luke Schwartz, transportation coordinator at the City of San Luis Obispo, infrastructure investment is both a solution for changing transportation patterns as well as an incentive to shift behavior in a community. The increasing push to structure cities toward mitigating climate impact has also meant that public projects and programs around active transportation are higher on the priority list than they were a decade ago (L. Schwartz, personal communication, April 28, 2021). Programs like Vision Zero which aims to eliminate pedestrian and bicycle related traffic deaths have gained widespread adoption in major US cities. In many ways, cities had been building up to a shift in how urban transportation happened for years and the COVID-19 pandemic was the triggering event which brought people out to actually use this infrastructure on a wide scale. However, growth is still needed to set up more complete and safe infrastructure networks. The new wave of activity is pointing out gaps in the system such as incomplete city-wide networks, affordability and equity issues, and rider education and safety. Active transportation related infrastructure projects are being created or accelerated by local governments in communities both large and small (Ped Bike Info COVID-19 mobility dataset). The City of San Luis Obispo (population 47,000) has taken a quick build approach with new bike infrastructure, employing painted lanes, temporary barricades, and street closure to strengthen its bicycle infrastructure. This trend has continued into large metropolitan areas like Seattle (population 724,000) which have agreed to permanently close over 20 miles of streets for exclusively pedestrian and bicycle transportation (Reid, 2020). Increased recreational cycling has also been noticed by major companies who are working to make active transportation a stronger part of their company culture and employee behavior post-pandemic (Pase, Chiariotti, Zanella,
Zorzi, 2020). Kurt Martin, a transportation consultant who works with private firms and city
governments around the country says that this is a unique point where the demand is meeting and
exceeding a lot of the infrastructure support which has been growing under the radar for the last

Steady long-term growth of active transportation in this corporate environment requires
active involvement in education and a proactive approach to things like corporate campus design,
integrating active transportation seamlessly into the company and making it an easy, fun, and
convenient prospect over previous modes such as the bus or a personal vehicle. Large companies
have the benefit of resources but are often limited to the edge of their campus in terms of design
and infrastructure support for cycling, requiring clear communication between local governments
and their business sectors. Martin says that “the public and private partnerships need to be very
open and mutual as we work through an improved transportation landscape.” While companies
may have few challenges allocating resources for new active transportation design and
initiatives, funding has become more challenging for cities over the course of the past year. Tax
revenue from industries such as tourism and even local retail which fund infrastructure projects
has fallen dramatically. Brookings Institute projects that state and local government revenues
will decline $155 billion in 2020, $167 billion in 2021, and $145 billion in 2022, about 5.5
percent, 5.7 percent, and 4.7 percent, respectively, excluding the declines in fees to hospitals and
higher education (Sheiner, Campbell, 2020). This revenue loss is impacting capital improvement
projects and projects in cities regardless of size. Luke Schwartz at the City of San Luis Obispo
confirmed that this decline in revenue was having an ongoing impact on the city capital
improvement project schedule, pushing them toward a greater reliance on lower cost quick build
infrastructure solutions that allow for efficient and creative problem solving around the city’s existing active transportation infrastructure.
Using the Opportunity and Assessing Challenges

The impacts on pre-existing transportation habits are not uniform across the board. The pandemic has upended previous workplace situations, put a pause on commutes for many and has reduced travel of all kinds. Certain communities are feeling this impact more than others. In Davis, California, the large university population which effectively doubles the city size and is a primary user group for both public transit as well as bike infrastructure has dropped dramatically and along with that, bicycle and pedestrian commuting declined sharply. UC Davis Bicycle Transportation Manager Jeff Bruchez says that “the campus was like a ghost town.” University towns and communities that rely heavily on tourism saw use of their active transportation infrastructure drop dramatically (J. Bruchez, 2021). However, this down period was not lost. At UC Davis, the pause allowed for an improvement of bicycle transportation and infrastructure programs. Bruchez used the time to improve programs around transportation equity, repurposing discarded and abandoned bikes for soon to be returning underserved students and evaluating infrastructure gaps which could become obstacles to active transportation. In Cities like San Luis Obispo, the pandemic came with an opportunity to experiment with different street closure strategies and infrastructure interventions to see what worked. “This process really allowed us to move quickly and get great community feedback on the network,” said Luke Schwartz at the city of San Luis Obispo (L. Schwartz, 2021). The explosion in recreational cycling in San Luis Obispo drove infrastructure changes and priorities which will have long term impacts as residents move out of the pandemic. In February 2021, the City of San Luis Obispo adopted an ambitious new active transportation plan which commits to long term infrastructure improvements.
The COVID pandemic afforded San Luis Obispo the opportunity to reassess its transportation goals and use a wide range of approaches to turn those goals into reality. In the private sector, the temporary pause allowed for companies to evaluate where they stood with integrating active transportation into their company culture. Consultant Kurt Martin points out that all of the marketing in the world does not result in meaningful change without facilities to support it and organizations spanning from private companies to large public universities are accelerating their efforts to create more secure bike parking, showers, lockers, and other amenities which will make active transportation not just another option in the commuting pool, but the best option, one which combines health, sustainability, and safety and is supported in the long term (K. Martin, 2021).

While the COVID pause has allowed for restructuring opportunities and reinforcement of infrastructure, it has at the same time created an imbalance of education and safety. The explosion in recreational cycling over the last year has the potential to positively shift transportation modes in urban areas moving forward, but safety and education need to be at the forefront of this shift. Rick Ellison at Bike SLO County notes that many safety education programs both for adults and young children in schools have been temporarily suspended. To compound the issue, the rapid rise in e-bike sales presents an exciting opportunity but also a serious potential hazard (R. Ellison, 2021). Electric bicycles are capable of much higher speeds and extend the trip range and carrying capacity for many riders, making them an excellent substitute for car trips when commuting or running short errands, however the increased speed and lack of safety education available at the moment could result in a spike of bicycle involved accidents in the coming years observes Ellison. San Luis Obispo participates in the Vision Zero bicycle fatality reduction program, but as ridership (in particular higher powered e-bike
ridership) increases, education and a programs focused approach must go hand in hand with new infrastructure improvements to ensure that the rise in bicycle commuting can be sustainable and in line with goals for a safer city transportation environment.

Organizations which are working to incorporate more active transportation have a golden opportunity moving out of the pandemic. No single event in the last 50 years has so thoroughly disrupted daily life and forced a shift in commuting and trip-making habits. At the same time, recreational cycling has seen an unprecedented rise. The challenge now lies with policy makers, advocacy groups, and planners to retain this ridership and help convert this potential into a real and long-term transportation mode shift in our cities, universities, and private organizations.
Case Studies

There is no single approach to supporting active transportation and more often than not, long term sustainable results come from a mixed approach which employs both infrastructure changes as well as education and incentive programs. Over the course of the pandemic, cities and other organizations have taken different routes to success in lowering traffic accidents and supporting the growth of active transportation. These case studies point out different approaches, but often share key principles which can act as a guide for other communities as they look to make active transportation a more significant piece of their landscape.

San Luis Obispo, California

Population: 47,000

Primary industries: Education, Tourism, Healthcare

The city of San Luis Obispo holds active transportation, safe bicycle infrastructure, and highly walkable public spaces at the heart of its identity. The friendly central coast community holds a gold level status for bicycling from the League of American Bicyclists and the large student population catered to high rates of active transportation prior to COVID-19 putting a pause on normal business and school operation in early 2020. The Pandemic disrupted the city’s tourism industry which is a significant tax source, putting a pause on several high investment capital improvement projects. At the same time the city was facing budget shortfalls, pedestrian activity and bicycling for recreation were seeing unprecedented growth rates as indicated by month long wait times in local bike shops and traffic counts revealing a growth in cycling despite a decline in car traffic. This challenge prompted the city to move toward quick build infrastructure solutions. Temporary traffic barriers, paint, and strategic street closure were
all employed to support the rise in walking and cycling while keeping the city’s tightened budget in mind. The disruption caused by the pandemic has not changed San Luis Obsipo’s long term transportation goals however, but instead, provided a proof of concept for new ideas and added to the strategies which are being employed as the city works toward its 2035 carbon neutrality goals, as well as the Vision Zero traffic safety goals.

The commitment to robust active transportation infrastructure was expanded with the February 2021 adoption of the city’s first active transportation plan as a part of the transportation element in the general plan. This element puts the goals for active transportation into a comprehensive strategy with actionable steps towards a long-term goal. One of these long-term goals is 20 percent of all trips taken in the city to be through non-vehicle mode and San Luis Obispo took the step of allocating its budget to align with these goals. City Transportation Coordinator Luke Schwartz says that the development of this plan incorporates the lessons learned through 2020 and the quick build infrastructure solutions which previously had not been major factors in the overall transportation strategy (L. Schwartz, 2021).

Moving forward out of the pandemic, the city sees an opportunity to capitalize on the increased rates of recreational walking and cycling and, through the methods outlined in the new active transportation element, convert those numbers into real world trip replacement as the city moves closer toward its 20 percent mode share goal. While the city is doubling down on its outreach and education programs around active transportation, long term success requires real financial investment. Bike SLO County, the largest bicycle advocacy group in the region works hand in hand with the city on feedback and bicycle education programs. This public-private partnership which mixes real infrastructure improvements with information and programs to support these improvements is a model for other cities with a strong riding community who can
work with city actions to address the human side of active transportation and lower the barriers which might be in the way as residents make a mode shift in their transportation behavior.

“Infrastructure is the foundation that everything is built on” says Luke Schwartz, highlighting that all of the education programming needs a solid base and physical change in street layout to be successful over the long term. The city of San Luis Obispo is a perfect example of transportation-related adaptability through the pandemic. Despite decreased tax revenue and funding shortfalls, they were able to adapt through effective quick build, low cost infrastructure measures and then in the new active transportation plan, incorporate it as a strategy into the long term vision of active transportation in the city. The pandemic was a proof that these solutions could meet a rapidly growing demand and the relatively low cost compared to major capital improvement projects means this policy is highly adaptable to a wide variety of communities regardless of their current financial limitations.

Seattle, Washington

Population: 724,000

Primary Industries: Technology, Biotechnology, Environmental Engineering

Despite its reputation for inclement weather, the City of Seattle was a model for integration of bicycle infrastructure into the urban landscape long before the pandemic. A 2013 survey run by the Seattle Department of Transportation (SDOT) indicated that 29 percent of residents rode a bicycle at least occasionally. Additionally, the significant investment in active transportation infrastructure over the past several decades were seeing consistent use with 37 percent of riders using specific bike lanes or bike oriented arterial streets for the majority of their trips (Seattle Department of Transportation, 2020). The key to Seattle’s high rates of cycling lie
in their focus on repurposing underused side streets and creating bike specific boulevards through some of their most highly trafficked zones. Like most other cities in the country, the COVID pandemic drastically reduced commuting in Seattle as the city’s major employers shifted to a work from home system, but Seattle was not immune to the bike boom in the last year. Rather than continue to run the bicycle infrastructure network as usual, Mayor Jenny Durkan moved to enact the Stay Healthy Streets plan which involved long-term closure of at least 20 miles of city streets, allowing cyclists and pedestrians more options for safe travel around the city.

With public transit ridership falling, the active transportation infrastructure needed to take on a greater share of total trips taken. Additionally the recreational cycling increase saw existing bike boulevards becoming highly congested which helped to prompt the permanent closure of underused arterial streets. “Just like we must each adapt to a new normal going forward, so, too, must our city and the ways in which we get around. That is why we’re announcing a nimble, creative approach towards rapidly investing in a network of places for people walking and people biking of all ages and abilities and thinking differently about our traffic signals that make pedestrians a greater priority. Despite the many challenges we face, 2020 will remain a year of thoughtful, forward progress as we build a safer, more livable Seattle for all” said Sam Zimbabwe, Seattle Department of Transportation Director (Seattle Department of Transportation, 2020). Seattle took a bold move with its city street network, but one that could be applicable to cities across the country. Real mode shift requires real support and investment. Arterial street closures streamline the vehicle transportation network and have a disproportionately positive impact on active transportation as a percentage of the total network. The street closures and conversions are not a replacement for focused infrastructure development in Seattle, those
projects are ongoing and expanding as well, but rather a kind of quick build solution to rapidly expand options for active transportation.

Just as is being done in San Luis Obispo, experimental solutions like arterial street closures and community feedback are at the core of usable infrastructure changes, and while closing down side streets to vehicle traffic may seem feasible for some cities, the old adage of “build it and they will come” has a role to play as well. If the basic infrastructure support for a mode shift in transportation behavior is in place, the change can occur rapidly and safely, encouraging residents who may have been hesitant about bicycle transportation to get out on the road.

UC Davis, Davis, California

Student body: 35,186

While San Luis Obispo and Seattle have employed an infrastructure-focused approach toward improving active transportation during the pandemic, UC Davis has taken the opportunity to improve its programs and facilities support for bike commuters. The pandemic forced the school to move to online instruction and a dramatic reduction in students living either on campus or in the surrounding community. This pause allowed for the university’s transportation services department to take an audit of existing facilities for bike commuters such as parking, access to lockers, etc… and create a unified program for bicycle maintenance and safety education for incoming students.

While some communities were overwhelmed with increasing rates of cycling, the quieter period over the last 12 months has allowed for a top to bottom analysis of how active transportation on the campus can be improved and encouraged moving forward. Access and
equity have also been a focus of the new programs which aim to allocate abandoned bikes which are currently sitting in storage to new students in need of assistance. According to program manager Jeff Bruchez, “It's about lowering the barriers and focusing on meeting people where they are…it is a chance to take years of student feedback and make some real, lasting changes (J. Bruchez, 2021).” The active transportation changes on the UC Davis campus are distinctly more program-focused than either of the cities discussed previously, but they still focus on assessing community needs, and incorporating feedback into new efforts. The college environment is somewhat unique in that there may be a whole new set of students who are using a bicycle for utility purposes for the first time in years, or possibly ever, and for whom an approach which focuses on education, clarity, and convenience will be most effective in retaining them as long-term users of active transportation.
Best Practices

The three case studies discussed above vary in their approach but converge around the same key goals. Rather than following a singular cookie cutter tool kit for active transportation, San Luis Obispo, Seattle, and UC Davis have assessed the unique needs of their community members and taken approaches which use their resources most efficiently and effectively. Both Luke Schwartz at the City of San Luis Obispo and Rick Ellison at Bike SLO County emphasize that infrastructure needs to be at the core of any effort to increase active transportation modes. In the past, this often meant costly and time intensive projects which would create excellent infrastructure but at a very slow pace (R. Ellison, 2021). The COVID-19 pandemic was a new incentive to experiment with quick build principles and trial methods which previously may have been ignored. The abnormalities in business practice such as outdoor dining worked with these ideas, creating a more justified push for street closure and allowing ideas which may have seemed infeasible a year ago to become popular with the community and contribute toward a new active transportation plan which commits to funding city goals for transportation mode share.

Safety is an often cited obstacle for people avoiding active transportation and Seattle met this through their own street closures. Their program focused on creating truly separate and safe bicycle and pedestrian infrastructure to accommodate the rise in outdoor recreation spurred by the pandemic. In doing so, they were able to show bicycle transportation as a real and safe alternative to personal vehicles and by permanently closing streets, Seattle residents will be able to continue using this infrastructure as the pandemic comes to an end and regular commuting returns to normal.
Finally, UC Davis was able to leverage their pause in activity to reassess their programs and facilities, taking feedback and focusing on how active transportation can be implemented equitably and sustainably campus-wide as students return to campus en masse in fall 2021. No single policy, program, or infrastructure intervention is greater than another, but they all represent the importance of focusing on specific community needs and barriers and using resources efficiently to guide the spike in active transportation into a well-supported, long-lasting upward trend in mode share going forward.
Moving Forward

The impact of COVID-19 on transportation will take years to fully assess. The principal challenge in assessment is that so many variables changed in a relatively short period of time and so parsing the correlative and causative effects of one policy or action is difficult. Behavior may shift back to a degree as the perceived convenience of individual vehicle transportation outweighs the benefits of active transportation. The dramatic increase in cycling over the past 12 months is still going strong, but this upward trend may not last forever (Bicycle Retailer, 2021). At this point, the opportunity is out there and both public and private organizations need to ensure that this spike is not just a flash in the pan with regards to long-term change. Based on the variety of perspectives consulted and approaches discussed, it is clear that there is no single right answer on how to improve active transportation, but the guiding principle of being open to experimentation and adaptability as well as community feedback is highly applicable regardless of context. Smaller organizations and cities (UC Davis, San Luis Obispo) often have a more direct line to constituents and can respond quickly, however, they may lack the sweeping power and influence of larger organizations and cities (Seattle). Consistently seeking the input of residents and interest groups, either directly or through public-private partnerships as the City of San Luis Obispo has done with Bike SLO County is key in ensuring that changes are well received and well used by residents. As the pandemic comes to an end and the transportation needs and behavior of residents change, adaptability will become even more important as organizations seek to support positive change but also balance that change with community needs.
Conclusion

Traumatic events like the COVID-19 pandemic can have silver linings. The bike boom in the past 12 months, more positive attitudes and perception of bicycle and pedestrian travel, and an increased focus on the need for environmental conservation are all positive outcomes from this difficult year. In the context of urban transportation, planners and organizers are afforded an opportunity the likes of which have not been seen before. The policy actions planners make in the next several years will have a major impact on long term transportation mode split. The past year is a time when people nation-wide were changing their daily behavior, trying new things, and adapting to a new lifestyle. Now more than ever, gathering community feedback, being creative with quick build infrastructure improvements, and analyzing gaps in current networks and facilities will yield major results in transportation behavior shifts. Even cities like San Luis Obispo, a gold-rated bicycle friendly community, have room to grow and improve their active transportation rates. While no single practice is a cure-all for a better active transportation landscape, starting with realistic, flexible, and achievable goals and involving the community for input along the way need to be at the heart of any plan to improve active transportation in the years to come.
References


Appendix A: Design Strategies

The interviewees discussed a variety of infrastructure design solutions which are helping to improve active transportation while remaining cost efficient. This appendix will look into several of the most popular designs being used nationally. Infrastructure improvements like these are low cost and high yield in terms of safety, positive public perception, and network connection, offering an excellent solution to cities wanting to encourage participation in active transportation but may be in a difficult financial situation due to the COVID-19 pandemic. These three strategies have been used heavily in all of the case study cities to positive effect. An exciting area of future study would be analysis of specific infrastructure projects or specifically types of projects over the course of the 2020-21 fiscal year compared to the 2018-19 fiscal year. The COVID pandemic both triggered the need for increased infrastructure and also took away funding. This could create an unique distribution of improvements made by cities with the majority consisting of relatively low cost or quick build solutions such as those presented below.

**Painted Lanes:** Painted bike lanes (usually green) are relatively recent additions to bicycle infrastructure, coming into common use in the past ten years, they are among the highest dollar to value solutions for cities looking to improve both their lane safety and connection. The glowing green paint is highly visible to vehicles and makes bike lanes uniquely their own space rather than merely as a section of the road on which cars can’t drive. While fully protected lanes or bike boulevards are the ideal mode for urban bicycle transportation, painted lanes are affordable ($0.60 Sq. Ft. for raw materials, $1.20 – $1.60 Sq. Ft. installed) and can make a network feel complete and cohesive in far less time than higher investment bike path projects (National Association of City Transportation Officials, 2016).
(Fig 1.1) Lane painting can work in conjunction with special traffic lights to retrofit old intersections to new bicycle safety standards

(Fig 1.2) Lane painting is both labor and cost efficient with a single crew and minimal equipment able to cover miles in a day
Temporary Lane Protection

Traditionally, bike lane design has either taken the form of open lanes on the streets with no physical protection, or fully isolated bike paths which sit independent of main roads. The installation of temporary lane protection measures such as bollards, planters, and cement barricades offers much of the protective qualities of high cost separated bike paths, but with lower investment and the ability to experiment with bike lane location and connection to existing infrastructure. This has been frequently used in the complete streets programs which have come into popularity in the last decade. Over the course of the COVID pandemic, lane protection measures have been a vital part of quickly and affordably expanding the capacity and connectivity of urban bicycle networks while ensuring rider safety and ease of navigation. This strategy has been used in all of the case study communities as they work to rapidly expand their existing network in a safe manner as well as experiment with new lane placement and connection.

(Fig 2.1) Planters and lane paint can create both a visual and physical protection for cyclists on the road.
(Fig 2.2) The planters, together with lane painting, create a space which is nearly as safe as a fully isolated bike path but at a fraction of the cost.

Reduced traffic volume has allowed for projects like this which take up a large share of road space to become more common in major cities. Quick build infrastructure improvements like this are an excellent way to show the impact that safer bike lanes can have on ridership numbers.
Street Closures/Bike Boulevards

Street closure has become commonplace during the pandemic for social distancing as well as transportation purposes. Street closure allows for a range of urban experimentation in an environment devoid of cars. Lane protection and safety measures can sit next to outdoor dining setups creating a boulevard without vehicle traffic oriented around pedestrian and bicycle activity. While most cities are not permanently closing their downtown sectors, the pandemic provided a proof of concept as to how popular these measures could be and introduced the possibility of more regular closure for events and activities. Street closure is an affordable and high yield strategy for dramatically opening up the urban landscape to active transportation in historically congested areas. Residential zones are less congested but can still take design cues from higher traffic areas as they install more traffic calming measures and divide a greater share of road space for bicycle and pedestrian traffic.

(Fig 3.1) Downtown street closure such as the one shown above opens up an entirely new space for pedestrian and bike travel, giving the opportunity to trial a variety of lane design and traffic flow concepts.
(Fig 3.2) Neighborhood boulevards such as this one utilize the naturally lower traffic volume of residential areas and creates safe and user friendly linkages through cities.

(Fig 3.3) Simple design interventions like these (street paint, signage), particularly around community hubs like schools and recreation facilities, allow for active transportation to be incorporated into daily habits at an early age.
Appendix B: Interview Transcripts

In this appendix are three of the interviews I conducted around this project, they have been edited for length and clarity but give an idea of the views on COVID and active transportation shared by industry professionals from both the public and private sector.

Jeff Bruchez, Bicycle Planning Coordinator at UC Davis,

Tim Mc Birney: First question. Tell me about your role in connection with transportation planning.

Jeff Bruchez: I work as a bicycle program coordinator, my job code is program policy analyst so I say that because as a university employee, I am essentially a state employee. And so, you can look up a lot of things about my position, my pay and all my contact information. But you can't look at my job description and essentially my job description is focused on three main things. I handle the on-campus bike registration and on campus bicycle enforcement. So that does not mean traffic enforcement, but that means parking enforcement, safety, maintenance of the campus infrastructure, bike racks, bike paths, bike lanes, really any of the built environment for bicycling, that stuff that falls into my review. I also work on bicycle education. And so that's kind of like I think it's 40 percent enforcement, which includes impounding and registration, 40 percent education where we do various things online. And it's tough because I started in December 2019 and then I was met with the pandemic so a lot of the stuff that I got excited about doing, I haven't gotten the opportunity to have like the normal baseline year experience. I haven't gotten a full move in. I haven't had a spring quarter yet so essentially though, it's focusing on facility planning and enforcement upkeep, education, planning and action and then encouragement and kind of policies, and that's kind of why I work within my Department of Transportation demand management team. We work on trying to push folks out of cars and onto bikes or onto buses or and onto walking, really, whatever it is, we just don't want you to drive yourself to campus.

Tim Mc Birney: Question number two, how has your job or work priorities changed in the last year? You alluded to starting kind of right before the pandemic. You don't really have a baseline yet. But how have you from your understanding of how the job works normally, how has it impacted that in the last year?

Jeff Bruchez: I was excited to optimize our programming. You know, my experience and what we were doing at the Facebook campus. And so, I came in with a lot of kind of system thinking
and excited to kind of enact change because we had a kind of a word of mouth and paper system for everything, especially like kind of focus on optimizing our impound operation because like, we have a huge thing. We're basically abandoned by students on campus. In an average year, we would impound some 1200 to 1500 bikes, and that is not nearly enough to actually keep the campus parking accessible for folks. We did a transportation study in 2012 estimated that some 30 percent of the campus bike parking is occupied by abandoned bikes. And so, if we have twenty seven thousand bike parking spots, we have 10000 by truck that are trash that are just sitting there gathering, gathering spiderwebs and rusting to death. I've seen this. I've gone on campus. I go around, they see how severe it is, we've had an immense opportunity to clean up because it's quiet and it's like, oh, construction's happening. I think the pandemic has really kind of changed to two main things. One, it's allowed us to slow down, develop and start implementing new systems. And that's really like one of the things we're working on today as we're doing an inventory that we do every two months. Right now, we go through our entire impound and we say, what bikes do we have? What bikes do we not have? What happened to those bikes that we don't have? We have theft issues at one of our facilities. But yeah, the pandemic has definitely changed, I think. How? All of those rules are out. And so, I get to come in and I get to kind of flow and figure out an engineer and develop the systems as I as I see needed for this. And then the other thing that it's gotten us is it's prioritized some really important things that work for sustainability on a campus. While I have not uniquely or individually been in charge of that, I have had valuable experience. I don't really know where I got it. I think it's just stuff I've always been talking about. But I've taken up the ropes on overseeing changes to our major infrastructure capital improvement projects, tearing out roads to building bike paths. And those are things that they have. We have university leadership that supports it, like the director of planning, the director of real estate, all of these people know how the bicycle is part of our identity here. And they're not necessarily familiar with the manual of uniform traffic control devices. Bike lanes for example are based upon Dutch design principles, got my trusty Dutch design manual for bicycle traffic patrol, but it's within an arm's reach because of how much I ended up starting to do that. Now, this. Very cool.

Tim McBirney: What alternate transportation patterns have you seen emerging before the pandemic versus now maybe in a university context or I know by Davis is extremely bicycle oriented as a city. Have you seen a legitimate transportation shift, or do you think it's just a temporary blip?

Jeff Bruchez: I hope they come back. There's a decrease in bicycling. When everything is remote and no one has to go to classes and a lot of people just haven't even bothered to come back right? They've stayed home. We also have excessive heat and all sorts of other things that make cycling a little more challenging. But yeah, I think the trends that I hope to see stick, though, right. I hope we see more folks opting into cycling like we see a lot of folks buying bikes right now. There's incredible demand at the bike store side of things. And I hope that sticks here.
I definitely will say our community is. Not being as innovative as I think I would like them to be, and this is an interesting thing where the University of California is. This island on the south side of Davis, once you cross the property line here in the city of Davis and the rules and things that we do on our side don't bleed across the line and we can never influence a certain time. We have 10,000 new students coming in and I think that the equity of that (bike cost) I think is really challenging. And this is where I am working on a program with our student resources center to say, hey, if someone comes in with financial need and they're burdened by transportation costs, I'll give them a bike.

**Tim McBirney:** It's a very ambitious but very helpful program.

**Jeff Bruchez:** Yeah, but then the bureaucracy of actually getting it online and going through the various campus assessments, like we have a vendor risk assessment program that is just arduous and challenging and it's making bike index mature like we have to have security policies to get past the office of the president. OK, let's put a document together here. Yeah, yeah. It's been kind of fun.

**Tim McBirney:** Moving on to the next question. Obviously, there's been a huge increase in recreational cycling over the past year. I mean, that a nationwide trend in bike shops or swamped in sales are through the roof especially for that entry level price point. What do you think your organization is doing or what do you think are some real opportunities for converting that into something like an actual transportation change going forward?

**Jeff Bruchez:** So, you know, what I see happening is bigger, bigger things than what I can do in one year. I see bike legislation. I see rebates coming to say, hey, we want you to touch your car. We want you to get you on anybody, anybody. I already have four people this year in the last month who have said, you know, I bought an electric bike and now my commute is shorter, but I don't want to leave it on campus because I wanted to get it stolen. Right. And so I'm starting to try to do it. I'm trying to get the political will together to start implementing more bike proper bike facilities. We have 27,000 bike parking spots. I have forty-eight of them that are secure.

**Tim McBirney:** Is Davis like a vision zero? Is that part of their programming or goals?

**Jeff Bruchez:** They're just getting around to that. This is where I'm like, you know, I wish the city was a little more innovative. Yeah, yeah. They're just getting around to that. I think they'll be introducing working documents in the next two months, I believe.

**Tim McBirney:** Do you think public transportation, as we knew it before, will come back as we knew it? Or do you think it'll take an exceptionally long amount of time to come back?
Jeff Bruchez: Interesting question. Yeah, I think the baseline line will probably be easy to get back to, right for certain services, our bus system, I think the baseline will be really easy to get back to because that's how students move and they're going to need to move again. They don't have other options. Most of the time, they don't have a car. They might not want to bike. They might not know how to ride a bike. So, the bus system, I think, is going to just go right back to normal if they can run the service that they need to. I don't know. Especially as we have more flexible work environments coming. I don't know what people will do. I hope people will go back to at least their normal ones and think more about how to use different tools. And that's one of the big things why we've pushed in our daily rate and why the university. I think, is a really great place for daily living, because we have a dynamic environment. Things change, people change. The population changes every two years, every year. It changes drastically every four years. But yeah, I think I anticipate public transit ridership to recover.

Tim McBirney: What do you think are some key policy interventions that cities or local governments organizations can make to expand their active transportation going forward out of the pandemic?

Jeff Bruchez: Abolish free parking because people think that being able to drive a car is a right. Lane parking minimums and free parking on public infrastructure I think are really egregious things that I think if we can eliminate there's a natural sort of questioning that someone will do when they're, oh, I'm going to go to Starbucks and park on the curb and go and buy my latte. That's what my latte just became. Two dollars more expensive.

Tim McBirney: So kind of going back to like the main overarching or one of the main overarching questions, do you think it is difficult because you're your world UC Davis is very impacted by people going remote, but do you think that the increase in recreational bike use, more people just getting out and riding for exercise, for fun, all that stuff, do you think that can be converted into a long term transportation mode shift, or do you think that once they're back in the office, it's going to be back into their cars, back on to the individual automotive trips, which everyone is trying to get away from?

Jeff Bruchez: I think it depends on the trip and the. Amenity necessary for that trip, right? Let's go back to let's take our hats out of our university bubbles, right? But maybe stay in my university bubble if I live in Woodland's. It's five miles away, eight miles, by the way the roads go. And I ride my bike to Davis, OK, it takes me half an hour. But when we're in summer it's 90 degrees in the morning. I'm going to be a sweaty mess and to come into my office job as a sweaty mess is going to be a challenge, right? I'm in a building that has a shower. I can get to work and change and get into my professional attire. Most people don't have that resource, and to add a new stop to go to the gym where we offer free showers for people who choose to buy, right, it's just an added step to it. And I think that's the barrier that I think is going to persist. But
I think if we can make the expectations different or. Yeah, I think it's really, it's tricky. Yes, it should if the trips are easy enough, there's the average trip people do with their cars two miles. I think that sort of trip travels. Yes. If the infrastructure is safe and accessible. But if it's greater than a trip and people have any sort of resistance because they don't want to be sweaty or they feel unsafe or any of that. e-bikes make that a lot different, too. To jump on a class one bike that's going to help me go 20 miles an hour. And then I can take all of the bike trail to campus where it's all shaded right there. And the parking is close to my building, if we can make it better than your car experience, right? We're always no one is never not a pedestrian. Yeah, how long is your pedestrian trek when you drive your car? Your pedestrian strip can be really long, but when you ride your bike, your pedestrian trip is typically really short. And because that I think that kind of is the one that really turns into my big, big thing. Is that last leg, that first mile, last mile. The first tenth of a mile. The last tenth of a mile. Right. Like how long it is, how long of that journey is that. How long of your journey is burnt up in that minute? Yeah. And that's, I think, the place that the bike will always reign supreme.

**Tim McBirney:** closing out, what are final thoughts and observations on trends or policy or best practices or anything like that?

**Jeff Bruchez:** Yeah, you know, I think it's high time that the bicycle is getting treated as a transportation vehicle. It has been a transfer to a hole for as long as I can remember. And it's really what got me dedicated to bicycling was bicycle transportation. And I think the more the. The more that people just get on a bike, regardless of what their trip is, if it's recreation, if it's commuting, if it's for racing right there on a bike and they're being out there, going out there, they're experiencing the world from a bike. And so, I think. You know, I think it's good, really, regardless of what's happening, just getting people to experience bicycling so that when people start talking about it, they're not adversary from the get-go. And I think expanding ridership across all age groups, I think is the thing that I would really love to try to really stick to seeing more old folks riding like schools got back into session here a few weeks ago and to see all the kids riding right. We're blessed that the bicycle is a high demand vehicle, certainly like it's the perfect storm. I've always said the bicycle is recession proof, but I never thought I would say it's pandemic proof.

**Luke Schwartz, Transportation Manager at the City of San Luis Obispo**
**Tim McBirney:** Tell me a little bit about your role with transportation, planning and kind of what your connection to it is right now.

**Luke Schwartz:** Sure, so my name is Luke Schwartz, I'm the transportation manager at the City of SLO, our group handles everything transportation related, essentially aside from transit and streets maintenance. We do everything from development review and traffic studies for a new development or transportation projects to leading our own capital projects, whether that be installing new traffic signals, constructing new bike paths, bike lanes to neighborhood traffic, coming straight, planning for siting and striking plans and updates, keeping our existing traffic signal systems and streetlights working. The whole gamut

**Tim McBirney:** From proposal to policy to implementation, you're a whole the whole process there?

**Luke Schwartz:** Yeah, it's kind of unique in that we have in our public works program. We also have a capital improvement project engineering group, and they do everything else, including utility projects, sewer lines. They actually manage our paving program. So just replacing and maintaining pavement surfaces. But our team is heavily involved in even those projects and looking at opportunities to update our striping plans or street configurations to better serve our transportation needs. So, yeah, pretty much everything else.

**Tim McBirney:** How has COVID impacted your job or your work priorities in the past year?

**Luke Schwartz:** I mean, we're still going through it. It really shifted a ton of our priorities for in many ways one was just the, you know, financial impact, when the lockdown orders were issued last March, you know, our city is a huge service economy, whether it's restaurants, hotels. And so those revenues completely dropped off. And so, we had to pivot pretty quickly and immediately look at our whole capital improvement program and start deferring and cutting projects that we just didn't have the ability to continue funding. And so that was a big pivot. And at the same time, we had to jump into a kind of triage mode to look at things that we need to do to help one economically with our local businesses. So as soon as indoor dining got shut down, we immediately rushed to get temporary barricades so that we could get out and help restaurants expand into the footprint of the parking lanes or the streets. We had a series of temporary street closures on Thursday, Friday evenings and on weekends in the downtown to let restaurants and other businesses expand into the street. We started basically in a temporary kind of program called Open SLO that had all these different elements to address problems that were caused by the COVID pandemic. Economic issues are a big one, helping businesses stay in business and just continue operations where they were completely shut down indoors. And then also we saw that there is this huge increase and just people out and about whether they're working remotely or
unemployed. In some cases, people had more flexibility to be enjoying their neighborhoods and getting around the city without having to drive. And I think part of what drove that, too, is we saw a huge decrease in our transit ridership. And so some of those folks, whether their schedules change or they had more concerns about riding public transit, we're shifting to other modes like walking and biking. We normally collect comprehensive traffic data throughout the city every other year. And we actually had to pause that program this last year and a half because the traffic patterns in general are just so different. We wanted to try out a number of temporary traffic ideas, road diets and other quick solutions we just threw it down and painted. And we were able to do it for a pretty low cost, I think is about 15,000 to 20,000 just for all the striping work, when normally you'd be talking about removing all the existing striping ceiling, the street repaving, repairing any pavement issues, putting down permanent thermoplastic, striping, it would have been orders of magnitude more costly. And so that's something we're able to do quickly. The outcomes were really good. And now it's something we're looking at making permanent with an upcoming paving project in the next year or two. Our strategy has been let's just do this now and do it with cheaper, quick build materials.

**Tim McBirney:** What alternative transportation patterns did you notice before the pandemic versus now

**Luke Schwartz:** In 2014, the city updated our general plan circulation element, which gives it's like the high-end blueprint of how we want to develop our city for four multimodal transportation. And we set a pretty aggressive mode share, which said we want to reduce reliance on single occupant auto trips and improve options for sustainable transportation. So, people walking, biking, taking transit, commuting via carpool. And basically, we set goals where we need to increase the amount of people using other modes of transportation. The way to do that is through infrastructure. And there's education and programs that make that more of a reality for a lot of people. But really, if the infrastructure is convenient, intuitive and safe, you'll get more people that especially in our community that like being outdoors and want to embrace those types of choices. And so, we've been steadily making progress on that through investing in bikeway projects, curb ramp upgrades and just land-use planning to encourage more infill development and more housing. We have this huge housing, jobs and balance where a lot of people commute into the city as a job center in our region. And as we fill out more housing, people have the opportunity to live closer to where a lot of them already work and have better options, whether it's hopping on a bus or riding a bike or taking transit to where they need to go. A lot of those things were already in progress. And then with COVID, what we saw immediately was the traffic volumes were way down right away. If you look, there is almost a 50 percent decrease in some places versus pre COVID times last winter. So right away it was nice because we had a couple of pretty disruptive construction projects planned. Either they were city led projects or along the whole Madonna corridor. We started developing our new update to the bike plan, which was an active transportation plan, which for the first time incorporated pedestrian
planning programs and projects as well as bicycle elements. And the focus really shifted with our staff and with our active transportation committee, which said, let's prioritize projects that serve the most people. They connect to most places and that we can build quicker. So, let's focus on instead of really driving all of our off-street paths that are great but kind of cumbersome and challenging to build, let's focus within our own arterial streets and major corridors that we own the right of way. The improvements can be done quicker with quick build tools and materials so that we can go in and get protected bike lanes and safer pedestrian and bike crossings at major crossing points.

**Tim McBirney:** What kind of broader transportation trends are you seeing because of COVID? Is it reflective of a trend statewide or nationwide even?

**Luke Schwartz:** I think that what will change the most beyond this is people's concept of how they value the public right of way and what it can or can't be used for. So especially in downtown business districts. You know, there's a handful of cities in California that have parklet programs and we're using on-street parking spaces for outdoor dining or just to kind of activate the street. And what we saw is so many cities were forced to kind of go that route in triage mode to just keep businesses open. And the end result was not just a short-term fix. But people are saying, well, like this, this environment's actually a lot more welcoming for people to come and spend their money and enjoy our downtown if the outdoor areas are activated and they see people dining. And, you know, we live in an amazing climate. And the fact that we didn't have a lot of that, we used 100 percent of our curb space for parking and for loading, which are important in their own ways, too. I think if people just kind of thought, well, can this space be used differently? Is there a balance that we can kind of move towards, especially some communities that were able to kind of pedestrianise their streets.

**Tim McBirney:** Moving back to public transit, do you think it'll return to the rates that you saw before COVID, do you think there's going to be a permanent kind of depression in ridership?

**Luke Schwartz:** I think because a lot of our ridership locally is driven by the university community, I think those riders will return and I think we'll see even more growth over time as Cal Poly adds more on campus housing and has more restrictions on who can or can't have a car on campus. You'll have more students that will have to utilize other transportation modes, including transit, to get to downtown or to work or other places in the city. I'm confident that our ridership will kind of pick back up to those levels where we're serving a million or more riders a year locally. And we've been really fortunate that we've been able to take advantage of all the federal funding programs. And we have a pretty healthy city economically, particularly after the passage of a local tax measure just last November, which increased our local sales tax to fund things like parks, transportation infrastructure. And, you know, some of that will help us continue funding transit at a level that we need at the same time. We have a pretty compact community
you know, three miles, four miles across at the most. I think that's always in our favor and with things like electric bicycles becoming more mainstream, this a really great place for active transportation to take off in addition to public transit.

**Tim McBirney:** What are you where do you think are the kind of key policy implementations that either you guys have made or that local governments can make, into active transportation?

**Luke Schwartz:** One thing that isn't the easiest to change quickly is land use and how you're integrating your land use planning with your transportation planning. You can have amazing bike lanes and transit services. But if you're mostly building a kind of sprawling low density housing or you're not mixing a good balance of housing and commercial and employment, people aren't going to go places if they don't if they're not near where they live or where they work. And so, I think continuing our kind of current plans of focusing more on infill and development in areas that are well served by alternate modes of transportation is good in preserving our kind of urban boundary and green belt.

**Tim McBirney:** Do you think the huge amount of recreational walking can be shifted into real transportation change?

**Luke Schwartz:** I think if you can break it down into pieces and it's not this binary thing where I'm a cyclist, so everywhere I go, I ride my bike or I'm a transit user or I'm a driver. It's I think getting away from kind of a binary look at it and just saying, look, if everyone could take one out of ten trips and if you look at the data, there's a huge percentage of the trips we make every day, especially if you live in slow that are a mile or less away, whether it's to run and grab a gallon of milk or run quick errands or go and drop it off at school. A lot of that stuff, if the infrastructure is there, you can do those trips really easily on a bike or by foot. And so, I think just helping people understand how long it actually takes you places on a bike or especially an electric bike or by walking, a lot of people don't realize that they live within a ten-minute walk of downtown and or their destination. They just always drive because it doesn't feel that comfortable to get there. If everyone now started replacing one or two of every ten trips with another sustainable mode of transportation, if just everyone in the city did that, we'd hit our goals like tomorrow. Ultimately, what we've found is that all the programs and educational opportunities and enforcement efforts and all kinds of non-physical changes are great, but they don't make the same kind of progress as good infrastructure. Our primary focus is on getting a really amazing transportation, physical environment and then supplementing that with education and programs, encouraging people to take advantage of it. But our main focus is infrastructure; how quickly and efficiently can we build it?
**Tim McBirney:** Any final closing thoughts on your view of transportation moving out of the pandemic, how active transportation is going to play a role in that, maybe even related to the city's climate goals? How does this all fit together?

**Luke Schwartz:** Yeah, absolutely, I think it gives a sense of kind of urgency and also flexibility in how quickly people can adapt and things can change. So historically, it's kind of always planned to say, well, this is how much growth we're going to have, and this is how much traffic we're going to have car traffic. And that's just an inevitable outcome. So, let's just plan our roads and widen roads and add new roads, because we know that's how much we're going to have. Instead of saying, well, what's the outcome we want? What the street looks like that's really successful economically and it works well for all people of different ages and uses and their abilities in ways that they're getting around and planning towards the environment. We want and know that people's patterns will adjust and will get those outcomes. And I think now just realizing that we need to find ways to do things quicker, you know, we can't wait decades to widen the road and acquire property from all the different businesses so that we can maintain big wide traffic lanes and push traffic through as quickly as possible. And then we'll get bike lanes in 20 years whenever we can, white. And it's like, well, what can we do now? And maybe it's not a permanent fix, but it provides the safety and mobility benefits, like more urgently. And then we'll move towards some kind of longer-term investments down the road. I think everything we're doing, we look at it through a climate and sustainability lens as well as a safety lens. And I think in everything we’re doing we need to move quicker.
Kurt Martin, Consultant at Bikes Make Life Better

Tim McBirney: Tell me about your role and what your connection to the transportation planning field is.

Kurt Martin: Well. Eleven years ago, I started this business as a consultancy and the goal was based on our experience with corporate America. My partner and I wanted to connect the bicycle world to large organizations…universities and corporations mostly, and just make bicycles available as a business tool. And that turned out to be fertile ground. And we've been super busy since then.

Tim McBirney: And moving on to question two here, how were your job and work priorities impacted in the last year?

Kurt Martin: The assumption was that people work at work and they don't really work at home, and now those assumptions have been thrown out and a lot of us had already been sort of mobilized, but. Our business has shifted to follow people and their bicycles and their interest in bikes away from the workplace to wherever they ride. So it has really democratized things.

Tim McBirney: Because BMLB focus is on the corporate-bicycle link, how much success have you had moving bicycles into people's personal lives a little bit more as a mode of transportation?

Kurt Martin: The fun thing about our business is we don't convince people they should be interested in bikes. We work with people who are already convinced. And suddenly tens of millions of Americans are like, oh, bikes are great for my whole life, including riding to work. And so, we didn't have to do any of that work. The virus has done that for so many people who said, oh, yeah, I'm not really a bike person, do bike anything, have had their minds changed. And now I ride a bike with my kids every day and I ride to the bar or whatever. Yeah. And when they go back to work, those people statistically now are pretty likely to want to at least try commuting.

Tim McBirney: What alternative transportation patterns more specifically around cycling have you noticed before the pandemic versus now both maybe from the recreational side, but also from the like actual transportation as part of a daily kind of daily habit side?

Kurt Martin: Yeah, there's still a huge disconnect in America between rec, cycling, fitness, cycling, race, cycling and daily cycling. Those are all really heavily segmented. And it's funny. It's like being in fraternities. It's really hard for people to move laterally. Yeah, so we're seeing that. But an interesting factoid is that new riders, basically coated riders, want to do everything
like they started writing last June, last August, statistically, and they're like, oh, I love riding my bike. I'm just going to do it for everything. And so they broke this mold of yeah, I just ride my bike for four with a particular type of button e bike and they're like they don't know from Lycra, they don't know from bike paths. They're just like they take their bike wherever and if they've just jumped over all the challenges. So that's pretty cool to see because those are people who were like, yeah, I hold my kids around on it now. I ride it to work. Why not?

Tim McBirney: Do you think transportation trends are changing on a larger scale within your jurisdiction? Do you think this is like a national thing or do you think it's more around your, like, the really more densely populated urban areas? Obviously, the Bay Area is a bit of a microcosm. Sometimes it can be a little bit of a bubble. Do you think this is a truly national trend that we're seeing?

Kurt Martin: We do work all over the country, mostly the western states, but we don't work in places that aren't interested in bikes. My suspicion is that there are places that have. Been touched less by bikes during COVID places where you don't see anybody driving and there are no facilities, but among places that already had some bike going, they've all blown up is my experience. And it's not restricted to cities, the numbers and the documents I've seen say it's pretty even split urban suburban country, like in all three realms, people are using bikes, which means that they're using them regardless of whether there's an infrastructure plan or some long term and guiding transportation planning they didn't get a bike lane, they got a bike.

Tim McBirney: Right. And it's like the chicken or the egg kind of a thing like you had at first. You had the infrastructure first.

Kurt Martin: Right. So, again, COVID broke that expectation. All right. When it feels safe, it's like, well, nobody's driving. I'm going to go right now. You know, if you're on a road that suddenly got busy and maybe you're just incentivized, but if you got into bikes and now, you're having a lot of fun riding a bike and just the pleasure of being on your own locomotion, then I don't think I'll give that up. See?

Tim McBirney: What has your organization company done to address the opportunity or challenge of having this huge wave of new writers and potential new commuters?

Kurt Martin: Yeah, we're really focused on just meeting people where they are. So all of our programs have been made virtual in some way, so. For instance, we operated a bunch of shops and they've been closed or very slow, but now we're doing shops on the road with mobile repair. We've always had lots of classes and events people go to. Well, now they're all online, except they're starting to come back to real life, but they're all online. In every category, we just said, how do we get to people who are sitting at home? And that's worked really well.
**Tim McBirney:** And has that been I assume that's just carrying on from your pre-existing clients or have you picked up a lot of companies during the pandemic who are realizing this moment and kind of this potential shift in transportation patterns?

**Kurt Martin:** Yeah, we started. Like in our second year, we started having these bike forums. They weren't even necessarily transportation leaders, but people interested in transportation and bike questions at companies to come sit and talk. So, it's just a peer to peer network, like, what are you doing at your company? What are you doing here? And we've done a lot more of those during COVID and that built a bigger network of companies that wanted to talk. And so, we've targeted a lot of those companies with little things they can do virtually just to get started. And that's gone really well. So, we've got a bunch of clients on the line that way and then spread ourselves out a little bit. But basically, it's more clients, but we're addressing them virtually, which lets us also help companies that are rather large.

**Tim McBirney:** do you think public transportation, specifically like bus and train, will come back to the levels that it was before the pandemic?

**Kurt Martin:** Yeah, I think it's a really mixed bag. There are communities that are going to do an awesome job bringing their transit back or have kept going the best they can. And there are other places where the budget questions are just going to kill transit. So, in places like Austin at one end, I have been working for years to build out a big transportation plan. And they passed a huge bond last fall. I think in general, bikes in particular have won more territory at the table just by the mass adoption. And also proving to be so useful, like bikes were pretty much useful right through the pandemic, they only gained and they're just so inexpensive to implement as a transportation policy.

**Tim McBirney:** What do you think are some key policy or implementation interventions which local governments can do to help increase and support this upswing in active transportation, bicycling specifically some more from like an infrastructure policy side?

**Kurt Martin:** There's always an interesting argument. At the city side, but also the corporate university side, which is what's the actual demand for this particular mode? Well, we want to build on that too. So, show us how many bike riders you have, right, which is inherently flawed if you have a policy that says we want to get to something. A lot of companies have a parking problem and they're like, all right, we need to have a plan to get fewer people to drive. Well, you actually have to build facilities for that. You have to invest in advance and then trust that they will come. So, again, COVID sort of blew them out of the water. It's like, oh, we didn't do anything, and all these bikes showed up. How do we react to that? And so, one is, don't give up what you've gained, solidify your gains. You have to commit to that. Almost all cities are just
terrible on bike parking, that's an incredibly cheap infrastructure investment that will keep people coming back. It's funny, we do a lot of work in Silicon Valley and bikes are a recruiting tool there. It's like, can I ride my expensive bike to work and will it be safe to park it there? And can I get a repair service there and stuff you're familiar with. When you've outfitted all parking lots with the charging station for the Teslas, you've pretty much told them that you think they're the most important people because the charging stations are always right next to the building. If I get a Tesla, I get to park right by the front door every day. Basically I'm suddenly a vice president. We always argue for bike facilities to be right by the front door just because bike people are already inconvenienced in so many ways. The least you can do is have showers and lockers and bike parking reasonably together near the entrance.

**Tim McBirney:** What do you think is the single best infrastructure change to increase transportation rates? You mentioned things like parking. Is it a lane investment? Is it truly isolated bike paths? What do you think are the key or maybe even the most realistic measures?

**Kurt Martin:** I think for cities, the biggest thing has been for years fixing their networks. Understanding the level of stress or the attractiveness of a network as a whole. Their main routes into any business area or to a corporate campus or even a building. But, you know, if you look at the ways to work, there are only so many ways to get to this place. And for bicycle's, almost every one of those routes has a couple of places where you fear for your life. And that's the place to start.

**Tim McBirney:** Do you think that the increase of walking and cycling as a result of COVID more for the recreational side, do you think that can be converted into a long-term transportation mode shift?

**Kurt Martin:** Yeah, what we've been working with companies really hard on is to have that conversation now and say we are going to do everything we can to make it easy for you to keep riding your bike, including back to the office. And there is that magic time when somebody is changing habits and everybody's talked about this long, like your golden opportunity and whatever you might call it. And people are coming back to work and third full time if you're ever going to get them to do it a different way. And that's it. And if they've gotten into their bike, then that's the time to keep the relationship going. Right. A lot of time on that because it's such a critical moment for sure. We're going to lose people who became big bike people while they were working from home, but now they're giving it up a little. But so many people are going to go back to some sort of hybrid arrangement where they're not at the office all the time, and so they're still going to have their bike thing and other days. So, they're going to be like, know, I can actually ride to work. And the statistics on the distance that most people do their trips, I'm sure you've seen that 60 percent of trips are just such a short bike distance. You don't need any bike or
anything. So exactly. Yeah, the hope is that people who ride their bikes around just switching to bikes are just your way of getting around, including the office and groceries and all.

**Tim McBirney:** Any closing thoughts, general observations on where you see some of these trends going? From a policy standpoint or from a program standpoint, how can things be made a little more permanent going forward?

**Kurt Martin:** Our motto when we started this was, “bikes as business tools” and people would kind of squint at that card and at least in most places in modern America, people just nod at that now. Yeah, I get that. They don't need to, like we just have to explain our business. You do. And now people are like, oh, yeah, we're going to do that. And so that shift is permanent, and the virus has just accelerated the awareness of that. More companies are either because of the work from home changes or because of sustainability goals or saying you've got to do something about transportation…. people are going to their town hall or to their boss and saying, yeah, we want to do some more for the bike infrastructure and facilities here because I've been riding a lot, that's the changes that a whole bunch of people said. This is a great thing. We should be doing more.