



Design to Encourage Walking and Cycling

VCP603

Shreshta Jaisingh
146250010
Visual Communication
2014-16

Guided by:
Prof. Sudesh Balan
Co-Guide:
Prof. Raja Mohanty

“Design to encourage Walking and Cycling”

*Submitted in partial fulfillment of the requirements
of the degree of*

Master of Design

by

*Shreshtha Jaisingh
Roll No. 146250010*

Guides:

*Sudesh Balan
Raja Mohanty*

Industrial Design Centre
Indian Institute of Technology Bombay
2016

DECLARATION

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

.....

Shreshta Jaisingh
146250010

Date:.....

APPROVAL SHEET

This thesis/dissertation/report entitled
“Design to encourage Walking and Cycling”
by Shreshtha Jaisingh, Roll No. 146250010 is
approved, for the degree of Master of Design
in Visual Communication.

Guide:.....

Chairperson:.....

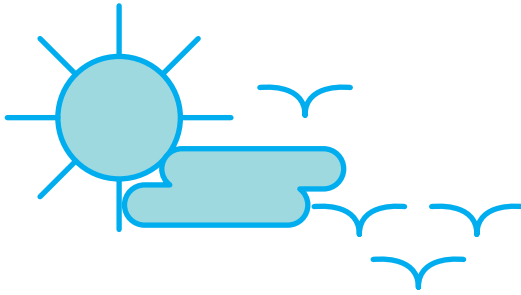
Date:.....

External Examiner:

Place:.....

Internal Examiner:

ACKNOWLEDGEMENT



This project was possible due to the opportunity that IDC provides us with, in order to delve deep into our own interests.

I would like to thank my Professors Sudesh Balan and Raja Mohanty for their support of my decision to take up this project. This project would not have been possible without the support and confidence that the faculty of IDC bestows upon all of us students.

I would like to thank my fellow classmates who supported me and provided me with timely advice every step of the way.

Finally, I would like to express special gratitude to my family and friends for providing me with all that I have needed in their endeavor to help me get through this Master thesis. I am very grateful to every single one of them for their guidance and kindness. Especially, my parents who kept me abreast with any news they found about new endeavors around the world to create awareness or improved conditions and laws for walking and cycling.

CONTENTS

8
Introduction

10
Abstract

11
Objective

12
Preliminary
Survey

19
Relevant Projects

24
Suggested Solutions

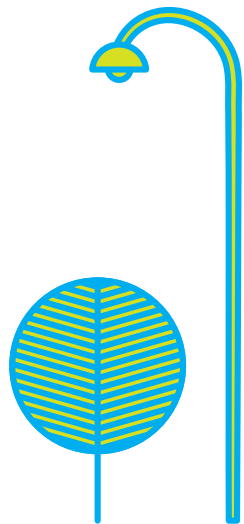
26
Preliminary
Survey

30
Development
of Solution

37
Conclusion

38
Bibliography

INTRODUCTION



The first time I realized that my true calling is design is when I started noticing the working of everyday things and realizing the small improvements that can be made to better them. To be a designer is to solve an external problem; it is the by product of possessing an observant nature. We make a numerous little decisions everyday, and the state of modern manufacturing spoils us for choice, thereby making way for a good decision to be made based on design. Apple computer is a highly overused example of an industry that got overtaken by an idea founded on the sole basis of beautiful design that made lives easier and simpler.

We must learn to look beyond the obvious and be able to tell a solution when it is right in front of us. It is an well known fact that if everyone in the world, especially populations like India and China consume at the same rate as the USA, the consequence will be the suffocation of every natural resource this planet has known. This project aims at a lofty ideal to want to influence habits and behaviors by trying to get people to choose to walk and cycle in their daily lives while the norm is to

want to save time, maximize relaxation, spend more time in Wi-Fi, drive a better car and live our own lives in peace and convenience. The project aims at fighting for a cause that currently stands on the opposite end of aspiration. While the common man wants to move up, own better things and provide the best he can for his family, he fights an environment that will not let him survive, if he succeeds at economic survival.

The well-to-do Indian has a penchant for inactivity. There are 100 million diabetes sufferers in the country, the second largest number in the world. There is an alarmingly growing number of two-car households. It may come as a shock for people in cities like Mumbai to learn that, according to World Bank statistics, when one takes all the people who travel to work in most global cities by motorized and non-motorized transport, a staggering 55 per cent walk to their workplaces.

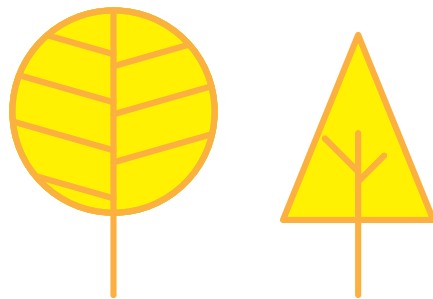
In their book on behavioral economics titled 'Nudge', Thaler and Sunstein (2008), state that people are not forced into making

certain kinds of decisions. However, the decision situation framed may create a push in the direction they believe are in their best interests. Therefore a person's opinion is not converted into a decision, no matter how noble their intentions. The authors go on to suggest that fuel-economy stickers should be designed and put on cars to make consumers realize the full cost of their actions, economically and otherwise. They believe that it would have the equivalent impact of putting a calorie count on a McDonald's meal, when it comes to decision making at the restaurant.

In an article titled, "Bicyclists Are Serious Shoppers," by the Bicycle Coalition of Greater Philadelphia, a 2012 study of shoppers in New York City's East Village district – which had recently installed protected bike lanes – found that, per capita per week, cyclists spent the most money at local businesses. They also term implementing bicycle infrastructure as a "Road Diet", as more cyclists means less car crashes and less road rage.

Creating open spaces is an integral part of making cities more livable in their entirety.

Here in Mumbai, with more than 10 million inhabitants, each person is said to have merely a little over 1 sq. metre of open space. Streets can provide such space, on certain days of the week, at certain times, for cyclists and walkers, who form by far the greatest majority, albeit due to economic reasons rather than by choice or informed opinion. There is much lacking with regard to infrastructure that cannot be controlled by the very nature of a design project. However, this project is my exercise in social experiment. It is aimed at testing the limitations of design when it comes to changing behavior that we have innately subscribe to in our daily lives. That being said, along the course of the project, I changed track and decided to only limit my target audience to people who are already inclined towards active transport. There is a fine line between creating a suggestion and creating a piece of communication that influences an opinion. This outcome of this project ended up being a service; a piece of communication that would aid an active person who wants to make his way around the city in an unusual way. The outcome is meant to aid someone in the quest for a unique experience.



ABSTRACT

Cycling and walking are two of the most prime methods of transport. Such modes of 'Active Transport' give us the most control over our movement. These are two activities that one can never forget, as it is so ingrained in our muscle memory. Why then, in a society that is increasingly health conscious, where medicine has made leaps and bounds to extend longevity, where fitness is not just a trend but a way of life, do we still not adopt these methods of basic human movement into our daily lives?

The pollution from our vehicles causes our temperatures to rise, motorized transport strains all our resources and creates a looming mess that we can't seem to clean up. We are a society bombarded with choices and advertorial messages all day, everyday; we have a world of knowledge at our fingertips, yet there is a requirement for an external stimuli that can make us reconsider our choices that we make in our daily lives.

This project falls into a realm of work that provides this stimuli. An initial survey involved asking people their preferences and why they

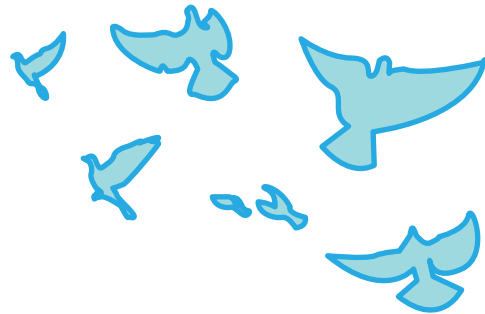
simply do not make a conscientious effort to contribute to the well-being of the planet though the means involves merely taking care of their own bodies. Understanding the problem, though it might seem like reinventing the wheel, is part of the process in order to understand and gain insights about this innate laziness that we as a generation seem to have so easily adapted to.

Work done that is similar to this endeavor in other such situations around the world was studied as part of secondary research, wherever similar efforts to promote walking or cycling were taken.

Much work has been done in glamorizing cycling as a sport and not enough promoting it as a means of transport. The most active cities in the world all have one obvious common quality of possessing the basic infrastructure needed to pursue such means of transport. Since that aspect is not under my control in the realm of a design project, I decided to dedicate my project to those who are already inclined to physical activity.

My outcome is a piece of communication that recognizes the limitations of influencing opinion and serves as an aide to people who want to pursue exploring the city in an unusual manner. It is for those who want to see it through a more personal perspective and need an incentive to plan out their own adventures. This project is created for the love of being outdoors, be it in an urban landscape or to be a little closer to the strains of nature around us. It is an aide towards making a more conscientious and healthy choice.

OBJECTIVE



Through this project I had hoped to study what causes people to make choices that are unhealthy and also damaging to the environment. This project aims at promoting a healthier lifestyle in the surrounding neighborhood with an effort to ease congestion and cause a modal shift, i.e. to take the strain off of roads and transfer it to other modes of transport. To choose active transport over private modes of transport is an effort to make the city more livable.

There are several issues that can be solved if people used transport means such as walking and cycling to perform simple everyday tasks, be it as a ruse to exercise or to run errands while saving money otherwise spent on fuel and gyms. This project hopes to re-establish bicycles as an acceptable form of transport in the city, despite its pollution, soaring daytime temperatures, congestion and potholes, by highlighting activities and places best suited for such activity to take place, thereby creating an active community.

A community that rides bicycles and walks more is said to have a thriving local economy.

Bicycling activity in an urban area has a very good direct impact on local businesses and urban (street) retail.

Another aspect of being a pedestrian or cyclist are the lack of laws in place to keep them safe. I will also highlight on the necessary precautions and communicate awareness for safety while using modes of active transport.

The outcome of this project will be a piece of communication design that will inspire most people inclined to activity to travel more by foot and bicycle by providing them with a choice of incentives to do so. Though my outcome cannot be measured for effectiveness in real terms, I hope to establish a stronger case for being outdoors.

PRELIMINARY SURVEY

The following series of questions were asked to different participants in order to determine their preferences toward walking and cycling.

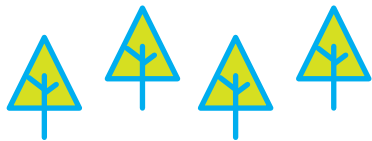
1. Do you like to walk or cycle? Why do you like either/both?
2. How do you get around on campus?
3. What is your preferred mode of transport?
4. Do you own a bicycle? Which one would you like to own? If you don't have a bicycle, why not?
5. What is your preferred mode of transport outside the campus?
6. Do you think there are any benefits to cycling and walking? Could you name them?
7. Would you choose walking/cycling as a lifestyle choice?
8. If there was a public cycling system in place, would it affect your choice?
9. Would you pay a small fee to rent cycles inside campus?
10. Did you walk or cycle as much as you do now before living on this motor-free campus?
11. Would you prefer if the campus allowed students to use motor vehicles?
12. What are the reasons for you to choose a motor vehicle over one that is healthy or good for the environment?
13. Are you aware of E-bikes with power-on-demand and pedal-assist or Fold-able bicycles ?
14. Do you think of bicycles as a means of Sport or Transport?
15. Would you be open to using a bamboo or cardboard bicycle? The low cost of production, environment friendliness and reduction of value, lower the risk of them being stolen.
16. Would you prefer a cycle rickshaw over an Auto-rickshaw? What if they were designed to reduce strain on the driver?
17. Should food delivery services use bicycles because of their low-radius or is time a greater factor in the delivery of food?
18. What are the situations where you would like to take a walk? A park? Shopping/markets? Street food stalls? Historical areas?



HIGHLIGHTS OF SURVEY

The participants were chosen with a precursor of being able choosing their own, varied mode between different types of transport. By this method, their opinion on walking and cycling is unbiased, based purely on choice alone, and not out of necessity.

Below are some highlights from the interviews, every excerpt is unique to a particular set of individuals and is included to highlight a set of similar opinions.



THE DAILY COMMUTER

Name: Prof. B K Chakravarthy

Loves to walk and cycle, has used it as a means of transport for years as he lives within the protected environment of a college campus.



THE THINKER

Name: Prof. Kumaresan

Drives a car to work to avoid dealing with pollution and traffic. Likes to walk in serene places as it helps him gather his thoughts.



THE CYCLIST

Name: Sony Salma

Very passionate about cycling/ outdoorsy/ seeks the thrill of adventure. Has been a pedal enthusiast from her youth. Dislikes using cycles in heavy traffic, but uses it on campus everyday.



THE SOCIAL WALKER

Name: Ashwini Hiremath

Loves to take walks only if she has a group of people for company. Uses public transport on the regular to commute within the city.



THE TIME SAVER

Name: Jayati Bandyopadhyay

Dislikes any physical activity. With a severe distaste for it. Prefers taking autos everywhere, even within the campus. Requires a high level of engagement in a space to be suitable for walking.



THE MOTOR ENTHUSIAST

Name: Indrajeet Roy

Severely dislikes any form of physical activity. Prefers to take auto-rickshaws everywhere. Wants to make private transport a possibility for students inside the campus.



THE STYLE SEEKER

Name: Tapan Kumar

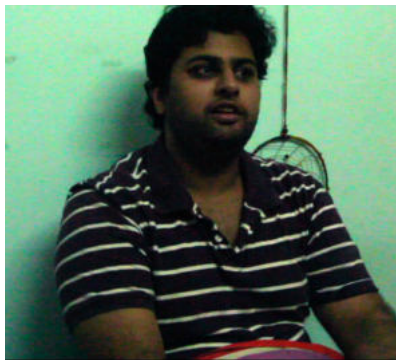
Is very passionate about running and taking motorcycle trips. Is aware of cycles as a symbol of low status quo. Would only use a bicycle if it makes a style statement.



THE SPORT ENTHUSIAST

Name: Ravi Purty

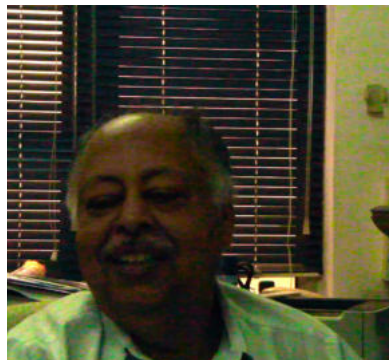
Uses autos on campus for daily transport but is a fan of cycling as a type of adventure sport.



THE HOMEBODY

Name: Rohitash Gupta

Dislikes any form of physical activity. Prefers driving his car everywhere.



THE DAILY USER

Name: Prof. Nachiketa Sadhu

He has used a cycle for many years as a means of daily transport. Recognizes the health and environmental benefits of cycling. Uses a cycle even outside campus for short distance trips.



THE CYCLIST

Name: Bhavik Grover

Loves adventure and taking part in various kinds of sports. Uses a cycle on the regular depending on suitability of the situation and temperature conditions.



THE NATURE WALKER

Name: Paulanthy George

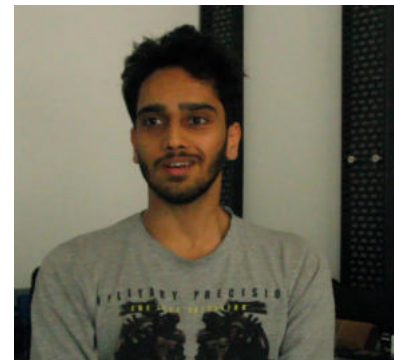
Likes to walk in green spaces like around the campus. Switches to motor transport when in contact with the world outside. Says that walking clears his head.



THE DEFEATIST

Name: Shabarni Gupta

Walks in and around campus but thinks that there is no hope for non-motor transport outside in the current condition of the city.



THE ADVENTURER

Name: Suryansh Jain

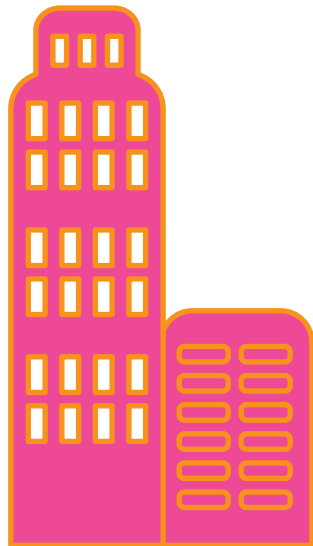
Loves stylish bikes and cycles, dislikes walking and using public transport. Adventure is an important aspect of cycling to him.

**“Physical activity
is a wonder drug.”**

- GIL PENALOSA

CHALLENGES OBSERVED

- There is an increasing demand for popular and stylish motorcycles among youngsters.
- Many people are faced with the challenge of a long commute to work and it is extremely stressful to be on the road, so people often opt for a comfortable mode of transport that allows them minimum contact with the atmosphere and pollution.
- There are no dedicated bicycle tracks in cities, most pavements have potholes and the greenery on our roads is sparse, making it an uninhabitable place for pedestrians and cyclists, especially during peak traffic hours or in the afternoon when temperatures soar.
- There is low awareness of cycling as a sport in India, specialized mountain bikes are not a popular option.
- There is a severe lack of infrastructure that would greatly enable cycling and walking to become a pleasant experience.
- There is a general awareness about alternately powered modes of transport, especially personal transport such as e-bikes. Hybrid cars are not considered to be cool or stylish.
- There is a need for more stylistic options within Eco-friendly alternatives for personal transport.
- Cycling is often looked down upon as it is considered a lowly mode of transport, it is viewed at with economic bias.



INSIGHTS GATHERED

The scope of this project falls in the integration of the space between opinion forming and decision making. Everyone is aware of the harm they cause to the environment, but no one is willing to sacrifice their comfort for it. A stylish bicycle doesn't provide the same experience and glamour of a sport or a fancy motorcycle or an expensive car. It is not incentive enough to expose themselves to physical exertion.

The target audience is visually literate and is constantly surrounded by options that provide a distraction at the tap of a fingertip. They value experience more than they value the cost of their own actions, or their consequences. The people's wants and desires are shaped by design, advertising and what they present as a means to attain a certain status quo. Good intentions are always easily overridden.

The cliché of health, environment, and conscientiousness were common knowledge for all participants, their personal opinions do

not influence their decisions when it comes to making a choice in mode of transport. Time making and convenience prevail over factors.

Amongst the few who do enjoy partaking in active transport, the incentive for them relies heavily on the experience of walking and cycling. For some, it almost always involves a high level of engagement, or a necessity to clear their own head. Most claimed they only walked in malls or a space of high activity. Almost everyone put forth a need for a controlled environment to be able to walk around or cycle in. They preferred the air conditioning of malls or a green, peaceful environment like the college campus itself. There was a common occurrence of phrases for a yearning for experience, expressed as, "Wind in my hair while riding a bike" or the "Quiet Introspection of walking". The takeaway being that level of environmental control and experience to take away are key factors in making such a choice.

RELEVANT PROJECTS

Similar or relevant projects done within and outside the country, despite its many infrastructural chasms and disparity of cultural ideas within the economic classes.



Image source: equalstreets.org

EQUAL STREETS

Thanks to this NGO, Mumbai has car-free lanes once a week on Carter Road, which hugs the coast in the suburb of Bandra. It has been quite successful, attracting around 15,000 visitors, from the crack of dawn to nightfall. This event also took place in Powai on the 8th of May, 2016.

This event is made possible by Equal Streets, which works with the police to redirect traffic and make the selected area only available to cyclists and pedestrians. They conduct activities that will enhance and make street culture a real part of the Mumbai streets.

Various activities like yoga, zumba and street dancing are conducted and people of all age groups can walk in and participate and interact with the community.

BANGALORE BIKER'S CLUB

This biking community was started three years ago and now has over 2,000 members.

The Capital has **DELHI CYCLING CLUB**, started in 2006, and **PEDALYATRI** in Gurgaon.

Besides **BIKE2WORK**, Hyderabad also has the **ATLANTA FOUNDATION** and the **GREAT HYDERABAD BICYCLING CLUB**, started by Deenanath Harpanhalli.

There are also corporate campuses that support cycling, such as **Infosys**, **Accenture**, **HP** and **Bosch**. At Infosys campuses everywhere vehicles that run on fossil fuel are banned; instead there are hundreds of bicycles scattered all over which employees are free to ride. Many Infosys offices also provide lockers and showers, where bikers can take a quick shower after a sweaty ride and get into their workday clothes.

PEDALERS VILLAGE

India's first **MTB skills park** was started in Pune in June 2013. A similar park has been proposed in Delhi.



*Pedalers Village, Pune.
Image source: redbull.com*

Pune Municipal Corp. (PMC) is stated to create a **COMPREHENSIVE BICYCLE PLAN** in the process of making Pune the “**City of Cycles**”. The Union Urban Development Department, is urging the civic body to prepare a comprehensive bicycle plan for the city as a model, that is to be replicated across the country in all other cities. The plan would set the vision, goals and policies regarding cycling and contain plans for creating a city-wide cycle track network, and cycle-safe streets.

A city-wide Public Bicycle Scheme with a detailed project report for a pilot project, bicycle parking facilities, integration with public transit, cycling promotion, adoption and use of design guidelines for planning and implementing cycle-friendly infrastructure, institutional mechanisms, capacity-building and financial planning for implementing the plan, awareness and education campaigns.

The final plan would serve as a road-map for the city to allocate resources, formulate policies, undertake projects and evaluate the outcome towards achieving the goals set with

it, applicable for a period of 20 years that would consist of short, medium and long-term goals and measures.

The “PEDALING TOWARDS A GREENER INDIA” report by The Energy & Resources Institute (TERI)

The report focuses on examining the key trends and issues with regard to growth in cycle ownership and its use, as well as the growth of Indian cycle industry. It recommends that we promote cycling in urban areas by developing cycling infrastructure in cities, introducing cycle-sharing schemes, and promoting awareness campaigns. Ensuring provision and maintenance of cycling.



DMRC cycle shelter. Image source: cyclesharing.in

“RENT-A-CYCLE”, an initiative by Delhi Metro Rail Corp. (or DMRC)

A public bicycle sharing system where cycle shelters are set up outside metro stations and one can borrow a bike, ride it all day and drop it off at any other metro station. Access to the bikes is granted through a chargeable smart-card at a fee of Rs. 10 per hour. This actively took root near the North Campus of Delhi University and has been implemented at a few other stations as well.

“NAMMA CYCLE”

This is a cycle renting project being piloted in the Indian Institute of Science (IISc) campus. It allows students to rent a cycle for commuting within the sprawling campus. The renting system uses a simple web application for bicycle reservation, pick-up, drop-off, and information tracking. A central stock circulates the bicycles between renting stations to ensure that necessary bicycles are available at all nodes, at all points of time.

A Moonlit Bicycle Ride Through Mumbai's Empty Streets

Experiencing the city at night.

TEXT: NATASHA SAHGAL | POSTED ON: JUNE 8, 2015 12:00 AM

[Share](#) 5 [Tweet](#) [G+](#) 0 [Print](#)



Image source: www.thrillophilia.com

Responsible Tourism award winner **REALITY TOURS** that gather tourists from midnight until 3 a.m. and organize a bicycle ride through the landmarks of Mumbai city.

INTERNATIONAL PUBLIC BICYCLE SHARING SYSTEMS

CICLOVIA

Gil Penalosa was Commissioner of Parks in Bogotá, Colombia and succeeded during his brief tenure to create as many as 200 neighborhood parks, big and small in his city. He was able to build footpaths around lakes in three years, when it had not been done in 27. Bogotá is famed, world-wide, for its Ciclovía – Spanish for “cycleway”.

Each Sunday, arterial roads are closed to motorized traffic and taken over by walkers, cyclists, skaters and other health-conscious citizens. It is said that around two million of Bogotá’s citizens – one in every three – use the Ciclovía. It is the largest such success story of a public bike share system.

THE VELIB

This is an inexpensive public bike-hire system in Paris. There are now 1,451 bike stations where anyone who has registered can swipe a card to free a bike and dock it at the nearest

station to his destination, where the hire fee will be deducted. This has eliminated an astounding 7,000 car parks.

STOCKHOLM CITY BIKES

A public-private partnership project of Stockholm in Sweden and the outdoor advertising unit of Clear Channel Communications. It is a community bicycle program that allows renting a bicycle for a maximum period of 3 hours, between 6 am and 10 pm.

CALL A BIKE

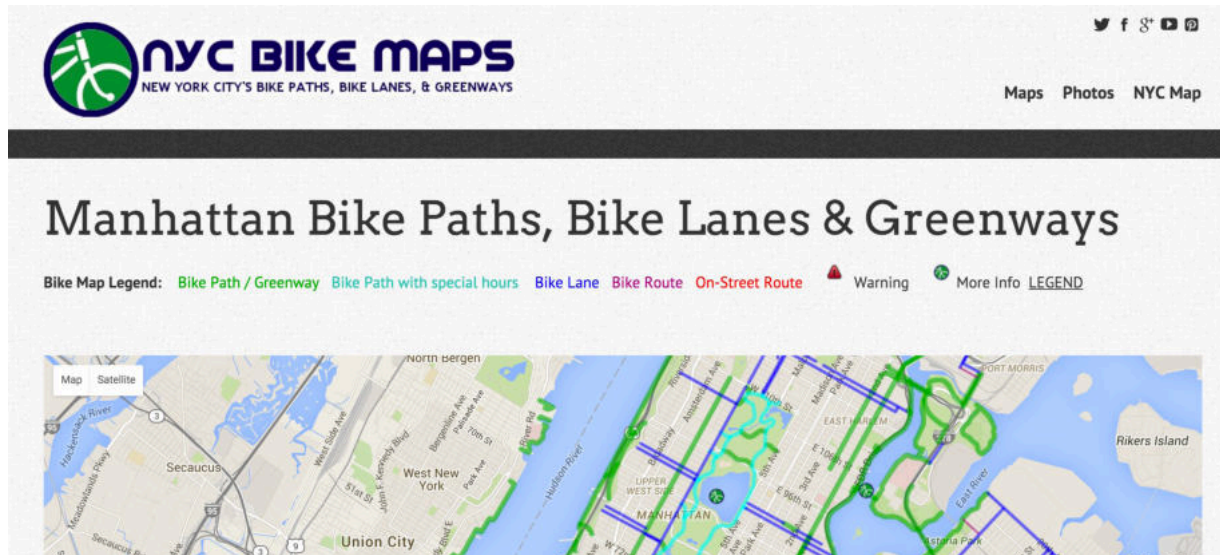
A bike hire system run by Deutsch Bahn in several German cities, such as Berlin, Frankfurt, Hamburg, Kassel, Köln (Cologne), Munich and Stuttgart. Developed in 1998 and operational since 2000, it uses a system of authentication codes to automatically lock and unlock bikes.

BIXI

Officially Société de Vélo en Libre-Service, is a not-for-profit and public bicycle sharing system developed in Montreal, Canada. Bixi systems are now found across North America, London, England and Melbourne, Australia.

BICING

A bicycle sharing system in Barcelona inaugurated on March 22, 2007. Santander Cycles is a public bicycle hire scheme in London, United Kingdom. The scheme’s bicycles are popularly known as Boris Bikes, after Boris Johnson, who was the Mayor of London when the scheme was launched. Barclays Bank was the first sponsor from 2010 to March 2015, when the service was branded as Barclays Cycle Hire.



Citi bike initiative, NYC. Image source: www.nycbikemaps.com

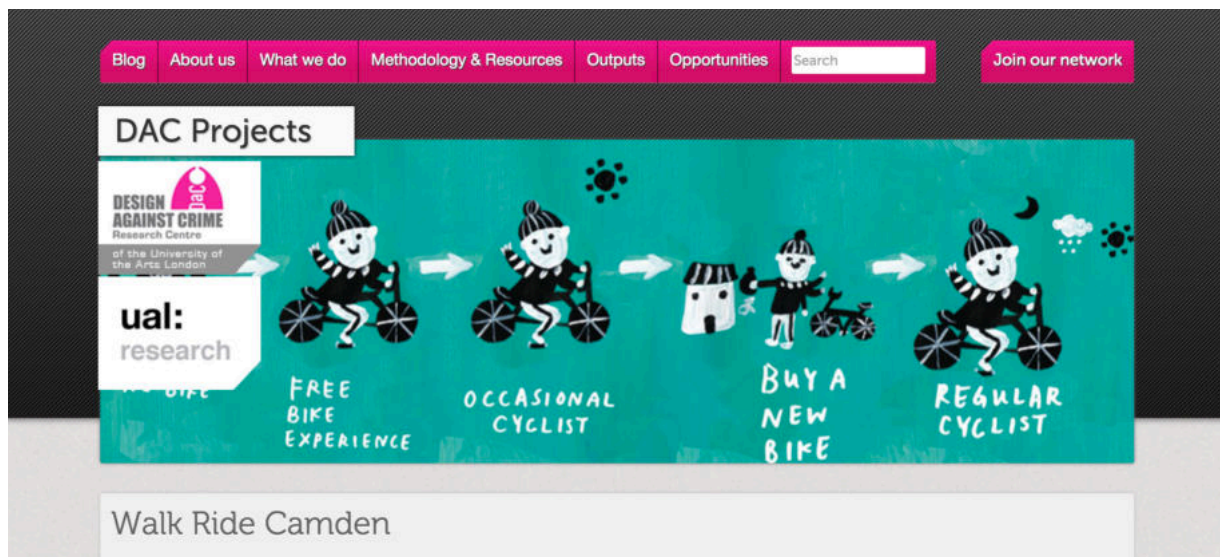
OTHER RELEVANT WORK

NYC BIKE MAPS

This initiative provides interactive maps of New York City's bike lanes, bike paths, and greenways and information on bicycling in NYC. Founded in 2006, NYC Bike Maps was the first interactive map for cyclists looking to navigate and explore New York City.

WALK RIDE CAMDEN

The aim of this student project was to induce public behavioral change that will have a positive impact on Camden residents. The project was a success and one of the proposals, 'Walk the Tube', has gone forward for implementation within the borough.



Walk Ride Camden, London. Image source: www.designagainstrime.com

SUGGESTED SOLUTIONS

While there are some that think of cycling with the perspective of an urban elitist trend, there is still room for improvement when it comes to considering it as a means of transport for not just those who can't afford any better.

Making a case for choosing convenience over obvious benefits and conscientious judgment is almost always easily overridden by the need for convenience. Asking questions about why people leave late and prefer private and convenient transport made me further delve into the joy of the experience. There were only a select few making the choice to use alternate and active modes of transport, and they did it from the heart. I tried to break down their process of choice based on their suggestions and comments from the preliminary study.

Walking and cycling are a common part of everyone's childhood, it was an activity we enjoyed, movement with the ability to be in complete control. As the saying goes, "You never forget how to ride a bike." But

why then, do we choose to forget? Why do we detest the thought of facing our own natural environment even for trips within shorter distances for no physical inconvenience?

There could be many reasons for this. Cycling goes out of style, especially with age as work, family and life catches up to us, we forget to enjoy the little things and do all that we can to minimize our own stress, causing us to choose motorized transport. The environment is not conducive to pedestrians and cyclists, what with growing rates of pollution and congestion on the roads. Instead of adapting to a healthier lifestyle and saving time by introducing activity to their transport, people preferred to opt for comfort and pay attention to fitness separately, as long as they could shield themselves from any sort of exposure to the environment. Thereby protecting themselves, but causing harm in the long run.

There were people who walked for causes such as social media, examples being InstaWalks, Historical Tours, Mumbai by Midnight, etc. Culture and nature still possess the potential to attract a visually vigilant person.

SCOPE OF WORK

Common Occurrence



"You never forget how to ride a bike"



Gone out of Style/ Status Quo



Make it exclusive/ Create Desire



It becomes Common

“It’s really about eliciting a positive response to the environment so that humans reconnect to nature and earth and feel a sense of protection. We will protect the things that we love and feel empathy with.”

- MILEECE

CHARACTERISTICS OF SOLUTIONS

The solution will comprise of communication design pieces that can provide an incentive and encourage change in choices by implementing an engaging factor for the target audience. Enhancing the visual quality of existing communication to highlight culture, art, history, natural attractions and making it accessible to as many people as possible.

The solution will be:

- A sustainable piece of communication, without the need for constant upkeep.
- Flexible and scalable.
- Will have a conscientiousness, fitness and safety factors for pedestrians and cyclists.
- Easily accessible.
- Socially responsive.
- Promote urban retail, culture, history and landscape.

PROPOSED SOLUTIONS

- Social Media Integrated Events. Eg. Instawalks, Photo-walks.
- Enhancing the Cycling/ Walking Experience: Routes with suggested points of interest which highlights the value of engagement with natural surroundings.
- Campaign to promote the cause and create interest and engagement.
- An ironic simulation/recreation of walking/ cycling to reconnect with nature.
- Urban Hiking: Who needs mountains when you’ve got steps, walls and streets?
- Laws for pedestrians and cyclists.
- Illustrated Maps highlighting cafes, natural attractions and museums.

DEVELOPMENT OF CONCEPTS

Deliverables for different kinds of solutions are possible as a solution to this project. Below are some of the concepts explored.

CONCEPT 1

Reflecting Nature

The project falls into the realm of design that creates an emotional response, relatability or familiarity. Only after it stirs emotion can any social change occur from within. Walking and cycling are ingrained in our lives ever since we were children and the connection to nature and ourselves must manifest in terms of these activities being appreciated again.

This route was developed seeing as to how much design should be taken forward to create change. When does it begin to influence opinion? To skim over these murky waters, a mere suggestion of a memory of reconnection is created. Henry David Thoreau's essay on Walking identifies the relationship between Man and the 'Wildness'. The Wildness, not Wilderness, is about the refreshing presence of Nature, so much so, that a person experiencing it also must come alive. In order to elicit a response, a reconnection with nature is to be treated as childlike curiosity.



Concept of Mirroring Nature

Image source: Tumblr

PROTECTIVENESS

Just as a child would love to play in the rain or get excited by a butterfly, how do we as knowing adults reevaluate our surroundings? I recently came across a craft trend of wearing plants as jewelry. Small planters, succulents, mosses, etc. are potted and people can wear them as an everyday accessory, the difference being that you must nurture it to keep it alive. This concept of reconnecting with nature in the role of a protector is a very interesting aspect to play into as well.

I wanted to recreate this experience in terms of my project. In a completely urbane environment, if there were spaces where one could reconnect with their favorite tactile aspects of nature. The idea was to build a likeness, to remind people of the way nature effects our every specific sense. You could mount a plant to the wall and touch it, feel it, smell it. A participant may be allowed to rub their feet on a patch of grass in the middle of their day to relax. The lushness and beauty can be recreated in an urban context, thereby making one want to go outside.



CONCEPT 2

The Superhero

How do we as an urban population attune ourselves to the needs of the environment? A more obvious question would be, “Who saves the planet?” And what does saving really mean? These questions further lead to the analysis of what the incentives are for a common man to rise up to such a challenge. In the film series ‘Cities on Speed’, the Mumbai edition showcases the conflict of interest is shown between the economically superior class residents—who, from the comfort of their chauffeur driven cars complain about the large number of flyovers being built in Mumbai—and a lower middle class common man, who just wants to make an earnest living for himself and buy a car and work his way up in society. There’s no arguing that an aspiration for a way of life should not be fulfilled in order to adhere to an ulterior motive. It is clear that the common person does not understand the consequence, or chooses to ignore the implications of his ambitions. How do we motivate someone from within?



Image source: Tumblr

ACCOUNTABILITY

If there was any indication as to exactly how an action can have a consequence on the environment, perhaps goodwill can be established by way of a better informed decision. This route would establish a sense of heroism that we can all strive for. It would include a campaign; a series of public service announcements which can be placed in decision-centric locations such as parking lots, petrol pumps, bus and auto-rickshaw stops. The campaign would only go on to show the benefits of walking/cycling such that it is a mere suggestion of the consequence of an action directly. By taking up responsibility for one's actions, a person can feel directly proud of his achievements and contributions made by their choice of action. That too, in immediate, measurable and direct consequences.

One fully-loaded bus can replace about 50 cars.

The average car emits 4 tonnes of carbon dioxide in a year.

20 bicycles can be parked in the same space as 1 car. It takes around 5% of the materials and energy used to make a car, and a bike produces zero pollution.

Taxi passengers are exposed to more than 1,00,000 ultrafine particles per cm³, which can settle in the lungs and damage cells. People in cars inhaled about 40,000. Cyclists, are exposed to just 8,000 ultrafine particles per cm³ because they ride at the edge of the road and aren't directly in the line of exhaust.

DEVELOPMENT OF SOLUTION

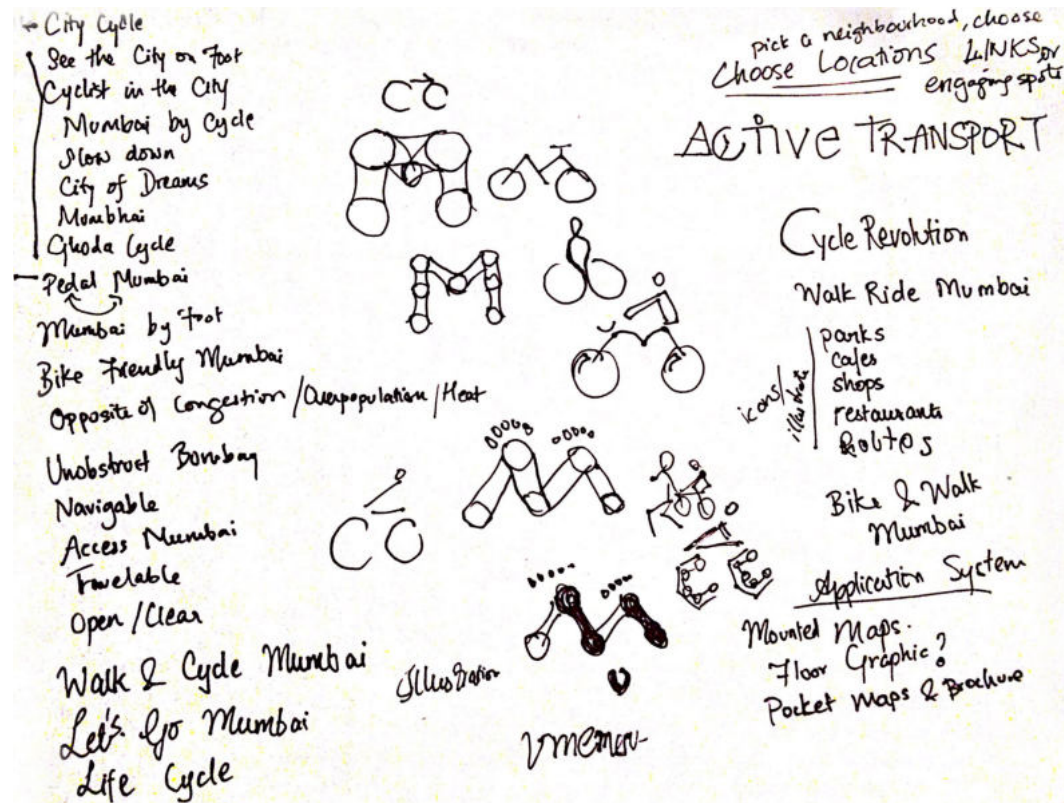
A guide to being a Walker or Cyclist in the City.

DESIGN PROCESS

After a slight revision of target audience, a solution was decided upon that would create connections between people and a place; an enhancement of public spaces that would cause public movement in an urban area, with focus on active modes of transport.

Not only does active transport come with many health benefits (and is easy on your wallet), it also allows one to truly experience a city, instead of looking at sights through the eyes of a mere tourist/commuter. Additionally, it also boosts retail on the streets.

The project began with conceptualization for a visual identity and subsequently alternatives were developed. In order to merge deliverables a visual language and illustration style were developed. The deliverables would also include a 2-in-1 folding book and bike map along with manual for laws and safety.



Development of Visual Identity



Development of an icon based, vector illustration style that can be used across maps, postcards, booklets, posters, etc.



Refined icon style

Cafes



Street Food



Parks



Urban Retail



Walking Paths



Trek trails



Parks



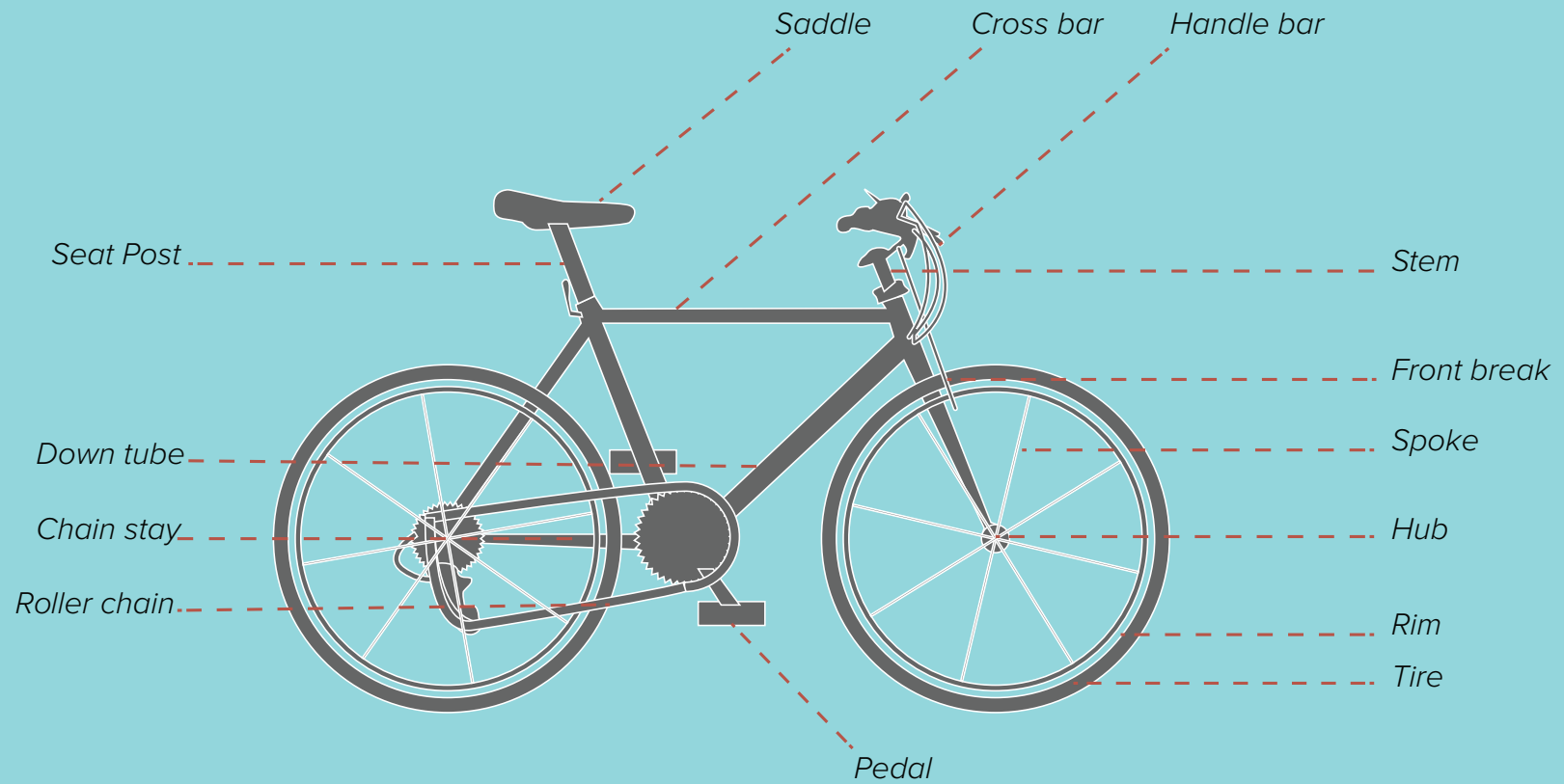
Residential Areas



Safety handbook

01

ANATOMY OF A BICYCLE



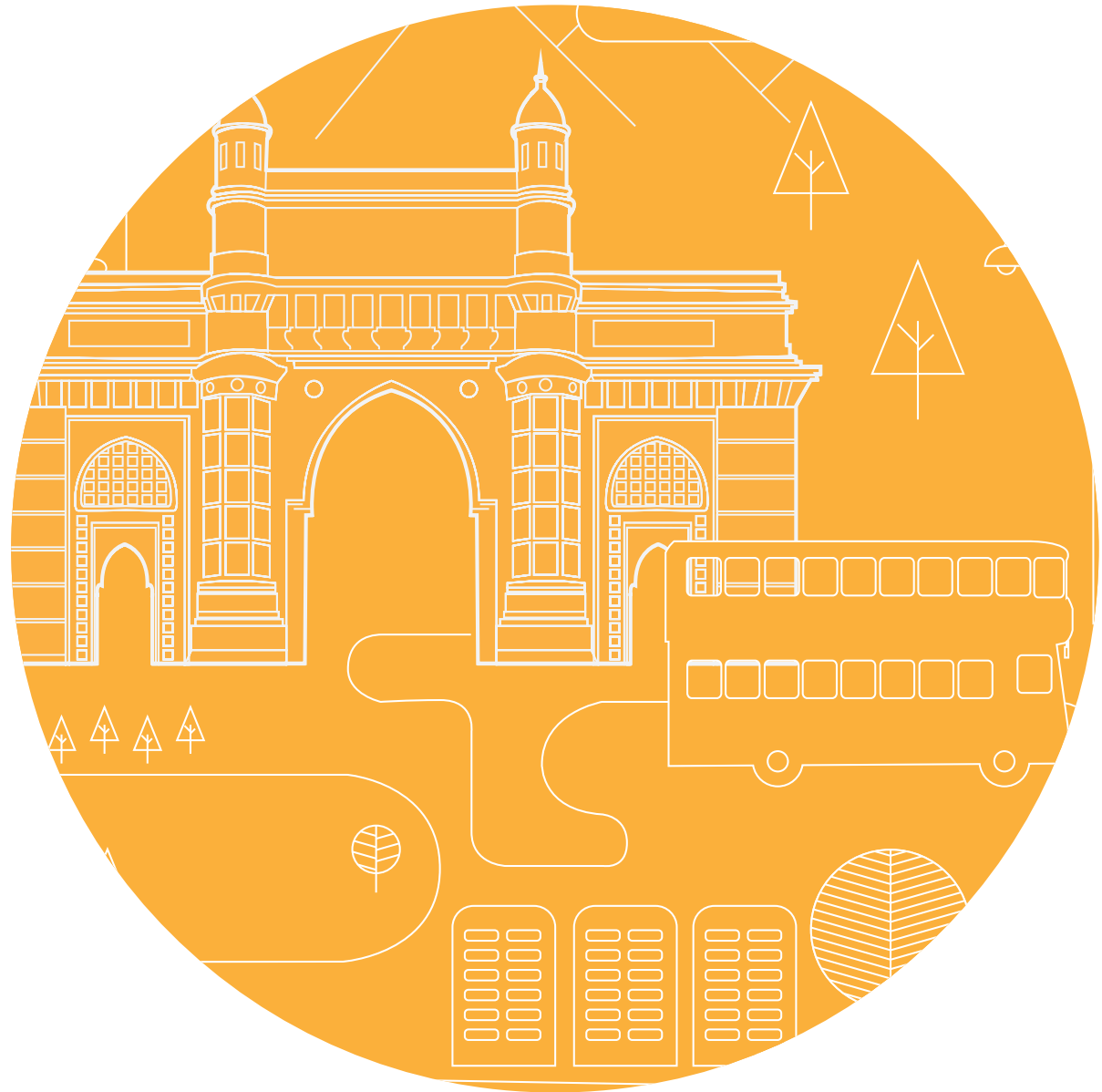
Poster/cover of the handbook



Illustration Details

DELIVERABLES

Once the identity was underway, illustrations were created to highlight various landmarks of the city. Neighborhood specific maps highlighting museums, art, places of cultural or historical significance, and local retail hot-spots were created. The pedestrian and cyclist's guide to the city will also focus on anatomy, safety, laws and gear for cycling, pedestrian rights and a note about the types of cyclists in Mumbai.



CONCLUSION

As human beings, it is intrinsic to our nature to want to take the path of least resistance. We do not think of behavior change as having direct correlation with environmental change or a change in our health. We are often clouded by our judgment for the short term, otherwise known as instant gratification. This project is aimed at making people do just the opposite, i.e. slow down and discover new adventures by choosing a map over a phone or a bicycle over a car. Realizing that all of our actions have dire consequences can be overwhelming, but efforts such as this project can help design choices in a manner that can be beneficial, while leaving it up to the personal opinion of the ultimate user.

In their book ‘Nudge’, Thaler and Sunstein define a nudge as “Any aspect of the choice architecture that alters people’s behavior in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates.”

People do not necessarily make choices that are within their best interests. We are influenced by the choices of others or by something that puts us at a short term advantage. For activities like walking and cycling to foster intrinsic motivation, they need to cater to the human needs of competence, relatedness and autonomy (Tieben, Sturm, Bekker & Schouten, *Playful persuasion: Designing for ambient playful interactions in public spaces*, Jan 2014).

The beauty of slowing down and appreciating a stroll is a lost art. Some of my earliest memories are those when I woke up before the sun in my summer holidays to go cycling before the traffic broke out the year I first learnt to ride one.

Attaching value to an activity or a memory can indeed create a case for its value in the modern world and its astounding pace of technological change. I chose the medium of print to add more value via a tangible object for one to hold—similar to the smell of an

old book in the library triggering off many pleasant memories, a map can trigger off a sense of wonder, and be the piece of design that causes an ambient interaction with a public space.

However, this study still has much to consider from its initial survey and observations of similar projects. A piece of communication design that puts to use visual stimuli, as well as serves to showcase all that is historical, artistic and engaging in our city surroundings makes way for real-time results. This engagement is invaluable as it is intrinsic to each person in a different manner. This intrinsic motivation is vital to recurrent occurrence, i.e. we are what we repeatedly do.

BIBLIOGRAPHY

BOOKS/ACADEMIC PAPERS

- “A Behavior Model for Persuasive Design”, BJ Fogg, Persuasive Technology Lab Stanford University, 2009.
- “Nudge”, Richard H. Thaler, Cass R. Sunstein, 2008
- “Pedaling Towards A GREENER INDIA”, The Energy and Resources Institute, 2014.
- “Comprehensive Bicycle Plan for Pune”, Pune Municipal Corporation, 2013.
- “Walking”, Henry David Thoreau, 1862.
- The Toronto Cyclists Handbook, Cycle Toronto, 2012

FILM

- Cities on Speed—Bogotá
- Cities on Speed—Mumbai

ON THE WEB

- designagainstcrime.com
- equalstreets.org
- cyclesharing.in
- thrillophilia.com
- nycbikemaps.com

- bicyclecoalition.org
- openbicyclesproject.blogspot.com, Open Bicycles Project, Mumbai, May 23, 2009.
- thoreau.eserver.org/walking, “Walking”, Henry David Thoreau, 1862.
- bikeradar.com
- dailygood.org, “Paths Are Made By Walking” by Nipun Mehta, May 14, 2012.
- youtube.com, Elon Musk Speech - ‘The Dumbest experiment In History’, 21 December 2015.
- redbull.com, “First Look at India’s First MTB Park,” By Abhishek Khan, 11 August 2014.
- natgeotraveller.in “Experiencing the city at night,” by Natasha Sahgal, June 8, 2015.
- eventshigh.com/mumbai/cycling

