

WOMEN ON WHEELS IN INDONESIA

PROGRAM DESIGN

October 2015



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INTRODUCTION

The Women on Wheels Project is a joint venture between Living Cities and Kota Kita. The project seeks to understand the conditions surrounding women cycling to promote this low-cost, zero-carbon mode of transportation in Indonesian cities.

Kota Kita's mission is to help people make thoughtful and inclusive decisions about the development of their cities. By facilitating participation and collective action, Kota Kita offers opportunities for citizens to improve the quality of life of their urban areas. Promoting bicycling for women is one way to achieve this mission.

This report presents a Toolbox of Programs, focused on developing incentives for bicycle usage among women in Solo, Central Java. The program design is based on research conducted from June to August 2015, including discussions with multiple stakeholders, fieldwork, and theoretical inputs about gender and cycling.

The Women on Wheels Project is composed of three phases: the Feasibility Study, the Toolbox Program Design, and the Pilot Project. The Toolbox Program Design presented herein is the second phase.



Feasibility Study: Solo-based research (February - May, 2015).

The main objective of this phase was to understand the potential for promoting bicycling for women in Indonesian cities. Kota Kita employed a mixed methodology including desk-based research, focus group discussions, individual interviews, and field observations. Based on findings, Kota Kita and Living Cities concluded that Solo would be an ideal city to launch a Women on Wheels Pilot Project. A combination of the city's characteristics, economic profile, legal and political context, and the increasing popularity of bicycling all helped lead to this conclusion.

The Feasibility Study identified four main opportunities for promoting bicycling for women and girls in Indonesia. These represent four strategies that can be tested in the Pilot Project Phase:

- Promoting cycling for school girls
- Promoting cycling with **female** factory workers
- Promoting women's cycling through the Government of Solo's Department of Transportation
- Promoting bicycling through local civil society groups

Toolbox Program Design: Solo-based research and design (June – August, 2015).

The second phase of this project focused on the design of tools and strategic actions to promote the use of bicycles among women and girls in Solo. During this phase, Kota Kita built upon the findings of the feasibility study, and continued research targeted at developing the four strategies outlined above. The team investigated the conditions impacting cycling for targeted civil society groups and institutions: junior and senior high school girls, women factory workers, Solo's Department of Transportation, and organized civil society groups through cycling events. The knowledge generated will inform the creation of contextualized tools to promote women cycling for each one of the identified strategies and their

Pilot Project: Implementation of tools and strategic solutions (Fall 2015).

The final phase consists of implementing the tools and strategies developed in prior stages to test their efficacy in incentivizing cycling. This phase will engage with citizens, bicycle associations, women's groups, repair shops, bicycle manufacturers, companies, media, and local government representatives to jointly develop and implement the identified solutions.

What is the Toolbox?

The tools are a set of strategies to promote bicycling as a form of transportation that is cheap, environmentally friendly, convenient, and flexible. This includes engaging stakeholders as allies in the promotion of women's cycling, and sharing knowledge to empower them with organizational skills and tools for advocacy.

The tools will promote cycling as an alternative to the current trend of motorization, and as a solution to the existing lack of reliable and convenient public transportation and growing traffic congestion. In brief, these efforts intend to:

- Break down barriers discouraging women from cycling
- Advocate for more bicycle-friendly conditions in Solo

These tools target (i) populations for whom cycling would be a convenient and safe mode of transportation, as well as (ii) key institutions with the influence necessary to promote better conditions for women's cycling. Three stages of the toolbox Design process are as follows:

a) Knowledge Generation

The first step is to create a knowledge base related to the conditions impacting women cycling in Solo. Kota Kita investigated the following questions through fieldwork, interviews, and case study analysis:

- Why are women and girls bicycling? Why aren't they?
- What are the main conditions that incentivize/disincentive cycling for women and girls?
- How common is women cycling within specific target groups?
- What are the most important cycling routes in Solo?
- What are the most pressing needs of the biking population?

Kota Kita utilized innovative survey methods featuring citizen participation and open communication between the project's stakeholders. The knowledge gained through this process has informed the design of tools for each strategy.

b) Toolbox Design

Informed by this knowledge base, we designed contextually specific incentives that address the needs of each target group. These tools may be utilized by a wide variety of individuals so as to engage as many people as possible, and will be described at length in the following sections.

c) Raising Awareness and Advocacy.

The tools and knowledge generated will be widely shared, not only to women and girls, but also to influential groups and institutions. The objective is to empower these groups with information and organizational skills so that they can advocate for a more cycling friendly environment.

We have explored activities in four action strategies; they are designed to promote changes in behavior in a number of different institutions -- public schools, factories, the government agency responsible for transportation, and civil society groups. Together we hope they will bring about noticeable change.



THE 4 ACTION STRATEGIES

1. Promoting cycling for school girls

This strategy targets women students between 12 and 18 years old in an effort to increase the proportion of them who opt to cycle to school. Every week day, around 6:30 am and 3:00 pm, the streets of Solo are filled with traveling students. A significant portion are girls on bicycles, who have traditionally been one of the strongest populations of bicycle users in the city. Cheerful groups of teenagers traverse the main paths of the city, full of youth and energy.

However, young cyclists face many issues when traveling through Solo's streets. Increasing motorization and congestion, hard crossings, physical obstacles, and bad infrastructure make cycling less safe and convenient. Furthermore, caregivers and school authorities do little to encourage this sustainable mode of transportation and are partially responsible for youths' shift to motorized vehicles at an early age.

Reversing this trend requires an understanding of schoolgirls: their main concerns, preferences, and attitudes towards bicycle use. Given the proper attention, schoolgirls are one of Solo's most promising bicycle communities.



School girls can be seen all over the city riding bicycles to school, it is an inexpensive, accessible and practical mode of transportation. But they are often fearful for their safety due to the conditions on Solo's roads.

2. Promoting cycling for women factory workers

Women factory workers in Solo have a long history of cycling, and therefore are a strategic focal point. They are historically recognized as one of Solo's strongest cycling populations. Though a high percentage of this community still cycles to work, this traditional practice is threatened by daily household chores, increasing motorization, and the abandonment of previous workplace cycling policies.

Solo is an industrial city, home to Batik workshops, plastic, tobacco and textile factories, all of which employ a largely women workforce. In past decades, many of these industries sponsored pro-cycling policies, such as bicycle bonuses and extensive parking facilities.

In recent times, conditions have changed. Factory authorities have abandoned incentives for biking to work. Furthermore, facing a heavy chore burden in their homes and increasing motorization, many women are discouraged with the time and effort required to cycle. To better understand these conditions, we held several discussions with factory workers and leaders. These conversations, complemented by field observations, influenced the formulation of solutions that aim to preserve and strengthen a long-lived tradition for sustainable transportation.



Solo is a city known for its many tobacco, textile and plastic factories, the majority of workers are women. While many ride bicycles the trend indicates many are changing to motorcycles.

3. Promoting cycling through Solo's Department of Transportation (DoT)

Collaboration with Solo's Department of Transportation provides an opportunity to influence government policy and encourage existing programs and partnerships with civil society. In recent years Solo has developed a number of policies and projects that promote sustainable transportation, for example, an educational campaign in schools, and increased safety measures on Solo's roads. However, many proposals lack implementation plans and specific focal areas.

Recently the DoT has initiated strategic partnerships with civil society groups and other government departments to design and implement some of their projects. This opens the door to a potential cooperation with Women on Wheels.



The Department of Transportation plays a pivotal role in securing road safety, proper circulation and developing policy to support non-motorized transportation; but they can't do it all alone.

4. Promoting bicycling through civil society groups

This strategy concentrates on collaboration with Solo's cycling communities. Local pro-cycling collectives have appeared in recent years, and have influenced policy as well as developed important programs and events for the promotion of cycling. These communities have a high level of influence in institutions and civil society.

Commonly known as onthel communities, bike collectives such as Bike2Work and Seli Solo Raya have popularized cycling as a fun, sustainable and convenient mode of transportation. They have developed social and recreational programs, city wide cycling events, and educational and awareness campaigns, among others. They are ideal partners in developing and promoting a new vision for cycling in Solo.



Recreational bicycle clubs, like this one above, meet regularly, often on weekends to get together with friends and share their common interest in cycling.

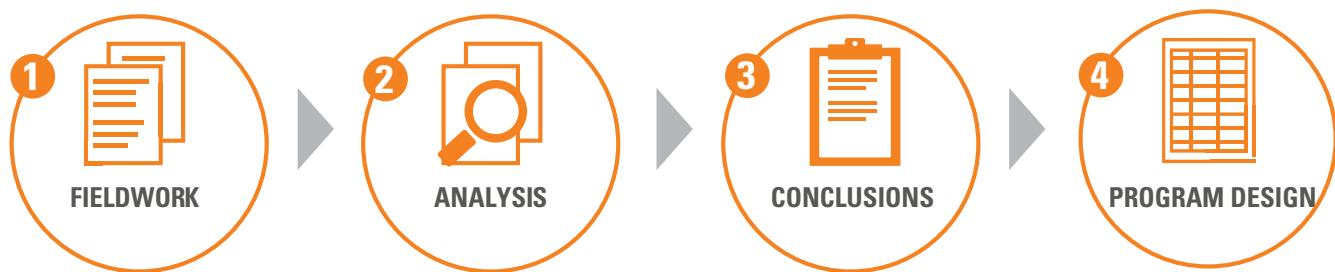


Kota Kita developed a research strategy that looked closely at the four different sectors, interviewing people, mapping issues, analyzing data and developing a set of conclusions. This study is presented here in the Program Design Toolbox.

METHODOLOGY

Between June and August 2015 the Kota Kita team engaged in fieldwork and analysis in Solo to design the Toolbox of proposed programs. The methodology to develop the Toolbox took us through a series of stages. In total eight different researchers worked to collect information, conduct interviews and facilitate focus group discussions.

The methodology used to develop the Toolbox is made up of a series of stages. Each is explained briefly below:



The development of the Program Design for the Pilot Phase resulted from four distinct phases: fieldwork and data collection, data analysis, discussion leading to conclusions, and finally the completion of this Toolbox of programmatic ideas.

Fieldwork

We gathered information to better understand attitudes, norms and behavior related to the use of bicycles by women and girls through focus group discussions, mapping exercises and fieldwork observation. 11 focus group discussions with stakeholders from the following groups: schoolgirls, women factory workers, Solo's Department of Transportation and civil society groups. This allowed us to better understand the conditions that determine whether they ride or what might be needed to encourage them to do so. Mapping exercises were carried out with women factory workers and the schoolgirls, to establish the main routes they take,

And the places where they experienced obstacles or danger. The maps helped to establish the travel patterns of both groups. In addition fieldwork observation allowed us to visit sites of interest, such as high schools and factories. Observations focused on analyzing the entrance and exit of students, their behavior and interactions, selected transportation modes and the physical condition of cycling infrastructure in and around the site.

Analysis

The analysis was conducted together with team members through a series of internal workshops where researchers and colleagues met to discuss the data and findings. Researchers presented photographic images, information graphics, maps and narrative accounts and analysis was conducted to question existing behavior, policies and possible actions. On further review the analysis synthesized more than 30 different findings to a set of 12 findings presented in this report.

Conclusions

The Toolbox program design process ends with 20 Proposed Actions and a set of conclusions drawn from the fieldwork, discussions and where Kota Kita proposes to take the Pilot Stage.

3 LENSES TO VIEW BICYCLING ISSUES

One of the main goals of this project is to innovate cycling for Solonese women. For this, we will analyze the needs and conditions of the specific target groups through specific approaches. We will refer to such approaches as lenses, which would serve as a framework for our findings and proposed actions. These lenses are drawn from Living Cities' own programmatic interests and focus areas.



Safety and Infrastructure

This lens will explore the subjects of infrastructure and safety for each one of the four action strategies. By interacting with our stakeholders, our purpose is to establish the different valorizations and interpretations that each one of them makes of these two topics. What are the DoT's policies in regards to road safety and infrastructure? What are some of the pro-cycling groups concerns and advocacy efforts in relation to this? How do women factory workers and schoolgirls perceive different routes? Do they feel safe and comfortable in Solo's streets while riding their bikes? A joint analysis of these issues –through various interactions with our stakeholders and direct field observations– will guide our formulations for improving the infrastructure and safety conditions of women cyclists in Solo.



Bicycle Design

The second lens will focus on learning about the conditions regarding bicycle design and provision across stakeholders. Its purpose is to establish common preferences in the design of specific bike models and accessories, in order to meet the needs and expectations of women cyclists. Further, this lens will analyze the existing conditions and concerns for bike maintenance and purchasing, as well as to determine the current policies for bicycle provision from the DoT and Solo's pro-cycling groups. The acknowledgment of these circumstances will help to understand the role of the bicycle in Solo and its position within public policies.



Norms and Attitudes

Our third lens concentrates on the current attitudes, behaviors, beliefs and norms of the public and institutions at large, which govern and determine the viability of bicycling in cities. Why do women choose to cycle? What are the main barriers that discourage the use of this mode? Which are the current normative policies in the city? What are the perceptions across different communities around road and traffic laws and regulations? Answering these questions will inform us about the overall valorization of cycling in Solo, as well as of the different perceptions of utility and attractiveness that different population groups have of this mode of transportation. Learning about this will guide our future proposals for education and normative policies and programs for women cyclists in Solo.





The research, conducted between June and August 2015, helped inform 12 Research Findings that are presented here. They form the basis for the 24 Proposed Actions for the Women on Wheels Pilot Phase.

12 RESEARCH FINDINGS

The following findings distilled from Focus Group Discussions, mapping excercises and observations inform our final solutions for the promotion of cycling for women in Solo. They are separated into the four targeted strategies:

1. PROMOTING CYCLING FOR SCHOOLGIRLS



Finding 1: Safe routes is the most important condition for schoolgirls

Most routes used by schoolgirls follow main roads. 70% of schoolgirls interviewed prefer to use major roads because they are more direct than small neighborhood roads. However, main streets are also more dangerous due to heavy traffic, particularly large trucks. 70% of interviewees indicated that having exclusive lanes non-motorized vehicles, and improving the existing slow lanes were the most important changes they would like to see.

Streets are crowded, in poor condition, and uncomfortable for cyclists. 77% of the schoolgirls stated that increasingly crowded streets, dominated by motorized vehicles, reduce comfort for cyclists. 30% stated that hot weather and bad road conditions were obstacles for enjoying cycling. Measures to regulate the dominance of motorized modes could help diminish their discomfort.



Finding 2: The ability to carry loads and good bike maintenance are important conditions for girls.

Elements for a convenient and attractive bicycle: Preferred model: The majority of the school girls indicated that their preferred model for cycling were city bikes (55%), followed by e-bikes (25%), and folding & mountain bikes (20%).

Accessories: Schoolgirls stated that the most important bicycle accessories were a basket and bell (50%), followed by gloves and mask (20%), and a back saddle(15%). A basket and bell, as well as a back saddle, should be considered key elements of a suitable bicycle design for schoolgirls, since they need to be incorporated during manufacturing, while gloves and masks are separate.

Repair shops are an essential part of the cycling routines of many Solonese schoolgirls. 90% of schoolgirls mentioned that they regularly go to repair shops to fix flat tires and to address other maintenance issues

Inaccessible bicycle maintenance is a barrier for schoolgirls. Many schoolgirls expressed concern about bicycle maintenance, which often discourages them from cycling. 44% stated that they'd be interested in learning about maintenance and repairs. Bicycle maintenance instruction could increase cycling amongst girls.



Finding 3: Social Norms and Attitudes Influence the choices schoolgirls make about bicycling

The physical and social benefits of cycling are highly valued. 44% of schoolgirls interviewed stated that the main benefits of cycling were exercise and fun, while 25% emphasized the low cost and convenience due to Solo's small size. Only 13% chose environmental benefits as the most important attribute of cycling. Activities and events that promote cycling as a recreational activity could lead to an increase in the proportion of schoolgirls opting to cycle.

Safety concerns and long travel distances are important obstacles to cycling. 38% of the respondents indicated that safety concerns were a constraint, and one especially emphasized by their parents. Another 38% of schoolgirls stated that long distances were an impediment to cycling to school.

Many schoolgirls ride motorcycles to school despite regulations. 90% of interviewed schoolgirls stated that many students ignore the schools' and police regulations prohibiting motorcycle use. To break the rules they take small alleys and park far away from schools. A higher enforcement power is needed to reduce the motorization of Solonese students. Schoolgirls directly relate cycling to regulations on motorcycle use by schoolmates: 75% percent of respondents related pro-cycling regulations to ordinances against motorcycle use by minors.

Schoolgirls are not interested in joining existing cycling clubs. Cycling clubs, which are popular in Solo with adults are often seen as inaccessible groups for schoolgirls. 65% of respondents declared to have no interest in pro-cycling groups while 25% perceived obstacles to becoming members of these communities. Incompatible schedules, low encouragement from their parents, and a lack of specific bicycle models or equipment were signaled as the main barriers.

2. PROMOTING BICYCLING FOR FEMALE FACTORY WORKERS



Finding 4: The dominant and growing presence of motorized vehicles diminishes the quality of cycling for many factory workers

Factory workers are split in their preference for large or small roads. 43% of the interviewed women preferred main roads, perceived as fast connecting corridors, while 35% preferred smaller streets with lower motorcycle presence, perceived as safer routes. Formulating policies for the improvement of cycling conditions on both types of roads will augment accessibility and comfort for many factory workers.

The primary condition for convenient cycling is a low presence of motorized vehicles. 70% of our respondents indicated that clearing the roads of motorized vehicles was key for safe and convenient cycling. 20% stated the importance of renovating and eliminating parking in slow lanes. These recommendations should guide future infrastructure improvements.

Growing congestion threatens the pleasure of cycling. 50% of the factory workers stated that growing congestion from motorized vehicles has turned Solo into a non-friendly city for cycling; only 38% still believe that Solo's short distances and flat topography made it a pleasurable city for biking. Improved traffic management and other regulatory measures could reverse this trend.



Finding 5: Convenience plays a large role in making the decision to use either a motorcycle or bicycle for women factory workers

Marketing campaigns and financing mechanisms for motorcycles eclipse easy access to bike units. 100 percent of the respondents signaled having easy access to bicycles, and owned at least one unit per household. However, they indicated that the finance mechanisms for the purchase of motorcycles made them very attractive and accessible, often relegating bicycle use to their children.

The vast majority of the women factory workers prefer city bikes (90%), followed distantly by folding bicycles (10%). In terms of bicycle accessories the majority (78%) signaled the need for a bicycle basket for carrying goods.

Repair shops are important in solving common maintenance issues and bicycle up-keep. All interviewed factory workers had used repair shops for maintenance and to fix occasional flat tires. 7 out of 10 respondents were interested in learning about bike maintenance, demonstrating the need to incorporate it into pro-cycling campaigns.



Finding 6: Many women factory workers are discouraged from bicycling to work due to their daily household responsibilities, low awareness, and a lack of workplace incentives

Factory workers are split between being captive riders and committed, everyday cyclists. 53% of respondents ride a bicycle because it is their only option for transportation, while 46% did so because they recognize the benefits of cycling – in particular because it helps improve their health, is low-cost, and is easy to use. Extending the awareness of these and other benefits to self-recognized captive riders may improve their perception of cycling.

The daily burden of household chores and work schedules persuade many factory workers to use motorized vehicles. 60% of the non-cyclist respondents dismiss bicycle use due to their need for a fast and convenient means of performing daily chores; 40% stated that motorcycles were the only mode of transportation available to them. Efforts to make cycling more convenient for working women can help reverse this transition to motorization

Solonese factories have little influence over workers' transportation decisions. 20% of respondents said, the factories used to give credits to workers to purchase bicycles, while 80% stated that the factory had no influence over their mode of transportation other than through the provision of bicycle parking in the work place. Facilitating new incentives for cycling, along with the recuperation of past pro-cycling policies, may encourage more women to bike to work.

Factory workers have little awareness about cycling regulations 96% of the respondents were unaware of any laws or regulations protecting cycling. 83% stated that if these regulations improved road safety and quality they would cycle more. This demonstrates the necessity of prioritizing bicycle safety policies.

Factory workers have little awareness about pro-cycling groups. 72% of respondents did not know of any pro-cycling groups, while 20% knew cycling groups from their work place and from city bike events like Car Free Sunday and Last Friday Ride. 40% expressed interest in belonging to a cycling group.

3. PROMOTING BICYCLING THROUGH CIVIL SOCIETY ORGANIZATIONS



Finding 7: Infrastructure and policy improvement are the primary focus of Solo's bike communities.

Bike2Work's members believe that the increasing popularity of cycling in recent years proves the need for new bicycle paths and the improvement of existing infrastructure. They are also concerned by the practice of parking motorcycles along slow lanes, the lack of respect motorized vehicles show cyclists, and the lack of bicycle parking spaces throughout the city.



Finding 8: Targeted promotions and give-away programs work

Bike-To-Work gives away bicycles to high school students at charity events. Seli Solo Raya has a campaign targeting women, promoting their bikes' adjustability and portability. Such promotions appear successful in attracting positive attention.



Finding 9: Solonese bike communities value joint collaboration in efforts to influence pro-cycling policies

Bike2Work and Seli Solo Raya are primarily focused on promoting strong cycling communities in Solo. Both movements are interested in expanding the benefits of cycling, and support one another in building a culture of respect around the bicycle.



Finding 10: Civil society groups are very interested in collaborating

Bike-To-Work and Seli Solo Raya believe that joint collaboration is crucial for achieving significant impacts. Both groups are interested in joint efforts with the private sector, city government and other pro-cycling groups. Bike2Work sees open collaboration as necessary for ongoing creativity and innovation.

4. PROMOTING BICYCLING THROUGH SOLO'S DEPARTMENT OF TRANSPORTATION



Finding 11: Solo's Department of Transportation has formulated numerous pro-cycling Initiatives.

Most of the government's pro-cycling objectives revolve around the improvement of slow lanes. The department has plans to relocate motorcycle parking and street vendors to a new building, and to conduct studies of slow-lanes to inform future interventions. Additionally, the DoT plans to develop pedestrian paths and slow lanes around Pasar Gede. While these efforts are promising, government plans lack structural and hierarchical organization, as well as a clear implementation strategy.

Other infrastructure projects propose small-scale interventions, such as:

- Traffic lights and signage for non-motorized vehicles
- Bicycle parking in public areas
- Bicycle boxes at intersections



Finding 12: Collaboration and educational campaigns are the Department of Transportation's primary strategies for the promotion

The DoT considers education the best path for the promotion of cycling. To this end, the DoT has created road safety education programs for schoolchildren in partnership with the police department. The program currently works with 11 schools and is considered a pilot project, transferable to other education centers in the future. The DoT has also collaborated with Bike2Work to develop coaching clinics and activities to promote cycling to school in selected education centers.

Furthermore, the government of Surakarta, school authorities, and the police department have developed a policy prohibiting the use of motorcycles by minors and established specific measures for regulation. In accordance, the schools of Solo must ban motorcycle parking for under-aged students and provide bicycle parking. This demonstrates the DoT's openness to collaborative efforts with other departments, civil society groups, and the general public.

The DoT is responsible for Solo's most popular cycling event: Car-Free Sunday. Every Sunday, a section of Solo's main artery, Jl. Slamet Riyadi, is closed to motorized traffic from 5-9am, inviting families and groups of friends to cycle, skate and stroll in a large motor-free area.

Summary of the Analysis

Promoting cycling for school girls		
Safety and Infrastructure	Bicycle Design	Norms and Attitudes
Safety is the main concern of school girls	Preferred model for cycling is city bikes, followed by folding bike, mountain and e-bikes	Physical and social enjoyment is biggest benefit
Direct routes are highly utilized and appreciated	Important bicycle conditions are able to carry loads and good maintenance	Safety concerns and distance are barriers
Growing congestion and motorization are highly discouraging	Little knowledge in bike maintenance is a barrier	Motorcycle use is problematic
Hard crossings and busy intersections are perceived as dangerous sites for cycling	Repair shops are commonly utilized services	Cycling clubs are unpopular with school girls

Promoting Bicycling for Women Factory Workers		
Safety and Infrastructure	Bicycle Design	Norms and Attitudes
Regulating motorized traffic is their main concern	High interest in learning about bicycle maintenance	High interest in learning about bicycle maintenance
Main routes are highly utilized, complemented by secondary streets	Repair shops are commonly utilized and reliable services	Household responsibilities pressure many to shift to motorization
Growing congestion is highly discouraging	Financing mechanisms for motorcycles eclipse the popularity of bicycles	Little or no incentives from factory authorities
The physical renovation and regulation of slow lanes are highly demanded		Little knowledge of cycling laws and regulations is limiting

Promoting Bicycling Through Civil society		
Safety and Infrastructure	Bicycle Design	Norms and Attitudes
Growth of active cyclists challenges infrastructure capacity	Consolidated programs of bike provision from Bike2Work	The promotion of strong cycling communities is the main interest of these collectives
Government and institutions need to update their perspectives on the subject	Several cycling communities advocate for the benefits of specific bicycle models.	Building a culture of respect around the cyclist is necessary
Bicycle parking has been neglected.		Joint collaboration is necessary for achieving significant impacts
		Openness, creativity and innovation are guiding values for cycling groups

Promoting Bicycling through Solo's Department of Transportation		
Safety and Infrastructure	Bicycle Design	Norms and Attitudes
The regulation and physical improvement of the slow lanes is one of the DoTs main priorities	Small scale interventions lack a clear implementation strategy	Education is the DoT's main strategy for promoting cycling.
Their value and success is recognized by proposals of extension of this type of infrastructure		Road safety and cycling technique campaigns are the protagonists of this strategy
Small scale interventions lack a clear implementation strategy		All regulatory and educational policies are formulated under the format of joint collaboration

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12 RESEARCH CONCLUSIONS



PROMOTING CYCLING FOR SCHOOL GIRLS

1. Safe routes to school are critical.

Safety concerns are a primary limiting factor for schoolgirls and their parents, and addressing them is paramount to promoting cycling for girls. Improving safety requires better physical infrastructure, better traffic management and regulations, and education about safety norms.

2. Solo's Slow Lanes are an underutilized asset.

Once regulated and physically improved, the slow lanes can be used to promote cycling as they provide a safe, comfortable, and convenient path for bicycle transit via Solo's main routes.

3. Access to bike maintenance and training will help to remove barriers.

One of the observed barriers to cycling is that many schoolgirls feel ill equipped to fix bikes themselves. This problem can be resolved both by promoting bike maintenance services and training for self-sufficient bike maintenance.



PROMOTING BICYCLING FOR WOMEN FACTORY WORKERS

4. Regulating increasing motorization is critical.

Growing street congestion and the lack of traffic regulation were identified as the main barriers to convenient cycling. This proves the need for traffic management measures and restrictions to create safe and comfortable conditions for cycling to work.

5. Access to bicycle purchase and maintenance strengthens attractiveness and convenience.

The convenience of financing mechanisms for motorcycle purchase far exceeds that for bicycles, which are nearly non-existent. Improving the ease of access to quality bicycles, complemented by the transmission of maintenance techniques and the promotion of related services, could increase rates of cycling.

6. Incentives to bicycle to work would motivate many to switch to cycling.

In past decades, many factories stimulated cycling to work through the provision of bicycles, extensive parking, and other incentives. These and other innovative policies could have a strong impact on biking's popularity in the work place.





PROMOTING BICYCLING THROUGH CIVIL SOCIETY

7. New policies and infrastructure improvements are key.

Bike2Work and Seli Solo Raya both emphasize the importance of adapting infrastructure to the current needs of cyclists. Efforts should address the issues of infrastructure and policies, and promote collaboration between the city government and civil society.

8. Promotions and bicycles giveaways are strong incentives.

Bike2Work's charity events that provide bicycles to students could be extended to additional education centers, factories, etc. The capacity, knowledge, and experience of these groups are important assets in strengthening of these types of campaigns.

9. Solonese bike communities value collaboration.

This is promising for the future development joint collaborations, and is paramount for achieving true advances in cycling infrastructure, policies and awareness campaigns



PROMOTING BICYCLING THROUGH SOLO'S DEPARTMENT OF TRANSPORTATION

10. The Department of Transportation prioritizes the city's slow lane infrastructure

The multitude of proposals for the renovation, regulation, and extension of Solo's slow lanes evidences their value to citizens and local authorities. This project is by far the DoT's most developed pro-cycling strategy, and its success is contingent on an effective implementation strategy.

11. Solo's Department of Transportation has formulated numerous pro-cycling

policies and interventions. This is positive indication, yet they often lack a clear implementation strategy. This threatens the viability of these projects and reduces their chances of producing a positive impact on cycling.

12. The Department of Transportation should collaborate with civil society groups to promote cycling.

The development of two educational campaigns with students, created in partnership with pro-cycling groups and public departments, evidences the DoT's openness to joint collaboration. The incorporation of partners into the DoT's policy formation and programming will also serve to further enhance their public appeal and validation.



24 PROPOSED ACTIONS

We put forward a series of proposed actions to help bring about needed changes to support women's cycling in Solo.

Designing solutions. Guided by the results and main findings from the previous stage, we move to the formulation of a number of solutions for each one of the strategies. These solutions aim to respond to the necessities and conditions of each cycling community or related institution

PROMOTING CYCLING FOR SCHOOL GIRLS



Action 1: Redesign Solo's slow lanes and enforce regulations on them

Once rehabilitated Solo's historic slow lanes can be a valuable resource for the bicycle community, they provide comfort and convenience for cyclists. At the moment they need to be reclaimed and restored as motorcycles and vendors predominate. A re-design project could include landscaping, repaving damaged areas, and relocating motorcycle parking and street vendors. The slow lanes routes most preferred by schoolgirls are those that run parallel to Jl. Slamet Riyadi, Jl. Adi Sucipto and Jl. Rajiman. Additional regulations and enforcement are needed to maintain improved slow lanes, as well as support from a multi-stakeholder group (including the school authorities, students, a citizen task force and government) to implement and regulate them.



Action 2: Regulate traffic and safety at selected key intersections

Increasing safety at heavily transited intersections would significantly improve conditions for cyclists. At the moment intersections, along Jl. Slamet Riyadi and Jl. Adi Sucipto, together with those near education centers, lack sufficient design measures to integrate bicycles and are of priority concern of school children. Installing traffic lights, bike boxes and signage, will improve cyclist safety there. These safety features requires the collaboration of the Department of Transportation, local government and a citizen task force.



Action 3: Design and market bicycles specifically for schoolgirls

Designing and promoting a special model of bicycle for schoolgirls significantly boost use amongst this age group and respond to their needs. At the moment there is no specially designed model and instead motorcycle propaganda is targeting youth, coupled with financing packages that have increased their popularity. Working together with bike manufacturers and retailers, we can design a bicycle model, promote a campaign focused on schoolgirls, and create financing mechanisms that provide easy access for buying them.



Action 4: Give away bicycles to high performing students

Bicycles can be given away in campaigns that recognize student achievement, and support those from economically disadvantaged backgrounds. One of the issues today is that many students who need personal transport can't afford them; instead they ride motorcycles which might be used by their parents. The Solo's mayor's an existing initiative with several schools, can be expanded and strengthened. Such an action requires collaboration between local government, pro-cycling groups, school authorities, student representatives, bike manufacturers and distributors.



Action 5: Transform selected repair shops into bicycle nodes

Selected service and repair shops can be renovated,

becoming multi-functional bicycle nodes, servicing the needs of cyclists. Schoolgirls are very interested in learning about bicycle maintenance, but lack a place to go to. Bicycle nodes can help them maintain and repair their bicycles, and sell spare parts and accessories, as well as offer rapid courses on maintenance and safety. In the future they may also become strategic points where a bicycle sharing system may develop in Solo, where one might transfer from one node of transport to another.

This would create a safe and attractive space to support cyclists, and a meeting point for the bike community. This action requires the participation of bicycle manufacturers and dealers, repair shop owners and pro-cycling groups.

Action 6: Promote cycling events for students

Organizing promotional events can disseminate the benefits of cycling throughout Solo's young student population. Despite a significant amount of schoolgirls valuing cycling's recreational and health benefits, many of them found that bicycle events and groups were not accessible in terms of schedule and requirements. We propose scheduling events during times and places compatible with young students' lifestyle. Such events will create social bonds between current and potential cyclists, fostering a stronger and highly conscious cyclist community. Social media will be used to publicize these events using schemes such as competitions and promotions for the marketing of bicycles. Its design and implementation should count with the participation of bicycle manufacturers and dealers, school authorities, pro-cycling groups and Solo's DoT.

Action 7: Conduct road safety campaigns to educate students, school authorities and caregivers

Educational road safety campaigns can be organized for students, school authorities and families to teach safe and responsible practices on roads. These campaigns will cover giving respect to other vehicles, safety guidelines and traffic rules. By incorporating school authorities and families into the campaign will help disseminate educational measures into lives of those that most influence students. In addition we propose the extension of incentive and reward programs for high performing and economically disadvantaged students with bicycles. Solo's current mayor has already implemented this policy in some schools, we proposed to expand and strengthen it.



PROMOTING BICYCLING FOR WOMEN FACTORY WORKERS



Action 8: Advocate for new bike paths on selected secondary roads.

Creating bike paths on selected secondary roads will increase convenience and safety of cycling for women factory workers. Many women factory workers indicated that they prefer using secondary streets, due to fewer motorized vehicles. At the same time, several workers stated that growing motorcycle traffic reduced their safety and comfort while cycling. Creating bicycle paths would involve collaboration Department of Transportation and government agencies, and studies for the selection of routes and a design proposal. The new bike paths should be integrated into a wider network of bicycle infrastructure throughout the city.



Action 9: Provide adequate bike parking and complementary facilities.

Providing adequate parking spaces and complementary facilities to Solonese factories will make bicycling more convenient and practical for women workers. Such facilities include bicycles parking spaces, shower and locker areas for freshening up, and small 'bike rooms' for basic maintenance. These facilities can encourage more women to bicycle, because it will be more convenient and comfortable to do so. These actions require the collaboration of factory authorities and union leaders.



Action 10: Develop a bicycle marketing campaign for factory workers.

Promoting specific bike models to women factory workers through a well-executed marketing campaign in collaboration with bike manufacturers and retailers. At the moment the marketing of motorcycle has become extremely sophisticated and widespread, but there is hardly any such marketing done by the bicycle industry. Motorcycle campaigns go as far as providing financing packages. A responsive and adaptive cycling campaign, offering accessible financing mechanisms, can offer an alternative that is well suited for this demographic.



Action 11: Give away bicycles to factory workers as corporate social responsibility

Bicycle giveaway and incentive programs can reward outstanding workers and employees with low economic resources, and promote increased bicycle use.

Often factory workers do not have the means to buy good bicycles, so many are forced to rely on financing schemes for motorcycles instead. At the same time several factories in Solo have precedents of bicycle giveaway schemes in the past, an initiative that we plan to recuperate and expand. This strategy could be framed as a corporate social responsibility program. Pro-cycling civil society groups can also provide guidance and support through educational and recreational activities to boost these workplace campaigns.



Action 12: Promote bicycling campaigns at Solonese factories.

Factories are good places to promote cycling through campaigns because so many workers already use bicycles, or potentially could, if they were more aware of its benefits or had better access to them. At the moment the vast majority did not have significant knowledge about pro-cycling regulations or laws, and see that motorcycles are a barrier to them. Campaigns to raise awareness would help to spread knowledge about road safety (such as how to avoid accidents and advocate for their rights as road users), and help them learn about bike maintenance. Training courses could be given as programmed activities during working hours, in to save the time of working mothers. The development of pro-cycling campaigns at work offers factory workers an educational opportunity that doesn't reduce the time they spend on daily activities, but it also creates a collective learning and socializing experiencing that strengthens joint bicycling commuting and mobilizes solidarity amongst workers.



Action 13: Promote bicycling campaigns at Solonese factories.

Facilitating skills and platforms for the creation of pro-cycling or campaigns at the workplace. A significant amount of our interviewed women family workers signaled the large presence and dominance of motorized

modes as an important barrier for cycling. Further, the vast majority did not have significant knowledge about pro-cycling regulations or laws. Learning about road safety and adequate cycling conducts would provide workers with the knowledge to avoid accidents and advocate for their rights as road users. Further, bike maintenance should be included in these campaigns to respond to the workers' interest in the topic.

This initiative would include training courses for factory workers on road safety and adequate cycling conducts and maintenance, imparted at the workplace as programmed activities during the work schedule, in order to save time expenditures for working mothers. This will require the participation of all factory workers, including non-cyclists, in order to achieve a widespread road safety awareness campaign. The development of on-work pro-cycling and training campaigns not only offers factory workers an education platform that does not reduce their time for daily activities, but it creates a collective learning and socializing experiencing that could strengthen joint cycling commuting and mobilization solidarity among workers.

You can integrate civil society bicycle organizations to make this work and create a bigger community around this idea.



Action 14: Ensure female factory workers benefit from multi-functional bike nodes

Women factory workers can be better integrated into the benefits of planned multi-functional bike nodes and bicycle infrastructure through a campaign to raise awareness about them. Female factory workers can be designated as special beneficiaries of the initiative, for example by receiving special courses in bicycle maintenance and discounts on bicycling gear and maintenance services.



PROMOTING BICYCLING THROUGH CIVIL SOCIETY ORGANIZATIONS



Action 15: Build capacity and organizational skills for pro-cycling groups

Building the organizational capacity of pro-bicycling groups through training schemes will strengthen civil society groups who promote bicycling. Over 40% of the focus group discussion participants showed interest in belonging to pro-cycling groups; and these groups have already led to the growth of women's cycling groups. Further promoting the capacity of such groups to create the perception of 'safety in numbers' or the idea of large mass movements and increases the visibility and perceived safety of women cyclists. Trainings, workshops and good practice learning material could for example help civil society groups develop more ideas. For example better schedules for group rides, or programming special activities, such as collective shopping trips and other daily routine activities. These trainings and skills will help support those groups attract more members and have a greater impact.



Action 16: Advocate for bicycle parking

Advocating for more bicycle parking and better regulations will improve the conditions of many cyclists in the city. At the moment there is very little parking infrastructure or spaces. We propose working with pro-cycling groups, the Department of Transportation and local government, to standardize the location of bicycle parking infrastructure throughout the city (so it responds to numbers of users per establishment) and prioritizes parking for public buildings, schools, government offices, markets and parks.



Action 17: Involve pro-cycling groups in designing, implementing and promoting bicycle infrastructure

Pro-cycling groups will be actively involved in the design and implementation process for creating new cycling infrastructure, as well as bicycle giveaway programs and pro-cycling campaigns. This can help leverage the knowledge and advocacy power of these groups and improve government proposals and initiatives that encourage cycling in Solo. This proposed action builds on the Department of Transportation's willingness to collaborate and legitimize and can potentially improve their programs. This requires open discussions and executive meetings, the creation of a Memorandum of Understanding, participatory workshops and periodic progress revisions.



Action 18: Create a guidebook that promotes different bicycle-related information

Launching an educational marketing campaign that disseminates an informational guidebook about different bicycle models for women and girls, indicating their benefits, maintenance requirements and profile of use. This would serve as a helpful resource for current and potential cyclists, providing them with information to make an informed bicycle purchase, as well as other information, such as bicycling routes, multi-functional nodes, repair shops and pro-cycling groups they can join. This would involve a collaboration between pro-cycling groups, bicycle manufacturers and distributors.



Action 19: Strengthen and extend existing pro-bicycle programs

Civil society pro-bicycle programs are already having an impact, good examples are

Bike2Work's 'Bike To School Program' and 'Bike To Campus Program', these should be supported and extended. By linking such civil society groups with corporate responsibility programs, or helping them raise money, they could increase the impact and strengthen their programs further. They could also offer a wider variety of pro-cycling programs, adapted specifically to women citizens, offering more possibilities for participation. Possible proposed programs could be the 'Bike To Market Program' and 'Bike At Night Program'.



PROMOTING BICYCLING THROUGH SOLO'S DEPARTMENT OF TRANSPORTATION



Action 20: Create a city-wide network of bicycle infrastructure

At the moment the government has plan to create a city-wide network of bicycle infrastructure. We propose that the priority plan, the creation of a slow lane and pedestrian infrastructure around the central market, Pasar Gede, be extended to further create a larger scale system. This system includes not only renovating and improving existing slow lanes, but also creating new cycling paths to increase accessibility throughout Solo. Through the collaborative efforts of school authorities, the citizen task force, pro-cycling groups and the Department of Transportation a strong partnership could be formed to advocate for the necessary budget needed by the Department of Public Works, and to raise awareness throughout the city.



Action 21: Create a multi-stakeholder task force to advocate for more cycling

Collaborative partnerships between organized civil society and the Department of Transportation are essential for the success of pro-cycling policies and infrastructure projects. We propose the creation of a citizen task force that involves the participation of existing pro-cycling groups, together with government officials. Together they can better design projects, such as locate traffic signage, traffic lights, bicycle parking and bike boxes, as well as more effectively launch public awareness campaigns that educate the public about new policies. For this to happen more spaces for interaction and discussion are needed and more collaborative partnerships that support certain projects and events. A potential moment for this could be the launch of this report, when different stakeholders will come together to learn about the findings of this study.



Action 22: Link the Department of Transportation's capacities to the mayor's bicycle giveaway initiative

Supporting and strengthening the Mayor's bicycle giveaway campaign can extend its benefits, but much more impact will be created if the Department of Transportation's pro-cycling events and policies were linked too. At the moment the Mayor and the Department of Transportation do not really coordinate with one another. But there is significant benefits to gain if all these policies could be integrated together, using the Mayor's example, and adding legitimacy to a city-wide campaign.



Action 23: Enforce existing regulations that ban motorcycle use by minors

The enforcement of existing regulations that ban motorcycle use by minors are urgently needed because high school students frequently flout them and use motorcycles illegally. The proposed action is to encourage both the local government and the police to work with high school authorities, to better monitor and discipline those students using motorcycles. Doing so will help encourage use of bicycles and also reduce their exposure to accidents and road hazards.



Action 24: Expand and reproduce pro-cycling events such as Car Free Sunday

Car Free Sunday is an enormously successful government policy that creates a public space for cyclists every Sunday along Jl. Slamet Riyadi, Solo's main thoroughfare. We propose advocating for the expansion of this policy, not only in time (beyond the 9 am limit it currently has) and beyond the geography limits that it also occupies. This would create a greater impact on air and environment quality, diminish motor-dependency and allow more people to participate in the event, thereby raising awareness about the benefits of bicycling.



GENERAL CONCLUSIONS

After reviewing our four chapters or strategy lines for the promotion of cycling for women in Solo, we are able to find three main common grounds for action. These are the result of shared concerns and interests between civil society, pro-cycling groups, the Department of Transportation and other city authorities.

Our three identified overarching solutions to promote cycling are:

1. The recuperation and extension of Solo's slow lanes, and their integration with complementary bike paths for the consolidation of a large-scale bike network.

One of the most important lessons is that there was widespread consensus amongst all stakeholders of the importance of restoring the slow lanes for bicycling use. Both schoolgirls and factory workers stated that they preferred to bicycle using the slow lanes. At the same time pro-cycling groups and the Department of Transportation voiced their interest in recuperating and regulating the slow lanes. The Department of Transportation is currently implementing such a project that around Pasar Gede. With consensus around the strategic importance of the slow lanes amongst stakeholders helps to strengthen the feasibility and significance of this project and its integration into a wider network for cycling paths in Solo.

This will translate into greater access and security for cyclists in the city, making their trips more enjoyable and efficient.

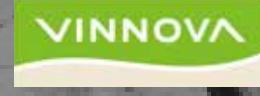
2. Developing integrating pro-cycling educational campaigns.

Education is a highly valued concept by our stakeholders. Our interviews with all four groups allowed us to see how different population groups are eager to learn about cycling safety, maintenance and techniques, while the city authorities and organized groups have concentrated an important part of their efforts, if not most of it, into developing and formulating educative platforms for the promotion of cycling and sustainable transportation.

Developing educational campaigns at schools, factories and other sites that integrate cycling groups, public authorities, caregivers, and other members of the community, will help create a widespread awareness of the importance and benefits of cycling. Creating a culture of respect for cycling that reaches a wide sector of the population, is equally or even more important than the development of extensive bicycle infrastructure.

3. Encouraging joint collaboration

The success of the first two solutions is highly dependent on the consolidation of strategic partnerships between civil society groups, biking communities and public authorities. These partnerships will not only amalgamate different perspectives, capacities and skills, but they a higher capacity of legitimization and public embracement of the projects. Seizing the moment of openness from bike groups, civil society and public authorities to embark into joint efforts for the promotion of cycling is a high priority for this project.



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