

# Bicycle Repair Station

Anna-Mari Knuuti

Juulia paloranta

Juha Johansson

Fall 2012



# Bicycle Self Repair Station

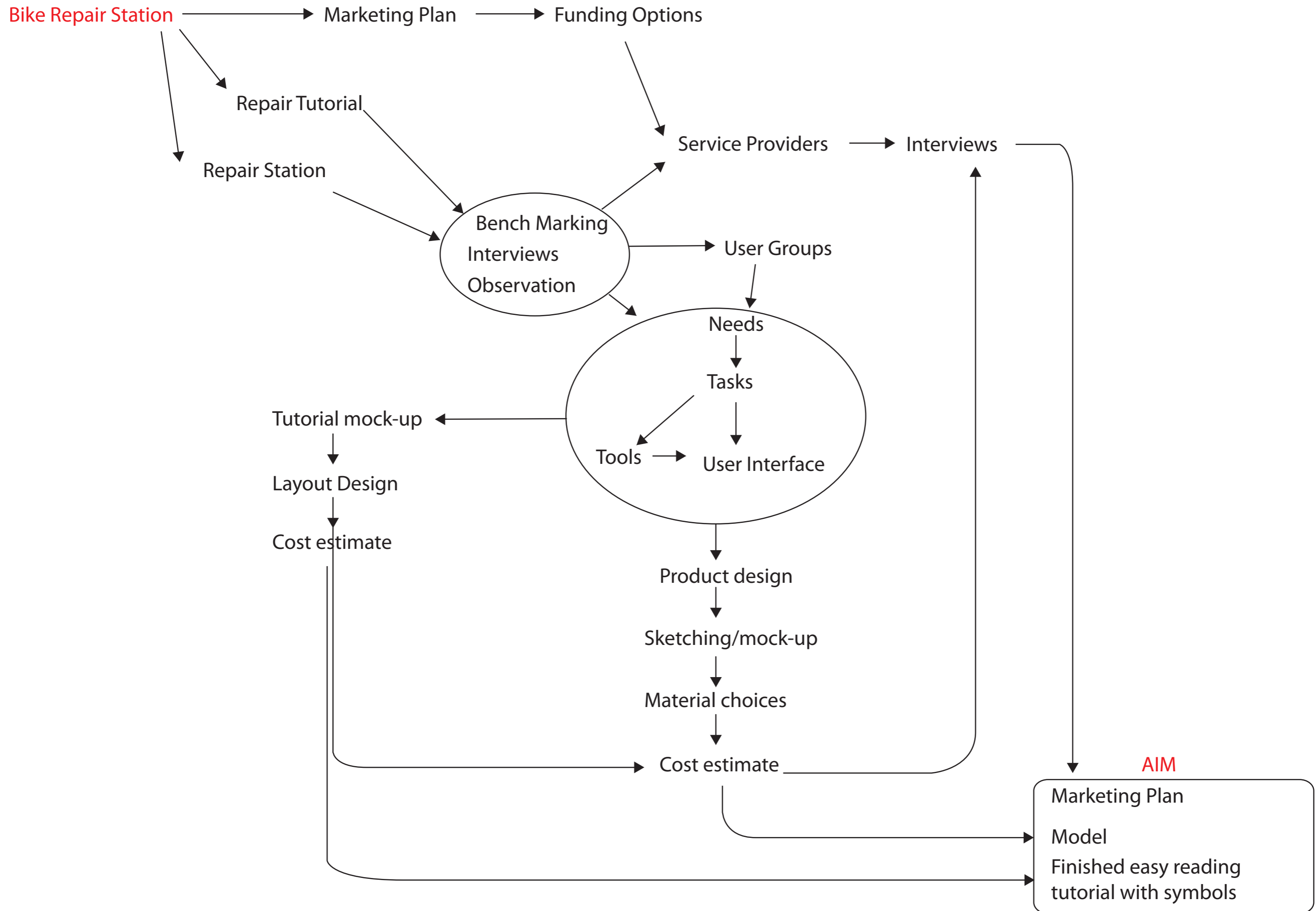
## Plan of Actions

| Repair Tutorial   | Repair Station                                      | Marketing Plan                            | week |
|---|---|---|------|
| Bench marking<br>Actions?<br>Tools?<br>User study<br>Interviews, Observing,<br>multivariate methods |   | Funding options?                          | 35   |
|   |   | modelling options by multivariate methods | 36   |
| Layout designing  | User interface development<br>Sketching<br>Mock-up? | Interviews?                               | 37   |
|   | Material choices<br>3d model?                       |   | 38   |
|   | Model   |   | 39   |
| Finished easy reading tutorial with symbols   |   | Marketing Plan                            | 40   |

Concept is divided into three different sections

**Target groups**  
Way to work bicyclists  
Hobby bicyclists  
Active bicyclist  
Professional bicyclists

**AIM**



# Existing solutions of independent bicycle repair stations



<http://www.gymnasium.com/2-quick-construction-station-for-your-self-service-bike-repair-station-project-sponsoring-energy-based-gym-night/>

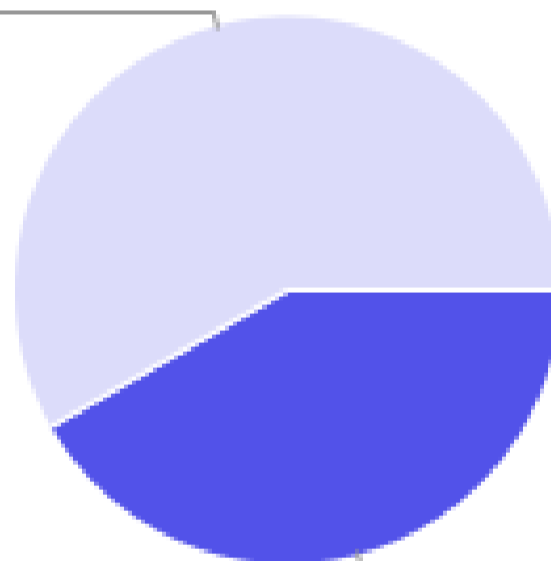
<http://www.bikefixtation.com/products/full-service-kiosk>

# Bicycle repair station survey

## 60 answers

### Sukupuoli

Nainen [35]

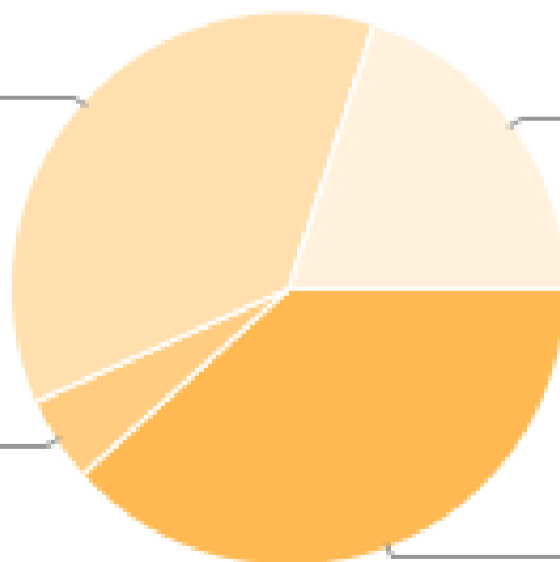


Mies [25]

### Minkälainen pyöräilijä olet?

Vapaa-aika [22]

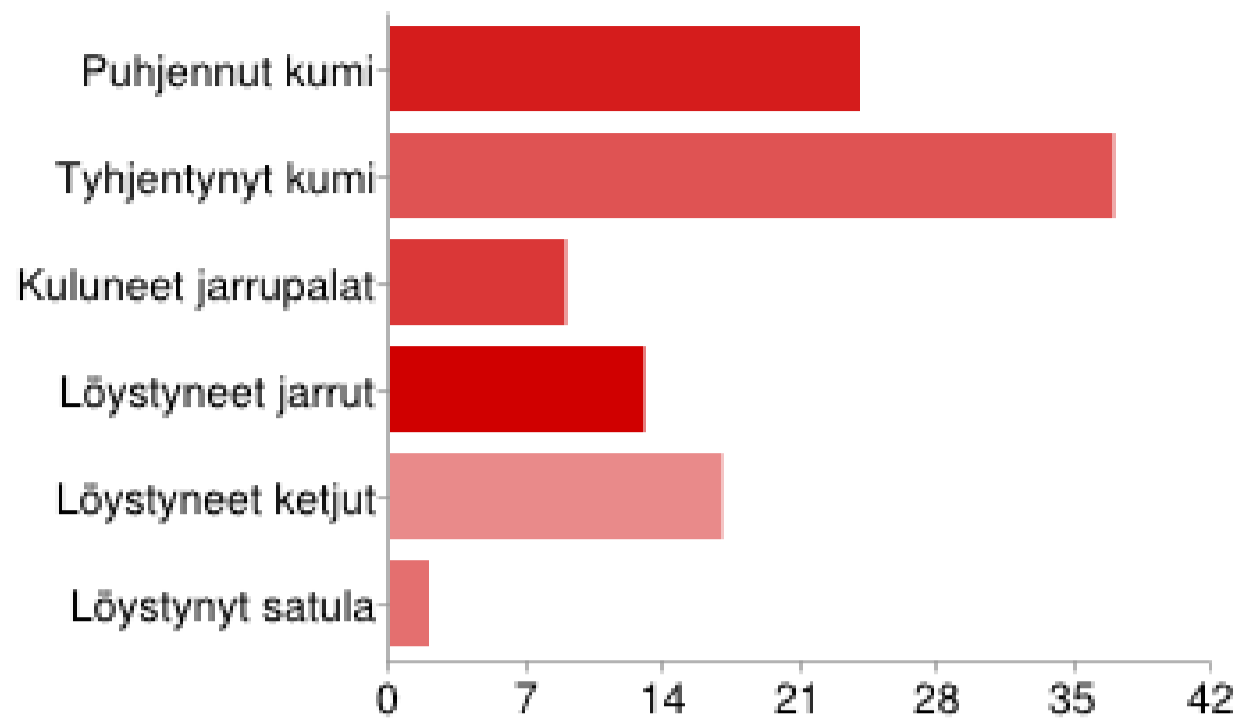
Satunnainen [12]



Liikunta [3]

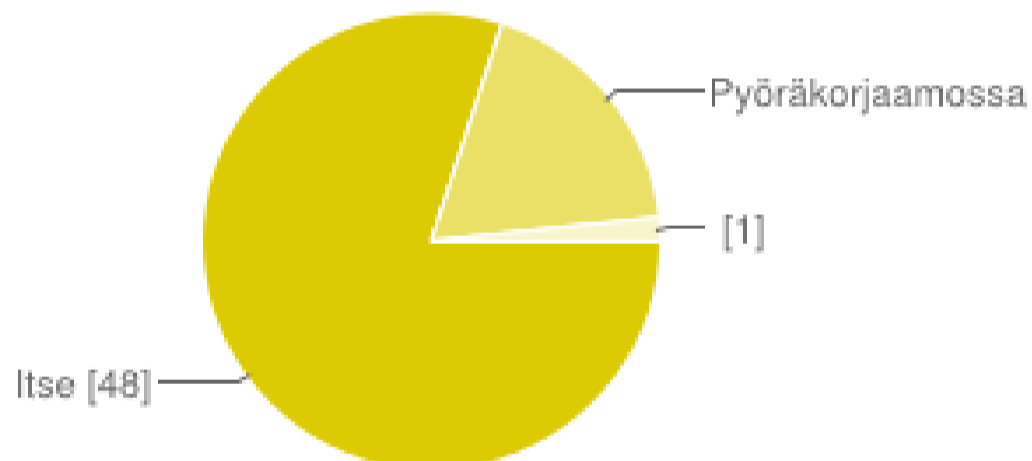
Työmatka [23]

### Mitä huollettavaa pyörässäsi useimmiten esiintyy?



**Most common problems:**  
**empty or broken tire**  
**loose chains**

### Missä huollat pyörääsi?



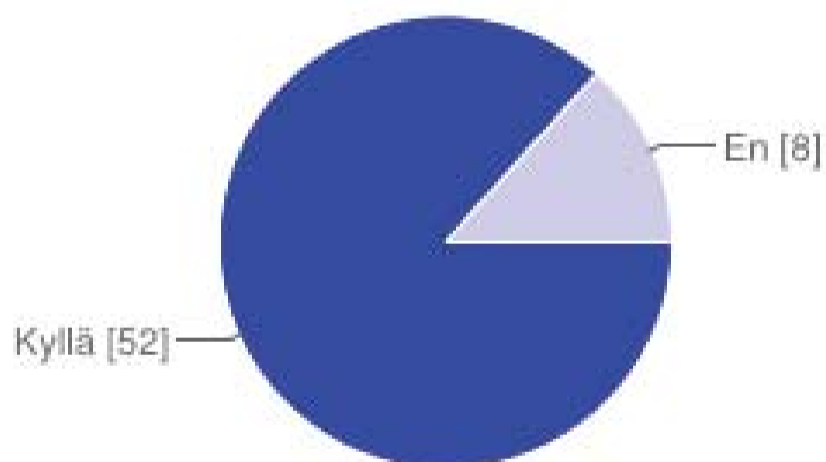
**80% of the cyclists repair their bicycle by them selves**

### Mitä huoltotoimenpiteitä osaat tehdä itse?



100% of the people knows how to pump their bicycle tires

### Olisitko valmis huoltamaan itse pyörääsi työkaluin varustetulla itsehuoltopisteellä?

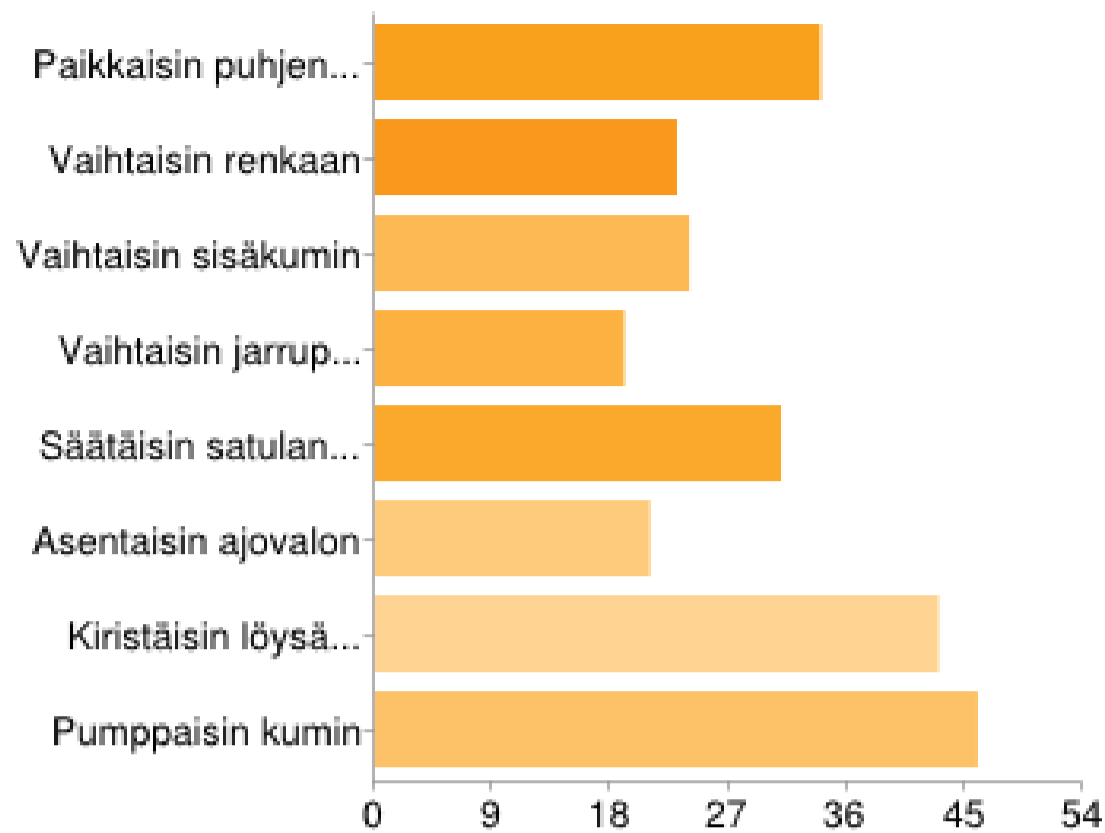


Kyllä

En

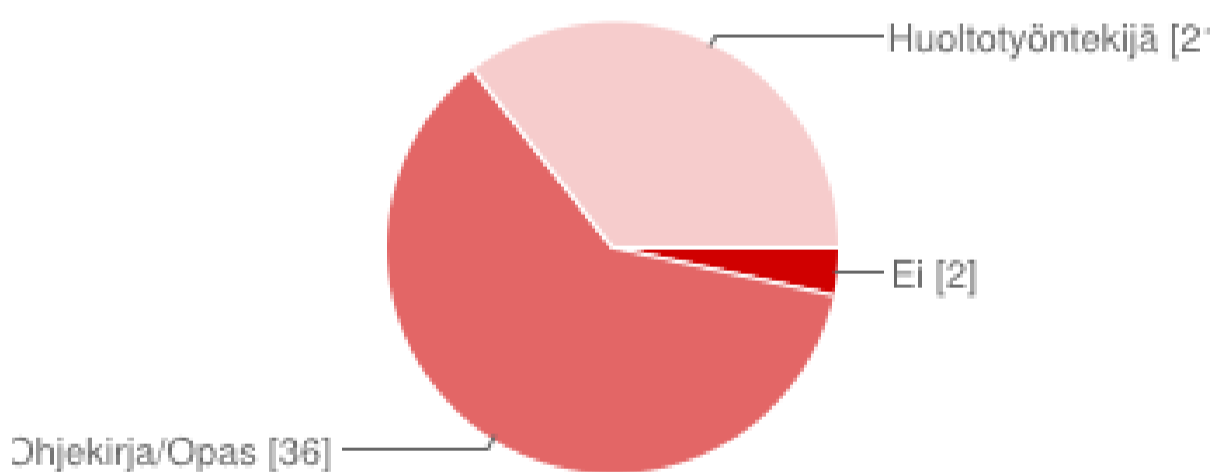
87% of the answerers would repair their bicycle on a self repair station

### Mitä huoltotoimenpiteitä tekisit itsehuoltopisteellä?



Washing the bicycle would be one of the most popular things to do on a repair station

### Pitäisikö itsehuoltopisteellä olla ohjeistus pyöränhuoltoon?



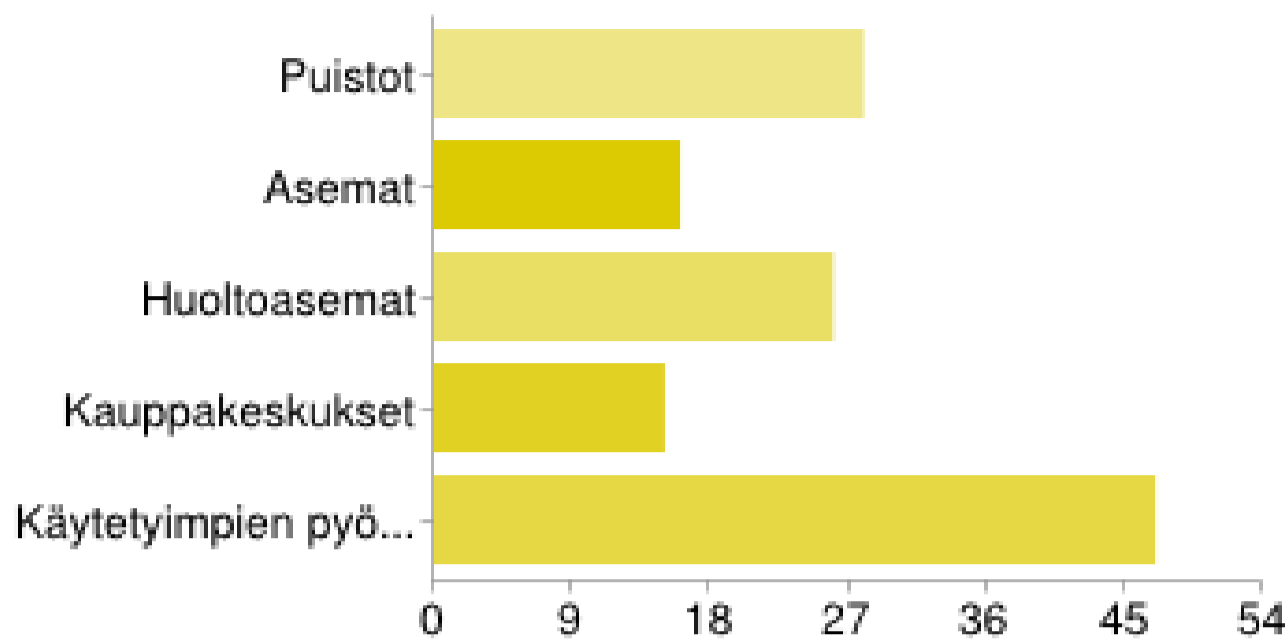
|                  |    |
|------------------|----|
| Ei               | 2  |
| Ohjekirja/Opas   | 36 |
| Huoltotyöntekijä | 21 |

# Guidance?

60% of the answers for a guide book attached to the repair station



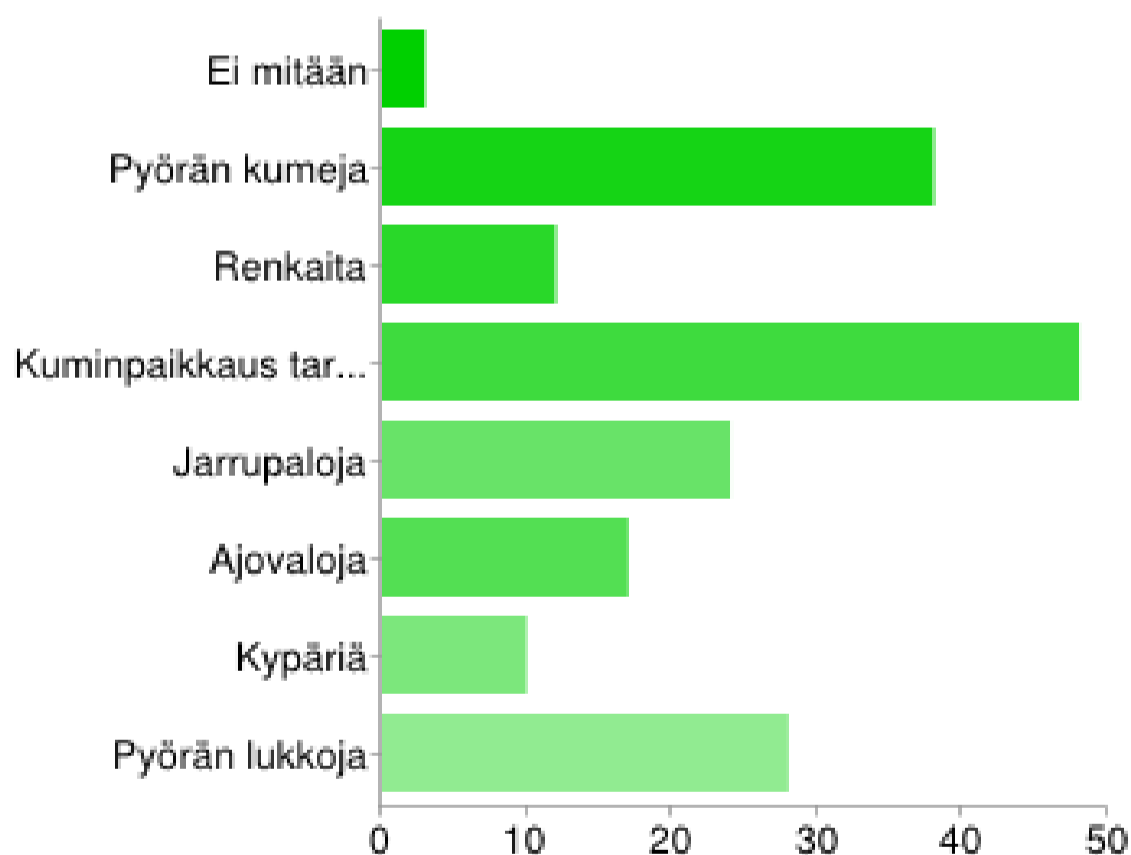
### Missä pisteiden tulisi sijaita?



# Location

80% for "next to the most used cycling lanes"

### Mitä pyöräilyyn liittyviä tuotteita huoltopisteellä olisi hyvä olla myynnissä?



# To buy?

Tires  
Bicycle locks  
Tire repairing equipment

# SWOT -Analyse

## Bicycle repair station as a part of gas stations

### STRENGTHS

synergy

> both gas station and bicycle repair station support each other

added value

> more environmental friendly image

low cost level

- > existing locations
- > existing surveillance

### WEAKNESSES

locations of the gas stations

> not necessarily near the most used bicycle routes

overlapping services

> part of the maintenance actions can be already done

### OPPORTUNITIES

low costs

> after start investment the costs are low

lots of existing placing possibilities

> possibility to grow

gas station company is able to gain profit by selling cycling products

### THREATS

gas station does not commit to the bicycle repair station

> they do not see the benefits

feel of insecurity

> bicyclists do not feel safe because of the heavy traffic

# SWOT -Analyse

## Bicycle repair station as a part of bicycle repair shop

### STRENGTHS

existing knowledge

> staff is trained and professional

existing customers

> target group is already using services

### WEAKNESSES

low resources

> low investment ability

not enough staff

> many repair shops already fully employed

locations

> shops are located randomly

### OPPORTUNITIES

new customers

> bringing also self service would bring more customers to shops

little bicycle repair shops could network

> better profits and visibility by working together

### THREATS

self service possibility

> can take away customers if self maintenance is too diverse

bicycle repair shops may not want to collaborate

> competition

# SWOT -Analyse

## Bicycle repair station as an independent self service station

### STRENGTHS

locations

> many possibilities for locations e.g. parks, near the most used bicycle routes and city centre

> on the way to work you can fix your bike and continue your journey normally

### WEAKNESSES

funding

> not easy to get sponsors for non profit service

maintenance

> repair stations need to be maintained periodically

weather

> snow and rain cause problems

### OPPORTUNITIES

location

> close to people and access to all bicyclists

public funding possibilities

> e.g. city or helsinki sports department

more services

> maintenance products could be available and paid by travel card or tokens

### THREATS

vandalism

> some people do not respect common property

maintenance problems

> if repair stations are not maintained appropriately they are not attractive to the users

# Outcome of the SWOT analysis

By analyzing the three different concept ideas based on the location of the bicycle repair station we came to a conclusion.

By comparing the strengths, weaknesses, opportunities and threats of three different kinds of repair stations we realized that bicycle repair station as a part of gas station would be most realistic option to implement.

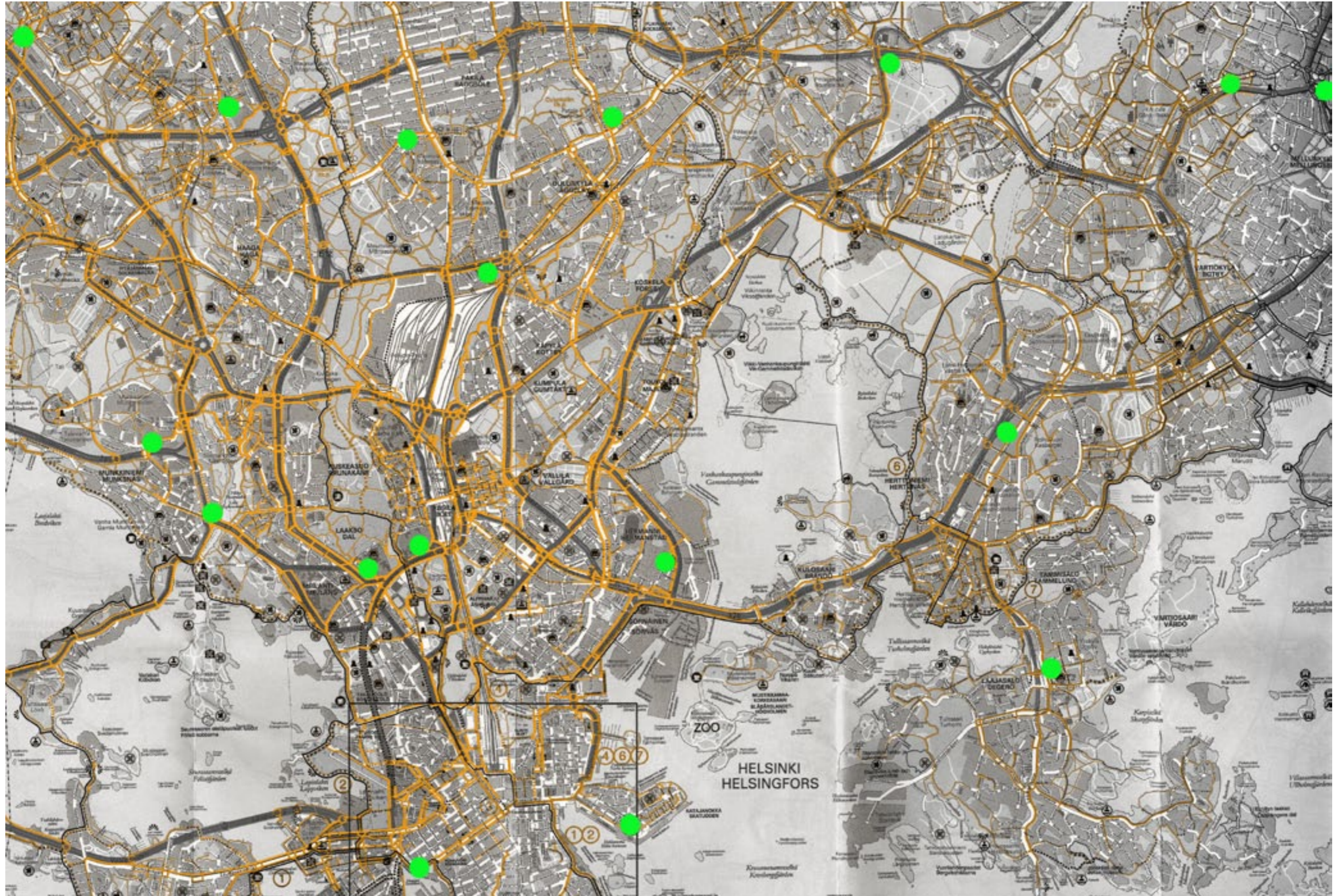
This concept has benefits like existing surveillance and existing locations.

Bicycle repair station as a part of gas station would bring more customers to the existing gas station. It would also bring profit by selling bicycle equipment and environmental image for the funding company.

Bicycling is getting more popular and if for example a gas station company wants to be updated by supporting bicycling it would be possible by funding this concept.

Independent Self Repair Station is also a developable option in case we have the needed resources. It is our secondary priority in this project.

# Concentration of Bicycle lanes and Neste gas stations in Helsinki



# Scenario

Mikko is about to leave to work from home. He wants to go by bike but remembers his tire is broken and the saddle is loose.

He remembers that there is a self repair stations for bikes. Mikko has heard about it from his friends and has seen the ad in facebook.

He searches the nearest gas station from internet and finds it is one kilometre away from home.

Mikko walks his bike to the nearest gas station to repair it.

He finds the self repair station next to the gas station. He puts his bike to the fixing stand and tightens the saddle.

Mikko also wants to repair the tire. He doesn't know how to do it and reads the tutorial attached to the fixing stand. He also reads what equipments he needs for the repair.

He walks into the gas station shop and buys the needed repair equipment.

He continues repairing the bike and fixes the tire and follows the instructions from the tutorial. He also fills the tire with pump attached to the station.

Mikko has now repaired his bike as he wished and can continue his way to work by bike.

# Chain of actions

Starting point / Problem

Selection

Research

Recieve

Use

Service

Pay / Service

Use

Outcome / Problem solved



# Equipment - Repair station

## Tools

2 x 8mm,  
2x 10mm,  
13 - 15mm,  
32mm  
Box-end/open-end wrench

Multitool  
Includes  
1-8 hex  
Philips, Flat-blade screwdrivers  
Chaincutter  
Multi spoke wrench

## Other

Brushes for washing  
Water  
Pump  
Trashcan





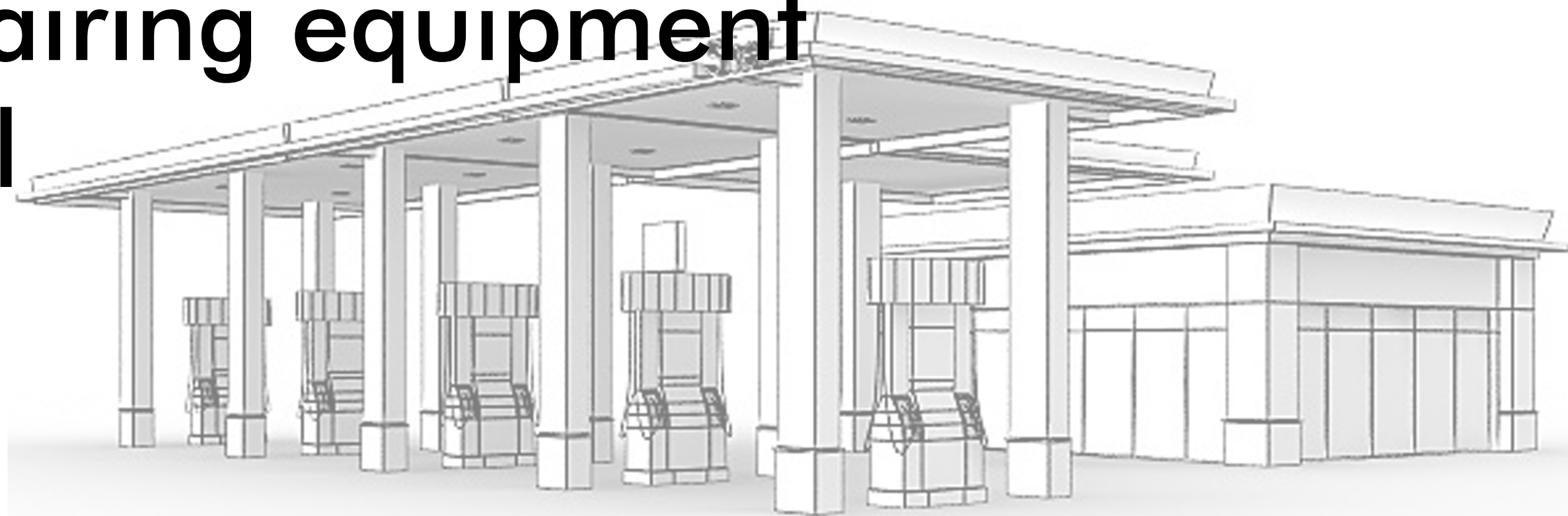
# Equipment - To buy from the station

shampoo

Tire repairing equipment

chain oil

vaseline



# What next?

Develop the repair station:

- weather resistance station
- guidance for repair
- marketing plan

