



Using local resources  
to reach greater heights

## SC - Module 3

Hanneke Hoogewerf | Simon Jaspers | Niek Marks  
Segourney Muntlag | Roos Stone





# Contents

<b>1. Identification</b>	<b>4</b>
1.1 Case analysis	4
1.1.1 Concept Idea	4
1.1.2 Setting X	4
1.2 Scenario Matrix	6
1.2.1 Throw Away	6
1.2.2 Collect & transport	6
1.2.3 Sort	6
1.2.4 Use & Recycle	6
1.2.5 conclusion	7
1.3 3D Scenario	7
<b>2. Integration</b>	<b>8</b>
2.1 Sub Scenarios	8
2.1.1 Throwing away	8
2.1.2 Collection	8
2.2 Concept Designs	9
2.2.1 Garbage collection bins	9
2.2.2 Bin collection carts	9
2.2.3 Recycled product concept	9
2.3 Final concept (CIPS)	10
2.3.1 The CIPS	10
2.3.2 The cart and the bin	11
3.3 How to manufacture	12
3.4 Budgetting & bussiness plan	12
3.5 Planning	12
3.5.1 Pilot project	12
3.5.2 Up-scaling	12
3.5.3 Short term	12
3.5.4 Mid term	12
3.5.5 Long term	12
<b>3. Implantation</b>	<b>13</b>
3.1 Branding & Promotion	13
3.1.1 Clean-up Logo	13
3.1.2 Pick-up Logo	13
3.1.3 Promotion plan	13
<b>4. Appendix</b>	<b>14</b>
4.1 Scenarios	14
4.1.1 Throw Away	14
4.1.2 Collect & transport	14
4.1.3 Sort	14
4.1.4 Use & Recycle	15

# 1. Identification

## 1.1 Case analysis

In this module we focus on a portable chair or bench in the slum. We are going to design a chair that can be used in the slum and sold at the Bijenkorf. The chair has to add value to the daily life of the slum inhabitant and create affection with the Dutch customers.

One of our goals is connect the third world to the first world and make them more aware of each other.

The second goal we would like to reach by introducing this project in the slum is to simplify local gatherings. These meetings will become more comfortable for the participants and due to the placed benches the gathering will become more organized and clear.

Last but not least we would like to create more work in the slum to provide the slum inhabitants more stability through a constant income.

### 1.1.1 Concept Idea

#### 1.1.1.1 Problem analysis

The inhabitants of the slum do not often have furniture. They usually sit and sleep on the floor. Also during events there are no benches provided. All events take place while the audience is standing or sitting down on the floor.

#### 1.1.1.2 Technology

The benches will be made out of wood because it is frequently used in slums. The benches can be manufactured in the wood workshop by the slum inhabitants. By using materials that are already present in the slum and hiring local craftsman to do the manufacturing, the cost will have to stay low.

#### 1.1.1.3 Usage

The bench can be used in the slum to provide the people some comfort. The benches can be used in or outside the house to sit down and relax. Because this bench provides the people more comfort they will be more likely to sit down

for a longer period. This could provide a new opportunity to have a talk with other people while relaxing.

Also during community events these benches could come in handy. People can sit down and watch the events. The benches provide the slum inhabitants a new way of experiencing events.

#### 1.1.1.4 Ergonomics

The dimensions of the benches will be decided on the database of DINED. DINED is a human dimensions database made by the TU Delft. The used measurements for the design of the chair will be a little under the average of the DINED database. This is because the average slum inhabitant is a bit smaller than an average Dutchman.

#### 1.1.1.5 Comfortable

In the design of this bench there is not a big focus on comfort. We will focus on easy production and raising social cohesion.

Because of the used material, wood, the bench will feel organic. It will not be really cold or hot compared to the body temperature.

### 1.1.2 Setting X

The following actors and elements are additions to the one mentioned in module 1 and 2.

#### 1.1.2.1. Actors

This module we would like to focus on the local artists. We can distinguish several kinds of artists;

#### Singers/ musicians

People who make and play music to entertain themselves and/or an audience.

#### Children play

Children often have fun while imitating the daily life or singing. Kids are very creative and have a rich imagination which they can use to create an interesting and amusing show.

### 1.1.2.2 Elements

Previously mentioned elements: (Super)Market, Households, Community centre, Workshops, School, Local authority, Bank, Media, Print, Radio, water basin & SEDG headquarters.

Within this module there are no specific elements added

### 1.1.2.3 Infrastructure

The infrastructure is very small and compact in the slum. There are no large open spaces like squares where big social meetings can be organized. Besides the lack of free space, the small available places are covered with garbage making it not very attractive to organize activities and making it hard to transport things around the slum. Hopefully, due to the garbage collection system we have introduced during the previous module, this problem will become history.

### 1.1.2.4 Events

Because a lot of people live on such a small area, there is a lot of activity in the slum. People celebrate happenings, organize meetings and have parties together. These activities normally take place among a small group of people. This is also because the available space is limited. Big events with many people never take place in the slum, due to the space limitation and lack of initiative.



## 1.3 3D Scenario

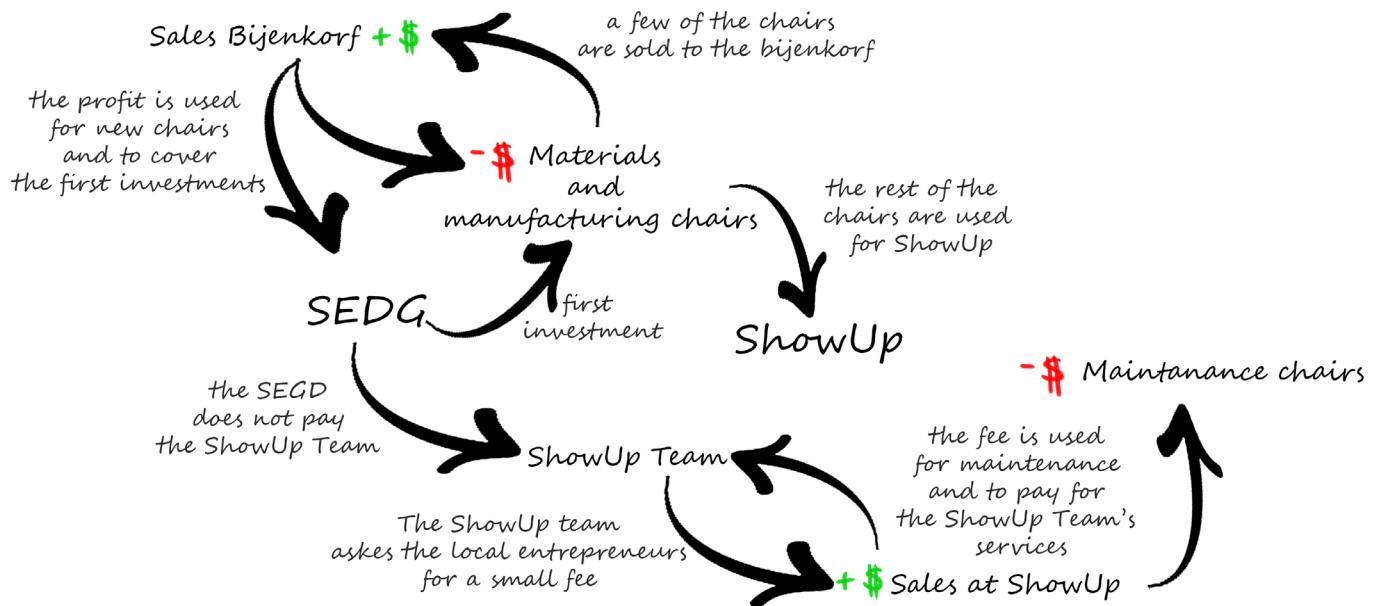
We used the 3d scenario to illustrate the possible use and location of the showUP festival. As shown on the picture on the right, the festival will be located on multiple central locations within the slum.



Picture 1.3.1: showUP festival impressions

## 1.4 Money flow

In the figure 1.4.1 the global moneyflow is shown. Further details will be discussed at the end of this report.



Picture 1.4.1: Diagram of moneyflow

# 2. Integration

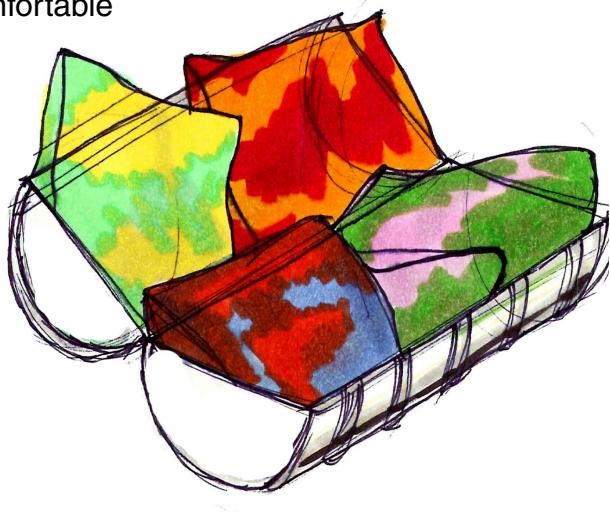
## 2.1 Concept Designs

We divided the concept sketching in three categories. These categories are:

1. Social. The concept helps encourages and stimulates the locals to socialize with each other.
2. Mobile. The concept can be transported easily by one or two people.
3. Slum. The concept represents the slum; it should look like something that has been there all along.

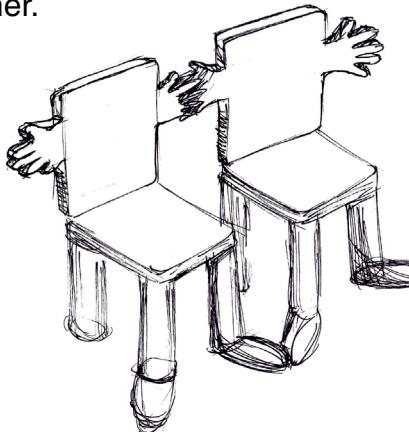
### Concept 1

This concept is made out of an old oil barrel that is decorated with colorful cushions to make it comfortable



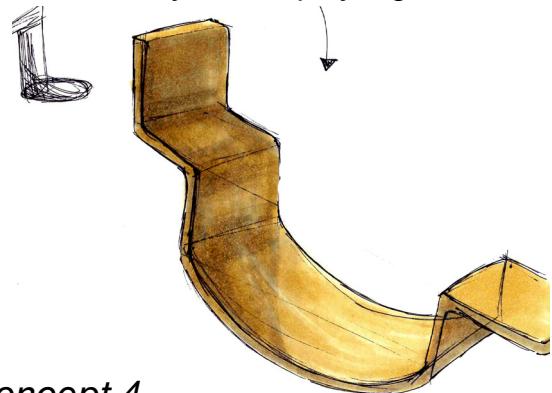
### Concept 2

This concept represents the feeling of togetherness. The arms that stretch out to each other symbolize the bond people could have when sitting together.



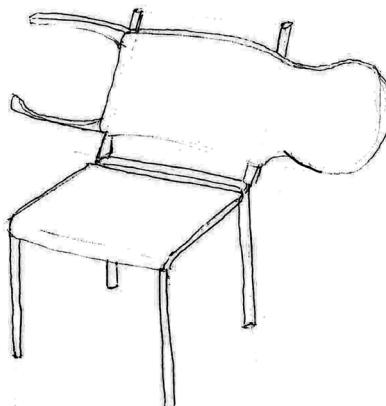
### Concept 3

This concept can only be used with 2 or more people. On each end there is a person to keep the chair in balance. They can rock with it which also makes it playful. Their friend can sit in the middle and they can all play together.



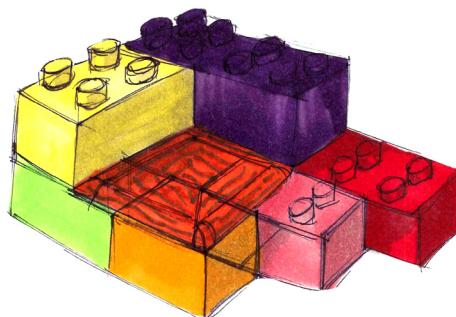
### Concept 4

The clicking of the two chairs together represents the bonding of the people. Also by clicking the two chairs together a third person can sit.



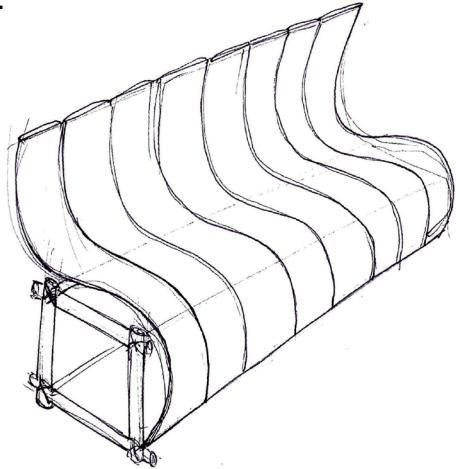
### Concept 5

If everybody brings one or two block they can create a chair to sit in together. Building a chair by placing the blocks on or next to each other, and it can be different every time.



### Concept 6

The chair is made of a wooden frame where old tires are strapped on to make a comfortable seat.



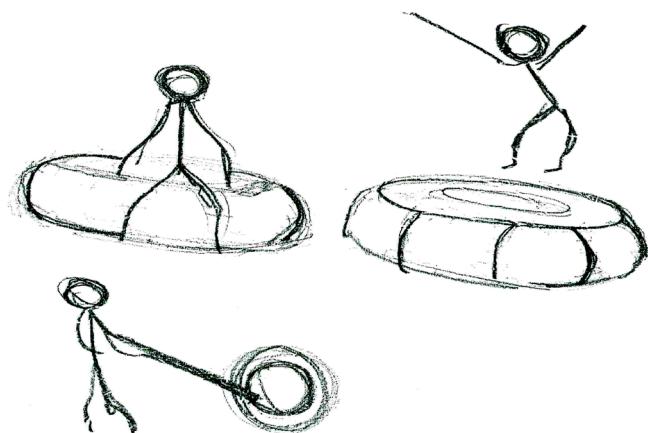
### Concept 9

A big truck tire with a rug of knotted plastic in it can be used to sit and lay on.



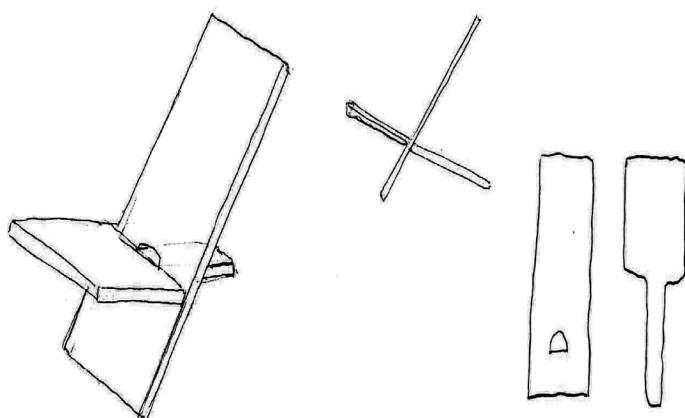
### Concept 7

Old tires can be used to make a chair that can also be used as a trampoline. To transport the tire can be rolled on its side.



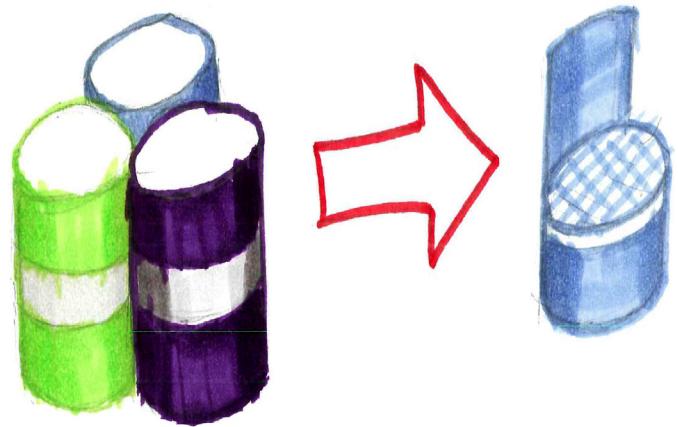
### Concept 8

Two wooden planks can be made into the shapes on the left and placed onto each other to make a chair. This concept is easy to transport because it consists of two planks.



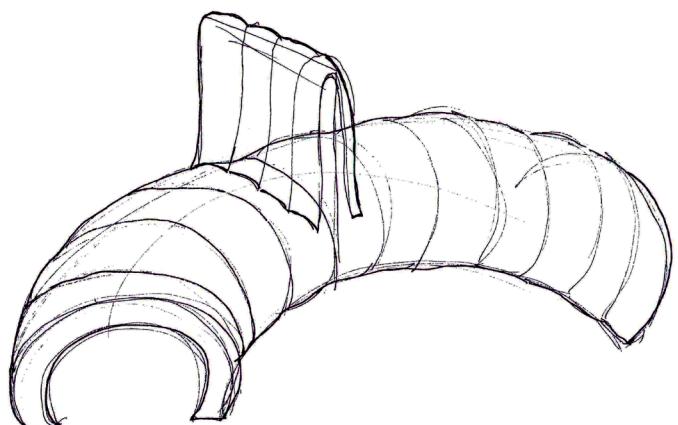
### Concept 10

Old oil barrels can be transformed into a chair.

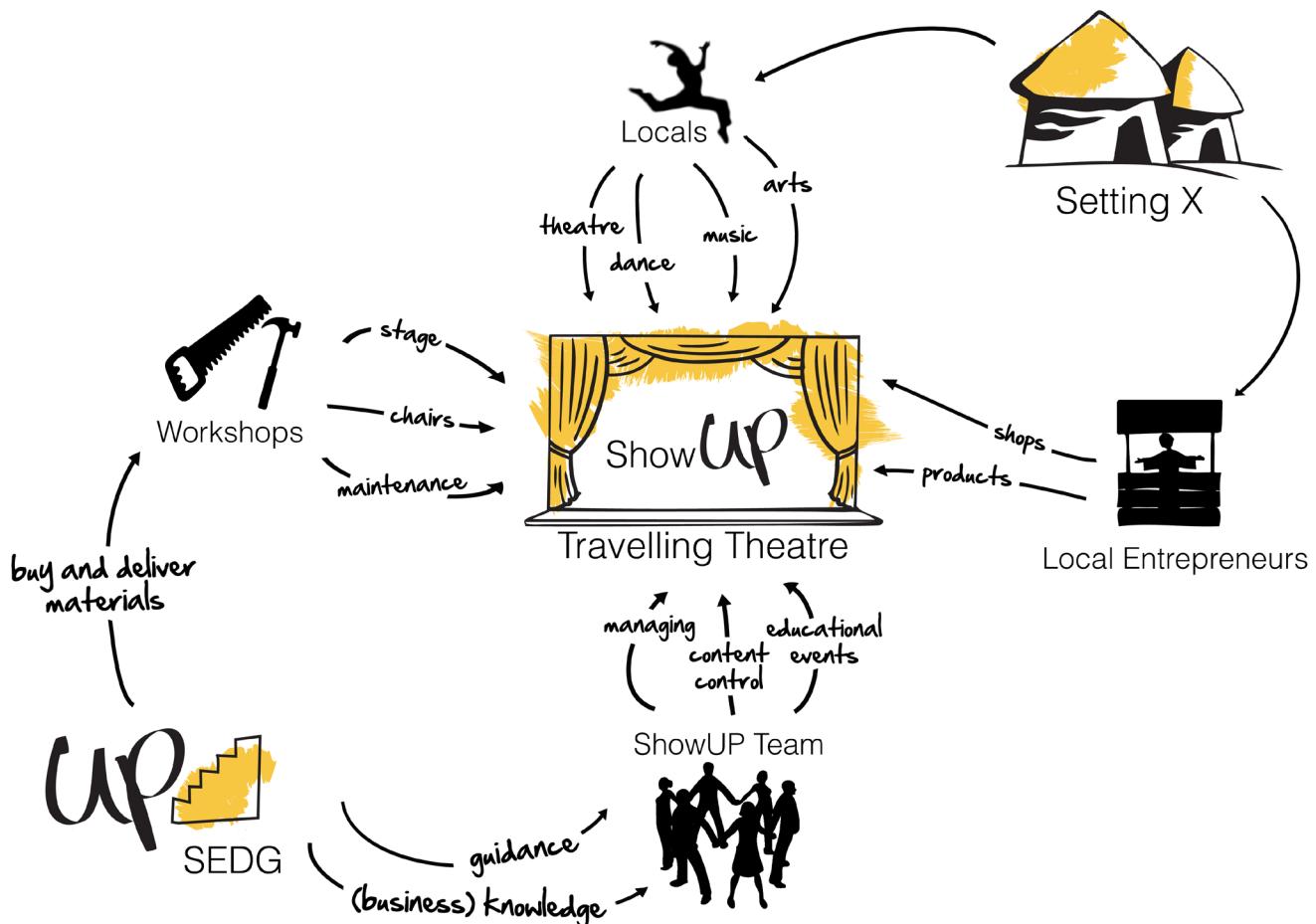


### Concept 11

Old tires can be used to make a seating chain.



## 2.2 Final concept



Picture 2.2: The CIPS

### 2.2.1 Show up traveling theatre

The traveling theatre is a project that contributes to the need that people have to socialize and express themselves. It is a mobile theatre which travels from one slum community (Setting X) to another, to promote local entrepreneurs/ artists and educate the locals on different topic. There are six essential parties who have to participate to make ShowUp successful:

1. Locals
2. ShowUP Team
3. SEDG
4. Workshops
5. Local Entrepreneurs
6. The Bijnenkorf

#### The locals

The locals are the starting point of this project. They are the ones who perform and entertain the public. It is not only entertainment but also promotion for themselves. The attendance of the community contributes to the continuity of the project.

#### ShowUp Team

This team consists of locals who have a background in dance entertainment and educating, for example the radio station DJ, community center workers and local artists who have already made a name for themselves. They help the locals prepare their acts, make a structured program and organize educational programs.

#### SEDG

The SEDG wants this to be a community project so they try to let the locals do as much as possible. They are there when the ShowUp team needs assistance to solve a problem that is out of its reach, for example raising fund and getting external materials such as projectors. The SEDG also buys and delivers the materials for the chairs. They hire the local workshops to make the chairs.

#### The workshops

As described above, the workshops manufacture the chairs and the stage. They also do

maintenance on the stage and the chairs. This gives them opportunity to make a profit (using local resources) and contribute to the ShowUp project.

### *Local Entrepreneurs*

These are the people who sell snacks, drinks, bags, souvenirs and other fun stuff that contributes to the felling of socializing (social capital). The big ShowUp crowd helps to increase their normal sales and gives them an opportunity to sell their craft.

### *The Bijenkorf*

The chairs are sold in the Bijenkorf as a piece of art and a that is created by slum inhabitants. It will be decorated by local artist and slum children to give it an authentic slum trademark. The profit from the sales will be used to finance the project.

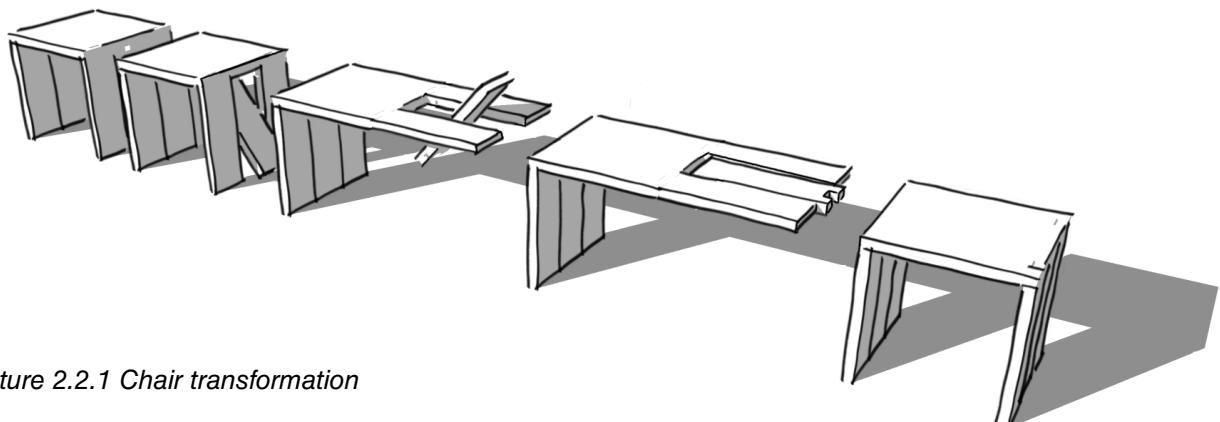
## **2.2.2 FeetUp**

From the previous mentioned concepts we created a final design. This final design is a wooden chair with foldable sides that can be transformed into a bench. We came to this design because:

- It is easy to manufacture
- It stimulates the social cohesion among the locals
- It is easy to transport
- It can be used for different occasions
- It can easily be decorated to fit the needs of the Bijenkorf

### *How it works*

The feetUp chair can provide three seats using two chairs. In a few simple steps the two chairs can be connected. One of the sides can be rotated and fit into the side of another chair.

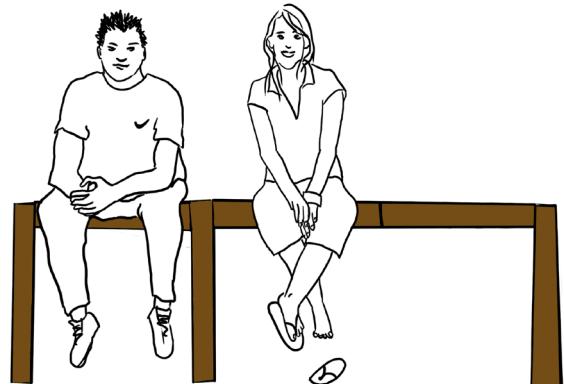


Picture 2.2.1 Chair transformation

### *Usage*



Picture 2.2.2 Single usage



Picture 2.2.3: Dual usage



Picture 2.2.4: Triple Usage

## How to manufacture

The manufacturing of the chair is simple. The entire chair is based on a 450 x 150mm and 30mm thick wooden plank. With these planks the wood workshops can form all the needed parts. The entire chair consists of 4 different parts, the outer planks of the sides, two different centre parts of the legs and the seat. These different parts can be manufactured by simple sawing, sanding and drilling. The connection rods (shown in the picture as black bars). Could be made out of wood or metal. Besides the simple manufacturing, the assembly is as easy as the assembly of a piece of Ikea furniture.

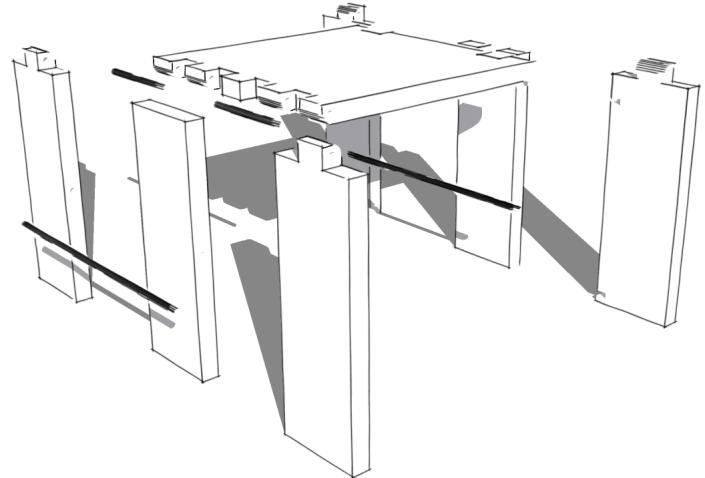
The decoration could be done after the manufacturing and assembly. This can be done by local artists, children of the people who are going to play in the ShowUP theatre.

After the decoration the chairs can be stored as flat planks to reduce storage space. This also enables us to use as less space as possible during the shipping to the Bijenkorf.

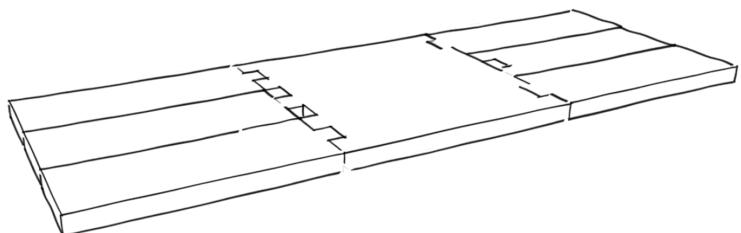
## Logo

ShowUp is the name of our entire system. This is traveling theatre for the locals by the locals. This is also the reason why the name is directed to the locals. They are the ones who have to show up to make it a successful project. They are also the ones who have to give a show for the people to see and enjoy. The logo refers to our SEDG, which uses the same colors and even includes our logo, Up. The color has a very positive vibe and the brush strokes give it something free and loose.

FeetUp is the name of the chair system. This name finds his origin in the English expression “put your feet up,” which means relax, make yourself comfortable. This also what we want the locals to do when they use our chairs. We want them to use that moments to relax from their stressed hard working lives, and enjoy the things that are being presented at the ShowUp theatre.



Picture 2.2.5: Exploded view



Picture 2.2.6: Flat chair



Travelling Theatre



Picture 2.2.7: Logo's



Picture 2.2.8 Chair Render

## 2.3 Sub Scenarios

To illustrate the effect of this new CIPS we came up with three possible scenarios of the usage and involvement.

### 2.3.1 *A day in the life of Umfufu*

Umfufu wakes up in the early morning. She is happy because her youngest son is starting school today. She gets up and makes a good breakfast for her husband and children. Umfufu walks the children to school while her husband goes to his shop, that he owns with two other friends. They rent out a pedal power system to locals, so they can charge the batteries for lamps to have light in the evening. On her way to work at the fabric store, Umfufu takes the garbage to the collection point. She feels a sense of pride when throwing away the trash, her daughter painted one of the bins.

After work she walks by the Up agency to get some plastic thread, she also buys supper at the supermarket. While she is cooking the children are playing outside in the clean streets. Umfufu's has invited some family friends over, because they are celebrating the 3rd anniversary of her husband's pedal power shop. In the evening they al go to the Show up theatre together. Umfufu's sister is going to perform in the show, as a dancer. The family makes a row of benches with the chairs that were provided by Up. After the show they walk home admiring the moonlight that glows on the clean slum streets. Umfufu puts the kids to bed and stays up for a while to knit a bag with the plastic thread, while her husband plays cards with his friend. She looks at them and smiles while looking at the bright lamp hanging above their heads, appreciating her new life with the unlimited possibilities.

### 2.3.2 *Kesia*

Kesia is 13 year old and likes to dance. Tonight she is going to perform with her group and the ShowUp theatre because the moving theatre is in her slum tonight. For a long time they have been practicing but never got the chance to show their talents to a big group of people. The ShowUp team looks at what they are going to perform that evening and gives them a few tips on how they can make it better. Her mother and aunt have told the whole neighborhood that their children are performing tonight so they expect a lot of people. They perform and afterwards get a standing ovation. Kesia is very proud and thank-

full she got the chance to perform in front of het community.

### 2.3.3 *Simon*

Simon is one of the members of the SEDG and today he has a meeting with a few members of the ShowUp team. After travelling in the different slums and organizing performances they want to organize a few educational events to educate the people about hygiene, birth control and STD's. This is one of the reasons they need the help of the SEDG. They need a few people with knowledge of these topics and the materials to back it up. And they need a projector. Simon brings them in contact with a few of these organizations (e.g The RedCross Foundation) and lends them one of the projector the SEDG uses to give their presentations. The ShowUp team members return to the rest of the group and discuss what they have learned. They make plans for their upcoming activities and are confident that these activities will be useful for the locals.

# 3. Implantation

## 3.1 Branding & Promotion

With our project we would like to introduce a festival in the slums. The performers on this festival are the slum inhabitants themselves. They can come and sing, dance, or perform another kind of talent to the audience.

We plan on not promoting this festival actively but we want to create a buzz within the slum. Due to the social cohesion people live a very social life in the slums. It is a small area where a lot of people live and share everything together. We hope that once a person knows about the festival, he or she will tell to all his or her friends and family. In a short period, everyone hears about the festival. Because the festival is created by and for the people of the slum, many people will feel very involved because they perform, or know someone that performs at the festival. Because so many people feel involved, they will be extra enthusiastic about the festival, which is the best promotion a festival can have. The ShowUp festival should really flourish in the slum thanks to the enthusiastic environment.

The benches will be sold in the Netherlands. We will sell the benches in the Bijenkorf and we want to give them the positive image and feeling. The benches will be painted by local artist so the Dutch owners will experience the local culture and art. The benches will evolve from being only an object to sit on to a real piece of art that can be displayed.

## 3.2 Budgetting & business plan

### 3.2.1 The ShowUp festival

The ShowUp festival does not demand a lot of tactile products other than some small stages and tents. This will be a one time small investment. The budget for this can be quite small because these tents and stages can be manufactured in the workshops. The fabric- wood- and steel-workshop provide all the facilities that are necessary for fabricating these products. The fabrication costs will be low and the fabrication in our own slum contributes to the idea that the festival is for and by the slum. The festival is made and “lives” in the slum.

A large stage, surrounding stalls and FeetUP chairs will be enough for the ShowUp festival to provide enough places for performers, entrepreneurs and visitors.

Besides the fabrication, the only investments in the materials of the festival will be some small repairs.

The festival will be build up and broken down by volunteers, probably people who are performing at the festival. The festival will attract some stalls with food or other products but we do not take this under our account. People start their own small entrepreneurship by beginning a stall. It is an open festival so we will not charge a fix amount of money, but we will charge a small percentage of their profit.

The whole organization of the festival will be done by the ShowUp-team consisting of four people. This team will be paid and supervised by us.

<b>Tents</b>	<b>Costs per stall</b>
Fabric	10
Pipes	20
Craftsman's costs	4

One tent will cost approximately 34 dollars.

The ShowUp team will be paid 2 dollars a day, so the entire team will cost us 8 dollars a day.

### 3.2.2 Benches

The benches will be made in the workshop of the slums. They will be made out of wood and manufactured by the slum inhabitants.

After the manufacturing the benches have to be painted by the local artists. Afterwards the benches can be shipped to the Netherlands.

<b>Bench</b>	<b>Costs per bench</b>
Wood	10
Paint	2
Craftman's costs	1
Artist's costs	1
Shipping costs	1

One bench will cost approximately 14 dollars to produce.

## 3.3 Planning

For the introduction of the benches we plan on placing a couple of benches in the community centre of the slum. These benches will be made in the workshops. These benches are not painted by children, artists or other people from the slum. People can use these benches during the festival and when the festival is over, we will leave these benches at the community centre. Because the benches will be used for a while in the slum, their appearance will change. By the time we will return in the slum with our ShowUp festival, the benches will be painted by the people in the slum and weather-beaten. We take these used benches and replace them for new benches. The used benches will be sold at the Bijenkorf in the Netherlands.

We will first try and implement this plan in one slum to find out whether people really use these benches and customize them inspired by their own culture and interests. If this happens we will implement this project in other slums and keep expanding this program.



Picture 3.1: decorated chair

# 4. Appendix

## 4.1 Scenarios

### 4.1.1 School

1. During the day the chairs are used in the school, so the kids can sit while they have class. After school the chairs can be used for other activities like plays and community meetings.

2. The chairs can be transformed into soccer goals, so the children can play soccer when the chairs are not being used.

3. Because the school now has the possibility to borrow chairs from the community centre, they perform a school play once every three months. At the end of a semester the older children present their school results from important papers they wrote, to their parents or whoever is interested, the topic can have something to do with healthcare, HIV prevention or other important subjects from the slum.

### 4.1.2 Supermarket

1. Rahim's mom placed him on a bench placed outside the supermarket to wait till she finish doing her groceries.

2. Cai went to the supermarket where she sees Ri. She haven not seen her old friend for a while so they talk on the bench in front of the supermarket.

3. Nia is waiting for her husband to pick her up after work. While waiting, she takes place on the bench.

4. Lia and Poh are jumping on and off the bench to play while their dad is shopping.

5. The supermarket organized a movie night to promote their new product. They borrowed some benches from the community centre and placed these inside the supermarket. All benches are filled with people wanting to see the movie.

### 4.1.3 Workshop

1. Umfufu meets one of his clients in his workshop. To provide a comfortable environment to discuss the future planning of the project they sit in a special piece of furniture that enables

and encourages social interaction.

2. Umfufu just finished one of his clients projects and takes a seat outside his workshop on a bench. One of the other workshop owners also needs a break and joins umfufu. They discuss their day and find some common interests.
3. Umfufu is a wood worker and specialized in furniture. Due to the SEDG project with social furniture he is able to gather orders and produce furniture. With the earned money he supports his family.
4. Umfufu is a steel worker. Due to the heavy work his health is bad. Especially his back is hurting. With the help of the new furniture is able to relax after work in an ergonomic position.
5. Umfufu has back problems due to his hard work. With the new furniture he is able to ergonomically position himself during his work.
6. Umfufu goes to the town centre to meet his friends. He sits down on a huge bench with his friends but because of the shape of the bench he comes in contact with a stranger. After some superficial conversations they start talking about the meaning of life and why they should live in the slum. This stranger eventually becomes one of his best friends and encourages him to live his dreams.
7. Umfufu's wife goes to the water basin to collect water. Because of the long queue she tries to find a place where she can wait in the shadow. This place is provided by a special piece of furniture that is made to create a climate that is nice during the hot mid-day sun.