

**Urban Lab #4: Smart Spaces, Pune**  
27th – 29th of June, 2018



**Integrated Development and  
Co-Production for Indian Cities**

# Imprint



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## Cover Page

Marcus Jeutner, 2018

**Berlin, September 2018**



**Research in  
Germany**  
Land of Ideas





Photo: Marcus Jeutner, 2018





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## Preface

Introduction by Marcus Jeutner



Welcome to the UrbanLab #4 in Pune!







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| Investigating ABB Area





**Group #1: Energy and Mobility**  
Vipul Toprani (Innovation Centre for Mobility and Societal Change - InnoZ)



## UNDERSTAND

The team decided to ask different “actors” and collect relevant information about connectivity in the Aundh-Balewadi Smart City District. The topics that were agreed upon are as following:

- General mobility and connectivity aspects
- Accessibility of mobility
- Parking, footpaths, foot bridges, subways
- Reactivation of public transport and other modes of shared transport systems

Thereafter the group was split into three groups of two to three members each and they started the site-visit and conducting the interviews.

## EMPATHIZE & DEFINE

The groups met with and talked to a variety of different interviewees in the district. These ranged from students and workers staying in the district, traveling to and from the district, caretakers at the Energize Parks, a couple of shop owners, users, guards and administration at the Jupiter hospital.

They gained an insight into everyday routines of the interviewees and additional information about positive and negative aspects of their travel

and their inputs about what works well, what doesn't and what ideas do they have.

Back in the workshop venue, each group presented their observations, experiences and findings. Group by group the results were summarized on post-it notes and presented to the overall group. In a next step, the findings of the morning were analysed thematically, obtaining a better overview sorting them into thematic clusters. These clusters helped to concretise the topics for further processing in the following steps of the workshop.

The key findings were categorized into the following clusters:

### Safety

- Cab Traveling is safe, even at nights
- Zebra-crossings are not really safe, not much help from the traffic police. Becomes worse in times of high rush
- Using roads at night is unsafe because of chain-snatching cases
- Lack of traffic lights in accident prone crossings

### Infrastructure

- Garbage often dumped on the road
- Parking spaces usage not ideal

- Encroachment on footpaths
- No bicycle tracks
- Poor accessibility to footpaths, lots of obstructions
- Usage of river for transportation unsuitable

### Private Vehicle Transport

- Lack of public transport means usage of private vehicles
- Traffic conditions have worsened in the last 5 years
- Low frequency and unreliability of public transport makes way for use of private vehicles
- Usage of two-wheelers prevalent for work, study or leisure
- Ridesharing in private vehicles with family, friends very common

### Public Transport

- Frequency, reliability of public buses is a question mark
- Buses are almost always overcrowded
- Rickshaw are unreliable and drivers are not the easiest to deal with
- Ola, Uber cabs are used frequently
- Six-seater Rickshaws have been banned from plying within various city districts including Balewadi
- Bike-sharing and carpooling also considered as part of public transport

The most striking observation was the parking of ambulances of the Jupiter hospital on the outside, thereby taking up street as well as parking space.

The team used the collected information to generate ideas for: **I wonder if this means...**

### I wonder if that means...

- ...that road safety and security as a problem is linked to inadequacy of infrastructure?
- ...residents use private vehicles due to inadequate public transport and related infrastructure?
- ...shared transport (Ola, Uber, autorickshaw) is perceived as being part of public transport?
- ...lack of accessibility to footpaths forces people to use streets for walking? (For e.g. encroachment, street furniture, non-contiguity...)

## PERSONAS

Based on the various interviews and the learnings, the team defined the following two personas:

**Aditi, 25 years old, female**, is an IT-Professional who stays in Baner and commutes by cab and autorickshaw to work. In the evening, she uses shared cycles or goes for a stroll. She is bothered by the lack of

dedicated bike paths, the condition of the footpaths. We discovered that she doesn't own a vehicle. She feels public transport is not safe because of a bad experience initially. She is happy about Energize parks, hailing cab services, shared cycles, basic amenities being reachable by foot. It would be helpful for her to have increased convenience and safety in the mode of transport she wishes to use for both work and leisure.

**Umesh, 35 years old, male**, has a family with kids and works as a chef in a restaurant in Baner. He resides at Dhayani. We discovered that he traveled 40 kms daily to his workplace by his two-wheeler motorbike. He used to earlier cover the same distance with his bicycle. It would be helpful if Umesh can have access to affordable and comfortable alternatives for traveling to and back from work.

## IDEATE & PROTOTYPE

Based on the previous steps, findings and condensed information, the following task was the development of concrete solutions for the personas defined above. Ideas around the following clusters, based on the “how might we” questions were considered:

- Public Transport
- Infrastructure
- Digitalisation

A number of possible solutions from the ideas brain-storming within above listed headings were discussed and it was decided to develop two prototypes for the aforementioned clusters. The team was divided into two groups, with each working on one prototype.

### Prototype 1: GO PUNE

**Problem to be solved** – How might we...

provide for safe accessible transport connectivity for the commuter?

**The pain points** – the users pain points/ needs are...

- Connectivity
- Safety
- Lack of information
- Poor availability of different modes of transport

**The users** – The user that we targeted are...

- Residents
- Commuters
- First-time Users

**The solution** – our solution works like this...

Dissemination of Information regarding available modes of transport via digital means



The mobile application “GO PUNE – Get On Pune Urban NeEtwrk” combines physical kiosks, mobile apps, SMS etc. with the following attributes:

- Modes of Transport: Bus, Six-Seater Rickshaw, Cycles, Shared Vehicles
- Time and Cost
- Emergency Contact/ Helpline Number

**The impact** – the benefit of the solution is...

- Time saving
- Cost saving
- Increased Accessibility & Connectivity
- Increased Safety for commuters

**The actors** – stakeholders – our solution involves...

- Government authorities – Corporation, Smart City SPV (PSCDCL)
- Transport players – PMPML, Transport associations, cycle companies, private players (cabs)
- Software development – web/ app designer, developer
- Operation, Maintenance and Management team

**The costs** – the solution needs investment for...

- Hardware – screens, kiosks, servers

- Software Development & Upgradation – website, app development, GPS Tracking
- Maintenance & Operation costs

**The revenues** – our solution generates profit by...

- Sponsorship from private players (CSR corporates, hospitals etc.)
- Advertising
- Funding from government (Central/ State/ City)
- Revenue from tickets (% License fee) Ideate & prototype

## Prototype 2: ABB Mobility Hubs

**Problem to be solved** – How might we...

improve road infrastructure for the residents and commuters?

**The pain points** – the users pain points/ needs are...

- Connectivity
- Availability & Accessibility
- Affordability
- Pollution

**The users** - The user that we target are...

- Residents
- Commuters

**The solution** – our solution works like this...

Setup of a central ABB mobility hub and several mobility satellites on internal roads.

The ABB Mobility Hub constitutes of a Bus hub, parking lot for cars, bicycles & bikes along with designated spot for shared mobility as well as multiple shops and a food court

The Mobility Satellite consists of a bus stop, small parking spots for bicycles or bikes and shared services (Rickshaw – 3-seater or 6-seater, Cab, bicycle etc.)

**The impact** – the benefit of the solution is...

- Improved connectivity & ease of commute
- Reduced private vehicles
- Better traffic management
- Increased Revenue for public transport
- Increased social interactions
- Better waste management @ food courts

**The actors** – stakeholders – our solution involves...

- Local corporator
- Private entities, PPP Model
- Pune Municipal Corporation
- Local shop owners

**The costs** – the solution needs investment for...

- Land acquisition, civil work, setup, management and organisation
- Operations – electricity, water, toilets, cleaning
- Transport vehicles

The revenues – our solution generates profit by...

- Sponsorships and Donations from private players (e.g. Corporate Social Responsibility)
- Advertising Banners
- Parking charges
- Shop rental, collective maintenance charges

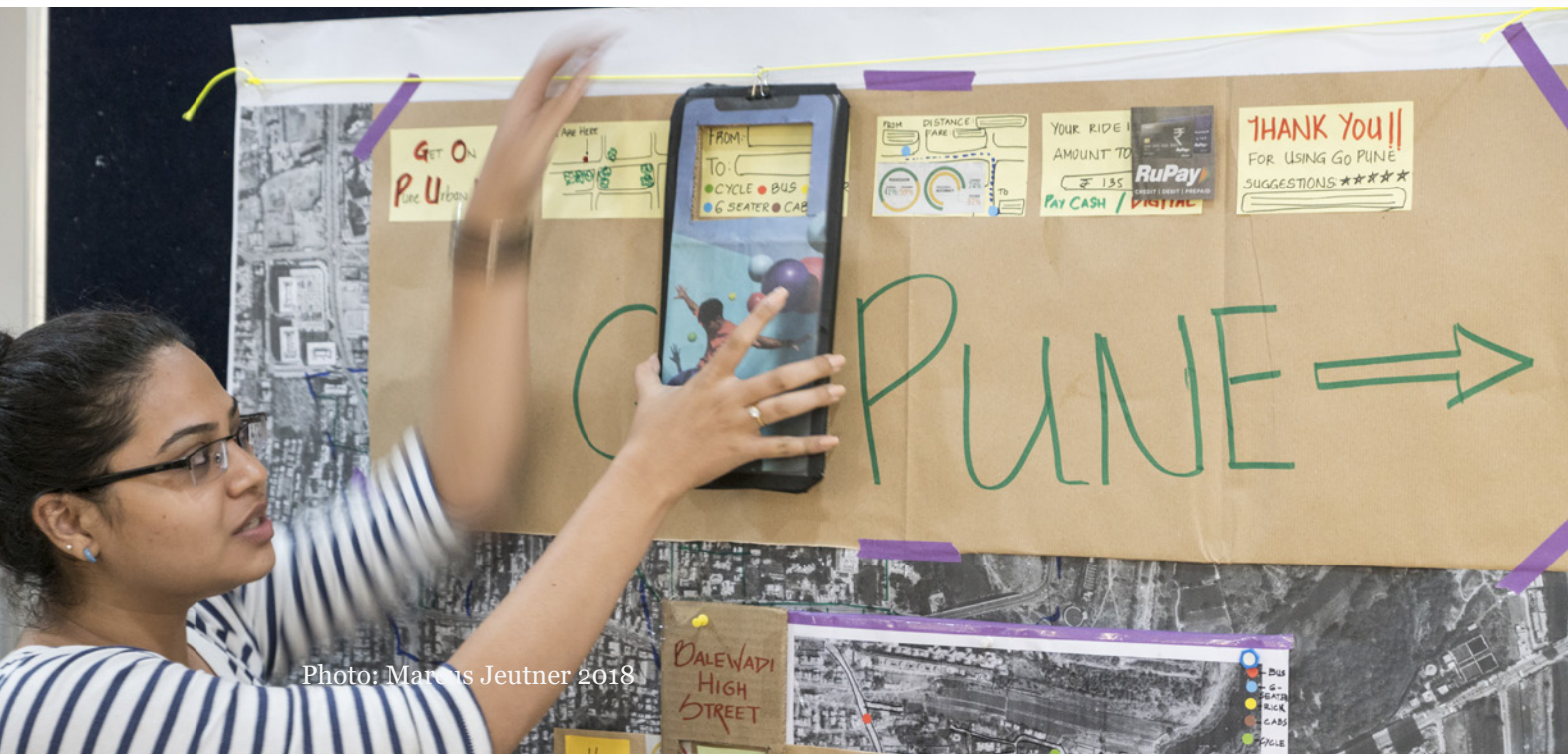


Photo: Marcus Jeutner 2018













## UNDERSTAND

The aim of the group was to understand who are the stakeholders, entities and individuals to promote, plan and implement these “Smart Spaces”. During the preparation for the interviews as well as in the further process the question and the focus of the group was shifted more to the user’s point of view and how these places can be designed and made accessible. The question of accessibility was discussed especially with regards to the interconnection of smart spaces and their visibility, so that citizens can easily find them.

The team decided to split in two groups. Before doing so a joint visit of both smart spaces that have been already implemented in the Smart City Area has been agreed.

Some of the joint questions to the people they met have been,

- if these places are well-known,
- if people use them,
- if they understand the background of these spaces (Smart City Pune),
- and what they generally think about spaces for leisure time in this area.

## EMPATHIZE & DEFINE

The groups talked to a variety of different people they met during the

visit of the smart spaces and in different parts of the neighbourhood. They gained insights into everyday routines of different kind of people – some living in the area, some working there and some doing both, living and working. All interviewees voluntarily shared their opinions about the neighbourhood in general, how it changed and, of course, their opinion about smart spaces or neighbourhood spaces in general.

Back in the workshop venue, each group presented their observations, experiences and findings. Group by group the results were summarized on notes and presented to all members of the group.

Some of the key or interesting findings were, that

- interviewees perceive the area in quite different ways according to their origin and bond to the area (from born and raised to job searching),
- Most of them did not know about the smart spaces,
- the “smart spaces” are mostly used in the evenings and already weddings took place,
- the neighbourhood is very crowded, especially on weekends, and “hiding places” are missing,
- the neighbourhood offers good salaries and job opportunities,

- that “smart spaces” should be integrated in the places, where people live and socialize.

In a next step, these on-site findings were analysed, obtaining a better overview sorting them into thematic clusters. The process of clustering helped to get a better overview and to elaborate main topics for further processing in the following steps of the workshop.

The general topics were subsumed as follows:

- Existing facilities in the neighbourhood and facility needs,
- Specification and characteristics of the “Smart Spaces,
- Employment and job opportunities,
- Neighbourhood development (planned and unplanned),
- Mobility (opportunities),
- Perception of the area – from busy to overcrowded.

## The most striking observations

As already mentioned, the perception of the area was quite different, regarding the origin and the time people lived in the area.

Not everybody of the interviewees knew about the smart spaces – which were, in such a big neighbourhood quite close to each other.

The citizens have to sign in when using the “Smart Spaces”. A library was part of one space with no books available.

Some of the interviewees pointed out that “Smart Spaces” and “Smart City Project” might increase the gap between poor and richer people.

On one side, some mentioned that the development of the neighbourhood provides good and better opportunities to earn a decent salary.

On the other side, people complained about the overcrowding especially on weekends, the noise and the loss of the original character and Indian tradition.

Grouping into knowledge, personas and first fields of action

After this first part of the workshop, the gathering of information and the clustering towards deeper understanding, the group dig deeper into understanding what questions could be concluded out of these findings. The question “I wonder if that means...” supported the elaboration of further insights.

## I wonder if that means...

...that only few citizens are aware of the “Smart Energy Parks” in the neighbourhood?

...that the Smart City Initiative is driving towards lifestyle changes?

...that only main roads (high street in particular) are developed properly?

...that energy parks really meet the social needs of the citizens?

...that the Smart City development integrates all social classes, especially Economically Weaker Sections (EWS) ?

...that the Smart City development is triggering migration?

...that the Smart City development leads to more informal settlements?

## Personas

**Mr. Kasminath Kadam, 48**, is a former farmer of this area and works today as a shopkeeper. He lives still in the old farmhouse some distance away and his shop is in High Street.

He is quite happy about the area, as he makes good business and he is enjoying the communication with other citizens and the facilities next to his shop. He is a family man.

Nevertheless, he recognises a fast change in culture, especially local aspects of it. He is obviously not happy about the overcrowding of the space, especially on the weekends and misses places for a private hide-away.

It would be helpful for him,

- if the local identity were kept alive, even so – or because – the area is developing fast.
- If there were decentralised places, dedicated to reduction and mitigation the effects of overcrowding.

**Mr. Tanaji Shinde (25-30)**, migrated from a small town for a new job. He lives in a rented apartment and works as IT specialist, free lancing. He is single.

He enjoys his work and the neighbourhood especially for the weekend happenings. He likes the offered facilities, but has not heard about the “Energized Parks” before.

Although he is happy about his job, his income is challenged by high costs of living in the area.

It would be helpful for him,

- if there was better information about facilities and amenities for public use

**Mrs. Shantabai (28)** migrated from a small town to this area of Pune. She is looking for job opportunities and good education facilities for her children.



Still, she is uncertain about her job and residential opportunities in the neighbourhood.

It would be helpful for her,

- if there was guidance in the area that showed job, apartment and educational opportunities for “newcomers”.

### IDEATE & PROTOTYPE

Based on the previous steps – findings and condensed information – the following task was to develop concrete solutions for the personas defined above. The main focus of this step was to find solutions that change the current situation in a way to improve the behaviour of the respective persona and the overall neighbourhood subsequently.

Not all topics of the first round of the ideation were deliberately pursued to maintain the focus. The topics that remained in the final discussion led to the question:

How might we create a network of smart spaces to give a) local identity, b) opportunities to hide-away (from overcrowding) and c) information dissemination?

Therefore, the following ideas were collected:

- Using existing facilities (shops, bus-stops etc.),
- Implement smart spaces at well frequented places,
- Introducing street furniture by PMC and sponsors,
- Produce physical handouts like maps, brochures etc.,
- Make use of digital media,
- Plant similar trees that lead to smart spaces,
- Bicycle lanes and footpaths with specific colouring,
- Improve smart spaces design,
- Optimise visualisation of smart spaces through e.g. art installations and events.

One joint prototype was built, integrating the optimisation of smart spaces as such and introducing creative ways of signalling were these spaces are and how to get there. In this process the smart spaces were diversified in different themes: playgrounds, biodiversity spaces with local trees and plants, art spaces to the point of bus stops. All parts and types are to be connected by a joint logo and signs that lead towards the places in the neighbourhood.

They were titled

- Connecting Spaces, connecting people for the topic of connecti-

ty and reachability and

- E<sup>3</sup> = Explore, Engage, Enjoy @ ABB for the optimisation and diversification of spaces themselves.

**Problems to be solved** – How might we...

create a network of smart spaces to give local identity, opportunities to hideaway from overcrowding and establish information dissemination

**The pain points** – the users pain points/ needs are...

- Loss of local culture
- Disturbance due to overcrowding and
- Lack of information about spaces and amenities

**The users** - The user that we targeted are... today's and future residents of ABB.

**The solution** – our solution works like this...

The solutions works in different areas:

- Use existing spaces to build and promote smart spaces
- Introduce street furniture, and improve cycle and walking paths
- Produce physical handouts
- Use digital media, like an app for citizens that connects places and people

- Optimal visualisation and
- Design improvement of smart spaces, like Art Katta or Food Katta (spaces that allow people to meet and co-create or sell and buy organic/local food)

**The impact** – the benefit of the solution is...

The proposed solutions benefit is to

- Create awareness (of smart spaces)
- Connect and make accessible public space
- Improve bus-stops and shop fronts
- Improve interaction and right to information
- Provide identity, ownership and belongingness for the spaces
- Provide smart connectivity through different media
- Improve air quality and consequently health of citizens and
- Improve community interaction

**The actors** – stakeholders – our solution involves...

Several actors are involved in this project: From administrative actors (Pune Municipal Corporation, Smart City Smart Purpose Vehicle, garden department,) local shops and businesses (corporate social responsibility, donors, and sponsors), developers, schools, artists and last not least citizens and NGO's

**The costs** – the solution needs investment for...

Additional costs have to be expected for the making of hoardings and signages, the planting of trees, art installations, digital and analogue display material, software development, pathway and cycling building material. Planners and designers have to be engaged. Costs for real estate and maintenance has to be included in the municipal budget. Events have to be financed including the participation of donors and sponsors.

**The revenues** – our solution generates profit by...

Although we could not calculate the overall costs and revenues, it was clear that besides

- monetary aspects of the suggested solutions (earnings through events, shopping opportunities, exhibitions and advertising) there are
- non-monetary benefits of increasing user numbers, like social well-being, mental and physical health benefits, an enhancement of community engagement, sense of having an elevated life-style, satisfied users and a general optimised infrastructure.

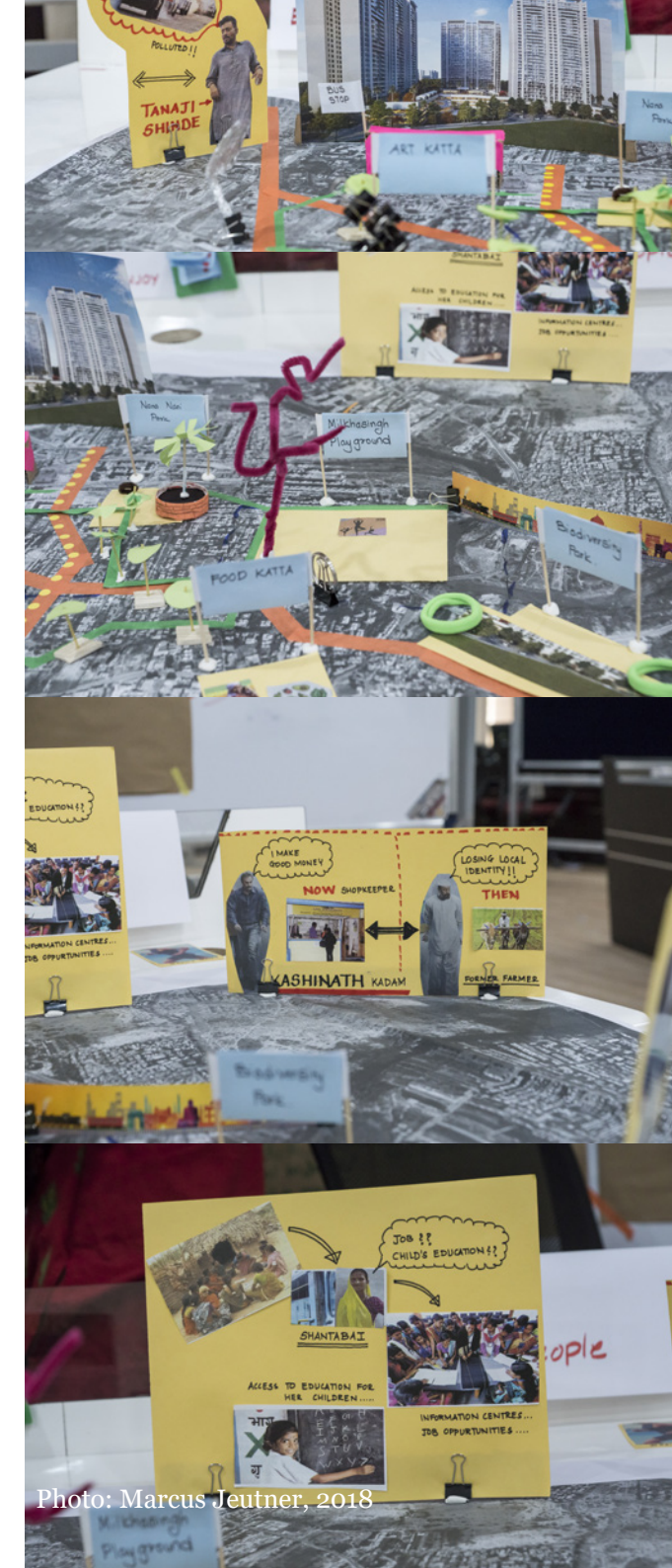


Photo: Marcus Jeutner, 2018



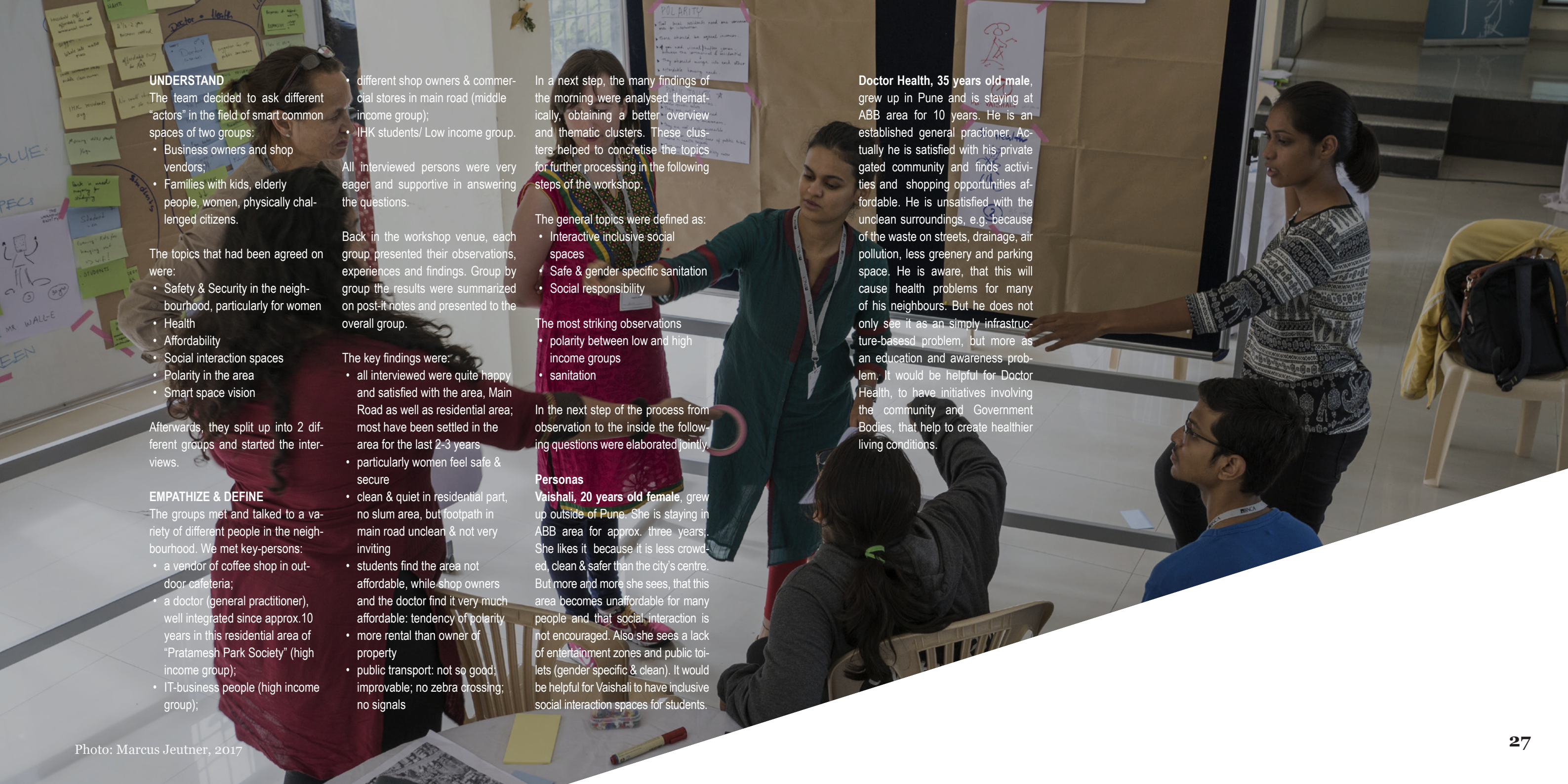






**Group #3: Open Spaces**  
Margret Böthig (gmp International)





## UNDERSTAND

The team decided to ask different “actors” in the field of smart common spaces of two groups:

- Business owners and shop vendors;
- Families with kids, elderly people, women, physically challenged citizens.

The topics that had been agreed on were:

- Safety & Security in the neighbourhood, particularly for women
- Health
- Affordability
- Social interaction spaces
- Polarity in the area
- Smart space vision

Afterwards, they split up into 2 different groups and started the interviews.

## EMPATHIZE & DEFINE

The groups met and talked to a variety of different people in the neighbourhood. We met key-persons:

- a vendor of coffee shop in outdoor cafeteria;
- a doctor (general practitioner), well integrated since approx. 10 years in this residential area of “Pratamesh Park Society” (high income group);
- IT-business people (high income group);

- different shop owners & commercial stores in main road (middle income group);
- IHK students/ Low income group.

All interviewed persons were very eager and supportive in answering the questions.

Back in the workshop venue, each group presented their observations, experiences and findings. Group by group the results were summarized on post-it notes and presented to the overall group.

The key findings were:

- all interviewed were quite happy and satisfied with the area, Main Road as well as residential area; most have been settled in the area for the last 2-3 years
- particularly women feel safe & secure
- clean & quiet in residential part, no slum area, but footpath in main road unclear & not very inviting
- students find the area not affordable, while shop owners and the doctor find it very much affordable: tendency of polarity
- more rental than owner of property
- public transport: not so good; improvable; no zebra crossing; no signals

In a next step, the many findings of the morning were analysed thematically, obtaining a better overview and thematic clusters. These clusters helped to concretise the topics for further processing in the following steps of the workshop.

The general topics were defined as:

- Interactive inclusive social spaces
- Safe & gender specific sanitation
- Social responsibility

The most striking observations

- polarity between low and high income groups
- sanitation

In the next step of the process from observation to the inside the following questions were elaborated jointly.

## Personas

**Vaishali, 20 years old female**, grew up outside of Pune. She is staying in ABB area for approx. three years. She likes it because it is less crowded, clean & safer than the city's centre. But more and more she sees, that this area becomes unaffordable for many people and that social interaction is not encouraged. Also she sees a lack of entertainment zones and public toilets (gender specific & clean). It would be helpful for Vaishali to have inclusive social interaction spaces for students.

**Doctor Health, 35 years old male**, grew up in Pune and is staying at ABB area for 10 years. He is an established general practitioner. Actually he is satisfied with his private gated community and finds activities and shopping opportunities affordable. He is unsatisfied with the unclear surroundings, e.g. because of the waste on streets, drainage, air pollution, less greenery and parking space. He is aware, that this will cause health problems for many of his neighbours. But he does not only see it as a simply infrastructure-based problem, but more as an education and awareness problem. It would be helpful for Doctor Health, to have initiatives involving the community and Government Bodies, that help to create healthier living conditions.



## IDEATE

The following ideas have been brainstormed based on the following question, which has been formulated by the working group:

- How might we Create an interactive, inclusive, social space with safe sanitation for women in this area, which could be modular, mobile, self-sustaining and multipurpose?

Based on the previous steps and findings and condensed information the next task was to develop concrete solutions for the personas defined above. The main focus of this task was to change the current situation in way that improves the conditions of the respective persona of this area subsequently. Not all topics of the first round of the brainstorm were deliberately pursued to maintain the focus.

In a second step it was decided to “Display of information” and “Incentives” as the prototyping part of the workshop required a concentration on one or two topics. Here are the results of the additional solution-finding process:

- Display of information on the board/ map of Area: explaining the pros and lacks of the area
- interactive, inclusive, multipurpose social space with safe

sanitation for women in this area, which could be modular, mobile, self-sustaining

- self-sustaining: water cycle; solar panels to generate renewable energy; green roof; well designed
- education & gamification to create awareness for health & sustainability (use game points)
- incentive based adverts
- building physical Modell

## PROTOTYPE

The ideas have been channeled into the prototype “SMART PAAR”, which is an interactive multipurpose social meeting point like the tree in a village market with safe sanitation & drinking water supply.

The prototype was displayed in two parts/ groups:

Group 1: smart Paar

The result was the Treelike structure with a green roof and solar panels, seating & game facilities; charging points for mobiles.

Group2: Smart Point System App

Creation of an awareness points/ good citizen points which can be collected in games & used as credits in shops. Part of this solution is a “Theme month” on specific themes to transfer knowledge on topics of health, climate, sustainability, saving of resources etc.

**Problem to be solved** - How might we...

Create a network of smart spaces to give

- local identity
- opportunities to hideaway from overcrowding
- information Dissiminiton

**The pain points** – the users pain points/ needs are...

- Loss of local culture & identity
- Disturbance due to overcrowding
- Lack of information about spaces & amenities

**The users** - The user that we targeted are...

- Local & new Residents
- Students/ women
- office goers

**The solution** – our solution works like this...

- connecting spaces – connecting people
- Design improvement of spaces
- Happy streets
- Game zone
- Weekly bazaar

**The impact** – the benefit of the solution is...

- creating awareness
- Ownership & Belongings
- Improved access to all the spaces

- Improved air quality and health
- Improved community interaction

**The actors** – stakeholders – our solution involves...

- PMC (Pune Municipal Corporation)
- Developers
- shopkeepers
- Local Corporates/ offices
- schools
- Smart City corporation
- NGO's
- Citizens group
- Keen activists
- Corporate Social Responsibility projects

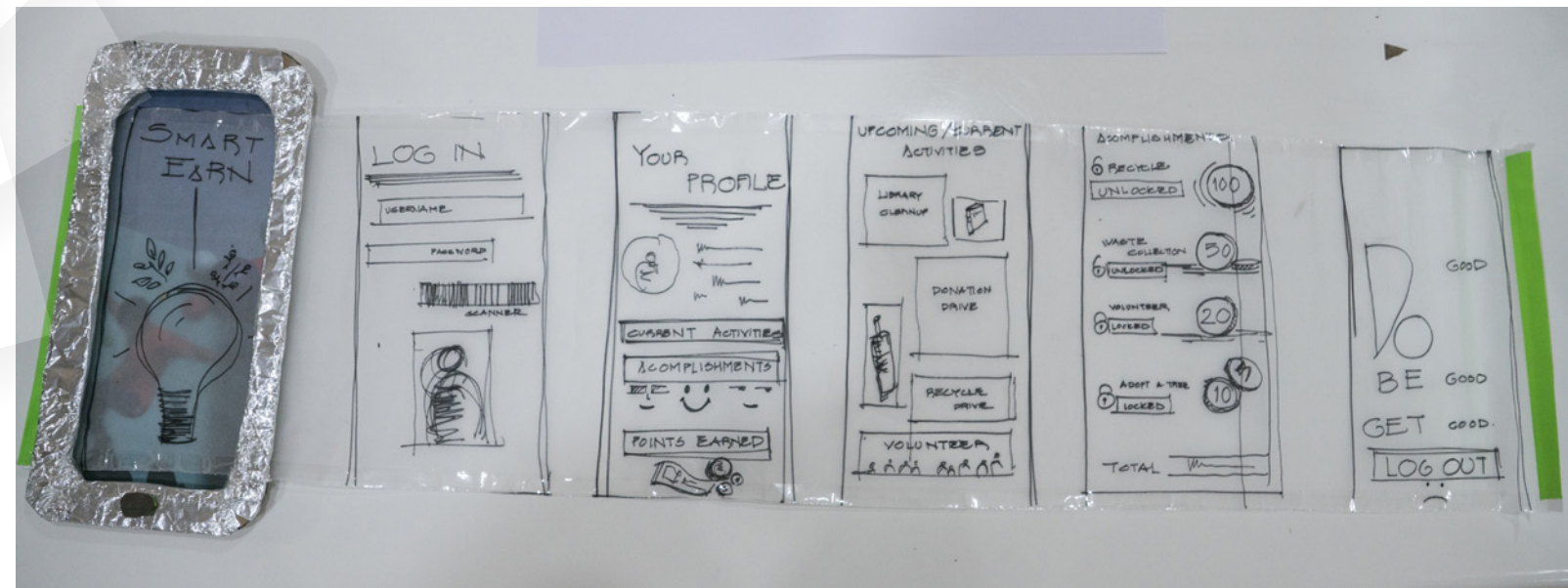
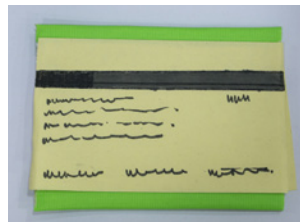
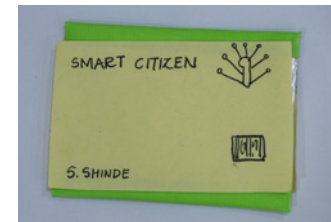
**The costs** – the solution needs investment for...

- Plot - Land cost,
- Designing/ planning
- Material (local/recycled)

- Art installation
- Planting trees
- Execution
- Maintenance cost
- Event organisation & management

**The revenues** – our solution generates profit by...

- Monetary:
  - Events, shopping, exhibition of artefacts, advertising
- Non – Monetary:
  - Social well being; mental & physical well bing; enhance engagement in the community / increasing happiness & social interaction amongs people
- Helps in optimum utilisation of public space











| Thank You!





insult and  
strife

ATTN