

Urban Lab #3: Asia-Pacific Week , Berlin
23rd – 27th of April, 2018



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

Imprint



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Cover Page

Marcus Jeutner, 2018

Berlin, June 2018



Research in
Germany

Land of Ideas

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| **Preface**
Introduction by Marcus Jeutner

Welcome to the UrbanLab #3 in Berlin !

Dear colleagues and friends of the Indo-German Smart Initiative,

we were happy to hold our “Dialogue on Smart Cities” in Berlin. We can now look back to a week full of inspirational discussions about our living environments, field trips, an Urban-Lab, and innovative ideas for future cities.

For the Indo-German Smart Initiative, this week set a new milestone of a very exciting journey. In February 2017, the Federal Ministry of Education and Research announced IGSI to be one of ten German research networks under its campaign “Shaping the Future – Building the City of Tomorrow”. This campaign gave us the opportunity to reach out to India, to find institutions, stakeholders or even individuals, which are passionate about the development of urban environments, keen to tackle global urban challenges and curious to learn from each other. After one year we are glad to state that we we had been able to build up new connections and partnerships, even friendships. These bonds will lay the bedrock for future collaborations.

“Dialogue on Smart Cities: Can Human-Centred Innovation design Digital Futures?” is the overall thematic umbrella that guided us through the collection of several perspectives on various aspects of Smart Cities. But what is a Smart City?

As an urban planner and researcher, working in many urban contexts in Europe and Asia, I understood, that Smart City is an idea, a vision or concept that appears out of technological innovations that might help us to leverage unprecedented potentials.

But if we look at the pictures that are depicted on prospects, we will easily discover that they do not differ much from visions that have been drawn in the past. By looking at futuristic pictures of the sixties, for example the pictures of Klaus Bürgle, and comparing them with the ones that are drawn today, it raises questions. Is Smart City in fact something fundamentally new to deal with, or does it simply mean the development and implementation of a new kind of infrastructure in our cities?

As observer of smart city initiatives around the globe, one can get the

feeling, that Smart City is often perceived as the name of a huge shopping mall, full of prefabricated concepts, promising efficiency, life quality and wellbeing for every situation, and that you can easily buy and implement in your city – wherever it may be located. But these promises are not always true. Concepts and situations have been changed so drastically within the last 100 or even 20 years and where the rush into the cities will continue in nearest futures.

In many places of our world, Smart City is seen as a tool to overcome the omission of planning and infrastructure developments of the past and leapfrogging into a better future. But while talking about smart solutions, we will still have to focus on fundamental purposes, say the provision of safe, secure and healthy homes, open common spaces able to function as social spaces, stimulation of an convenient and sustainable everyday mobility for people and goods, clean air, resource protection etc.

Those challenges may appear differing between countries of the world or change dimensions, but we are all

ultimately sharing them, wherever we are located.

Smart City could enable us to improve our cities in a way it never did before. Evangelists of digital futures are especially addressing the opportunities that ICT are offering to empower people and to enable them to contribute directly to sustainable futures. But here in Germany, as well as in India, we should not forget to include those people into the concepts that are not yet part of our digital societies. The inclusion of weaker parts of our societies and the empowerment of local communities will be one of the main challenges and tasks for us. The concept of a Smart City may contribute a lot to it, if it is not less than adopted to local conditions, respecting the existing identity of places, and if it is focusing on the real needs of local situations, people and stakeholders.

With this in mind I'd like to invite you to read the following summary of our UrbanLab Berlin. In case you would like to contribute thoughts or suggestions, I encourage you to get in touch with us.

- Marcus Jeutner

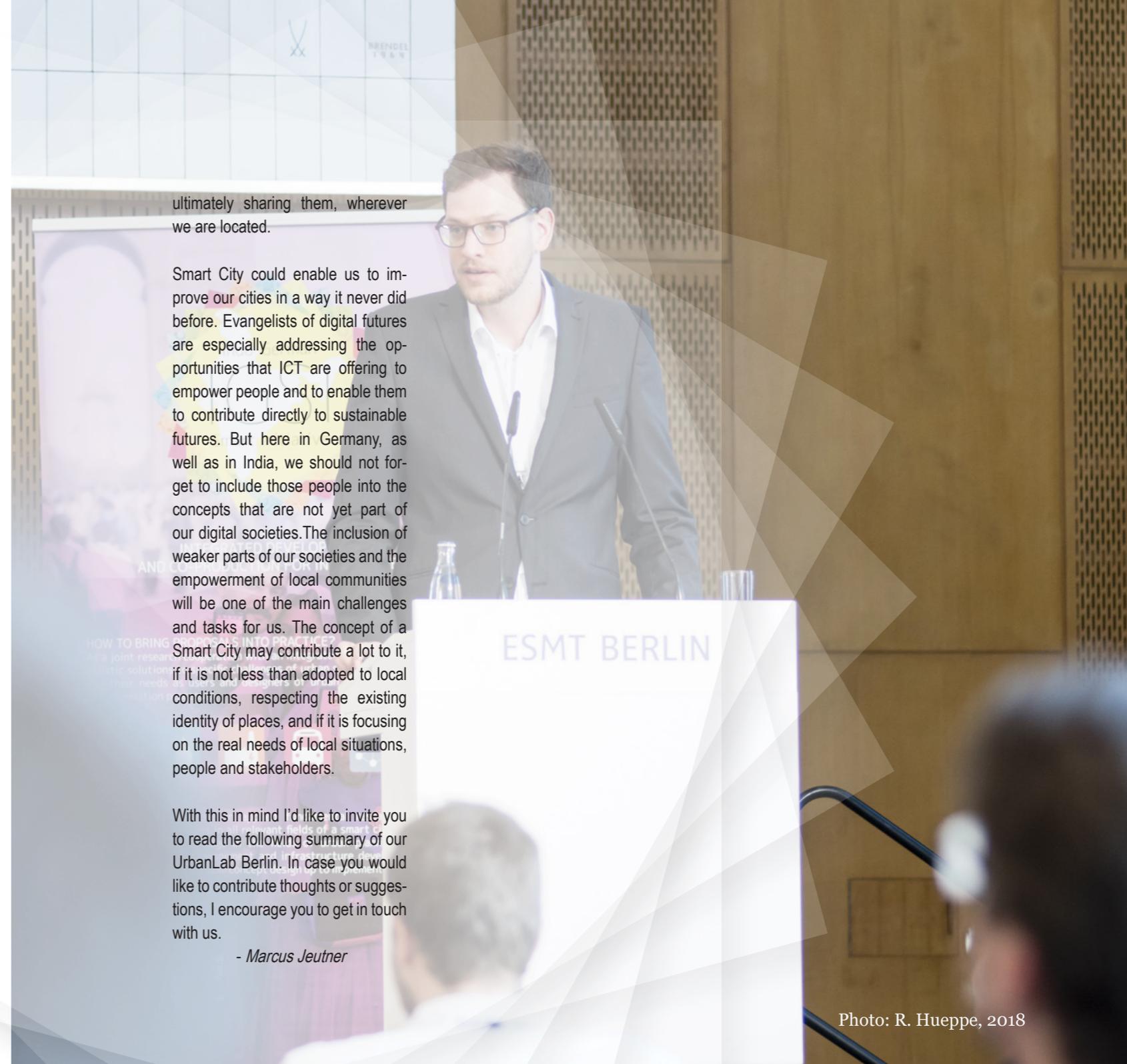


Photo: R. Hueppe, 2018

Profile and Approach IGSI

Founded by four Berlin-based architecture companies in 2014, the Indo-German Smart Initiative (IGSI) today is a broad network of German research institutions and planning offices that aims to contribute as an interdisciplinary think tank to the Indian urban development processes. IGSI recognises integrated planning as fundamental principle toward smart cities: Planning, which relates infrastructure and spatial planning with socio-economic development and unlocks new potentials by a goal-oriented use of technological solutions.

With its integrated approach, IGSI can develop holistic solutions, that are focusing on specific challenges of an urban setting and is looking for an exchange of ideas with academia, planners, politicians, stakeholders and project developers for Indian smart cities. It offers expertise in applied fundamental research, integrated approaches and profound knowledge of all relevant sectoral fields of a smart city.

The Network

- gmp International GmbH
- DGI Bauwerk Gesellschaft von Architekten mbH
- se·g architects
- Patzschke & Partner Architects insar consult, schwartze, wessling and partner
- P2m Berlin GmbH
- Harbauer India Private Ltd.
- Ingenieurbüro Hausladen GmbH
- Innovation Centre for Mobility and Societal Change (InnoZ) GmbH
- Thomas Waschke Strategy Consulting and new Mobility Systems
- IAV GmbH Berlin
- BuroHappold Engineering
- von kories consultants
- Remondis Aqua India Pvt.Ltd.
- ARGUS GmbH
- Klaus Hoppe Consulting

Human-centred Approach

Contemporary challenges of urban transformation processes – e.g. rapid urban growth, shortages in housing and infrastructure provision, demographical and social changes, digitalisation, climate change mitigation – require an intense collaboration of relevant stakeholders from governance, science, economy and citizens; from the first phase of

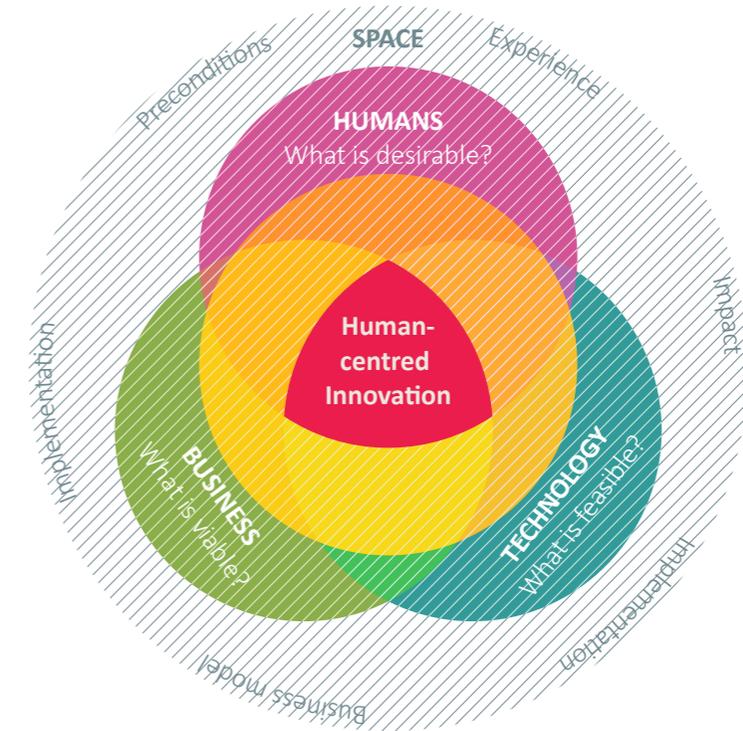
needs assessment to the phases of implementation and operation.

Concept basis and starting point of the activities of IGSI is the principle of “human centred innovation”, which merges human needs, technical feasibility and economic viability to innovative solutions. Both, initial position and spatial and functional consequences of planning decisions, are consistently analysed and visualised. By this, results can be used as basis and for a transparent process of decision making.

By doing so, IGSI strongly focusses on the concept of “Urban Design Thinking”, a method and planning tool developed at Technical University Berlin, which sets citizens as user and main designer of urban spaces in the centre of development processes. Dialogical events, called “UrbanLabs”, are crucial part of the collaborative process. Herein users, stakeholders and planners are jointly working together on specific problems and their solution.

Excellence supported by German Government

In 2017, the German Federal Ministry of Education and Research (BMBF) announced IGSI as one of ten research networks of excellence within its campaign „Shaping the Future – Building the City of Tomorrow“. The approach of the campaign is to promote research networks from Germany to present their ideas and innovations for urban development abroad. Within this framework IGSI set up a series of UrbanLabs and network activities in India.



Human-centred innovation concept, M.Jeutner/E.Pahl-Weber: 2016

UrbanLab #3 – Berlin

From April 23rd to 27th 2018, a new event of the IGSI UrbanLab series was organized during the Asia-Pacific Week in Berlin, Germany. IGSI invited urban planners, engineers, researchers, initiatives, academia and business representatives to a five-days program in the frame of the UrbanLab. We were dealing with the question if human centred urban design can contribute to design digital futures. The UrbanLab has been supported by experts of our network partners.

Conference “Dialogue on Smart Cities: Can Human-Centred Innovation Design Digital Futures? “

On the first conference day at the European School of Management of Management and Technology, 9 professionals, researchers and experts around the core topic from India and Germany were giving talks and speeches, providing insights in their work, learnings and results.

Besides portfolio presentations, there have been talks on specific fields e.g. collaboration, governance, legal frameworks, climate adaptation, water management and mobility.

Key Speaker

Marcus Jeutner (IGSI/TUB):
Opening Speech

Prof. Elke Pahl Weber (IGSI/TUB):
Can co-creation contribute to urban digital futures?

Holger Prang (City Science Lab):
Digital City Science - Decision support tools from global scale to local scale

Dr. Angela Jain, Dr. Thomas Blanchet (nexus Institute): Citizen Relationship Management in Smart Cities – Digital tool for online participation?

Florian Lennert (Director Intelligent City, InnoZ): Intelligent City: Integrating Smart Users and Sustainable Infrastructure

Anmol Bansal, Dhruv Mehra (Make in India): India: The land of unlimited opportunities

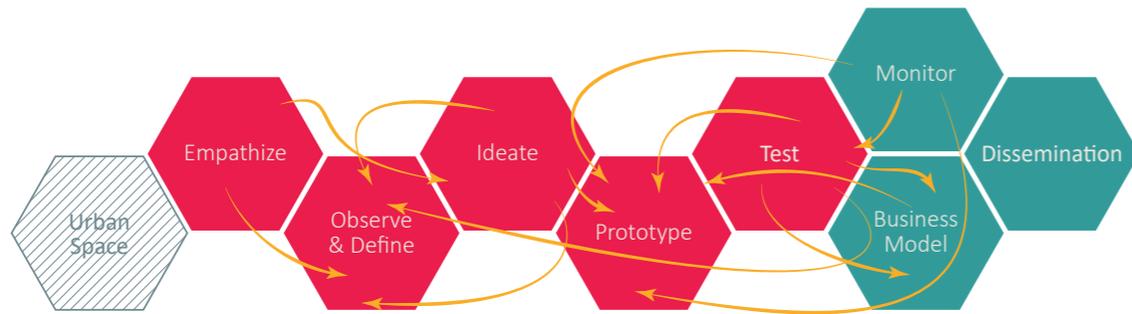
Michael Petersik (GIZ): Climate Smart Adaptation in Cities

Kai Ressel (Harbauer): Potable Water in SMART Cities in India

Dr. Phungmayo Horam (Arden University Berlin): Market trend, barriers and opportunities for rooftop solar in urban India



Photos: M. Jeutner, R. Hueppe, 2018



Urban Design Thinking Process (Graphic: Jeutner/Pahl-Weber; based on the Design Thinking Concept of the Institute of Design, Stanford)

Workshop

During the third and fifth day, the team of TU Berlin applied its unique planning methods to facilitate a process, in which the participants investigated specific issues and created solutions, which put citizens first. The workshop days have been organized and carried out in partnership with BOUWOG Group.

As a starting point, IGSI concentrated the workshop this time on a task, which dealt with the smart development of a mixed-use neighbourhood, which will be developed by BUWOG Group. The area is located in Berlin, Spandau (see on the right) and is with its converted silo storage buildings supposed to one day provide qualitative living for people. The main topics can be diverse in such a development but regarding a workable research outcome. IGSI chose to concentrate on the topics “commons

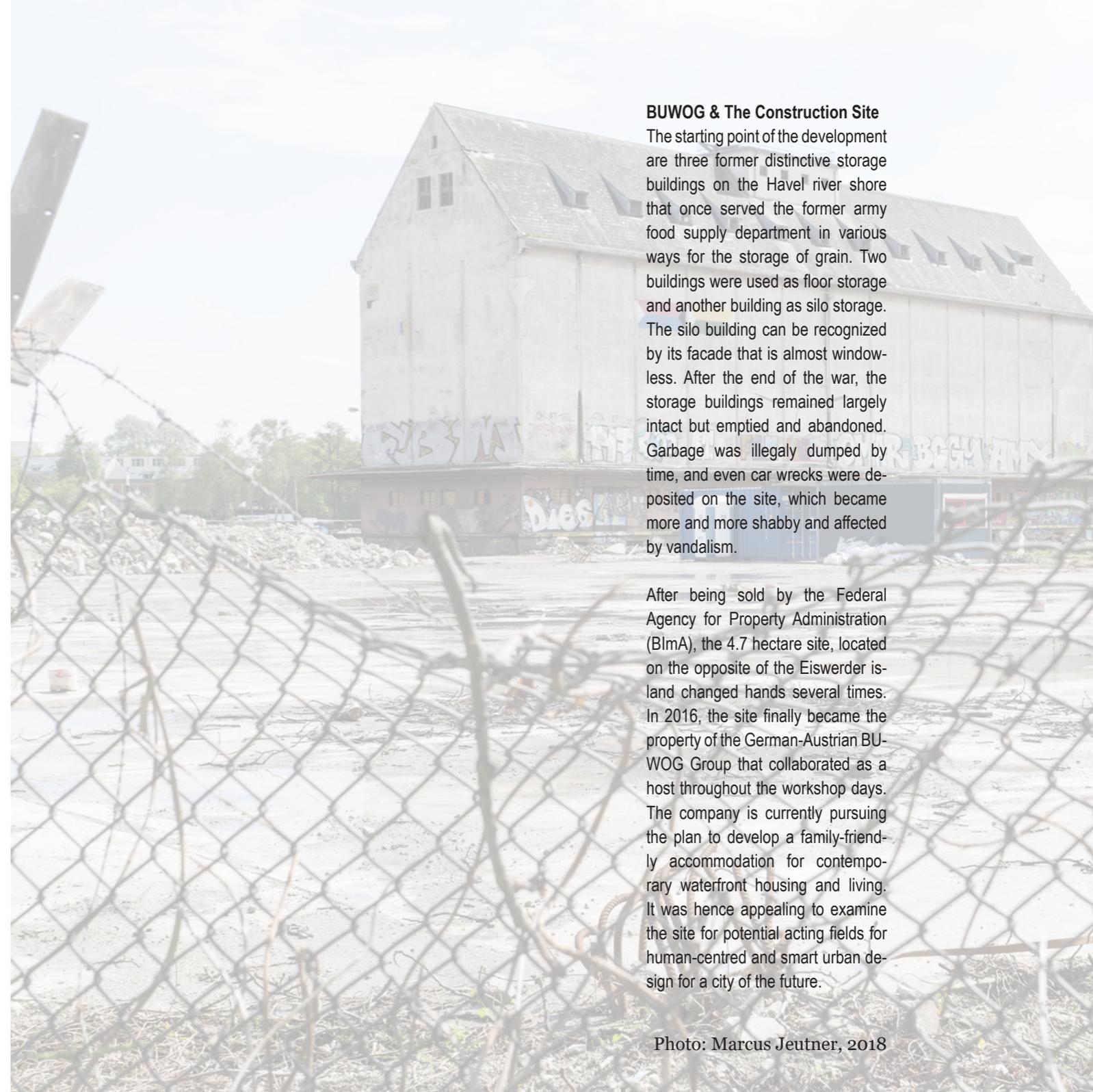
and open spaces” as well as “energy and mobility”. The participants were developing ideas, tangible solutions, and visualisations in form of small models and other prototypes, to bring the idea of a smart neighbourhood into practice. The participants were supported by three German planning experts and scientists from the IGSI network.

The participants worked in five thematic groups:

- #1 Energy and Mobility (supported by Vipul Toprani, innoZ)
- #2 Buildings (supported by Christoph Towara, DGI Bauwerk and Philipp Eichstädt, seg architects)

The kick-off for the working-phase was given by a tour to the construction site, where the hosts of BUWOG was introducing facts about the history, status quo and ongoing

plans, deadlines and challenges. The group work dealt with several questions that are concealed by the major challenge: What is the right starting point for planning? What do we consider? What does it mean for future residents and present neighbors when the new development becomes smarter? Who is it that will live or work here? What is going to change on the local level and what impacts on the city-level are to expect in the future? The answers have been given in each of the groups: human-centred, adaptive and contextualised solutions.



BUWOG & The Construction Site

The starting point of the development are three former distinctive storage buildings on the Havel river shore that once served the former army food supply department in various ways for the storage of grain. Two buildings were used as floor storage and another building as silo storage. The silo building can be recognized by its facade that is almost windowless. After the end of the war, the storage buildings remained largely intact but emptied and abandoned. Garbage was illegally dumped by time, and even car wrecks were deposited on the site, which became more and more shabby and affected by vandalism.

After being sold by the Federal Agency for Property Administration (BImA), the 4.7 hectare site, located on the opposite of the Eiswerder island changed hands several times. In 2016, the site finally became the property of the German-Austrian BUWOG Group that collaborated as a host throughout the workshop days. The company is currently pursuing the plan to develop a family-friendly accommodation for contemporary waterfront housing and living. It was hence appealing to examine the site for potential acting fields for human-centred and smart urban design for a city of the future.

Photo: Marcus Jeutner, 2018



How might we create a neighbourhood by offering intelligent mobility?

Public Transport

GARAGES

SHARED SERVICES

Group #1: Energy and Mobility
Prof. Elke Pahl-Weber, Vipul Toprani

Photo: Marcus Jeütner, 2018

UNDERSTAND

A short introduction of each member of group, following which the participants discussed the various trends, facts, places and stakeholders pertaining to the project. In conclusion, the topic “providing sustainable mobility for the future residents of Parkstraße” was finalized, and the participants discussed the interview process.

Given that the project is still in the planning and construction phase, interviewing future residents was not an option. Instead, the team decided to interview different stakeholders from the neighbourhood locality to get a better understanding about the situation and the needs of the current residents. The team was divided into smaller groups of 2 each with the goal to interview multiple people from different facets about their understanding of mobility and the project in general and its importance to the neighbourhood.

EMPATHIZE & DEFINE

The group visited the main site and around the complex and talked to the following groups of people:

- School children
- Current residents in the neighbourhood – families, singles, retired
- Workers in the area

By asking questions regarding perception of mobility, their specific needs and that of their families and friends, the groups gained an insight into the practices of the person in question, and supplementary information about the current situation of mobility in the area and its impact on the lives of the residents.

Upon returning, the group analysed the various types interviewed by compiling and presenting the findings of each sub-group to the rest of the participants. Each group member wrote down on a post-it a note or sentence accompanied by a little sketch or logo to make quick recognition at a later stage easier. These notes were sorted into sub-topics to provide structure. Depending on the group of people interviewed, the key findings can be summarized into:

Spandau:

- Most of the interviewees were very happy with Spandau and its identity
- They were happy to be “Spandauers” and have been living here for a long time
- The residents are quite happy with the neighbourhood and mingle gladly with each other

Public Transport:

- “Public Transport is really very good” – the majority of the interviewees made this statement
- Use public transport to get to services/ go shopping/ to school and university/ to travel to the city centre in Berlin...
- Would like a bus station in the Parkstraße given that lots of old people live in the neighbourhood
- Wish – digital information screens about the public transport / improvement in the BVG app.

Private Transport:

- There are no problems finding parking spots in the area
- Private cars used for shopping
- Families share their car (unofficial carsharing exists already)
- Residents are open to official car-sharing

Facilities:

- There is a need for more shops in the neighbourhood – no super-market close-by
- Shopping isn’t as easy as in the city centre
- Lack of places of eat

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

- ...that offering more facilities will reduce the need to own a car?
- ...that transformable parking spots will help in offering better services in the future?
- ...offering e-shared services that are accessible and affordable could reduce the need for parking spaces?
- ...creating a Spandau identity for the Parkstraße residency would be beneficial for the BUWOG?

PERSONAS

Considering the current situation at the Parkstraße project, it would be easy to determine that two different personas were needed – one who is already residing in the neighbourhood and the other who will be the future residents of the residency. On this basis, the following personas were defined:

Angela – 35 years old, mother of two, grew up in Spandau, part-time employee in a downtown shop in Berlin, uses public transport because her husband uses the family car; she picks up kids after work, goes to LIDL for buying groceries – hates to carry heavy bags, kids go outside to play while she drags home the groceries and is tired; she has no time to relax; in the weekend, the small

family goes to local parks where others Spandauers come as well; she doesn’t like biking, is not sporty, lives to shop in shopping malls; her father lives close-by and she visits him in her free time.

For Angela, the following question was formulated:

How might we...

- ...help Angela to take out time for herself?
- ...offer Angela services that could help her manage her busy life?
- ...help Angela carry heavy loads after shopping?
- ...help Angela get free time for recreation by making mobility easy and effective?
- ...reduce Angela’s daily travel time?
- ...offer Angela’s family weekend activities without the need of a private car?

Mr. & Mrs. Well Off – 50-60 year old retired couple, the kids are grown up and live in the city, they own a car, and are open to using e-mobility, they are also experienced in using public transport, they love to be near the nature, they like to go by bike for recreation, they are environmentally conscious.

For Mr. & Mrs. Well Off, the following questions were formulated:

How might we...

- ...help Mr. & Mrs. Well-Off to come to the city visiting friends without having to own their own car?
- ...help Mr. & Mrs. Well-Off to have good access to the city-centre?
- ...help Mr. & Mrs. Well-Off to have good access to various facilities?

In lieu of multiple types of users, the team decided to formulate a few more questions that would be common to all types of residents.

How might we...

- ... create a neighbourhood community by offering intelligent mobility?
- ... enhance the quality of life by fostering community building through sustainable transport system?
- ... ensure efficient energy supply for mobility offers?

IDEATE & PROTOTYPE

Ideas around the following clusters, based on the “how might we...” questions were considered:

- Information systems (Digital/ Analog solutions)
- Energy
- Mobility Hubs
- Garages
- Bike
- Shared Services
- Shuttle Services

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 cluster mobility hubs – “Speicherbalett Mobility Hub”. The team was divided into two groups, with each working on one prototype.

Problem to be solved - How might we...

create a neighbourhood community by offering intelligent mobility?

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

immediate access to mobility (both frequency and distance), affordability and accessibility, lack of community building (in future), fear of gentrification

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

the neighbourhood, future residents of “Speicherbalett”, visitors, users of boats

The solution – our solution works like this...

Mobility Hub (MH) and Access to shared services and local community services

- decentral mobility points(MP)
- inclusion of neighbourhood facilities
- hydrogen and electric charging stations and production
- inclusion of community centre and café

The Mobility Hub prototype was made using simple craft materials showing the various elements for the information and mobility services. Services include carsharing, bike and cargo-bike sharing and charging stations with PV on the rooftop. Besides a parcel delivery station has been setup behind the café. The Speicherbalett Café serves the purpose of promoting integration.

Multiple Mobility Points built with modular elements will be setup around the residency to allow easy access.

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

building a community feeling, providing comfortable mobility access, reduction of CO2- emissions, noise reduction, quality of urban spaces, affordable & flexible mobility for all, integrated parcel delivery station

The actors – stakeholders – our solution involves...

BUWOG, mobility manager and operator, residents of Speicherbalett & neighbourhood, district administration of Spandau, Digital platform provider, Café host, post station

The costs – the solution needs investment for...

the construction of hub and satellites, maintenance and operation, energy infrastructure and charging, café construction, post and parcel station

The revenues – our solution generates profit by...

user fees, café rent, parcel delivery, increased rent



Group #2: Commons and Open Spaces
Philipp Eichstädt, Christoph Towara

UNDERSTAND

The group covered the topics of "Services", "Community" and "Public Space". In a first round of analysis and brainstorming the topics were broken down into the following, project specific focus points:

- Services: Integration of mobile and delivery services in the new residential development.
- Services: Integration of small start-up and co-working spaces in the development.
- Community: Creation of communal spaces out-door and in-door.
- Community: Zoning of private to communal to public spaces in the development.
- Public Space: Ensuring best use of the waterfront area.
- Public Space: Creating good anchoring and connection between new and existing.

Following this initial preparation of the group set out to investigate the site of the new developments and the existing neighbourhood.

EMPATHIZE & DEFINE

In an open arrangement the members of the two groups met with and talked to a variety of different interviewees in the neighbourhood. The interviewees were predominantly direct residents with a few pedestrians from further apart, passing through the site on their way from work, etc. Based on the interviews the group gained an insight into everyday routines of the residents as well as general expectations and fears with regards to the expected development. All interviewees were principally supportive but predominantly afraid of change in their direct surrounding. 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:

- A majority is keen on more and new green public space.
- A majority is keen to get direct, usable access to the water.
- A lot complained about trees and greenery being destroyed in parallel to site preparation.
- A lot were afraid of rents and prices rising as a result of the new development.
- A lot liked the area as it is – stating a tendency that they might dislike the current state being change.

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 enrich the topics with further details for the following steps of the workshop.

The key topics that were isolated for further processing were:

- Ensuring use of the waterfront.
- Ensuring maximum availability of public space.
- Ensuring best overlap and interaction of new and existing neighbours.

Not surprisingly most of the interviewees had a negative attitude towards change in their neighbourhood in general and a fear of rising rents and prices in particular.

Over and above the majority stated being happy with the neighbourhood as it is today, articulating a strong bond with the green and the waterfront.

Based on the above findings the following questions were jointly elaborated for the next step of the process: **I wonder if that means that...**

- ...there is a desire for a connection of green and water?
- ...the neighbours like to live on the edge of the city – urban density in the

back and open green with generous views of the water right in front?

...there is not enough public space next to the waterfront in the neighbourhood?

...there is no public swimming place in the neighbourhood?

...there is a lack of outdoor spaces for children?

PERSONAS

In order to address the wide range of demands encountered the group decided to come up with three rather different personas:

Andreas (42), employee

Father of two, Andreas works in sales in the city center where he commutes to by public transport. Proud to be a "Spandauer" local. He loves BBQ which he enjoys with his friends in the public green and uses access to the riverfront to go fishing. He is concerned about rising rents and increase of prices as well as his teenage daughter who is frequently out and about in the neighbourhood.

Horst (75), pensioner

Suffering from rheumatism Horst spends most of his time on the balcony, watching the everyday life from first floor. He leaves his flat only to walk his dog. When speaking to people, which he tries to avoid, Horst prefers to tell stories from his past.

For the neighborhood he is generally concerned about things to change and particularly worried about green and trees being reduced.

Majida (16), goes to school

Majida is annoyed by her younger brother, about not having enough space at home and not enough pocket money in general. The way from home to the bus stop she feels is too long. She likes swimming and hanging out with her friends. Because she thinks of the city as too hectic she prefers to be in the green and on the riverfront.

IDEATE

Based on the previous steps, findings and condensed information, the following task was to develop solutions that might help connecting the personas (or “existing neighbourhood”) with the new development. In this process it quickly emerged that the main focus should be to provide leads for the structuring for the multitude of requirements of the new development’s public space.

In order to keep the process focussed, not all topics of the brainstorm’s first round could be pursued further, condensing the final steps of the workshop into answering the following question:

How might we maximize public space by

- activating the waterfront?
- offering a variety of use types?
- connecting new and existing users?

PROTOTYPE

In a first round of prototyping three core aspects were sketched out:

- An organizational principle for arranging public and private spaces across the site overall: This prototype was proposed as a plan layout including multiple layers with specific functions imposed.
- An approach to populate and utilize the waterfront: A physical model of a approx. 10m wide section (in reality) – from the restored “Speicher” building to the river arm was built. Adding to it, a wide range of mobile structures was built and located on the model suggesting various scenarios questioning and finding ideas for the relation between public and private at the waterfront and its direct surroundings
- An analysis of the most critical collision points of public and private space: This part mainly focussed on verbal descriptions and some solutions which contributed to the model described above.

Based on this a modular section was built to study the spectrum of possibilities to organize space at the most narrow point between private garden, public thoroughfare and the waterfront.

Problems to be solved:

How might we organize the public space towards the waterfront for both private and public users?

The Users:

Existing residents, new residents, tourists and visitors

The Painpoints:

Lack of green public space. Lack of access to waterfront.

The Solution:

Smart integration of public and private space along the waterfront.

The Impact:

Create liveable and lively places. Avoiding conflicts by design. Adding attractiveness to the development.

The Actors:

Buwog, tenants, residents (old/new) municipality, water council

The Costs:

Planning, construction, maintenance and activation of space in general.

The Revenues:

Micro production of goods, giving tours, voluntary work, involve pensioners





Photos: Marcus Jeuttner, 2018

Visiting of urban transformation projects



| Thank You!

Photo: Marcus Jeutner, 2018



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Berlin, June 2018