



TriNet-Global  
Business Sector, Universities and Local  
Authorities as Agents for Change



## Development Policy Dialogue at the Asia-Pacific Weeks Berlin 2013

Cities in Transformation  
Pioneers for Sustainable Development

June 11-12, 2013, Berlin



**TriNet-Global**  
**Business Sector, Universities and Local**  
**Authorities as Agents for Change**



**LEGAL NOTICE**

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Throughout the report, the masculine gender form had been used to ensure the better readability of gender-specific concepts. This form is understood explicitly as gender neutral. Obviously, both sexes are always implied.

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**sef:** Stiftung  
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in cooperation with the German Society for International Cooperation (GIZ)

**Location**

GIZ-Haus Berlin, Reichpietschufer 20, 10785 Berlin

**WELCOME SPEECH**

**Guido Beermann** - Secretary of the State  
Senate Department for Economics, Technology and Research, Berlin



‘Cities in Transformation – Pioneers for Sustainable Development’ is the working motto of the three-day long Development Policy Dialogue at the Asia-Pacific Weeks 2013. The new millennium had marked the beginning of the era of cities. For the first time in human history the majority of the world’s population lives in cities: if in the middle of the 20th century only 30% of the world population were urban residents, by 2008 the number increased to over 50% - and is rising. According to some estimates about 80% of people worldwide will live in urban centers in 2050.

It is also expected that by 2020 there will be 27 megacities (cities with more than ten million inhabitants) in the world. Many of the participants come from very different parts of Asia. Currently, there is a high concentration of such megacities on the Asian continent, where each of them is struggling on their own with different challenges, as there are poverty reduction, economic growth and the achievement of climate-related and development goals.

Approaches to the solutions for a sustainable, viable urban development and a resource-saving, energy-efficient and modern infrastructure are of a great importance for the Asian region. And even if Berlin can only offer a limited response to these pressing questions of the future, our city also faces the challenges of a growing metropolis. This involves finding sustainable solutions for sustainable urban development, which include both: living space and jobs. The cities should be attractive not only to its residents but also to economic actors. Community life, subculture, economic and environmental innovation, style creativity, modernization and value creation are all taking place in the cities.

Many of the participants had already arrived to the city a few days before the beginning of the Development Policy Dialogue and exchanged their views about the next generation of Smart Cities. Maybe you had a chance to discover Berlin’s ‘best practices’. Berlin is the reference city for technology and forward-looking approaches to solving major societal challenges. Recently Berlin had been selected in a national competition as one of four display windows in electromobility. The display window is used for demonstration, testing and development of new technologies for mobility of the future. The metropolitan Berlin has currently the highest in Germany number of electric vehicles as well as the largest charging network for electric cars in the public domain. This city has the goal to become the leading metropolis and the pioneer in testing and application of electromobility. Electricity as the power source makes the city’s traffic of the future not only more cost-effective and quieter but also more environmentally friendly.

Berlin is already a member of various international networks of cities, such as the ‘C40 Cities’ on climate change or the network ‘Metropolis’, an association of over 100 cities to improve the living conditions in large cities and megacities.

At this point I would like to thank our partners for their support: the Federal Ministry for Economic Cooperation and Development and the Society for International Cooperation. Also I am extremely grateful for their support in the transfer of knowledge and the possibility to be hosted at the GIZ.

Special gratitude goes to the Development and Peace Foundation and its managing director Mrs. Roth, who on behalf of our State Office for Development Cooperation has coordinated the Development Policy Dialogue.

I am grateful to the Technical University of Berlin, especially to Mr. Meyer, who had invited Alumni of TU-Berlin from Asia, thereby laying a foundation for further international exchange. I am glad that our city becomes even more international and diverse for the duration of the Development Policy Dialogue thanks to our Asian guests.

**Klaus Brückner** - Head of GIZ Representative Office in Berlin  
Board of Trustees of the Development and Peace Foundation (SEF), Berlin



For the first time, the Development and Peace Foundation and the German Society for International Cooperation, the Federal Ministry for Economic Cooperation and Development and the State Office for Development Cooperation of the Senate Department for Economics, Technology and Research in the framework of the project 'TriNet-Global' had joined forces to organize an event, which spans through the Asia -Pacific Weeks, with its main events having already taken place on 5 - 9th June under the motto the 'Smart Cities' in the Development Policy Dialogue. The Development Policy Dialogue's mottos are "The 'green' City" and "The 'collaborative' City". Already the headings of the three days show how diverse and interdisciplinary the issues pertaining to sustainable urban development are. This is also shown by the cooperation partners, who have participated in the drafting of the current program and the selection of speakers.

For the first time in history, more than half of the humanity lives in cities - a number that is certainly not mentioned in this year's Asia - Pacific Weeks for the first time. By the end of the century that number is projected to rise up to 85% - of a then expected world population of 10 billion people. This means that in the next decades there will be a need to integrate 5 billion new urban residents in the local infrastructure and local supply mechanisms. In India and China, the five biggest cities already contribute to 15% of gross domestic product, which corresponds to about three times their part in the world population. Simultaneously, a large part of the global water and energy resources had been already consumed in urban centers. Also environmental pollution such as sewage and air pollution are most clearly noticeable in cities. Population growth and resource consumption will continue to increase. According to the estimates of the Asian Development Bank the Asian cities must provide 20,000 new homes, 250 kilometers of roads and infrastructure in order to transport additional six million liters of drinking water daily to intercept the population growth. Therefore, there has been some re-thinking for some years now and cities worldwide increasingly see themselves as leaders of sustainable development. To govern a 'green' city requires a coordination of different policy sectors and levels of governance as well as the active involvement of the private sector and civil society. The redesign of conurbations offers the unique opportunity to develop and implement new plans together with the city population in the mutual effort to make a city more attractive. Consumer-oriented and decentralized power generation, intelligent water resource management, a rethinking of traffic structure are only a few key points in which political innovation could simultaneously offer to enormously reduce environmental impacts of a city and considerably increase the quality of life of its population.

In the framework of the Development Policy Dialogue the innovative ways of sustainable urban development in the Asia-Pacific area will be discussed among the high-ranking German and international guests in order to identify the factors of success, the remaining challenges and the transferability and adaptability of individual projects. There is also the question of what kind of a pioneering role could Germany play in this process.

**Dr. Rainer Seider** - Head of Unit European and International Cooperation  
Senate Department for Economics, Technology and Research, Berlin



The Asia-Pacific Weeks is a well-established platform, which enables a targeted exchange of experiences between partners from Germany, European and Asian countries since 1997. In the business and technology conference ‘Smart Solutions for Urban Challenges’ and their Expert Tours, which took place on the 5th and the 6th of June 2013, positive examples of Smart City solutions have been presented and discussed. In the framework of the Day of the Embassies economic incentives for sustainable urban development have been discussed - the Chinese Ecopark Qingdao, the industrial corridor between Delhi and Mumbai and the Smart Cities in Southeast Asia are just a selection from the variety of topics covered.

Furthermore on the 8th and the 9th of June young architects, urban planners, designers and scientists held debates at a symposium and workshops of the Architecture Forum AEDES in cooperation with the Goethe Institute Jakarta on ‘Smart Cities - The Next Generation: Focus South East Asia’.

At these presentations and discussions are connected with our theme ‘Cities in transformation - pioneers for sustainable development’, which links up to development policy. We therefore not only support the exchange of information and transfer of knowledge but also are ready for focussing sustainability and global challenges and tasks.

We are indebted to the EU for the possibility to carry out research on the urban dimension for three days this year. The EU supports our project TriNet-Global to enhance the cooperation between actors from industry, universities, development organizations and city administrations.

Above all, I would like to thank our partners for their support: the Federal Ministry for the Economic Cooperation and Development and the Society for International Cooperation, for the upcoming transfer of knowledge and for the possibility to be hosted at the GIZ.

I also thank the Development and Peace Foundation and its Managing Director Mrs. Roth, who, on behalf of our State Office for Development Cooperation, has coordinated the Development Policy Dialogue.

Last but not least, I thank the Technical University of Berlin, which has established a basis for the future international exchange by inviting the expert alumni of the TU Berlin from Asia to Berlin.

Already 50% of the global population lives in cities. By 2050, a further increase up to 70% in the urban population is expected.

The majority of megacities with 10 million inhabitants are situated in Asia. Therefore, approaches

for a sustainable urban development and viable resource saving, energy-efficient and modern infrastructure are of great importance for the Asian region.

I would like to name several of urban challenges:

- On the top are the sheer size and the rapid growth of Asian megacities.
- To provide an adequate technical and social infrastructure requires high skills and resources from municipal and regional institutions.
- Increasing traffic, increasing distances between home and work, high urban density and lack of recreation zones worsen the quality of life in cities. In particular, poorer city-dwellers who do not benefit from the urbanity are likely to feel disadvantaged.
- Inadequate housing, the demarcation of residential quarters and lack of preventive health care and educational institutions pose more problems.
- The high proportion of informal economic structures, which poses considerable risks for the environment and community.
- 80 % of the energy produced worldwide is consumed in the cities.

In The World Conference of Cities - Urban 21, which took place in Berlin in 2000, the participating Ministers of Urban Planning agreed on the following recommendation:

‘The sustainable development of cities with their social, ecological and economic components, will continue to be the central concern of urban development worldwide. The creation of conditions, which permit the sustainable development of cities and its establishment, has reinforced the focus of future tasks. We emphasize the responsibility of states, as well as of the cities, in this process. We have to reconsider the public and state responsibility and the opportunities rising, when combined with this task.’

In order to be able to tackle the local governing issues, the cities and regions require the necessary political and financial support, possibly even to build autonomy. Actors from civil society and the business sector have to support the cities in their duties. Cities should be attractive not only to its residents, but also to economic actors.

Cities, that utilize the potential of modern information and communication technologies, are important centers for economic activities. That is why today we will engage with the aspects of a “connective” city, new technologies, urban management and smart-networks. Here the experiences with and in city networks are certainly important.

With our event we seek to answer the following question:

What would cities look like, if they are in equilibrium with their natural environment, if they realize the Millennium Development Goals and if both economic growth and also sustainable environmental protection are supported?

Berlin can only offer limited answers to this question. While being indeed a growing metropolis, Berlin can hardly be compared with Asian megacities. However, some models of sustainable urban development and best practices in Berlin are suitable to study, for example:

- the environmentally fair management of water resources,

- the public transportation,
- the use of renewable energy, particularly through photovoltaic solar roof initiatives
- the increase in energy efficiency in new construction and renovation
- the coordination of the planning and land use in the urban-rural space.

Berlin scores in the European Green City Index (a worldwide estimate, provided by Siemens) above average in almost all fields. Only in terms of energy there is still a room for improvement.

In addition to the issues of urban infrastructure and regional planning, the diverse approaches to civil society, democratic participation and models of participation have a direct impact on the special city culture of Berlin.

We look forward to cooperation between the Senate and universities, TU Berlin with their alumni program, the seminar for rural development (SLE) at the Humboldt University and the Technical University of Cottbus, a cooperation, which hopefully originates from the Development Policy Dialogue and the TriNet-Global project. We hope to benefit from the intensive cooperation of university professors from Berlin-Brandenburg with their partners in Southeast Asia who will introduce us to their local regional challenges.

Berlin is a member of various international city networks, such as the 'C40 Cities' on climate change or the network 'Metropolis', an association of 100 cities with the aim to improve the living conditions in large and mega cities. Berlin is an international node in these networks: over 300 institutions of development policy, more than 100 embassies and numerous internationally active associations, NGOs and political foundations are residents of Berlin. I am glad that throughout these days our city becomes more international and diverse thanks to our Asian guests.

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**11/06/2013**

Time: 9 am 16.30 pm  
Followed by excursions

## **Location**

GIZ-Haus Berlin, Reichpietschufer 20, 10785 Berlin

**'GREEN' CITIES**

## PANEL 1: SUCCESS FACTORS OF A CLIMATE-FRIENDLY CITY DEVELOPMENT

### Moderation

**Dr. Florian Steinberg**

*Senior Urban Development Specialist,  
Asian Development Bank, Manila*



### Inputs

**Prof. Dr. Raoul Bunschoten**

*Professor of Urban Planning and Sustainable  
Urban Development, Technical University  
Berlin*



**Prof. Frank Schwartz**

*Professor of Urban Planning and Spatial  
Design, Brandenburg University of Technology  
Cottbus*



### Extended Discussion

**Le Dieu Anh**

*ACCA Program Coordinator Association of  
Cities of Vietnam, Hanoi*



**Dr. Hung Hoang Vinh**

*Faculty of Urban Management, Hanoi  
Architectural University, Hanoi*



**Wenjun Li**

*Chief Executive Officer Wande Wenmai  
International Architecture Design Consulting  
Co., Ltd., Beijing*



## **‘GREEN’ CITIES**

### **PANEL 1: SUCCESS FACTORS FOR CLIMATE-FRIENDLY URBAN DEVELOPMENT**

#### **Background and theses**

Cities consume three-quarters of global energy. The gas emission also happens in cities, particularly due to the altered modes of living, consumption and nourishment. For this reason the focus of the urban space worldwide is on the implementation of a more sustainable and equitable climate and thus energy-efficient development. Cities are places of rapid growth of the economy, land use and resource consumption and are thus central laboratories for the implementation of a global climate policy - in particular the reduction of CO<sub>2</sub> emissions. The change of lifestyles in the cities also offers enormous opportunities for the urban development, including dimensions of social, economic and environmental sustainability. In order to achieve higher sustainability, the urban systems must be converted from a model of consumptive resource use into resource-saving circulation models. To achieve this, different sectors of urban systems are to be addressed through appropriate measures:

urban structure,  
transportation system,  
resource flows,  
socio-economic system.

All four areas are integrated into policies and strategies to support the sustainable urban development. City planning takes over an important role of influencing the sustainability in different sectors.

Asian cities are experiencing a process of rapid urbanization and population growth. Sustainable and inclusive urban development must respond to different regional framework conditions as well as to local conditions. The spatial planning is pinpointed to play an important role in climate change adaptation and implementation of a CO<sub>2</sub> reduction in a city. The shape of the spatial organization of cities and metropolitan regions is probably the major single factor affecting the long-term CO<sub>2</sub> emissions, so that the marriage of urban planning with investment in transport infrastructure and buildings in the long term has the highest effect. A coordinated development of cities of all sizes and the support of a balanced distribution of functional space are major tasks along with the implementation of a transport-oriented urban development model. The task is to support a forward-looking planning at all spatial levels in the region from city to district down to buildings. The first planning should also integrate implementation measures of a sustainable development model. Only in this way can city-specific and regional structures be created with low energy consumption and CO<sub>2</sub> emissions as well as reduced operation costs of infrastructures and buildings.

To meet the challenges and satisfy the basic needs in the field of housing and urban infrastructure, there is a necessity in competent planning organizations and residents - oriented concepts. With new investments in housing and new neighborhoods, the cost of infrastructure development is generated from the project – by this way supporting less-favored areas. Especially the residential areas with disadvantaged groups of population stand under diverse risks, such as inundation, so that their regeneration, improvement as well as the creation of new residential sites are key tasks. In these processes of transformation, the municipalities are encouraged to balance individual property

rights with interests of estate developers and to control speculation. Structural effective measures are needed as well as transparent planning processes and public control. Local communities and city governments should be enabled to implement democratic planning processes to improve the urban functions and planning.

*Bibliography:*

*Gaffron, Philine; Huismans, Gé; Skala, Franz (Ed.) (2005): "Ecocity - Book 1: A better place to live", Vienna.*

*CAI-Asia and CDIA (2012) "Climate Change and Infrastructure in Asian Cities". Pasig City, Philippines*

*China Science Center of International Eurasian Academy of Sciences, China Association of Mayors and UN-HABITAT (2012) „The state of China’s Cities 2012/2013“. Beijing*

**Introduction to the panel**

The moderator introduces the dimension of urban design and development with particular reference to the challenges of traffic and thus emission avoidance in urban structure of the cities of Southeast Asia. The panel should discuss the questions of what has been achieved, what are the challenges ahead, and what are the key success factors. The central questions are formulated as the basis for the discussion about the current forms and processes for sustainable urban development, the balance between the growing urbanization and the increasing energy consumption on the one hand and the need for energy-efficient buildings and environmentally friendly urban infrastructure on the other hand and the role of integrated strategies and concepts of urban development. Particularly answers to the following questions should be found:

- Which success factors of sustainable urban development in the Taiwan Strait and the Greater Mekong region that can be derived for other areas?
- Who is responsible for proactive activities for sustainable urban development? Does the city planning take the leading role? Who is responsible for planning at the regional level of the metropolis?
- What are the experiences with the integrated interdisciplinary and planning processes that are necessary for a development of a ‘Green City’? What are the chances in the cases where there are shortages?
- What are the appropriate forms of cooperation between different actors?
- What is the ratio of the actors from the national to the local level? Is there sufficient support available from the international actors for the city’s activities?
- What are the specific roles of the different actors? How can universities and business be involved in the processes for sustainable development?
- How can best practice and experiences be translated and more importantly made applicable in different regional contexts?

**Dr. Florian Steinberg** - Senior Urban Development Specialist Asian Development Bank, Manila

*'Factors of Success for Climate-Friendly Urban Development'*

In his keynote speech at the panel "Success Factors of a Climate-Friendly Urban Development", Dr. Steinberg made it clear that the answer to the question of climate-friendly urban development cannot be answered in a singular approach. Rather, it requires a multi-dimensional analysis of urban agglomerations in order to allow a sustainable action.

On the first level here are the planning of the use of space and the space management. An increase in the efficiency of use of urban space begins with spatial distribution of functions, which in terms of a city with "short ways" can reduce the volume of traffic. In combination with a densification of the downtown areas, the users and functions can be concentrated within the body of the city and can thus reduce the number of necessary trips. The savings of time, money, resources and the reduction of traffic-related emissions are all the measurable gains of utilization of space, which is planned in a sustainable way.

At this point the level of integrated transport and traffic system are interconnected. The targeted expansion of transportation infrastructure can counteract a steady blockage of urban roads and let them be used effectively. Avoiding traffic together with a sustainable traffic management contributes significantly to increase the quality of life.

The third level of climate-friendly city is the Green Building Technologies. The aspects of sustainable construction can be taken into consideration already during the planning and construction of buildings, such as the local climatic conditions, the use of local and renewable materials and the prefabrication of modular components. The increase in energy efficiency of a building can be made possible through the targeted use of modern building technology systems, for example, through passive heating and cooling system or the implementation of smart grids on roofs or facades.

There is a potential in the open urban spaces themselves to increase the climate- and utilization efficiencies. The creation of productive public spaces of a multi-purpose use contributes significantly to the identification of the inhabitants with their living environment and increases the quality of life in cities. It is also important to deepen approaches, in which the city space can be utilized in the sense of urban farming for the production of food.

Ensuring the supply of cities by a sufficiently robust technical infrastructure represents another level of action. Many of the fast growing cities have to get supplied first with basic technical infrastructure. The guarantee of a universal water supply, sewage and garbage collection is essential in creating sustainable urban living spaces.

The sixth level of consideration is aimed at the reduction of area consumption. In this endeavor in particular the inner development plays a special role, for example through the development of brown fields or the conversion of former industrial sites in the downtown areas. In many places an efficient ratio between surface and density of the city needs to be considered, in order to satisfy the densification of building structures.

One of today's controversial aspects of climate-friendly city is the urban mobility. In general, all future concepts should take the approach of 'Avoid, Shift, Improve'. This means traffic avoidance,

# Dimensions of Climate-friendly Urban Development

## Land management - Urban Densification

increase urban efficiency, reduce travel needs, lower emissions

## Integrated transport and mixed Land-use

Reduce congestion, provide better quality of life

## Green building technologies

Energy efficiency, passive heating/cooling, Smart grid roofs and facades, prefabricated modular construction, local materials,

## Greening the habitat and neighborhoods

Public space, Street lighting, home zones, urban farming

## Resilient Infrastructure

Retrofitting the city, sanitation, water, solid waste management,

## Brownfield Redevelopment

Industrial sites, urban renewal, infill buildings



*Editt Tower, Singapore*



*EXPO 2010 Initiative:  
Shanghai*



**Fig.:** Dimensions of Climate-friendly Urban Development  
*Source: Dr. Florian Steinberg, 11.06.2013*

the shift from the individual towards an efficient public transportation and the development of ecologically sustainable driving and power solutions.

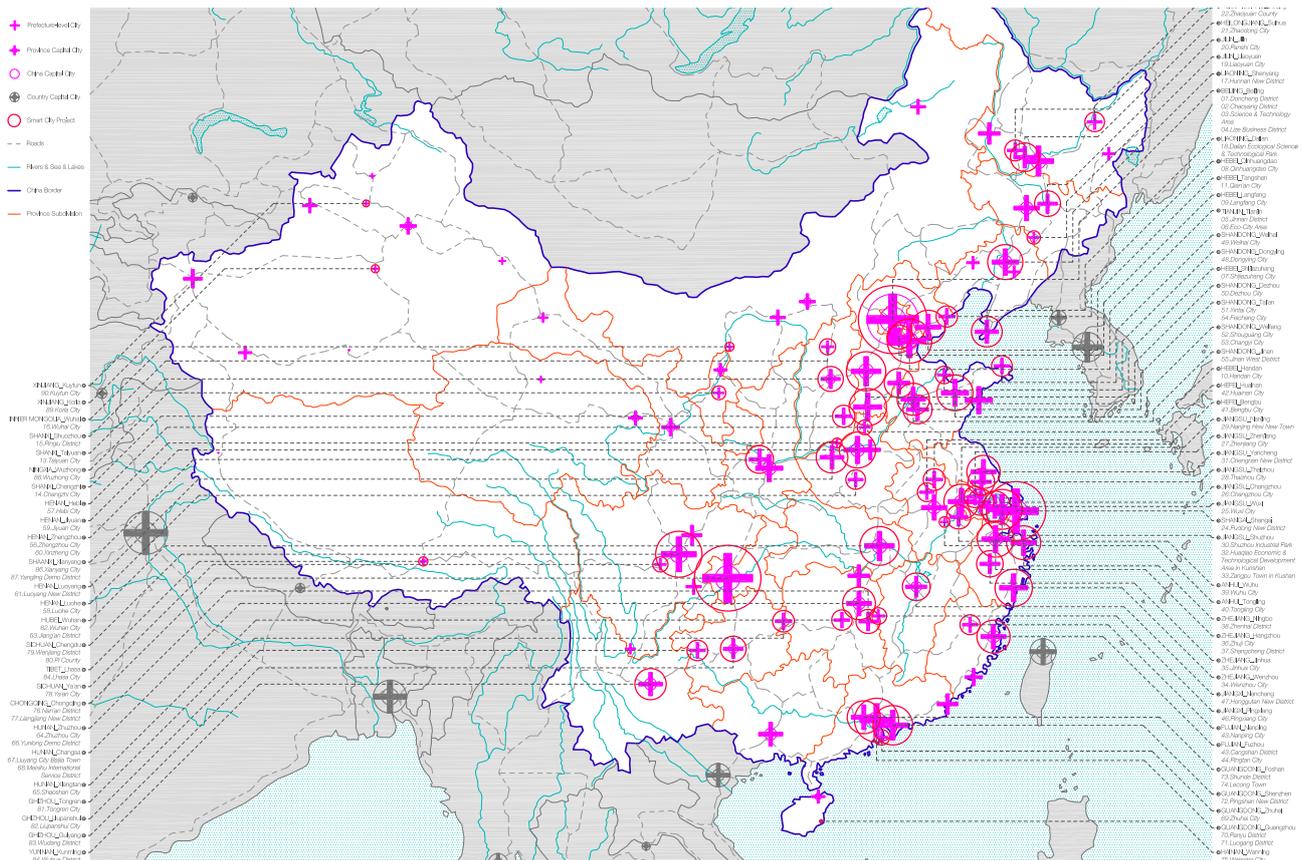
Generally, three basic questions are discussed in the following panel:

1. What has been achieved?
2. What are the main tasks for the future?
3. What are the key success factors?

## Panel Presentations

**Prof. Dr. Raoul Bunschoten** - Professor of Urbanism and Sustainable Urban Development Technical University of Berlin

Returning from his research trip to China, Prof. Bunschoten explains, that the question of the Smart City is already widely discussed in the country itself. The Chinese government had named in the beginning of the year 90 places, districts and provinces that could apply to become a Smart City and directed a substantial financial amount to the implementation. This program serves the economic development, technological research and production as well as residential, real estate and infrastructure sectors and the increase in the total quality of life.



**Fig.:** „Smart cities“ in China  
 Source: Prof. Dr. Raoul Bunschoten, 11.06.2013

Thus also in China there is this core omnipresent question: What is it – a Smart City? How can such a Smart City concept be implemented? It is no longer only about the technical dimension of possibilities through smart phones and sensor networking and integration of infrastructural aspects and parameters. Smart City is not just a result of unification of more or less intelligent products. Smart City is an evidence-based process with a global dimension, which points the way to a sensible future. Above all according to his view, the ‘smartness’ of a city begins with the human factor as part of the shared vision to reduce energy consumption and emissions and thus to mitigate catastrophic climate change. In terms of a networked thinking, it is the ability of actors to decide and to bring together the fundamental thinking of the main levels of these organizations and interactions. These main levels of consideration of technical infrastructure, constructed spaces and processes formulate the core metabolism of the city, which is a starting point to negotiate issues related to nature and urban space.

In what follows Prof. Bunschoten presented the activities of the Technical University with the aim of implementation of the concept of Smart City, e.g. connected with the European Climate-KIC initiative or sponsors. For example, a ‘Smart City Platform’ has been erected by Mrs. Prof. Pahl-Weber and several others at the TU Berlin Urban Lab. An essential core of his methodical approach is an understanding that various technical innovations of sustainable energy production and its consumption, synergetic and systematic, bring different combinations of possible solutions and supplements of specific architectural constructions. Then, complex pilot projects are evolving based on the combination of several at first monofunctional examples. In the evaluation of these best practices the knowledge of the potentials and problems are generated, so that the next generation of urban components can deliver even more efficient and better results. These parallel evolutionary



**Fig.:** Interactive city model: Encouragement of the human factor in „smart cities“  
 Source: Prof. Dr. Raoul Bunschoten, 11.06.2013

processes induced in interaction the co-evolution of these prototypes. As test room for this radical toolbox Berlin's Tegel airport, still to be closed, is chosen. Here in the 'Urban Tech Republic' the future of the city will be built and tested.

How this Smart City really looks like, there are first approaches but no overall consensus. It is therefore a useful tool to zoom into the available prototypes, but also to go through the drafts of scripts and visionary utopias. The works of the students and CHORA – the office run by Prof. Bunschoten – particularly focus on the power of diagrammatic representations and plan-graphical tools to illustrate these complex connections and to make them traceable. Only through this visualization would the potential become distinguishable. The processes of political learning and decision-making would be installed to secure the implementation of these complex strategies with the aim to support the climate protection.

The projects of re-utilization of the Tempelhof Airport, chosen as a result of a competition, and the studies to re-use Tegel Airport illustrate the potential use of the spaces of Berlin city airports. Strategic visions on urban regional scale are exemplified by the contributions to the 5th Ring of the city of Chengdu to the local Biennale, the energy ring for Xiamen, the Rural Urban Prototypes for smart Zhalanthun and over-regional to scale up with the utopia of a smart Taiwan Strait region. With the anchoring of a defined area with special rules, a so-called incubator, a political climate can be created through the common idea of the future of the city and the region, which would help to overcome differences. The proposed process involves the boundaries on the opposite coastal lines of Taiwan and China and an installation of a variety of prototypes on both sides of the Taiwan Strait. To avoid an uncoordinated approach a manual supports a self-organization of the leaders. The Taiwan



**METABOLIC CIRCLES** Virsavija Fuhrmann / Simon Becker / Elena Zaera / Tim Nebert

FAKULTÄT VI Planen Bauen Umwelt | Eine Kooperation von Prof. Elke Pahl-Weber (ISR) und Prof. Raoul Bunschoten (IFA)

CHORA City & Energy  
www.chora.tu-berlin.de

**Fig.:** Metabolic Circles: Airport Berlin Tegel

Source: Prof. Dr. Raoul Bunschoten, 11.06.2013

Strait Atlas is both a survey as well as it sheds some light on a typology of existing prototypes and the methodology in the context of incubators and co-evolution. Thus, this manual shows recipes of how individual decisions and various parts can be brought together to create a positive whole.

The strategic challenge will be to find and evaluate the current best implementations through monitoring and benchmarking in order to turn them into the next best generation practices and to gather the knowledge about all the cities and towns. First of all, the components need to be brought together, such as the Smart Grid, mobility, and garbage collection, in order to produce a positive effect on our resource consumption and other environmentally induced outcomes. Especially the challenges of a growing developing country in China pose critical risks, which should be addressed through the alliances between science and research, planning and management, (further) education and business.

**Prof. Frank Schwartz** - Professor of Urban Planning and Spatial Design Brandenburg University of Technology, Cottbus

*'Sustainable, climate-adapted Urban Development in the Mekong Region'*

Based on the results of a conference and summer school on sustainable urban development in the Mekong region as well as a funded by the BMBF project on climate convertible adaptation in Urbanism and Urban Planning in Ho Chi Minh City, Vietnam, Prof. Schwartz presented in his contribution the central role of planning. Adaptation to climate change and lowering the greenhouse gas emissions by reducing energy consumption are the keywords that dominate the debate on urban development



**Fig.:** Case Study Ho Chi Minh City, Vietnam  
*Source: Andreas Grawert, BTU Cottbus, Megacity Ho Chi Minh Project*

in the North and in the South for quite some time. The necessary action to build a sustainable and climate-effective urban structure is part of a strategy of sustainable urban development and demonstrates against the background of climate change the urgent need to change the existing pattern of urban development. The concept of a sustainable city (Philina Gaffron, Ge Huismans, Franz Scale eds. (2005) *Eco-city, Book 1: A better place to live*) combines the above-mentioned areas of urban structure, transport, energy and material cycles with socioeconomic areas of action into an integrated perspective in reducing the encroachment of the environment and of the human living conditions while maximizing the quality of life. The implementation of sustainable urban development, particularly in the rapidly growing cities of the Mekong region, includes measures for the integration into the urban structure of green and retention spaces, more climate-adjusted buildings with simultaneous compact mobility-avoiding urban forms and new mobility concepts.

In particular, the connection of the concepts of mobility with the organizational structure of the city through strategies of decentralization of functions and spatial requirements and the implementation of related concepts, such as the Transit Oriented Development (TOD) are worth mentioning. This infrastructure development and utilization of space must be considered and implemented together. The key trend is integration of these ecological aspects into the planning, which comes down to land utilization as well as city planning. An ecologically oriented planning in the future will connect with the urban planning in various ways. The city planning is crucial in conjunction with a coordinated transport planning, according to the Asian Development Bank's (ADB) 2012 report on 'green urbanization'.

The Mekong region in Southeast Asia includes such countries as Myanmar, Thailand, the southern

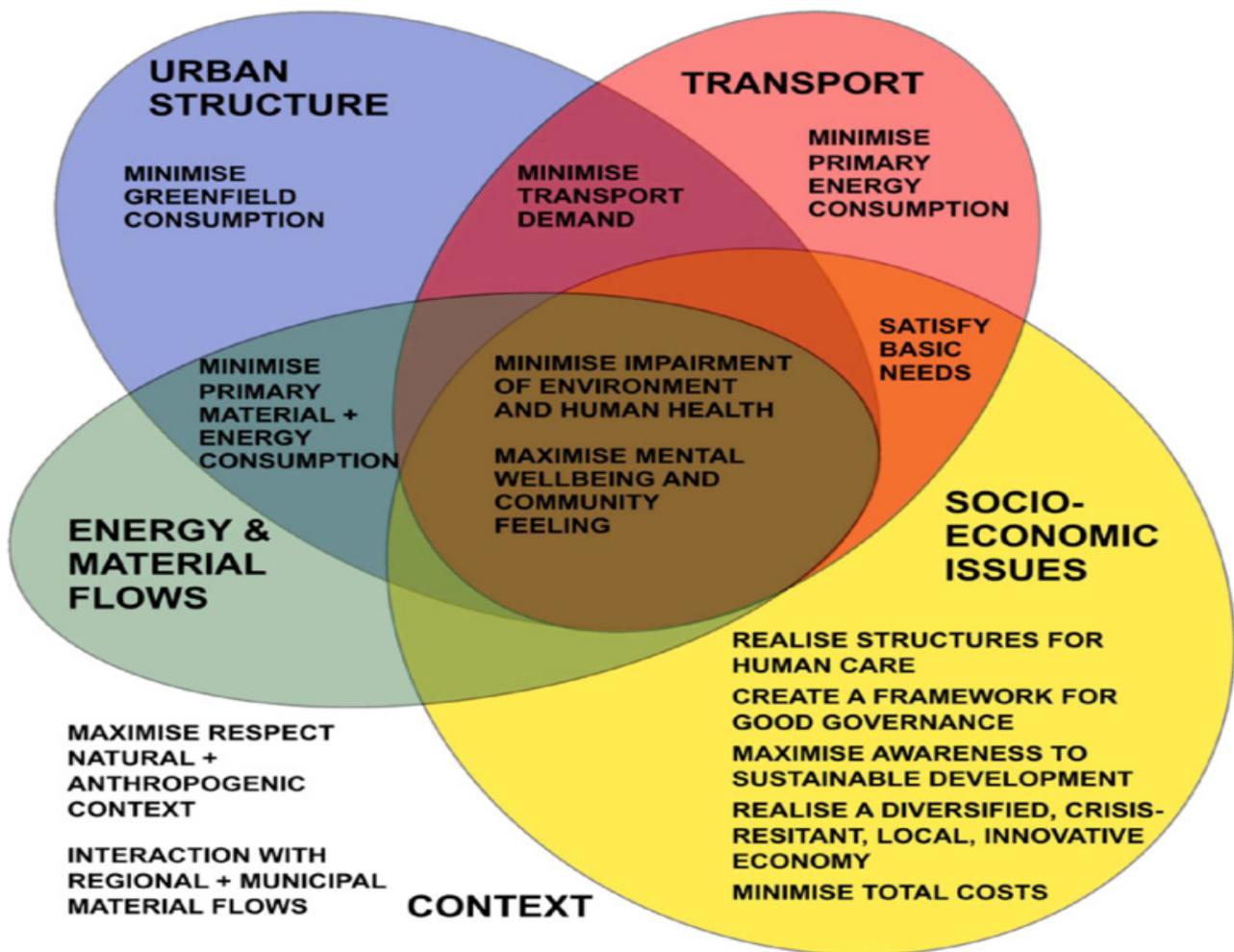
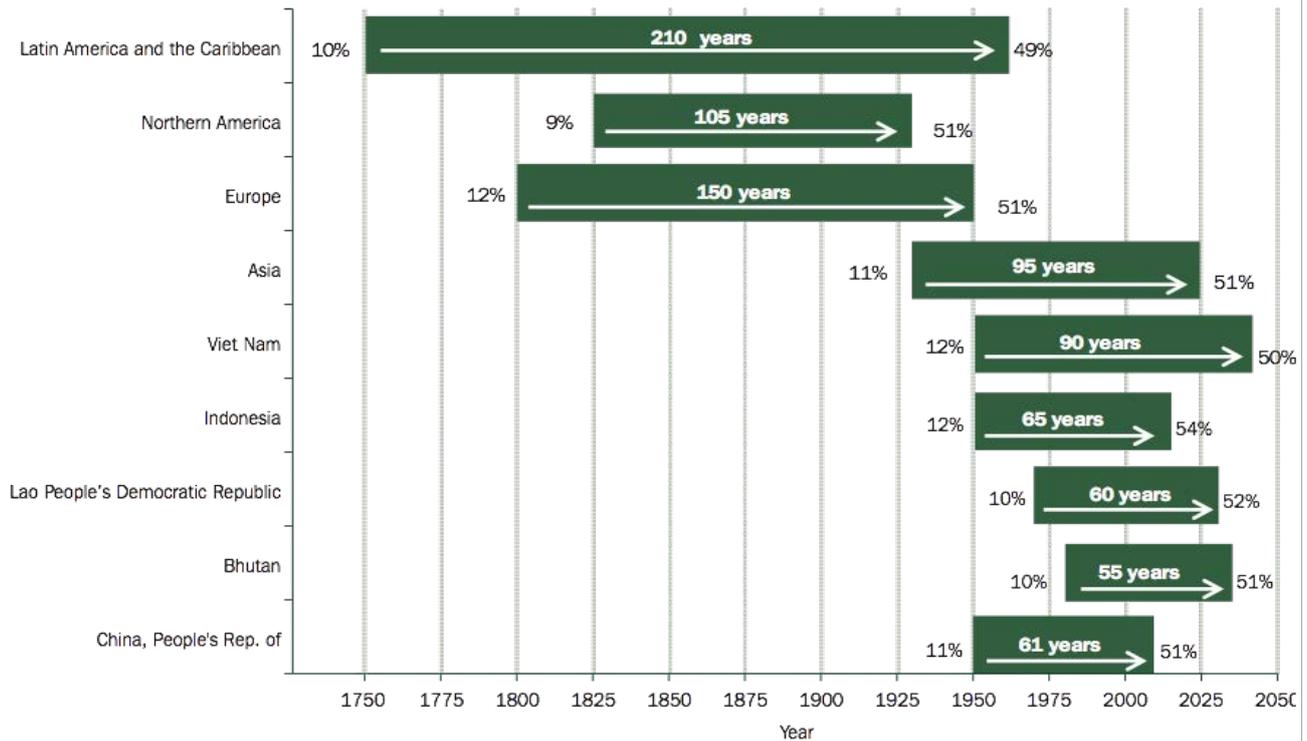


Fig.: Overall ECOCITY - goals structured according to elements of ECOCITY-planning  
Source: „Ecocity - Book 1: A better place to live“, Gaffron, Huismans, Skala, 2005

provinces of the People’s Republic of China, Vietnam, Cambodia and Laos. In the next 15 years at different pace and on various levels a significant increase in urbanization is expected in the region, driven by rapid economic growth particularly in Vietnam, Laos and Cambodia. Myanmar is opening up and will in all probability follow a similar development dynamics, while Thailand already has a consolidated structure and is the most developed in the region. The major urban centers of the region are the economic engines and carriers of the rapid structural economic development. The coastal agglomeration areas of Hanoi, Ho Chi Minh City, Bangkok and Yangon, as well as Phnom Penh have several million inhabitants. These cities are situated next to the mountain regions and are most likely to be affected by the climate change in the Southeast Asia. In particular, the consequences of the growing number of storms, regular floods and heavy rains in the increasingly compacted urban space pose a massive problem for the residents and the business. These are not the predicted impacts of climate change, such as the increase in sea levels, which in the case of Ho Chi Minh City will clearly bring the stronger floods, but the consequences of urbanization, that had not taken much into account the interests of the environment and the public space, their technical infrastructure systems, as well as their present or future requirements for a climate-friendly urban development.

The spatial planning, as has been demonstrated and emphasized from different angles, plays a central role in leading the various sectoral plans to integrated and coordinated approach to development. A quick look at a comparison provided by ADB using the UN-collected data, unravels

Figure 1 Number of Years from about 10% to 50% Urbanization



Note: Extrapolation and interpolation were used to estimate urbanization level and corresponding starting years for Latin America and the Caribbean and Northern America.  
Sources: ADB estimates based on Bairoch (1988) and UN (2012).

Fig.: Number of Years from about 10% to 50% Urbanization  
Source: „Green Urbanization in Asia“, Asian Development Bank, 2012

the processes of urbanization in recent centuries in selected countries and regions. For example in Europe in 150 years from 1800 to 1950 the degree of urbanization has increased from 10% to 50%. Vietnam will reach this development around 2040, in 90 years. For Laos the same source predicts a similar development in only 60 years, and until 2030, with a trend towards the urbanization level of 52%. Thus the cities in the Mekong region are faced with the task of planning and developing the sustainable urban structures in a very short run. Simultaneous planning decisions about the city's structure, its density, and connection to the transportation infrastructure are considerable in its scope and will widely determine the coming decade. They perpetuate today the city's structure and hence its sustainability for the next centuries.

A look at the reality of planning, for example in Ho Chi Minh City, Vietnam shows that the questions of a short-term capacity of mobilization of space from the perspective of large space developers as well as a variety of informal planning decisions will be made on the level of investors through the allocation and development of urban spaces. The decision-making structures in the planning systems are fragmented and not coordinated between the policies of various sectors. The same is true for the metropolitan spaces between the core city and the surrounding provinces. Planning is hampered by insufficient information and low financial and human resources capacities in the planning and financial management. This is exemplified by there being two meanings of the word 'plan' in the Vietnamese language, where the first one relates to the official 'hanging plan', which had already been approved and is hanging on the walls in the official offices, but does not have to be implemented. (see: Coulthart, Alan, Nguyen Quang, Sharpe, Henry (2006): Urban Development Strategy, Meeting the challenges of rapid urbanization and the transition to a market oriented economy, p 28)

However, this condition might not be a suitable tool to call into question the need for integrated concepts of 'Green Cities'. It is rather an invitation to keep the diverse levels and dimensions of the planning process in mind and to achieve the integration of various state actors. The results of the Expert Dialogue on sustainable urban development in the Mekong region confirmed that significant barriers exist on different levels of the implementation of a correspondingly controlled urban development. Therefore the institutional framework and competent management structures as well as the legal framework need to be created. Integration mechanisms of the plans on various sectoral and spatial levels, especially at the level of metropolitan regions, need to be developed to increase the levels of knowledge and skills of the key players in the administration.

These include training programs as well as appropriate monitoring and analytical tools that permit to evaluate effects, successes and failures of planning and to learn from them. In order to implement a more sustainable urban development it is required to connect the necessary institutional reforms with financial instruments. Just as the examples of the expansion of the European Union showed that a change and implementation of new structures, processes and ways of thinking are possible, if concrete and desired high incentives are offered.

Urban development and urban planning had become more complex. Urban planning and management are based on interdisciplinary processes involving the exchange between architects, engineers, energy experts as well as environmental and urban planners. The implementation of a concept of 'Green Cities' should initiate in addition to the focus on the structural and technical solutions, also a learning process and contribute to the exchange of knowledge among and integration of a wide range of actors.

**Anh le Dieu** - ACCA Program Coordinator Association of Cities of Vietnam (ACVN), Hanoi

Ms. Anh le Dieu opened the discussion on the feasibility and the nature of previously used concepts and strategies of adapting to climate change and reducing gas emissions in Vietnam. They are designed in line with the organizers of the projects, their goals and interests. The concept of a Green City is discussed in Vietnam since 2000. But the question of how does an implementation concept of a sustainable city in a particular locally governed community look is unanswered. The demand side is missing and some possible answers could be that the local administrations should make clear the potential economic advantages. If no stronger orientation on the actual demand and local problems is achieved and the benefits are not evident, the concept of a Green City remains a luxury.

**Dr. Vinh Hung Hoang** - Faculty of Urban Management Hanoi Architectural University, Hanoi

*„Toward a Sustainable urban development in Vietnam“*

The example of the processes of urbanization in Vietnam led to the necessity to clarify the notion of ecologically sustainable urban development. The floods and the rise of sea level with its 3269 km long shoreline, as well as its dense network of 2,360 rivers particularly threaten the country. The quest for an ecological sustainability is therefore a pressing need for the Vietnamese population. The rapid growth of urban centers in the country has led to the fact that today around 31 % of the 89 million Vietnamese are living in cities. These centers, such as Hanoi, Ho Chi Minh City, Da Nang and Hai Phong are not only responsible for around 70% of economic growth. More than 55% of the

total energy in the country is consumed in them. The construction industry is responsible for 30% of national energy consumption. The natural and migration-related growth of cities has led not only to their horizontal growth. The sharp rise in population numbers also puts a considerable pressure on the infrastructures of utilities and waste disposal, transport infrastructure and on the urban housing market. The latter in particular raises the question of a socially sustainable growth; the answer to it is of a high importance, since 12.6% of total population lives below the poverty line.

In the recent past, the consequences of worldwide climate change were noticeable in Vietnam. Between 1996-2009 around 9,600 people lost their lives due to natural disasters. The economic loss was around 1.5% of gross domestic product (GDP).

The earlier attempts to meet the challenges of climate change were aimed mostly at economic strategies, not at urban development. Moreover, they hardly managed to achieve local successes through political programs. The current top-down approach although delivered the development goals, failed to offer support or instruments.

Also the relationships between energy efficiency, climate change and urban development have not been so far sufficiently understood. It is obvious, however, that the Vietnamese cities are not sustainable structures in terms of the consumption of natural resources. And thus in recent years a perception of the connections between floods, sea level rise, water supply and urbanization processes had been growing.

The previous measures had a strong focus on technical and architectural solutions. The social component of sustainability has been treated rather secondary. The reason for this may be the fact that the planning practice had been strongly focused on the private sector. Within these practices the socio-economic master plans are developed in close cooperation with private actors, while the issues of energy efficiency and climate change are rarely addressed. Also on the political level there is a relative disagreement considering what sustainable urban development actually really means and what should the guidelines for the use of public funds be. The monitoring instruments, by which the success of the implementation of policy programs can be evaluated are so far still lacking.

Furthermore, there is a lack of suitable tools with which local actors and decision-makers can be activated. There is a lack of a mechanism that could bundle together local resources and competences of the state, the population and the private sector. The actors from the fields of research, management and policy are missing incentives, experiences and tools to involve civil society in the planning and implementation of strategies for sustainable urban development.

A clear definition of what a 'Green City' actually signifies is also currently missing. A green city is commonly seen as an entity that has a high proportion of parks or green areas. However, from a technical point of view, this term means far more than that. In order to negotiate the plans in the future, it is necessary to integrate sustainability issues into the curricula. Since the construction industry enjoys intense clientistic relations with the administration, academic research in urban development plays a minor role. Therefore, in the future, a stronger connection between academia, public decision-makers and private construction sector needs to be created.

In recent years, the regional exchange concerning the issue of climate change has been reinforced. The rising number of projects, which deal with the combination of climate change and urban development, has helped experts and authorities to enlarge the population's awareness in this topic. However,

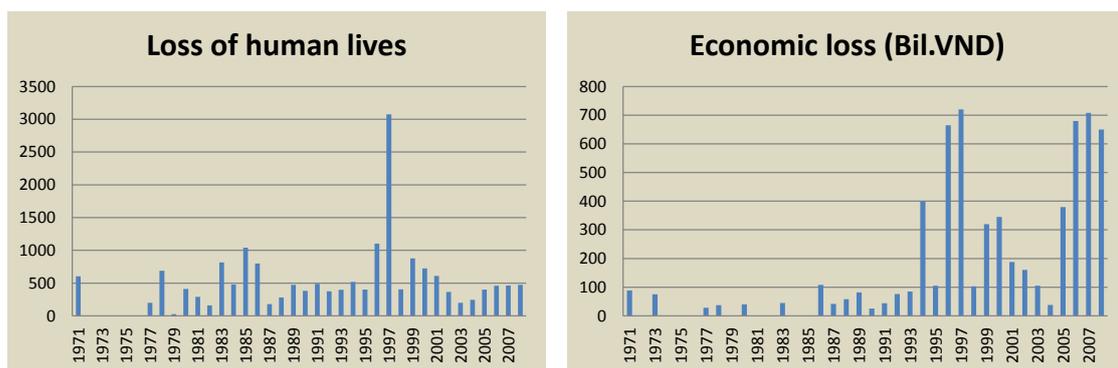
# Energy consumption and Natural disasters

3

- ❑ The residential sector: >55% total national energy consumption,
- ❑ building sector: 30% of all energy in society.

1996-2009

- ❑ Loss of human lives: 9600
- ❑ Economic loss: 1.5 % GDP per year



**Fig.:** Energy consumption and Natural disasters  
 Source: Dr. Vinh Hung Hoang, 11.06.2013

international institutions carry out the major part of research activities. The Vietnamese research so far lacks sufficient coordination of issues, capacities and activities. This again leads to fragmented research programs, duplication and competition between the various research institutions for grants and projects.

Although the national and international networks had been established and the first projects had been initiated, they require better coordination, a sound scientific base, the prioritization of different activities and the identification of the most important needs in different cities. The following question needs to be answered in the future:

With which methods can research results be applied into policy and planning practice?

**Wenjun Li** - Chief Executive Officer, Wande Wenmai International Architecture Design Consulting Co., Ltd., Beijing

*'Development of the Chinese City Planning - Example of Beijing'*

The intersection of population growth and economic liberalization has led to the situation of the ever-growing cities in China. Cities seem to increasingly lose their historical roots and visible structures as well as suffer other consequences of their sudden growth. Currently 74 cities in China have their total population above two million. Today's megacity of Beijing has grown only marginally through the centuries. The city has always been oriented towards its center, the Imperial Palace. The city's development had pushed the boundaries of the historic old town and had long since blown up and stretched far into the outskirts. However, growth had also been happening inwards.

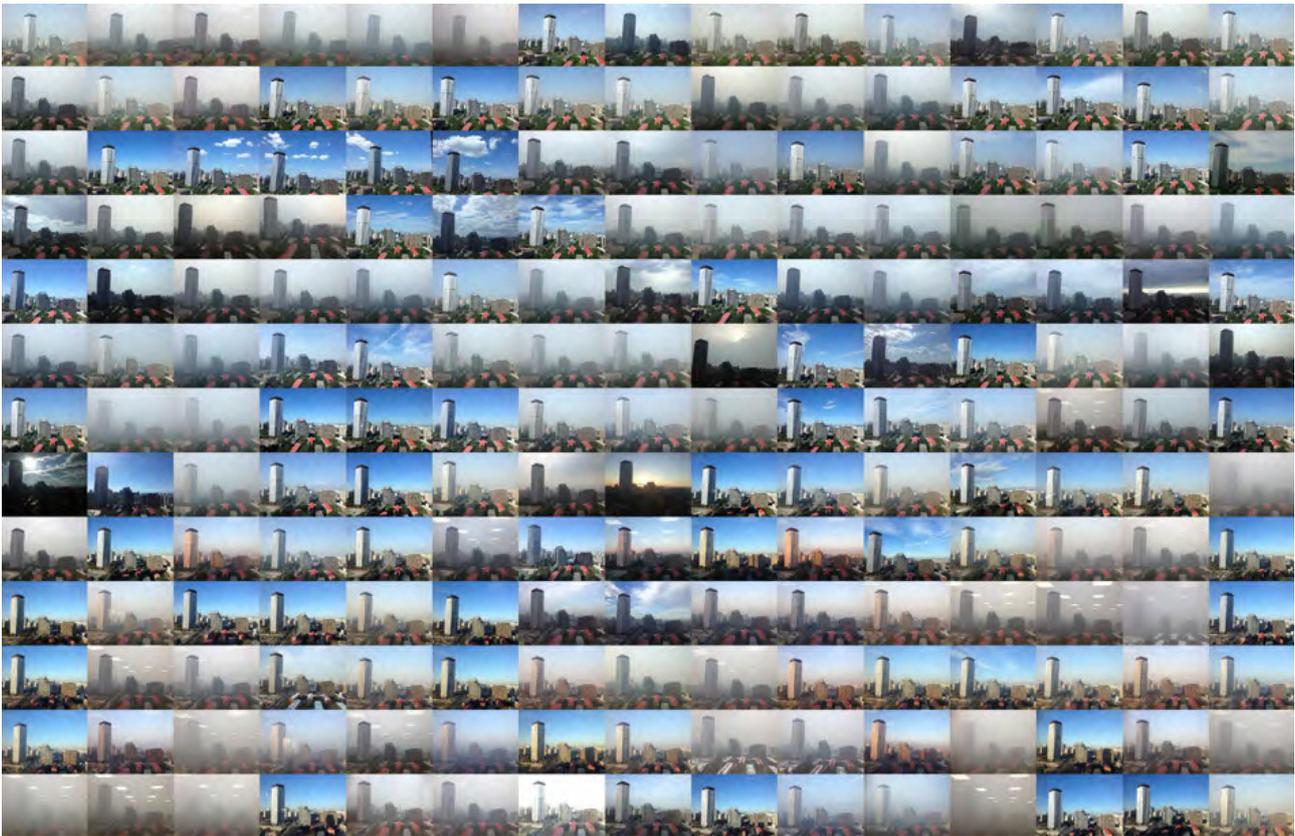


**Fig.:** Different scales and levels of usability of public spaces  
*Source: Wenjun Li, 11.06.2013*

Residential buildings were traditionally constructed within the street grid in the form of single-storey buildings around courtyards. These structures if they even still exist are extremely jammed by additional buildings so that there is hardly any private open space. Two strategies have been followed in recent years to improve the living conditions in these traditional 'hutong'. The majority of the historical structures of a rigid housing market fell victim to politics and had been torn down with large residential complexes and office buildings being built on their space. Only in recent years had the awareness increased among the decision-makers who are responsible for the questions of identity of the Chinese City Planning. They had identified several neighborhoods for rehabilitation under the monument protection act.

Today, however, the face of Beijing is coined by the large-scale building complexes and wide peripheral and radial roads, which are hardly ever central to urban life. In order to give Beijing this new identity, in the last 20 years, the city engaged architectural projects by beaming international star architects such as Zaha Hadid and Paul Andreu.

Thus, the question of spatial identity is not the only problem of urban development in China. Beijing suffers from a permanent water shortage and problems with the quality of drinking water. To this adds the massive problem of air quality. The strong exhaust gases from the transport and industry cover the city for most of the year in a turbid cloud of vapor. It is also problematic to supply the city dwellers with food. Furthermore, the living conditions in the newly built tenements are sometimes very unstable. At the same time the great housing shortage contributes to the fact that the land and rental rates in the city are constantly rising with no alternative being offered to the majority of the population. The problems of urban growth are felt also outside of the housing environment. Public



**Fig.:** Beijing Sky 2012  
*Source: Wenjun Li, 11.06.2013*

places such as restaurants, shopping centers, hospitals and streets are mostly over-crowded. Even the few green areas are usually overfilled and thus stand in stark contrast to the sometimes huge stone burst around the contemporary prestigious projects in Beijing. The power supply of the megacity is not assured throughout the area and around the clock. On top of this there are problems with the overcrowded streets and the public transportation around the clock. In order to solve these problems several campaigns were launched recently to raise awareness among the residents of Beijing for a more sustainable use of resources in order to reduce energy and water needs of the city. Furthermore attempts are made to cooperate with the 'South-to-North water diversion project' in order to manage the water shortage in the city. The aim is to shift parts of heavy industry from the urban area to the outskirts of the city. The Chinese government attempts to address the housing shortage by the planning of social housing.

To curb the problems of street transport there is an attempt to increase the management of the traffic flow. Simultaneously the higher parking prices for private vehicles made cars less attractive as means of transportation in the city center, allowing more drivers to switch to public transport. To be able to accommodate the increasing number of users, the construction of additional rail lines is planned. Finally, there is an attempt to change the consumer behavior of the residents of Beijing. For example, the Internet is used to group the shoppers together in order to reduce the number of individual shopping trips.

### **Discussion and questions**

The discussion was once again focused on the role of planning and asked specifically about the connection between the short-term and the long-term strategic plans. This left certain pessimism about the enormous challenges, for example, in the approximation of the environmental situation in Chinese cities, in the progress that had already been achieved in the range of other media, or about the ability to learn and implementation strength of the control system for urban development.

It was also noted in the discussion that there is still a lack of investors who are interested to invest in sustainable planning projects. This includes also inadequate investment in energy saving measures in the buildings and energy-efficient building as well as city planning projects.

## PANEL 2: WASTEWATER AS A RESOURCE: USAGE STRATEGIES AND CHALLENGES

### Moderation

#### Dr. Susanne Neubert

*Seminar Director for Regional Development (SLE), Humboldt University Berlin*



#### Inputs

#### Dr. Liqa Raschid-Sally

*International Water Management Institute (IWMI), Colombo*



#### Thomas König

*Water and Wastewater Specialist, Member of the Northern German Water Center (NWZ) and the International Water Association (IWA), Göttingen*



## PANEL 2: WASTEWATER AS A RESOURCE: USAGE STRATEGIES AND CHALLENGES

### Background and theses

In the times when the fresh water resources becoming increasingly scarce amid the growing population and urbanization, adequate handling of wastewater is among the greatest challenges. Besides the sanitary primary care and sustainable systems of wastewater treatment solutions increasingly come into focus, in which the already once used water is re-used several times. In view of the global water crisis the humanity cannot afford to consider wastewater as a pure residue, which with the help of purification plant or the self-cleaning in nature will 'somehow' be taken care of. The purification plants are known to be expensive and their self-cleaning capacities are limited. Instead, it is time to consider wastewater both quantitatively and qualitatively as a resource to be used. The objectives of 'green cities' are to treat the valuable untouched water resources with care, to increase the use-efficiency of already pumped water and at the same time to make the optimum use of the therein-contained nutrients.

As a concept, the re-use of waste water for irrigation is a prime example for an integrated water resource management (IWRM), to which all national and international actors of development committed at the big international water and environmental conferences in Dublin and Rio in 1992 and which has been confirmed in several following conferences. Thus IWRM represents a consensus aiming to soften or integrate confines between water sub-sectors like sanitary environmental engineering and agriculture, to see water- and land management in connection, to connect streams of materials and water in metabolic circles and to involve multidisciplinary aspects in a smart water management. Therefore the topic of reuse of wastewater is not exclusively interesting for experts of wastewater and agriculture, but also for water manager and scientists, who want to demonstrate a smart use of water that is aiming the use of synergy effects by this example.

Following advantages are connected with the reuse of wastewater:

1. Additional water for irrigation will be provided and untouched water resources will thus be saved. This advantage is mainly relevant in countries or regions that naturally given or due to an excessive use have small quantities of water resources and which have a high rate of urbanization at the same time, like in many countries in Asia or Middle East. In metropolitan areas large quantities of wastewater are accrued, so that an advantage of saving would reach a relevant scale very fast due to the scale effect.
2. The nutrients contained in the wastewater are the 'free' fertilizer. In many countries the costs of fertilizer have been more than tripled within the last ten years. Especially in countries that have to import fertilizer, prices did explode, so that for farmers these fertilizers became one of the main expense factors in food production. Due to the fact that the use of organic fertilizer out of wastewater could be nearly free of charge, this could also be an economically highly attractive solution.
3. The use of wastewater is 'climate-smart', as this will help avoiding greenhouse gas emissions, which are connected with the production and application of mineral fertilizers. The latter repre-

sents the largest issue in agriculture and thus makes the sector the largest contributor to climate change.

4. The use of wastewater leads to a harmless wastewater elimination through the plants and the soil. The soil develops in its oxygen-poor and-rich space highly diversified microbial patches, which can biologically completely purify normal household wastewater.

Multiple synergies are bound together with the reuse of wastewater, in keeping up with the concept of 'Green City'.

### **Introduction to the panel**

As part of the panel 'Wastewater as a Resource: Usage Strategies and Challenges' it should be clarified whether the approach fits in the context of integrated water resources management:

- a) Is it really that much future-oriented and whether wastewater can be thus disposed in a sustainable and a cost-favorable way?
- b) Which specific opportunities do the implementation open and what kind of savings can the agricultural sector expect? Indeed, both in terms of gas emissions and the reduction of costs for mineral fertilizers?
- c) Where and in what context should the approach be pursued and what is the relevance of the reuse of treated wastewater for irrigation in urbanized regions of Asia?

The concept of a critical review and analysis should be discussed:

1. What challenges are connected when this approach is put to practice? What kinds of risks exist, if unchecked large quantities of wastewater flow into food crops and soil?
2. What happens if the wastewater is not biodegradable but contains heavy metals and other toxic substances or pathogens?
3. Can it be ensured that the wastewater before reuse is adequately cleaned?
4. What risks arise in respect to the possible over-fertilization of crops with nitrogen? Do the crops require this composition of nutrients?
5. How can the waste be pre-cleaned adequately so that the pollutants are eliminated, but the nutrients remain?
6. How sustainable alternatives look like?

### **Panel Presentations**

**Dr. Liqa Raschid-Sally** - International Water Management Institute (IWMI), Colombo

*„Wastewater as a resource: strategies and challenges“*

Today the use of wastewater in irrigation is a necessity in many countries, the result of the water shortage. Thus, for example a quarter of Pakistani vegetable production is irrigated with wastewater. Wastewater has become a marketable commodity that compensates for the low access to drinking water while providing fertilizers at your disposal. In the developing countries in three of the four



In Hanoi 80% of the vegetable production is from urban and peri-urban wastewater agriculture areas

**Fig.:** wastewater as resource: Reuse of urban wastewater in agriculture  
 Source: Dr. Liqa Raschid-Sally, 11.06.2013

cities the farmers use the wastewater for irrigation. As the growing cities have an increasing demand for clean drinking water, agriculture is the loser in the competition for unpolluted water.

The use of wastewater in agriculture offers the possibility to use its nutrients. The largest challenge is to determine the risks and to make sure that they are connected with this technology. These are mainly the problems of pathogens such as intestine worms, chemical substances, but also its part in the possible loss of quality of agricultural products and their acceptance by buyers. The impact on the soil and the quality of the ground waters should also not be neglected. The WHO policy on the use of wastewater for irrigation in 1989 and 2006 contains standards and guidance, but the main challenge is the implementation. Training, incentives, social marketing and application of existing standards are the essential components of an integrated approach to minimize the health risks for the consumer from wastewater used by the farmer.

The support of a planned approach is connected through the economic development with the practice of wastewater use for irrigation. According to a study currently only 53% of the examined countries established guidelines for wastewater use or follow officially the guidelines of the FAO/WHO. Irrigation with wastewater in agriculture, therefore, is not substantially regulated. The embedding of an IWRM approach in this context means that the reuse of wastewater is placed in the larger context, which includes:

- the use of the economic effects,
- optimal use of limited water resources and finances,
- reducing the cost of cleaning the wastewater,
- benefiting agriculture through the nutrients.



**Fig.:** Wastewater as fertiliser: Increase of the nutritive value of the soil by the usage of wastewater  
*Source: Dr. Liqa Raschid-Sally, 11.06.2013*

The creation of win-win situations is paramount. The success of the reuse of wastewater requires resilient bottom-up decisions with improved coordination at the state level and also between farmers and consumers. It is important to overcome the fears, which are particularly connected to the safety and product quality.

**Thomas König** - Water and Wastewater Specialist, Member of the Northern German Water Center (NWZ) and the International Water Association (IWA), Göttingen

The use of wastewater should follow an integrated approach. Clarifying the concept must accompany its fundamental acceptance, as it is the major hindering reason for the use of wastewater. Public relations is an important task, therefore, along with the financing and the fee system, which, as the example from China had shown, is much bigger a problem than the technical aspects of infrastructural development.

### **Discussion and questions**

The discussion once again highlighted the key elements of risk management. The degree of pre-cleaning of the wastewater should be required and the residual risks must be identified and clarified. The example of the Berlin sewage farms and their themed issue of heavy metal pollution makes it clear that in the future there is a need for a solution to separate the industrial wastewater from other fertilizers. In particular, the industrial wastewater and its elucidation are crucial. The next aspect is the connection to the ecosystem-service approach. From a unified point of view of all service functions

## COMLIZER development : potential business model

### Fertilizer enrichment of excreta based compost



**Fig.:** Synergies: Production of fertiliser as a source of income  
*Source: Dr. Liqa Raschid-Sally, 11.06.2013*

of the ecosystem, wastewater reuse helps save costs and enables funds for other developmental tasks. The use of decentralized systems returns to the spotlight.

## PANEL 3: SUSTAINABLE MOBILITY: TRANSPORT STRATEGIES AND AWARENESS-RAISING

### Moderation

**Joris van Etten**

*Cities Development Initiative for Asia, German Society for International Cooperation GmbH (GIZ), Manila*

### Inputs

**Dr. Wulf-Holger Arndt**

*Head of Research Unit "Mobility and Space" Center for Technology and Society (CTS), TU Berlin*



**Shashank Gandhi**

*Research Associate, Centre for Science and Environment, New Delhi*



**Thomas Siegemund**

*Direktor, Product Management, Mass Transit, Rolling Stock Central & Northern Europe and Asia, Bombardier Transportation, Hennigsdorf*



### Extended Discussion

**Darlene Magnolia Antonino-Custodio**

*Former mayor of General Santos City*



**Dino Teddyputra**

*Sustainable Urban Transport Improvement Project (GIZ), Jakarta*



## **PANEL 3: SUSTAINABLE MOBILITY: TRANSPORT STRATEGIES AND AWARENESS-RAISING**

### **Background and theses**

The Asian megacities grow in an unprecedented scale. The enormous expansion of the megacities multiplies demands for urban services much beyond the capacity of city authorities. The enormous size of megacities reinforces some of the social and urban problems as well as traffic-related challenges. The strong economic growth and spacious urbanization projects create a substantial demand for a smart transport infrastructure. Yet the infrastructure and services are severely lacking to respond the increasing demand for mobility. The growing demand for mobility is the largest challenge to a sustainable and energy efficient urban development of a megacity. The spatial form of the cities is highly determined by the mobility patterns and means of transport used for transportation, which results in an interrelation of spatial organization, density of population and transport-related energy consumption. Therefore the possibilities and strategies to reduce transport related energy consumption by the means of optimized spatial and functional distribution models as for instance the concept of multimodal regions and the concept of the city of short distances including mixed use structures, as well as the Transport Oriented Development (TOD) approach are widely debated.

With the street-based transportation systems alone the required accessibility cannot be guaranteed and the demand for mobility cannot be met within the cities. Although the expansion of road infrastructure is required, it cannot solve the traffic-jams problems, as the examples of Bangkok, Tehran, Seoul and Hyderabad demonstrate.

The large cities in developed countries of Asia, such as Tokyo, Osaka, Hong Kong and Seoul, have the highest percentage of public passenger transportation in overall traffic volume. These cities are mainly supplied by the railroad public transportation systems of strong capacity that offer a high standard of service and, therefore, represent an attractive alternative to cars.

The public transportation of the Asian megacities has a strong business management potential because of its intensive use. Depending the urban structures, the institutional situation and the needs for the development of public transport systems good governance structures with public private partnerships and clear responsibilities for investment in the infrastructure and operating of the systems can be established.

### **The challenge of sustainable mobility in Asian megacities**

The highly dense mono-centric urban structure is a distinctive feature of Asian megacities. The approach of “decentralized concentration” may be a promising target, which should be promoted together with the development of a railroad local and regional transportation. The mono-centric highly frequented core cities should be gradually divided into polycentric urban units.

The proposed development options for implementing such a city structure include the use of master plans and urban containment strategies, as well as a market-oriented strategies such as value capture and land adjustment schemes. Traffic planning and urban master plans, zoning plans and urban containment policies are the main policy options to create such desirable urban forms with polycentric and mixed-use structures. For this planning level the metropolitan authorities should have the responsibility for the total metropolitan region, when impacts on the region can be assumed.

Planning should also expand and improve urban street networks, but generally reduced in capacities in favor of public transport, by accepting that streets cannot solve mobility problems in Asian cities and high-speed street infrastructure investment should not get emphasized. Planning and development processes need to be accompanied by incentives and regulations to promote public transport and restrict car use. Common perception of public transport of loss-making services should be changed into potentially profit-making business. Despite the fact that there are examples in Japan where value capture (through real estate development around railway stations supported by TOD) made it possible for private sector railways to build and operate suburban railways without government subsidies, it has to be stated that transport infrastructure especially rail-based mass transit (MRT) is requiring public spending and the implementation will be limited by the availability of public funds. Important is that the public investment is concentrated on establishing the infrastructure and that maintenance and operation works without public funding.

### **Future Tasks**

In a perspective, a hierarchically balanced public passenger transport system with rail-bound fast mass transport systems (Mass Rapid Transport MRI) and the rail-based mass transit systems (LRT - Light Rail Transport) as well as the integration of pedestrian and cycling infrastructure services should be used as a backbone of urban development. This should be done as part of a qualified investment planning. Fast bus systems can be a part of a balanced public passenger transport system, but they cannot replace the rapid rail-road mass transport systems.

Rail-based mass transit systems (LRT) should be the commonly used means of public transportation in medium-sized cities as well as for middle demand flows in megacities. Various means of transport should be used depending on a situation, but the main commuter flows should be connected with regional commuter system because of its low cost and low emissions and also an ability to absorb large crowds during peak hours. Many useful rail routes can be operated profitably. In general, integrated transport systems with different means of transport that are well matched with one another, are necessary.

To reduce gas emissions from the transport sector, alternative types of vehicles should be considered and supported, but this will not replace the public transport and eco-friendly systems and sustainable city planning policy. On the local level, city planning tailored solutions to protect the inhabitants from the emissions coming from the main transport corridors must be established.

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### **Introduction to the panel**

The infrastructure of many cities is mainly designed for car traffic, although, especially in emerging and developing countries, the majority of the population does not own a car. The transport sector not only has a large share of gas emissions, but also traffic jams and noise are negative consequences of motorization, amid a predicted increase in the future. Sustainable forms of mobility, such as local transport, cycling and walking are not sufficiently developed in many cities. In order to offer a real alternative to cars, other means of transport and routes must be attractive, safe and above all, affordable, such as Light Rail Systems. Measures in various policy fields must be grasped and connected with the communication of a new vision of mobility to achieve collective learning and

rethinking. At the same time sustainable mobility concepts always have to take into account the social characteristics of the region.

Key questions:

What are success factors of effective mobility concepts in Asia? What are best practice examples from the Asia -Pacific region and how these can be transferred to other Asian cities?

Can public transport mobility concepts be transferred and adopted despite different regional contexts? What can be learned from the European experience to be applied in the Asian megacities and vice versa?

What is the role of technological innovation? Can new automobile technologies and new technologies for transportation systems in different regions be applied in a similar way?

To what extent does the car industry affect traffic concepts? What role does the car industry play as a partner for sustainable transport development?

What strategies and concepts work even with the restricted public investment opportunities? Are the concepts of private financing and the involvement of regional development gains really useful?

Is there a specific way to solve the Asian traffic problems in megacities? Does the existing structure of the dense cities lead to pronounced solutions in urban passenger transport?

## **Panel Presentations**

**Dr.Ing. Wulf-Holger Arndt** - Head of Research Unit "Mobility and Space" Center for Technology and Society (CTS), TU Berlin

*"Cities in Transformation - Pioneers for Sustainable Development"*

Dr. Arndt highlights in his presentation, the relationship between the intense population growth today and the future of mega-and medium-sized cities, the traffic problem especially in the developing countries as well as conceptual approaches to a sustainable transport development. Here, Dr. Arndt refers to examples from Iran, Vietnam, India and China. The lecture concludes with basic requirements for a sustainable transport development for new medium and mega cities.

The significant population growth in the cities under consideration requires a multidisciplinary approach together with other traffic methods and instruments of development strategy. They need to be adapted to local conditions and made more appropriate than the traditional strategies from developed countries. The consideration of the relationships between spatial and traffic developments, which unfortunately is often not adequately regarded, is very important

Concerning the relationship between spatial and traffic developments, Dr. Arndt explained that the distance between home and work, as an often assumed major determinant is a wrong assumption and that it is rather the time that the population spends a day on average, which is the real and defining parameter. Thus, in Germany, despite of the much changed in the past decades' traffic structures, a constant average of 80 minutes/day is what the working population spends on mobility. It means that when the speed increases, so does the distance between home and work locations.

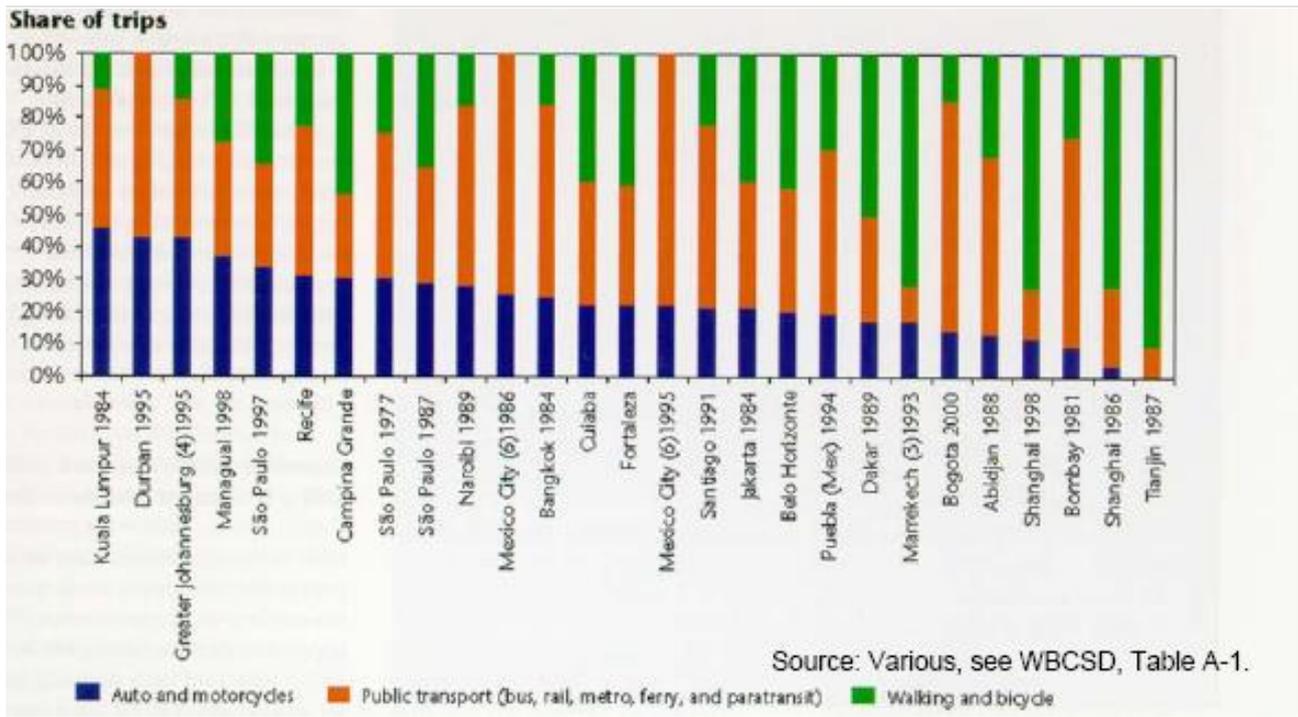


Fig.: Share of different means of transportation in the daily traffic in several cities  
 Source: Dr.Ing. Wulf-Holger Arndt, 11.06.2013

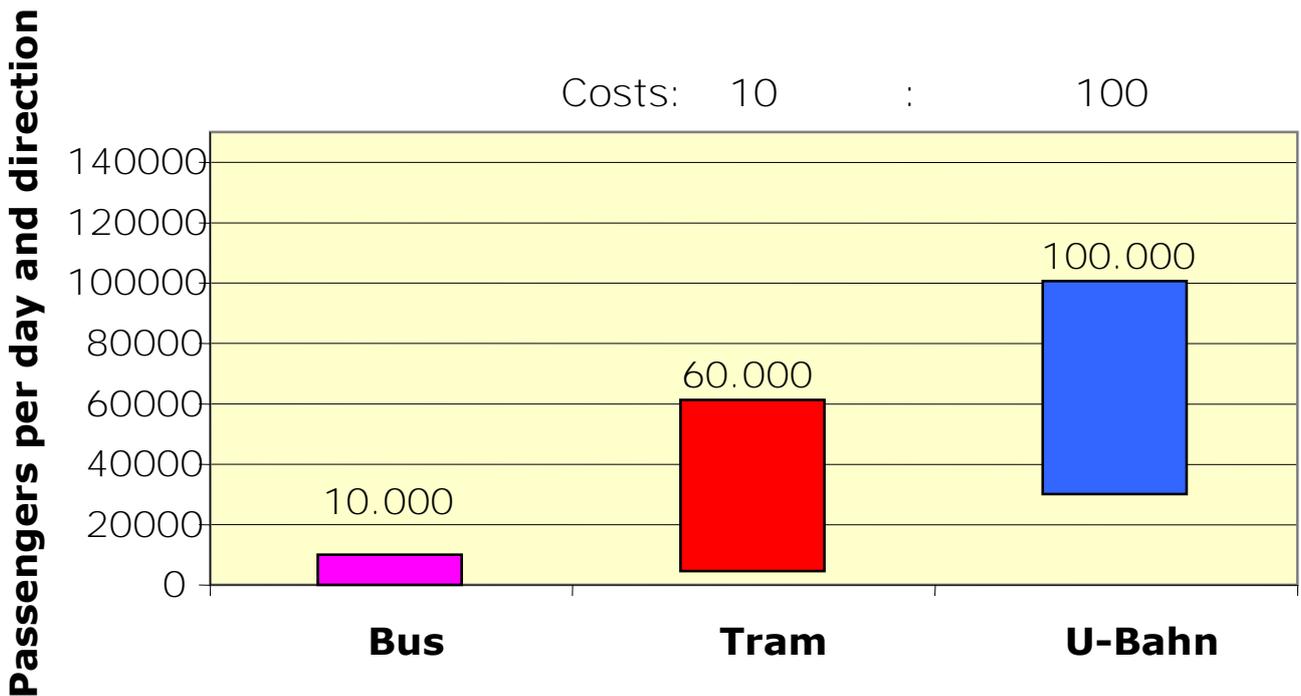


Fig.: Capacity of public transport in Berlin  
 Source: Dr.Ing. Wulf-Holger Arndt, 11.06.2013

Population density, distance between home and work, and thus the spatial structure of cities and urban areas together with the transport determine the energy consumption and thus also CO<sub>2</sub> emissions per capita. In international comparison, it is clear that the developed countries have a higher energy and space usage per capita, than the high-density cities of the developing countries.

Based on different examples of cities the potential usages, advantages and disadvantages of the various transport carriers are presented. Here it is clear that while the MRT and LRT systems are portable and proficient, the BRT (Bus Rapid Transport) systems are a good way to improve the traffic conditions during the transition phase especially in cities with limited financial resources. In addition, Dr. Arndt cited examples of various cities and their urban structures, the importance of coordination and pairing of the different transport carriers.

According to Dr. Arndt, general requirements for the development of large cities in Asia for a more resources-protective and sustainable spatial and traffic development are:

- high density
- city areas of mixed functionality
- high density of pedestrian and biking ways
- high quality of public transport services
- adequate systems for other collective transport systems (taxis, car sharing, call buses, ...)
- restrictions on individual motorized transport
- considering trade-offs between high-tech, 'middle-tech' and other long-term solutions
- increasing the skills of planners and other actors with special attention to the knowledge of relationships between transport and settlement structure
- raising of awareness in public to support electric mobility
- utilization of simple planning tools.

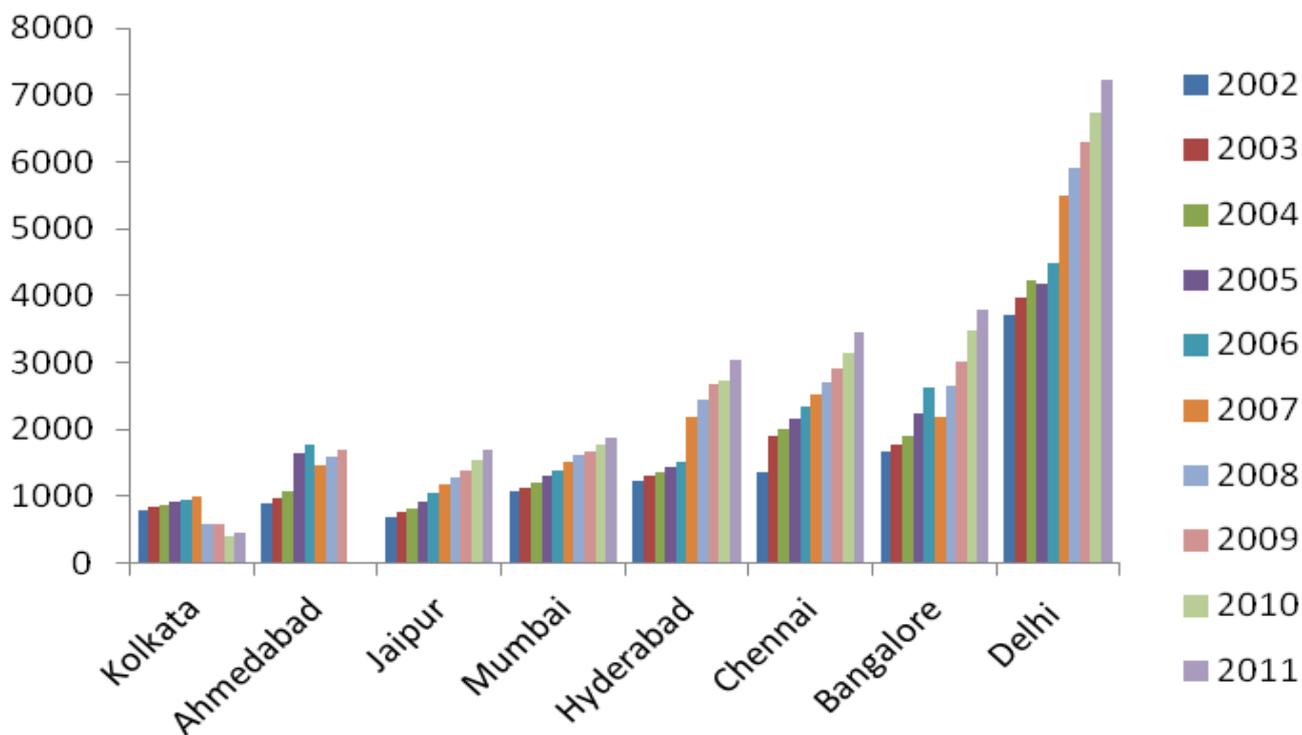
**Shashank Gandhi** - Research Associate, Centre for Science and Environment, New Delhi

*„Sustainable Mobility: Transport Strategies and Awareness-Raising“*

In the beginning of his report, Mr. Gandhi notes that the cities were losing the 'war on motor car overload' which along with the 'traffic crisis' makes every success in reducing air pollution in other sectors and a better health care negligible.

The realised strategy, to cope the volume of traffic through the construction of roads, especially highways without crossing points had failed in India. During the past 40 years, the population had increased fivefold, while at the same time the number of motor vehicles had increased three hundred times. This also has a significant environmental impact on cities that oftentimes lie barely within the acceptable limits, and hereby affect the poorest layers of the population with significant impact on their health. Particularly affected by the strong emissions are pedestrians, cyclists and users of public transportation.

According to Mr. Gandhi, building more roads can never be sufficient enough: it is not possible to tackle the current traffic crisis with previously effective methods. Therefore, a change in transport policy is required to develop and support a transportation system, which satisfies the following requirements: reliability, regularity, punctuality, flexibility in regard to the changing requirements of spatial development and is comparable with the comfort of a private vehicle.



**Fig.:** Trends in growth rates of private motorised vehicles in large Indian cities  
*Source: Shashank Gandhi, 11.06.2013*



**Fig.:** Urban and infrastructure planning are mostly neglecting the needs of pedestrian  
*Source: Shashank Gandhi, 11.06.2013*

A key demand, as voiced by Mr. Gandhi, for this change is a new balance of road space allocation with respect to its users. This means more space for separate bus routes, cycling lanes and sidewalks. Particular importance is placed on the example of Delhi and rapid transit tracks. This allowed to increase the average speed of buses from 11 to 19 km/h, which benefited approximately 60% of road users.

Important for the transformation of transport policy according to Mr. Gandhi is the fact that the transport sector is not isolated, but is integrated. Therefore, an improvement of the public space for pedestrians, their connection with non-motorized transportation options and an improvement of its infrastructure and development of intermediate solutions within a development strategy are

required. A differentiated and focused on development phases transport and urban development policy should be used, with sustainable transport as the main carrier, which can also limit the future emissions.

The following guidelines should support this transport and urban development policy:

- Availability of a room for maneuvering to establish a differentiated and alternative transport system integrated with public transport and user-friendly infrastructure for pedestrians and cyclists
- Reducing the need and attractiveness to drive a motor vehicle, through better urban planning, an increase of fees for the road usage, an equitable taxation of the various modes of transport and an introduction of parking management
- Quantum leaps in the use of sustainable technology and enforcement of environmental friendly emission standards.

This development needs a substantial support, but there is no alternative.

**Thomas Siegemund** - Director Product Management, Mass Transit Rolling Stock, Central & Northern Europe and Asia Bombardier Transportation, Hennigsdorf

In his short presentation Mr. Siegemund emphasizes the meaning and the opportunities of the usage of MRT and LRT systems. Regarding the background of the global urbanization processes and the development of large agglomerations on the one hand and the shortage or scarcity of resources and energy on the other, Mr. Siegemund highlighted the high efficiency and capacity of rail transport systems while using a low amount of space. Another particular advantage in investing into the railroad transport systems is its high economic value. This not only includes creating jobs that are directly related to the investments, but also the investments and development that would follow, better coverage and protection of the environment and not least the longevity of such systems and the associated sustainability of investments achieved through the location advantage. Despite the great advantages of rail transport systems Mr. Siegemund also emphasized that it is not a competition of transport systems within an urban center, but it always depends on each particular situation to smoothly adapt, tune and fit to the existing systems, so that in the end a system of complimentary and coordinated infrastructure is created.

Mr. Siegemund presents his thesis that with the increasing use of automated guided-local trains their employment flexibility, safety and efficiency can be significantly increased.

Regarding the far-reaching investment decision in favor of railroad transport systems Mr. Siegemund particularly emphasized that some determinant features in the construction of MRT and LRT systems must be observed, because if they are discovered afterwards, they could no longer be changed. These are, for example, the diameter of lanes and tunnels and the length of trains and platforms. All other technical and standards-related equipment can eventually and gradually be adjusted according to the needs. Mr. Siegemund illustrated how complex the task to determine an appropriate sizing and alignment of the entire system is for these investment decisions. The experiences show, however, that speed is of central importance. This includes fast logistics for entry and exit as well as the decision on the distance between the stops.



**Fig.:** Comparison of the consumption of space by different means of transportation  
*Source: Thomas Siegemund, 11.06.2013*

Furthermore, Mr. Siegemund pointed out that the use of public transportation should be promoted as a part of a lifestyle to bring about a change of consciousness for urban mobility among the residents and thus increase the public's acceptance of public transport.

### **Discussion and questions**

For policy makers, especially in the emerging big cities of Asia it is very difficult to enforce a priority development of public transport and those associated restrictions on individual motorized transport, since the private car is still a very important status symbol, to which all the citizens aspire. In addition, large investors, especially from commercial establishments in the city, such as shopping malls, through a strong lobby representation strive to invest into large parking spaces, would be missing out by the shift in motorized individual transport in the city.

Nevertheless, there is an agreement that the traffic and environmental problems of large cities can only be solved through a stronger approach to public transport. This can only be successful in the big agglomerations with quick public transport systems and a focus on sustainable urban development, urban planning with a polycentric urban structure, functionally mixed neighborhoods and appropriate city planning density. MRT and LRT systems should be used in the long term as fast transportation options, with LRT systems already coming close to the standards of quality and capacity of MRT systems. BRT systems can be a good temporal solution or be on a limited offer, but they do not come close to the standards of quality and capacity of MRT and LRT systems.

For development planning the emphases is on flexibility and phase-oriented gradual implementation strategies, which need to remain manageable under the rapidly growing cities' population and uncertain economic and social framework. To develop these strategies, it is important that they are related to the local context, and it is also very important to integrate the existing and partly informal public transport offers into a new hierarchical mass transit system. While the strategies have to be adapted locally, the transport systems should be of a higher standard than the specifically developed transport systems. This saves money and opens up a greater flexibility in their developmental ability.

In the future mobility must become an important component of integrated urban development planning in the major Asian cities, for which also a shift in awareness or a change in the way of thinking about the transport planning is required. Mobility planning must be considered as less of a task of an industry, but rather as an important issue integrated into urban development. Thus, mobility planning never follows an industry itself, but must serve the functionality of cities as a whole.

The use of stronger public transport systems must be intensively supported so that it achieves a better acceptance among the population as well as among the authorities.

### **Follow-up Questions – Ways Forward**

Some of the listed key questions were answered by the lecture and discussion.

The question of the financing of transport infrastructure projects will continue to represent a challenge and needs to be better clarified. The development of private applicable models of financing is a non-exhaustive deep/puzzling field of action. The question of a potential of profit development through urban planning had been left open, as the one pertaining to the building permits and the development of desirable residential and business locations for the realization of better public transport offers.

## CONCLUSION

**Eckhard Bock** - State Office for Developmental Cooperation (LEZ)  
of the Senate Department for Economics, Technology and Research, Berlin



We had the opportunity to listen to plenty of reports, debates and presentations on the urban part of the Asia-Pacific Weeks 2013. At the 'Day of the Embassies' eco-cities in the Philippines, sustainable industrial corridors in India and sustainability issues from Australia and Thailand have been presented.

In the official program Mr. Lo, the executive traffic management director of Singapore and Mr. Acharya had held a lectures at the mobility panel. Energy efficiency and water resource managements have been addressed in separate panels.

This weekend the gallery AEDES hosts the event Smart Cities - The Next Generation – with outstanding architects, designers, scientists and city planners from Southeast Asia. Their works are shown at the Gallery AEDES at Pfefferberg - Metro Station Senefelder Platz – I would like to encourage you to take the time and to look at the sketches, ideas and concepts!

One of the works shown there is an example from Vietnam, in which an incredible pressure on ground utilization in the real estate market is observed. The demand for housing is so big that probably in some cities it is impossible to do without high-rise solutions. However, it is also underlined how highly needed is a far-sighted urban planning that can manage particular interests.

Before I try to summarize the common perspectives and different approaches, I would like to briefly explain why we have selected the themes of urban development, water resources management and sustainable mobility.

A good city - as well as a good city governance - is in equilibrium with its region and leads to inclusion and balance within its borders as well as within the broader space. In the case of megacities or of urbanizing regions, this principle should apply for the whole region. The regional impact is immediately visible when it comes to water or wastewater resource management and also in the traffic issue. But how is it applied on urban development, architecture and urbanism?

Frequently individual projects - sustainable buildings complexes with high-energy efficiency – are presented without formulating an urban planning approach. So how can urban development and sustainability be assessed as a whole, and with what instruments?

Reflection and action is stimulated by comparison. The company Siemens had introduced yesterday the Green Cities Index, and proposed to compare the cities in their respective spatial context (in Europe or Asia or South America). Here you can see the quite good rating for the city of Berlin - specific perspectives and a change potential should get complemented by a qualitative description,

which an index fails to offer. Another approach emerged from the European Urban Audit. Here the basic idea worth pursuing is that cities provide data continuously and inform themselves mutually about their state of development. Eurostat and the national statistics agencies are also included. Even international comparisons are easily possible with this instrument. Although handling of the data is easy, data is often not on the same level of aggregation and also there are different assessment and evaluation methods.

### **Transferability of Approaches**

When a complex structure - such as a city with its own neighborhoods, its own shape and cultural diversity is evaluated, indexes are not always helpful. To escape this problem, the concept of 'best practices' is set overall and is applied to the specific project level. The planners speak of "incrementalism" - a dreadful word creation.

As we know from the development cooperation, the project-level is not exempt from wrong assessments or conclusions. Effectiveness, ownership, accountability and responsibility are essential development criteria. Especially transferability should stimulate us to think. I would like to offer an example:

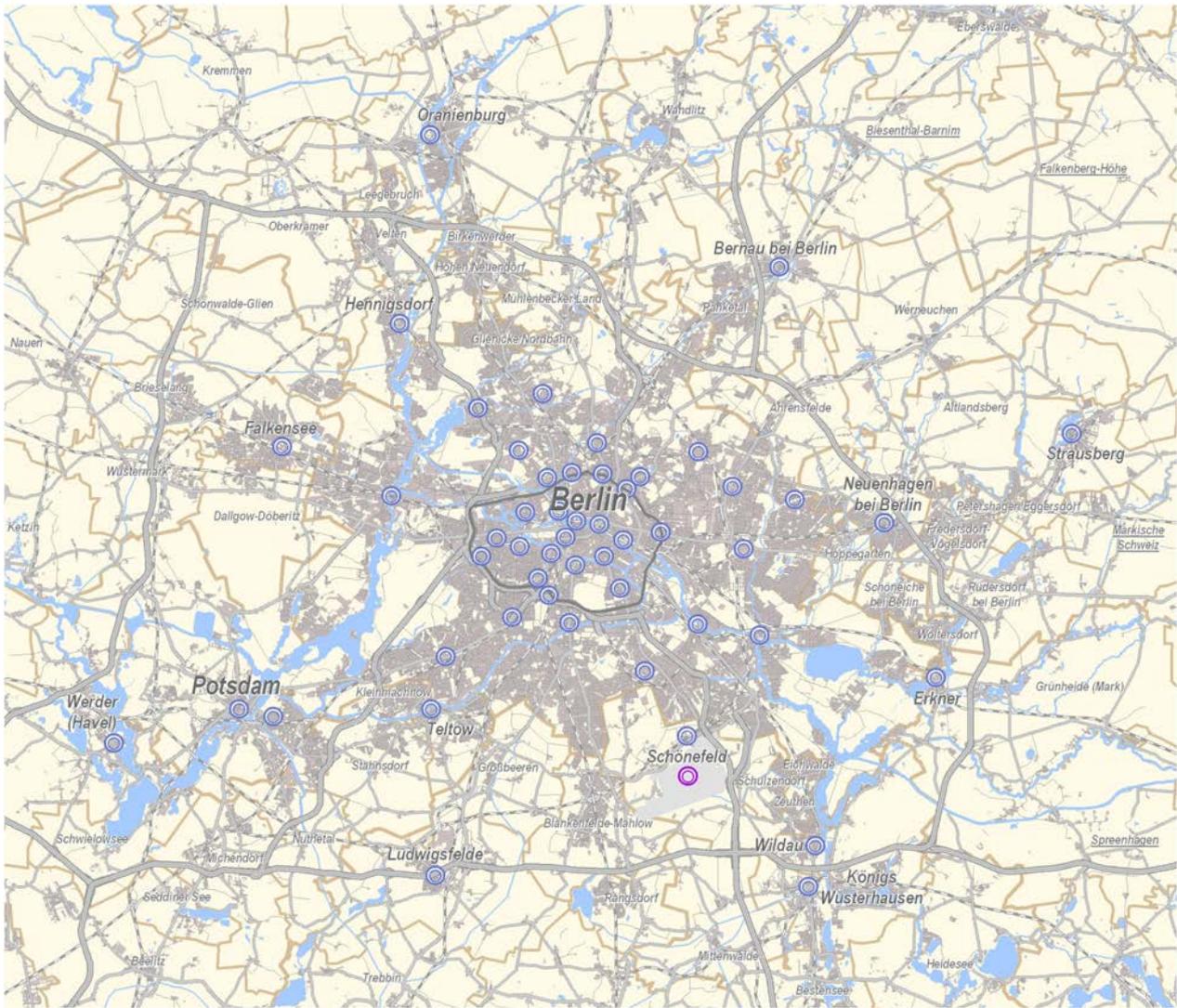
The Asian guests admire Berlin and other German cities for their perfect transport systems. The subway system is considered as particularly worthy for application, because at least at the first glance, there is no tampering with the very narrow road space and with the necessary demolitions of buildings and realignments of streets.

Just as a reminder - we have just heard in the transport panel that common space of the streets in Asian cities is sometimes a third of the surface in European cities. We are currently experiencing a hype in the subway construction in Chinese cities. To quote the Economist: "Many of the underground systems are needed, but some are being built in cities that are too small to justify the exorbitant expense. By some estimates the total bill could approach \$ 1 trillion, not including the cost of operation."

Do not get me wrong, whether subways are useful in a particular case is a decision of the respective cities. The central question is whether what we see – or under an influence of other facts admire, as the by Joris van Etten quoted Nobel Prize winner - is really transferable. One should do properly evaluation of its consequences and implications before applying solutions.

Let us take an example from the traffic theme and look at Berlin's development in the 19th Century. Berlin has experienced its urbanization processes in the period from 1870 to 1930 and has evolved from a relatively minor royal residence to a world city. At first the only available mode of transportation was the tram, followed/supported later by a farsighted planned rail network and the much later established bus service. The tram was highly profitable until 1930 and could finance the non-profitable bus and subway. The train was significantly more expensive and was used by the more affluent Berliners.

In 1928 the then Senator for Traffic and later the city mayor Ernst Reuter visited the U.S.A and admired the level of motorization and the highways. This visit led to the fact that in 1950 in West Berlin urban motorways and major trunk roads had been created in already a car-friendly city. The tram was abolished completely in the western part. Only after the unification succeeded the underground



**Fig.:** Inner city City, suburban areas and the surrounding region of Berlin  
 Source: SenStadtUm, Gemeinsame Landesplanung, LEP BB 2011

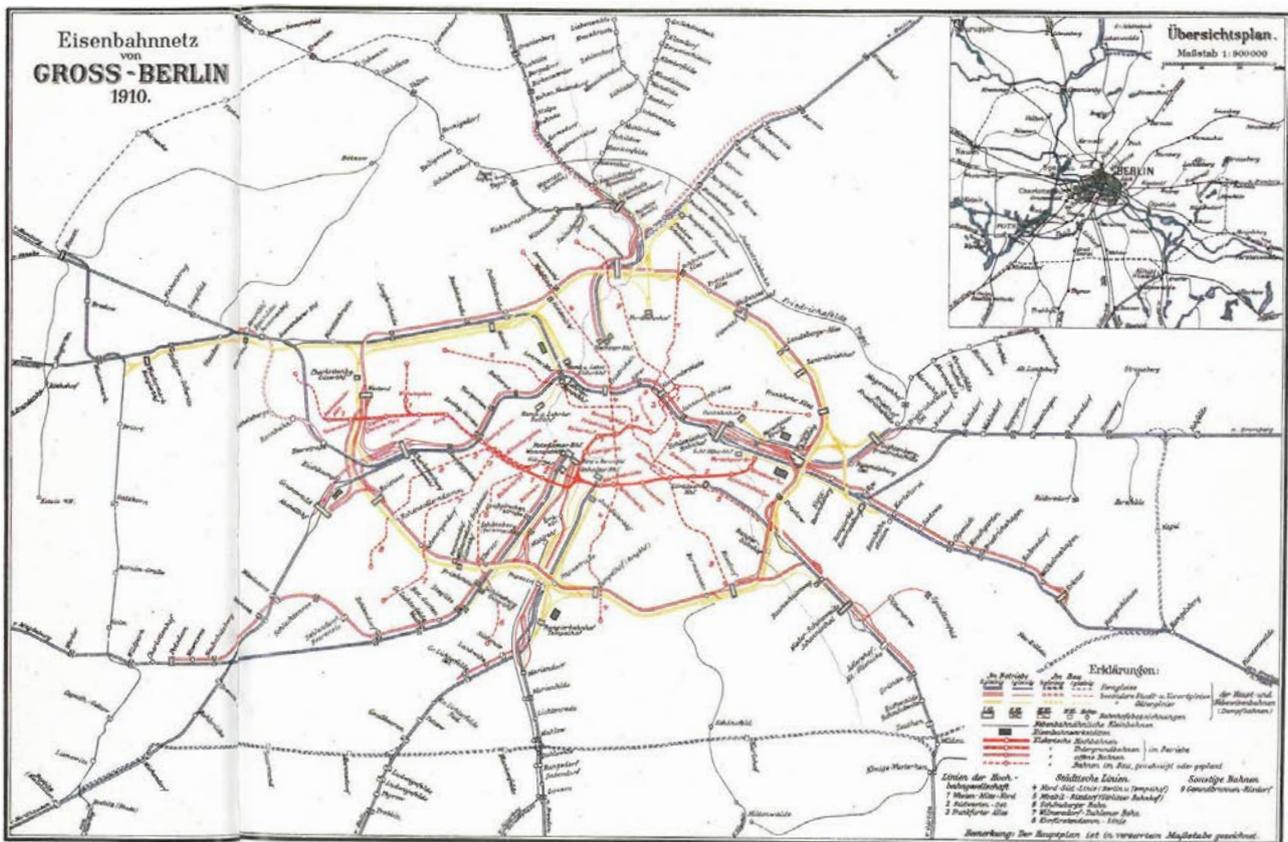
of the East – the tram – was integrated back into the overall transportation network. Each city can opt for an appropriate transport network and type of carrier - but one does not necessarily need to opt in the lack of basic structures with public transport for the most expensive version.

### Concentration and density

A sustainable city should develop a focused transport infrastructure, which enables the construction of public transport oriented on settlement axes. It is crucial, when a city makes basic decisions to arrive at a sustainable urban and transport development. For Berlin it is significant that exactly six years after the Hobrecht plan of 1865 - the plan for the development of the core city of Berlin - had been approved, the first decision taken was to create a train and railway system to run beyond the boundaries of the core city.

The magistrate of Berlin reported a generous expansion of ‘radial webs that penetrate far into the inner city’ from 23/10/1871

‘The coherent stone buildings of Berlin had already attained the diameter, which is still on a verge of walking distances. It appears ... necessary to take measures that give the people the opportunity who work in the center to take apartments within a longer distance. For the development of Berlin’s



**Fig.:** Berlin railway network 1910  
 Source: *Glaser's Annalen für Gewerbe und Bauwesen, 1910*

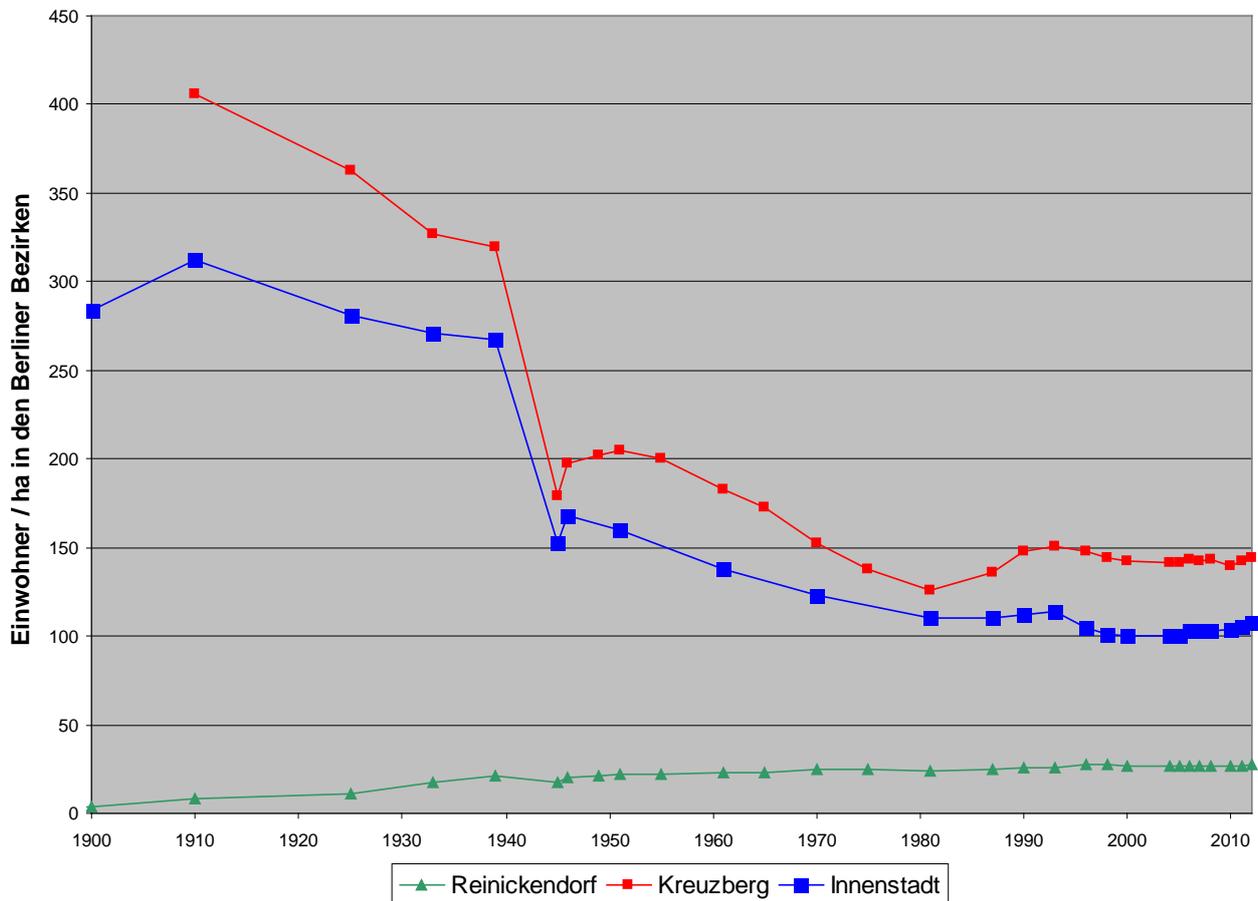
housing conditions a new railroad will be opened, which will be given a healthy direction .... It is necessary to catch up with sufficient performance of means of communications to build great apartments around Berlin, ... so that the cheaper land can compete with the high-priced ones.'

Despite considerable resistance, especially from the conservative property owners the foundations for the further development of Berlin had been thus laid. In addition to a highly dense core city in 1910 with about 40,000 inhabitants per square kilometer -the suburbs developed - partly in suburban form, sometimes in dense urban forms -.

When these figures from Berlin in 1910 are compared with the figures of the Asian cities of today - Bangkok with about 20,000 inhabitants/km<sup>2</sup>, you notice that the issue of urban density and concentration of buildings is an ongoing challenge. The stonebuilt Berlin is an appropriate description for the core city. - It took decades of comprehensive urban renewal programs to rehabilitate the old wilhelminian quarters structurally and functionally.

It is therefore quite clear that there are limits to density and the distress that are associated with too dense living conditions, which should be avoided especially for the reasons of health and hygiene.

When we hear that the number of people living in slums has grown to about 150 million worldwide and Asian cities are particularly affected, the question arises, how can the problem of housing shortage be addressed. UN-Habitat has been upgrading slum areas and the informal settlements for years - but had the cities been able to take the appropriate measures?



**Fig.:** Evolution of population densities in selected districts of Berlin  
 Source: *Senatsverwaltung für Stadtentwicklung und Umweltschutz, www.senstadt.berlin.de*

And a much more difficult question is: Which magnitude should extensions and new housings have? If using the numbers suggested by experts, the magnitude requires either extreme density or high-rise buildings. While I can criticize as an architect, the Chinese high-rise housing - as a town planner I greatly respect the Chinese example. Simply because key issues – for example basic needs mentioned in the Millennium Development Goals - have been taken into account and often – even though not everywhere - the technical and social infrastructure has been erected.

With this woodcut-style overview I close the second day of the development policy dialogue and I am happy to accompany you on excursions. Thank you very much for your attention.

# Development Policy Dialogue at the Asia-Pacific Weeks Berlin 2013

## Cities in Transformation – Pioneers for Sustainable Development

June 10-12, 2013, Berlin

### Organizer:

Development and Peace Foundation (SEF), Bonn  
State Office for Development Cooperation (LEZ)  
of the Senate Department for Economics, Technology and Research, Berlin  
in cooperation with the German Society for International Cooperation (GIZ)

### Time:

12/06/2013

Time: 9.00 Uhr - 14.00Uhr

### Location:

House of EKD in Berlin, Great Hall, Charlottenstr. 53/54, 10117 Berlin

## COLLABORATIVE CITIES

## PANEL 1: TOWARDS INCLUSIVE URBAN GOVERNANCE. NEW APPROACHES TO COLLABORATIVE URBAN DEVELOPMENT

### Moderation

#### Tile von Damm

*MOD Institute Berlin-Bangalore, Berlin*



### Inputs

#### Rupali Gupte

*Assistant Professor, KR VIA, Collective Research Initiatives Trust (CRIT), Mumbai*



#### Prof. Dr. Philipp Misselwitz

*Urban Catalyst, Chair of the Habitat Unit, Technical University of Berlin*



#### Julian Petrin

*Nexthamburg, Hamburg*



### Extended Discussion

#### Dr. Ivan Al Hadar

*UNDP Consultant Jakarta, Indonesia*



#### Claudius Lieven

*Department for the Stadtwerkstatt and Participatory Procedures, City of Hamburg*



*Picture: SEF*

# COLLABORATIVE CITIES

## PANEL 1: TOWARDS INCLUSIVE URBAN GOVERNANCE. NEW APPROACHES TO COLLABORATIVE URBAN DEVELOPMENT

### Introduction to the panel

*The urbanization processes today are highly complex. The traditional regulatory and financing mechanisms are often inadequate instruments in dealing with the development dynamics of Indian cities. State organs and institutions are increasingly no longer able to afford to provide basic city services to all sections of society. It is estimated that in some regions of the world up to 50% of city dwellers are not reached by the formal municipal governance. At the same time informal ways to achieve city development become increasingly important. These are characterized by a diverse but also fragmented landscape of actors that common to Indian cities. Alternative ways of more flexible, participatory and cooperative urban development are therefore absolutely necessary and are being tested in several cities for some time. They range from multi – stakeholder models through participatory budgeting to new “smart” ways of communication and networking.*

*Which opportunities do new approaches offer when supported through new technologies such as ‘smart communications’ or ‘urban crowd-sourcing’? What experience has been gained with new approaches to collaborative urban development in recent years, and which lessons can be learned?’ (MOD Institute)*

In her welcoming speech Ms. Barbel Dieckmann underlined the importance of global processes of urbanization. The rapid growth of cities has not only led to the fact that in the meantime, more people live in cities than in a countryside. It had also produced megacities and mega - urban regions, which had spawned further development especially in developing countries, which is only ‘partially controlled’. This is not only based on recognizing the assumption of failure of state structures and classical planning processes. It also means an opportunity for the collective creative power amplified in the development of urban living space. An opportunity to solve the problems and the accomplishments of urbanization challenges in the future become possible through participatory approaches of civil society. The lectures in this event focused on the bottom-up approaches, which are exemplified by means of case studies and concepts from India and Germany.

India is a good example of the future urban challenges. Since Independence in 1949 the Indian cities experienced rapid growth. Today about 360 million people live in the cities of the subcontinent. By 2030 this number will almost double. This development should not only be assessed as a demographic one. It puts the cities into the centre of India’s development in the future. In the coming decades the urban sector will play a crucial role in the structural transformation of the Indian economy and the maintenance of high economic growth. In order to ensure the sustainable growth, however, the widespread system of public transport and available infrastructure in all major Indian cities is an essential requirement. But exactly at this point a fundamental structural problem of the physical outgrowth comes to light. Almost all Indian cities are now suffering from the absence of an efficient and consistent planning system, which would bind socio-economic development together with usage of space and infrastructure planning. The future urbanization requires better coordination of planning at all governing decision-making levels. So today the governments of individual states play the super-ordinate role in urban planning decisions and the creation of city development plans.



**Fig.:** Exclusion of social groups by participation  
 Source: Rupali Gupte, 12.06.2013

The majority of decisions to be taken at a local level require confirmation of the respective state government, which in turn slows down the planning processes.

If state structures can no longer deal with the problems and tasks of urbanization, we need new models. But what are they and to which scale do they apply? Which changes are necessary to create new ways into a sustainable future?

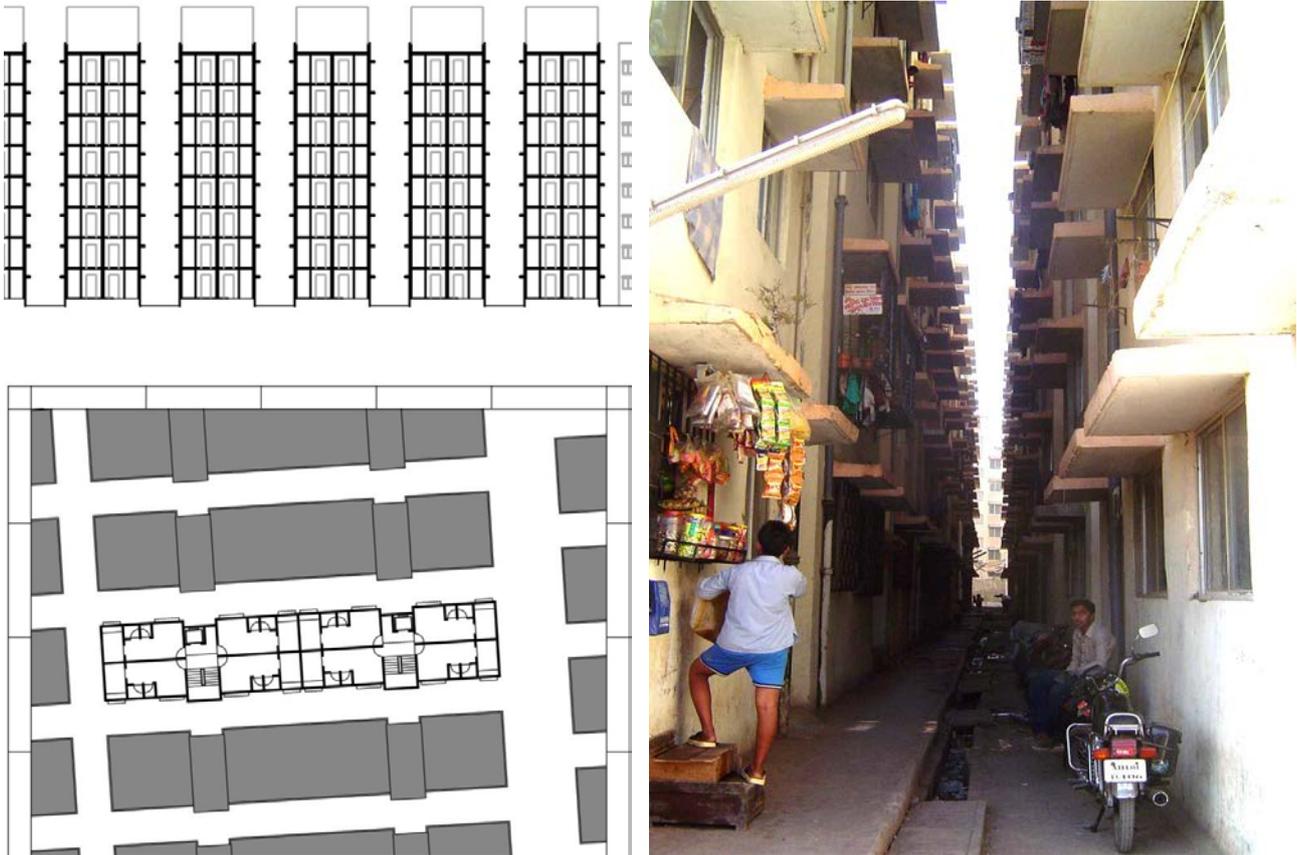
It is essential to seek out solutions not only through technical developments and innovations, but rather putting the people into the focus. The new models of comprehensive participation are to be named, as well as the new levels of decision-making. The design of new landscapes and actor's balance of power is a key point for answering the question about the shape of the cities of tomorrow. On the one hand the answer to this question must be universally valid. On the other hand, however, it must be possible to adapt it to local peculiarities and cultural and historical records.

## Panel Discussion

**Rupali Gupte** - Assistant Professor, KRVI Collective Research Initiatives Trust (CRIT), Mumbai

*„Looking closely at the 4 mantras of urban governance”*

Inclusion, collaboration, participation, transparency - these are the watchwords for Rupali Gupte: they are currently over-used, but are seldom truly meant. In the future, a closer look at these four factors of sustainable development is needed. Based on various parts of the completed “Slum



**Fig.:** Marginalization by urban development: Slum-resettlement projects in Indian Cities  
*Source: Rupali Gupte, 12.06.2013*

Sanitation Program of Mumbai” projects she illustrated different interactions of various actors such as the World Bank, the city government, NGOs and the local population in the practice of planning.

In the Colaba district, for example, an NGO established a toilet block together with a private owner and cooperated with the local community in dealing with water and sewage. Very soon after the project was taken over by a women’s organization, which managed the infrastructure and established a mafia-type of structure and left the local population not being de facto in charge.

In the second example Rupali Gupte shows that other places lack the engagement of NGOs. Profit-oriented and opportunistic companies, they are often interested exclusively in taking over projects, showing a visible result and finally making money. Therefore, no NGO had been willing to finance or to run the construction of private toilets. The city council took on the project, which resulted in improvement of sanitary and hygienic conditions in the project area within the shortest time.

The third example shows the interplay of public provision of infrastructure and social commitment. Here, the city government built a public toilet, the administration of which was taken over by a local cricket club. The latter used the space to manage events and provide services to the resident population. This way the infrastructure of technical usage has evolved into a community infrastructure.

This knowledge had been eventually applied in the work of CRIT, which had seen infrastructure as a hygienic necessity and a technical solution, while extending the social and community opportunity space, to define the role of local actors.



**Fig.:** Formalisation of informal production of space: Urban development in the city of Nanded  
*Source: Rupali Gupte, 12.06.2013*

Thinking of the development process of a master plan for the fishing village Moragaon in Mumbai, Rupali Gupte pointed out that a participatory process can easily drift into unwanted directions and further marginalize people rather than include them. This example spurred out of the community of the villagers' wish to work out a development plan for their settlement distribution. The responsible planner from the city also had the same wish. The village received only a small patch of land, while the larger parts of their territory were given to a five-star hotel. This 'market-oriented participation' had not taken into consideration the pursuits of the local fishermen in infrastructure, housing and public space, which de facto had meant their marginalization.

In other examples, a participation of certain groups created an exclusion of others. In Gurgaon middle class communities became interested and involved in development of their living environment. They defined a development area with the help of fences and gates to guarantee that the less affluent groups of population are kept out. The same is true for the development of waterfront projects in Mumbai, which repeatedly converted the territories, used by poorer people into promenades or fenced their settlements with high walls.

Not only participation, but even the collaboration of actors can easily reach their limits and cause unwanted effects. There are different examples of this in the 'Slum Redevelopment Projects' in Mumbai, which were carried out jointly with government agencies, local slum dwellers, NGOs and private developers. In order to be allowed to remove a slum in Mumbai, to develop a territory, a developer is obliged to replace the decomposed unperturbed living space. In return, he receives this land for free. The problem with this scheme is that it does not specify in any form where the compensating living space is going to be set up. Today it is common that the high-priced apartments are built in the place of the inner city slums, whereas an alternative housing in the form of tenements with some uncertain living and hygiene conditions are built on the outskirts. However, this system applies only to high-priced flats, for which a developer can receive high returns. Private developers are rarely interested in less profitable areas.

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Based on this model the need in a new distribution model becomes evident, in which the profits from the structural development of the former slums dwellers will be attributed to their former dwellers.

So far in India the much-needed transparency has not always been present in planning and development tasks. In many places in the context of slum development projects, data had been gathered from the slum dwellers. They were promised in return an identification card, which would entitle them to the state aid in the form of goods and services. However the promises had often not been fulfilled in terms of actions and the inhabitants were denied an answer about the actual use of their data. That such a case can also mean something positive, is shown in the example of the city of Nanded, where slum dwellers had not only been registered, but had also been allowed to build a house within a certain timeframe, along a certain road without permits, which was then legally registered as their property. Through this unconventional approach the lengthy planning process could be bypassed.

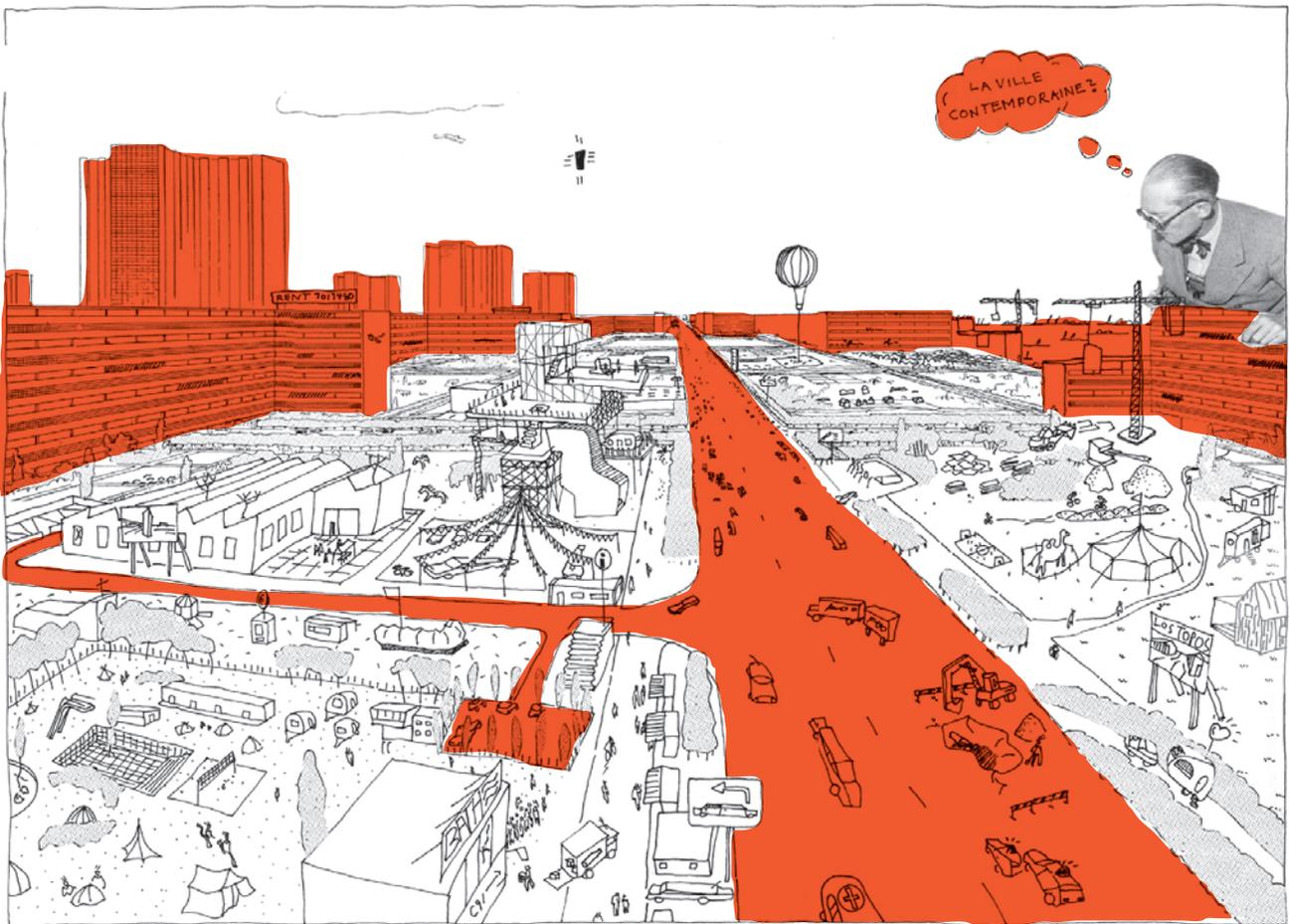
**Prof. Dr. Philipp Misselwitz** - Urban Catalyst  
Chair of the Habitat Unit, TU Berlin

*„Urbanism Open Source“*

For Philip Misselwitz the planning systems urgently need a paradigmatic shift to the ‘how’, especially in the matters of participation. Looking at the urban plans in Berlin in the 1990s, he describes a ‘parallel universe’ that co-existed in the traditional and the new worlds of formal planning. Thus, for him the ‘Plan for the City Centre’, which included formal mechanisms of participation, showed an exaggeration of planning. It becomes particularly clear with an example of the upper Stadtspre, where much was planned but little was actually built. The role of real estate developers was taken over by small initiatives, which had developed new working and living spaces there without planners. Their motivation had often been to find niches for themselves in a city that began to move more and more away in its development focus from the local to the global. This created a parallel universe, which acted as an incubator for new ideas and a dense network of new local actors in the Spree area had bloomed.

And yet the current city planning development of Berlin is indoctrinated by traditional ideas and approaches, in which an inflated role is attributed to the planning. However, this system in recent years became a subject of market-oriented development, a factor that has led some to re-thinking. Thus, for example the inner city resources are nearly exhausted so that the downtown area planning activity has become for many too expensive. This favors foreign capital investment in the Berlin real estate market, as it increasingly became an object of speculation. But not only the scarcity of land affected the planning reality of today’s Berlin. Also, the shortage of affordable living space is a persisting problem. However, in the past few years, a new reinforced culture of protest emerged that opposes the tedious planning projects and the rising rent.

But how can an urban project be at the same time green, compact and affordable? These questions cannot be answered with the help of the classic ways. Should not urban planning then be thought of as an open source solution’, as it has been established in other business and consumer sectors long ago? With this solution planning begins with the user itself and the architect or planner comes helping later. For this however, it is essential, to re-consider the traditional system of space and time and to turn it into something more dynamic. New constellations of actors and decision-making



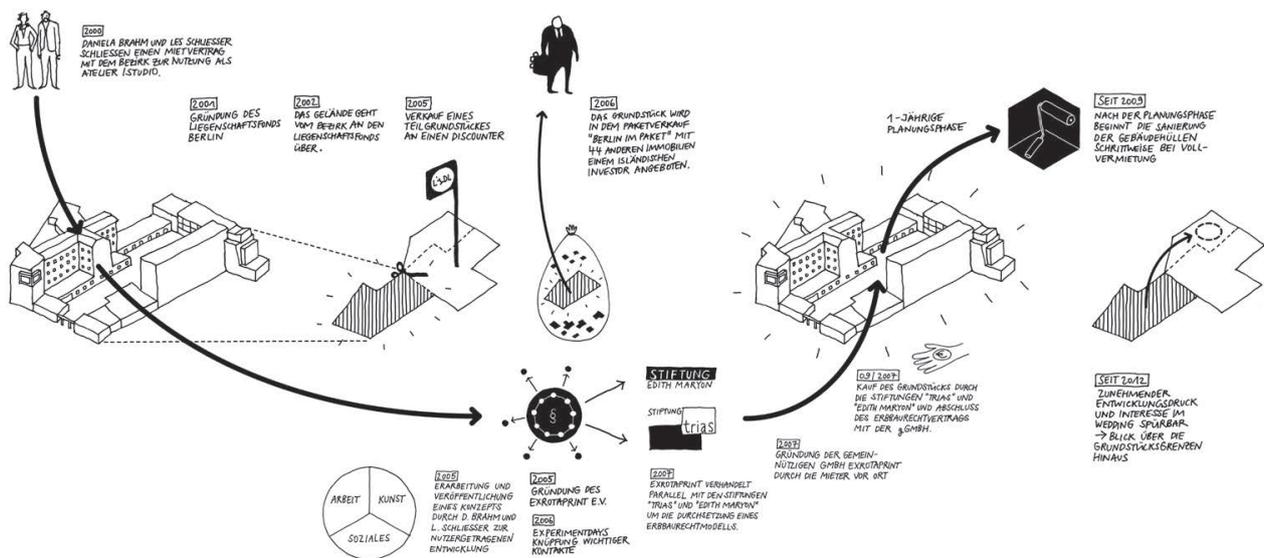
**Fig.:** La Ville Contemporaine 2013: Synergies between classic and actor-based planning  
 Source: Philipp Misselwitz, 12.06.2013

structures need to be developed.

Various examples in Berlin in recent years have shown that the availability of opportunity spaces can bring viable projects that have arisen solely out of the people's necessities. The 'pioneer fields' at the Tempelhof field open space are offered today to experiments. Many actors invest in 'Almendekontor', namely users bringing small input into small space to operate their garden projects. The 'Prinzessinnengärten' at the Moritzplatz began as a school project and contributed greatly into redefining the common understanding of property. A former printing house 'ExRotaprint', in which many artists and professionals have designed their 'worlds of work' also benefited from it. This project had managed to establish itself permanently by a 99 years long leasehold right.

In a similar vein the cooperative 'Holzmarkt plus eG' emerged. Due to the leasehold right a space on the Spree River had been developed as a project for living, working and leisure. Here the ideas had been first developed and then the architect came into the picture. Similarly, there are numerous projects that permit the middle class members an access to downtown Berlin real estate market.

To sum up, one can say that temporary users of space networks strengthen and professionalize the politicization of urban development on a broad scale. The policy has accepted in return, the 'quality of development' as another key criterion and its real estate strategy had been revised. It is no longer so that the maximum financial gain must be achieved in each project at any price. Furthermore, it tests the local planning platforms, which are decoupled from the planning system and are connected



**Fig.:** Example for urban planning without planner: ExRotaprint Berlin  
 Source: Philipp Misselwitz, 12.06.2013

with essential developing areas and reconsider the bureaucratic participation processes.

But what are the implications of these developments for planners and architects? The practice of space appropriation is now incorporated into architectural concepts. Therefore, there is a need for the classic design of (new) orientation, which enables process-oriented approaches and actor-based developments.

As a contrast to the paternalistic actions of the classical welfare state and the neo-liberal concept of 'entrepreneurial city', an open-source urbanism could operate urban development without capital, make use of available resources, accept the unfinished, co-production and participation, support sharing and combine classic top-down with new bottom-up methods.

**Julian Petrin - NextHamburg, Hamburg**

*'City 2.0 - Rules for collaborative urban development'*

The past few years have increasingly shown that today's plans, whether on a small or on a large scale, are often stuck in a 'participation dilemma':

1. Projects fail due to the non-participation of citizens, which results in the new form of protest culture
2. Projects fail due to involvement of citizens and interest groups; thereby either one is excluded and opts to protest.

Therefore it is necessary, according to Julian Petrin, to initiate a collaborative change and to focus on the common development of urban environments.

As a role model the 'Web 2.0' could be used, in a sense that in the Internet the limits between the creators and users of the content were almost dramatically erased. This principle is now common in the consumer world. In a kind of 'open innovation' users say today what they are missing in the





**Fig.:** New models of participation also need classic ways of communication and participation  
*Source: Julian Petrin, 12.06.2013*

of ‘non-professionals’ expert-checks is going to be subjected to assure their feasibility. Ideas can then for example be specifically developed in competitions and then implemented even in prototype form. To finance it the model of “crowdfunding” is applied, which is becoming more popular.

However, it is not exclusively designed for individual issues and ideas. Rather, it is also about bringing those specific to the localities topics to the agenda, such as the development of mobility concepts, suburban development strategies and the development of ports. NextHamburg operates internationally as a global transfer of knowledge. The project usually follows the same ten rules:

1. ‘A clear promise is the foundation – as well as the clear boundaries’; this means that every idea is being seriously discussed, no matter how deviant it might seem at first. The community then decides which ideas to follow-up. Participants are never promised a realization of ideas. However, the ones that are decided upon are followed through.
2. ‘The drivers should be intermediaries - informality requires flexibility’; information channels are used to spread the ideas of the community. There are no thoughts forbidden and there is no place for no-go topics.
3. ‘A must: the link to formal actors (in democratic systems)’; NextHamburg, focuses on cooperation with various actors from politics, education, culture, economy and civil society.
4. ‘Collaboration needs emergency - no issues guidelines’; for example the project in Bangalore begins with first asking a simple question ‘Which places would you change?’ The topics are then aggregated on a simple online platform.
5. ‘There cannot be ‘No’, every idea is at first given a serious round of discussion in the community.
6. ‘Online is only with Nonline’; indeed, in the collection and development of ideas numerous web-

based channels of communications and platforms are used. However, workshops and sessions are always conducted, in which the idea developers and the real experts come into a real-life contact with each other. This prevents the exclusion of people, who are not familiar with the use of the new media.

7. 'Go to where the people are'; participation events are always held where people are. Ideas are therefore discussed within the constructed world of the citizens, whether at a mall or a subway station.
8. 'Create a visible stage', with the motto 'Those who participate will also be visible'. NextHamburg creates a platform for all of those who have something to add to the urban development.
9. 'Every city needs its own methods'; there is no blueprint that is universally applicable to each and every project. Approaches need to be adapted and modified according to the context and task.
10. 'Love it or leave it', only serious participation can lead to success. Apparent involvement, however, inevitably leads to frustration of citizens.

## Extended discussion

**Dr. Ivan Al Hadar** - Consultant UNDP Indonesia, Jakarta

*„Palu 2015: Zero Poverty“*

In his comments Ivan Al Hadar reports about the program 'Palu 2015: Zero Poverty' in the Indonesian provincial capital Palu. The city suffered in the past from complex social problems, which were visible through the large gap between the rich and the poor sections of population as well as through the countless homeless, beggars, orphans, street kids, etc.

Poverty had been one of the fundamental problems of the city. The number of poor people was 34,500, which is around 10% of the total population. Although this percentage is still significantly below that of the region or the country, but it is due to the exodus of poor layers of population into the cities, which is expected to largely increase in the next years. To counter this, the city council came up with the slogan: 'Give Back the City to the People', with the aim to create the future of the city together with its citizens and other actors.

"Zero Poverty" should firstly improve the living conditions and independency of all the poor people in Palu with respect to their skills, culture and sources of income. Secondly, the concept should satisfy the essential goals of the city. The goal had been set that by 2015 no poor, as defined by the state programs of fighting poverty, should live in Palu.

The program has five main components:

1. Creation of the necessary decision-making and administrative structures
2. Activation of the private sector
3. Agreement on recipients/target groups of the program
4. Concept of development and financing
5. Monitoring and evaluation of the participative fighting with poverty

By taking into account the problems of urban poverty, it should be possible to benefit from the synergies. 'Cash for Work Program' for 100 days a year is to be created to give opportunities to the



**Fig.:** Elements of the Zero-Poverty-Programme  
*Source: Dr. Ivan Al Hadar, 12.06.2013*

poor people to earn money, in which they will be employed in resolving of urgent problems of the city. They could be employed, for example, in the construction of basic infrastructure, the creation and maintenance of urban green space, the backup water supply and sanitation, environmental protection tasks and the construction of housings. Thus, not only sources of income are generated, but also positive effects are provided for the entire city.

To make the city cleaner and greener ‘Waste Bank’ came into being. It bought the collected trash from the people. The streets of Palu became cleaner; the collector paid a wage for their work; the bank won from the garbage recycling, which it in turn resold. Furthermore, the city supports the poor through the attainment of relevant skills, financial aid, income growth, and through an offering of informal income opportunities in the informal sector.

“Palu 2015: Zero Poverty” connects together different programs that fight poverty and changes the attitude of all urban actors into constructive citizens. To this end, the city used a kind of roadmap based on the needs of the poor citizens and tried again year after year, to identify synergies between the different actors, programs and activities.

**Claudius Lieven** – Department for the Stadtwerkstatt and Participatory Procedures, City of Hamburg

In Hamburg for some time there has been a platform that supports dialogues in the urban development and thus has a goal of reinforcing citizens’ participation. Because the platform had not been provided in the current management structures, it always causes problems with implementation and funding.

Thus, for example, citizens' opinion polls have to be used as internal recommendation/approval, a 'citizens' approval', so that the project can be funded. In managing a certain amount of risk-taking experience this should lead to advancement of new forms of deliberative-operative city planning.

In reality, the importance of participation by different actors is seldom understood in the same sense. The policy defines 'participation' in terms of counseling and information provision. The citizens, however, must understand that they can make and design their city by themselves. Therefore, it is necessary to clearly define levels of participation in the future.

The issue of exclusion through participation must be definitely considered in the future. Because today it is often that only the better-educated members of the middle class are involved, while the parts of the population that cannot be reached will not achieve their goals. Also the quality of the participation work must be raised so that it can find a greater response from the citizens. A 'co-creation process' can be an effective solution for narrowcasting in the future.

### **Follow-up Questions – Ways Forward**

Had the times of the classical methods of urban planning passed?

Are plans still needed at all?

What do these trends mean for the current players in urban development?

What impressions do these issues have in relation to the informal sector of Mumbai?

Gupte: In India these traditional forms do not exist everywhere. Therefore, there has been thinking already for a long time about other solutions. Particularly important is the question, 'For whom is it possible to participate?' In order to give such an opportunity to many people the 'not-in-line' solutions are necessary.

Petrin: In the future, we should rather speak of "space development" rather than "planning". We should keep the classical part. However, the concept must be designed in an open area.

Misselwitz: Planning tasks become more complex today. What should the role of the city and regulatory authorities look like? And how could a "win-win" situation for many players look like?

von Damm: What could the future actors be? In which power relations could different actors stand and with what resources? Are modern crowdfunding approaches currently conceivable in India?

Gupte: The question of aesthetics should not be held back with the participation, but rather be intensified. In this context, the question must be asked what should be defined as a city today. Just the opening of classical thinking in planning systems can lead to answering this question.

Lieven: The classical planning system is in big trouble, because it lacks the ability to expand the skills of complex planning tasks. We need bigger scopes for understanding in order to be able to achieve the diversification of actors.

- Al Hadar: The role of actors and the balance of power between them are cultural issues. In Indonesia, for example, currently more participation takes place in a form of mobilization. Only the traditional elites of the cities are often involved.
- Audience: How much democracy does a society require to be able to develop participatory projects? What are the instruments with which poor people can be reached in participation processes? How can the people that had previously been excluded be reached? Can 'Development Pacts' be an adequate instrument?
- Misselwitz: If a state manifests itself through the symbols in one place, conflicts arise. The mobilization of people is often a problem of governments because they lack a local focus and local knowledge.
- Gupte: Today, participation is often seen and used as a 'performance of participation'. But it is necessary to unite with the people who have no previous voice in this performance.
- Al Hadar: It is hardly possible for the poor people to participate in such processes, for example, because they have to suffer a loss of earnings while participating. Therefore it must be considered how involving in other ways can help generate even more income from it.
- Petrin: Participation is always a problem for 'the people without a voice'. To reach them, you have to go indirect ways, for example, in the context of cultural events or educational measures.
- Lieven: We need new ways to involve people. Cultural or recreational events may be a viable option. Besides, decentralized decision-making structures need to be more intensively considered.

**PANEL 2: TOWARDS INCLUSIVE URBAN LIVING. COOPERATIVE HOUSING AS A BASIS FOR URBAN DEVELOPMENT.**

**Moderation**

**Anne-Katrin Fenk**

*MOD Institute Berlin-Bangalore, Berlin*



**Inputs**

**Naresh V. Narasimhan**

*Janaadhar, Bangalore*



**Prasad Shetty**

*Collective Research Initiatives Trust (CRIT),  
Mumbai*



**Prof. Jörg Stollmann**

*Chair for Urban Design and Architecture, TU  
Berlin*



**Extended Discussion**

**Dr. Jochen Hucke**

*Senate Department for Urban Development  
and the Environment, Berlin*



**Prof. Dr. Nitichan Pleumarom**

*Montfort Del Rosario School of Architecture  
and Design (ABAC) Assumption University,  
Bangkok*



*Pictures: SEF*

## **PANEL 2: TOWARDS INCLUSIVE URBAN LIVING. COOPERATIVE HOUSING AS A BASIS FOR URBAN DEVELOPMENT.**

### **Introduction to the panel**

A major problem of urban development is the lack of (affordable) housing. This affects a large proportion of India's urban population, primarily the weaker income group and low income group. However, housing is one of the first democratic prerequisites for any form of social participation. It seems that the state has limited governance capacity here, especially in informal settlements and life structures. Collaborative and participatory models are increasingly filling this gap. However, they often come into conflict with the state regulatory level. "Affordable housing" is becoming an increasingly topical issue – for German cities as well. How can the lack of housing be addressed and resolved? What kind of a problem- and solution-oriented city policy is needed in order to counter growing inequality? Which difficulties must be overcome, and which opportunities arise at the same time? Can the new ways of cooperative urban development presented in the panel I, make a contribution here as well?

### **Panel discussion**

**Naresh V. Narasimhan** - Janaadhar, Bangalore

*„Affordable Housing - Ground Realities in India“*

The Indian population growth is seemingly unstoppable. It is accompanied with the growth of the Indian cities. The number of people living in Indian cities is expected to will grow from 377 million in 2001 to around 600 million in 2031. However, today the cities cannot cope with the stream of immigrating rural population. Many people have no access to the formal housing market. Often the recently-arrived migrants are absorbed by existing social networks and are finding a place in slums. One can see that the smaller the living spaces are, the larger is the number of people who live in them.

The aftermath of the financial crisis of 2008 had a serious impact on the real estate market in India. In order to achieve sustainable profits, private property developers initiated the 'affordable housing' to induce to opening up of the market. In this segment for financially weak people around 22 million units are altogether missing, accounting for about 90% of the entire apartment units needed.

But what is 'affordable housing'? The Ministry for Housing and Fighting the Poverty distinguished apartments sized between 28 and 56m<sup>2</sup> as affordable when the purchase price is not four times higher than the annual household income and the rent is less than 30% of the monthly household income. According to this definition the following 'affordable rents' are valid for the economically weak section (EWS) or the low-income group (LIG):

Income Categories	Monthly Income	Max. Rent (30% of monthly income)	Max. purchase price (4x annual income)
Economically Weaker Section (EWS)	< INR 5,000 (<67 EUR)	INR 1,500 (20 EUR)	INR 2,40,000 (3,220 EUR)
Lower Income Group (LIG)	INR 5,000-7,500 (67-100 EUR)	INR 2,250 (30 EUR)	INR 3,60,000 (4,800 EUR)

The comparison of this definition to reality revealed that, a four-person household in a big city can only afford a 10 to 15m<sup>2</sup> accommodation with public toilets, as the following table demonstrates:

Income Categories	City type	Max. Size (Rent)		Max. Size (Purchase)
		Without 5% support	With 5% support	
Economically Weaker Section (EWS)	Megacity	10m <sup>2</sup>	16m <sup>2</sup>	15m <sup>2</sup>
	Second rate city	12m <sup>2</sup>	20m <sup>2</sup>	19m <sup>2</sup>
Lower Income Group (LIG)	Megacity	16m <sup>2</sup>	27m <sup>2</sup>	23m <sup>2</sup>
	Second rate city	20m <sup>2</sup>	34m <sup>2</sup>	29m <sup>2</sup>

Furthermore, the cost of renting in the Indian cities is drastically different from the official definition.

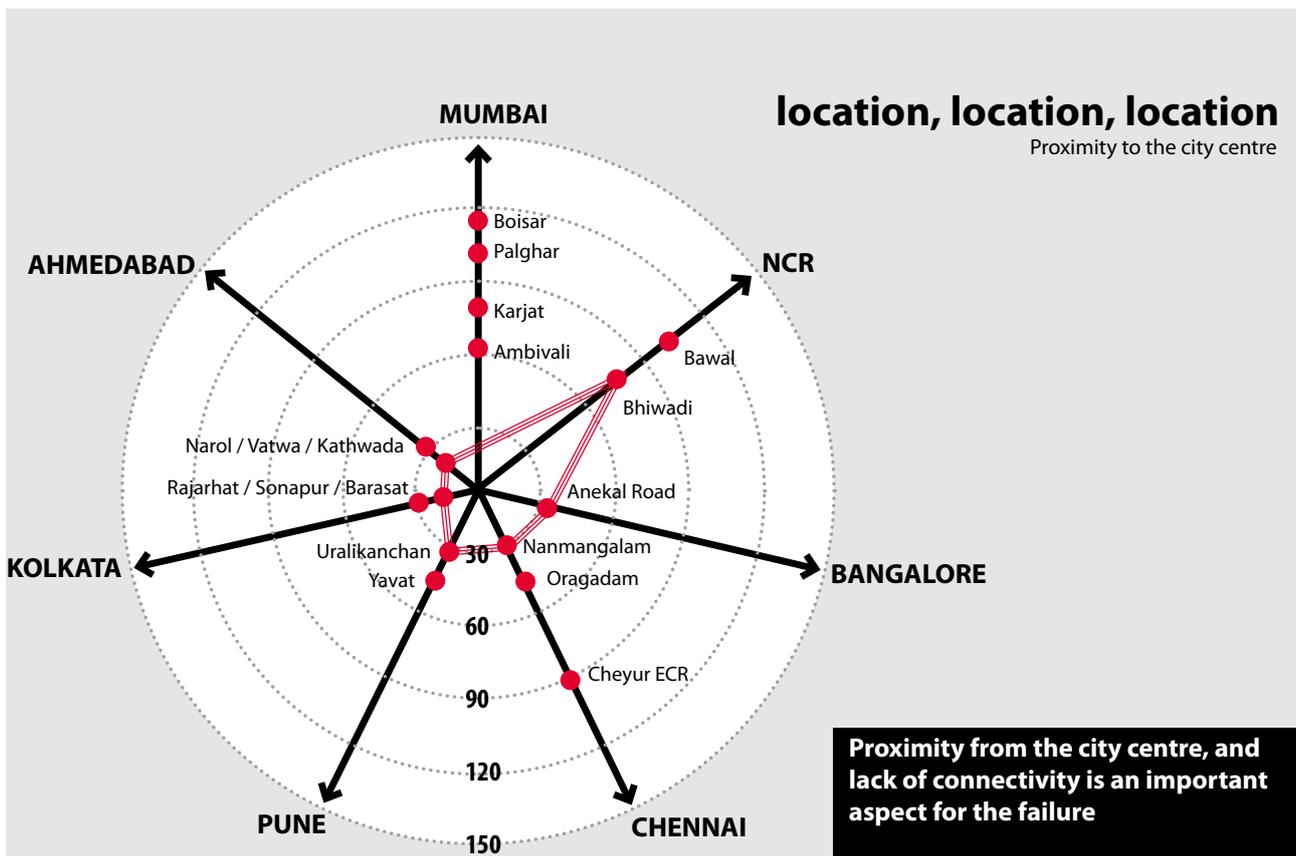
In the recent years, the number of projects, which had been planned and realized by private developers, has skyrocketed. However, with this comes the problem of large-scale expansion of cities. As the profit margins are relatively low in this type of housing projects, the settlements are usually built far away from the city centers, in which the land prices are too high to achieve high profits with cheap rents and purchase prices. These outskirts areas are usually poorly equipped with public supply and disposal infrastructure and with a limited public transport connection with the city center. The large distances to the inner cities' economies adds to the fact that many people sell or sublet their new homes and move back into the city slums.

The complexity of the housing problem in India reveals that there is no simple one-dimensional solution. On one side of the problem there are demand-driven forces such as rapid urbanization, rising incomes and the culture of the owner-occupied apartments. On the other, there is a problem of how to finance the lack of housing through the regulatory support of the state given the low availability of land in the inner city.

Furthermore, the construction costs continued to rise in recent years, which is due to delays in mostly cartel and mafia structures in the construction sector. Indian authorities by taking their time in processing applications and licensing regularly cause these delays. For this reason alone the actual construction is prolonged by an average of 2.25 years. And the quality of construction is often left behind simple standards, as there is no training program for construction workers in India.

While many state support and development programs have been launched recently, they are handled and applied differently from state to state and their duration is often unclear or too short. Furthermore, these programs do not discuss the specific requirements for the affordable housing or sanctioning measures.

A way out of the housing problems in the future requires integrated solutions that accompany and



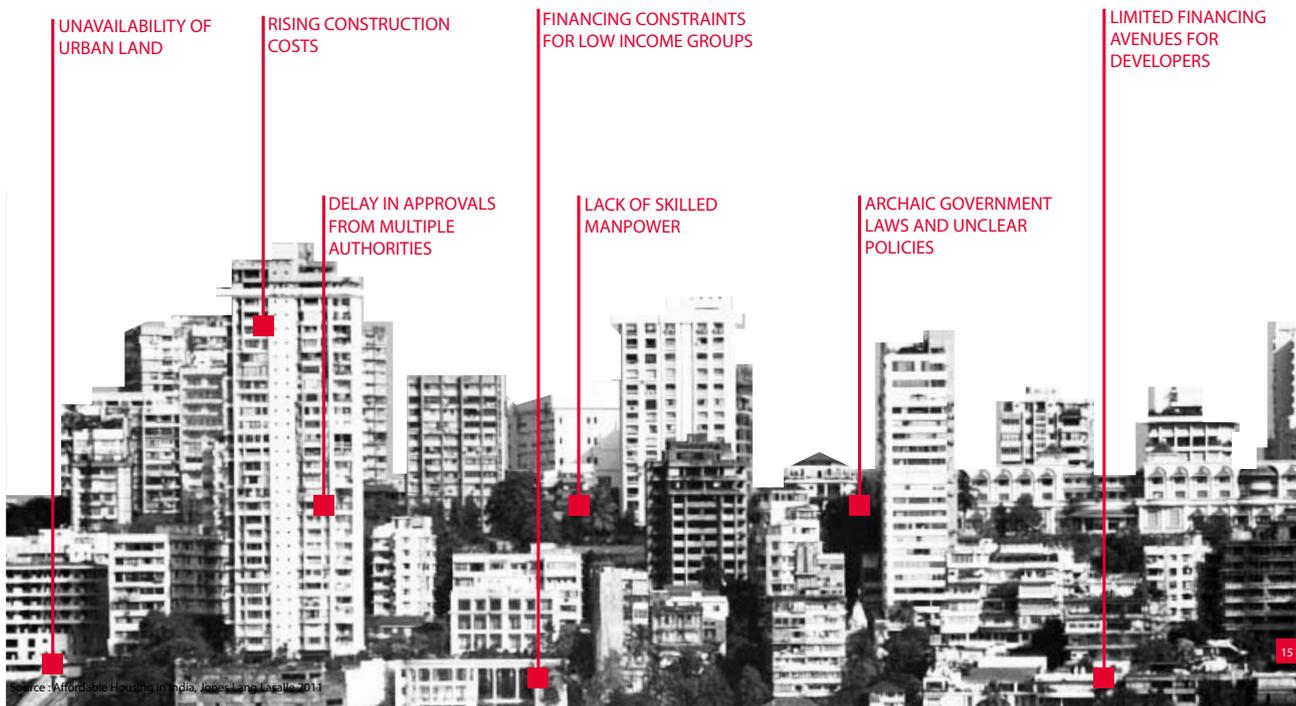
**Fig.:** Private developer are creating „affordable housing“ mostly in suburban areas  
 Source: Naresh V. Narasimhan, 12.06.2013

accelerate the entire planning and construction processes. This requires transparency in the field of the issuance of building permits, to offer supported adjustment frames, to provide the necessary infrastructure and to develop good quality building standards. It is also necessary to reduce capital costs, to prepare support for affordable apartments and financially support groups of population in construction of housing projects and not the selling prices of apartments.

In the future, the solution of the housing problem should be connected to the support of communities. In line with Jan Gehl’s ‘life, space, building’ approach, sustainable effects can be achieved in a way that they lead not only to the diffusion of the tight housing market, but also to social improvement for many people. Following this approach, ‘life’ means that a vibrant community is able to make the housing affordable. Low paid sections have resources, manpower and ideas that are supported in finding creative solutions for their housing requirements and can simultaneously reduce costs. However, this life needed a ‘space’ that is multifunctional and ‘building’, which must be developed according to specific rules, so that these rules are developed according to the needs of the community. For this purpose the use of the infrastructure and resources of the community can be used. They may be directly involved and interested in engaging in such projects in the sense of ‘ownership through participation’. In this line, for example, micro-financing institutions could be supported in a way that the profits are reinvested in housing projects.

## challenges

road blocks hampering affordable housing



**Fig.:** Challenges for solving the indian lack of housing units  
*Source: Naresh V. Narasimhan, 12.06.2013*

**Prasad Shetty** - Collective Research Initiatives Trust (CRIT), Mumbai

*„Of Shortages and Dilapidations - Rethinking the Housing Question for Mumbai”*

Mumbai in Prasad Shetty’s lecture is an example of the overgrowth of an unresolved demand for apartments in India. It is Due to a number of unfavorable conditions the territory of the core city, which is a home to around 12 million inhabitants, is scattered through dilapidated houses and informal settlements. In around 457km<sup>2</sup> there is a high population density of 26,000 persons per km<sup>2</sup>.

Similarly to other cities in Mumbai a tremendous shortage of available land prevails. This is additionally aggravated by the geographical conditions, due to its location on a peninsula. Furthermore, 31% of the city area is covered with forests, marshes and mangroves. Another 22% of the city area is inaccessible through the use of a recreation zones, as it is occupied by technical facilities, transport infrastructure or by military facilities for the construction sector.

To this adds the dilapidated condition of large parts of the existing building stock. More than 20% of Mumbai’s population is living in buildings that are considered old or dilapidated. A further 50% of the population lives in informal structures or slums.

In the recent past, many of the slums and older buildings had been massively renovated. In the inner city areas today almost all large scope construction works are carried out under the guise of “redevelopments’ that are a part of a populist housing market policy. According to it, new apartments should be made available to all residents of slums and old buildings. In return, the developer obtains



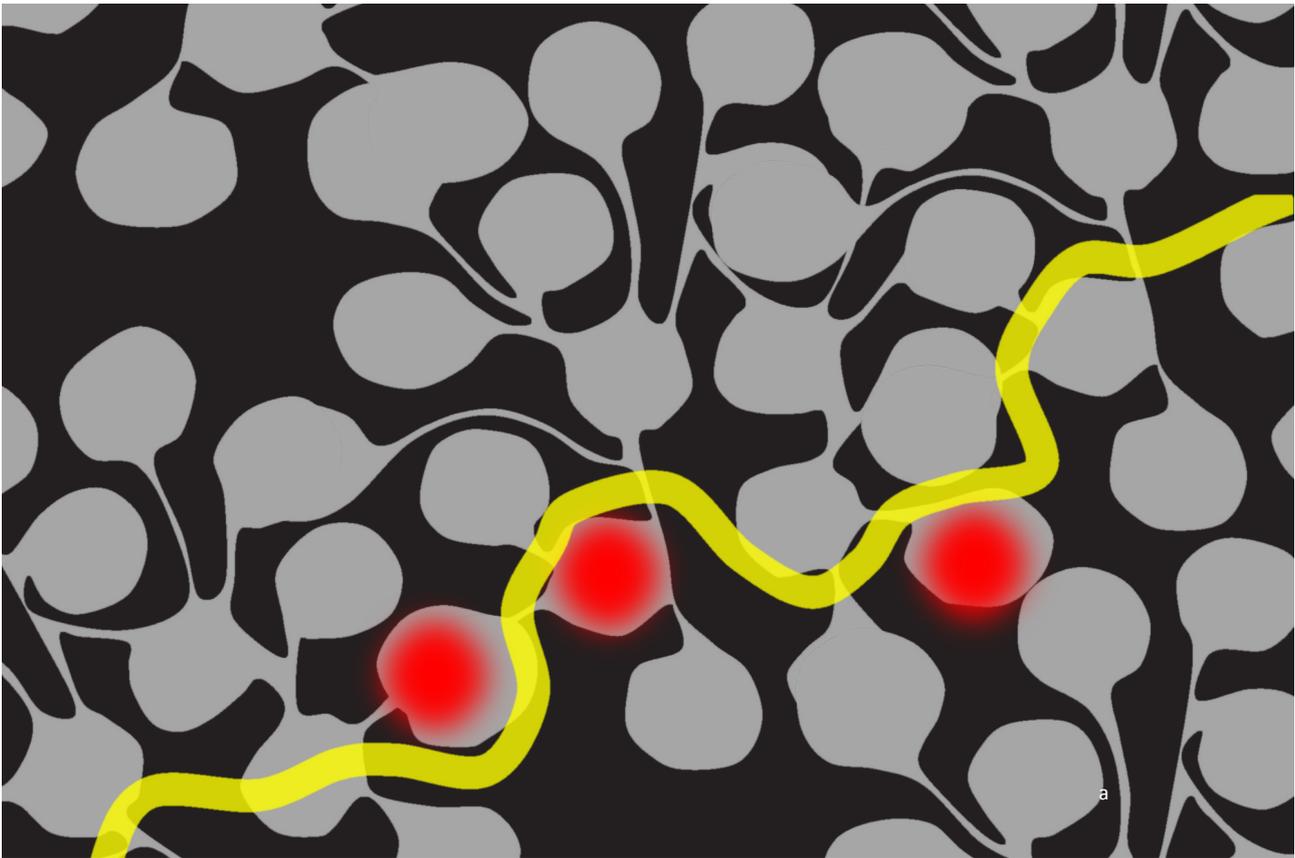
**Fig.:** What looks un-planned and chaotic on the sight follows a complex inner logic of daily routines  
*Source: Prasad Shetty, 12.06.2013*

the right to build higher, as it would normally be allowed by the construction rules. This collaboration of private and public construction activity has made the formal living in the inner city particularly for socially disadvantaged people impossible. Even their alternate homes are built by private developers today, turning the housing policy of the state solely into an economic program for the construction industry.

Another problem is the limited property market. Here the rent adjustments are legally very difficult, which brings the rented houses to develop into a financially unsustainable model, because no larger renovation work can be funded during the rental period. And even if these renovations and remedial measures to be carried out, they would also need to go through a lengthy approval process. But not only the construction of apartments for rent remains closed to many sections of population. Due to the high price of land in downtown areas, the price per square meter in an apartment varies from 2000 up to 15000 US dollars.

To be able to solve the housing market problem, it is necessary to rethink all of this. First comes the question of the density and the land usage. In the past 20 years, the city growth was below the national average, which means that only a few migrants have moved to the city in recent years. Furthermore, it is not the density of the city, which has increased in this period, but the intensity of the land usage. Also the ways, in which people work and progress as well as the types of business enterprise had changed.

The second consideration is linked to the urban form, which at first glance mostly appears to be unstructured and chaotic. However, the internal logic of the city only works through diffused



**Fig.:** The actor network of urban development is very diversified. Because of that every citizen can be part of the urban development processes, by occupying intersections.

Source: Prasad Shetty, 12.06.2013

boundaries and border areas, complicated appropriations of terms of ownership, mixed-usage and the innovative occupancy of space. The city has developed over the years in these structures. The blurry shape allows a very intense exchange, which shapes the city and provides economic foundations to many of its inhabitants. The fuzziness is, therefore, the city. This type of improvement, in essence, enables a life for the majority of the city's population. Also, it generates its own form of cultural life. Through today's clear way of 'redevelopment' the networks in those fuzzy structures are destroyed, resulting in a high degree of polarization in Mumbai, which contradicts the actual logic of the city.

The third question to rethink is the private project developers, who now dominate the real estate market of Mumbai. These are rarely individuals, but rather a dense, complex network of actors and institutions. Why should it not be possible to let the normal inhabitants to become developers themselves? This way, they could not only participate in the development of the city, but also directly benefit from it.

This leads to the question of financing of such an approach. The following facts need to be considered:

1. A slum-house is constructed with the help of local opportunities and through their own initiative. The cost of such a house is around 175,000 rupees (about 3.500 US dollars) and can be expanded as needed or rebuilt.
2. Around 50% of the slum-houses are rented out for about 5,000 rupees (100 USD) per month.
3. The construction cost of an apartment in this case is about 2,000 rupees (40US dollars) per square foot. Because of speculation with apartments, they can be sold between 10,000 and 75,000 rupees (200 - 1.500US dollars) per square foot.

The last census from 2011 provided some new insights into the reasons and particularities of the housing shortage. It had shown that there is a lack of residential units in Mumbai for 8,561 households. Furthermore, around 1.4% of the overall condition of the apartments, i.e. 37,581 of housing units are in poor condition. There is a total lack of about 45,142 housing units. The main reason for the lack of housing is, therefore, less so the absence of housing, but rather the unlivable conditions of the real estate.

In order to be able to bring change to this area, rethinking on political level as well as development of a long-term perspective are necessary. As the proportion of slums' populations during the last 50 years had remained constant at 50%, the policies attempted to address this problem with various strategies. For example, by the introduction of policies and laws in which the once clear rules of terms of ownership or adequate size of residential units became more opaque. However, many of these laws and efforts had hardly produced any positive effects.

To sum up, the following statements can be made:

1. The policy is still primarily oriented on finding a solution to the lack of available land and it takes into account the displacement of people. However, fewer people move into the city.
2. Each resident of a slum is paying today for the prospect to build, to maintain or to rent an accommodation there. Slum dwellers have therefore de facto certain financial potential.
3. The aspirations of the Indian planners in an 'acceptable size', an 'acceptable standard', 'clear ownership structure' as well as a 'clear form' has not only proved impossible, they have also become destructive to the form and the logic of the city.
4. The recent statistical studies have shown that the demand for new residential space in Mumbai is comparatively marginal.
5. There seems to be a need for a political change of direction, which would aim at the maintenance, renovation and security of the existing buildings and not the development of new buildings and areas.

**Prof. Jörg Stollmann** - Chair of Urban Planning and Architecture, Technical University of Berlin

*„Towards inclusive urban living“*

What does “inclusion” in relation to urban life mean? It is not always the financially most profitable market segments that make up a city not only spatially, but also produce urbanity. The current market prices for rent and condominiums in many places prevent an urban mix of retail, small-scale industries, cultural infrastructure and affordable housing from all segments of the market. In the short run, there is a need of a concept, by which socially and culturally stable neighborhoods become the measure of urban development. In the long run, the private sector and the city itself can benefit from social business or development models in the real estate market. One can assume that a city that is inclusive will be effective in the long term.

That such a mixture is needed is shown in the painting ‘The good government’ of the painter Ambrogio Lorenzetti from 1338, in which the complexity of urban life is captured. Leon Battista Alberti also emphasizes this mixture of social classes and functions in his ‘Ten books about the art of building’ from 1452.

Another example of this urban mix is the Ethiopian capital Addis Ababa, the neighborhoods of which



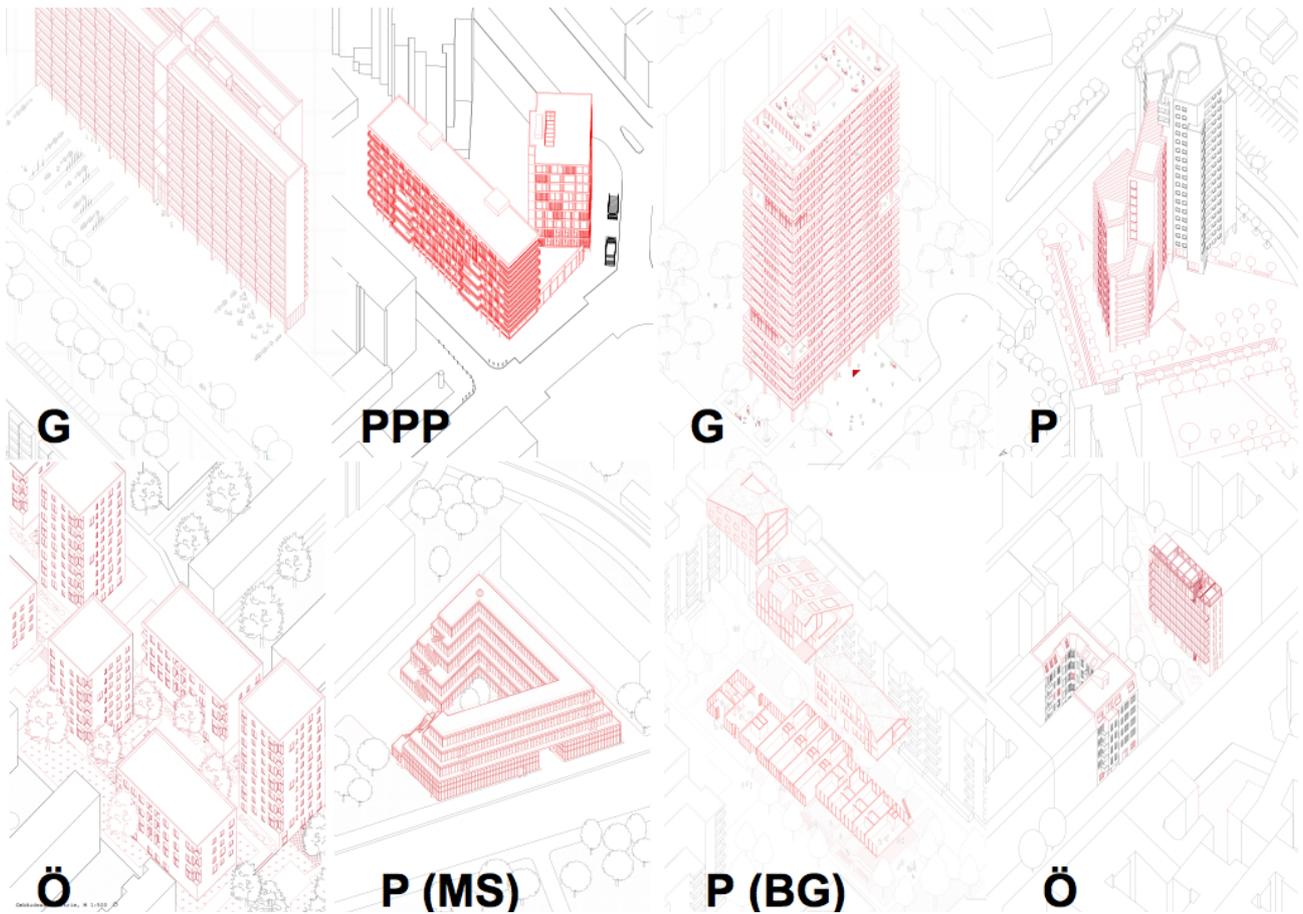
**Excursus 1: Siena**  
**Ambrogio Lorenzetti (1338), Siena: Il Buon Governo**

**Fig.:** „The Good Governance“: Creation of urbanity by diversity  
*Source: Prof. Jörg Stollmann, 12.06.2013*

are grown out of village-like settlements. The mixed cultures of the neighborhoods' dwellers have solidified in today's urban structures. These heterogeneous structures were not observed in many construction projects. Some large housing projects during the construction or after completion had the traditional lifestyles reintroduced by the inhabitants, however these attempts were successful rather rarely, so that today one can only find a few mono-functional quarters in the city, that carry the traditional structure.

This failure would possibly also we witnessed today in the large inner-city market-quarter Mercato, had not the local actors successfully opposed international developers and their new construction projects. The market takes place on the streets in mostly simple, single-stored stalls. Some of those stalls are still part of the structures planned during the Italian occupation 1936-41, others have been added informally. The shopkeepers resisted when they became aware that their businesses were planned to be replaced by larger shopping malls. They founded associations and developed and built new multi-storey commercial and market buildings by themselves. Mercato is not only a market, but also an area for living for the shopkeepers. Especially informal day-laborers and unskilled workers life in the neighborhood under simplest conditions.

It is especially visible in the last example, that urbanity needs a spatial, visual and socio-cultural proximity. The juxtaposition of production, trade and affordable living creates this proximity. In order to make this sustainable and fruitful, the public space must also be productive.



**Fig.:** Results of an urban-design studio at the TU Berlin in cooperation with the Chair of Planning and Construction Economics/ Real Estate Prof. Kristin Wellner  
 Source: Prof. Jörg Stollmann, 12.06.2013

As many cities in Brazil, the city of São Paulo is coined by stark social and spatial fractures, in which expensive residential buildings and gated communities separate the green zone of the ocean from corrugated iron roofs of the favelas. Peculiar is the example of the favela Paraisópolis, whose inhabitants are not necessarily the poorest in São Paulo. In the course of the favela urbanization program buildings had to be demolished and rebuilt in proximity to make place for a new construction. For this purpose, the area was first comprehensively mapped and data about its population and businesses collected. This socio-economic analysis enriched the prevalent image of the favela - which is still not in accordance with what planners and administration consider an “orderly” urban space - with an understanding for its lived-in and social spaces.

The Swiss architect Christian Kerez took this image when he devoted himself to the task of the planning replacement buildings. In the preparation and concept development phase he intensively researched the existing structures, and used the as models for his concept of ‘Jardin Colombo’. In this he developed dense, tangled structures of high residential buildings. They break free from the modernist conception of daylight as the most important parameter for good urban housing projects. Instead, the project introduces transverse ventilation, structural safety and fire aisles while keeping maximum neutrality in uses of the individual spaces. Like in the existing favela, all spaces can be equally used for living, working and trading.

From these examples we can conclude that an inclusive urban life requires a culture of contrast and a mixture of different functions, which offers a potential for social and economic integration,

needs a spatial density, and provides a space for commercial, small-scale businesses and affordable housings. As an example of the evaluation of such factors we should name the 'Urban INDEX ® Institute', which has developed an evaluation matrix, to assess the economic, environmental, social and aesthetic parameters. The example of Prinzessingärten and Aufbau-Haus in Berlin demonstrates the fact that such soft factors can be taken into account in project development. A private investor managed to secure the existence, even if only temporarily, of the socio - cultural garden project Prinzessingärten as an integral part of the neighborhood. It is this commitment by private actors that can give hints to the questions of where poor people can live in the future and where in the city the creation of affordable housing is generally possible. Various combinations of classic and new rules of ownership could provide innovative solutions, depending on location and program, through a mix of PPP projects, private and public constructions as well as housing associations. Private and public alike will profit in the long run from resilient, socially and functionally mixed neighborhoods – both in terms of quality of life as well as economically.

A livable city can only be successful through economic management that comprehends the urban as a whole.

1. What are the new cooperative models for the private sector, companies, investors and project developers?
2. What are the appropriate tools for the visualization and a discussion on the urban economy?
3. Who are the actors for the implementation of these new strategies?

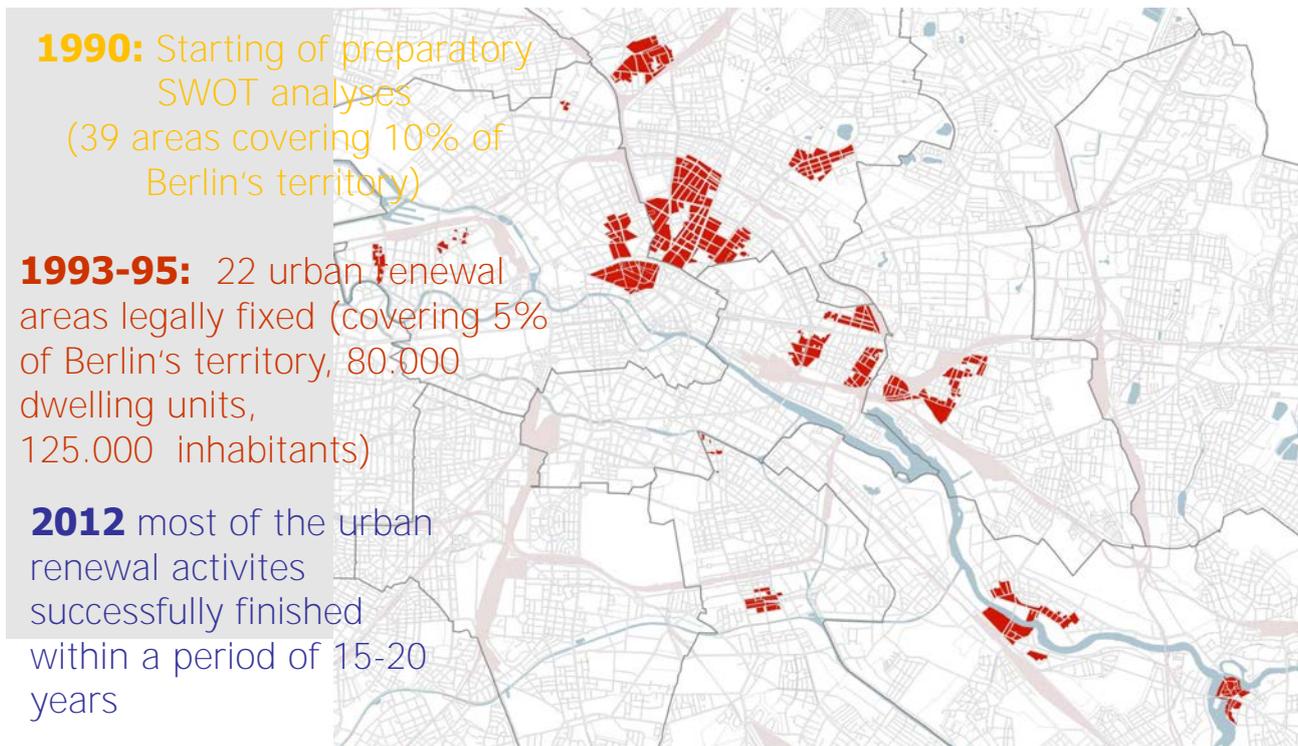
## **Extended discussion**

**Dr. Jochen Hucke** - Senate Department for Urban Development and the Environment, Berlin

The today's density and growth rate of the Indian cities are comparable to those of Berlin in the second half of the 19th century. In Berlin, the aims are now to save the spatial structures and quality from this period by regulations and continue the development. Here, the focus is primarily on the preservation of mixed structures. To fulfill this, the principle of local self-government is an essential prerequisite, so that large projects are not planned centrally and thus their local component is taken sufficiently into account. This way, small-scale projects can be developed and implemented at the local level.

These projects must be written in a framework of a large-scale long-term development concept. Thus, for example, the Berlin Senate defined potential specific areas of development of housing, green areas and commercial areas for the period 2013-2030. To fulfill this concept a plan had emerged for the major new housing sites, which identifies a total of 25 probable sites with a potential of more than 1,000 new housing units in the period between 2013 and 2025.

A comprehensive SWOT-analysis (Strengths, Weaknesses, Opportunities, and Threats) is essential in order to determine the costs of planning and implementation of development of the downtown area. Costs and financial plans, which are derived from it, serve as effective control instruments of urban development process. In Germany today, the federal government, the State and the municipality each finance one-third of the urban renewal projects. It is important to consider in the future how to strengthen citizens' and owners' participation in development processes and to support their contributions. The support of more initiatives is a key to carry out the local solutions.



**Fig.:** Re-densification in the existing urban fabric: Urban renewal areas in Berlin  
 Source: Dr. Jochen Hucke, 12.06.2013

A mixed approach is required in relation to the regulations concerning land division and ownership. As many European cities, Berlin also has a long tradition of cooperative living. In times of rising rents in the downtown areas this model is again in a great demand. In combination with a wide range of municipal housing the cooperative housing construction can have an effect on the development of residential rents. To diversify the offer of the inner city housing, in addition to major construction companies and housing cooperatives, smaller private building initiatives are reinforced. Thus, for example, the members of a private cooperative planned approximately 400 residential units in Möckernkiez. However, rapidly rising construction costs led this housing project to remain unaffordable for socially vulnerable groups.

The following challenges will be faced in the future development of residential districts:

1. Provision of land within the inner city for construction
2. Finding a balance between the requirement for redevelopment and open space
3. Requirement of participatory processes
4. Ensuring a social mix
5. Finding a balance between different forms of property (real estate companies, city housing 6. companies, housing cooperatives, private 'self-made' living groups).

**Follow-up Questions – Ways Forward**

The previous lectures have made it clear that the solutions to the future challenges of urbanization can be found in the neighborhoods. Therefore, it is essential to make local issues visible so that a cooperative action can occur.

‘How can an inclusion succeed?’

‘How can space be seen as a resource?’

Prasad: During the conversion of land into space the question of which space will be in demand, must be answered.

Narasimhan: The question of ‘livable neighborhoods’ must be answered locally. Buildings and districts in India are traditionally multi-functional and are subjected to various everyday utilization cycles.

The standardization in the area of residential buildings is now very low, whereby pre-fabrication of components and thus a cost-reduction in residential construction is hardly possible.

Pleumarom: The base of the population pyramid can not be operated by the market. It needs other solutions that require development in this area.

Fenk: The solution of urban problems lies in neighborly relation and not in global micro-financing system. It is therefore necessary to discuss this topic.



# Development Policy Dialogue at the Asia-Pacific Weeks Berlin 2013

Cities in Transformation –  
Pioneers for Sustainable Development

June 10-12, 2013, Berlin

## **Organizer:**

Development and Peace Foundation (SEF), Bonn  
State Office for Development Cooperation (LEZ)  
of the Senate Department for Economics, Technology and Research, Berlin,  
in cooperation with the German Society for International Cooperation (GIZ)

**11/06/2013**

Tour 1: Urban Development, Water Management, New Urban Housing  
Tour 2: Urban Mobility

## **EXCURSIONS**



# Development Policy Dialogue at the Asia-Pacific Weeks

Thematic city walks

June 11th 2013 from 5pm to 7pm

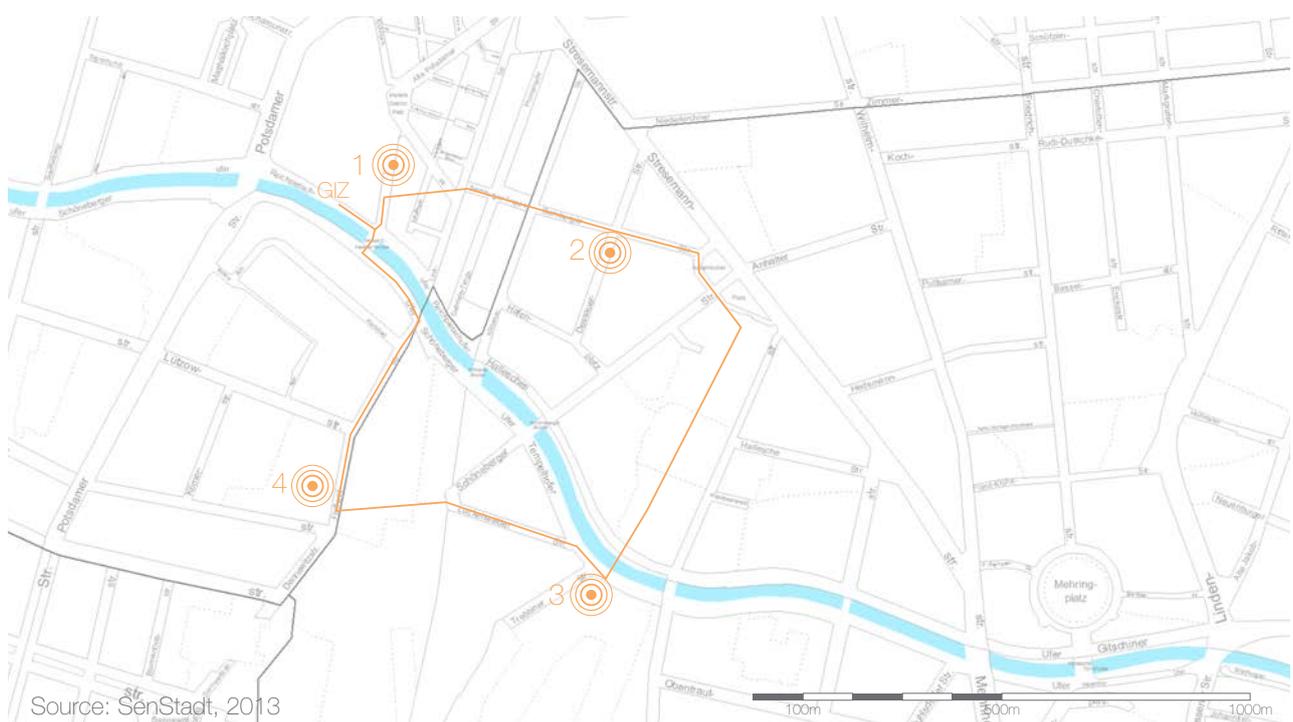


## Tour 1: Urban Development, Water Management, New Urban Housing

Start: GIZ Reichpietschufer 20

Guide: Frank Schwartz

- 1 5pm Ecological urban water landscape Potsdamer Platz
- 2 5.20pm Watermanagement system 'Block 106'  
Dessauer Straße / Bernburger Straße  
  
5.40pm Walk to 'Deutsches Technikmuseum' via 'Tempodrom'
- 3 6pm Solar concept of 'Deutsches Technikmuseum'  
Trebbiner Straße 9  
  
6.15pm Walk through 'Gleisdreieck Park'
- 4 6.30 Inner City Housing Project 'MetroPolis'  
Flottwellstraße 8-18  
  
6.50 Return to GIZ Haus  
Reichpietschufer 20



Source: SenStadt, 2013



*Pictures: Marcus Jettner*

# Block 6 in Kreuzberg - Bernburger Straße / Dessauer Straße

Completed model project of the city of Berlin.

Download of the project flyer:

[http://www.stadtentwicklung.berlin.de/bauen/oekologisches\\_bauen/download/modellvorhaben/flyer\\_block6.pdf](http://www.stadtentwicklung.berlin.de/bauen/oekologisches_bauen/download/modellvorhaben/flyer_block6.pdf)

### „StadtNatur“

Die meisten der im Block zu bewachsenden Pflanzen sind aus Hochlagenregionen herangezogen. Einige Arten haben sich aber auch spontan eingestellt. In den Vegetationsbeständen des Geländes finden sich trotz mäßig hoher Geländehöhe die Artenvielfalt und die damit verbundene Erlebung der Tierwelt nach dem Urbild der Insel- und Inselökologie. Die Regenwasserkanäle, auf Teiltischen, weisen nach südwestlicher Richtung. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet.

### Stadtböologische Modellvorhaben

In Anlehnung an die Bundesprogramme für Eigenheimbau (BIM) und Städtebau (EBC) wurde 1986 das Berliner Landesprogramm „Stadtböologische Modellvorhaben“ entwickelt. Das Berliner Modellvorhaben war der Block 6 im Kreuzberg. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet.

### Projektziele / Aufgaben

Zentrale Aufgabe für Stadtböologie: Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet.

### Entwicklung und Fertigung

Projektziele / Aufgaben: Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet.

### Regenwasserbewirtschaftung, Grünversickerung, Regenwasserkanäle

Projektziele / Aufgaben: Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet.

### Freizeitanlagen

Projektziele / Aufgaben: Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet.

### Projektziele / Aufgaben

Projektziele / Aufgaben: Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet.

### Das Projekt

Ziel des Landes Berlin war es im Einvernehmen mit dem Eigentümer den Bestand der Anlage als „historisches Denkmals“ zu sichern und zu optimieren sowie die Bewirtschaftung einer nachhaltigen Gebäudeanlage zu ermöglichen.

### Betriebswasserkonzept

Wie im EBC 02 Projekt, entworfen wurde die Planung des Gebäudes in zwei Phasen: 1. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet.

### Regenwasserbewirtschaftung

In die ursprüngliche „Planungskonzepte“ wird nun die auf dem Gelände vorhandene Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet. Die Regenwasserkanäle sind in Berlin in der Regel nach Süden ausgerichtet.

### Betriebsgebäude

Für die Unterbringung der Anlagen zur Betriebswasserbewirtschaftung wurde die Errichtung eines Betriebsgebäudes erforderlich, das sich in die bestehende Gebäudestruktur einfügt und auch eine Möglichkeit der Umweltbildung bietet.



**Tour 2: Urban Mobility**

Start: GIZ Reichpietschufer 20, Bus transfer  
 Guides: Eckhard Bock / Christoph Wessling / Dr. Arndt

5pm Bus transfer by public transport

- 1 5.15pm Coordination centre of the Berlin Municipal Transport Services „Berliner Verkehrsbetriebe“  
 Control system Bus, incl. controll of the light-signal system and Tram positioning  
 Potsdamer Straße 188

6.15pm Urban Regeneration projects in Berlin-Kreuzberg  
 Transfer by Public Transport - Subway

- 2 Visit of Gneisenaustraße 2a
- 3 Visit of Gneisenaustraße 8
- 4 Visit of the backyard Nostizstraße 12
- 5 6.30 Visit of 'Riehmershofgarten' Yorckstraße 84

7pm Return to GIZ Haus  
 Reichpietschufer 20



Source: SenStadt, 2013

Presentation „Introduction to RBL/ITCS (Intermodal Transport Control System) of BVG AöR“

**Keller, Carsten** - Berliner Verkehrsbetriebe (BVG) FI-E12

11.06.2013

## ***Asia-Pacific Weeks Berlin 2013***

***Introduction to RBL/ITCS (Intermodal Transport Control System) of BVG AöR***

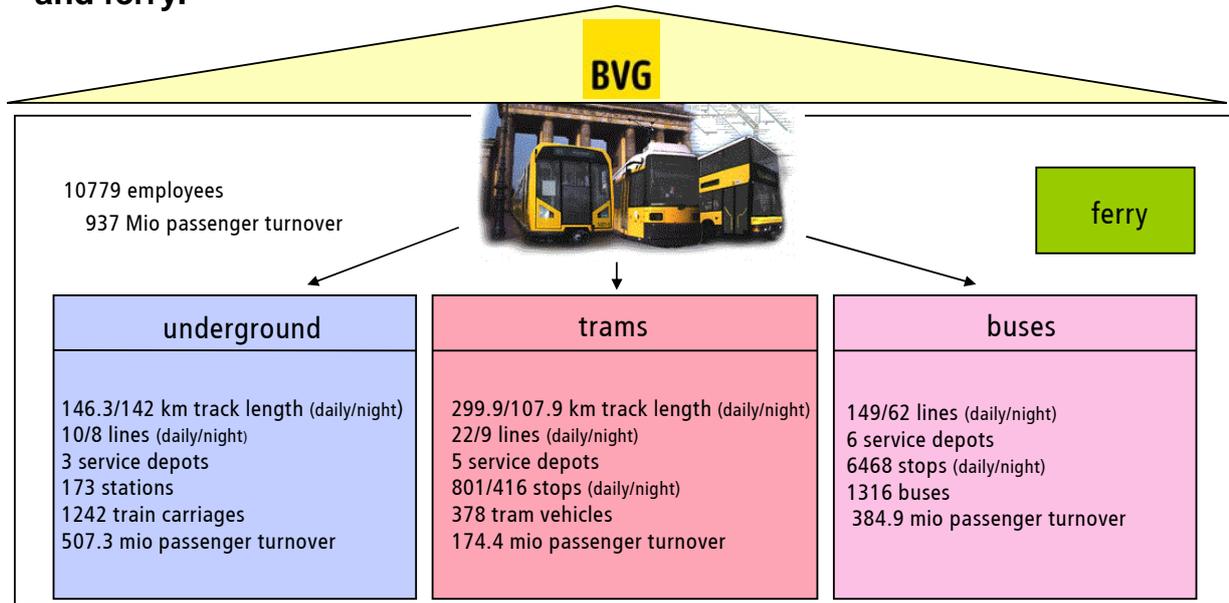
Berliner Verkehrsbetriebe (BVG)  
FI-E12

11.06.2013



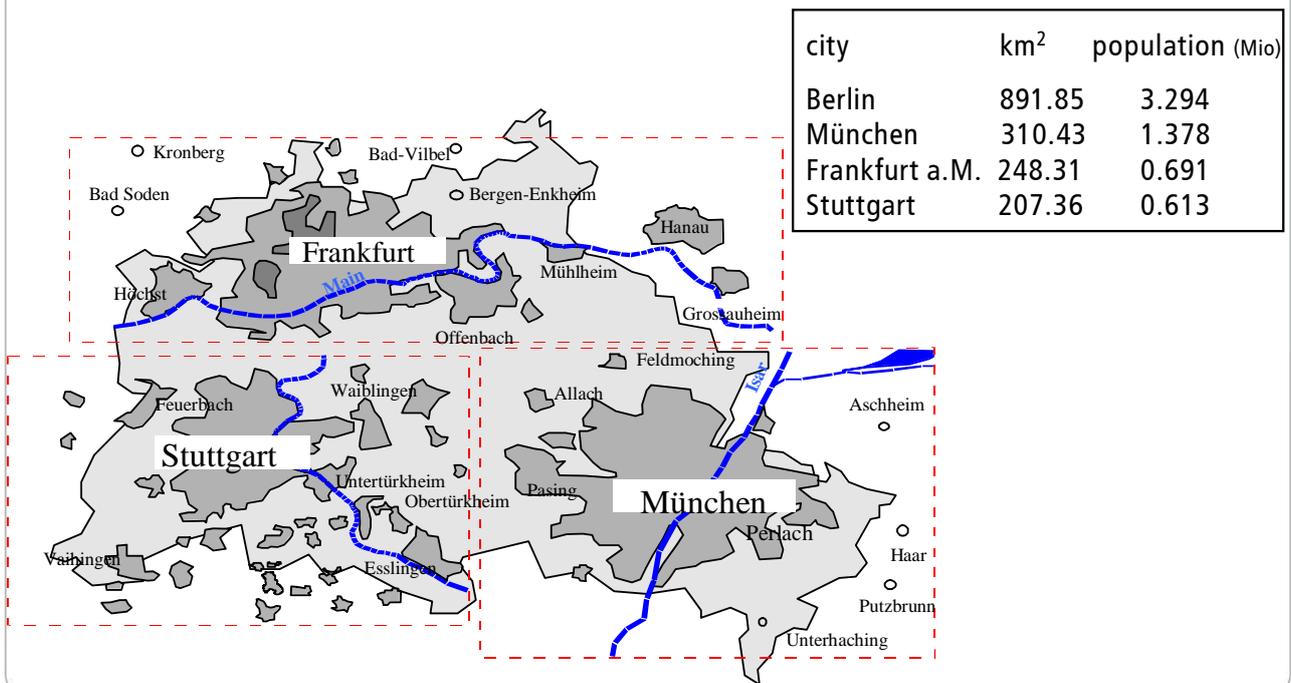
**BVG**

The „BVG“ is the largest public transport company in the germany-speaking area (Germany, Austria, Switzerland) operating underground, trams, buses and ferry.



last revision 31.12.2012

### Dimension of the "transport area"



**RBL** „Rechnergestütztes BetriebsLeitsystem“  
**ITCS** „Intermodal Transport Control System“

RBL/ITCS is the computer-aided networking of buses, trams, stops and control centres through data transfer and a radio system.

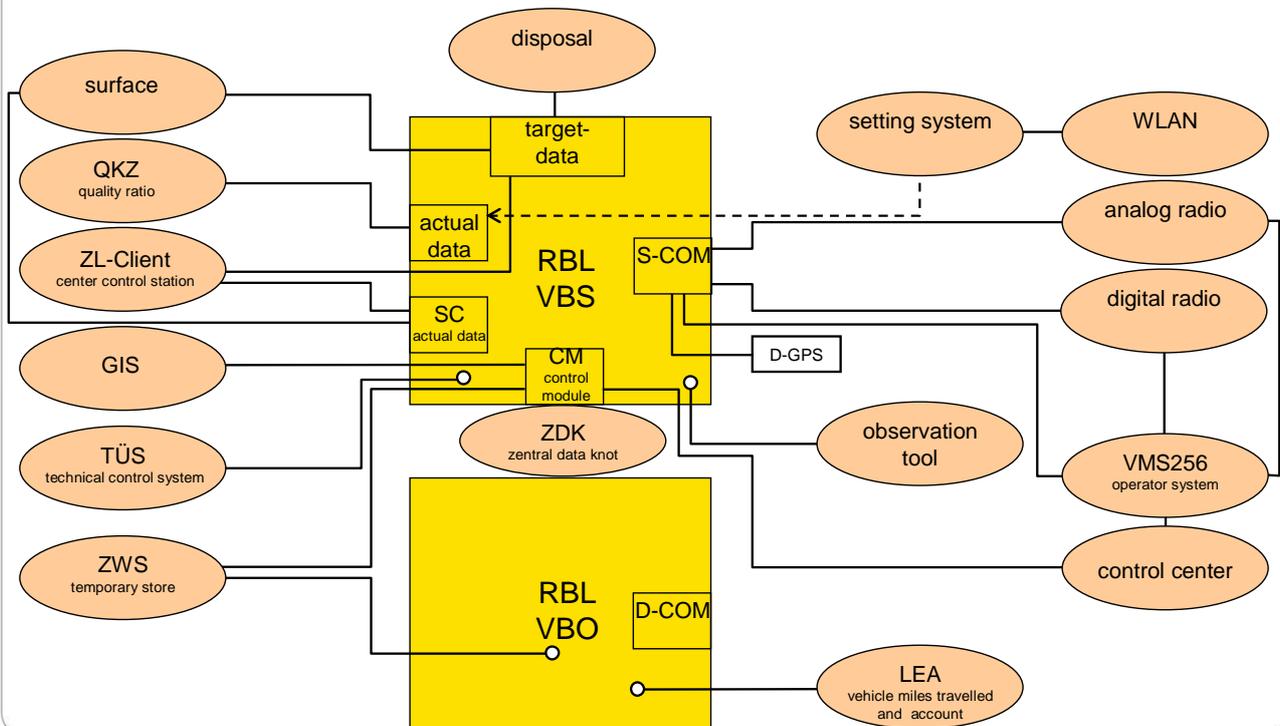
This modern operating control instrument is crucial in order to introduce further improvements to the quality of our services.

The establishment of the RBL/ITCS for bus and tram was a major step in the efforts of BVG to modernise the control system and achieve economic efficiency.

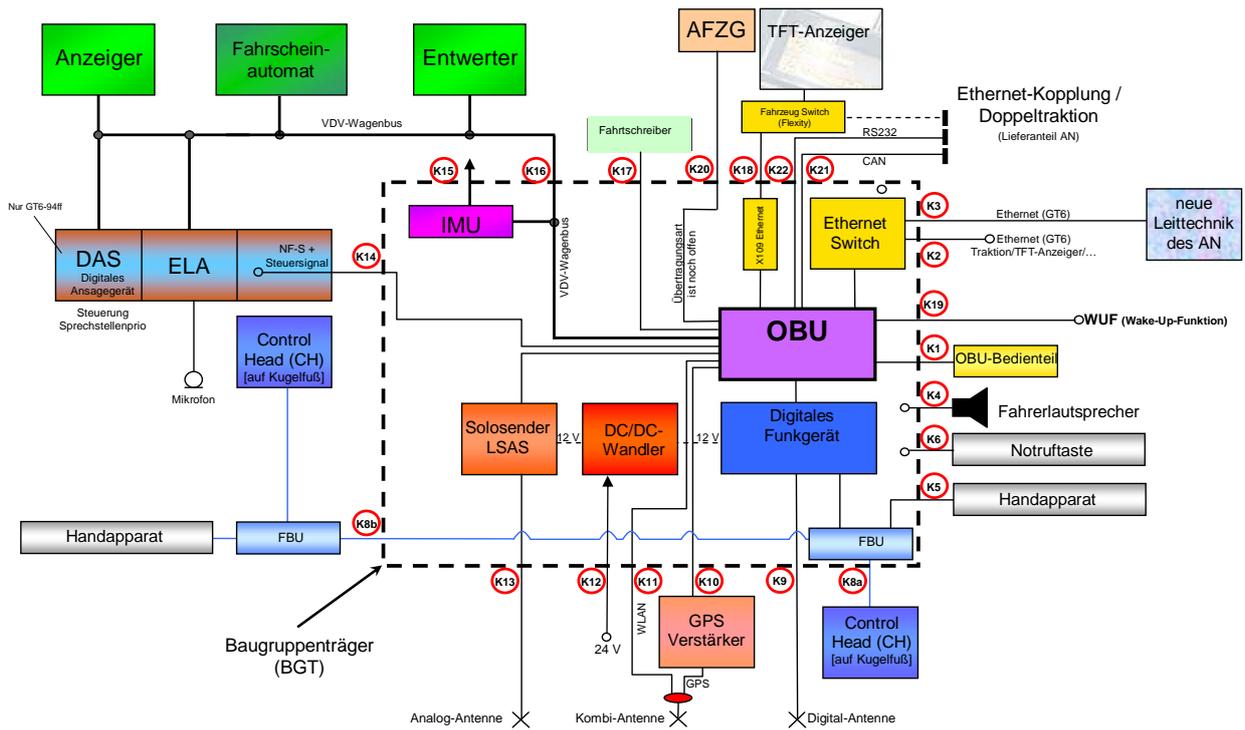
Now the BVG has started to renew the RBL by ITCS.



**abstract product RBL/ITCS**



## Tram project OBU VBS + digital radio TETRAPOL



6

BVG AöR RBL/ITCS Keller, Carsten 11.06.2013



BVG

*thank you for your attention*

*are there any questions left?*

7

BVG AöR RBL/ITCS Keller, Carsten 11.06.2013



BVG

## APPENDIX

Qualified urban renewal projects in Berlin Kreuzberg; Executed during the 1980s by the Town Planning Department of Berlin-Kreuzberg; Source: Eckhard Bock

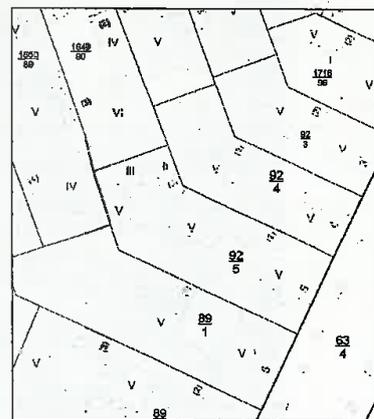
### Qualifizierte Stadterneuerung in Kreuzberg

Hochverdichtete Blockbebauung mit Vorderhäusern, Seitenflügeln und Quergebäuden in der Tempelhofer Vorstadt, Blockstruktur entsprechend dem Hobrechtplan mit mehreren z.T. in sich geschlossenen Höfen. Bebauung nach 1887



#### Beispiel: Grundstück Graefestrasse 5

Planungsaufgabe: Abriss von Wohnungen in schlechten Lagen, Öffnung des geschlossenen zweiten Hofes; Verbesserung der Ausrichtung der Wohnungen; Herstellung von Balkonen und Loggien an den Abrisskanten; Hinzufügen hochwertiger Wohnungen im Dachgeschoss; Zusammenlegung von Wohnungen



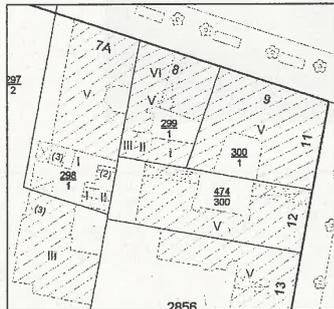
**Beispiel: Gneisenastr.8**

Dichte Bebauung der frühen Gründerzeit um 1870 auf Grundlage des Hobrechtplanes in der Tempelhofer Vorstadt.

Planungsaufgabe: Grundlegende Verbesserung der städtebaulichen Situation auf dem Grundstück.

Veränderung der Lage durch Öffnung der gesamten Gebäudesubstanz nach Süden zum ruhigen und von der Straße abgekehrten Blockinnern.

Wohnwerthebung durch gestuften Abriss und Anlage von Balkonen und Dachterrassen auf den erhaltenen Gebäudeteilen.



**Beispiel  
Hasenheide:**

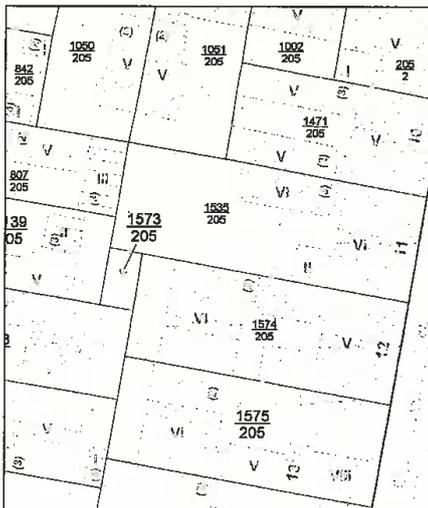
Alter Ballsaal Neue Kultur und Dienstleistung im Quartier



## Qualifizierte Stadterneuerung in Kreuzberg

### Block Schleiermacherstraße/Mittenwalderstraße

Entwicklung eines Planungskonzeptes, das möglichst umfangreiche Wohnlagenverbesserungen bei Teilerhalt der Strukturen vorsieht. Erhöhung der Zahl der Wohnungen mit verbesserter Ausrichtung und mit wohnungsbezogenen Außenräumen. Öffnung von Brandwänden und Umorientierung von Wohnungen. Prozesshafte Sanierungsdurchführung auf der Grundlage eines umfassenden Blockkonzeptes



### Beispiel: Schleiermacherstraße 11

Planungsaufgabe: Durchgreifende Verbesserung der städtebaulichen Situation auf dem Grundstück. Vollständiger Abriss eines Quergebäudes und eines Seitenflügels. Öffnung von freigelegten Giebeln, veränderte Ausrichtung von Wohnungen.

Hochwertige große Wohnungen mit Balkonen in den Vorderhäusern. Kleinstwohnungen in den Seitenflügeln und in den Quergebäuden.

Eng gegenüberliegende Seitenflügel. Quergebäude und Seitenflügel, die Hofgemeinschaften ohne Freiraumqualitäten bilden. Nach Sanierung: Wohngebäude mit nach Westen ausgerichteten Seitenflügelwohnungen

Abriss von Gebäudeteilen, die eigene und fremde Wohnlagen verschatten. Einfügen von Balkonen an den Abrisskanten.

Aufwertung der Freiräume. Verdichtung der Blockkante durch bis zu achtgeschossigen Neubau. Öffnungen zum Blockinnern.

### Beispiel: Schleiermacherstraße 13

Planungsaufgabe: Vervollständigen eines Kriegsschadens an der Blockkante. Berücksichtigung unzureichender Belichtungsverhältnisse von eigenen und benachbarten Hofgebäuden. Erhalt und Neudefinition der unterbrochenen Blockkante aus städtebaulichen Gründen.

Neubau von Wohnungen mit guten Wohnlagen.



**Texts and editorial by**

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