



TITLE OF THE PANEL: THE FUTURE OF SCIENCE PARCS AND THE EMERGENCE OF SCIENCE CITIES

PROPONENT: Drees & Sommer Switzerland

CHAIR: Dr. Christiane Gebhardt, Director Blue City Development Drees & Sommer Switzerland, Member of the Executive Board of the Triple Helix Association

MAIN TOPIC/SCOPE:

We would like to discuss the paradigm shift and new trends in the area of planning/design and realisation of Science Parks in cities in terms of impact, integration and sustainability of places. There are many reference cases that show that the green deal, sustainable and social integration as well as the use of Science such as AI, Clean Technology, Cradle to Cradle and Lean Construction can be crucial and self-enforcing elements of the city system if you take a holistic approach in urban planning and building. Apart from that perspective, many science developments become research objects in itself, i.e. so-called city labs which try out innovation in a learning and participative approach. Empirical evidence illustrates that science cities are attractive urban agglomerations which need to manage further growth in a sensible way.

We understand cities as unique urban laboratories, where multiple-stakeholder- driven approaches and multi-disciplinary methodologies prove to work in synergy. The cities in the current global competition are the most important powerhouses of human, social and relational capital. The city, as a multi-cultural and charismatic capital must use its existing potentials and accelerate the re-structuration from planned centralized industrial production and isolated science parcs to a more knowledge-based economy. This natural interplay between education, innovative industries, culture, and with its deep roots and strong connections to local communities, represents a model that can serve as an important driver of urban growth - encouraging social cohesion, promote cultural diversity and understanding, stem the brain drain of educated young professionals, and act as a driver of innovative urban regeneration.

New typologies of a Science + Industry 4.0 Campus are immensely diverse and potent areas that can include Innovation Districts, independent spaces that intend to revitalize the decayed industrial districts. The existing human and spatial qualities form the basis, from which the existing rich and adaptable architectural, urban and landscape potentials can be reactivated. This action can catalyse a more innovative, inclusive, integrated and sustainable model of urban revitalization and eventually be up-scaled and replicated throughout the countries and regions.

PANELISTS

1. Dr. Christiane **Gebhardt**
2. Prof. Johannes **Orphal** (Speaker)
3. Thomas **Rufener** (Speaker)
4. Dr. Haris **Piplas** (Speaker)
5. Dipl. Ing. Abdulmajid **Karanouh** (Speaker)
6. Prof. Josep Miquel **Piqué** Huerta (Speaker)

Chair:



Dr Christiane Gebhardt Director of Blue City Development at Drees & Sommer Switzerland.

Before her current assignment Dr. Gebhardt was head of global initiatives and a strategy and organizational development consultant in an international consulting company. Since 2012, she has been responsible for building up the global program "Cities and Regions". Today her focus is on innovation policy, international strategy development, organizational transformation, and governance (climate resilience of cities, integrated city development). As a Fraunhofer Morgenstadt Partner she applied the Fraunhofer City Insight Indicators and the Rockefeller KPIs in many European Cities. Dr. Gebhardt contributed to the analytical tool set and designed management tools for stakeholder integration and regional/urban innovation clusters. She worked in many interdisciplinary local and international expert teams with a strong focus on knowledge transfer, participation, and implementation. Dr. Gebhardt gained degrees from the University of Konstanz in Public Administration Sciences (Master) and from University of Gießen, (PhD in Political Science / Technology and Innovation policy). She has researched governance models and system design at the University of Chicago IL and at the MIT, Cambridge MA. She is a member of the Executive Committee of the Triple Helix Association in her second term and was editor of two topical collections of the Triple Helix Journal (open access, Scopus, Publisher: Brill): *The Future of Science Parks and Areas of Innovation* and *The spatial dimension of innovation: Triple Helix and the city* with Harald Mieg/ Simmel Center for Metropolitan Studies at the Humboldt University Berlin.

Affiliation

Director Blue City Development | Drees & Sommer Switzerland

Speaker:



Prof. Dr. Johannes Orphal is Head of Division IV "Natural and Built Environment" and

Presidential Commissioner for Climate Protection and Sustainability at the Karlsruhe Institute of Technology (KIT), Germany. He graduated in Physics from Humboldt University, Berlin, Germany, in 1991, and obtained his PhD (Docteur en Sciences) from Université de Paris-Sud (Orsay, France) in 1995. He worked as Research Scientist and University Professor in Bremen (Germany), Créteil (France) and Karlsruhe (Germany), and was Director of the Institute of Meteorology and Climate Research at KIT from 2009 to 2020. From 2011 to 2020, he has been Scientific Speaker of the Programme "Atmosphere and Climate" funded by the Helmholtz Association of German Research Centers. He is author of more than 200 scientific publications, mainly in the areas of atmospheric science and remote-sensing. In 2017 he was awarded the French-German "Gentner-Kastler" Prize, and in 2018 the "Humboldt - Gay-Lussac" Prize of the Académie des Sciences (Paris). His main focus is an overarching research platform at KIT for sustainable urban development.

Affiliation:

Director, Institute of Meteorology and Climate Research (IMK), Karlsruhe Institute of Technology (KIT), Corresponding Member of the Air and Space Academy (AAE) Germany

Speaker:



Thomas Rufener is the managing director of the Singapore-ETH Centre since January 2019. Before joining SEC, he was the chief operating officer for the Group General Counsel Area at the Zurich Insurance Company – a leading global multi-line insurer. Prior to his role, amongst other activities, he was involved in the establishing and developing the internal consulting unit within Zurich Insurance. He also worked for the strategy consulting company McKinsey & Co in the financial and energy production sectors and was on the management board of a listed total contracting and real estate investment company. Furthermore, he was on the investment advisory committee of a Swiss-registered pension fund for more than 10 years until the end of 2018. Thomas Rufener holds an Executive Master in Consulting and Coaching for Change (INSEAD), an MBA from the Erasmus University, Rotterdam School of Management, a post-graduate degree in regional planning from FHNW, and a graduate degree in architecture from ZHW.

Affiliation

Managing Director of the Singapore ETH Centre, Singapore

Speaker:



Dr. Haris Piplas (ETH) – Co-Director Blue City Development Drees & Sommer Switzerland – Dr. Haris Piplas is author and collaborator of several urban, landscape and architectural projects in Germany, Switzerland, Denmark, Morocco, Eastern and Western Europe, Latin America, India, China and other regions. He is co-author of the book "Global Urban Toolbox", which highlights spatial and infrastructural challenges under the influence of economic-social, geopolitical and cultural aspects in case study cities, among others: Berlin, Zurich, Detroit, Cape Town, Beijing, London, São Paulo etc. He is also the author of the publication "City Action Lab: Urban Transformations in Central and Eastern Europe". Dr. Piplas was the editor-in-chief of two issues of the Journal of the European Federation of Landscape Architects (IFLA), entitled "Adaptability of Cities" and "Political Implications for the Urban Landscape".

He figured as pavilion curator of the 15th Architecture Biennale in Venice, as well as keynote speaker at numerous international conferences. He is also a member of ISOCARP (International Society of City and Regional Planners), the former Young Leader Chairman of the Urban Land Institute, nominator of the Aga Khan Prize for Architecture and member of the Advisory Board for Building Culture of the European Forum Alpbach. He has been invited as keynote speaker at numerous international conferences. Dr. Piplas was involved as consultant to international organization on the topic of integrated urban development, smart cities, ecosystem services and landscape planning. Dr. Piplas holds a Master of Urban Design from the Technical University of Berlin and a Dr.sc. from the Swiss Federal Institute of Technology (ETH) Zurich, Department of Architecture. In addition to external teaching and expert activities, he has been a researcher at Politecnico di Milano. At ETH, he worked on the conception of the Urban Simulation Game (stakeholder inclusion instrument for district and city development) and the institutional development of the ISTP (Institute of Science Technology and Policy) "Urbanization Incubator" - a platform for collaboration between academia, practice, NGOs, multilateral organizations and local governments.

Affiliation

Co-Director Blue City Development | Drees & Sommer Switzerland

Speaker:



Abdulmajid Karanouh, Head of Interdisciplinary Design & Research, Drees & Sommer Dubai United Arab Emirates

With a background in Mathematics (Bacc-II), Architecture (BSc), Computation (MSc), Engineering (MSc) and Design Communication (ongoing PhD), Abdulmajid has developed over the past 19 years from a passionate specialist in architectural geometry into an interdisciplinary design and high-tech specialist in the Built Environment.

Abdulmajid's career covers a range of record-breaking and award-winning projects across the globe from the world's first twisted tower to the longest metro line. This includes co-authoring the winning competition scheme of the Al-Bahr Towers in Abu Dhabi in 2007 when working with Aedas in London in collaboration with Arup – spearheading the design team to project completion in 2013. The Al-Bahr towers stand out for their energy efficient geometry, highly robust honeycomb supporting system – used for the first time as a tower structure – and for their unique three-dimensional adaptive solar screens. The unique features of the building earned it Best Innovation Award in 2012 by the Council for Tall Buildings and Urban Habitat, Best Inventions in 2012 by Times Magazine, Best Project in the Middle East in 2013, and Façade Engineering Excellence in 2013 by the Society of Façade Engineering.

Abdulmajid's contribution to the Built Environment includes authoring papers and articles for major journals and publishers, covering a variety of topics related to innovation and advanced technology. Currently heads the Interdisciplinary Design and Research group at Drees & Sommer, specialising in fusing the principles of interdisciplinary design via BIM-augmented algorithmic thinking to develop and deliver context-inspired masterplans and buildings solutions.

Affiliation

International Director | Head of Interdisciplinary Design & Innovation | Drees & Sommer Dubai

Speaker:



Dr. Josep Miquel Piqué Huerta - Josep Miquel Piqué is a Telecommunication Engineer

from La Salle and UPC and MBA. He

is Doctor on Ecosystems of Innovation from Universitat Ramon Llull. He holds also diplomas

from Massachusetts Institute of Technology (MIT) and University of California-Berkeley.

He is a disciple of Professors Henry Etzkowitz (co-founder of Triple Helix), Francesc Solé Paredada (Entrepreneurship) and Jerome Engel (Clusters of Innovation).

He is the President of XPCAT (Catalan Network of Science Parks), Vice-President of APTE (Spanish Network of Science Parks) and XVII President of IASP (International Association of Science Parks and Areas of Innovation).

He is expert of the Directorate General for Regional and Urban Policy (DG REGIO) of the European Commission and member of the Team of Specialists on Innovation and Competitiveness Policies of the United Nations Commission for Europe (UNECE).

His long professional experience in university management has led him to promote and

lead Postgraduate Programs, Technology Transfer Centers, University Incubators and Innovation Science and Technology Parks. He has promoted several hybrid organizations taking the partnership model University-Industry-Public Administration.

In the field of public administration has been CEO of the District Innovation - 22 @ Barcelona (developing 22@Barcelona Urban Lab), Director of Strategic Sectors of the Agency of Local Development - Barcelona Activa and CEO of the Office of Economic Growth of the Barcelona City Council. Among other projects he has participated in teams of Barcelona European Capital of Innovation and Barcelona Mobile World Capital.

He has published several papers in publications and congresses on Innovation Ecosystems.

He has participated in several international forums in Europe (Bulgaria, Denmark, Spain, Finland, France, Italy and UK), America (Brazil, Canada, Chile, Colombia, Mexico, Peru, U.S.A.) and Asia (Korea, Philippines, Singapore, Japan and China).

The central line of his activity is the promotion of Knowledge-based Economy and Society in order to consolidate Knowledge Cities on Smart Cities. He has elaborated several models and papers about Living Labs, implementing Living Labs in Barcelona, Malaga (ENEL) and other projects including Living Labs (Medellin, Porto Alegre, Marica-Rio de Janeiro, Fortaleza) and participating in international events about Living Labs (ENOLL, IASP, ...)

Affiliation

President of Technova Barcelona – La Salle Innovation Park

XVII President of International Association of Science Parks and Areas of Innovation