22nd Karlsruhe Dialogues 2018
The (Artificial) Intelligent City

Opening Address on Friday, 2 March 2018
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– original speech held in German; check against delivery –

Introduction

Ladies and gentlemen, friends of ZAK and of the Karlsruhe Dialogues, Mayor Dr. Käuflein, Vice-President Professor Wanner. Once more, I extend warm greetings to all those who have already been welcomed – I am especially happy that our theme has met with the interest of policymakers at all levels – perhaps they too feel that a strategically wise policy for the cities nowadays really can extend beyond the scope of action of a city or municipal council. And a special welcome to our opening speaker, Mr. Leo Hollis!

During last year's Karlsruhe Dialogues on the theme 'Pluralistic Society and Its Enemies' it already became clear that there are highly diverse ideas about the concept and feasibility of an intelligent city. The 19th Karlsruhe Dialogues on the theme 'Global DemocraCITIES: Between Triumph and Decline' already focused on issues of governance and civic involvement. They also point to the increasingly complex questions of how urban planning processes can be steered, by whom, and in line with which interests.

In the international context we are seeing a growing number of cities with increasingly autocratic governments, such as Istanbul or Cairo, Hong Kong or Singapore. But much closer to home, too, we see ever more populist, polarising, and highly networked movements in the heart of Europe. I would like to remind you of 'NationEUrope: The Polarised Solidarity Community', our theme from two years ago, which will soon be the subject of a volume in the *Interdisciplinary Studies on Culture and Society* series, published by Nomos. I would also like to refer to the 2014 Karlsruhe Dialogues on the theme 'World (Market) Society: On Trade with Goods, Data and Humans'. All these groups of themes describe the dynamic backgrounds, determining factors, constraints, opportunities, and risks that intelligent cities need to deal with locally and globally when competing with each other in order to further the goals of improved urban quality of life and safeguarding identity.

I would like to present a few propositions, terminological remarks, and more general observations at the start of the 22nd Karlsruhe Dialogues.

We quite intentionally didn't aim to reduce the theme 'The (Artificial) Intelligent City' to the term 'smart city', which has been established for a decade or so. Even at the semantic level we had our reservations here. What is smart? Clever, ingenious, cunning, neat, dapper, shrewd, intelligent? Many connotations of this English term are far from being purely positive. There are many who regard this expression, which is far from new and also derives in part from the marketing sector, as arbitrary, analytically imprecise, and in some contexts as an empty catchword.

Ladies and gentlemen, some might regard the following scenario as 'cool': driving a small car of the 'Smart' make, developed by Daimler and Geely in the 1990s and now converted to an electric motor, through the comprehensively smart-controlled city. For health reasons you maybe no longer smoke cigarettes of the 'Smart' brand, with the cult design packaging created by the Austrian designer Emanuela Wallenta[1] in 1955, but instead a modern e-cigarette, and you allow yourself to be guided by your smart satnav Alexa, Siri, and co. to the smart shopping mall. Here, since the bookstore appears to have closed down, you can use the Amazon app on your smartphone to conveniently order some self-help literature, such as *Smart Food intelligent eating*[2], and quite probably, a smart restaurant is awaiting your visit. Retro-products and the future in smart packaging. Utopia, dystopia, something in between. Maybe you'll feel the same way as I do: I want to decide for myself what's 'smart' – as well as I'm able to!

And nonetheless, as is often the case with hyped terms, the word has become part of everyday language. So it's all the more important for us to understand the term when the image of the 'smart city' is used as shorthand.

A study conducted by the Centre of Regional Science of Vienna University of Technology, by the Research Institute for Housing, Urban and Mobility Studies (OTB) of Delft University of Technology, and by the Department of Geography of the University of Ljubljana in 2007 contains a catalogue of criteria for describing a smart city, divided into six categories as the basis for an empirically based ranking of 70 medium-sized European cities. This study cites the categories Smart Economy, Smart People, Smart Governance, Smart Mobility, Smart Environment, and Smart Living – categories which in turn are differentiated into 33 individual factors. As the authors summarise: "A Smart City is a city well performing in a forward-looking way in these six characteristics, built on the 'smart' combination of endowments and activities of self-decisive, independent and aware citizens".[3]

I can't address the individual results here, but instead I'd like to warmly welcome the former mayor of Eindhoven, Mr. Rob van Gijzel, and also mention that even back then Eindhoven was in the top group for five of the categories. The five German cities included in the study – none of which were in Baden-Württemberg – all came in the middle of the field.

We see a varying prioritisation of 'smarter goals' in urban planning, which are usually also used in advertising for image cultivation. In line with this, we see different individual areas being emphasised and/or sometimes also being used as labels. The sustainable city, the digitised city, or – something increasingly being promoted as a new task for municipal policies – the resilient city. So we need cities that can find robust and adaptable solutions to the diverse and simultaneous demands and effects resulting from processes of transformation. Digital resilience and security is currently a much-discussed issue, and for good reason.

As part of the science year on the theme 'Future City' proclaimed by the Federal Ministry of Education and Research (BMBF) in 2015, a guideline was presented for promoting measures for a 'Smart Service City: Service Innovations for the City of Tomorrow'. The tender text refers to intelligent cities – or 'Smart Cities' placed between quotation marks and with an exclamation mark – while later in the text the goal of transforming today's cities into smart cities is directly addressed.[4] The idea is that projects for promoting joint coproduction of services and their use should contribute to the strategic priority, namely to support the generation of new social innovations.

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[1] Christoph Laimer: Smart Cities – Zurück in die Zukunft, in: dérive. Zeitschrift für Stadtforschung, Nr. 56, 2014; http://www.derive.at/index.php?p_case=2&id_cont=1253&issue_No=56 [02.03.2018].
[2] Roland Trettl: Smart Food intelligent essen, Munich 2011.
[3] Smart Cities. Ranking of European Medium-Sized Cities; http://www.smart-cities.eu/download/smart_cities_final_report.pdf [02.03.2018].
[4] Federal Ministry of Education and Research: Announcement of 6 May 2015; https://www.bmbf.de/foerderungen/bekanntmachung.php?B=1047 [02.03.2018].

We could cite the examples of many similar goal-oriented research projects. But the term remains a little fuzzy, and resolving this issue is not only an aim for academic research. The fuzziness is due to the fact that we now have a 'suitcase term': each person packs a different content into the suitcase – with a range of motives, too. But in the end we have to talk chiefly about the contents of the suitcase and also about who determines the contents, their use, and their ownership issues. We will be getting important impulses on this subject this evening, too.

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The first Karlsruhe Dialogues took place in 1997, devoted to the theme 'City Perspectives'. In his opening speech, Professor Hermann Glaser said: "One can almost describe the term 'processual city' as a pleonasm: because a 'stationary city', a city without 'process', 'flow', 'story', 'development' is a contradiction in itself. The city as a concentration of life and work (...) is either unavoidably or deliberately 'in motion'".[5]

In our highly technologised, digital age this period of time seems like half an eternity. Now with the 22nd Karlsruhe Dialogues we want to take a new look at the city perspectives: What is an intelligent city? What processual developments are involved in an (artificial) intelligent city? Do we have sound, future-oriented concepts that will help us, in the sense of an 'anticipatory rationality', to reflect on what we want, but also to discuss what we certainly don't want, insofar as this has already become clear at all? City perspectives. Where will we stand in 2040 – that is, in another 22 years from now?

Observing that entire societies, and with them their cities, are experiencing radical processes of transformation, we also have to ask who will steer these processes, ask about the huge opportunities involved in this, but also about the considerable risks which have been discussed by respected academics but to date have received little public attention. Prominent critics in this field include Anthony Townsend with his 2013 polemic *Smart Cities. Big Data, Civic Hackers, and the Quest for a New Utopia*[6], the writer and urbanist Adam Greenfield, the sociologist Richard Sennett, and the architect Rem Koolhaas, who is hardly unknown here in Karlsruhe.

To state things quite clearly: there are no simple answers, but there is certainly a responsibility to point out possible or even just supposed risks. Scientifically supported insights gained through basic research, practical experience, and applied research are crucial here, as is the participation by urban civil society in the formulation and conceptualisation of concrete goals for shaping their, our city.

ZAK regards itself here as an impetus-provider and as an intermediary, and we see this as an integral part of our Public Science remit. Our experts from the scientific realm and a former mayor will illuminate for us the fascinating development possibilities of the new smart cities and confront us with critical fundamental questions. And we will all seek answers to the question: What does an intelligent city involve? Now let me briefly sketch the most frequently cited arguments.

I'll summarise a few of the advantages of the smart city often cited in the discourse. The opportunities provided by the multi-layered possibilities and offers, which can be subsumed as 'smart', are contained in the general goal of achieving an improvement in urban quality of life: more efficient services and infrastructures, environmentally friendly mobility, greater security, higher productivity, and open data are a few of the keywords. Due to the constantly growing infrastructure of sensors and individualised digital devices which we use on a daily basis, we as citizens are contributing intentionally – and unintentionally – to a better use of resources and increase in efficiency. Many infrastructures and services can be extended, optimised, and developed in customer friendly ways.

[5] Hermann Glaser: Die prozessuale Stadt. Städtische Arbeits- und Lebenswelt, in: Problemkreise der Angewandten Kulturwissenschaft. Aphorismen zu Stadtansichten, Year 1, H. 2, 1997, pp. 9-20.
[6] Anthony Townsend: Smart Cities. Big Data, Civic Hackers, and the Quest for a New Utopia, New York 2013.

Smart technologies enable decentral working, much better communication, and an active consultation/involvement of experts independently of time and location – to give one example, the health sector is breaking radical new ground here. It seems certain we can look forward to new forms of cooperation in the field of research and development, faster support for a realisation of innovations, intelligent concepts for the local and, more pressingly, global conservation of resources, sophisticated optimisation processes, and much more, which today we can only imagine in vague terms.

New possibilities for participation and coproduction are arising thanks to the rapid creation and expansion of digital platforms. The boundaries between experts and non-experts are disappearing behind innovative forms and formats of coproduction and co-creativity.

So it's all fine, right? Leo Hollis will shortly be presenting us a different and highly differentiated picture, with many unanswered and intriguing questions. And after all, the expansion of a sharing economy in the networked smart city is promoted by smartphones. This evening, we will be greeting Professor Trebor Scholz from the USA, who tomorrow will take a look at the sharing economy that is not exclusively positive.

On the risk side of the smart city discourse, the participation possibilities for active, independent citizens can be viewed critically, strongly relativised, or even seen as a great danger. We'll be asking whether participation in the voluntary and generous provision of data will drop. There can be no doubt, however, that sharing data can be very useful when it comes to optimising urban services.

Commercial providers also certainly have few objections when we act as 'data collectors' for their benefit. As consumers we are already often doing this much too willingly. The question remains as to whether we actually discover at all which role we are playing in which situation, which data is being used in which way and where, and how things stand in terms of 'ownership': to whom does our data belong? Leo Hollis will be discussing this today.

We not only live in a closely networked IT world with its many advantages and its as-yet-unclear risks, but also increasingly in an AI world, a world of artificial intelligence.

This reminds me of one of the core controversies of the 2011 Karlsruhe Dialogues entitled 'Caught in the Net? Global Google Cultures'. At that time, we experienced a sharp exchange between Daniel Domscheit-Berg – the co-founder of WikiLeaks, together with Julian Assange – and Andrew Keen, a fundamental critic of the Internet. This revolved around the warning by Geert Lovink who pointed to the negative effect of search engines, which among other things culminates in the over-valuation of popularity and 'likes' while the validation of contents in accordance with scientific and journalistic standards often falls by the wayside. The discussion even extended to the proposition that physiological changes to the brain could come about.

Speaking very generally, we hear frequent warnings not only about the cited dangers and risks, but also often about "the possible collateral damage of an overly tech-fixated urbanism".[7] Here we should ask where justified concern ends and where technology phobia and scare-mongering begin. Worries about the increasing possibilities of total surveillance, about the dominance of commercially prompted interests, are joined by the fear that smart city concepts will make people mentally dull and don't leave room for divergent public spaces that enable creativity and unplannability, although it is precisely these that embody the innovative and valuable freedom of cities.

It would probably be a little too polemical to posit that the intelligence and capacity for critical reflection that we are losing through the increasing and ever more excessive use of IT, apps, Siri, and co.

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[7] Johannes Novy: Smart City-Hype: Die Verdummung der Städte?; http://www.carta.info/77252/smart-city-hype-die-verdummung-der-staedte [02.03.2018].

can be replaced by the further development of artificial intelligence. The (artificial) intelligent city would thus, so to speak, function as a compensatory future goal. But it seems we have to consider the oft-stated view that cities can only be as intelligent as their residents.

In his sensational book *Life 3.0. Being Human in the Age of Artificial Intelligence*, which has just been translated into German, the Swedish-American MIT cosmologist and science philosopher Max Tegmark takes a nuanced look at the inescapable development of the AI worlds. He is not an opponent of artificial intelligence, but he warns of and criticises the fact that far too few scientists address the elephant in the room. What happens if or when artificial intelligence develops into a super-intelligence? Or in Max Tegmark's words: "What will happen once machines outsmart us at all tasks?"[8] This is a question to be dealt with in further Public Science events.

Acknowledgements

Dear audience, ladies and gentlemen, there are many here whom I must thank this evening. Long-standing sponsors and cooperation partners have, with their complementary contributions, facilitated the Karlsruhe Dialogues at the basic level. Representing all these parties, I would like to thank Mayor Dr. Albert Käuflein and Dr. Susanne Asche, head of the Cultural Department, for their support over the years; I thank Clas Meyer of the Science Office of the City of Karlsruhe for the support and the excellent collaboration in putting together the film elements of this opening evening. I thank Thomas Schmid of ARTE Germany and I thank Filmtheater Schauburg and the Zentrum für Kunst und Medien (ZKM), where we were able to present the ARTE film nights on an alternating basis. Representing the ZKM I thank Professor Christiane Riedel. This year, the international forum on Sunday morning is being held with, among others, the former French minister and president of the Anna Lindh Foundation, Madame Élisabeth Guigou. The afternoon reading and the following theatre performance with audience discussion, which as always will ensure that at the end of a dialogue-rich weekend we'll have discovered many new questions, will be taking place in the Baden State Theatre Karlsruhe, which has been supporting us for 22 years. Representing the staff of the theatre, my great thanks go to the acting General Director Jan Linders.

For the third time our regional newspaper, the BNN – Badische Neueste Nachrichten, has devoted a special supplement to the Karlsruhe Dialogues. I thank Udo Kamilli and this year in particular also Holger Keller for the wonderful editorial support. The supplement is much more than advertising for our event. In the spirit of Public Science it presents a well-founded account of the various positions on each theme and thus helps to prepare our mutual exchange.

My very special thanks go to our wonderful team, who in various line-ups have supported me over the years. This year, I would once again like to single out Christine Melcher, whom I thank representatively for the entire outstanding team.

And now, to conclude, I would very much like to thank the L-Bank – and this also with just a little melancholy. 22 years ago the former Chairman of the Landeskreditbank Baden-Württemberg, Hans Dietmar Sauer, first made the Karlsruhe Dialogues possible. In the audience I see several people who surely remember those early days. Back then in the Garden Hall of Karlsruhe Palace, we were really happy when the audience didn't fall below our 'waterline' of 50.[9] When we were once more

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[8] Max Tegmark: Can Humanity Survive in the Age of AI?; http://www.sciencefocus.com/article/future/life-30-max-tegmark-interview-ai [02.03.2018].

[9] We have recorded the magic of the early years, together with the comprehensive history of the Karlsruhe Dialogues, in our richly illustrated jubilee publication, see: Caroline Y. Robertson-von Trotha (ed.)/Marco Ianniello: Dialogue in Progress. Wissenschaft. Kultur. Gesellschaft. Stimmen aus 20 Karlsruher Gesprächen, Karlsruhe 2017.

seeking a main sponsor, the L-Bank was once again willing to give us a bridging loan. Representing the bank, I greet Cordula Bräuninger and Dr. Benjamin Quinten and say: thank you!

In almost exactly a year from now I will be 'IR', as we say in German. That means 'in retirement', but also 'in reach'. In view of the exceptional privilege and total freedom of being able to organise the Karlsruhe Dialogues for 22 years – a third of my life – and for the wonderful support and continuing interest of, if I may be permitted to say, 'my' audiences – I would like to say a great 'merci'! This is not a farewell; we still have a packed shared year ahead of us. I would be very happy if the Karlsruhe Dialogues were to continue. No one can say at the moment whether this will be possible, but now we have the highly exciting Karlsruhe Dialogues right ahead of us, on a theme that affects us all. So once more my sincerest thanks!