

GCRI INTERVIEW

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1. Could you please describe the main characteristics of a "Smart City"?

A "smart city" manages to make the best use of information and communication technologies for enhancing the livability, sustainability, and efficiency of urban systems. There are several domains where cities can opt to become "smart": such as in offering online services to their citizens, facilitating open data standards and encouraging ICT start-ups, implementing smart traffic management across different modes of transportation, connecting decentralized production systems of renewable energy into an intelligent demand-side energy management system, or using the potential of mobile phone data and urban sensors for big data analyses. What all "smart cities" have in common is the need for highly specialized IT companies and collaboration with scientists for designing intelligent systems.

2. What are the primary research areas of the "Morgenstadt - City Insights" project?

The Fraunhofer Innovation Network "Morgenstadt: City Insights" focused on the interplay of technologies, business models, and governance approaches for sustainable urban development – development that would help reduce energy and resource consumption while also enhancing the livability of a city. We defined eight core research sectors: energy, mobility, buildings, production and logistics, urban water infrastructure, security, ICT, and governance. The interesting innovations can be found where the sectors merge and where sustainable technologies are shaped around human behavior in cities. One great example of this is the future car-sharing systems based on electric vehicles and smartphone integration.

3. Infrastructure, economic growth, and quality of life are just a few of the challenges that 21st century global cities face. In which areas do you think smart cities will have the greatest impact and why?

Cities increasingly compete for bright people and clean investments. At the same time, technology enables us to work from wherever we are located. Therefore, smart cities must not only start to invest in soft factors like green spaces, clean air, and good education, but also in aspects that make our lives easier, such as free Wi-Fi throughout the city. Livability is intrinsically linked to sustainability and resilience. A smart city will have an impact on all three of these areas. In so doing, it will

attract a highly educated workforce, reduce its environmental footprint, and prepare against external shocks, such as floods, storms, or terrorist attacks.

4. How does Germany compare with other countries with respect to smart cities and urban development?

Subsidiarity grants German cities a high level of autonomy in making their own decisions without needing to consult at the state or national level. This has led to a very heterogeneous cityscape. Cities like Freiburg, Tübingen, and Stuttgart have implemented some of the most sustainable solutions in terms of district development, energy use, or innovative buildings. However, the "Smartization" of cities is just beginning. We still have not found the solution for effectively dealing with privacy issues in data use. This prevents many stakeholders from investing in smart city applications. In my opinion, Berlin is the most interesting spot in Germany so far when it comes to open data projects in cities.

5. What is your vision for the city of the future?

The successful city of tomorrow manages to include its citizens in decision-making processes without inflating administrative practices. Regulatory frameworks will thereby increasingly resemble economic incentive structures that reward sustainable and environmentally friendly behavior. In my vision, the city of the future will have found ways of valuing its natural and intangible assets in the same ways it currently values money. This will allow for better strategic decisions on which technologies to use and where to channel investments in order to simultaneously increase social, environmental, and economic value in the city.