

Smart Cities

Executive Summary



Success factors, framework conditions
and challenges for business models
in the city of the future

Noerr

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More and more German cities and municipalities are looking to take advantage of the opportunities offered by digitalisation and to develop into 'smart cities', and this trend has been further boosted by the coronavirus pandemic that we have been experiencing since March 2020. This is the outcome of a scientific study commissioned by the law firm Noerr, for which 120 decision-makers in companies and city administrations were interviewed.

95% of those interviewed consider connecting the areas of energy, mobility, urban district development and administration an essential requirement for a smart city. A majority of the companies surveyed see digitalisation as an opportunity to create connected, sustainable and resource-saving business models through the exchange of mobile data.

The issue of smart cities plays an important role, either today or in the future, for almost **80%** of the companies surveyed. **35%** of those interviewed state that they have already been working on smart city solutions. Of the **65%** that are currently not doing so, more than two thirds (**68%**) expect this to change in the next five years.

"This study is the first of its kind to examine the extent to which smart city concepts already have economic significance for companies today, and what technical, economic and legal obstacles need to be overcome to further develop such concepts," says Holger Schmitz, head of Noerr's Regulatory & Governmental Affairs practice. "We are very pleased that this empirical study now provides an important contribution to systematically developing innovative business models on a scientific basis."

Beyond questions relating to data protection and data sovereignty, a majority of survey participants considered legal aspects to be a major challenge in the development of smart city concepts. Issues include the storage of electricity, or the provision of digital services of public interest. Other legal challenges identified by respondents are public tenders and award procedures.

"It is true that existing legislation takes little account of innovative business models which, due to their networked character, tend to touch on several areas of law,"

Florian Koch, Professor of Real Estate Management, Urban Development and Smart Cities at Berlin University of Applied Sciences.

Professor Koch conducted the study on behalf of Noerr with the assistance of Benjamin Brunnow.

Another result of the study is that smart city concepts are primarily driven by companies with more than 500 employees. As they view the issue as strategically relevant, many large companies have already adapted their management structures, established subsidiaries and acquired know-how or technological solutions by taking over start-ups or cooperating with know-how leaders. In contrast, smaller companies, which lack the required capacities or are expecting reduced sales, are currently relying almost exclusively on cooperating with smart city service providers. Irrespective of the size of the company, there is broad consensus among study participants that the aspects of modernisation, optimisation of traffic flows, increasing energy efficiency as well as an overall urban development concept are characteristic of a smart city.

More than **80%** of those interviewed see great potential in the development of smart cities for companies and local authorities in terms of efficiency, convenience, information, communication and sustainability, with security (58%) and cost of living (35%) being mentioned less frequently. The study shows that energy, mobility and infrastructure are the sectors that are highly relevant or relevant (>80%) for smart cities. The study participants also see potential for e-government (60%) and real estate (50%).

The opportunities that smart cities offer companies lie in a horizontal connection of vertical fields of action, for example by linking energy, mobility and urban district development. Such connections are crucial for cities to develop into smart cities.

Only a holistic approach to combining the individual visions and objectives will make it possible to rethink the system of a city in digital terms, in order to significantly improve the quality of life of its inhabitants and save resources. In the end, a smart city is more than the sum of its individual parts.

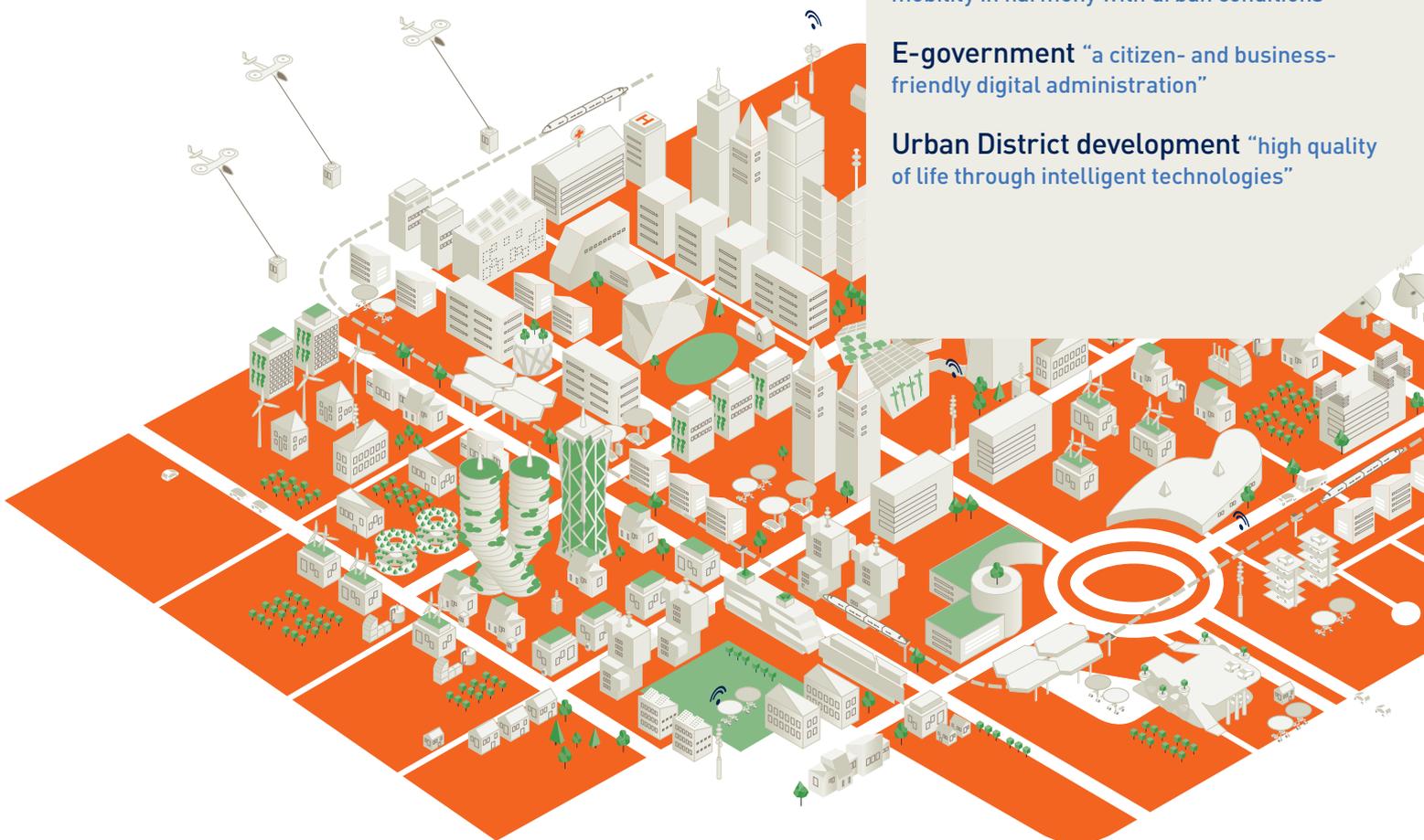
Visions and objectives

Smart energy “intelligent secure supply of renewable energies for cities”

Smart mobility “intelligent and sustainable mobility in harmony with urban conditions”

E-government “a citizen- and business-friendly digital administration”

Urban District development “high quality of life through intelligent technologies”



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