# Technology Outlook 2021

English Version

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# Smart cities

Increased quality of life and optimised resource efficiency

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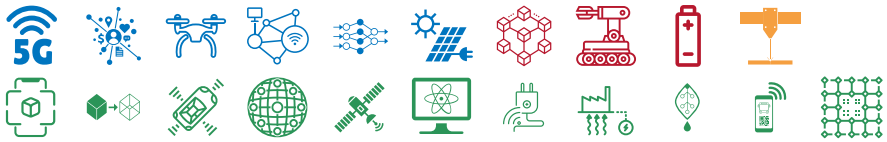

**The concept of "smart city" focuses on using social and technological innovations to increase life quality and resource efficiency in cities and urban living environments. The definition and goals of a smart city have changed significantly in the past twenty years. Today's efforts mostly aim at conceiving improvements based on the digital transformation of the urban environment that benefit the citizens, the environment, the corporate world and the public administration.**

## The situation today

Smart cities also use various technologies that are based on communication networks and on the real-time availability of data from public space, coupled with the processing of large data volumes. For this to happen, it is necessary to link public and private data sources, which currently are separate. The hope is to be able to make smart infrastructures more efficient and transparent, enabling them to support sustainability and the optimised use of resources and therefore to improve life quality. Examples of such applications include improved traffic routing, the coordination between departments of the public administration etc. The challenges in the development of smart city applications lie in the complexity of such systems and in ensuring data protection and data ownership. For smart city projects to succeed, an informed cooperation between the public, the government and the economy is needed.

Worldwide there are many smart city initiatives, from pilot projects and lighthouse projects to urban transformation processes. Considering the variety of possible targets, no city however has yet reached the full potential of these initiatives. In the rankings that include Swiss cities, the latter belong to the leading group.

More and more Swiss cities have a smart city strategy, which often inspires neighbouring areas to define their own smart city strategy or at least a digitalisation strategy. Of the 84 cities that participated in the *Swiss Smart City Survey 2020*, about 43% are actively working on a smart city strategy. All participating large cities (over 100.000 inhabitants) are evolving into a smart city, while only just under a third of the smaller cities and municipalities (under 20.000 inhabitants) actively address the topic. Interest in the subject is also increasing among smaller and medium-sized cities, despite the challenge primarily due to their limited human and financial resources.

Frequent projects concern e-government applications or efficiency and sustainability goals. The development of a smart city revolves around the axes Environment (46.4%), Living (43.7%) and People (42.3%). All efforts generally aim at making the city a more attractive place for citizens and businesses to live and work in.

## Future prospects

The main challenge is to define the meaning of "smart city" for the population, for local businesses and for the municipal administration. Based on this definition, one can then determine how the benefits can be attained while ensuring the acceptance of all parties involved.

In Switzerland, given that both the state and the economy are interested in smart city applications, much activity is seen in this area. But the path ahead is still very long. In the medium term we can expect to encounter various pilot projects and trials, because many cities and regions are seeking suitable solutions. Smart cities are likelier to result from partnerships than from a top-down implementation.

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