



International Federation of Consulting Engineers
The Global Voice of Consulting Engineers

/Executive summary and recommendations

/SOW2021



Over the past century there has been a general move across the globe from rural to urban areas. This is a trend which is likely to continue. These urban areas are not only containing and housing more individuals and activity, but in the case of a new breed of mega-cities, their economies rival that of countries.

As mega-cities evolve, they will present their own infrastructure challenges, but these challenges will also be exacerbated by the effects of climate change. This will present engineers with interesting choices to ensure that infrastructure is resilient and sustainable and also improves citizens' quality of life.

Mega-cities, however, are not the only part of the story. There are also increasingly a number of smart cities developing but are these the future? With the Internet Of Things, cloud computing and mobile working, as has been discovered during the Covid-19 outbreak, is the smart city now a thing of the past?

This does not, however, mean a smart city is a mega-city and vice versa. In fact, the scale of mega-cities can make the implementation of smart solutions more challenging, but if achieved they also hold the greatest potential for improvement.

A smart city can therefore be considered a region, multiplicity etc. where the use of information technology the internet and smart data allow for smart decisions or monitoring based on the information collected. This should in theory, help cities to become more efficient and sustainable.

Why should the concept of a smart city, however, be limited simply to the historical areas we would consider cities. The development of cloud based systems and improvements in internet access mean technologies can be extended to communities much further afield.

These sustainable communities would have similar aims to use technology and data to ensure that maintenance and operations are efficient and use resources to the best of their ability. These communities and smart cities could be interconnected, use big data and machine learning in an attempt to take a much broader approach to services such as water provision, transport etc. and ultimately meeting the SDGs.

In this State of the World 2020-2021 series we explore the evolving trends of these two phenomena to see how the most sustainable and holistic approach can be taken moving forward.

This report asks the whole sector to consider recommendations within the following categories:

Communities are essential. From the early days of their development for defence and policing through to more current recognition of their importance for human health physically, mentally, and socially. It is therefore important that actions going forward involve and are based on communities' needs and engagement with sustainability.

Connections are important not only within communities but also between them. Traditionally it has been simple to consider these as roads and railways, but increasingly these connections are online. There are plenty of examples of towns, cities etc that have gone into social decline and Covid has emphasised what isolation can do to communities. Therefore, these connections are more important than ever.

Commitment is essential. Without such ambition and drive and an understanding of not only sustainability but the environment and social needs, we will struggle to achieve not only what is needed but what is increasingly required to meet the SDGs.



Recommendation 1 – Spatial planning and spheres of influence as well as the effect of Covid can not be ignored. Within cities, sustainable communities need to become the norm and there needs to be a shift away from simply considering sustainable cities.

Recommendation 2 – People matter. The infrastructure sector needs to do more to engage with its customers' wants and needs, but also educate individuals more widely on what meeting the net zero agenda actually means for day-to-day life.





Recommendation 3 – Standards on building and infrastructure sustainability need to be harmonised across the globe. FIDIC would encourage and is happy to facilitate cooperation on this between the various bodies and industry representative to ensure this takes place.



Recommendation 4 – There needs to be greater consideration for the connections between sustainable communities it is no longer and is not effective to rely on hubs and spokes if we are to meet the SDGs and net zero challenges.



Recommendation 5 – FIDIC is committing to develop a Climate Charter. This will be released soon and FIDIC encourage member associations, companies and individuals to sign up and share it going forward. This document will develop over time and help to set a global trajectory for the consultancy and engineering sector.

