

# The INFRASTRUCTORS

## Inside the Sandbox of Sustainable Urban Development *the executive summary*

By 2050, 68% of the world's population will live in cities. The vulnerability of these cities to heatwaves, flooding and pollution is also increasing, alongside their production of greenhouse gas emissions – **75% of all greenhouse gas emissions derive from cities.**



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Authorities in charge of driving sustainable urban transformation may struggle with siloed organizations, disparate or incomplete data sets, regulatory hurdles, and budgetary restrictions. The solution comes, in part, from virtual twins.

For example, by building **virtual twins informed by meteorological data**, cities can better identify hazardous heat islands, and create targeted solutions to limit their impact, such as revegetation, building insulation, and the optimization of road-surface materials.

Virtual twins offer a powerful solution for harmonizing stakeholder groups. By simulating different scenarios, they enable effective budget and resource allocation to projects with the greatest potential for lasting impact – also facilitating clear communication of these decisions to both public and private stakeholders.



**1%**  
of our planet  
is covered  
with cities



**55%**  
of the global  
population  
lives in cities



**78%**  
of the world's  
energy is consumed  
by cities



**70%**  
of cities are already  
dealing with the  
effects of climate  
change and all are  
at risk



**2°**  
is the expected  
ambient temperature  
raise in the most  
populated cities  
by 2050



**800**  
million people  
will be exposed  
to rising seas  
and storms

Source: Cities Alliance (hosted by UNOPS)

By partnering with for example the Southern California Institute of Architecture, Dassault Systèmes is helping **ensure the next generation of urban planners get hands-on experience** with solutions like virtual twins, which will be vital in building the sustainable cities of tomorrow.



Want to find out more?

[Meet the Infrastructors](#)

