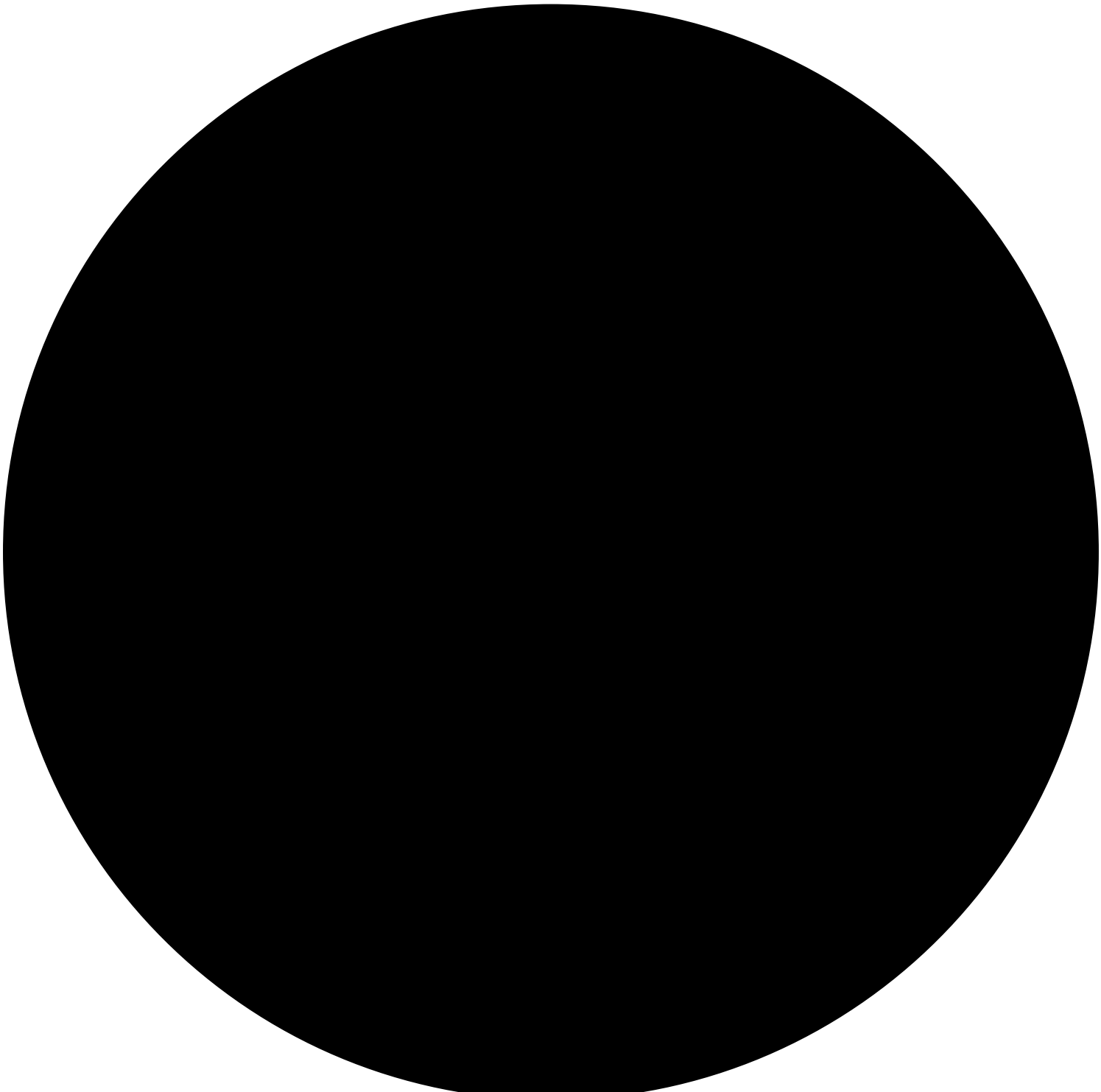


SINGAPORE'S DIGITAL TWIN

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The concept of digital twin is booming. These are virtual simulations of systems that exist physically, in order to experience all kinds of scenarios, see what works and what doesn't, anticipate problems, and be able to prepare accordingly. It is often linked to the creation of virtual twins of manufacturing plants, in order to simulate Industry 4.0 solutions, but it is also possible to duplicate entire cities. The city-state of Singapore has become a laboratory for this idea, creating [a virtual replica of itself](#), in order to have a more complete knowledge of its systems, better plan its

development projects, and measure its impact on the population, its buildings, its means of transport, its green areas, etc.

Through the development of the Internet of Things, Big Data and Virtual Reality, [the virtual 3D replica maps all the information](#) coming from the sensors that are being deployed in the city — information both on the characteristics of its infrastructure, as well as on the tastes, preferences, choices and habits of the inhabitants — . With this, the tool provides urban planners and researchers with a much greater understanding of how the city really works.

Planners, developers and urbanists can detect existing problems at exact points and moments in their infrastructure to solve them, and they can test innovative solutions on virtual reality, without taking any risk. By accessing a 3D visualization of the city, they have a much closer understanding of reality for issues such as accessibility problems at street level, the potential of rooftops for the installation of solar panels, or waste collection. In addition, the provision of a digital twin may be crucial, in the future, for the deployment of artificial intelligence systems such as autonomous vehicles.

The Asian city-state, with six million inhabitants, has allocated 73 million dollars to the construction project of its virtual replica.

There are no comments yet.