Singapore faces many challenges and our researchers are attempting to address some of them by developing models and through simulation. We decided to work on 3D models – the starting point for the Virtual Singapore project – and when we found about the 3DEXPERIENCE platform, we knew it would provide us with an opportunity to build a virtual Singapore to work on and test out scenarios. There is a huge influx of data in the world today, which will be increasingly generated dynamically in real time, via connected devices and the Internet of Things. We are running an experiment that draws on data from the urban environment, while also giving our students a firmer grasp of data about themselves. Our partnership with Dassault Systèmes has been honest and open, both in terms of our relationship with the R&D team and management as a whole. Our goals are perfectly aligned.”

The promise of a virtual Singapore

Insight from:

George Loh,
Director Programmes, Singapore National Research Foundation

Dassault Systèmes’ 3DEXPERIENCE solution is providing the Virtual Singapore platform with a digital referential of the city. Sustainable, connected and participative – the city truly is becoming smart.
The National Science Experiment (NSE) has two main goals: to introduce students to the practical applications of science, technology, engineering, and mathematics, and to gather data on their environment that can be input into Virtual Singapore. Organized by the Singapore National Research Foundation and a number of partners from the academic and scientific world, the program kicked off in 2015 with a pilot project involving 300 young Singaporeans. There were 45,000 participants by the end of 2015, and more than 250,000 students are expected to take part by 2017. The participants are provided with a SENSg, a device capable of gathering multiple types of physical data on the environment. This information is sent to a central server using wireless technology. The students can view data about themselves online, such as number of steps walked, time spent outdoors, travel, and their carbon footprint. Projects like SENSg will help make the use of big data perfectly normal for the participants.

Virtual Singapore uses both data gathered from various public institutions and data collected in real time. The platform serves as a single point of access for content and applications originating from several sources, in multiple formats. The content can be real-time, proprietary, open data, system-based, or from connected objects.

Available parking places in real time.

Calculation of the percentage of light and shade for each building, in relation to the position of the sun.

Weather simulations (winds, currents, etc.)

Display overall travel patterns, and of access to or from a specific location.