

Shenzhen, China:

# Sponge City

Model:  
Public-Private Partnerships

Shenzhen is a leading city in China using the “Sponge City” model to **design and engineer with nature**. Using a multi-faceted approach to bring in the private sector, Shenzhen reached over 46% city-wide coverage in 2022.



## THE CHALLENGE

Shenzhen’s rapid growth led to a **water ecology crisis** and they needed a way to systematically respond. In 2016, the city became part of the second batch of pilot cities for the construction of Sponge Cities, promoted by the State Council, as well as relevant ministries and commissions.

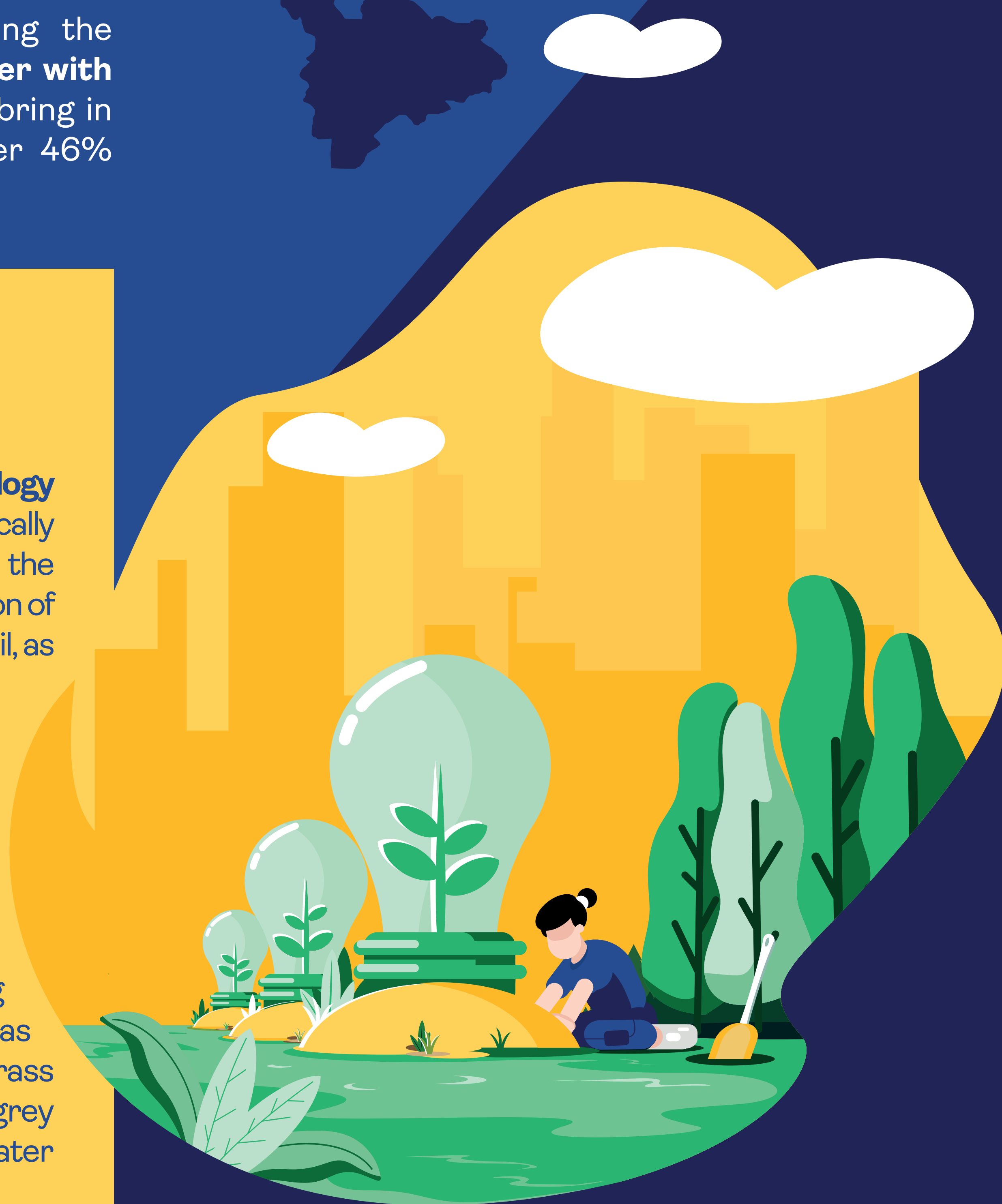


## HOW IT WORKS

A Sponge City is an urban development model that allows for the absorption, storage and slow release of rainwater. Using ecological sponge measures such as permeable pavements, rain gardens and grass ditches, rather than traditional grey engineering methods, facilitate rainwater **purification, accumulation, and reuse**.

Many of the 1,000+ Sponge City projects completed are government-implemented, while others are financed through varying large scale and smaller PPP agreements. Companies are incentivized with subsidies and through split investments where the city covers portions of the projects. The role of city government changed from manager to **supervisor and partner**, supplementing public sector capacities to meet the growing demand for local development.

The city also integrated sponge city requirements into local building standards. For instance, a large business, Tencent, recently completed their global headquarters in Shenzhen and integrated rooftop water collection and permeable ground level tiles.



## LESSONS

Facilitating multiple projects of different sizes can help cities expand a programme’s reach with the private sector. As in Shenzhen, **agreements can be project dependent** rather than one-size-fits all.

PPP models can finance sponge city development for both public projects and private sector developments. But these are strengthened when they form **part of a coherent nature & resilience policy**.