The fastest urban growth happens mostly in the global south, where many countries lack resources to counteract the negative side-effects. We attempt to simplify this complexity of planning, therefore combining three main aspects into our proposal: 1) an indicator-based sustainability assessment with focus on the economic, environmental, social, and governmental dimension, to guarantee a data-oriented basis. 2) the application in spatial environments to study outcomes of interferences in urban areas. 3) the simulation of scenarios and development opportunities to support the decision-making process of planning authorities. We will show our objectives in examples of Hong Kong, Lilongwe and Mexico City.