Through advancements in 3D technology, one is now able to analyze the impact of sunlight on a built-up environment by studying the spatial and temporal extent of shadows. Urban planners, property developers, and interested third parties are seeking additional information sources regarding the manner in which built-up environments are created, maintained, and evolve. The ability to know when and where shadows exist is a precursor to using that information to make better informed decisions.

The Sun Shadow Volume tool, by Esri, provides the ability to generate shadows at a user defined time interval. Further, the results can be broken out in more granular fashion to illustrate the exact location of shadows throughout the course of a single day. This project illustrates where buildings are casting shadows from early morning to mid morning, to midday, to early afternoon, and late afternoon. Each time frame is distinct from the others and will draw the viewer in with the level of detail.