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Digitized Urban Planning for Improved Efficiency and Compliance – A Cambodian Perspective

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Why Digitized Urban Planning ?

Problems with the current urban Planning Process

Time consuming, complex, inflexible, broken

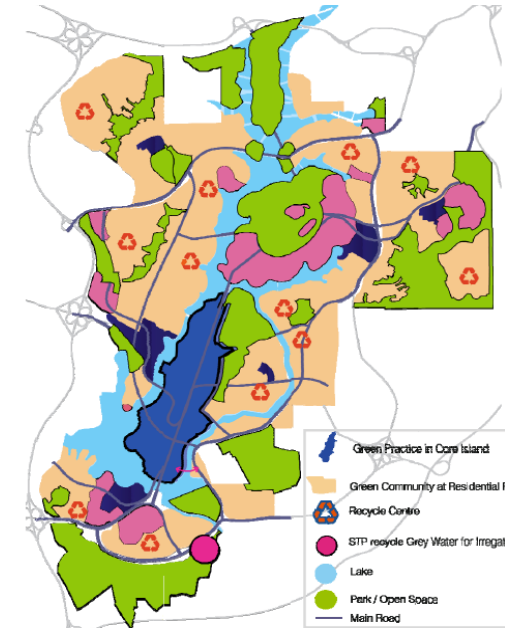
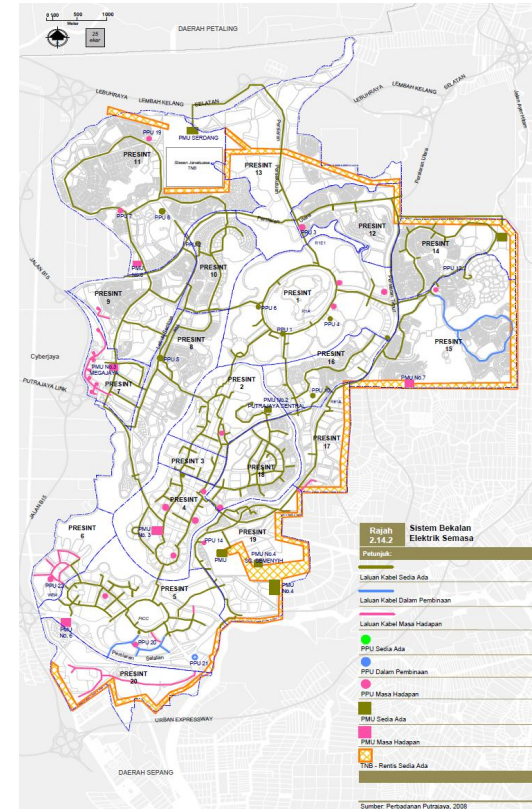
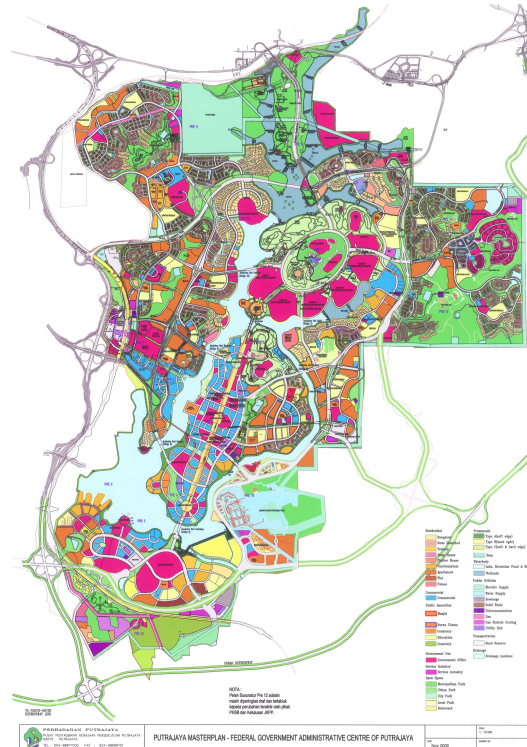
Collection and data analysis

Formulating stakeholder goals and objectives

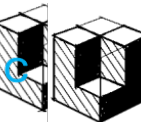
Plan formulations

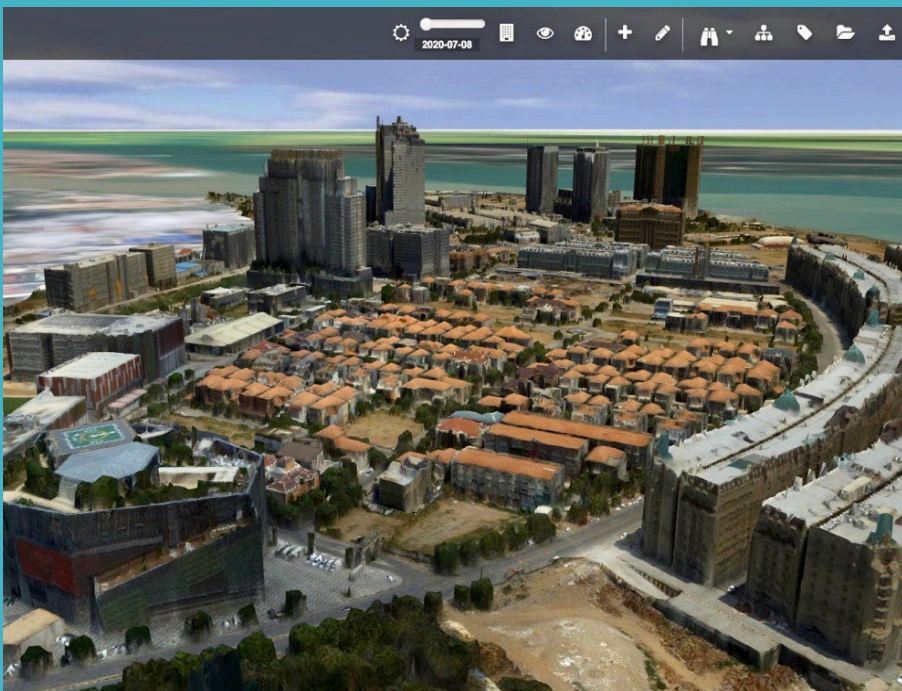
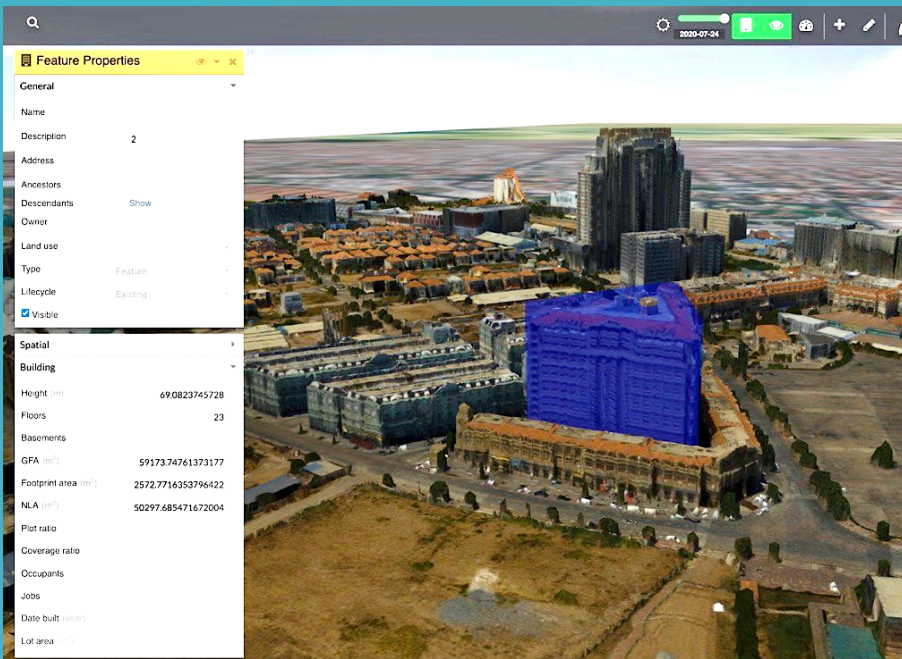
Developing Implementation mechanisms

Evaluate and implement new decisions



Source: Sustainable Putrajaya 2025



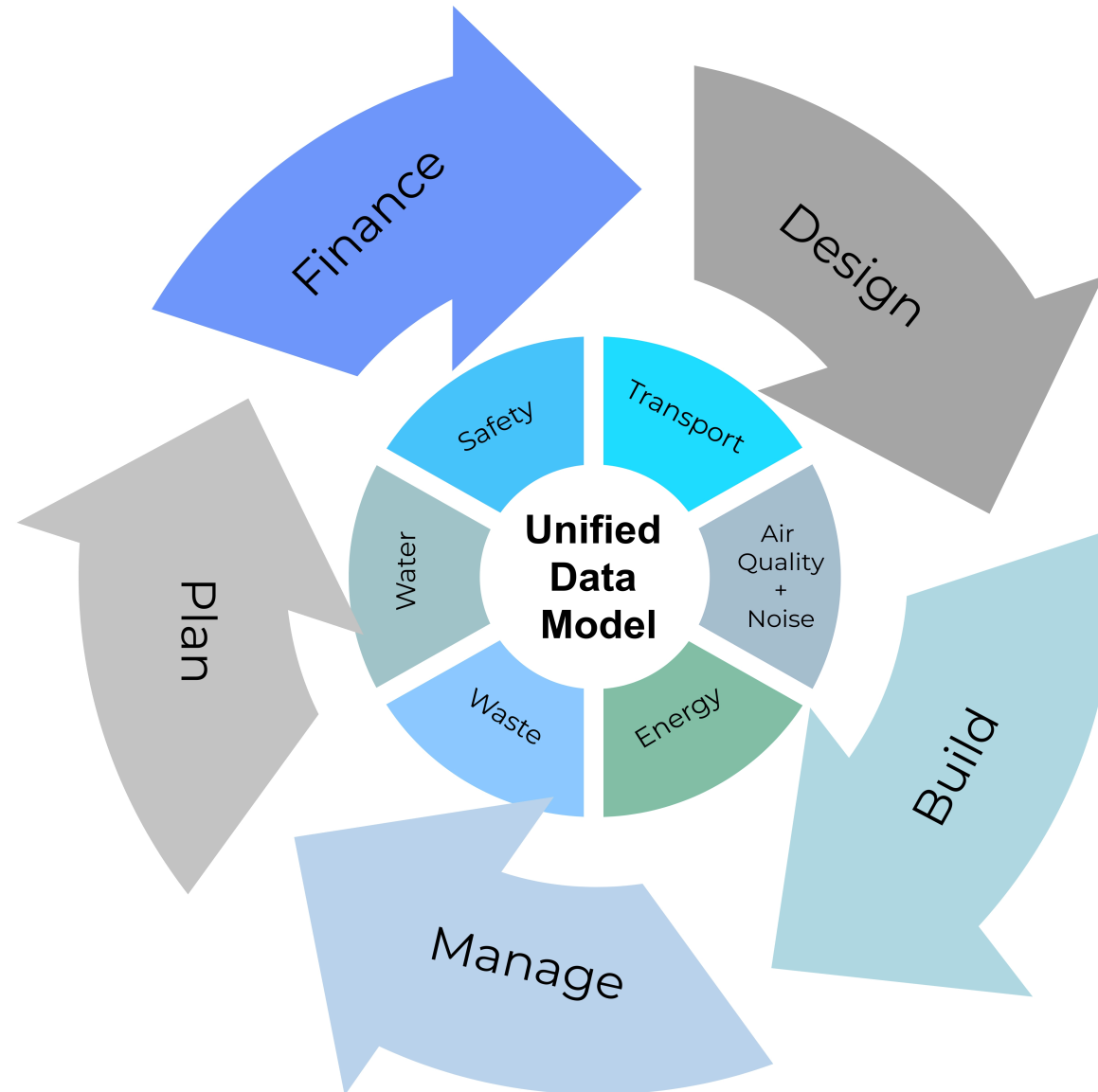


DIGITIZED URBAN PLANNING

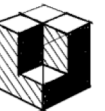
Fast, Integrated, data rich, parametric, compliant, with scenario simulation and measurable impacts, and aids meeting the cities Sustainable Development Goals.

Precinct Information Model (PIM)

Any digitized urban planning system is essentially centered around a unified data model of the city



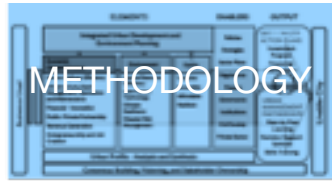
Urbanetic's 'Fabric' data model is a unified semantic data Model of a city - allowing any city to be digitized and analyzed in same ways



Phnom Penh Sustainable City Plan 2018-2030

With ambitious targets and timelines - Urbanetic's recommendation was, to adopt and move to a Digitized Urban Planning future

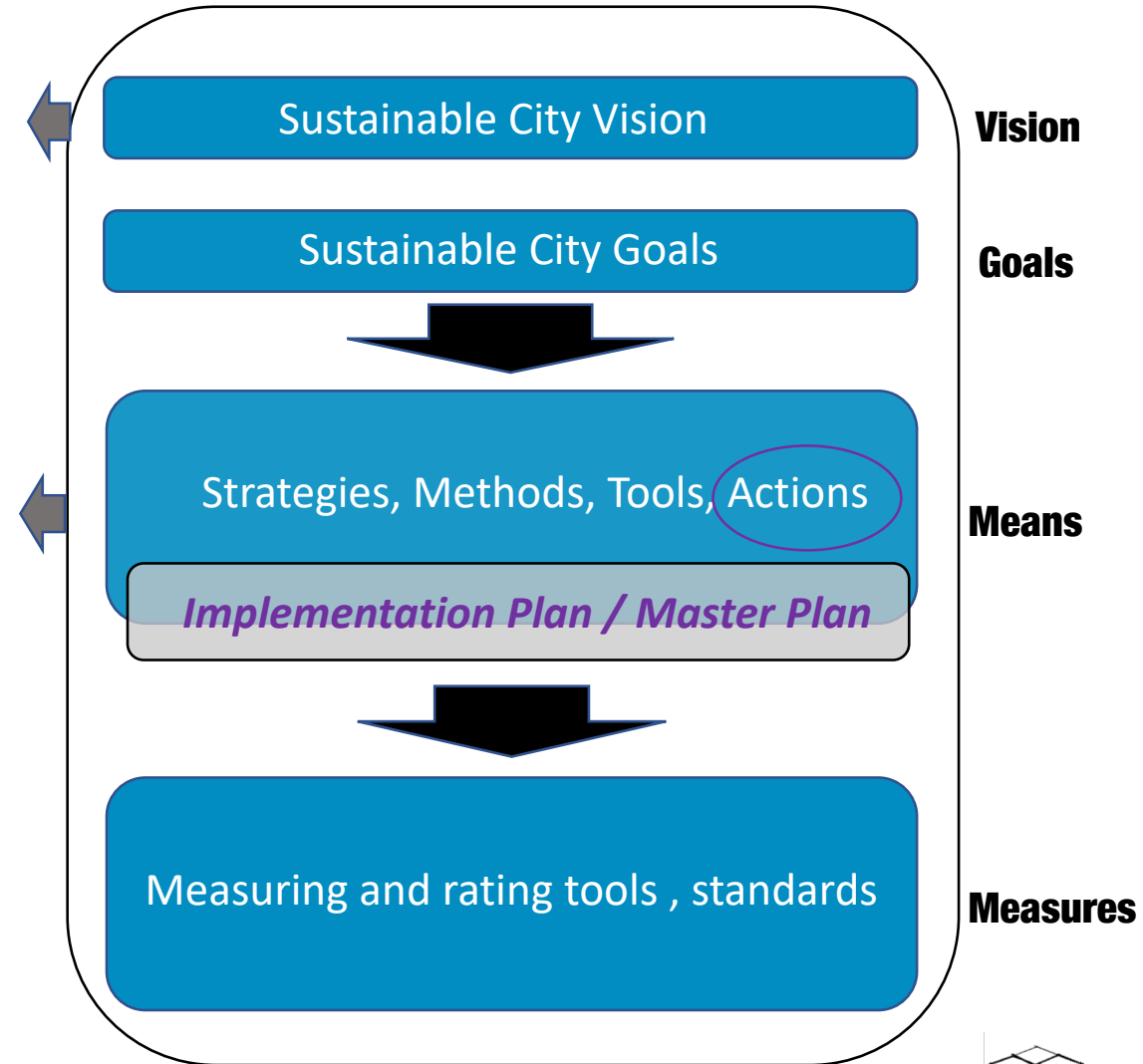
By 2030, Phnom Penh will become a clean, green and competitive city, offering a safe quality lifestyle to its residents.



METHODOLOGY

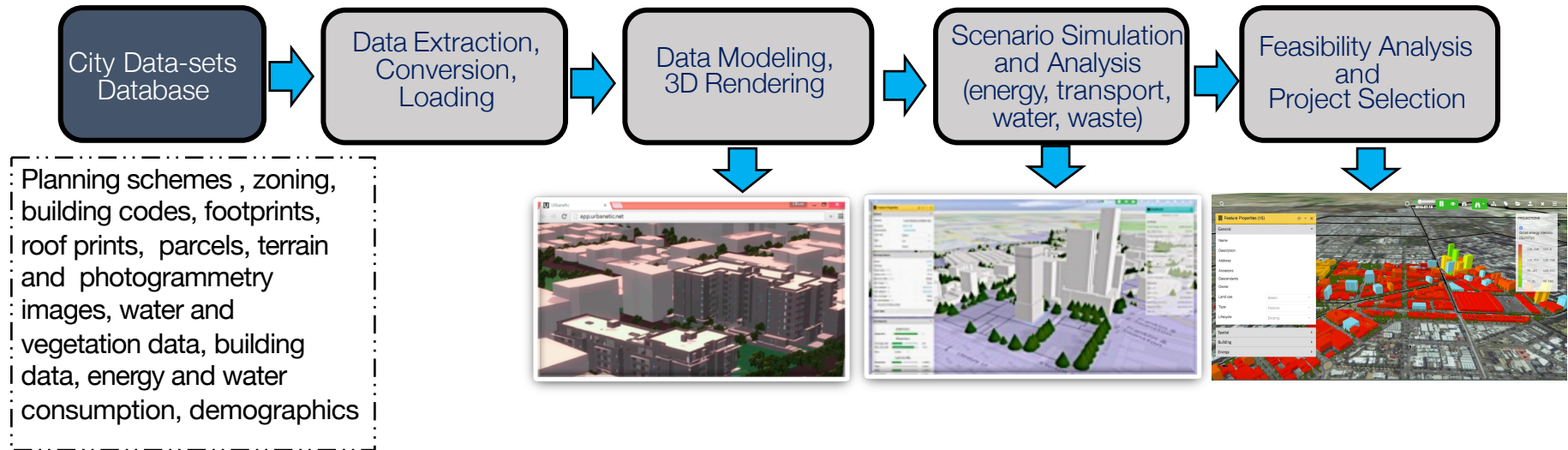
- 48 strategic initiatives
 - 6 Urban Planning

None shared at that time
(November 2019)



But Digitized Urban Planning Needs Big Data

From raw data to 6D* parametric model in a matter of weeks

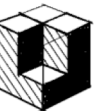


Data from public and private domains

- Data collection and assimilation is a massive task.
- Cost of digitization can run up to tens of millions of US dollars.
- We** needed to produce the most cost-effective solution.

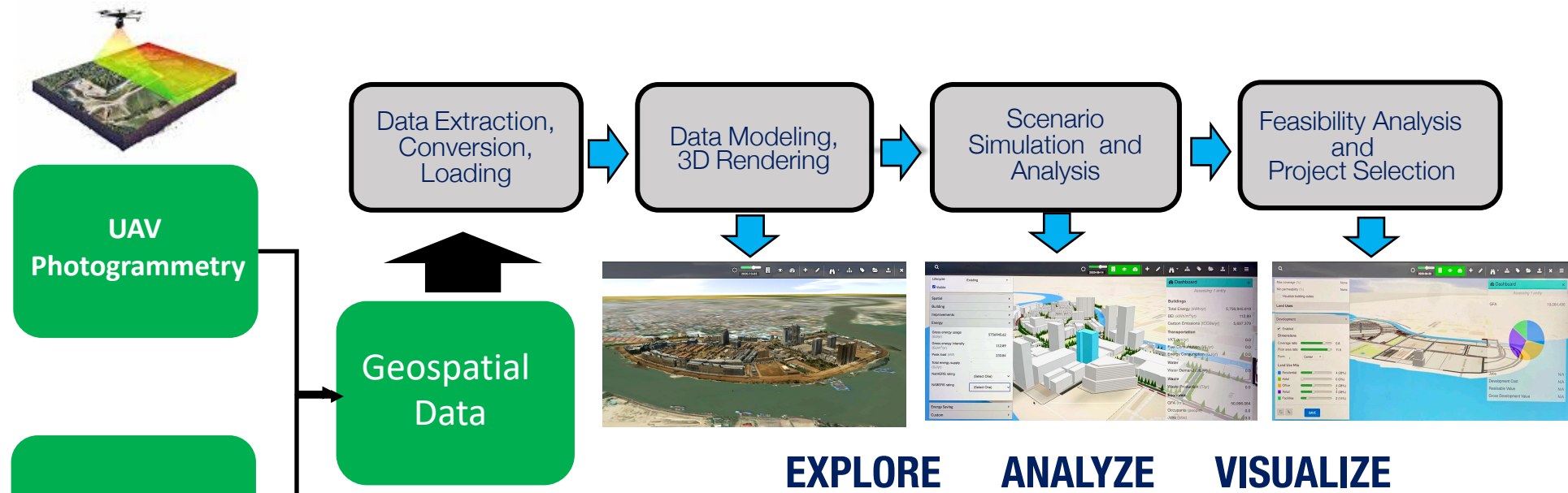
* 6D = Spatiotemporal + Cost + Performance ;

** Urbanetic and its partner in Cambodia



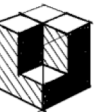
Innovative Approach to Data Capture and Extraction

UAV photogrammetry for extracting feature data and generating 3D meshes



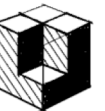
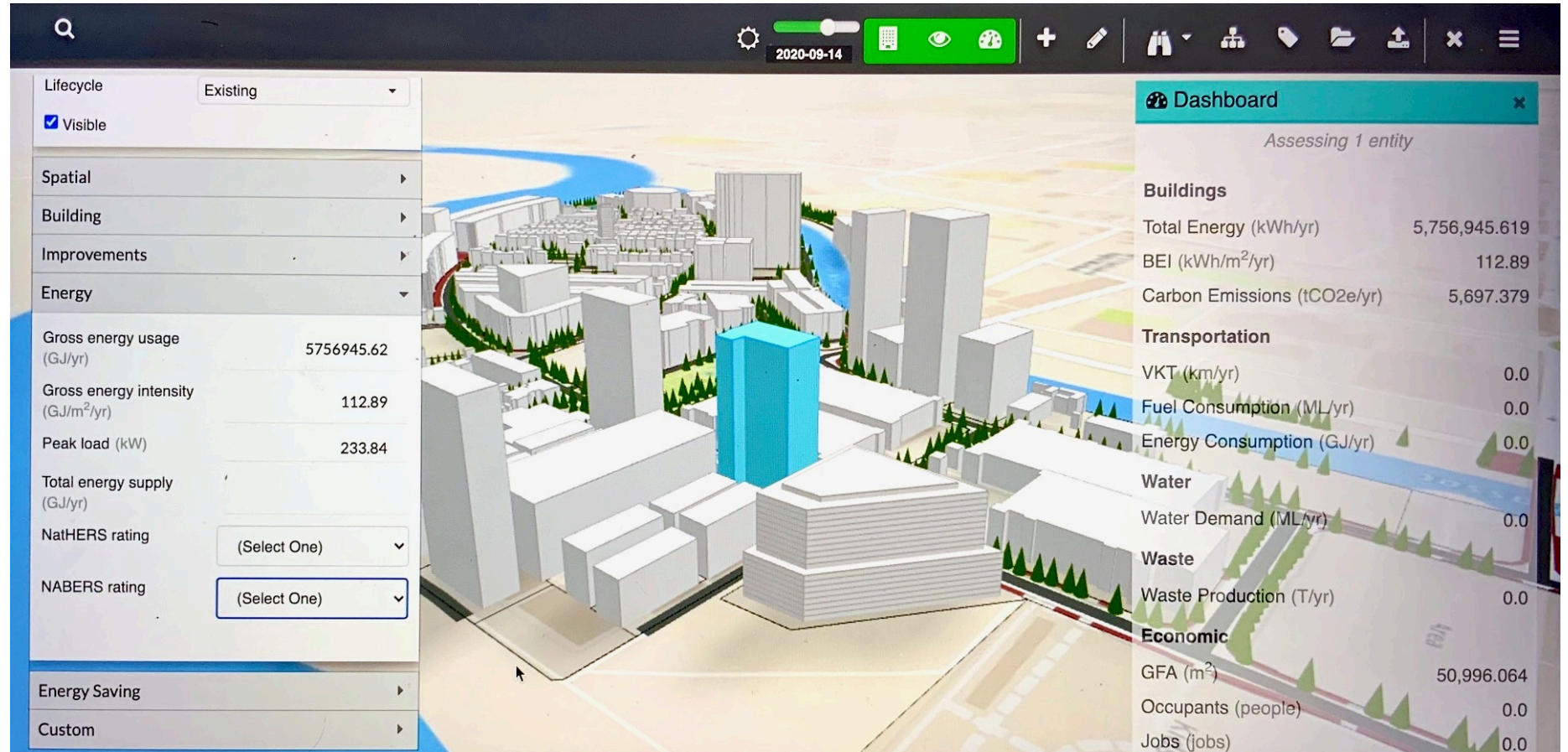
The world is flat

Urbanetic's advantage: It controls critical pieces of technology that is part of the solution

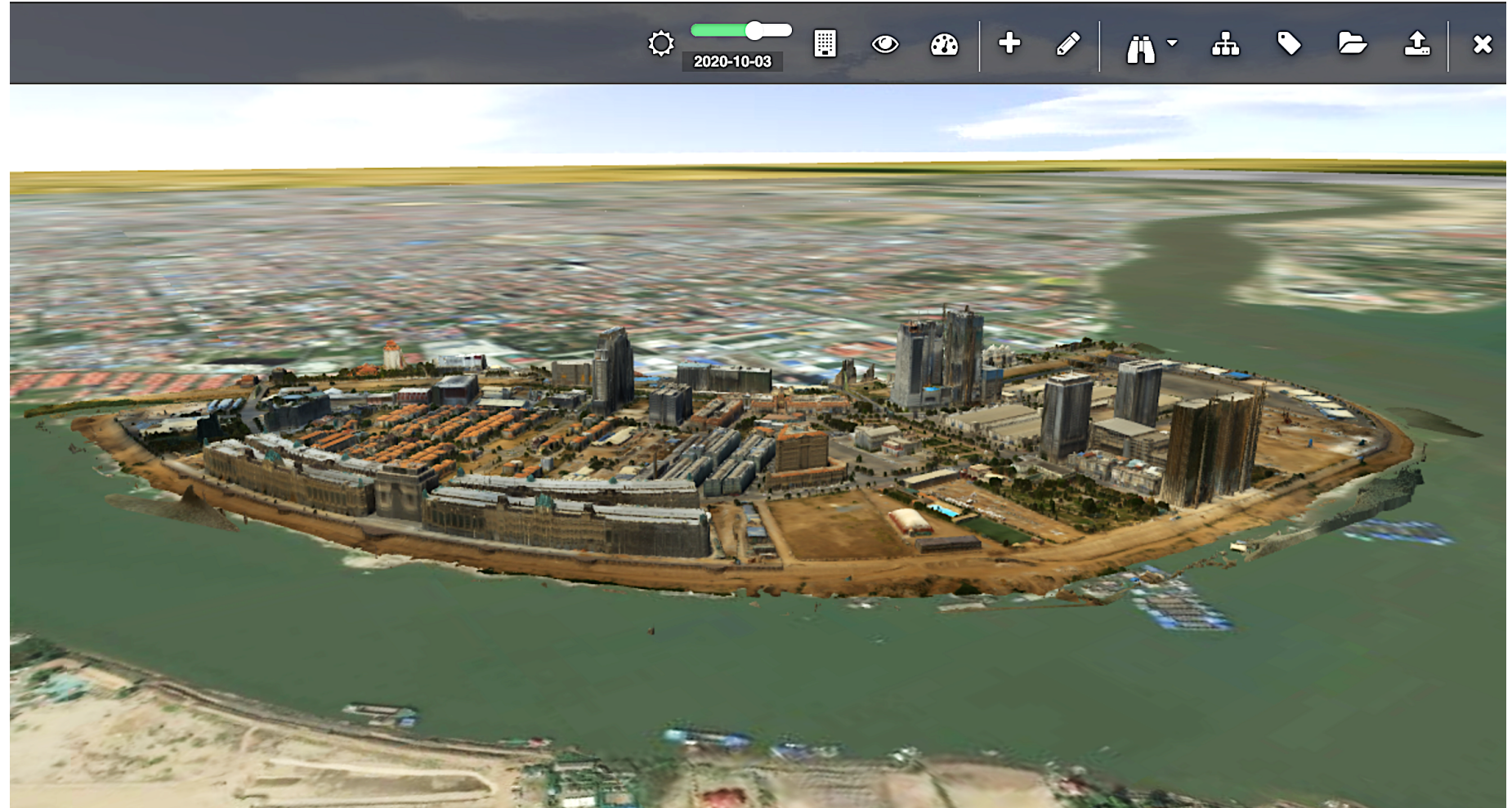


Photogrammetry Generated Geospatial Data

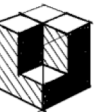
Visualizing and analyzing UAV photogrammetry generated geospatial data



Perhaps the most cost effective and time efficient digital
twinning solution

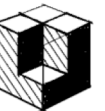
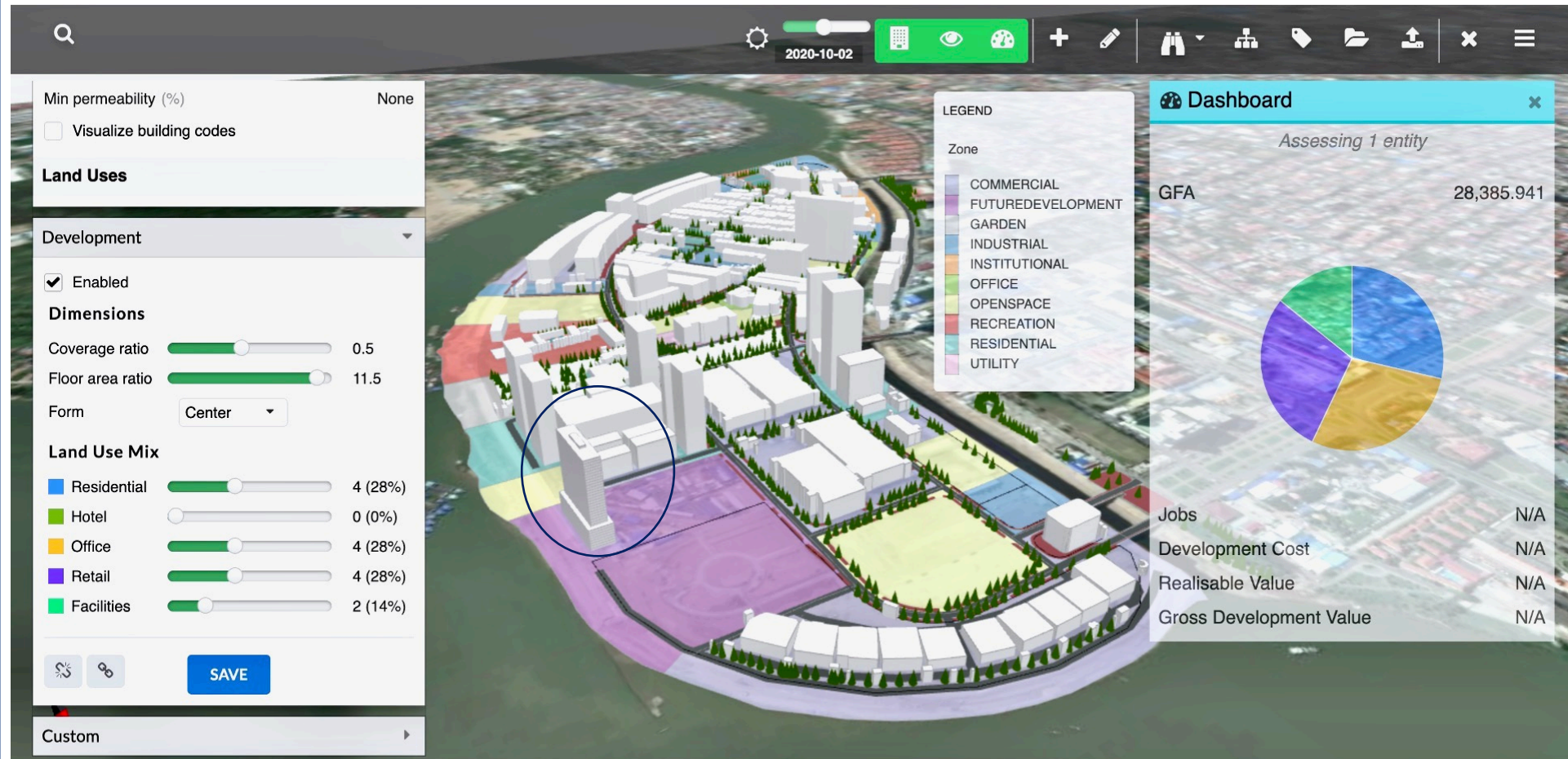


UAV
Photogram
metry
Mesh



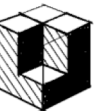
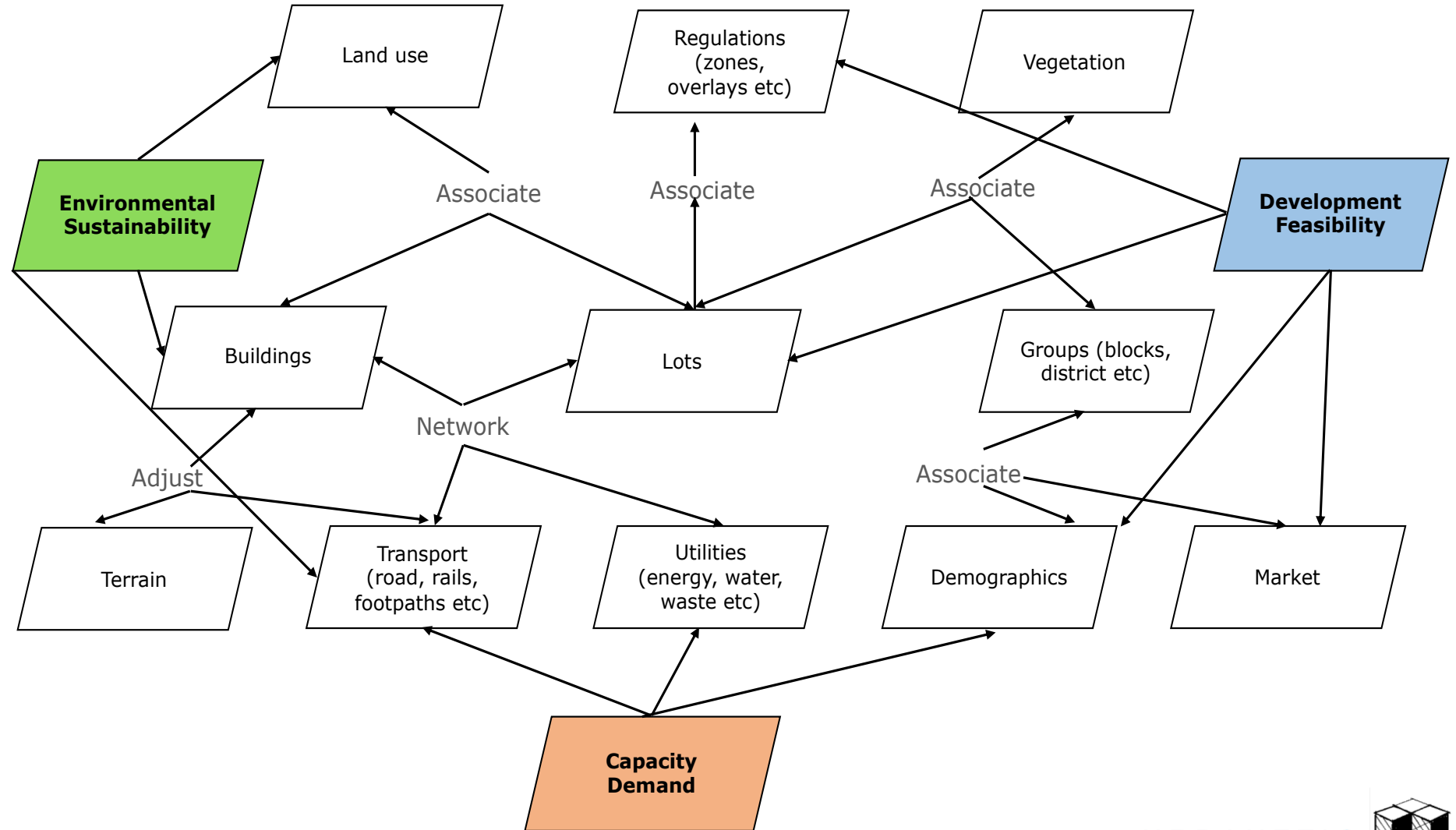
Efficiency and Compliance

Sustainability, development feasibility and Infrastructure demand calculations running in the background – (with some missing data sets).



The Next Steps for Cambodia

The steps for getting the required data sets are currently in progress



The Platform Business Model for the Cities

No technology is successful without a viable business model

A SaaS, City-as-a-Service Platform

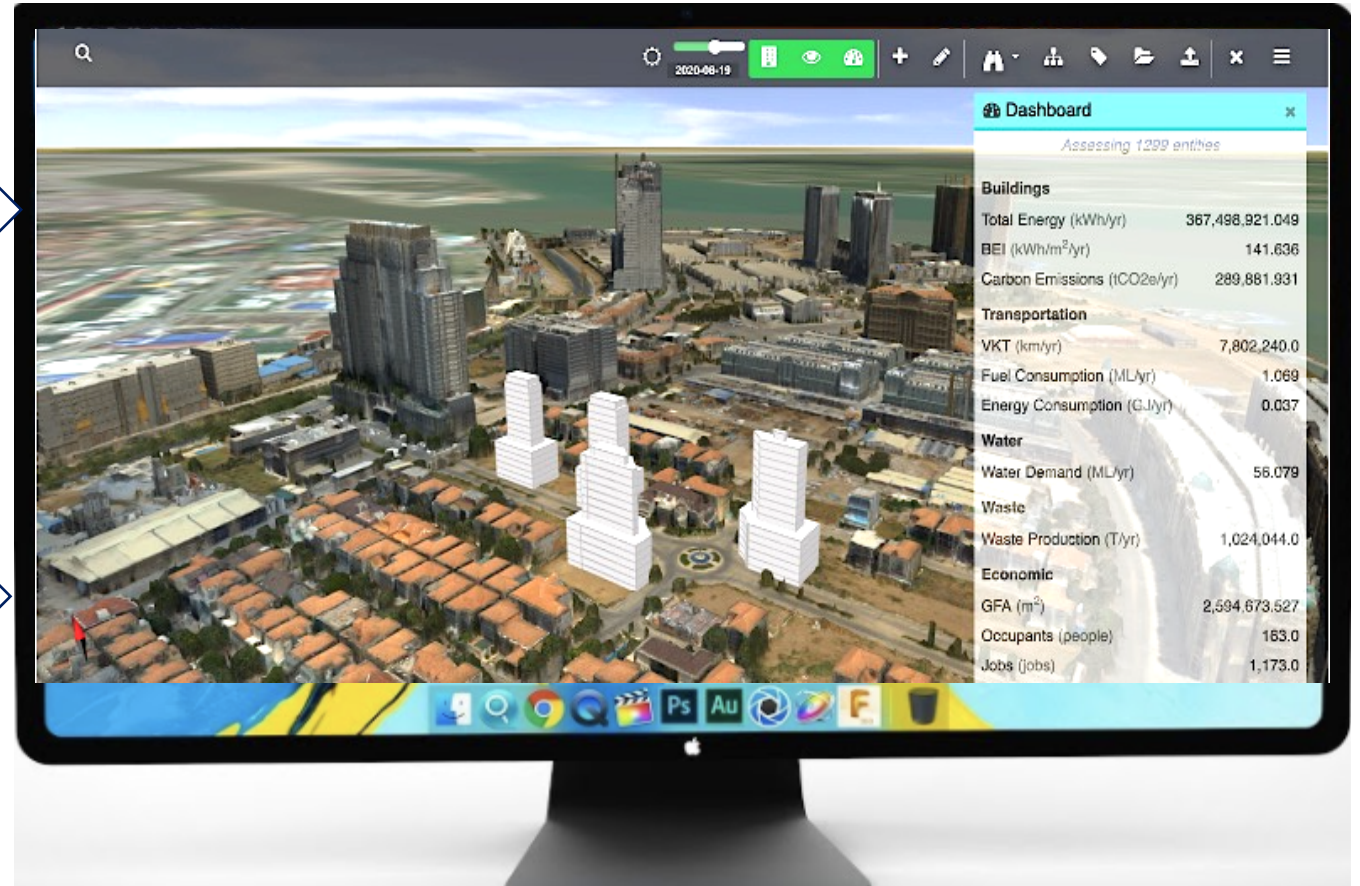
PLAN FINANCE MANAGE

EXTERNAL DATA

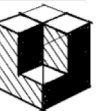
- Demographics
- Weather
- Demand / Supply
- Property
- Trade / Transactions

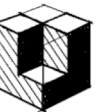
- Property Management
- Facilities Management
- Urban Transportation
- Product Design
- Safety and Security

EXTERNAL APPLICATIONS



URBANETIC







Thank you!

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