ASEAN
AUSTRALIA
SMART CITIES
TRUST FUND
Asian Development Bank

Australian Government
Department of Foreign Affairs and Trade

ADB

DIGITAL SOLUTIONS:

SMART 3D VISUAL MASTER PLANNING

DIGITIZED URBAN PLANNING FOR IMPROVED EFFICIENCY AND COMPLIANCE

OPPORTUNITY

Truly smart 3D planning systems allow city planners to simulate, test, and validate multiple planning scenarios with only a few clicks. 3D visualizations of planned changes in the city landscape are powerful ways to communicate and present solutions that many stakeholders will benefit from.

Smart 3D planning systems have become an invaluable tool to create compelling new masterplans and a tool to ease the workload on city planners by automatically highlighting if any local regulations or land use conditions are not respected during the design process.

An open and visual planning process in the early stages of investment maximizes the city's potential and strengthens consensus and participation. With smart 3D planning systems, city planners can bring greater transparency, awareness, and engagement in the decision-making for city officials, private developers, and citizens.

BENEFITS

- Allows city planners to communicate comprehensive urban master plans to political decision-makers, developers, and the public in an easier, interactive, and participatory manner.
- Ensures that feasible projects comply with city regulations at the master planning stage.
- Generates information and data for municipal and private investments implied by the project (e.g. power supply, parking, transport, etc.)
- Strengthens city planning processes, making it easy to test, simulate, and modify multiple scenarios and create a broad understanding of the impact of each scenario.
- Supports standardized certification of buildings and neighborhoods.
- Supports transparency, equity, and easier inclusion of multiple stakeholders with different ages, genders, and socio-cultural backgrounds.

PRECONDITIONS

- Requires Geographic Information System (GIS) data, footprints, or 3D building data for the system to create visualizations of the city landscape.
- An area can be a specific building plot, a whole neighborhood, a city district, or the entire city.
- Updated information on the city landscape integrating newly constructed buildings, green areas, etc.
- Updated building regulations, design standards, open space requirements, and local regulations.
- License for digital tools and platforms.

KEY TAKEAWAYS ON SMART 3D PLANNING
From the ASEAN Australia Smart Cities Webinar Series Part 3: Digitized Urban Planning for Improved Efficiency and Compliance

bit.ly/3cNtXON

- Smart spatial planning systems enables fast design development with real-time simulations and evaluations which can enhance co-design and interaction with stakeholders.
- Digitized urban planning systems are centered around a unified data model of the city, allowing city planners to be better informed on new designs through perspectives such as efficiency, compliance, sustainability, economy, and feasibility.
- While digital twins usually come to life during city operation and maintenance phase, it can be a powerful strategic tool for directing investment towards sustainable infrastructure and citizen services to accelerate relevant outcomes.

SCAN
CODE FOR
DIGITAL
VERSION

bit.ly/3nf1l5I
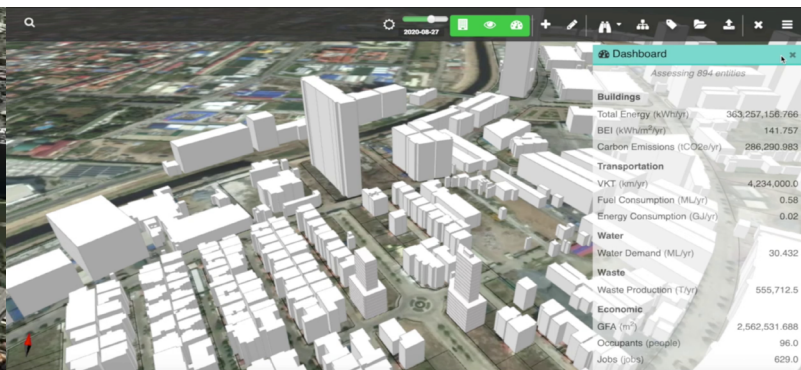
USE CASES

Photo attribution: Brisbane City Council

Photo attribution: Urbanetic

Visualizing planned developments through 3D city modeling

bit.ly/3lD1sqb

AUSTRALIA

AGENCIES INVOLVED

- Brisbane City Council
- AAM Pty Ltd

Brisbane City Council (BCC) has employed a computer-generated, spatially accurate and interactive 3D model of the city, which aids in the visualization and analysis of proposed developments and planning scenarios in relation with the city's existing urban environment. Virtual Brisbane is a platform that allow BCC's planners to actively use a 3D representation of the city to assess the impacts of proposed designs rapidly and in great detail and to be able to make informed decisions about how the city grows. The 3D realistic visualizations also make it easier to engage with the city's citizens and improve their understanding of proposed designs and changes in their local community, ideally to also get their feedback.

A more cost-effective approach to digitized urban planning

bit.ly/3k5g41v

CAMBODIA

AGENCIES INVOLVED

- National Council for Sustainable Development (NCSD)
- Ministry of Environment (MoE)
- Urbanetic Pte Ltd
- Dynamic Technologies

Urbanetic has developed a web-based digital tool to help policy makers and consumers better understand the planning of a city. The digital tool will be deployed in Phnom Penh to support the city's Sustainable City Plan 2018-2030 to transform Cambodia's capital city into a clean, green, and competitive city. The digital tool assimilates data from various agencies onto a single 3D interactive platform that is accessible to city planners, developers, investors, and citizens. Once commissioned, the platform will serve as an enabling tool that integrates the planning, design, financing, and management components of urban development projects, helping policy makers, planners, and other stakeholders to prioritize and quickly analyze these projects for their financial feasibility and impact.

ABOUT THE ASEAN AUSTRALIA SMART CITIES TRUST FUND

The ASEAN Australia Smart Cities Trust Fund (AASCTF) assists ASEAN cities in enhancing their planning systems, service delivery, and financial management by developing and testing appropriate digital solutions and systems. Digital solutions address vital cross-cutting themes such as social inclusiveness, gender equity & women's empowerment, climate change & environmental sustainability, and public-private partnerships. By working with cities, AASCTF facilitates their transformation to become more livable, resilient, and inclusive, while in the process identifying scalable best practices to be replicated across cities in Asia and the Pacific.

AASCTF   bit.ly/30zLuo0   @aasctf   @aasctf