



**Asia-Pacific
Economic Cooperation**

2021/CTI/CONF1/013

Quality Infrastructure Investment for Smart Cities - Singapore's Latest Urban Transformations

Submitted by: Mitbana



**Conference on Promoting Smart Cities
Through Quality Infrastructure Investment
in Rapidly Urbanizing APEC Region
15 September 2021**

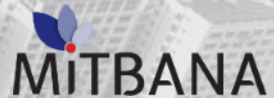
Quality Infrastructure Investment for Smart Cities

Singapore's Latest Urban Transformations

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CEO, Mitbana (*a joint venture company of Mitsubishi Corporation & Surbana Jurong*)

15 September 2021



Surbana Jurong

A brief history



Surbana International Consultants

- Roots in Singapore's Housing & Development Board (HDB); principal engineering and design consultant behind Singapore's public housing



Jurong International - Roots in Jurong Town Corporation (JTC); lead government agency developing and managing industrial estates in Singapore

Surbana Jurong formed by the merger of Surbana International Consultants and Jurong International Holdings



Mitbana is formed through a partnership with Mitsubishi Corporation, with a mandate to invest in townships, transit-oriented developments (TODs) and urban infrastructure in ASEAN & South Asia



1960s

2015

June

2018

November

Complete Value Chain Services

Our value proposition



PLAN & DESIGN

Concept & Feasibility Studies
Master Planning
Development &
Project Financial Services
Sustainability &
Environmental Consultancy



DEVELOP

Architecture & Landscaping
Engineering & Specialist Services
Quantity Surveying &
Cost Management



DELIVER

Project Management
Construction Engineering
Site Supervision
Contract Advisory



OPERATE & MANAGE

Smart City Solutions
Facilities Management
& Asset Enhancement
Safety & Security Services
Defence Services &
Training Solutions

SUPPORTED BY OUR FAMILY OF SPECIALISTS



Transforming an **Open-Air Carpark**...



...into Jewel Changi Airport



Houses the world's tallest indoor waterfall and one of the world's largest air-conditioned gardens

Arching over the gardens, waterfall and shops is a large glass roof more than three times the size of a football pitch

Transforming the **Open-Sea...**



...to Gardens by the Bay



Waterfront gardens in Marina Bay featuring two large conservatories

Supertrees house photovoltaic panels that generate enough annual power to light the Supertrees

From **Traditional Fish Farms...**



...to Floating Ponds

APOLLO AQUACULTURE
GROUP



World's first vertical fish farm that is six times more productive than traditional land-based farming

Harnesses solar energy to grow algae on rooftops

> 90% of the water is recycled via a Recirculating Aquaculture System (RAS)



Source: Apollo Aquaculture

From **Rural Villages...**



...to Punggol Town



Singapore's first eco-town incorporating new planning concepts and models in its design

Singapore's longest man-made waterway

Surbana Jurong completed over 40 housing projects in Punggol Town

...and Jurong Innovation District



Advanced manufacturing hub that will provide testbed for innovations and smart technologies

Implementation of info-comm technology infrastructure, sensor networks, technology solutions

Surbana Jurong's new Campus will be situated in JID

24/7 Estate Management

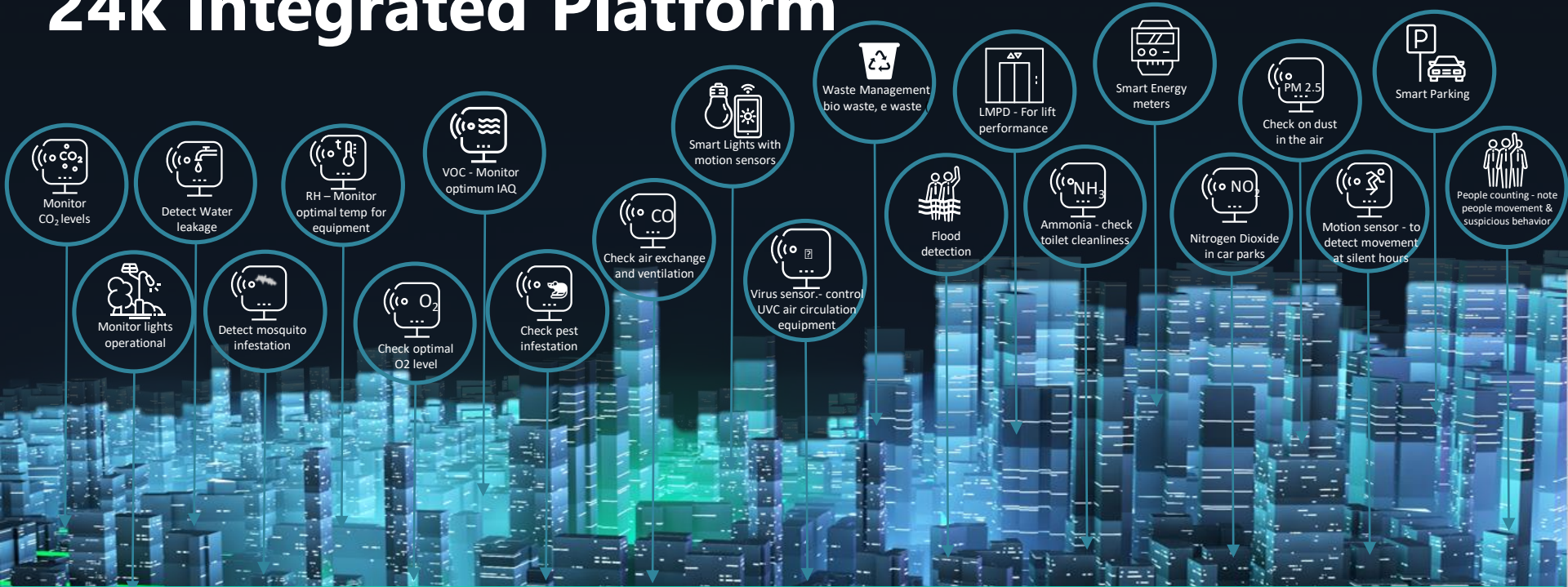
A control room for 24/7 estate management. The room is dimly lit, with the primary light source being the multiple computer monitors. In the foreground, a person is seen from the side, looking at a large monitor displaying a grid of security camera feeds. In the background, another person is seated at a desk, looking at a monitor that displays the 'AETOS' logo. The wall behind them is covered with several large projection screens. One screen shows a map of a coastal area with various markers. Another screen shows a list of data or a dashboard. The overall atmosphere is professional and focused on real-time monitoring and data analysis.

Leveraging data to support 17 Town Councils with real-time asset monitoring

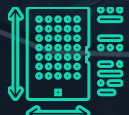
Continuous improvement through data analytics

Data-backed decision making enabled by consolidated dashboard

24k Integrated Platform



Digital Twin



OMNI



Integrated Operations Centre

24k



Mobile Support



AI & Analytics



Common Data Environment

Thank you



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