

Singapore's Artisan Green collaborates with Siemens to digitise & scale farming operations

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Singapore's leading modern indoor hydroponics farm, **Artisan Green** teams up with tech giant **Siemens** to pioneer a highly scalable integrated Farm Management System to accelerate farming practices nationwide and build a more resilient food future for the nation. The partnership between Artisan Green and Siemens marks a significant milestone in the pursuit of sustainable and resilient agriculture in Singapore.

Artisan Green has harnessed vertical farming technology to achieve year-round production of crops, ensuring a consistent supply of fresh produce to 41 supermarkets islandwide, as well as online platforms like Redmart and GrabFood.

Aligned with Singapore's '30 by 30' goal, the newly integrated farming operations will enhance crop quality and yield. It is expected to produce 25 tonnes of greens per month, which is estimated to generate a monthly supply of over 134,000 meals with leafy green vegetables.

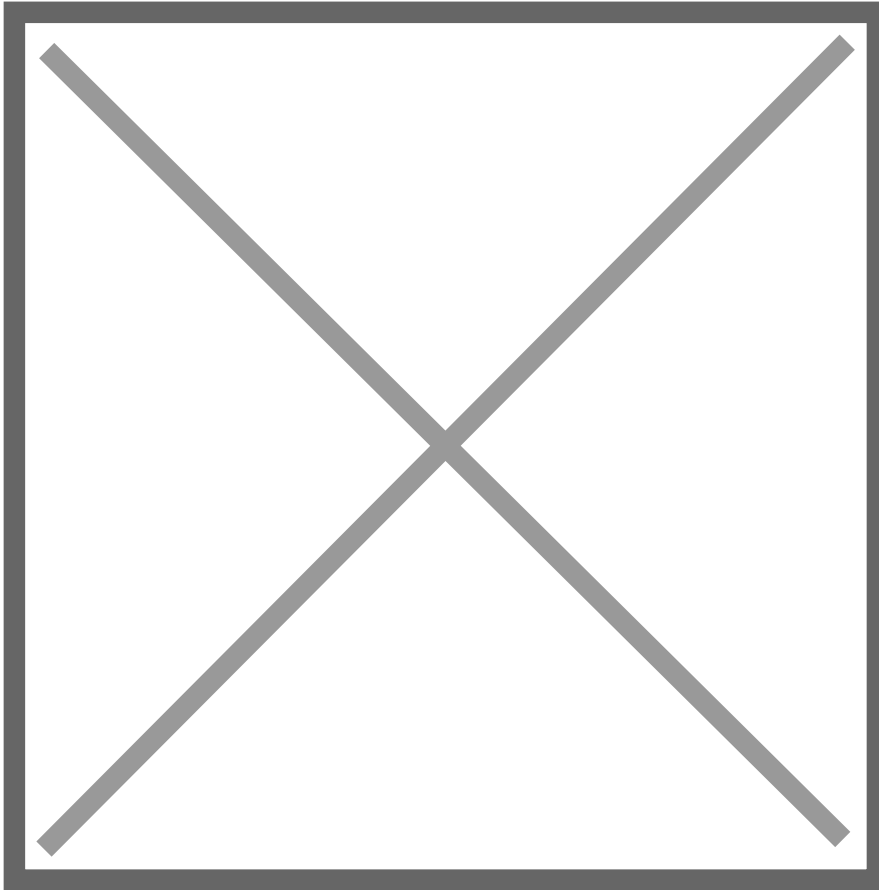
The partnership was formalised at the signing of the Memorandum of Understanding (MoU) held at the **Industrial Transformation Asia-Pacific 2023 (ITAP)** conference on 18th Oct.

Singapore's heavy dependence on food imports, which account for more than 90% of our food supply, exposes us to potential food security risks, exacerbated by factors such as population growth, urbanisation, climate change, and unprecedented events like the COVID-19 pandemic. That's why we need new ways of smart farming that integrate

automation and digitalisation, so as to produce more with less, and to produce locally,â commented **Isabel Chong, Head of Siemens Digital Industries in ASEAN.**

The partnership will leverage automation and digitalization, with a focus on plant science to advance sustainable farming operations at Artisan Greenâs farm.

Farm Management System Elevates Crop Quality and Efficiency



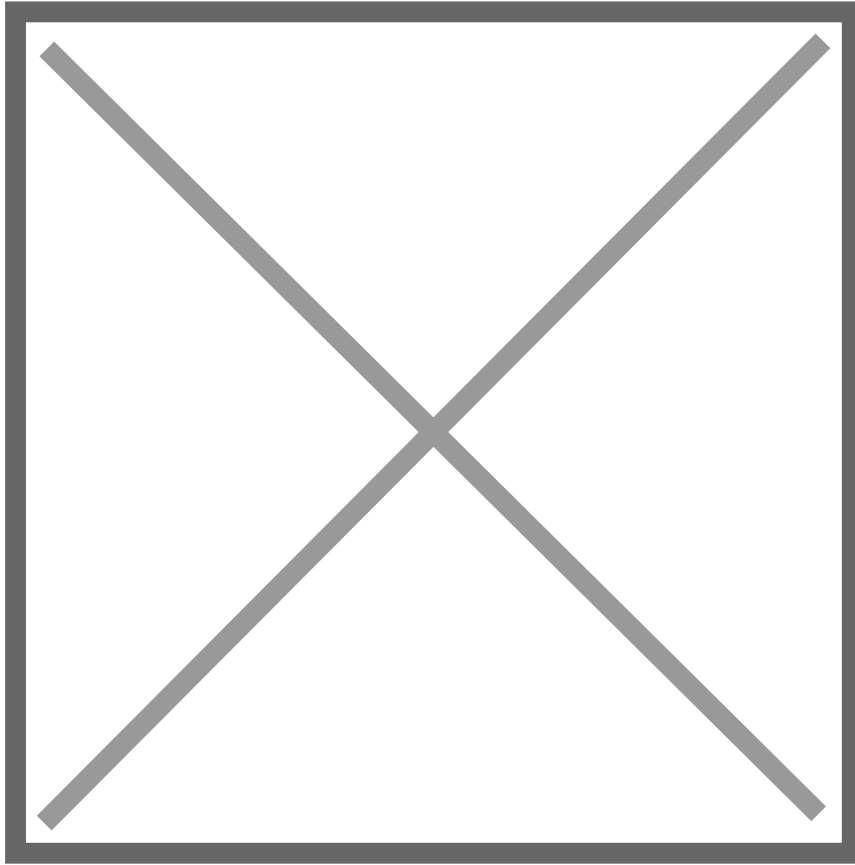
Siemensâ booth at ITAP 2023 showcased the companyâs latest solutions for Digital Enterprises in ASEAN_ credit Siemens

Powered by Siemens technologies, Artisan Green will be able to gain precise control over its hydroponic system, enabling remote access and monitor the farm operations, so that the growing parameters can be easily and securely set to an optimum to ensure highest-quality crop production from anywhere. It also enables an integrated recipe control system to facilitate the selection of the right cultivation program for each crop. The system can store and manage recipes including lighting intensity and duration, irrigation schedules, nutritional needs and temperature to enhance resource efficiency. It can also help to minimise the risk of crop diseases, pests and weather-related disruptions. With the optimum control over the farming operations, sales planning and scheduling can be adjusted to meet the demand efficiently and optimise seeding and growing tasks.

Overall, these technologies will enable Artisan Green to: Boost Artisan Green's current yield of leafy vegetables and herbs by a remarkable 25-fold ; Achieve an impressive 95% reduction in water usage compared to traditional farming; Reduce the farm-to-table carbon footprint while minimising overall waste throughout the harvest; and to eliminate the need for pesticides.

Elevating Energy Efficiency for Sustainable Agriculture

Utilising a range of advanced technologies such as Artisan Greenâs proprietary Precision Nutrient Injector, a Chilled Water cooling system as well as Siemensâ energy management software, Artisan Green effectively reduces the energy consumption of traditional indoor growing systems by half. As a result, Artisan Greenâs new farm is projected to operate at only 15 kWh per kilogram of produce, exceeding Singapore Food Agency's Clean & Green standards.



Artisan Green vertical farm exhibit at Siemens ITAP 2023
booth_credit

According to **Ray Poh, Founder of Artisan Green**, this partnership is pivotal in advancing the local vertical farming industry. He stated, "Supported by Siemens' state-of-the-art technological capabilities, we are able to advance our vertical farming operations and would greatly improve the efficiency of our manpower across operations, business planning and R&D. This will allow us to achieve greater production volumes at a lower operating cost; enabling us to provide fresh, high quality local produce at affordable prices for Singaporeans. We fully intend to set a new benchmark for hydroponics operations and hi-tech agriculture in Singapore and the world."