



Smartwell



Product Introduction

A company that provides digital services for the agricultural planting field
based on AI algorithm models

CEA Solution

Control Environment Agriculture Solution

CEA system is mainly used for users who grow high value-added crops in greenhouses, the system monitors environmental parameters through IoT sensors, combined with the optimal crop growth model in the system, intelligent management and control automation equipment to carry out scientific management, so as to increase yield, reduce manpower and water resources, pesticides and fertilizer consumption.



Helping Agribusiness and Farms Reach Their Goals



Increase Crop Yield

Through the crop optimal growth-mode in the CEA system, the crop can be kept in the optimal growth state at all times, so as to achieve the effect of increasing yield.



Efficient Management

Through the CEA system combined with automatic control equipment, the planting can be intelligently managed, which saves a lot of manpower.



Reduce Pollution

Through the application of crop optimal growth models, fertilizers and pesticides can be used rationally and efficiently, thereby reducing environmental pollution.



Increased Production



Save Manpower



Save Fertilizer



Save Pesticides



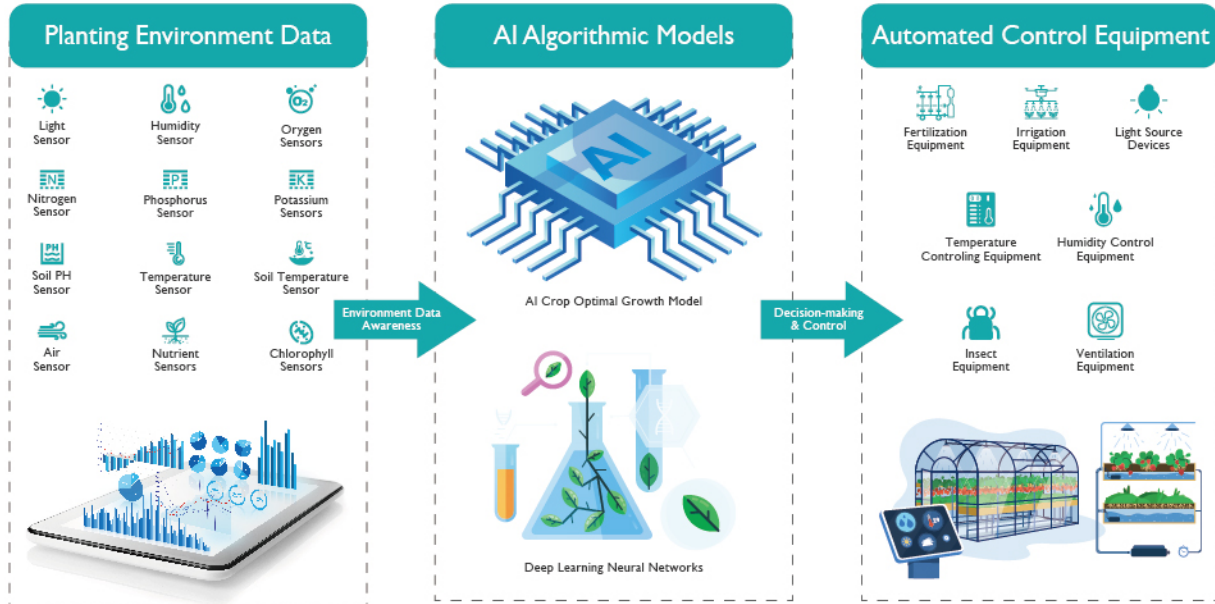
Save Water



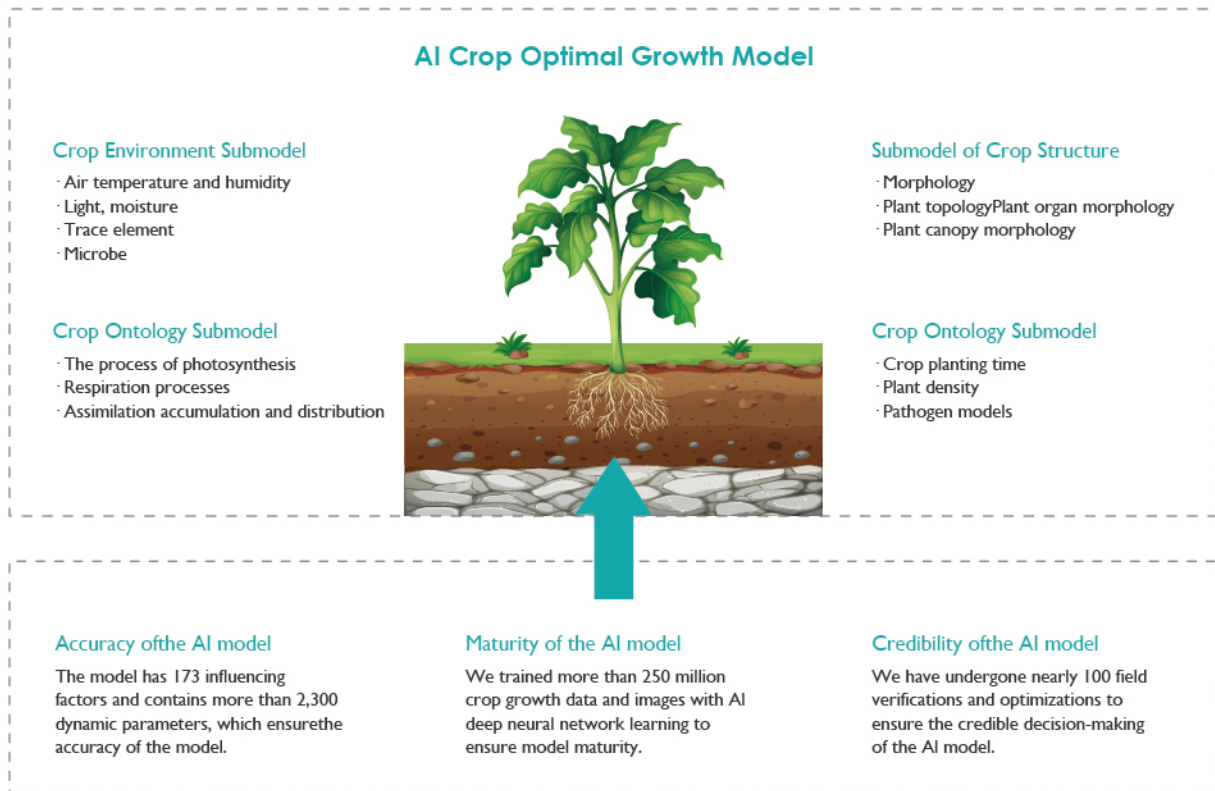
Efficiency Improvement

CEA Solution

Control Environment Agriculture Solution

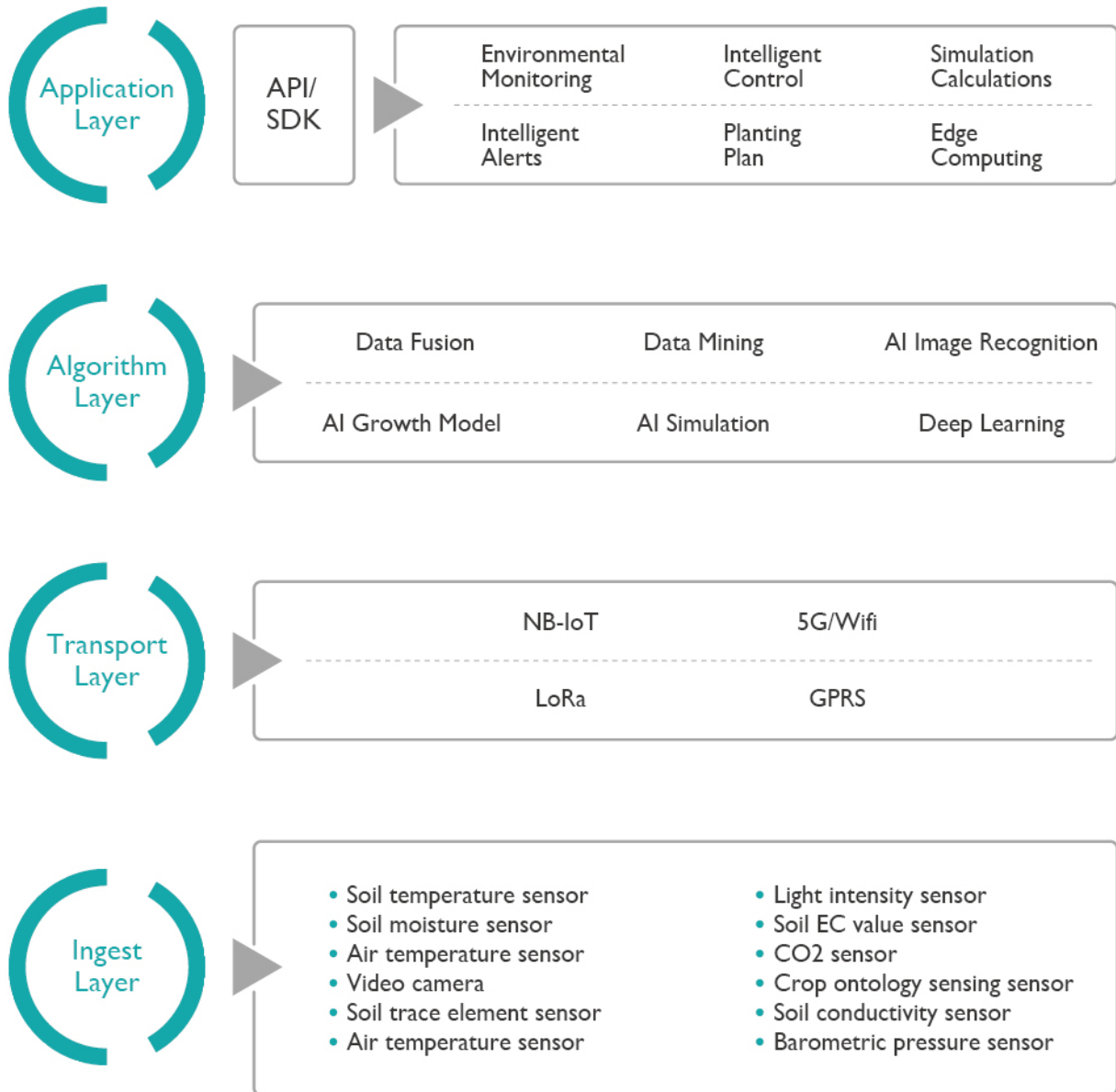


Exceptional AI Crop Optimal Growth Model



CEA Framework

Control Environment Agriculture Framework



Planting Environment Data Monitoring



Based on the IoT sensor, the crop growth status and environmental parameters are continuously monitored at the minute level, and the visual display is displayed in the system.



Soil Temperature Sensor



Soil Moisture Sensor



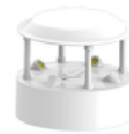
Soil EC Value Sensor



Soil Trace Element Sensor



Light Intensity Sensor



Barometric Pressure Sensor



Soil Conductivity Sensor



Air Temperature Sensor



Air Temperature Sensor



CO2 Sensor



Video Camera



Crop Ontology Sensing Sensor

Automated Control Equipment

Managed by the system through the crop optimal growth model



The CEA system provides users with the best growth model of crops, and the system intelligently controls the equipment in the greenhouse according to the model, and automatically adjusts the crop growth environment to achieve the best growth state.



Water and Fertilizer Equipment



Insect Device Management



Artificial Light Source Management



Greenhouse Ventilation Management



Greenhouse Roll Film Management Equipment



Greenhouse Temperature Management

Application Cases

Specialty Crops We Work with



Industrial Hemp

Topics: Humidity, light, ventilation, CO2

Summary: Industrial hemp cultivation is sensitive to humidity and requires artificial light sources (white, red, far-infrared light combination) applications. At the same time, the CO2 concentration is controlled. Industrial hemp growers achieved great results: increased extract content, **28%** increase in CBD yield, and **12%** increase in THC yield.



Strawberry

Topics: Temperature, irrigation, light

Summary: Strawberry cultivation is sensitive to temperature and requires strong light exposure, so it is important to control the temperature, and strawberries prefer slightly acidic soil. The result: Strawberry growers achieved great results: an average increase of **10%** in yields, **38%** in water savings, **12%** savings in fertilizer and increased profits for growers.

Application Cases

Specialty Crops We Work with



Lettuce

Topics: Environmental monitoring, irrigation, light, nutrients

Summary: Lettuce cultivation has different temperature requirements during different growing periods. At the same time, it is sensitive to light intensity, and the soil pH value is weakly acidic. The result: lettuce growers have achieved great results: an average increase of **15%** in yields, **35%** in water savings, **13%** savings in fertilizer, and increased profits for growers.



Tomato

Topics: Temperature, irrigation, ventilation, fertilization

Summary: Tomato planting is sensitive to temperature, and organic fertilizers should be added during the critical period of growth. The result: Tomato growers achieved great results: an average increase of **12%** in yields, **25%** in water savings, **17%** savings in fertilizer, and increased profits for growers.

Overall Service Process

Communicate with customers to understand the basic situation (planting category, planting conditions, basic situation, on-site photos or videos, customer needs)

Issue solutions and communicate with customers for confirmation

Issue a project software and hardware list, quotation

Issue the implementation plan, implementation cycle and communicate with customers to confirm

The project is formally signed

Project implementation, software deployment, hardware debugging and installation

Project trial run

Project acceptance

Software and hardware maintenance during the warranty period

Yuntong System

Yuntong system collects remote sensing satellites, meteorological satellites, and UAV images, continuously monitors crops, uses the company's self-developed AI algorithms and models to analyze and process images, obtains key crop growth data, and provides standardized data services for agricultural financial institutions, large farms, government departments and other users.



Exceptional AI Crop Optimal Growth Model



Agricultural Credit



Agricultural Insurance

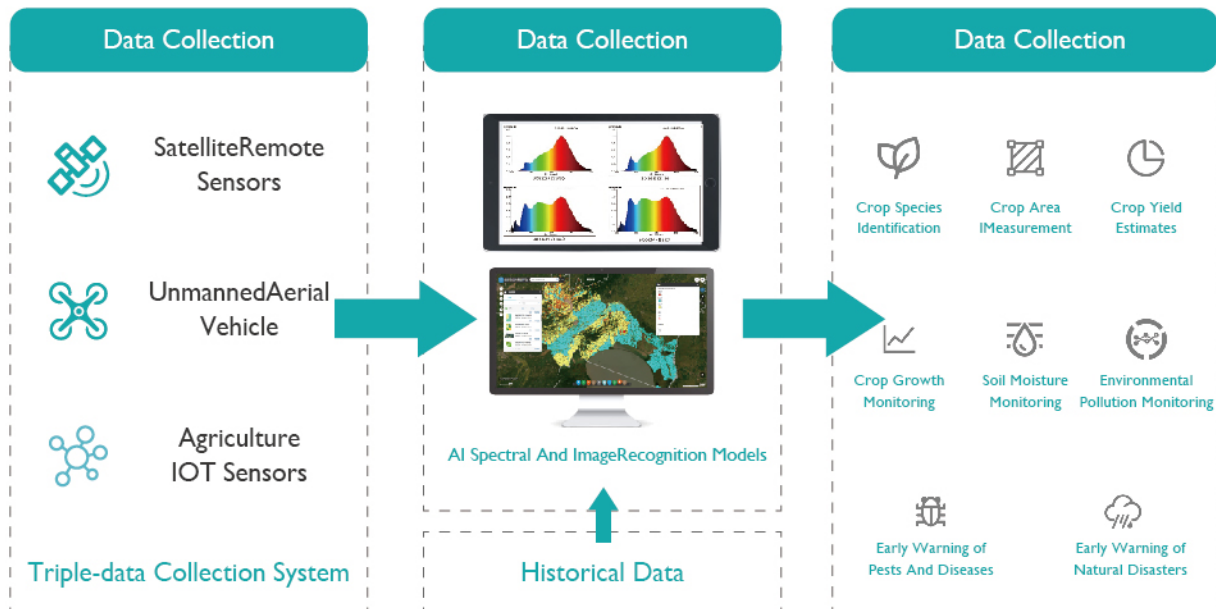


Large Farm



Government

Yuntong System - Agricultural Remote Sensing DaaS Platform



The satellite data source is from China National Earth Observation Centre, hundreds of Chinese commercial satellites, and hundreds of other countries' commercial satellites (US, Europe, Japan, etc.)



Rich Remote Sensing Data Sources

It integrates the data of **hundreds of satellites** from China, the United States, Europe and Japan, making multi-source data at an altitude of tens of thousands of meters within reach.



Extensive Data Coverage

Data coverage capabilities from plot level to national level, high time resolution, and data revisit capabilities as short as **30 minutes**, fully match various user needs and business scenario applications.



Accurate AI Data Analytics

Based on the third-generation AI technology and deep machine learning technology, the data analysis and processing of remote sensing images reached an average accuracy of more than **92.3%** and a maximum of **99%**.



Strong Data Processing Power

Based on the development of hybrid cloud architecture, it flexibly schedules server CPU computing tasks and GPU computing tasks, and the daily data computing peak reaches 100 billion data points, effectively covering large area, long-term, and high-frequency computing tasks.



Diverse Data Products

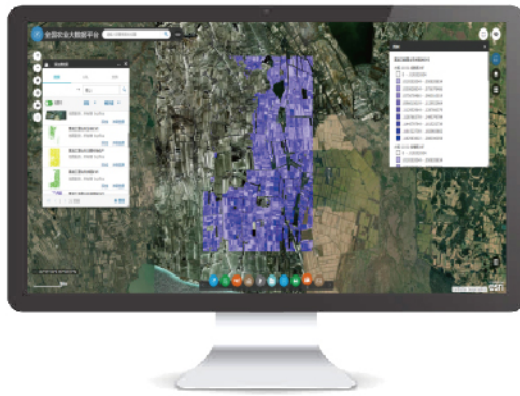
Multiple types of data products, from standardized outcomes to visualizations, meet complex and dynamic solution development and delivery. This system is equipped with **SDK** and **API** for data products, making it more convenient for users to use.



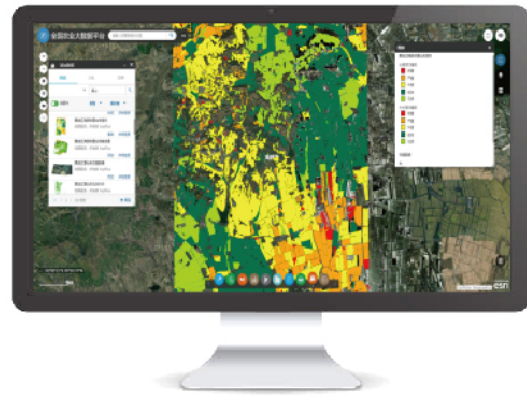
Rapid Data Delivery

The fastest can achieve minute-level technical docking, **hour-level data delivery capabilities**, and rely on independent and controllable algorithm computing power to ensure the timeliness and stability of each delivery. Standardized pricing helps users control their budgets.

We Provide Accurate Crop Growth Data to Farms Through Remote Sensing



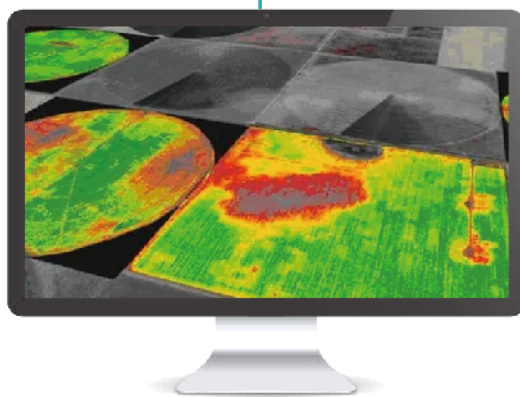
Crop Growth Monitoring



Pests and Natural Disasters

Planting Decisions

- ◆ Precise irrigation
- ◆ Fertilize moderately
- ◆ Disaster prevention
- ◆ Predict storage, processing, trade and pricing through crop yield estimates

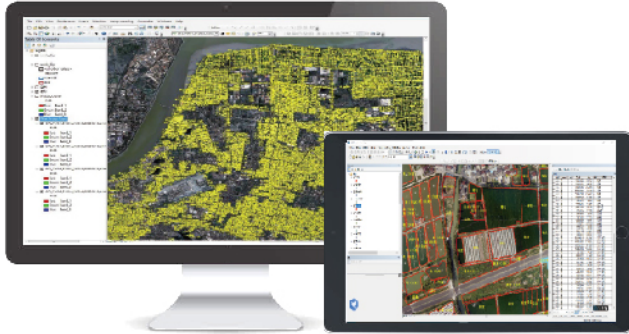


Crop Growth Monitoring



Pests and Natural Disasters

We Provide High-value Data to Agricultural Credit Institutions Through Remote Sensing



Provide credit institutions with basic data on farmers planting area, types, and yield estimates. Provide crop growth monitoring and disaster early warning to credit institutions for risk control.

Remote sensing technology is used to provide planting data of farmer's in a specified range to provide a basis for credit

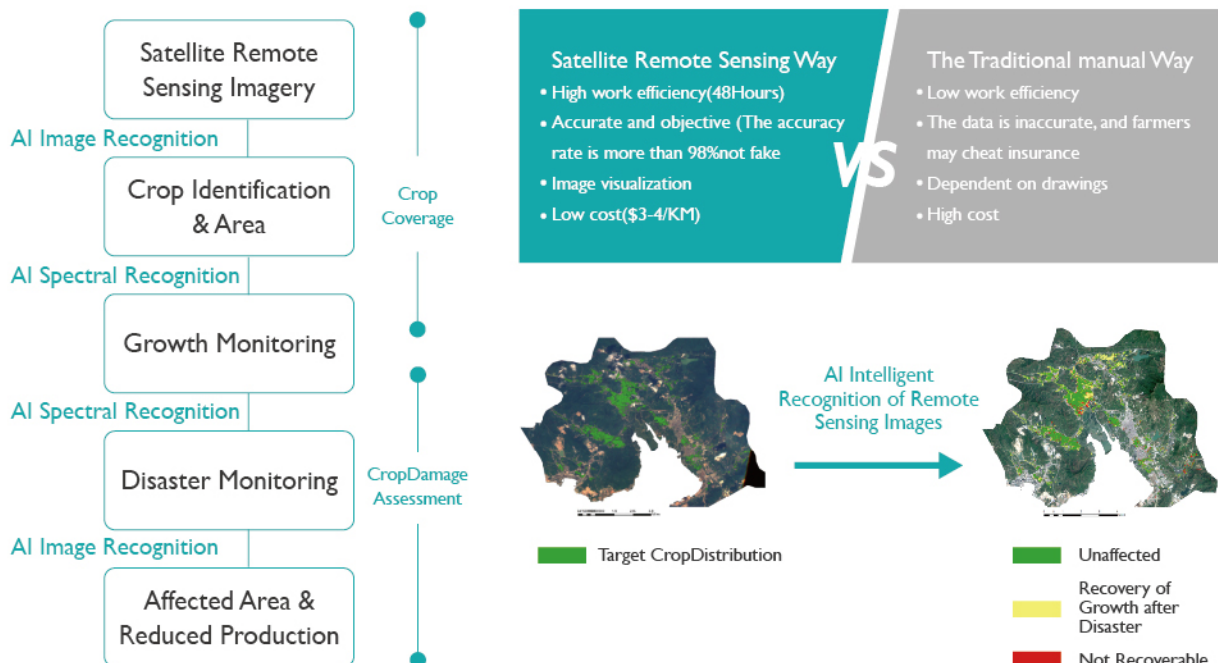
Problem solved:

Provide basic data for financial institutions for risk control.

Replace manual remote and accurate verification.

Generate potential customers quickly for financial institutions.

We Provide Credible Data for Agricultural Insurance Institutions Through Remote Sensing



About Us

99

Number of
Intellectual Property

86

Number of
Customers Served

8

Number of
Crop Models

Our International Certifications

- ISO9001 Quality Management System Certificate
- ISO 20000 IT Service Management System Certificate
- ISO14001 Environmental Quality Management System Certificate
- ISO27001 Information Security Management System Certificate
- ISO45001 Occupational Health and Safety Management System Certificate
- ISO22301 Business Continuity Management System Certificate
- ISO27701 Privacy Information Management System Certificate
- ISO27017 Cloud Service Security Management System Certificate

Contact

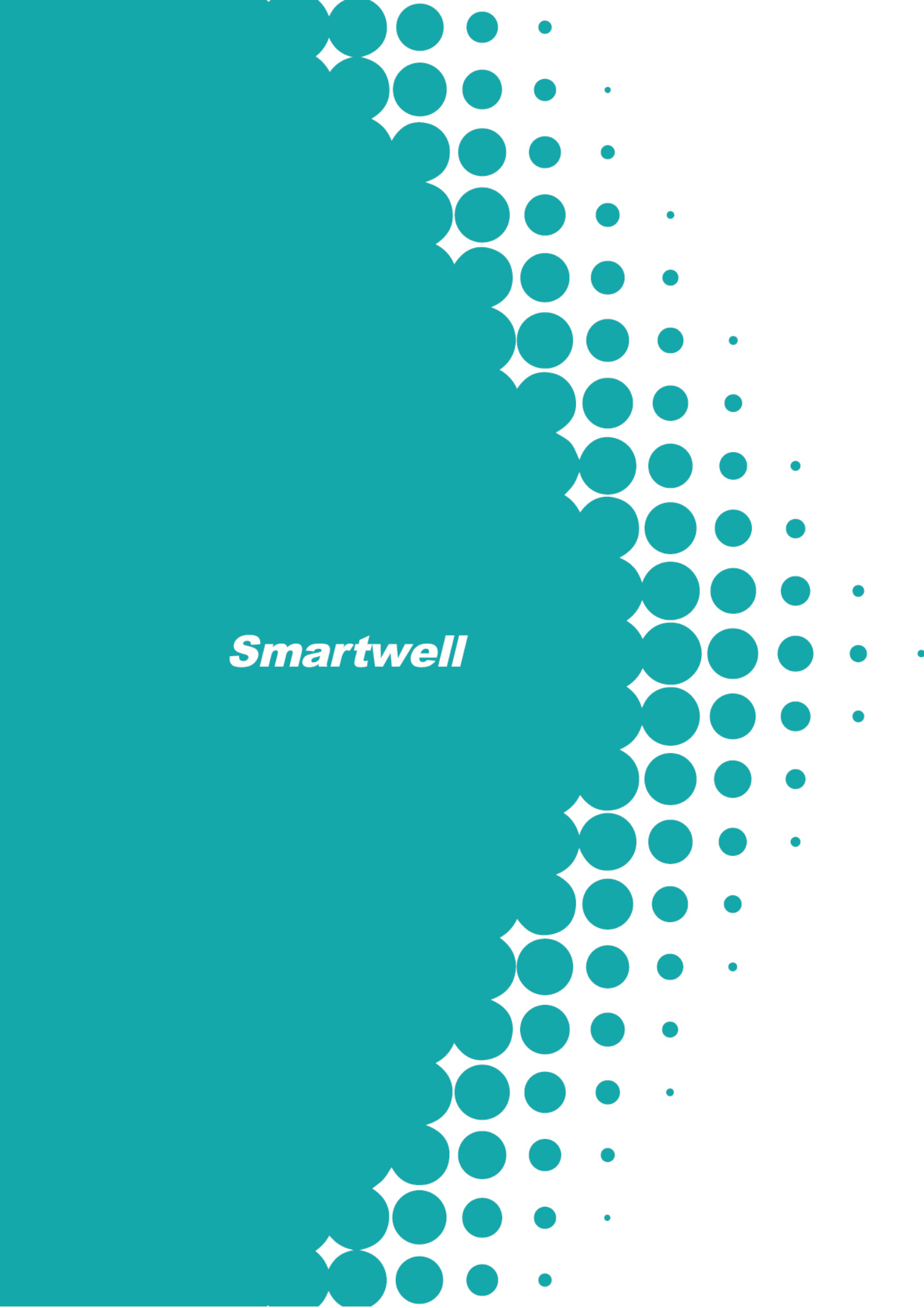
Company: Smartwell Technology Inc.

Name: He Yang

Address: c/o 1000 – 409 Granville St. Vancouver, BC V7C 1T2

E-Mail: heyang@smartwell.info

Tel: 0086-152 1015 1061



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