



**APIS**

# COMPANY PROFILE



The new era for smart IoT City

[www.apisiot.com](http://www.apisiot.com)



# APIS

## 2024

Feb	Export enterprise support program (KOTRA)
Mar	Startup support program (KOSME) Online export enterprise support program (KOTRA)
Apr	Patent Pending
May	APIS DAQ 03 (On-Device AI system)
Jul	AQI Tower prototype
Oct	Taiwan Innotech Expo First Export product to Taiwan
Nov	AQI Tower Export to Singapore

## 2023

Mar	R&D MOU with Dankook Univ. APIS DAQ 01 in Singapore
Jun	APIS DAQ 02 Development
Sep	City Social problem solution Award (Daejeon) APIS DAQ 02 in Dubai APIS DAQ 02 in USA
Oct	Taiwan Innotech Expo Gold & Special Award APIS DAQ 01 & 02 in Taiwan
Dec	Certificate of Venture Enterprise 20231227030087

## 2022

Mar	Living Lab Project (INNOPOLIS)
May	SKT ESG Contest
Jul	Pre-startup (KOREA Institute of Startup)
Aug	ECO Startup Award (Ministry of Environment)
Nov	Patent KR 10-2470359
Dec	APIS DAQ 01 Development

## 2021

Mar Patent pending  
Apr Sponsored by JLCPCB

## 2020

Mar Open AI Project  
Apr SKT True Innovation  
Jul KTB Venture Challenge



APIS First Office in 2022

# APIS



# Welcome to Our Company

## Introduction

APIS has developed an integrated air quality monitoring device for urban and rural areas that do not yet have a system or infrastructure set in place. The device tracks and monitors a variety of hazardous pollutants in a real time. This data can be then implemented in an enterprise system that can deploy pollution resist mechanisms.

APIS provides reliable data that differentiates itself from other companies through dynamic optical sensors and hardware that we have developed.

The APIS system can be efficiently installed at low cost, along with competitive maintenance costs.

We have integrated our products and services for wide area coverage. They are designed to be utilized as a system to combat serious air pollution now and in the future.

## Connectivity with the city and people

With the wide spread deployment of high speed cellular, things began to connect.

In line with these trends, APIS aims to detect and process the data generated in urban and industrial areas to make them useful for people.



## Hardware Platform

APIS has developed a hardware platform that can be used in various fields.

The platform, APIS DAQ, can be used for air pollution, livestock pollution, wildfires, and gas leaks in industrial complexes.

In addition, as it is a platform that connects sensors and network communication, it is used in various kinds of equipment.

APIS DAQ is constantly being updated; APIS DAQ Gen3 platform will be an evolved IoT platform with On-Device AI systems.

## APIS ultimate mission

The goal of APIS is to install APIS DAQ's in all markets that can benefit from our technology.

## APIS long term vision

Starting with APIS DAQ, it is designed to detect and purify air pollution, in order to ultimately prevent potential disasters by analyzing the data generated from the cities.

# OUR PRODUCTS

## APIS DAQ Series



## APIS IAQ

APIS IAQ is a specialized indoor AQI device. It detects CO, NO<sub>2</sub>, SO<sub>2</sub>, O<sub>3</sub> and fine particles (PM<sub>2.5</sub>, PM<sub>10</sub>).

The device measures every single minute in real-time. The AQI index is the global standard for air quality.

## APIS DAQ

APIS DAQ is a specialized outdoor AQI device.

The solar power generating system is an available option.

The device can be installed and operate in an outdoor environment.

## APIS DAQ Tower



## APIS AQI Tower

The current system is an integrated monitor that receives and displays EPA's AQI data.

The APIS AQI TOWER performs real-time detection at any installed location.



## Patent

Technical patent for mobile status detecting and data analyzing process.



## Reliability

APIS DAQ is designed with high resolution detecting system and highly reliable hardware. The device can detect certain gases in 'ppb' resolution.



**Marcus**  
CEO / Founder

APIS is the scientific name of honeybees. In high school, together with a few close-knit friends, I started APIS with the hope of making an impact in the world with our technological creations. Taking inspiration from the work ethic of honeybees, and the positive impact they bring to the environment we, as APIS, operate with the same purpose and passion.

To make such an impact, it means taking on challenges. Often times, everything can seem new and uncharted. However, we thrive in the challenge of finding solutions. After learning through the trials and errors, we ultimately come upon the desired results, and the experience we gain from the journey prove invaluable.

For us, experience is the foundation for understanding the past and moving forward. APIS team members bring vast and significant experiences from their own respective fields. The synergy from these experiences have been crucial assets in developing APIS products and services, which culminated in the creation of the first prototype, APIS DAQ.

Our goal and objective were to plan and develop a hardware platform that can be used in various fields. Hardware development found success after undergoing a series of rigorous testing and verification. In the end, APIS DAQ successfully hit each target, as it has been ready for deployment in the industries involving the air environment, livestock, industrial complex, and fire detection. In fact, APIS is currently developing the next generation.

2024 is the year when the On-Device AI platform, one of APIS' numerous goals, is being developed. I hope that through the rapid development of technology, APIS' services will expand and spread globally throughout the world.

APIS will faithfully perform its role as a system development company, and not just a manufacturing company.

**Innovation is difficult and hard to achieve.  
But I can't imagine the impact on the world  
when it is completed.**

**As we have done so far, we will move toward a  
bright future and a better world.**

# HOW WE WORK

## Development based on R&D expertise

APIS has tried to develop technologies that are helpful to the world. It has developed new forms of products or services by learning and improving existing technologies.

Learning from previous and current technologies is very helpful in moving forward. Both past and future technologies are strengths of APIS.

APIS CEO, Marcus, has a background and experience from the R&D process to manufacturing. With his experience in developing products in both military and aerospace industries, he believes the most important part of developing commercial products is 'operational reliability'.

Reliability is the promise we ensure our customers. Whether the customer is an individual, corporation or government, the same high standard of reliability is vital to us.

Products are designed and developed with industrial-grade operational reliability. We systematically check the entire process from the initial design stage and all the way through development and production stages, testing all possible variables along the way to create the most robust and reliable product.

APIS is an R&D-based company. With this as our foundation, our researchers continually strive to learn and acquire new knowledge. The results from this effort are applied into product development, ultimately benefiting our customers.

In staying true to our ethos, APIS will continue to strive for innovative technology and a better world.



## The process of development

Product development is divided into three categories. 'Planning - Design - Production'.

The planning stage is to identify product requirements and analyze the problems of the existing product. The existing problem may be performance or price related. We plan according to our analysis and the needs of the customer.

The design is based on what is described in the plan. It consists of circuit design, optical design, housing design, and system design.

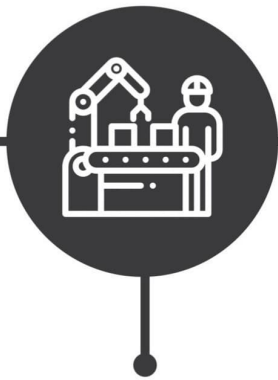
The production stage involves the creation of a prototype, and the verification of the design through a series of checks and quality control. By doing so, we actively minimize potential problems that may arise when entering the pilot production stage.



## Circuit & Optic sensor development

The development of circuitry and optical sensors is the core technology of APIS. It was researched and developed based on the experience and expertise of APIS members finally undergoing testing.

In addition to optical sensors, APIS will strive to develop technologies in various fields.



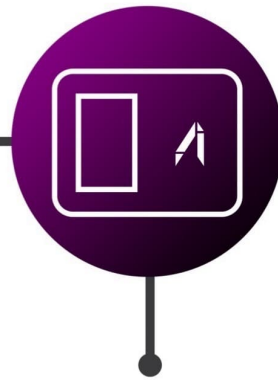
## Prototype & Pilot production

Prototyping and pilot production are essential processes before mass production. The purpose of this process is to identify and prevent potential issues, while ensuring product reliability.

After production, the product is verified and tested for abnormalities through sensor operation, LTE communication, and external environmental tests.

Products that have been inspected and approved are installed. Once the operation is tested, successful and confirmed, the supply contract is then completed.

Reliability is the pride of APIS



## Device management

Products are used differently depending on the type, hence, the management methods also vary accordingly.

APIS provides remote monitoring services for devices with LTE capabilities to maximize user flexibility and convenience.

Products with LTE communication allows immediate action when a problem is detected from the sensor data or other monitored components.

APIS products come with a 1 year full warranty and up to 5 years of limited warranty. With advancing technology, we ensure that our parts are consistently evaluated and updated if necessary. Service is always available on a warranty basis.

# Client Feedback

A device in a new form factor. Devices are made small size rather than large existing equipment can be utilized without the place restriction.

- Taiwan Client -

The AI system by APIS is a data prediction model based on the interaction between devices. I am looking forward to the next exhibition.

- U.S. Client -

## Taiwan Innotech Expo Gold & Special Award

APIS participated in the 2023 Taiwan Innotech Expo and released the APIS DAQ series incorporating its patented technology.

APIS DAQ constantly detects and updates the AQI data in real-time via LTE communications to its servers.

The device is specially designed for easy maintenance compared to both legacy and current systems out on the market.

All-in-one detecting system garnered much interest and excitement from clients and participants at the Innotech Expo.



## Supported by

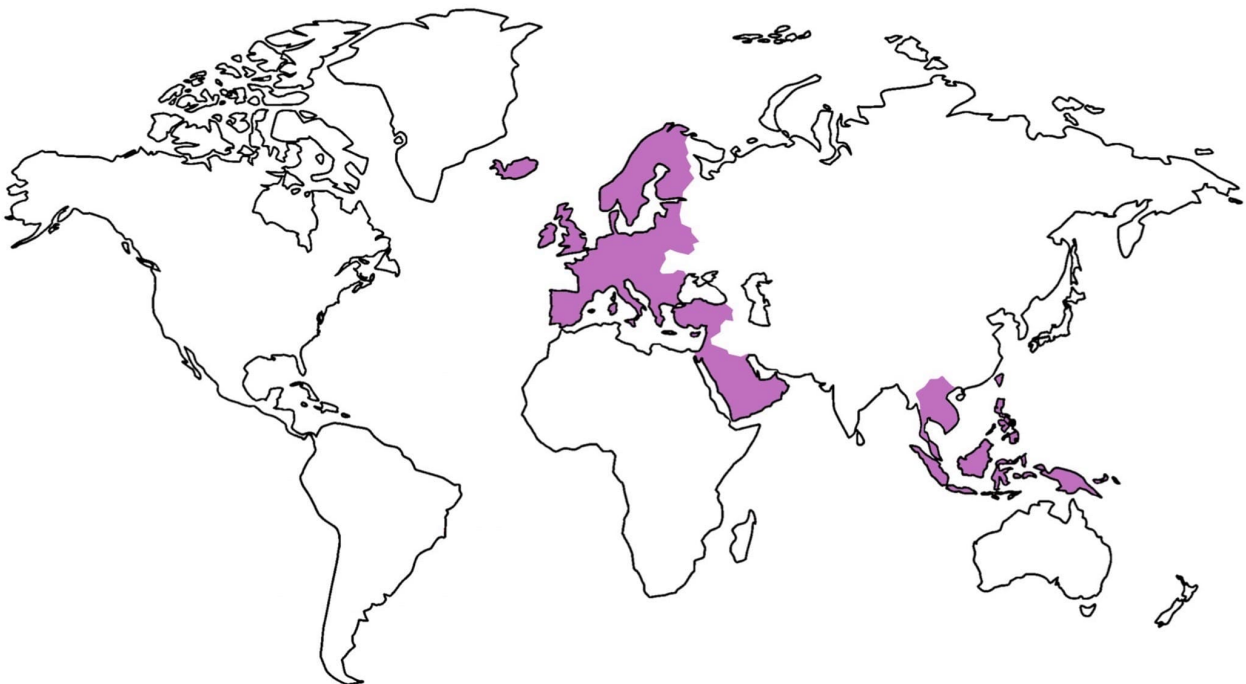


# Target Market



Singapore in March 2023

Dubai in September 2023



## Indonesia

Indonesia is one of the fastest growing countries in the world. But Jakarta has one of the most severe air pollution in the world. Installing APIS DAQ is a dependable way to collect and generate vital data that will be impactful for creating future pollution related regulations.

## Singapore

Singapore is surrounded by lots of pollution producing countries. The APIS DAQ can be deployed as an early warning system.

## Taiwan

Taiwan has not deployed any Air Quality Monitoring system as of yet. APIS DAQ is ideally the best solution for places like smart IoT city.



APIS

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