

GiA

Guardian of Indoor Air, Cyber Physical EcoSystem

E TREND MARKETING SDN BHD





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Core Value

sales, construction and maintenance management of indoor air quality system

GiAAir Quality

- GiA Cyber Physical EcoSystem (GiA CPES)
- GiA Smart Indoor Air Quality Sensing Controller
- Data Analysis and Maintenance Management
- Equipment Development and Cooperation
- Project Improvement





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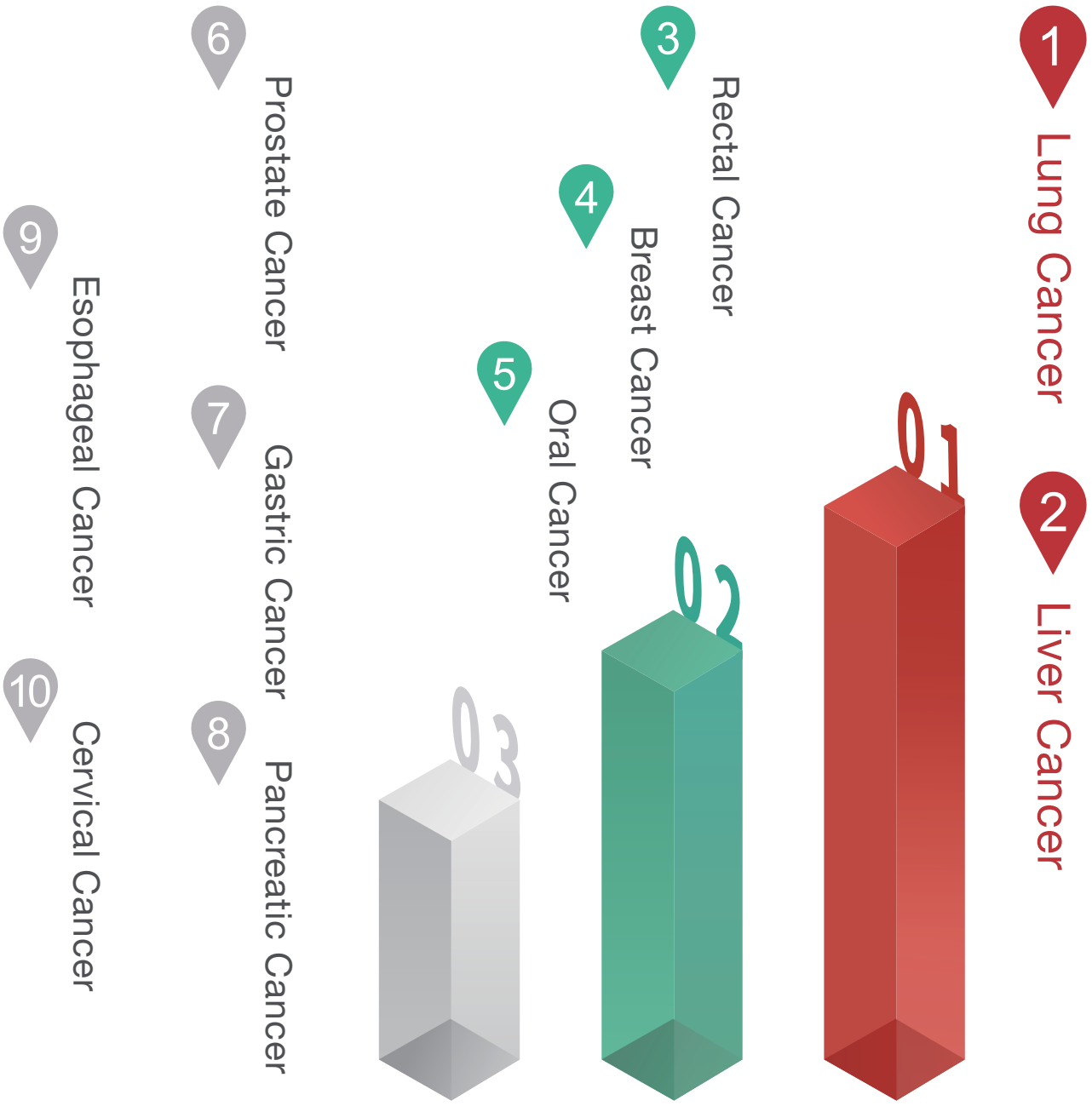
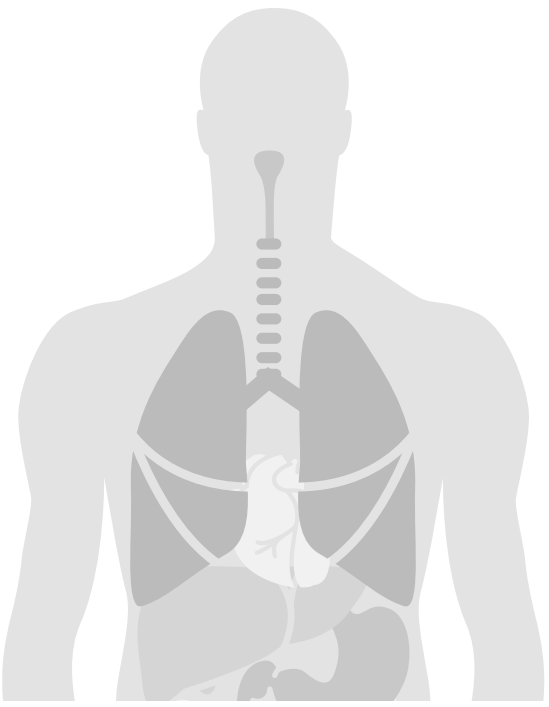
What is a healthy environment

- Zero Formaldehyde
- No PM2.5
- No mold
- Right Temperature and Humidity,
- Fresh Air Introduction (Diluted CO₂)

Improvement method of air quality

- Detection
- Filtration
- Dilution

Taiwan's Top 10 Cancers





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Core Technology About Air Quality

1

Continuous
Monitoring

2

Accurate
Diagnosis

3

Professional
Improvement

4

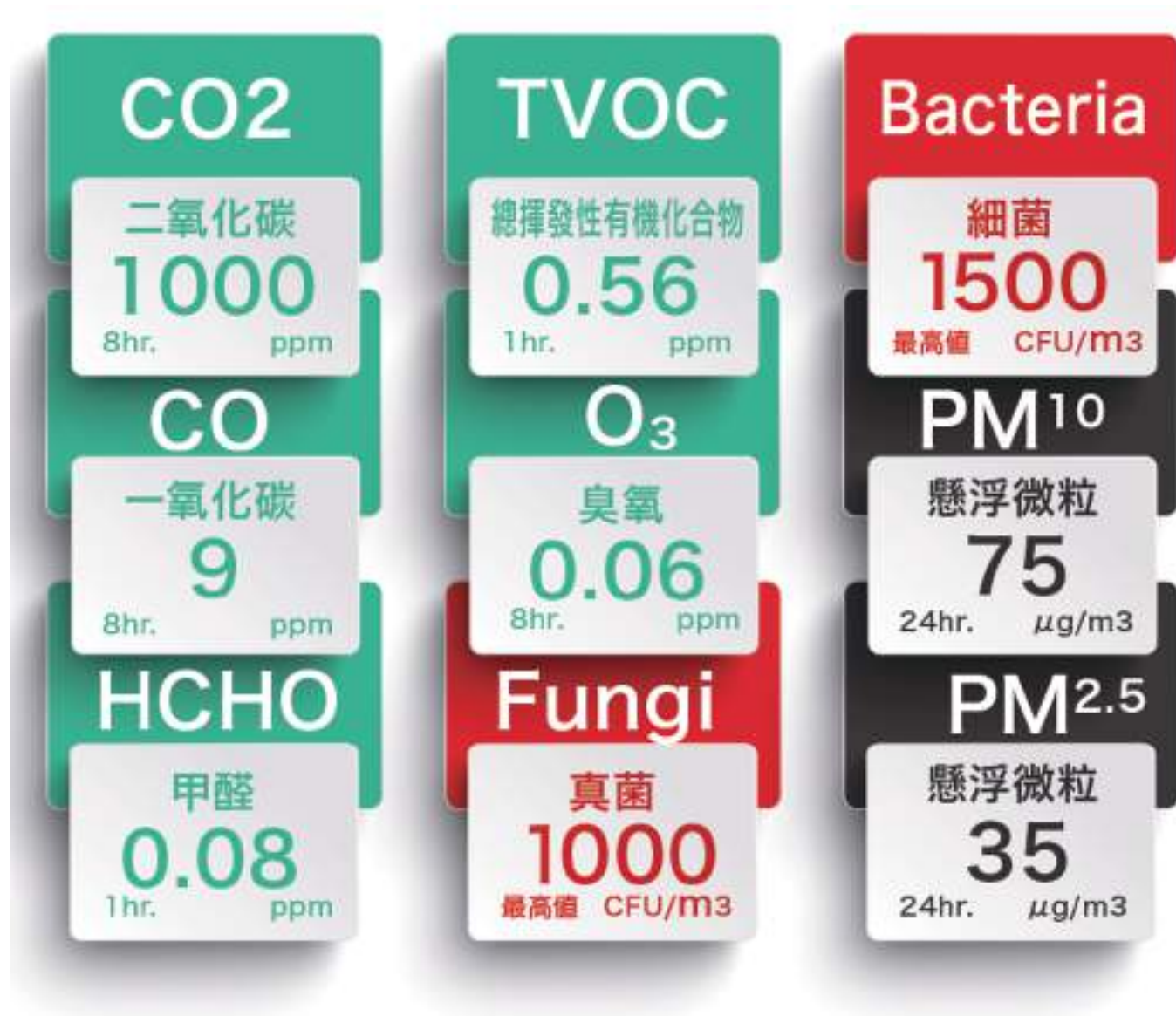
24-Hour
Monitoring

5

Maintenance
Management

Indoor Air Quality Standard Value

- Chemical Pollution
- Biotype Pollution
- Particles Pollution



Indoor Air Quality Pollution

Source 《Sick-House Consultants》

| Source | Name | Source of Occurrence | Health Effects |
|---------------------|-------------------|---|---|
| Chemical Pollution | CO ₂ | School, After-Class School, Store, Library, Cinema, Gym, Office | Dizziness, Reduced Learning Ability |
| | HCHO | Decorating Home, Office, Market, Toys, Furnitures, Painting | Spasm, Hyposmia, Decreased Consciousness, Sneezing, Have the Chills, Dermatitis, Epistaxis, Aggressive, Restlessness, Tongue Paralysis, Leukemia, Lung Cancer, Carcinogenicity |
| | TVOC | Decorating Home, Office, Market, Toys, Furnitures, Painting | Stinging Eyes or Fatigue, Stimulate the Lungs, Strong irritation to skin and mucous membrane Apnea, Asthma, Sore Throat, Headache, Cough, Chest Pain, Nausea, Conjunctiva Hyperemia, Dizziness |
| | CO | Incomplete combustion of gas, Gas Leaks | Carbon Monoxide Poisoning, Headache, Nausea, Dyspnea |
| | OZONE | Ozone-Producing Machine, Printer | Irritation to eyes and respiratory tract and affect on lung function including possibility of triggering asthma. |
| Particles Pollution | PM _{2.5} | Outdoor Air Pollution, Cooking, Smoking, Mosquito Coil Incense | Bronchitis, Pneumonia, Pulmonary edema, Lung cancer, Lung Adenocarcinoma, Cardiovascular Disease, Asthma, allergies |
| | PM ₁₀ | | |
| Biotype Pollution | Fungi | Wet Area (Counter, Kitchen, Bathroom, Corner, Walk-in Closet, Tatami) | Fungal disease, Mycotoxin Poisoning, Fungal Allergy, Liver Cancer, Lung Cancer, Kidney Failure, Hematopoietic Damage |
| | Bacterial | Confined space with crowds, Hospital, School | Cold, Viral Infection, SARS |
| | Virus | | |

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Guardian of indoor Air

Smart Indoor Air Quality Sensing Controller

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- The world's most comprehensive 12-in-1 air quality detector.
- Diversity communications interface connecting device, including 802.11, Ethernet, RS485 communications interface.
- Manual mode of purification equipment, automatic mode, situational mode.
- Outdoor air quality display & push notification of bad air quality.
- Providing mobile phone APP to remotely monitor home air quality and purification equipment operation.

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Certification

- NCC Number: CCAH18LP1800T8
- FCC Number: 2APZX-GIA-K007
- TAF Certification Temperature, Humidity
- Taipei Tech Certification PM2.5、CO2、TVOC、HCHO、CO
- Smart Indoor Air Quality Sensing Controller Design Patent: D198716
- Smart Indoor Air Quality Sensing Controller China Design Patent: ZL 2018 3 0385694.4
- The Control System of Modular Air Quality Utility Model Patent: M567857
- The Control System of Modular Air Quality China Utility Model Patent: ZL 2018 2 1101657.7





Why do we need GiA

Pollution of a building includes 3 categories

- 1. Pollution from the building
 - 2. Pollution from internal decoration
- Known Pollution

3. Pollution from the residents, such as: Detergents, Cosmetics, Pets, Incense Burning, Smoking etc.
Unknown Pollution

Detection and relevant data are necessary for searching the correct improvement method.



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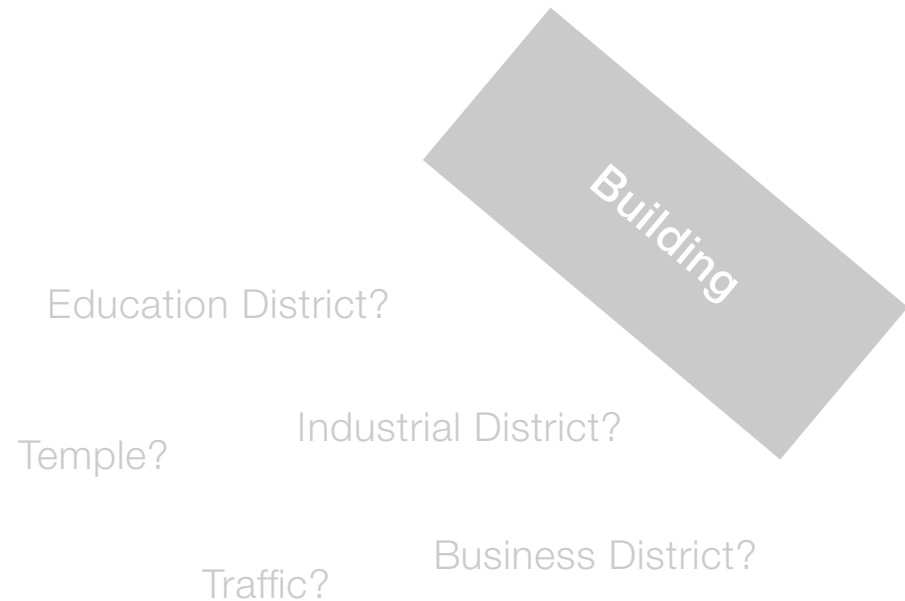


Points to be taken into consideration for ventilation planning

- Grasping wind direction
- Avoiding setting at downstream of the exhaust gas
- Avoiding possible pollution source of neighborhood
- Equipment with ventilation volume suitable for the person number
- Correct piping and tubing

Importance of ventilation

- Dilution of indoor pollutants
- Keeping comfortable and warm feeling
- Cutting part of heat load
- Removal of indoor pollutants
- Maintaining respiratory demand



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New Building, New Decoration

Planning, configuration, design and construction as per the site condition



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Heat Exchanger

150m³/h - 2000m³/h

+



Air Purification Box

750m³/h - 1000m³/h



Air Purification Box

350m³/h

90% of the pollutants can be filtered

GiA

New Building, New Decoration

Planning, configuration, design and construction as per the site condition



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Energy Recovery Ventilator
200m³/h - 350m³/h

+



Air Purification Box
750m³/h - 1000m³/h



Air Purification Box
350m³/h

90% of the pollutants can be filtered

GiA

New Building, New Decoration

Planning, configuration, design and construction as per the site condition

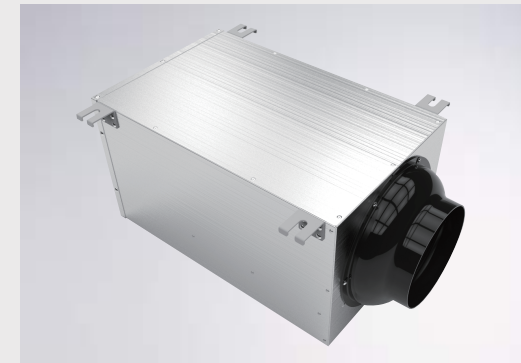


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HouseHold Recovery Ventilator

200m³/h - 350m³/h



Classroom Recovery Ventilator

700m³/h

Improvement of old building



Internal Circulation

Air Purifier

Medical grade certification



Up to **99.97%** of PM 0.3
can be filtered

External Circulation

Window Mount Fans

Simple construction provides
a satisfactory ventilation effect



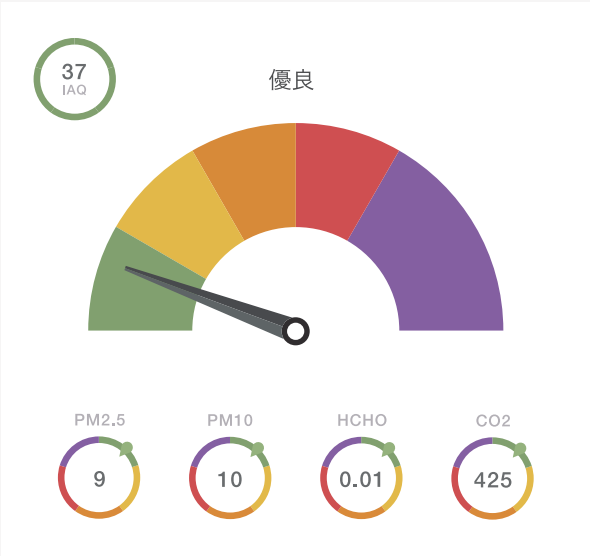
Up to **90%** of PM 2.5
can be filtered

主控台 已更新: 2018/07/16 15:01:42

下載報告

| | | | |
|---------------|-------------|--------------|----------|
| NewGreen Tech | 所屬群組 | | |
| 3 裝置 | 1 Online | 2 Offline | 2 操作者 |

IAQ 平均指數



室內地圖



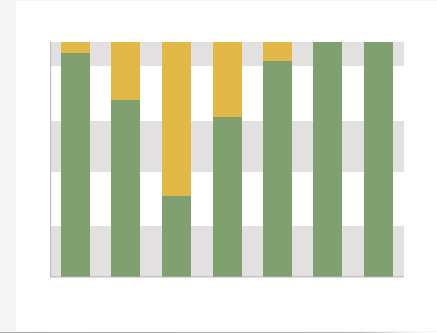
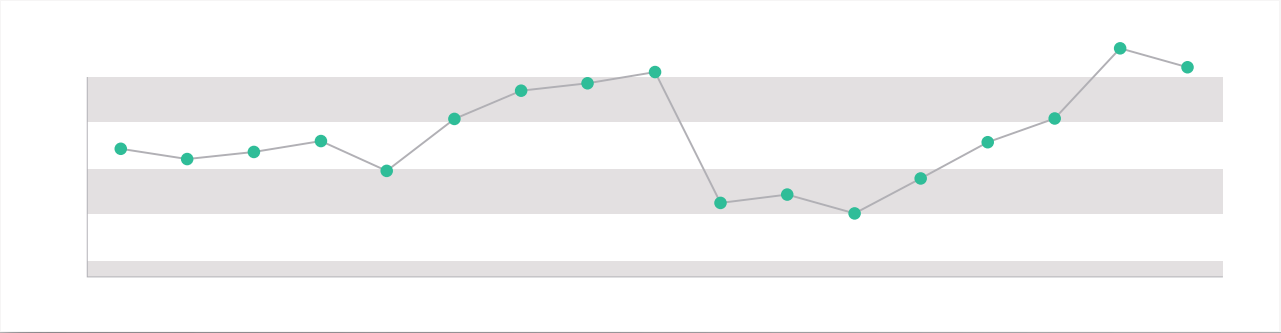
裝置 IAQ

| IAQ值 | 裝置 |
|------|--------------|
| 37 | OCFE5DE002D5 |
| 120 | OCFE5DE00307 |
| 55 | OCFE5DE0001D |

IAQ 趨勢圖

04/03/2019 日 周 月

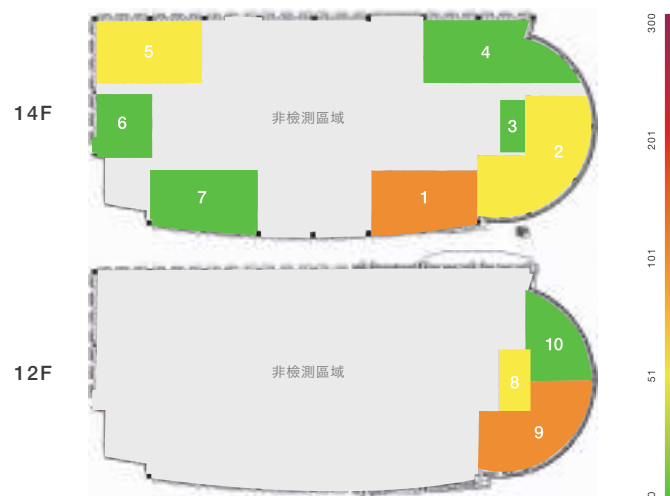
IAQ 每日分佈圖



Providing indoor air quality diagnosis report

貳、檢測結果 | 空氣汙染指數

平面圖



檢測點

- | | |
|-------------------------------|--------------------------|
| 1- 14樓行政組(內有印表機3部) | 6- 14樓查德專案辦公室(內有印表機1部) |
| 2- 14樓美洲組(位於影印室門口) | 7- 14樓企劃室(內有影印機1部、印表機2部) |
| 3- 14樓1407影印室(內有影印機1部、印表機2部) | 8- 12樓影印室(內有印表機2部) |
| 4- 14樓非洲組(附近無影印機, 14樓西側參考點) | 9- 12樓鑽探組(內有印表機2部) |
| 5- 14樓礦區拓展處(附近無影印機, 14樓東側參考點) | 10- 12樓工程組(鄰近印表機1部) |

圖: 14樓行政組(內有印表機3部)

加強室內通風換氣, 降低TVOC逸散濃度。
少, 汽車廢氣、噪音影響較小的時間點開窗通風, 其餘
維持室內良好之通風換氣。

功能之空氣清淨機, 以降低該環境之TVOC濃度。

圖: 14樓礦區拓展處(附近無影印機, 為14樓東測參考點)

健康的關係是非常密切, 長期處於高濕度環境下, 容易
疾病。

扇與空調系統, 以保持室內溫濕度平衡。

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Navigation system can be connected in series

The large digital display shows a navigation system interface. The top left features a video of two women in a modern interior. The top right displays weather and environmental data for Taoyuan City. The bottom section features an advertisement for a water fountain.

桃園市
TAYUAN CITY

26°C 75% 15:00 11:56

| | | | |
|--------------------------|------|------------------------|------|
| • AQI 空氣品質指數 | 478 | • IAQ 室內空氣品質指數 | 156 |
| • TEMP 溫度 (°C) | 24 | • HUMID 濕度 (%) | 78 |
| • PM2.5 細懸浮微粒 (µg/m³) | 70 | • PM10 懸浮微粒 (µg/m³) | 89 |
| • CO2 二氧化碳 (ppm) | 1239 | • CO 一氧化碳 (ppm) | 0 |
| • FORMAL 甲醛 (ppm) | 0.02 | • TVOC 揮發性有機物 (ppm) | 0.28 |
| • FLUORINE 氟化物 (ppm) | 1056 | • OZONE 臭氧 (ppm) | 0.03 |

我們的氣派與品味
Fountain of youth
軟水生飲機

欣寶科技工程股份有限公司 電話: 03-3812-800 欣寶科技工程

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Case Share

INSTITUTE FOR INFORMATION INDUSTRY



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Specifications & configurations of equipments used

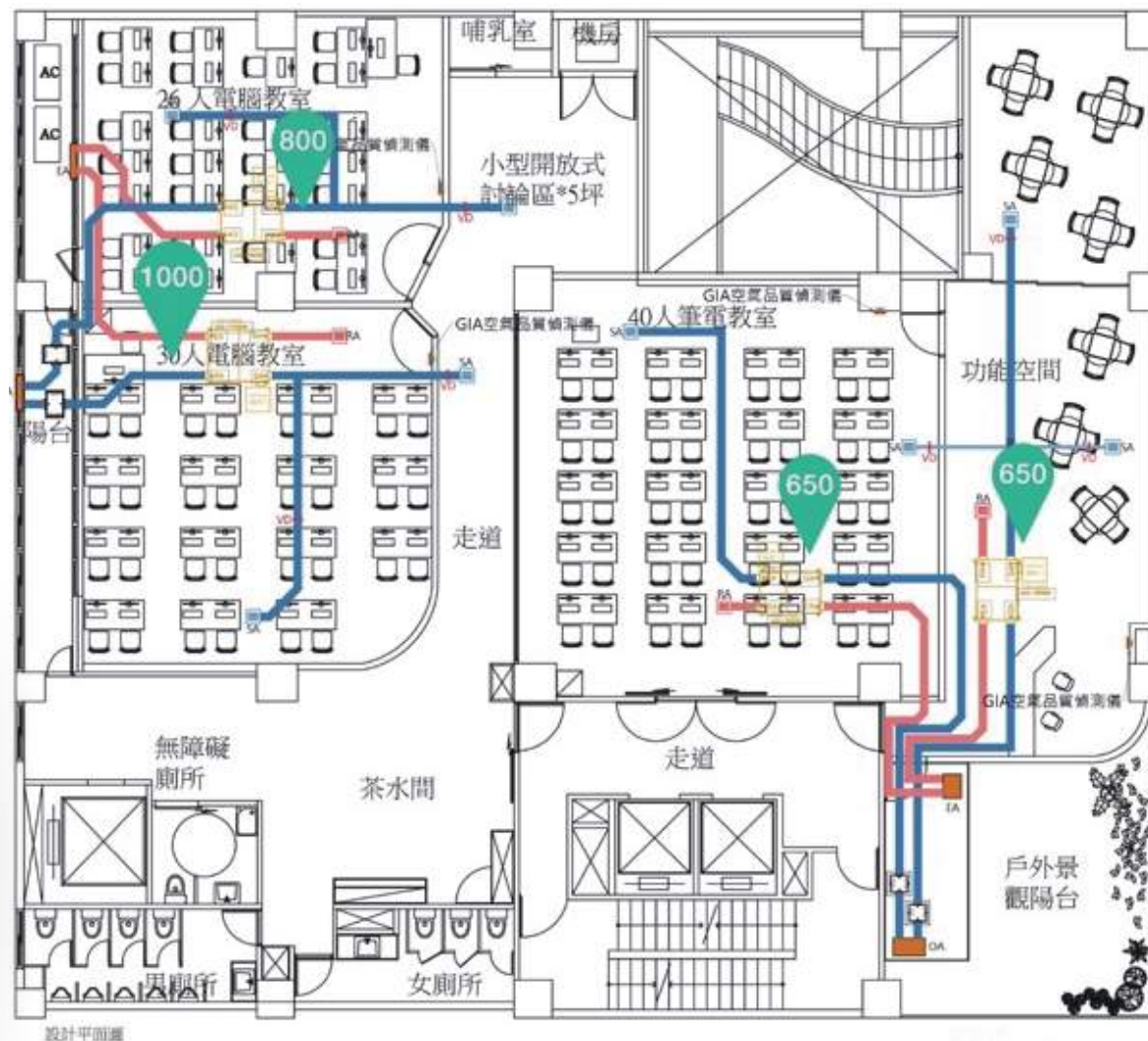


Heat Exchanger
650m³/h - 1000m³/h

+



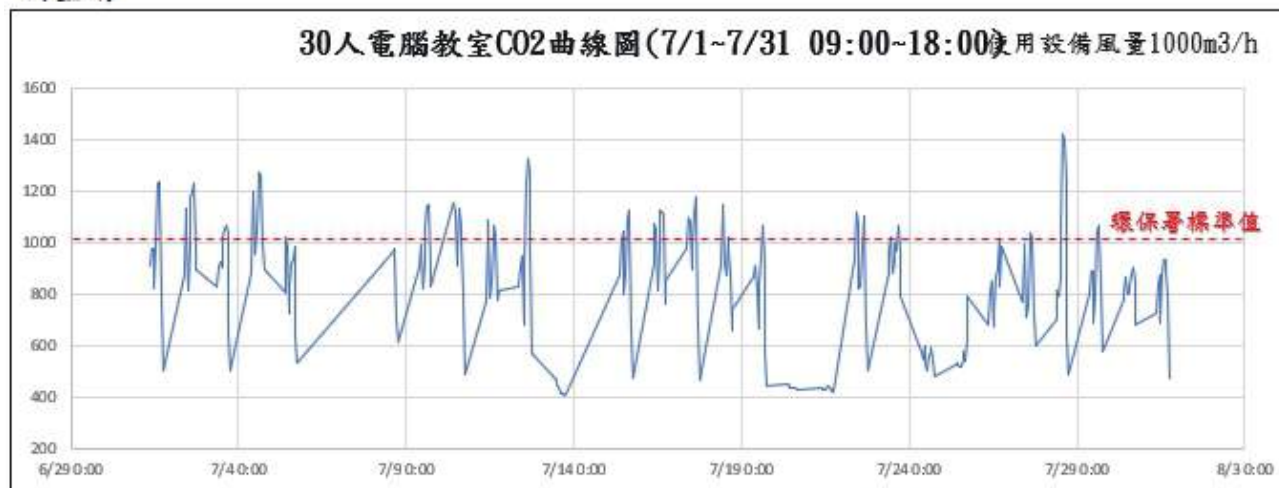
Air Purification Box
750m³/h - 1000m³/h



Data Analysis

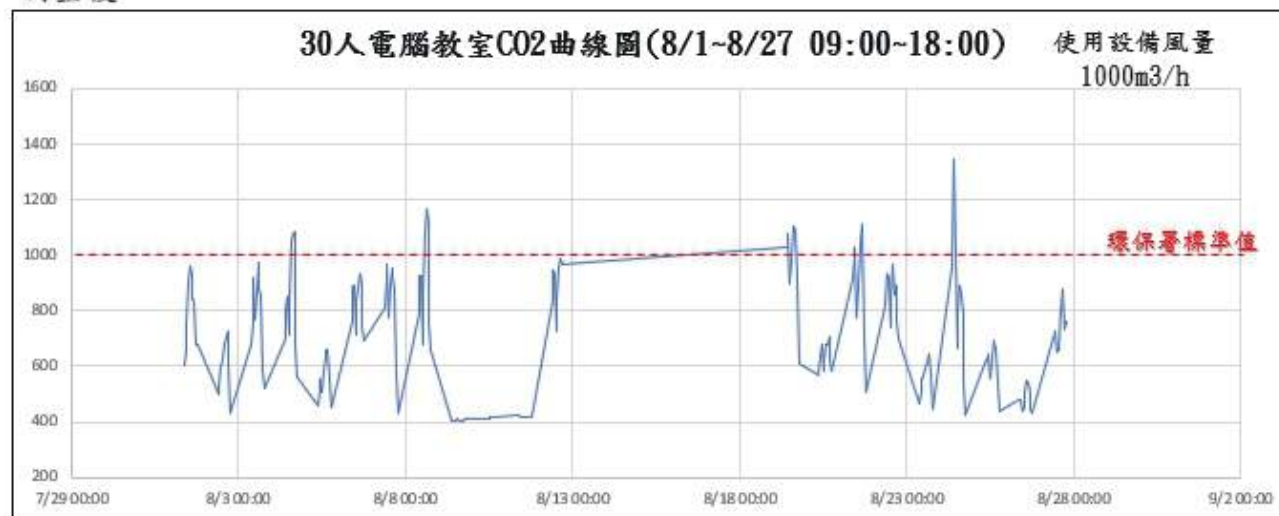
Continuous monitoring CO2 level for 8 hours

調整前



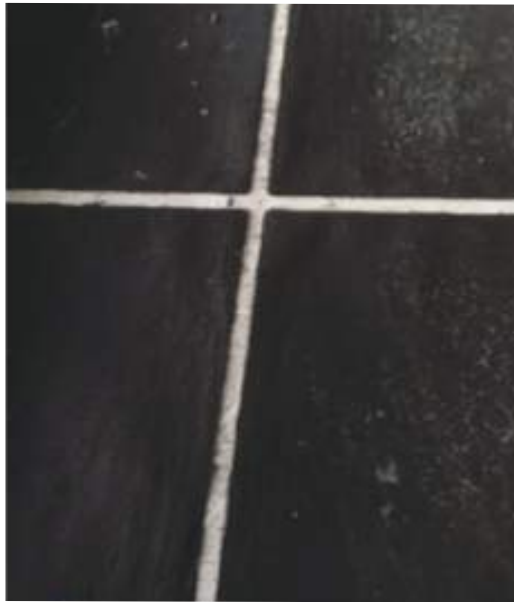
7/1~7/31 09:00~18:00 CO2平均值 841ppm

調整後



8/1~8/27 09:00~18:00 CO2平均值 701ppm

Push notification function can be provided by the APP



Primary Filter



PM2.5 Filter





Healthy indoor air requires

1. Precise, multi-functional and continuously monitoring instrument
2. Well-established ventilation
3. Equipment suitable for the space
4. Excellent construction team
5. Maintenance and management on cloud data
6. Periodic home environment diagnosis report, maintenance and management

Detailed electricity charge bill

Actual indoor number of flats 50 pings

| 2017 | Jan-Feb | Mar-Apr | May-Jun | Jul-Aug | Sep-Oct | Nov-Dec | Total |
|-----------------|---------|---------|---------|---------|---------|---------|------------|
| Electricity Fee | 1,915 | 2,563 | 6,260 | 10,885 | 7,596 | 2,995 | 32,214 TWD |
| Average | 958 | 1,282 | 3,130 | 5,443 | 3,798 | 1,498 | - |
| 2018 | Jan-Feb | Mar-Apr | May-Jun | Jul-Aug | Sep-Oct | Nov-Dec | Total |
| Electricity Fee | 2,530 | 3,022 | 9,463 | 14,541 | 7,046 | 4,223 | 40,825 TWD |
| Average | 1,265 | 1,511 | 4,732 | 7,271 | 3,523 | 2,112 | - |



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GiA Cyber Physical EcoSystem (GiA CPES)



Health: Prevention precedes over treatment



Energy Saving: introduction of fresh and good air to replace air conditioning



Electricity Saving: if ventilation equipment of Model 250m³/h is used, electricity charge is about NTD 150 per month



Environmental Protection: release of CO₂ will be reduced



Management with Big Data at Cloud: to promote the Application Program of Internet of Things for Air Quality in Taiwan



Health Diagnosis Report: to propose relevant solutions so as to reduce the population of allergy and lung cancer



100%

臺灣製造

支持MIT產品



GiA × CPES

GiA Cyber Physical EcoSystem

- Building an integrated GiA cyber physical ecosystem
- Implementing intelligent environment cleaning control plan
- Prevention precedes over treatment
- Caring for family health

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