# SMART CITIES IN TAIWAN Businesses Directory

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# Introduction

Smart cities are one of the goals that countries around the world are striving to develop, and Taiwan is world-renowned for its smart city development, with many cities ranked top in international smart city competitions. For example, Taoyuan City was honored as the 2019 Intelligent Community of the Year by the Intelligent Community Forum (ICF), and Keelung City won the "ASOCIO Smart City Award 2019" held in Thailand; furthermore, Taipei City was ranked 8th in the world and 2nd in Asia of 2020 Smart City Index, showing that Taiwan's achievements in the field of smart cities have been universally recognized.

The Overseas Community Affairs Council held the "Malaysia Smart City Industry Exchange Conference" on September 14, 2020, and compiled an Achievement Handbook afterwards, covering important information related to Taiwan and Malaysia's Smart City industry exchange and cooperation. The OCAC further organized a video and physical exchange meeting between Taiwan and Thailand, combining the network of overseas Taiwanese entrepreneurs, to lead Taiwan industries to Southeast Asian countries and even the world and to bring more business opportunities for overseas Taiwanese businessmen, Taiwan industries and global trade.

Hence, the OCAC has collected information on outstanding domestic enterprises in the fields of smart health, smart manufacturing, smart infrastructure, smart energy and environment, smart governance, smart architecture, smart mobility and smart education, and compiled a "Smart Cities in Taiwan - Businesses Directory", available on the OCAC's official website: <a href="https://Business.Taiwan-World.Net">https://Business.Taiwan-World.Net</a>, to provide references for enterprises from all over the world.

# **Contents**

1.	AAA Business Co., Ltd.	. 11
2.	Acmepoint Energy Services Co., Ltd.	. 12
3.	Advantech Co., Ltd	. 14
4.	AdvMeds Co., Ltd.	. 16
5.	AIC Inc.	. 18
6.	Allion Labs Inc.	. 20
7.	ARBOR Technology Corp.	.21
8.	ASUS CLOUD	. 22
9.	Auden Technology Corp.	. 25
10.	Augmented Intelligence Inc.	. 27
11.	Bintronic Enterprise Co., Ltd.	. 29
12.	BriteMED Technology Inc	.31
13.	CC&C Technologies Inc.	. 33
14.	Chicony Power Technology Co., Ltd.	. 35
15.	Chunghwa Telecom Co., Ltd.	. 37
16.	Coretronic Intelligent Robotics Crop. (CIRC)	. 40
17.	CTCI Advanced Systems Inc.	. 43
18.	Cypert Technology Inc	. 45
19.	Deloitte Taiwan	. 47
20.	Digisine Energytech Co., Ltd	. 50
21.	Ecolohas Energy Technology Co., Ltd.	. 53
22.	Edgecore Networks Corporation	. 56
23.	EDIMAX Technology Co., Ltd.	. 62
24.	e-Formula Technologies Inc.	. 64
25.	Elan Electronics Corporation	. 65
26.	Elite Optoelectronic Co., Ltd. (EOC)	. 68
27.	En Ke Yu Co., Ltd.	. 69
28.	Ensense Co., Ltd. (AECL Group)	.71
29.	Ever Fortune AI Co., Ltd.	. 73

30.	Far EasTone Telecommunications Co., Ltd.	75
31.	FETC International	77
32.	First General Technology Inc.	79
33.	Flowline Taiwan Co., Ltd.	82
34.	FREE Bionics Taiwan Inc	84
35.	Full Enterprise Corp.	86
36.	GeStream Technology Inc.	90
37.	GIANTech Co., Ltd.	92
38.	Global Power Technologies, Ltd.	96
39.	Hamastar Technology Co., Ltd.	98
40.	Hung Chun Bio-S Co., Ltd	100
41.	Hygeia Touch Inc.	102
42.	ICP DAS Co., Ltd.	104
43.	iLu Co., Ltd. (Xmethod Network)	106
44.	InSynerger Technology Co., Ltd	108
45.	IOEZ Inc	111
46.	Jei-Qiao Co., Ltd. (supply chain partner for Far EasTone)	112
47.	Kingwaytek Technology Co., Ltd	114
48.	Kuan Kun Electronic Enterprise Co., Ltd	116
49.	L.K. Machinery Corp. (Taiwan)	117
50.	Long New Technology & Research Co., Ltd	118
51.	Luckpump Machinery Co., Ltd	119
52.	Medimaging Integrated Solution Inc.	121
53.	Merit Lilin Ent. Co., Ltd.	123
54.	Mirle Automation Corporation	127
55.	MiTAC Information Technology Corp	129
56.	NEXCOM International Co., Ltd	132
57.	NextDrive Co.	134
58.	Parkxper	136
59.	Partilink Inc.	138

60.	QB Tech Co., Ltd	141
61.	Simplive Technology Co., Ltd.	143
62.	Sinotech Engineering Consultants, Ltd	145
63.	Skwentex International Corp (SIC)	147
64.	Smart Ageing Tech Co., Ltd.	149
65.	Smart Cities Consulting (SSC) Technology Co., Ltd	151
66.	Smart Frequency Technology Inc.	154
67.	Soteria Biotech Co., Ltd	156
68.	Speed 3D Inc.	159
69.	Superior Mechanical Solutions Corp.	160
70.	SYSCOM Computer Engineering Co.	162
71.	Sysinno Technology Inc	163
72.	TaiHao Medical Inc.	165
73.	Taiwan Optical Platform Co., Ltd. (top MSO)	166
74.	Taiwan Power Company	169
75.	Taiwan Smart Energy Industry Association (TaiSEIA)	170
76.	Tatung System Technology Inc.	171
77.	THI Consultants Inc.	174
78.	Turing Drive Inc	178
79.	Trade-Van Information Services Co.	180
80.	Tronco Electric Machinery Inc.	182
81.	Ubiik Inc	184
82.	Verdigris Technologies Inc.	186
83.	Veryya Co., Ltd.	189
84.	VIA Technologies Inc.	191
85.	Wishing-Soft (supply chain partner for Far EasTone )	193
86.	Wistron Medical Technology	195
87.	WFE Technology Corp.	197
The	OCAC "Global Digital Platform for Overseas Compatriot Service"	200

No.	Company	Page
Smart Hea	althcare	
1	Advantech Co., Ltd.	14
2	AdvMeds Co., Ltd.	16
3	ARBOR Technology Corp.	21
4	ASUS CLOUD	22
5	Augmented Intelligence Inc.	27
6	BriteMED Technology Inc.	31
7	CC&C Technologies Inc.	33
8	Chunghwa Telecom Co., Ltd.	37
9	Cypert Technology Inc.	45
10	Deloitte Taiwan	47
11	Edgecore Networks Corporation	56
12	Ever Fortune.AI Co., Ltd.	73
13	FREE Bionics Taiwan Inc.	84
14	Full Enterprise Corp.	86
15	GeStream Technology Inc.	90
16	GIANTech Co., Ltd.	92
17	Hung Chun Bio-S Co., Ltd.	100
18	Hygeia Touch Inc.	102
19	IOEZ Inc.	111
20	Medimaging Integrated Solution Inc.	121
21	Partilink Inc.	138
22	Simplive Technology Co., Ltd.	143
23	Smart Ageing Tech Co., Ltd.	149
24	Soteria Biotech Co., Ltd.	156
25	Superior Mechanical Solutions Corp.	160
26	TaiHao Medical Inc.	165
27	Wistron Medical Technology	195
Smart Ma	nufacturing	·
1	L.K. Machinery Corp. (Taiwan)	117

No.	Company	Page		
Smart Infrastructure				
1	AIC Inc.	18		
2	ARBOR Technology Corp.	21		
3	ASUS CLOUD	22		
4	CC&C Technologies Inc.	33		
5	Coretronic Intelligent Robotics Crop. (CIRC)	40		
6	Edgecore Networks Corporation	56		
7	First General Technology Inc.	79		
8	Hamastar Technology Co., Ltd.	98		
9	iLu Co., Ltd. (Xmethod Network)	106		
10	InSynerger Technology Co., Ltd.	108		
11	IOEZ Inc.	111		
12	Jei-Qiao Co., Ltd. (supply chain partner for Far EasTone)	112		
13	Kuan Kun Electronic Enterprise Co., Ltd.	116		
14	Long New Technology & Research Co., Ltd.	118		
15	Luckpump Machinery Co., Ltd.	119		
16	MiTAC Information Technology Corp.	129		
17	NEXCOM International Co., Ltd.	132		
18	QB Tech Co., Ltd.	141		
19	Smart Frequency Technology Inc.	154		
20	Speed 3D Inc.	159		
21	Tatung System Technology Inc.	171		
22	Verdigris Technologies Inc.	186		
Smart Ener	Smart Energy/Environment			
1	AAA Business Co., Ltd.	11		
2	Acmepoint Energy Services Co., Ltd.	12		
3	Allion Labs Inc.	20		
4	ARBOR Technology Corp.	21		
5	Auden Technology Corp.	25		
6	Augmented Intelligence Inc.	27		

No.	Company	Page
7	Digisine Energytech Co., Ltd.	50
8	Ecolohas Energy technology Co., Ltd.	53
9	Edgecore Networks Corporation	56
10	EDIMAX Technology Co., Ltd.	62
11	e-Formula Technologies Inc.	64
12	Ensense Co., Ltd. (AECL Group)	71
13	First General Technology Inc.	79
14	Flowline Taiwan Co., Ltd.	82
15	ICP DAS Co., Ltd.	104
16	iLu Co., Ltd. (Xmethod Network)	106
17	InSynerger Technology Co., Ltd.	108
18	Luckpump Machinery Co., Ltd.	119
19	NextDrive Co.	134
20	Sinotech Engineering Consultants, Ltd.	145
21	Skwentex International Corp.	147
22	Smart Cities Consulting (SSC) Technology Co., Ltd.	151
23	Smart Frequency Technology Inc.	154
24	SYSCOM Computer Engineering Co.	162
25	Sysinno Technology Inc.	163
26	Taiwan Power Company	169
27	Taiwan Smart Energy Industry Association (TaiSEIA)	170
28	Ubiik Inc.	184
29	Verdigris Technologies Inc.	186
30	Veryya Co., Ltd.	189
31	Wishing-Soft (supply chain partner for Far EasTone)	193
Smart Gove	ernance ernance	
1	ARBOR Technology Corp.	21
2	CC&C Technologies Inc.	33
3	Chunghwa Telecom Co., Ltd.	37
4	Deloitte Taiwan	47

No.	Company	Page	
5	Edgecore Networks Corporation	56	
6	GIANTech Co., Ltd.	92	
7	Global Power Technologies, Ltd.	96	
8	iLu Co., Ltd. (Xmethod Network)	106	
9	MiTAC Information Technology Corp.	129	
10	Smart Cities Consulting (SSC) Technology Co., Ltd.	151	
11	Taiwan Optical Platform Co., Ltd. (top MSO)	166	
12	Trade-Van Information Services Co.	180	
13	Verdigris Technologies Inc.	186	
Smart Build	Smart Building & Housing		
1	ARBOR Technology Corp.	21	
2	Bintronic Enterprise Co., Ltd.	29	
3	CC&C Technologies Inc.	33	
4	Chicony Power Technology Co., Ltd.	35	
5	Edgecore Networks Corporation	56	
6	Elan Electronics Corporation	65	
7	Elite Optoelectronic Co., Ltd. (EOC)	68	
8	En Ke Yu Co., Ltd.	69	
9	First General Technology Inc.	79	
10	Full Enterprise Corp.	86	
11	iLu Co., Ltd. (Xmethod Network)	106	
12	InSynerger Technology Co., Ltd.	108	
13	Luckpump Machinery Co., Ltd.	119	
14	Mirle Automation Corporation	127	
15	Smart Frequency Technology Inc.	154	
16	Sysinno Technology Inc.	163	
17	Tronco Electric Machinery Inc.	182	
18	Verdigris Technologies Inc.	186	
19	VIA Technologies Inc.	191	
20	WFE Technology Corp.	197	

No.	Company	Page	
Smart Mobility			
1	ARBOR Technology Corp.	21	
2	CC&C Technologies Inc.	33	
3	CTCI Advanced Systems Inc.	43	
4	Edgecore Networks Corporation	56	
5	Far EasTone Telecommunications Co., Ltd.	75	
6	FETC International	77	
7	First General Technology Inc.	79	
8	Kingwaytek Technology Co., Ltd.	114	
9	Merit Lilin Ent. Co., Ltd.	123	
10	NEXCOM International Co., Ltd.	132	
11	Parkxper	136	
12	Smart Cities Consulting (SSC) Technology Co., Ltd.	151	
13	Smart Frequency Technology Inc.	154	
14	Taiwan Optical Platform Co., Ltd. (top MSO)	166	
15	Tatung System Technology Inc.	171	
16	THI Consultants Inc.	174	
17	Turing Drive Inc.	178	
Smart Educ	Smart Education		
1	Edgecore Networks Corporation	56	
2	GeStream Technology Inc.	90	

## 1. AAA Business Co., Ltd.

**Category:** Smart Energy/Environment

## The main products or services:

Global compliance testing for smart lighting and energy in cities and any applications of wireless connections. RF, EMC, SAR, Safety, Telecom, OTA, Energy Saving, Mobile Payment, Performance Testing.

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#### The Company

ATL (A Test Lab Techno. Corp.) is a 3<sup>rd</sup> party lab for compliance testing. We support customer to get worldwide type approval for FCC, CE, IC, RCM, TELEC, JATE, MIC, NCC, BSMI...etc. The products include Mobile Device, Networking, Industrial, IT, Medical, Lighting, Home security, controlling, and IoT devices.

#### The Challenge

The wireless connectivity base on different application, it will need to adapt different regulation requirement.

#### The Solution

ATL provide testing service for 5G/4G/3G mobile, WiFi, Bluetooth, Zigbee, ZWave, Lora, RFID technologies. There are often use technologies which can be utilized for a multitude of applications, from Smart Parking, Environmental Monitoring, medical cure equipments to Smart Refuse.

- ATL global compliance testing & various testing service for wireless communication support last miles of "Smart City" applications of its time to market requirements.
- Deliver major elements of smart city connectivity.

# 2. Acmepoint Energy Services Co., Ltd.

Category: Energy Service Company

The main products or services: One-stop services for energy solution, from

consultation, planning, design to construction.

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## The Company

Having the sufficient access to electricity is seen as a basic right by modern society. Photovoltaic system offers a solution that has zero emission, fully renewable, and can efficiently provide power supply in a short period of time. Acmepointes is dedicated to building exceptional solar power plants and to providing renewable energy related and smart grid services.

## The Challenge

Smart grid is an emerging facet of power industry that integrates numerous advanced technologies to improve efficiency, reliability, economics and sustainability of power generation, transmission and distribution. But there're still challenges in its deployment, such as upgrading existing infrastructure to cope with the smart grid can be time consuming and pricy, high capacity renewable energy plant requires high capacity of transmission cable which often comes with higher loss.

#### The Solution

Smart grid is a large scale project that needs to incorporate city's infrastructure. Acmepoint has been the leader in building advanced solar plant, with Acmepoint's on-stop services, we'll assess the condition and options to tailor-made the solution that equips SCADA system and motoring system of energy generation and distribution that allows the client to manage the plant from afar; we can also integrate a storage system depending on the needs.

- Acmepoint offers all types of solar plant (floating, ground-mount, and rooftop) planning, design, procurement and construction.
- Plant's long-term operation and maintenance service.
- Deliver major improvements in smart energy.

## 3. Advantech Co., Ltd.

Category: Smart Health

#### The main products or services:

Advantech iHealthcare is a leading player in the global healthcare market with decades of proven experience. Engage with smarter hospitals, Advantech provides medical computing platforms, in order to assist hospitals with establishing patient-centered healthcare environments.

Starting with high-performance as well as medical-grade products, such as medical computers, medical carts, and medical displays, Advantech iHealthcare branches out into integrated platforms to offer more intelligent hospital solutions.

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#### The Company

Advantech's corporate vision is to enable an intelligent planet. The company is a global leader in the fields of IoT intelligent systems and embedded platforms. To embrace the trends of IoT, big data, and artificial intelligence, Advantech promotes IoT hardware and software solutions with the Edge Intelligence WISE-PaaS core to assist business partners and clients in connecting their industrial chains. Advantech is also working with business partners to co-create business ecosystems that accelerate the goal of industrial intelligence.

#### The Solution

Advantech iHealthcare has worked with international medical equipment manufacturers and system integrators to assist hospitals with establishing patient-centered healthcare environments and universal digital healthcare platforms. Empowered by IoT technology, Advantech iHealthcare offers solutions in the following five fields: Digitizing iHealthcare, Integrated OR Imaging and Video Interoperability, Intelligent Ward and Patient Engagement, iMeditation Solution, and Intelligent Hospital Management.

#### **Digitizing iHealthcare**

Advantech iHealthcare provides medical devices, which are able to process and store medical data, combined with Advantech DeviceOn, a cloud computing platform, to enhance overall efficiency in hospitals.

## **Integrated OR Imaging and Video Interoperability**

With the increased complexity of surgical procedures, the working efficiency at operating room is reducing. Advantech's AVAS solutions support real-time image and video streaming, centralized control, remote teaching and consultation, and cloud-based management in order to streamline operating room workflows.

#### **Intelligent Ward and Patient Engagement**

Intelligent ward solution allows faster communication between medical professions and patients to meet the patients' needs. Moreover, the bedside information systems provide value-add services. Through the solution, hospitals can improve service quality as well as patient satisfaction.

#### iMedication Solution

Applying RFID technology, Advantech iMedication solutions fulfill the requirements for close loop medication administration (CLMA) in hospitals. In addition, combined with medication carts, Advantech iMedication solution assists hospitals to ensure patient safety.

#### **Intelligent Hospital Management**

Advantech iHealthcare designs hospital-focused command center, a solution based on Advantech WISE-PaaS, to assist hospital with overall management. With different sub-modules, hospitals are able to monitor overall workflow. For example, the asset management and patient management can be easily realized through RTLS.

## 4. AdvMeds Co., Ltd.

Category: Smart Health/Tele-care

**The main products or services:** A Smart city concept for integrating urban and rural, island into a participatory health Care service.

#### How to contact

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#### The Company

AdvMeds focuses on integrating medical and healthcare services through ICT (information and communications technology). We gather outstanding talents and obtained investment from hospitals in Taiwan and partners from Silicon Valley. Provide smart health IT solutions and to help our partners improve their quality, effectiveness of care services. We have a wide range of clients, from individuals nearby CV stores, pharmacy, department stores, communities, hospitals, enterprises, include 18 countries project sites, and mainly focus on SEA countries (Southeastern Asia).

## The Challenge

To look after the health of residents has always been one of the most important issues of becoming a smart city. Especially those stay in the rural area or islands and elder population, their healthcare is a difficult problem for governments and companies to take care. This solution demonstrates how future medical care should be presented, changing the medical care scenario from one signal party becoming the holistic health management group. We present a showcase in 3 major cities which cross in a modern city, rural area and island in Taiwan, total co-work with 255 hospitals and clinics that bring in participatory cloud and APP for doctors can provide additional services without restrictions to share the information and co-care with not just the patient, their family, community but also other doctors. With build 130 Self KIOSKs for data collection such as different vitals, questionnaire and give personalized feedback. Finally, accumulate user-health big data through various service scenarios to analyze and explore future health value-added services and business opportunities in different channels. This is a combination of an online/offline service model and will be the next opportunity and trend for health care in the near future.

#### The Solution

Our solutions include cloud HIS (hospital information system) implementation so called mHIS cloud, smart personalized care platform so called mPHR cloud, self-service measurement station so called Smart Health KIOSK, Personalized care APP, Queuing and Calling platform (mScheduler), and medical device linkage IoT

solutions (LinkBox). We expect to build a smart medical ecosystem which enables everyone living in an omnipresent healthy and convenient environment. The project starts from the community, deep into individuals and families, finally integrated with core hospital and preliminary care facility. The domains include public health, medical, remote health care, IOT devices, personal AI data analysis, health promotion governance, share economics business model. Smart Health Station is an All-in-One self-service KIOSK, which provides the measurement of blood pressure, blood oxygen, W/H, ECG...etc. The Personalize Analysis results can be shared with the Doctor and families. Participatory Health Cloud and APP is the first platform to bring together doctors, case managers, community, users and their families to maintain a personal health record through a cloud and co-care model. Doctors can provide additional services without restrictions, such as remote applications, data collection and family co-care.

## The Opportunity

This project demonstrates how future medical care should be presented, a combination of online and offline service model. Due to this project, the project outcome will lead the next opportunity and trend for medical care development. The model has been successfully promoted in places like subway stations, hospitals, and communities in Thailand and Malaysia. With the community-based service model and platform promoted by this project, all cooperative medical institutions, communities, and individuals are able to develop new models of health care services on this basis. and changing the medical care scenario from one signal care party becoming the holistic health management group, and improve overall people's health and reduce the waste of medical resources.

## 5. AIC Inc.

Category: Smart Infrastructure

The main products or services: Server for Computing & Storage Solution

#### How to contact

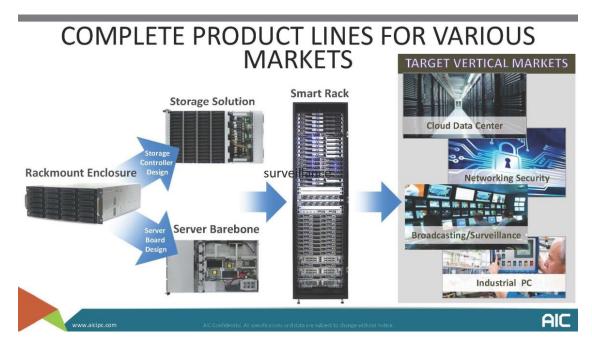
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#### The Company

AIC is the leading provider of both OEM/ODM and COTS (commercial off-the-shelf) and server and storage solutions. With expert in-house design, manufacturing and validation capabilities, AIC's products are highly flexible and configurable to any form factor, standard or custom. AIC leads the industry since 1996 with experience in mechanical, electronic, system-level engineering as well as a dedication to innovation and customer satisfaction. Headquartered in Taiwan, AIC has offices and operations throughout the United States, Asia and Europe.

Combing the wide range application such as Cloud Virtualization, Fast/Density storage, AI, Cloud Mail, which can easily meeting customer infrastructure deployment.



## The Challenge

Customized solution adapting to each independent requirement will be the most challenge for proper solution providing in order to satisfy end client actual demand under different culture involving.

# **The Solution**

AIC has been working with several local applications.

- Data center/Carrier grade virtualization IaaS, PaaS & SaaS deployment
- AI & Density Storage solution for video surveillance infrastructure
- Office suit solution under Private/Public Cloud environment

## 6. Allion Labs Inc.

**Category:** Smart Energy/Environment

The main products or services: Providing testing service

#### **How to contact**

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## The Company

Allion is a test lab in the worldwide. We are the first one test lab to provide the Wi-SUN FAN certification in the worldwide. Wi-SUN is a great way to build smart networks for metering controls. FAN (Field Area Network) is mostly deployed for infrastructure or large-scale networks such as smart power grids, smart traffic lights.

#### The Challenge

Reliability, Connectivity, Data management, Security

#### The Solution

Allion can structure customized conditions into various user scenarios, helping fully validate the certification, functionality, performance, and interoperability of your IoT products.

## **The Opportunity**

Third Party Product Quality Endorsement

# 7. ARBOR Technology Corp.

**Category:** Smart Infrastructure, Smart Building & Housing, Smart Mobility, Smart Health, Smart Governance, Smart Energy

**The main products or services:** ARBOR is a global provider of dedicated industrial IoT computing and mobility solutions.

#### How to contact

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## The Company

ARBOR is a global provider of dedicated industrial IoT computing and mobility solutions. ARBOR offers comprehensive system integration, customer-centric design services, embedded systems, automation products, and global logistics support. We cooperate closely with our partners to develop complete solutions for a wide array of applications across a diverse range of industries. Our mission is to enable an intelligent planet by providing mobility and embedded computing products that make working and living smarter. With ARBOR, there is no limit to how smart your business can be!

#### The Challenge

Smart Factory, Smart City, Smart Hospital..., to make things "Smart" has become an imperative trend, making people and society lifestyle to be manageable and affordable.

How can technology innovation help smart healthcare in dealing with growing portion of elderly people, obesity and diabetic patients issues will be the challenge.

#### The Solution

ARBOR provides a range of medical computing solutions to offer efficient communication, patient care, vital sign monitoring and telemedicine within the healthcare industry. With ready access to patient records, results and medication dispensation, healthcare professionals can make informed decisions, avoid unnecessary delays and provide a more comfortable in patient experience.

- Advanced 802.1AC/AX and BLE wireless connectivity which forms the network infrastructure for compelling 'Smart Healthcare' solutions
- Using cloud management solution to organize borderless smart healthcare network, which provides seamless communication and management between medical personnel and patient.
- Portable medical tablet gives medical personnel abilities to gather patient information anywhere and quick responses instruction remotely to front-line personnel.

## 8. ASUS CLOUD

Category: Smart Health, Smart Infrastructure

The main products or services: Innovative wireless network which revolutionizes smart lighting and energy in cities. Smart Medical Application Ecosystem – Omni Care Smart Medical Materials Sharing Platform

The OmniCare smart medical material sharing platform provides a variety of wearable devices, allowing hospitals to select the medical materials needed to obtain the required physiological measurement data. Lightweight and convenient through wearable devices, it can be applied to patients who need continuous monitoring.



## Smart Medical Application Ecosystem –Health Bot Real cases

System Maintenance and Trial Sites of the National Health Agency Health Cloud from the second half of 2016 to the first half of 2019

-Chiayi City, Keelung City, Taipei City

Cooperation with Keelung and Hsinchu to participate in EU PULSE project

—For Asthma and T2 Diabetes

Participation in EU Activage Senior Technology Research Project

-10 Senior Use Cases / 9 Fields

Collaborating with Beishi United Doctors for the Dementia Hospital Project

—Health Passbook Databank Project

#### How to contact

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## The Company

ASUS Cloud is the operating team that develops cloud services for ASUS. Since 2008, it has invested 500 million NTD in capital to develop its own technology, the OmniStor cloud data platform with massive data storage and computing capabilities. Integrated innovation with the Internet of Things.

In recent years, we have integrated the expertise of ASUS Group in various fields to accelerate the development of smart city application technology.

Based on the ASUS IoT application platform OmniThings and terminal devices develop urban solutions in vertical fields and introduce ASUS personal cloud, health care, education technology and smart city applications in vertical fields.

## The Challenge

The field of smart cities is wide, and all the hardware and software will be redefined. Each industry will also actively step out of its own business, hoping to expand and strengthen its own business through information integration and resource sharing. Therefore, two larger problems will arise:

- 1) Different specifications
  - There are many types of sensors developed by various brands, and the information collected will also be diversified. How to summarize the huge amount of data and uneven information into useful information is a direction worth considering.
- 2) Personal issues

Smart cities are the ultimate display of a mixed IT/OT environment. Huge amounts of data will cause hacker attacks, so personal security will be a very important protection issue.

#### The Solution

As for the 6th "The Challenge," Asustek proposes the following solutions:

- 1) Different data specifications: ASUS Cloud launches products such as Omnicare smart medical materials sharing platform in the field of smart medical care, hoping to solve the problem of different specifications; In addition to integrating products within the group, ASUS also cooperates with many domestic manufacturers Cooperate to solve the problem of data specifications in advance, so that hospitals or local governments can reduce the time and effort involved in tandem testing of different equipment when using our solutions.
- 2) Individual issues: ASUS Cloud has always attached great importance to information security. For data transmission, the national security AES 256 encryption method is used. At the same time, the ASUS Cloud Development Team also has The ISO 27001 information security management system is verified and incorporated into the principles of the EU GDPR. The personal data of the management platform system can effectively prevent hacking.

## The Opportunity

1) Traditionally, cities provide a variety of services. These services are largely independent of each other. After the introduction of smart city solutions, these services can be integrated to provide a more convenient living environment, and then induce people to further technology demand.

- 2) In the medical industry, the introduction of solutions can more effectively save the broken work of medical staff, allowing medical staff to invest in more valuable work matters or obtain more accurate medical information.
- 3) For the overall industry, a vertical ecosystem can also be created to drive the economic chain of upstream and downstream industries

# 9. Auden Technology Corp.

**Category:** Smart Energy/Environment

The main products or services: Innovative wireless antenna, equipment & testing solutions which revolutionizes smart lighting and energy in cities

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## The Company

The Auden Group is the world's leading service provider of wireless technology communication.

We have been devoting to technology development of designing and manufacturing of wireless communications. Relying on professional team management and strong RF core competence, we have achieved various types of wireless application development in the market. Auden Group's development is based on communication technology, with cross-disciplinary expansion and integration services.

Including Wireless Communication Business, Equipment Marketing Business, Smart Link 5G mmW Business, Testing and Certification Services Business, Green Energy Business and Information Security Services.

## The Challenge

At the moment there are a multitude of "Smart City" application and service providers, all competing in different silos. Cities often end up investing in different architectures, one for each solution (e.g. parking, smart lighting, and environmental monitoring). This is very efficient in both use of infrastructure and cost. Solutions in the "Smart City" sector are all unique, and often one size doesn't fit every problem – each geography has a particular set of requirements.

The wireless connectivity base on different applications, it will need customize design.

#### The Solution

Auden has been working to develop the technology various solutions target to Smart City applications, ex. 5G antenna module, and high efficiency small size for the Smart Lighting system. The wireless antenna solutions & testing equipments can be utilized for a multitude of additional applications, from Smart Parking, Environmental Monitoring, medical cure equipments to Smart Refuse.

- Auden antenna & testing equipment solution, global compliance testing & various testing service for wireless communication enhance "Smart City" applications' wireless connectivity, efficiency and information security.
- Wireless network which forms the basis for compelling "Smart City" solutions
- Deliver major elements of smart city connectivity.

# 10. Augmented Intelligence Inc.

Category: Smart Energy/Environment, Smart Health, Smart Hospitals

## The main products or services:

(1) **BodyMap** is a medically accurate representation of the human body that can be manipulated in 3D virtual reality. Our strict data reconstruction and design methods set us apart from competitors and provides users with realistic visualizations of every detail of the human body. Users may interact with the virtual body in numerous ways, including walking into the virtual body for a detailed inspection of internal organs, grabbing out anatomy structures for a closer look, and simulating instrument insertion techniques with instant haptic feedback.

## **Choose BODYMAP if you are:**

## A health professional student

- 1. solidify your anatomy learning
- 2. quiz yourself on anatomy knowledge and view results to assess understanding
- 3. practice procedural techniques such as scalpel insertion or syringe injection

#### A clinical educator of anatomy

- 1. develop more effective teaching methods and improve curriculum based on student quiz feedback
- 2. increase student engagement and interaction through instant and shared viewing design visually appealing lectures using screenshots or animations captured from our application

#### An institution

- 1. attract students looking for technology-based learning solutions to enhance traditional teaching methods
- 2. reach more students remotely so that those not in physical attendance may still participate in learning
- (2) **DigiTwin** converts 2D patient medical images (MRI, CT scan) into 3D virtual images in less than 30 seconds. This technology allows clinicians to engage patients with their Digital Twin for improved patient education and shared decision making processes leading to better treatment plans.

# **Choose DIGITWIN if you are:**

#### A clinician

Better connect with and educate patients so as to more efficiently reach shared decisions and formulate appropriate treatment plans

#### A clinic or wellness center

Attract patients who wish to spend more time with their health providers to learn about their health conditions in detail and take part in treatment decisions

(3) **AcuMap** leverages proprietary BodyMap technology to visualize various meridian pathways which are otherwise invisible to the naked eye, overlay these pathways against main systems of the body, and also simulate acupuncture techniques on

various acupoints with instant haptic feedback and interactive visualization tools including depth information and angle insertion readings.

## **Choose ACUMAP if you are:**

## A student of acupuncture

- 1. learn the location of acupoints in relation to bones, muscles, nerves, and blood vessels
- 2. simulate needling techniques with instant depth and angle insertion readings

## An educator of acupuncture

- 1. overcome limitations of teaching with traditional acupuncture manikins
- 2. conduct more effective dry needling training

#### A practitioner of acupuncture

Refine specific needling procedures prior to initiating treatment on actual patients

#### An institution

- 1. attract students looking for technology-based learning solutions to enhance traditional acupuncture teaching methods
- 2. reach more students remotely so that those not in physical attendance may still participate in learning

#### How to contact

Name and Title: Mariya Chernyavska, Business Development Manager

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Company e-mail: hello@MAI.ai

#### The Company

Dedicated to building medical precise images of human body, we reconstruct 2D MRI/CT into 3D environment through Virtual Reality. In the medical education side, BodyMap gives it a way to let students observe vivid human anatomy layer-by-layer in a simulation world to enhance visual memory. In the surgical side, Digital Twin can offer customized service of medical record to Health Center and Medical Center which make Doctors easily cooperate with each other and get efficiency visual communication with their patient.

# 11. Bintronic Enterprise Co., Ltd.

Category: Smart Buildings & Housing

The main Products or services: Smart curtains and blinds solutions for home and

Architecture.

#### How to contact

Name and Title: Luke Lu / Alice Chao, Sales Representative

Email: sales@bintronic.com

TEL: +886-7-623-6001 FAX: +886-7-623-5583

Website: en.bintronic.com/bintronic.asp

## The Company

Bintronic specializes in electronic industry and we have developed many kinds of production line such as the electronic controls, motorized curtains and blinds, Home automation and smart building applications. We have our own professional and experienced R&D team, completed line, which starts from production to sales to respond different kinds of customers' need. For example, for large factories or offices, we can provide our semi or full automation solutions and combine analyzed information from big data, small weather station and main frame systems connected. It cooperates with lighting and air conditioner to maintain a certain amount of light indoor. It does Not only meets the benefits of energy saving and CO2 deduction, but saves the expenditure of extra manpower.

## The Challenge

Nowadays, there are various suppliers are devoted to different aspects of smart city. However, for the smart building, there is no consideration of the relationship between light control and temperature, so that there is no solution to block the heat but utilize the sunlight to save the waste of lighting illumination. Besides, the control and management of the big large area is another issue to be overcome.

#### The Solutions

Bintronic Enterprise has developed and worked in the aspect of smart home for several years. We provide a series of reliable products, customer services and we are also well experienced to work with various needs of customers. We combined our products and different sensors mutual, utilized the analysis of big data and mainframe system to make the curtains and blinds be controlled synchronously, and made the curtains and blinds follow the Sunrises and falls and automatically adjust to the best position. Therefore, there is no need to waste extra manpower and also reduce the emission of the Carbon footprint effectively.

- 1. Bi-direction communication: instantly catch up with the status and situation of the curtains and blinds.
- 2. A continuous series of product solutions: smart home/ smart architecture.
- 3. Energy Saving and Environment Protection: Green Architecture, Energy saving and reducing the emission of carbon footprints.
- 4. Precise Positioning: Big Data application and Sun tracking system.

# 12. BriteMED Technology Inc.

Category: Smart Health

The main products or services: Provides 12-Lead ECG/vital sign measurement

medical devices, medical display and e-medical cart solution

#### How to contact

Name and Title: Kelly Wang, Sales Director

Email: kellywang@britemed.com.tw Tel: +886-2-8691-9498 ext.18755 Website: www.britemed.com.tw/en/

#### The Company

BriteMED is established since 2009, dedicated to manufacturing and marketing innovative medical devices and electronic medical solutions that improve clinical workflow and enhance patient care. As an affiliate of IEI Integration Group, a reputed industrial application provider, we leverage the hardware and software strength to develop complete solutions covering medical device, medical display and mobile nursing workstation for one-stop-shopping advantage.

With the trained in-house R&D, production and sales & marketing team, we aim to develop reliable and technology-driven solutions that make people's lives better-whether they are doctors, nurses or patients. At BriteMED, all the solution are designed, tested and refined with the clinical environment in mind.

#### The Challenge

With the growing of aging society and the limited doctors and nurses, how to enhance the healthcare quality by an efficient way has become a big challenge for medical/healthcare industry. The scope of patient care is not only limited in the hospital but also in the elderly center, community and even the patient house. How to allocate the limited human resources of medical professionals properly to take good care a wide range of patients is a challenge in smart health applications.

#### The Solution

BriteMED has been working on the development of smart medical device that is able to connect with the HIS/ PHR system directly. Take the 12-lead portable PC ECG for example. The BriteMED 12-lead portable ECG is designed with PC-based. By connecting with the general Windows PC, the 12-lead ECG waveforms can be real-time displayed on the screen without any delay. The ECG report can be further saved for long-term tracking or link to the cloud server directly for remote cardiologists to make diagnosis and decide the follow-up medical treatment immediately. This enhances the diagnosis efficiency and healthcare quality for patients living in rural area or the elderly bedridden patients. With the integration on

the e-medical workstation, the ECG measurement can be easier than ever in ward-round or tele-diagnosis application, facilitating two-way communications between patients and doctors.

- Enhance the quality of patient care service in rural area or bed-ridden elderly patients.
- Real-time record links to HIS/PACS server to shorten the process time and decide follow-up medical treatment quickly.
- Link to different service providers to bring a complete remote healthcare service.





# 13. CC&C Technologies Inc.

**Category:** Smart Health, Smart Mobility, Smart Governance, Smart Buildings & Housing, Smart Infrastructure

The main products or services: Main Products are as follows and CC&C is an OEM/ODM manufacture in Taiwan and we can provide variety of service relative to Hardware of products.

Bluetooth/NFC category: USB adapter, Audio, Peripherals WLAN: USB adapter, Router, IoT Gateway, 4G/LTE Router

Module: Bluetooth/Zigbee/WiFi Module

#### How to contact

Name and Title: Ms. Kate Tsai, Sales Specialist

TEL: +886-2-8226-5088 ext.204 E-mail: kate.tsai@ccandc.com.tw

Website: www.ccandc.com.tw/products.php

Skype: chicho0504





## The Company

CC&C Technologies, Inc. located in Taiwan since 1993, certificated with ISO 9001/ISO 14001 and manufacturing factory in Kun-Shan, China. We has been specialized in WiFi and Bluetooth applications over two decades, rooting from Pagers to Wireless Module, IoT Solution, ODM/OEM Product (Wi-Fi, BT, NFC). To build a Smart City should be starting from Smart Building. Our Smart Building Solution contains wireless Router and adapter are able to comply with contractor system integrator's controller systems as a Total Solution package to bring whole family a faster and stable networking environment, using internet as you go. With our customized IoT gateway can let all of your home appliances (such as toilet, bath tub and mirror, refrigerator, and so on).

## The Challenge

In modern city, people are dealing with plenty of things for their hustle and bustle life.

How to use the efficiency way to do all the things in a short time, it's the key to let any home appliances and electrical equipment/device be more intelligent, as a key for Smart City.

Smart City is the best way to keep everything settled in orders, how to do it, it will be combined a set of Wireless Products (such as WiFi router, IoT gateway, and lighting, security camera, doorbell, electronic lock). To achieve the best performance between the difference devices, it's relied on stable quality of bridge- such as WiFi Router, IoT gateway, adapter.

#### The Solution

As above mentioned, the major problem to build up the Smart City is keeping every device at home is going harmoniously and stably. We, CC&C, are offering the customized wireless router, IoT gateway, adapter to satisfy your entire specific requirement to achieve the goal of Smart City.

## **The Opportunity**

With experienced hardware and software engineer's team, and using customized and reliable WiFi router/IoT gateway/USB adapter (under strict QC regulation) from CC&C to be bundled with your software and major controlled device or equipment can gain the most customer's satisfaction of yours.

# 14. Chicony Power Technology Co., Ltd.

Category: Smart Buildings & Housing

The main products or services: AIoT Smart Building Integrated Management

Platform and Smart Building System

#### How to contact

Name and Title: Bonnie Chou, Sales Supervisor

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LINE: bc5082

Website: <u>iwa.chiconypower.com</u>

#### The Company

Chicony Power Technology Co., Ltd. is one of the listed subsidiaries of Chicony Group. It was established in 2008. The paid-in capital is NT\$3.823 billion and the number of employees is about 12,700. It is one of the top three professional power supply manufacturers in the market. The main products include smart building management systems, high efficiency electric motors, various types of commercial or consumer IT equipment power supplies, LED power modules, and LED lights.

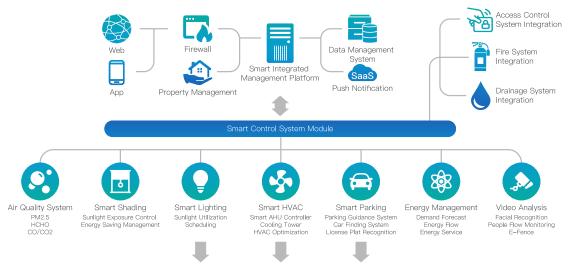
#### The Challenge

People spend around 85~90% of their lives in the buildings and always require them to offer a comfortable and safe environment, yet, efficiency for economic reason can't be ignored. Thus, the biggest challenge for a smart building solution is **how to keep a good balance between users' comfort and owners' operational costs**. This is the key point when designing a smart building system that should be well considered.

#### The Solution

While looking into the portion of power usage among all systems within a building, especially a commercial or public area, lighting and HVAC system consume the power most. Thus, **IWA Smart Building Integrated Management Platform** is dedicated to the followings:

- 1. Energy management system
- 2. Smart lighting system
- 3. Smart curtain system
- 4. HVAC optimization system
- 5. Image recognition system
- 6. Smart parking system
- 7. Equipment optimization solution



Data Analysis / Machine Learning Algorithms

## **The Opportunity**

Buildings consume up to 42% of the global electricity and emit the most greenhouse gas on the earth. Increasing the building efficiency is the major task for smart building solution providers. IWA delivers **Energy Management System, Smart Lighting, HVAC optimization,** and a series of **high efficiency motors** to improve the efficiency of devices in the buildings as the first step. Yet, along with a well-managed linkage control strategy of all facilities in the building through **IWA Smart Building Integrated Management Platform** can optimize the power usage to a better level.



# 15. Chunghwa Telecom Co., Ltd.

Category: ICT Engineering Department/Design & Planning Department

The main products or services: Intelligent Operation Center (IOC)/ Participatory

Care

### How to contact

Name and Title: Shih-Hao Lin, Engineering

Frank Tseng, Director of Design & Planning Department

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Tel: +886-4-2344-2102; +886-2-2344-5827 Website: <u>www.cht.com.tw/en/home/cht</u>

## The Company

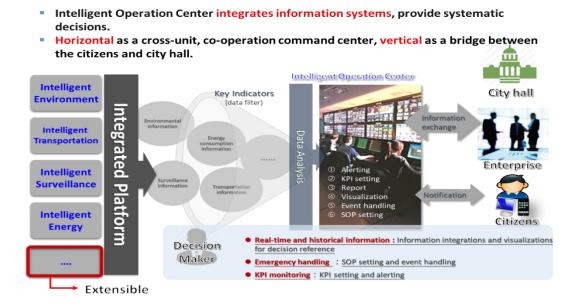
Chunghwa Telecom is the largest integrated telecommunication service provider in Taiwan, with leading offerings in domestic and international fixed communication, mobile communication, and broadband, internet, and IPTV services. We committed to bringing visionary new products and services to market to improve the consumer's quality of life. CHT provides information and communication technology services to enterprise customers with big data, information security, cloud computing and IDC capabilities, and is expanding businesses into innovative technology services such as IoT, AI, etc. All of these capabilities and offerings aim to create an optimal communication environment to enable wonderful and convenient digital life-style, as well as to serve as a key partner for other international telecommunication service providers. In short, the purposes of all the smart city solutions are due to optimization of smart life, it's necessary to continuously enhance. Chunghwa Telecom is ready to show the world the infinite possibilities of life in a faster, safer, and more dynamically interconnected city.

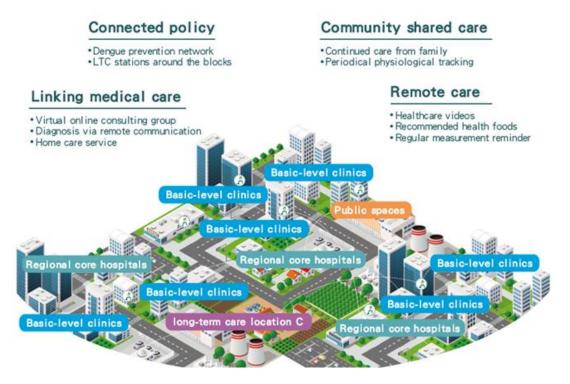
# The Challenge

Smart Cities utilize connected devices to gather and analyze data in an effort to improve the quality of life for people. Therefore, to build connected devices is the key element to develop smart city. Those connected devices need power and internet connectivity, and cloud storage to host data collection. It's a challenge that how to installing and maintaining the new infrastructures when old infrastructures still exist, and to integrate new and legacy information system. When developing countries started promoting smart cities, ICT regulations played a key role in the smart city revolution. Governments and businesses need organizational adjustments in several related areas to accommodate these innovative application services, including consumer protection, technology convergence and Internet governance, digital human rights and information security.

### The Solution

The Intelligent Operation Center (IOC), Chunghwa Telecom (CHT)'s in-house developed smart operational management and big data analysis platform. IOC integrates decentralized and independent municipal systems, and helps relevant agencies to manage and make decisions through data analysis and its visual interface. By collecting and analyzing the information from each system and providing intelligence, systematic and visualized information, IOC solves the problem of difficult management of separate systems and scattered information. Combined with big data analysis, it provides market forecasting and decision-making capabilities to improve operational management efficiency. The IOC enables lateral collaboration among different units, and builds vertical communication channel with citizens. Based on stabilizing communication quality, establishing Participatory Care platform, and combining medical treatment with numerous existing communities' resources, CHT has developed a concrete Participatory Care service that created the first nationwide smart, public, self-service Participatory Care sites. This new and innovative healthcare model is based on sharing economy, incorporating medical care and health care along with various industries from food, living, education and entertainment. This automated, smart, and convenient technology application services meet the elders' need of "being seen, being found, and being used."





# The Opportunity

Advancements in "big data" and connected devices have allowed cities access to information that's never been available before. A well-designed data analytics strategy gives city officials the ability to access and analyze a massive amount of information — and easily glean meaningful, actionable insights. Aging roads, bridges, and buildings often require significant investments to maintain and repair their service life. Smart technology can provide predictive analytics for cities to identify areas that need to be repaired before infrastructure fails. Smart devices can send data showing adverse structural changes, identify tilts or cracks in buildings and bridges, and send messages to notify personnel that inspection or maintenance is needed. These features provide huge opportunities for cities to save tax and life on preventable infrastructure failures.

# 16. Coretronic Intelligent Robotics Crop. (CIRC)

Category: Smart Infrastructure

The main products or services: Autonomous AI Drone - Smart Surveillance

Solution

### How to contact

Name and Title: Jimmy Chien, Business Development Manager

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Website: <a href="www.coretronic-robotics.com/index.php">www.coretronic-robotics.com/index.php</a>
YouTube: <a href="www.youtube.com/watch?v=EynOh\_-Ij3c">www.youtube.com/watch?v=EynOh\_-Ij3c</a>

## The Company

Coretronic Intelligent Robotics Corporation (CIRC), a subsidiary of Coretronic Group. CIRC offers full range solutions of commercial drones. CIRC Autonomous AI Drone is designed specifically for security & inspection applications, which can patrol the field automatically along the designated route, so nothing will be neglected with the system of ground camera and control center. This solution is suitable to apply in remote or dangerous fields, such as industrial sites, dams, bridges, power plants, factories, traffic systems, or public facilities. When there is unusual movement, security drones will alert the control center immediately by recognizing and tracking the objectives, which is expected to enhance the security and lower the cost and risk efficiently. Please refer following features of solution:

# Safety Design

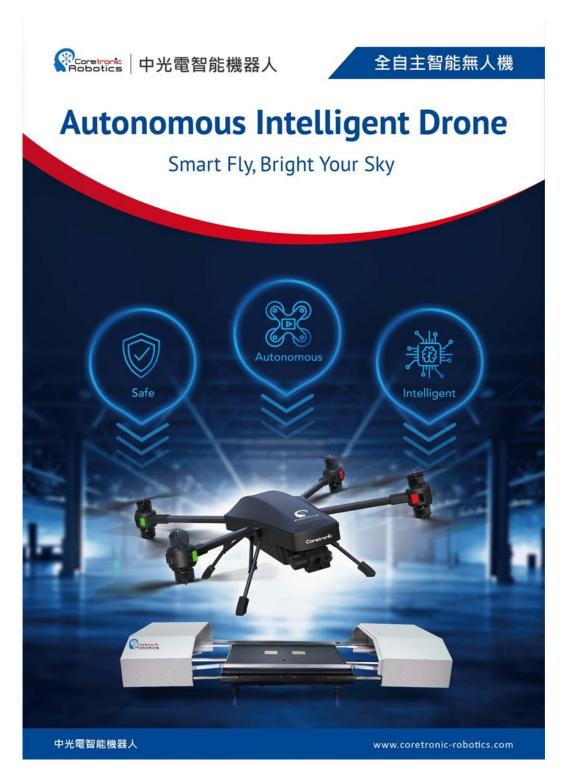
- Redundancy and failsafe setting
- Industrial grade and weatherproof design

## **Fully Autonomous**

- Auto taking off, flight, precision landing & recharging
- Easy operation and 24-7 flight mission

# **Intelligent Computing**

- Live image capturing, autonomous recognition and tracking
- Edged computing AI and Data Analysis



# The Challenge

Security staffs perform routine patrols to look out for situations deviating from normal operating conditions. But there are some pain points, such as restricted surveillance range, high manpower cost, slow action response, negligence and low efficiency in traditional security method.



### The Solution

Autonomous + AI drone solution, providing automatic inspection, threat response and live monitoring for on-time decision making. The system is equipped with high-speed computing and induction control platform to achieve fully automatic flight, precision landing, recharging and recognition and tracking operations. It is designed for 24-7 security operators to realize the overall security situation and achieve intelligent security monitoring objectives. It is expected to take advantage of robotics, artificial intelligence (AI), and Internet of Things (IoT) technologies to provide a complete security solution for smart cities.

- Security: Larger Area Patrol, Facilities, Oil/Gas/Power Plants
- Inspection: Pipelines, Power Towers, Solar Farms, Infrastructures
- 3D Mapping & Survey: Construction, Aerial Survey, Dams, Mining Disaster Management: Firefighting, Emergency Response etc.



# 17. CTCI Advanced Systems Inc.

Category: Smart Mobility

The main products or services: Passenger Information Display System

### How to contact

Name and Title: Vincent Lo, Sales Representative, Marketing & Sales Division

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Fax: +886-2-2788-9016 Mobile: +886-911-931-224

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# The Company

CTCI ASI (CTCI Advanced Systems Inc.), specialized in system integration services, was founded in 1987 as part of Taiwan largest engineering group, CTCI.

With industrial control as the core technology, CTCI ASI provides automation system design, procurement, installation, integration, commission engineering services in the refinery, LNG, petrochemical, power, transport, green energy and high-tech industries.

For the I 4.0 manufacturing market demands, CTCI ASI keeps continuously developing new intelligent manufacturing technology to enhance production performance, energy savings, plant safety, reduction in emission and cost. These efforts and solutions assist our customers toward sustainable development and make CTCI ASI the top industrial intelligent service provider.

CTCI ASI was public listed in Taipei stock market (TPEx: 5209) since 2002.

# The Challenge

# 1. Over-transition period

Solution: CTCI ASI is still oriented to the traditional project, and requires a lot of manpower and resources to be developed in advance with the IoT (Internet of Things), and it can't see immediate results in the short term. It is necessary to consider the coexistence of project and development, and slowly adjust the proportion of the two, which is also a problem that the company has to overcome.

# 2. Limited technology and resources

Solution: Recruit employees with relevant experience, employees participate in professional training, strategic alliances with external companies, or use 3<sup>rd</sup> party's products to add value and packaging. In addition, the limited resources make it more important for us to focus on several areas of specialization.

## 3. Easy to be copied

Solution: Raise the barriers to entry for technology (system), such as technology with engineering background or professional skills that cannot be learned in a short time. If the research and development has achieved results, it should also

apply for a patent first. The threshold for funding is not our advantage.

### **The Solution**

Transportation and Hi-tech Plant E&M Systems:

- 1. Signaling
  - Railway E&M Activities: Detail Design
  - Installation
  - VDU System
  - CCR Engineering
  - Passenger Info Display System
  - Seismic Detection
- 2. Airport E&M
  - Backbone Transmission System
  - CCTV System
  - A-VDGS
  - Runway Power Supply System
  - Flight Simulator System
  - Energy Management
  - Baggage Handling System / Baggage Handling System Lite
- 3. SCADA
  - SCADA
  - Isolation Rail-Joint system
  - Electric Distribution

# **The Opportunity**

Passenger Information Display System

Please refer to Attachment 1 & 2 for further details.

# 18. Cypert Technology Inc.

Category: Smart Health

The main products or services: We aim to provide a wide range of customized medical certified computing solutions and become the strategic partner for the leading healthcare providers.

### How to contact

Name and Title: Michelle Yang, Senior Project Manager

Email: michelle@LT21.com.tw Tel: +886-2-2659-9355 ext.58

LINE: shuyiyyang

Website: <u>www.LT21.com.tw</u>

## The Company

Cypert Technology has more than 20 years of experiences in the IT embedded industry, specializing in design, development, manufacturing and optimizing the performance for GMP compliant Medical Panel PC, Medical Cart, Kiosk, and medical tablet PCs, featuring anti-bacterial, IP65 water/dust proof, privacy film, and PoE (power over Ethernet). With strong customization capability and flexible manufacturing, Cypert Technology creates and delivers differentiated products with competitive pricing advantage for you and your clients.

### **Self-Service Patient Information Kiosk**

With a built-in touch screen, the versatile Kiosk could be used as:

- **E-Bulletin board** for floor guide, latest hospital news and events.
- **Intelligent Self-Service System:** for patients to check their scheduled appointments and medical records without staff assistance.
- Easy Clinic Self-Check-In Service: patients can self-identify and check-in for scheduled appointments by scanning their health ID cards.

## **Intelligent Data Server**

Intelligent Data Server for Medical Solution, featuring:

- High performance CPU computing power with the latest Intel server platform.
- PCIe expansion capability for multiple GPU cards.
- Easy configuration with flexible chassis dimensions and server-based options
- Options: 1U to 4U server chassis and Micro ATX to EATX form factor boards.

## **GMP Compliant Medical PCs**

LT designs, develops and manufacturers All-in-One systems that meet the demand required in the medical facilities.

### **Panel Features:**

- Anti-bacterial (MRSA resistant) / Anti-Reflective, Anti-Glare, Anti-Smudge
- High Brightness, up to 2,000 nits / Anti-spy, privacy film

• Multiple size selection:

\*4:3 ratio, Wide 16:9 aspect ratio, stretched monitors

## **Mechanical Design:**

- Aluminum, SECC or Stainless Chassis
- Open frame, panel mount or closed frame option / IP54/IP65 protection

### **Touch & Protection:**

- Multi-touch & single touch / Inclusive touch functions: PCAP, Resistive, IR touch
- 7H hardness protection for vandal proof

### **Medical Cart**

Integrated with an Intel® Atom® fanless platform and a 21.5" panel, Cypert delivers Medical cart of a high-performance, ease of use all-in-one solution.

- Lightweight built with high mobility
- Modular design with flexible customization
- SLA / LiFePo4 battery option
- Electronic motorized height adjustment
- IEC 60601-1 compliant

## The Challenge

Currently, all devices and solutions in hospitals are vendor-specific that cannot be properly integrated. This disconnection creates the inefficiency and delayed patient data problem that current hospitals have encountered.

### The Solution

Cypert Technology aims to provide one single solution that addresses the value of competitive value, efficiencies and financial savings. The goal is to streaming the work process, improving healthcare decisions with greater data, and ensures that all medical machines/appliances are operating effectively. We will provide a centralized control over all devices and technologies. All systems will be monitored with a set of rules to allow hospitals to respond efficiently in times of emergencies so that they can service patients better and with the potential to save more lives.

- Use of Cypert Technology high-performance, medical-grade, GMP compliant products for uninterrupted healthcare missions, establishing patient-centered healthcare environments.
- Use Cypert Technology's smart health solutions for point-of-care computing, integrated operating rooms, intelligent wards, closed-loop medication administration and tele-health applications.
- Deliver major improvements in smart hospital, creates efficiency and reach budget-saving.

# 19. Deloitte Taiwan

Category: Smart Governance, Smart Health

The main products or services: Smart City Master planning/Strategy

### How to contact

Name and Title: Rick Wen, Partner

Mavis Hsu, Senior Manager Gary Yang, Project Manager

Email: rickswen@deloitte.com.tw mavismhsu@deloitte.com.tw garycyang@deloitte.com.tw

Tel: +886-2-2725-9988

Website: <a href="https://www2.deloitte.com/tw/tc/pages/risk/solutions/smart-city-services.html">www2.deloitte.com/tw/tc/pages/risk/solutions/smart-city-services.html</a>

# The Company

Deloitte was founded in 1845 and has run our business with 3 main goals: Innovation, Impact and Leadership. Deloitte continues to provide high quality services for clients from all sectors around the world. With the advent of the IoT era, a comprehensive view is needed to support smarty city development in aspects such as living, working, learning, and public services, all in an urban environment in conjunction with big data.

Based on Deloitte's own 360° Smart City Framework and supplementing with ICT and cyber security & analysis, we provide professional services from the perspectives of economy, mobility, security, education, living, environment and healthcare. Deloitte assists clients in developing smart cities and services that provide a high quality of life for citizens, ensuring security, sustainability, and business opportunities.



## The Challenge

UN research indicates that 68% of the world population is expected to live in urban areas by 2050. Moreover, population concentration will lead to urban environmental issues, including housing, health care, energy, transportation, education and security. As public and private sectors all rush to develop smart cities, they usually prioritize the implementation of new technologies over bringing out the core value of smart cities, which lies in cross-domain data integration and information management that drive citizen-centered service applications.

In the trend of AIoT, Big Data and 5G, it has become the primary challenge for governments, academics and industry leaders to collaborate in creating strategies that are citizen-centric and enable co-development of smart cities and industries, leading to the success and sustainability of smart city endeavors.

Moreover, as life expectancy continues to rise, healthcare needs are increasing in many countries and consequently medical services are not necessarily provided with high quality to those in need. Under the circumstances, leveraging technology in healthcare would benefit not only patients but the entire industry.

### The Solution

Deloitte Taiwan, along with its global member firms' experiences and resources, provides professional smart city services for clients from all sectors. Basing on the 360° Smart City Framework, Deloitte's scope of services covers strategic advisory, implementation and operations. Deloitte strives to assist clients with strategy development and implementation, technical architecture and operating system design, funding and financing, business model creation and transformation, cyber security management, program/project management and quality assurance, and ecosystem orchestration.

Deloitte Taiwan has extensive experiences in planning and operating Smart City Project Management Office (PMO) in various cities. Furthermore, Deloitte Taiwan specializes in smart city strategy development and business model co-creation for public and private sectors, from designing technology and digital solutions, building public-private partnership living lab, to providing citizen-centric services.

In terms of healthcare, Deloitte Taiwan assists hospitals, pharmaceutical companies and other services providers to tackle the challenges of 21st century in service quality, efficiency, cyber security and digital transformation. Combining medical data with information systems, analytic tools, AI and Blockchain technologies, we develop strategies for clients providing modern healthcare services, transforming patients' journey from every aspect of healthcare.

## The Opportunity

• The maturity of IoT technology has laid a strong foundation for innovative Big Data and AI applications.

- 5G technology would transform human-technology interactions in a wide range, from transportation, health care, entertainment to logistics, etc.
- The Asian smart city market is expected to reach US \$ 220 billion by 2025.
- Global healthcare spending is projected to increase at an annual rate 5.4% in 2018-2022.

Advancements in medical technology provide growing possibilities for treatment and healthcare services with easier access, higher efficiency and quality.

# 20. Digisine Energytech Co., Ltd.

**Category:** Smart Energy/Environment

The main products or services: Small cloud smart grid

### How to contact

Name and Title: Hope Hung, Export Sales Manager

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Website: www.digi-sine.com

## The Company

The founder and executive director of Digisine along with his teams of engineers have more than 20 years of experience in research & development, management and in production and will continue to make and improve our innovative products in the years to follow. We believe in the future of innovation, therefore we have recruited engineers from all over the world, with their next generation ideas and our experienced staff members together we will to take the concept of innovation to the next level. We have made major breakthroughs in IOT (Internet Of Things) and will be incorporating it into our products to give users more control over the products and to work seamlessly with them on a daily bases. We at Digisine promise to continue making our products with quality components and semiconductors that are strictly made in Taiwan as well as bring you a fast and reliable service, to not only put a guarantee on our products but client satisfaction too.



# The Challenge

1. The application of Digisine Smart Grid is advancing with the times. In particular, Digisine uses the DIY design concept to enable products to be sold at affordable prices in general retail channels. It breaks green energy and can only rely on government subsidies to enter the market. The most important thing is that Digisine's technology is self-developed. Major new technologies have been applied for or have obtained patent protection. Therefore, Digisine's exposure to patent issues is not high, and Digisine's products are for the global market. The development of the place is not easy to be affected by changes in the policies and laws of individual countries. However, Digisine directly entered the development mode of multi-national cross-border e-commerce direct sales as a factory. The problem will inevitably be working capital because the product. The development must be invested in considerable engineering resources. After the development is

- completed, the development of the mold and the purchase of materials are followed. Finally, the goods are sold through the e-commerce platform, and then the sales revenue can be used to generate profits. Therefore, cross-border sales in multiple countries will inevitably make Digisine's financial situation creates certain pressures and risks.
- 2. At present, in addition to China and Taiwan, there are small and medium-sized enterprises that invest in smart grids formed by small wind turbines and peripheral applications. In addition, European, American and Japanese companies mainly focus on the research and development and manufacturing of large-scale grid-connected systems. Most of the opponents are located in China or Taiwan. Like the solar industry, competitors from China are usually good at grabbing the market at a low price. Therefore, Chinese competitors will not use power conversion controllers with power tracking. Simple rectification charging is used for power conversion, and other small wind turbine manufacturers in Taiwan mostly develop vertical axis wind turbines and claim that such generators can meet the needs of low wind speed power generation, but the cost of this vertical wind turbine It's expensive, and it must have a very strong base, so it's completely impossible to DIY. Whether it is a Chinese or Taiwanese competitor, they usually replace the self-manufacturing with the purchase of the various unit components required to form the system, in order to reduce their R&D and mold costs, thereby enhancing their price competitiveness. These unit components usually come from many different sources. It is difficult for manufacturers to create a single control interface that is friendly to use.

### The Solution

The countermeasures to solve the financial risks faced by the development of the industry are:

- 1. Strengthen the planning unit to carry out business development with precise discussions, and get the products listed as soon as possible to obtain sales profits.
- 2. Seek foreign buyers to share mold costs.
- 3. Log on to the counter board and strengthen corporate governance, with a view to logging on to the counter as soon as possible to raise funds.
- 4. Cooperate with local agents to operate e-commerce to reduce inventory funds.
- 5. Countries with underdeveloped e-commerce are traditionally traded by local importers.
- 6. Due to cross-strait relations, it is not easy to import goods. Find mainland foundries and enter the booming e-commerce market with mainland-made products.
- 7. Participate in domestic and international exhibitions to increase product visibility by borrowing product exposures, and also attracting customers from retail channels in various countries. Digisine has participated in the CES Consumer

Electronics Show in the United States since 2018, and registered with the government's new southbound policy Including Indonesia / India / Thailand / Vietnam and other four Taiwanese boutique image exhibitions, the domestic part participated in computer exhibitions to counteract risk issues with actual actions.

- 8. Develop and connect IoT wireless modules that can be identified by each unit component, and install the modules in the components produced by each Digisine, so that each component of Digisine has the ability to connect things.
- 9. Construct a smart handheld device at the near end and monitor or adjust the grid system with a cloud system at the far end to provide a user-friendly interface.
- 10. Accumulate various data in the cloud, and use this data to carry out big data on power generation in various places or regions, and users can use this data to conduct power dispatching or trading with traditional grids.



# The Opportunity

In 2017, the main market of Digisine's green energy smart grid products was the United States, and since 2018, it will enter Amazon UK / Amazon Japan / Amazon Australia. Digisine's smart grid products will have multiple growth opportunities in 2018. In addition, Digisine plans to enter Amazon India Amazon Singapore (ASEAN) / Amazon Germany in 2019. In addition to Germany, which is a developed market, the other two countries are High-growth companies are also the countries with the strongest electricity demand.

In terms of market revenue, in 2016, the company's Amazon sales in the United States were US\$308,000 and generated a gross profit of 90,000. In 2017, the company's Amazon turnover was US\$352,900 and generated a gross profit of 125,000. In 2018, Digisine increased Amazon UK / Amazon Japan / Amazon the turnover of Australia and Amazon in these three countries is only slightly lower than that of the United States. Digisine's new turnover and profit after entering these three markets are approximately equal to the profit level of a US market, plus the US market trend as it matures, profitability for 2019 will reach a record high.

# 21. Ecolohas Energy Technology Co., Ltd.

**Category:** Smart Energy/Environment

The main products or services: Renewable energy power generation planning, smart energy storage system development, smart microgrid planning, and distributed grid planning.

### How to contact

Name and Title: Kevin Yang, Chairman

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Tel: +886-7-215-4567

Website: www.ecolohas.com.tw

## The Company

Founded in 1998, Ecolohas Energy Technology Co., Ltd. is a new social enterprise focusing on distinctive green energy solutions in Taiwan. The company has strong technical teams of energy communications and power distribution, and strongly commits ourselves to renewable energy combining with power storage system planning, design, and construction. Also, we invest lots of research resources in the implementation of R&D integration, coordination and management to build energy network, distributed energy and smart microgrid architecture, which best meet social needs. With these inventions, we successfully boost the efficiency of renewable energy generation and electricity consumption, and reduce energy demand of large-scale power grids. We aim to develop and provide self-efficient energy solutions to decrease carbon emissions, help solve climate change issues, and create a sustainable, energy-saving and environmental-friendly world.

## **Business Philosophy**

- Our Visions: With the worsening effects of global warming, Ecolohas has made endeavors to protect the environment around the world. We create the most environmental friendly energy system, integrate solar power as well as various energy storage components, and build distributed renewable energy as well as smart microgrid power system. Just like what Israel treats water resources, we make the most of all electricity generated by all natural energy.
- Our Core Values: Renewable energy is our motivation to create the future, and realize a healthy and sustainable lifestyle.
- Our Philosophy: "Energy saving and generation" is always the principle of Ecolohas; we insist on premium product quality and safety. Meanwhile, we persist in providing the best service, products and satisfying price to users.

### The Challenge

## **Product History**

After Morakot Typhoon disaster hit Taiwan in 2009, to solve electricity problems in rural and low-spread electricity areas, our company has actively invested in the power supply facilities for post-disaster emergency energy storage, and has developed a variety of energy storage systems for different applications. Ecolohas also worked government, industries, universities, and institutes, in reconstruction projects such as: Solar power community reconstruction post-Morakot, rescue actions of Nepal Earthquake, and the project of Meranti post-disaster reconstruction. The most well-known rebuilding project, Siaolin Village in Kaohsiung, is the first case in building a residential microgrid field. We effectively helped villagers understand the mode of power generation and electricity consumption. By system testing combining with distributed energy storage system and centralized energy storage control, it can truly achieve the goal of new energy with smart microgrid. Generally, the replacement rate of grid power can reach 80%, which greatly reduces the power supply by large power grid and attains the maximum effectiveness of energy saving and carbon reduction.

### The Solution

## **Professional Planning**

Renewable energy power generation planning, smart energy storage system development, smart microgrid planning, and distributed grid planning.

- Planning Assessment: Field study and site layout planning.
- Design, Research and Development: Layout simulation and power design.
- Integrated Construction: Equipment development and expertise construction.

# **Smart Energy Storage System**

Smart energy storage system is designed for home, business, and power grid. It can be applied to different situations of use. It is durable, waterproof, and dustproof. With remote monitoring function, we can monitor renewable energy power generation, power storage, power consumption load anytime and anywhere. Also, it integrates precision battery and energy management systems providing better quality and efficiency improvement.

- Designed and Made in Taiwan.
- Multiple-battery integration.
- Compatible with all energy facilities.
- Customized planning and designs.

# **The Opportunity**

# **Distributed Microgrid Concept**

This concept consists of three major elements. Renewable energy power generation system, independent small-scale energy storage system, and centralized large-scale

energy storage system.

- Renewable energy will be prioritized for the use of loads (solar power, wind power, and hydropower generation).
- The extra electricity of renewable energy will be stored in independent small-scale energy storage system.
- When electricity is saturated in independent small-scale energy storage system, the excess power will be delivered to centralized energy storage system.
- When the renewable energy power supply stops and the power runs out in small power storage station, the centralized energy storage system will be activated and supply power to residences.

Additionally, connecting multiple centralized energy storage systems to form an independent power grid can effectively reduce the power supply from large power grid.



# 22. Edgecore Networks Corporation

Category: Smart Health, Smart Mobility, Smart Governance, Smart Buildings & Housing, Smart Infrastructure, Smart Energy/Environment

The main products or services: Innovative wireless network which revolutionizes smart lighting and energy in cities

- 11ac, 11ax Indoor/Outdoor WIFI AP, wireless controller, 60G antenna
- L2, L3 fiber /POE/Copper switch, Industrial switch
- 1G/10G/25G/100G/400G data center switch for AI/Smart city infrastructure

#### How to contact

Name and Title: Michelle Shu/ VP of Channel Sales

Email: michelle\_shu@edge-core.com

Tel: +886-3-563-8888 LINE: 0910923579

Website: www.edge-core.com

### The Company

## **Edgecore Networks Solution**

Edgecore Networks Corporation is a wholly-owned subsidiary of Accton Technology Corporation, the leading network ODM. Edgecore Networks delivers wired and wireless networking products and solutions through channel partners and system integrators worldwide for data center, service provider, enterprise, and SMB customers. Edgecore Networks is the leader in open networking providing a full line of 1GbE, 10GbE, 25GbE, 40GbE, 50GbE, and 100GbE open and OCP switches that offer choice of NOS and SDN software for data center, telecommunications, and enterprise network use cases.

### **Products**

OPEN NETWORKING – DC: Packet Optical

Networking/400G/100G/40G/25G/10G/1G

OPEN NETWORKING – CSP: Mobile Networks/ Packet Optical Networking/

Broadband Access/ Edge & Aggregation Switching/ Network Appliance

ENTERPRISE SWITCH: L2/L3/ Web-Smart Pro Switches/ Web-Smart Series/

**Industrial Switches** 

ENTERPRISE WIRELESS: Controller/Indoor AP/Outdoor AP/Hotspot Gateway.

### USE CASE 1 for Smart Education

# Edgecore and partner NETAS deploy large scale wireless network in 4,000 schools across Turkey.

Edgecore Networks' controller-based indoor wireless access points together with its distributed controllers and two-layer back-up centralized controllers won the first phase FATIH project. In total, 92,000 units of Edgecore Networks ECW7220-L 11ac

indoor wireless access points will be installed in 4,000 schools with one EWS4502 local controller installed in each school. Edgecore Networks also provides ECView Pro as the network management system for all wireless access points across the provinces in West Turkey.

## USE CASE 2 – SMART CITY WIFI

## 3G offload Outdoor Wi-Fi Access Points in Taiwan by Chunghwa Telecom

Edgecore dual-band dual radio outdoor access points are selected and deployed in various cities by CHT, the largest telecom operator in Taiwan, to offer outdoor hotspot for 3G offload because of the high-performance and robust IP-67 water proof design. The service already starts to deploy in March 2014 and will continue to deploy throughout the island in the following months.

### **USE CASE 3- Smart Education**

# Clemson University use Big Switch Networks and Edgecore Switches

Clemson University in South Carolina uses Big Cloud Fabric from Big Switch and bare-metal switches from Edgecore to deploy an open production-grade OpenStack virtual desktop environment.

### Models used in the case

2 units <u>AS6712-32X</u> 40GbE data center switch with 32 QSFP+ 40G ports, serving as spine switches with 40G downlinks to leaf switches.

4 units **AS5712-54X** 10GbE data center switch with 48 10G SFP+ ports, and 6 x 40G QSFP+ uplink ports, serving as leaf switches with uplinks to spine switches and downlinks to controllers and compute nodes.

### **USE CASE4-**

## senseLAN uses Cumulus and Edgecore Switches

## PILOT PROJECT: OPEN NETWORKING

Like many comparable providers, senseLAN traditionally uses the same networking platform from a large, well-known network company. "However, we are generally very open source-savvy," says Martin Kolly, Systems Engineer at senseLAN, "and many of our servers run on Linux. We barely use Windows at all." The team therefore possesses strong Linux expertise, including when it comes to network functions.

### Models used in the case

2 units **AS5712-54X** 10GbE data center switch with 48 10G SFP+ ports, and 6 x 40G QSFP+ uplink ports, serving as leaf switches with uplinks to spine switches and downlinks to controllers and compute nodes.

## The Challenge

## Smart education for school project

One of the important elements of the program is networking throughout the education network, including both wired and wireless connectivity. EGECORE offered Stable and affordable wired and wireless network equipment with management capabilities is very essential to the success of the FATIH project which deployed be total 150K units of indoor access points installed in 8,000 schools across different provinces in West Turkey. Then, the whole program will continue and move on to other provinces in East Turkey.

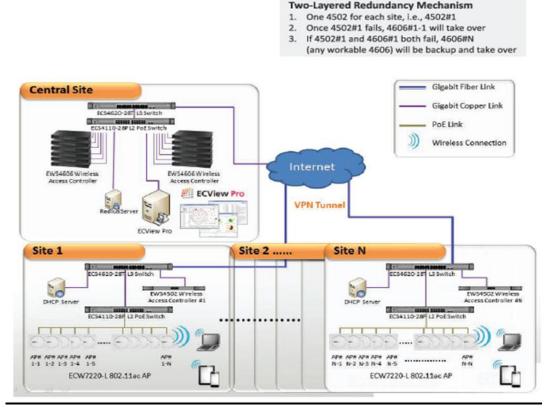
# Smart City for tourist free WiFi surfing

In Taiwan, a lot of mobile service providers are offering flat rate for 3G data access. With the heavy usage on smart phone, most users are choosing premium 3G data access, which does not limit the bandwidth for download and upload per month. Based on the fixed monthly charges to users for 3G data network, mobile users are consistently using smart phones or tablets to upload their photos or video. Heavily video/photo data upload via 3G networks really caused the bottom neck for the networks, especially where there are big events. Comparing to 3G connectivity, Wi-Fi networks are more suitable for high bandwidth data access. Therefore, for smart phone users with Wi-Fi connectivity option, Chunghwai Telecom is looking for outdoor Wi-Fi solution to provide 3G hotspot services in certain districts or template solution where there is a special event like games and concerts. The project requires s load balance design to avoid traffic conjunction, redundancy and high scalability as well as Hotspot 2.0 certificate offering the seamless Wi-Fi/3G.

Clemson specially looked for a speedy delivery of course-specific software to students by providing every student with a common virtual desktop environment, a reduced operating complexity of IT staff by allowing them to provision and sandbox applications centrally for entire classes, regardless of size, as well as build a scalable and economical solution to address current and future needs.

### The Solution

# Edgecore and partner NETAS deploy large scale wireless network in 4,000 schools across Turkey solution.

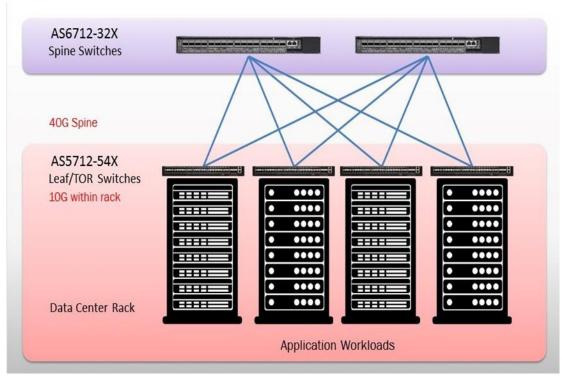


# <u>3G offload Outdoor Wi-Fi Access Points in Taiwan by Chunghwa Telecom</u> solution.

Edge-Core outdoor solution, <u>ECWO5110</u> (SMC2890W-AN), is an 802.11a/b/g/n dual-band, dual-radio device with an 802.3af PoE function. This product is the best suitable outdoor wireless LAN solution for extending network coverage when wired networks are not available. It also provides point-to-point and point-to-multipoint wireless bridge functions. The 16 SSIDs and IP-67 supreme waterproof design give the operator flexibility in its network design in severe environments.

# <u>Clemson University use Big Switch Networks and Edgecore Switches solution.</u> Application Diagram

Leaf and Spine Topology for Data Center



senseLAN uses Cumulus and Edgecore Switches solution.



# **The Opportunity**

Edgecore standard usage for global compliance, power efficiency, security, symmetric 2-way communications

Wireless network which forms the basis for compelling 'Smart City' solutions

Through the partnership with NETAS, Edgecore Networks controller-based indoor wireless access points together with its distributed controllers and two-layer back-up centralized controllers won the first phase FATIH project. In total, 92,000 units of Edgecore Networks ECW7220-L 11ac indoor wireless access points will be installed in 4,000 schools with one EWS4502 local controller installed in each school.

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With six different colleges and more than 80 undergraduate majors and 110 graduate degree program serving over 20,000 students, Clemson's IT department has a large and complex job. In addition to providing seamless, secure connectivity and managing a range of IT applications and infrastructure, technology has been a key part of the curriculum. Many classes have specific assignments that require course-specific software packages, simulation modules, and in some cases, access to specially-configured computers in a physical lab.

For senseLAN, the main advantage of the open networking platform is that the Cumulus operating system is Linux-based: "If you are already familiar with Linux, you immediately feel at home on the new platform. It is very easy to integrate into the existing Linux environment and can be managed using the same administration and automation tools, such as Ansible." The configuration and monitoring are said to be very simple – one of the main reasons why Cumulus was selected.

Cost savings were also said to be a factor in the decision. Getting started does, however, require familiarization with the details of the Cumulus scripting syntax. The staff of course had many years of experience with the conventional network infrastructure used outside the virtualization platform, and there are certainly differences. "But once the settings have been configured properly, the Cumulus based network is very reliable."

# 23. EDIMAX Technology Co., Ltd.

**Category:** Smart Energy/Environment

# The main products or services:

Air quality monitoring including indoor and semi-outdoor types:

Indoor: Plus 8-in-1 Multi-Sensor Indoor Air Quality Detector with PM2.5, PM10, CO2, CO, TVOC, HCHO, Temperature, and Humidity Sensors Semi-outdoor: Smart Wireless Air Quality Detector with PM2.5, Temperature and Humidity Sensors

### How to contact

Name and Title: Joseph Cheng, Director General

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Website: <a href="https://www.edimax.com/edimax/global/">www.edimax.com/edimax/global/</a>

### The Company

Edimax Group is a comprehensive network group. Its products include the Netcom retail market and the enterprise market. It invests in Comtrend Telecom to penetrate the telecom market. The products are mainly divided into home network products, enterprise network products, and physical Internet of Things (IOT) and telecommunication infrastructure.

# The Challenge

Measuring the air quality in cities packed with vehicles and well as industrial facilities is an important health consideration around the world.

Official air monitoring stations equipped with sensors are inherently expensive, and the more they are used in larger cities, the more costly this approach becomes.

### The Solution

- The semi-outdoor product works with EdiGreen to provide an air quality monitoring solution which is comprised of emission identification and traceability, and device management support.
- Indoor air quality with 8-in1 accurate multi-sensor function. Expect stable readings from temperature, humidity, fine dust (PM2.5 and PM10), carbon dioxide (CO2), carbon monoxide (CO), total volatile organic compounds (TVOC) and formaldehyde (HCHO).
- Able to expand further with an array of connection methods and systems. Connect to an external air circulator with options such as RS485 Dry contact, Bluetooth and Wi-Fi.
- The real-time data from the Edimax product can immediately be fed to an air improvement system or transmitted to the cloud for further analysis. Each sensor can check the historical data, such as hourly, daily, weekly, and monthly conditions.



- The low-cost sensing system can augment, and one day, possibly compete with costlier urban air monitoring stations.
- Breathe Better, Live Better



# 24. e-Formula Technologies Inc.

**Category:** Smart Energy/Environment

**The main products or services:** Smart Energy – Energy Management System [EMS] & Energy Storage Solution; AIOT Solutions including EMS Dashboard, facial recognition, 3D around view system, real-time environmental monitoring.

### How to contact

Name and Title: Alan Lo, Senior Manager

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Tel: +886-2-6617-5186

Website: www.e-formula.com

## The Company

e-Formula expand and broadened its service to total solutions offering in smart cities: Smart Energy Management System [EMS] and Energy Storage; AIOT service including industry 4.0, big data appliance and machine learning and data center design, information communication technology solutions [ICT solutions], 3D around view system, real-time environmental monitoring. E-Formula devotes itself toward providing services which are tailored each clients' needs, this is accomplished accordance with quality management system ISO 9001, TL 9000 and ISO 27001 standards.

# The Challenge

At the moment there are a multitude of "Smart City" application and service providers, all competing in different silos. The real potential of smart city technology lies in connecting all software and hardware, effectively integrating virtual and physical public services, rather than implementing fragmented single-point plans. However, there are countless suppliers for a project alone, and the limitations of regulations need to be overcome. The standardization process is quite difficult.

### The Solution

e-Formula is devoted to developing a total solution for smart cities, including developing a platform that can integrate various sub-systems in smart buildings / smart cities, so that managers can view all information and make effective decisions on a single platform. In addition, develop a microgrid-level energy management system to integrate energy harvesting, energy conservation, energy storage, and intelligent control of regional energy supply and demand.

- Use of the energy management system platform (e-FOM) can help customer achieve green energy, it can effectively reduce operation costs and risks.
- Our AIoT solutions can use in broad area including energy management, operation optimization, security management, etc.
- Deliver major improvements in smart energy

# 25. Elan Electronics Corporation

Category: Smart Buildings & Housing

The main products or services: No Battery Contactless Fingerprint Identification

**Smart Card Solution** 

### How to contact

Name and Title: Ming-Xia Lee, Senior Manager

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Website: <u>www.emc.com.tw/eng/index.asp</u>

## The Company

ELAN is a company specializing in consumer products, biometrics, pointing devices, touch screen/touch pad and modular solutions. Its headquarter is in Hsinchu Science Park, Taiwan, and it has algorithm research and development centers in Tainan and Kaohsiung software parks. A module factory was set up in Zhonghe District, Beishi City, which is responsible for the design, development and production of notebook computer input device products. In response to the increasingly fierce competition in the global electronics industry, it has strengthened its global presence and established a business strategy planning center in the United States and China. Lu's Shenzhen, Shanghai, Suzhou, and Chongqing have business and after-sales service centers, and set up shipping and customer service centers in Hong Kong.

Elan Electronics has won the Silver, Gold and Contribution Awards of the National Invention Award, twice the "Outstanding Innovation Enterprise Award" of the Ministry of Economic Affairs' Industrial Technology Development Award, and twice the "Best Annual Award" at the Taipei International Computer Show. "Industrial Excellence Award" of the World's Invisible Champion of the Ministry of Industry and Industry, Innovation Design and Engineering Award at the Consumer Electronics Show in the United States, won the Forbes Global Outstanding Small Business for the third time, and the Hsinchu Science Park Innovation Product Award and R&D Achievement Award for the tenth time. Wait. The quality of the products developed by ELAN has been well recognized by customers. At present, the proportion of the world's first-tier manufacturers accounts for more than half of the revenue. The touch pen chip has nearly half of the world's market share, and the touchpad module also has more than 30%. Market share, ranking second in the world in terms of market share, pointing device market share is also the world's first, the world's top twelve laptop brands are our customers.

# The Challenge

The Hsinchu Science Park is a science-based industrial park where many national organizations, technology companies, community houses, and schools are located. A

Smart Card/IC Card is commonly used within the park as an identification card. Besides basic functions such as access control and attendance records, some may even have co-branded EasyCard/credit card functions. However, risks of losing a valuable card and having it counterfeited or stolen cannot be ignored.

The proposed solution is a battery-free fingerprint identification device that can be added to an identification card. Powering from the NFC Reader, the fingerprint of an individual is stored into the card during registration. After pressing the fingerprint sensing chip, place the card close to the Reader. If a fingerprint is recognized, the card will be activated. The Solution can strengthen the verification of individuals and overall access control, effectively solving the problems many manufacturers have encountered.

How it works - battery free



### **The Solution**

Currently the solution with the most optimal performance on the market, and the only Total Solution supplier.

- 1. The sensing chip has high sensitivity and strong ESD protection, with an overall average power consumption of 8mA or less.
- 2. The recognition time of a fingerprint is less than 600msec, and the recognition ability is maintained at FRR  $\leq 2\%$  @ FAR=1/10,000.
- 3. Dimensions and reliabilities are in accordance with Smart Card ISO 7816.
- 4. Hold 9 patents.
- 5. High cost advantage.
- \*FRR=False Rejection Rate, FAR=False Acceptance Rate

- 1. Support multi-application
  - Replace multiple cards with one multi-functional card: For example, fingerprint-added staff identification cards can be used for access control, attendance, EasyCard, e-wallet ... avoiding identity thieves.
- 2. Strengthen the security of the National Identification Card Only when fingerprints are added can we truly make instant confirmations. This new "eID" can serve like a smart key for citizens to gain quick and secure access to public services.

# The Future of Smart Living





**ID** Card front side

**ID** Card back side

# 26. Elite Optoelectronic Co., Ltd. (EOC)

Category: Smart Building & Housing

The main products or services: Interactive smart film for energy efficiency and commercial media purpose





### How to contact

Name and Title: Peter Chin, BD Director

Email: peter@e-o-c.cc Tel: +886-2-2298-3091 LINE: chinmengyang Website: www.e-o-c.cc

## The Company

EOC had repositioned ourselves as next generation materials provider. In addition to continuing research of heat releasing materials, we had stepped into the area of transparent conductive ink, antistatic ink and electrothermal carbon paste and derived applications. We had combined LED and transparent conductive film technology to develop Transparent Flexing LED Light (TFLL), as well as Transparent Flexing LED Display (TFLD). Those applications had won the 2012 TAITRONICS Innovation Invention Award. We had combined liquid crystal and transparent conductive film technology to develop the first Flexible Electronic Curtain (flexible smart film) and also won the 2013 TAITRONICS Innovation Invention Award.

### The Solution

EOC has been developing diversified film technologies for energy-saving and commercial purpose. Those film technologies could be easily applied and adopted in building and housing to reach the goal of smart city.

- Energy-saving for air-conditioner
- Interactive smart film in the buildings for commercial and advertising media

# 27. En Ke Yu Co., Ltd.

**Category:** Smart Buildings & Housing

The main products or services: AIoT Chiller Energy Saver

### How to contact

Name and Title: John Hsieh, COO

Email: john@biace.com.tw
Tel: +886-2-7709-8779

Website: www.biace.com.tw

# The Company

Enkeyu is found by a team with experienced expertise in mechatronics, computer science, data mining, HVAC energy saving and engineering. We are focusing on the HVAC (Heating Ventilation and Air-Conditioning) control, HVAC energy saving and smart grid applications.

We have developed a Smart HVAC Management Cloud System which monitors the operation of HVAC systems remotely in real time through a set of smart meters and sensors. With the collected big data and data mining algorithms, this system can learn the energy utilization pattern of a HVAC system, office or building; monitor the power efficiency of electricity instruments; make forecast of electricity power consumption and send alarms on events. This system has been used by customers to manage HVAC system and energy consumption of building.

Affordable, sustainable and scalable AIoT chiller energy saver reduces electricity consumption up to 30%.

Instead of "monitoring", BiACE is providing enterprises an end-to-end chiller energy saving solution featured with \$0 front cost, 15% or above saving guarantee, 30-day free trial and 4-hour fast installation. Customers pay monthly fee from saved bills (proven revenue). It also can work with other energy-efficiency.



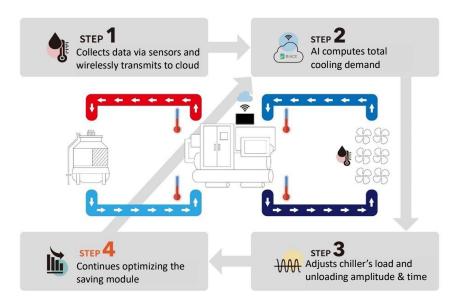
# The Challenge

- 30%+ of commercial electricity consumed by chillers
- Chiller life cycle: 15~20 years
- Very few saving solutions in the market

### The Solution

• AIoT Chiller Energy Saver –

- o is an end-to-end solution for enterprises to reduce electricity consumption up to 30%.
- is an affordable, sustainable & scalable solution for different customer types and markets
- o works on 90% of chillers



- To customers: We monitor the health of HVAC system in real time 7/24 to significantly reduce HVAC system failure time. We send alarms on HVAC system events and send qualified engineers immediately. We control the HVAC system always work efficiently and reduce the electricity power consumption. We let our customers to have reliable HVAC systems to reduce their operation risk and cost. We help our customers focus on their core business and never worried about their HVAC systems.
- To engineer Companies: We provide big data analysis report of HVAC systems to let engineers quickly and accurately isolate the issues of HVAC systems. We help engineers improve their service quality and speed up trouble shooting and increase their service value.

# 28. Ensense Co., Ltd. (AECL Group)

**Category:** Smart Energy/Environment

# The main products or services:

The environmental quality (air quality, temperature, humidity etc.) monitoring devices with wireless solution provide a flexible and economic choice for projects.

### How to contact

Name and Title: Seng-Yong Lau, CEO

Email: sy\_lau@aecl.com.tw Tel: +886-2-2223-2997 ext.3601

Website: www.aecl.com.tw/en/index.html

## The Company

The growing level of environmental awareness makes us start working on research of environmental sensing element and devices. We introduce sensors and develop environmental transmitter since 2004. The humidity and gas sensors from Sensirion, SenseAir, SGX and DD-Scientific, are introduced to our market and all gain high reputation in related industries. These sensors are widely used in IoT, agricultural, HVAC, air quality monitoring, security industries and etc. With an experienced and skilled team, we not only provide sensors, but also support product design and calibration to our partners.

# The Challenge

- Measuring the air quality in cities packed with vehicles and well as industrial facilities is an important health consideration around the world.
- Air quality is heavily polluted by daily domestic activities, factory, and mobile transportation and so on.
- The odorless and colorless properties of the contaminates in air make their detection very difficult.

#### The Solution

- Ensense sensors are used widely in HVAC, building automation, semi-conductor, food, environmental monitoring and chemical industries.
- Our solution ensures safety, comfort, energy saving and environmental protection to workplace and to household
- Ensense has experience in deploying air quality low cost sensors in Taiwan of the Government's projects.
- Sensor quality management prior to deployment.

- Application scenarios for smart law enforcement.
- Many applications to environment and industrial safety, Indoor depollution system, air comfort for transportation, semiconductor and pharma clean room etc.





- Industrial Park
  Dense
  deployment
  300 500 meters
  150 300 meters
  for current
  projects

Industrial Park Neighbor Hood • Middle dense • 500 ~ 700 meters



- Towns

   Sparse deployment

   1 ~ 1.5 km
- City Traffic
   Middle dense
   500 ~ 700 meters

# 29. Ever Fortune.AI Co., Ltd.

**Category:** Smart Health, Smart hospitals, Emergency services, Health monitoring, Assisted living, Tele-health, Tele-care

The main products or services: Innovative wireless network which revolutionizes smart lighting and energy in cities

- 1. <u>Bone Age Assessment System</u>: Developed through the cooperation between EverFortune.AI and Dr. Fuu-Jen Tsai using deep learning artificial neural networks and automated image processing techniques, this system can help doctors speed up bone age assessment and assist in predicting a child's final height.
- 2. **Breast Ultrasound Tumor Classification System**: Through the use of an autoencoder and a large amount of breast ultrasound tumor images, artificial intelligence learns to identify specific features which can classify between benign and malignant tumors. This system assists doctors in the diagnosis of the tumor, and can be a non-invasive screening to breast puncture and biopsy to determine the malignancy of the breast tumor.
- 3. <u>Computer Tomography Liver Cancer Metastatic Risk Assessment System</u>: Through cooperation with Dr. Wei-Ching Lin, EverFortune.AI developed the CT Liver Cancer Metastatic Risk Assessment System. By using radiological image feature extraction technologies, the system can increase the radiologist's efficiency, and can assess the metastatic risk of the liver cancer. This in turn can assist doctors in treatment planning, and increasing the survival of the cancer patient.
- 4. <u>Liver Fibrosis Assessment System</u>: Dr. Cheng-Yuan Peng cooperated with EverFortune.AI to develop the Liver Fibrosis Assessment System. This system uses parameters from blood sampling in order to assess liver fibrosis, in order to be able to quickly enter the treatment planning stage.
- 5. <u>Atrial Fibrillation Detection System</u>: In cooperation with Dr. Kuan-Cheng Chang, EverFortune.AI developed the Atrial Fibrillation Detection System, which uses artificial intelligence to interpret the electrocardiogram signal, and assesses the condition of the heart, providing accurate and efficient assistance for doctors.

#### **How to contact**

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Name and Title: Tom Chen, Assistant manager

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Tel: +886-915-056-022

Website: www.everfortuneai.com.tw



# The Company

EverFortune.AI is composed of professional AI Solution Architects, Biomedical Information Engineers, and Big Data Scientists. Using artificial intelligence as a tool, EverFortune.AI provides a complete solution for the development of medical AI, and uses deep learning technologies to transform big data into functional models. The results both provide a professional second opinion for doctors, and assist clinical doctors in making medical diagnosis, which in turn raises the speed, accuracy, and efficiency of medical decisions.

# 30. Far EasTone Telecommunications Co., Ltd.

Category: Smart Mobility

# The main products or services:

Provides road side parking spaces real-time information service. Installed parking sensor in each high demand parking spaces. The parking sensor will send detection results to the platform by NB-IoT network; people can find the empty parking space via the official LINE ID "Parking Go".

#### How to contact

Name and Title: Lucas Chen, Manager Email: chmichen@fareastone.com.tw

Tel: +886-2-7700-9125

Website: www.fetnet.net/corporate/en/



# The Company

Far EasTone Telecommunications (FET) is a leading company in Taiwan which provides telecommunications and digital application services. Since its establishment in 1997, FET has strived to close the gap between people to achieve the objective of "Closing the distance".

As the 5G era approaches, FET has set its sights beyond tele-communications and has reinterpreted the brand statement in 2019, setting a new milestone with "For Every Thought, We Go Further". FET's aim is, through Big Data, AI, IoT and other digital applications; to not only bring people closer together in mind, also to reduce the gap between people and new technology.

#### Our Vision

FET Connects and Enriches Life.

#### Our Mission

The most preferred partner in Digital Life by superior experiences and innovative services.

#### Our Commitment

FET promises to exceed client expectations with innovation and passion, as well as become the most sought-after employer among employees. In addition to maximizing profits for shareholders, we are committed to CSR and sustainable environmental development.

# The Challenge

- People looking for parking spaces on popular roads can only reduce their speed and continue to look around the field, it affecting road traffic.
- People do not have a unified platform to obtain real-time parking information in each county and city; it needs to be provided from city government its own.
- County and city governments cannot effectively collect data on roadside car

parking, such as roadside car turnover, car parking rate by time, car parking delay and other related information

#### **The Solution**

Provides road side parking spaces real-time information service in Taichung, Tainan, Hsinchu, Nantou. Installed parking sensor in each high demand parking spaces. The parking sensor will send detection results to the platform by NB-IoT network; people can find the empty parking space via the official LINE ID "Parking Go."

# **The Opportunity**

- Collect fully usage data of each parking space round-the-clock, which helps to adjust the parking fee rates and policies.
- Provide APIs for linked to the ordering business such as the time tracked by parking sensor as the basis of billing, and guiding the public to place order voluntarily.

# 31. FETC International

**Category:** Smart Mobility

The main products or services: Intelligent Tolling Service Enabler from ETC to

Smart Highway & Smart City

#### **How to contact**

Name and Title: Peggy Liao, Sales Manager

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Mobile: +886-937-581-717 Website: www.fetci.com

# The Company

FETC International is the world's leading Intelligent Tolling Service Enabler. It is a wholly-owned subsidiary to its parent company, Far Eastern Electronic Toll Collection Company (FETC) in Taiwan, a global awarded ETC, Smart Highway and Smart City expert with more than two decades of experience in planning, implementation, and operation.

# The Challenge

- Improves flow of traffic and toll collection efficiency by eliminating stop time of manual toll collection and reduces transaction costs for governments through installation of the distance-based electronic tolling system
- Enables authorities to manage freeway traffic immediately and proactively implement control measures through insights from big data analysis of traffic flow, travel speed and time travel time
- Builds smarter cities through smart traffic management capabilities including smart traffic, smart parking, smart safety, smart security, and smart payment

#### The Solution

Having pioneered the use of RFID in the toll industry, FETC's RFID Solutions – DevOps from 20+ Year ETC experience providing State-of-the-art tolling solutions which address all strategic and operational needs.

Overview of the RFID Solutions provided:

- Barrier Based Tolling
- Free-Flow Tolling
- Convergent Smart Highway
- Road Pricing
- Smart Parking
- Fleet Management

- Border Control
- Road Tax

# **The Opportunity**

- The eTag ETC system can support future system upgrades and value-added application development by leveraging open standards and cost-effective RFID sensing technology
- The multi-lane free flow and distance-based ETC system supports road pricing and various charging models based on toll zones, transactions time, trip distance or a combination of the above
- FETCi work with partners/customers to enable the digital transformation acceleration through Tolling Service seamless migration to Smart Highway and Smart City.



# 32. First General Technology Inc.

Category: Smart Mobility, Smart Governance, Smart Building & Housing, Smart Infrastructure, Smart Energy/Environment

# The main products or services:

# **System integration Platform**

- ECC200 Artificial Intelligence smarter platform
- ECC100 Smart community platform
- **SHC Smart Building Systems**
- E100D Access control Systems
- E100M CCTV Systems
- ECC100V IP Phone Systems
- ECC100P Public Access and Video Conference Systems

#### Flow meter

- FMG-W Waste water AIoT Wireless Flow meter
- FVF-W Steam AIoT Wireless Flow meter
- TMFM-W Gas AioT Wireless Flow meter

#### How to contact

Name and Title: Kevin Yen, General Manager

E-mail: service@fgttw.com

LINE: fgttw

Website: www.fgttw.com





# The Company

# FGT® [First General Technology Inc.] MEP System Integrated design | Flow meter manufacturer

The Corporation has 1600 square meters of production design factory in Tainan, Taiwan Industrial Zone, is a combination of engineering planning, the professional control components manufacturing, whole plant equipment the planning oriented uphold warmly spirit of service industry

Professional automated process design and planning, professional handling of system monitoring, process monitoring, smart home control, engineering design of the development of automation equipment, industrial equipment (Multi-temperature controller, Flow meter) and System platform Design (Cloud, IoT, Artificial Intelligence, Big data platform) manufacturing company, using six Sigma management, the responsibility system design company.

# Contract design scope

- SCADA system writing design
- Multi-database integration design
- PLC writing and control panel design
- On-site comprehensive terror line construction



- Cloud host design and planning
- Information security firewall design and establishment
- UI and APP interface operation and design
- Cross platform RWD website design
- Flow meter manufacturing
- Manufacturing of multi-point temperature control equipment

# The Challenge

Although local governments and enterprises at all levels are actively exploring the construction of smart cities, there are still problems such as unknown characteristics, poor experience, and insufficient sharing. The root cause lies in the failure to achieve a good integration of urban big data resources and urban business. Specifically, the challenges include three areas:

- It is full of information system chimneys and hinders data sharing
- The data governance is generally weak and the value is greatly reduced
- The level of data management is different and the overall linkage is lacking.

#### The Solution



# FGT's ECC200 system platform

ECC200 AI today is all about building the technology to capture what we do as humans and trying to automate it using machine learning to build models based on training data of past behaviors. Another industry term for this I see is "augmenting intelligence." It is about using AI to help us do our work better instead of replacing us, e.g., make decisions faster with a huge volume of data.

# ECC200 include system module as bellow

- ECC100Smart community platform
- SHC Smart Building Systems
- ECC100D Access control Systems
- ECC100M CCTV Systems
- ECC100V IP Phone Systems
- ECC100P Public Access and Video Conference Systems
- Property management



#### FGT's FMG-W Wireless flow meter

FMG-W technology include IoT, BI, AI together in this flow measurement It can help to engineer too easy to install to monitor flow data in mobile phone Application to

- Public water conservancy Water Resources Monitoring
- The water plant raw water metering
- Sewage treatment and sewage metering
- Printing dyeing machine filling water metering
- Steel, thermal power ,petrochemical plant circulating water monitoring
- Building property or Chilled water metering

# The Opportunity

# **Project for Construction or City Planner**

Apply the concept of building a smart city to quickly integrate a comprehensive platform system demander

# **Application to**

- Different zone building smart community
- Hotel style smart community solution
- Old community upgrade solution
- Smart home DIY solution

# Project for monitoring energy data

Create smart data collection requirements, sensor design requirements

# Requester as bellow

- Pipeline monitoring data
- Environmental monitoring data
- Light current engineering design

# 33. Flowline Taiwan Co., Ltd.

**Category:** Smart Energy/Environment

# The main products or services:

- 1. Air quality related sensors:
  - Temperature and humidity;
  - CO;
  - CO2;
  - HCHO (formaldehyde) and TVOC
- 2. Water quality analysis:
  - Free Available Residual Chlorine;
  - Dissolved oxygen (DO);
  - Turbidity;
  - Conductivity;
  - PH
- 3. Flowrate and level related instruments: Flow rate, liquid level, water pressure related
- 4. Wireless integration: NB IoT, LoRa WAN, Ethernet, TCP/IP, Modbus RS485

#### **How to Contact**

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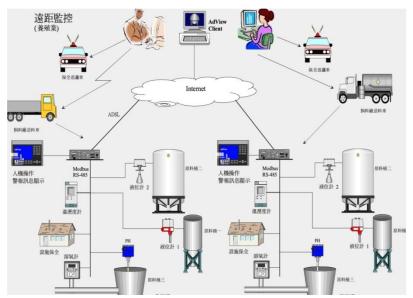
Website: www.flowline.com.tw

#### The Company

Flowline Taiwan sells water quality analysis and production measuring and monitoring related equipments to semiconductor, electronic and chemical factories for their professional and strict standard. At the same time also provide air conditioning and air quality related measuring facilities for smart building control.

#### The Solution

- 1. We provide air condition meter (BTU) which can charge by the exact amount of using; combine with air quality sensor such as temperature and humidity, HCHO, CO2, CO and TVOC, can build a comfortable living environment in a smart building or even a community and industrial park.
- 2. Water quality analyzer, flow rate and liquid level measuring can be applied to food and beverage, electronic, seafood farming as quality control and real time notification. Uploading these data to the cloud also helps to increase the production and improve the efficiency.



3. System integration, old factory or vacant productions upgrade current facility to WiFi connection. Example: convert analog signal to RS485, WiFi, LoRa...etc interface, and through Ethernet TCP/IP, Modubs RS485 to connect MQTT using Web operation to send notification to LINE and email or other mobile APP.

# 34. FREE Bionics Taiwan Inc.

Category: Smart health

The main products or services: Innovative exoskeleton devices and services which upgraded human mobility to the next level.

#### How to contact

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LINE: yawenfreebionics

Website: www.freebionics.com.tw

# The Company

FREE Bionics is a start-up company which spun off from ITRI (Industrial Technology Research Institute, the national leading institute developing robotic technology in Taiwan). We are a team composed of professional engineers and physiotherapists which enables us to develop user-friendly exoskeleton products. By supporting or enhancing human strength and mobility, we aimed to increase global working population and human potential. We provide various exoskeleton products and solutions to make people's life easier and better.



#### The Challenge

Safety is our priority when it comes to product development. However, the application process of medical certificates and the requirements of clinical trials usually take months or years to accomplish. The challenge therefore is the time pressure of responding to users' needs.

We are eager to bring our technology to help as many people as we could. However, one or two products and technologies are not enough to create a barrier-free environment for everyone. FREE Bionics is working on "developing a total solution", and we hope that we can have more partners to join us!

#### The Solution

Aiming to enhance human's mobility, FREE Bionics is dedicated to developing

exoskeleton technology as the solution. We adopt attitude sensor, Human Factor Engineering, AI Algorithm, wireless control and integrated those techniques in our exoskeleton products. FREE Walk is our first innovative product which assists spinal cord injury patients and individuals with lower limb weakness to perform stand, walk, and functional training. In the meanwhile, another new product, KneeBO, the single joint exoskeleton is ready to be launched. KneeBO could help individuals with stroke or joint problems to increase muscle endurance and strength. It could also be applied in a wide range of indications. With the hope of providing various solutions to enhance human strength, we are currently applying KneeBO in different fields.

# The Opportunity

- The aging population's growing needs can be better solved by exoskeleton technology.
- People nowadays valued quality of life higher than before.
- Exoskeleton technology can be applied in various fields such as sports training, logistics handling assistance, industrial application and medical care.



# 35. Full Enterprise Corp.

Category: Smart Health, Smart Buildings & Housing, Smart Buildings Governance

# The main products or services:

Based on the experience of 36 years of telecommunications foundation (ICT), FULL combines more than 200 wireless terminal devices (IoT) and integrates different levels of technology (ABCD) to effectively integrate the wired and wireless communication layers and to accommodate multiple communication protocols. Supported by high-tech clusters, two platforms are constructed:

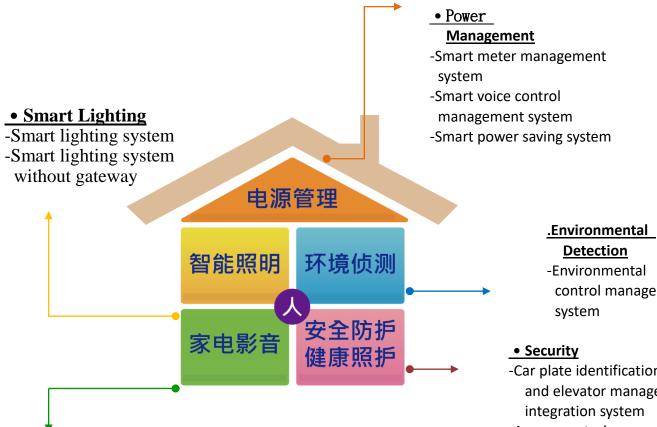
The first one is the sensing platform of IoT which can solve various solutions.

The second one is the cloud platform, which can not only do storage, but also do more precise calculations and other cloud storage to exchange more information, then achieving resource sharing.

We use ICT + IoT + ABCD as tools to implement the application of solutions in all walks of life

- 1. Smart house to smart home care
- 2. Smart house to smart community
- 3. Smart community to smart community care
- 4. Institutional care
- 5. Big health medical care and health promotion, smart medical system
- 6. Smart energy saving and security
- 7. Smart postpartum center and kindergarten
- 8. Smart agriculture
- 9. Smart factory and office
- 10. Professional nursing care training for elderly

# The Company



# .Audiovisual System

- -Home appliance upgrade system
- -Smart audiovisual multimedia system

#### .Health Care

- -Smart positioning system
- -Wireless SOS emergency system
- -Indoor thermal detection
- -Automatic fall detection and warning system
- Smart body temperature detection system
- -Sleep and bedside detection system-Health station system
- Health promotion and rehabilitation (precision exercise) system -Remote Medical Care Management System
- Emergency ambulance management
- Medical integrated management system

control management

- -Car plate identification and elevator management
- -Access control system
- -Single face recognition system
- -Multi face recognition system
- -Smart disaster prevention alarm system
- -Video monitoring management system

#### How to contact

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Web: www.fullcorp.com

FULL uses IoT + ABCD as a tool, integrates six major functional systems, and takes people as the core. Starting from smart life, it builds a smart life that meets all ages. It extends from smart care to smart community health care, and gradually expands to the solutions for all walks of life finally formed the embyro of a smart city.

# The Challenge

Smart city is a long-term, sustainable development and construction. The future city type will be an entity, just like the operating system. Its iterative calculation is no longer a technology upgrade and innovation of a single commodity, but the entire smart management. System upgrades and iterative calculations can be used as an ecosystem solution platform, as well as a platform for innovative services, providing more big data, reducing the occurrence of errors for users or users, and increasing the effectiveness of prevention.

It must interconnect people, things and space in the entire city, and use technology clusters to achieve real-time, synchronization and resource sharing. This will be large, diverse, and constantly evolving system architecture. It cannot be completed independently by single one. Only the integration of cross-border and cross-domain can achieve.

How to "integrate" the power of grouping innovation to form a mutually beneficial group advantage, how to "integrate" city information and turn it into an effective data, share resources and create economic benefits to open up a new pattern, how do city leaders the use of precision policies and government forces to assist the integration of the industry and make the people feel, these are the problems that smart cities face in implementing.

#### The Solution

FULL uses ICT + IoT + ABCD to integrate a complete set of intelligent systems of the IoT, including the IoT of smart living circle and self-care system for big health, to achieve the most basic needs of "Smart Life" and "Safety Protection" And "health promotion or postponed aging," and then achieve "smart energy saving" and "prevention" of accidents and disasters, with people as the core, to achieve smart security from the smart life (home security, community health and institutional maintenance), with "smart city" as the ultimate goal.

# The Opportunity

Facing the problems of aging of the global population, inadequate care manpower and capacity, the burden of care for the elderly in the young and middle-aged population has increased, and the willingness to bear children (low birth rate) and the weakening of economic productivity and consumption, they all have a great impact on the overall socioeconomic impact.

FULL uses ICT + IoT + ABCD as a tool and surrounds people as the core to achieve all-life-cycle health monitoring and "mobile monitoring, mobile management, smart companion." At the same time, all fields are related. The problems will be resolved and the needs will be satisfied in real time, reducing the physical and mental pressure of caregivers during full-time care. Through the collection and management of physical signs data, preventive medicine will be used. Health promotion campaigns will be used to help the elderly recover and empower, and increase their lives. Autonomy and self-care ability, and further extend disaster prevention and energy saving.

The FULL Smart City Solution is not a single product or a single category of products, but an overall healthy life solution that includes smart management and in-depth services. Industry, creating an infinite future and great business opportunities.

# 36. GeStream Technology Inc.

Category: Smart Health, Smart Education

The main products or services: Innovative BeRobot system which revolutionizes

smart Health or smart Education in cities

#### How to contact

Name and Title: Robert Chang, Senior Manager

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LINE: BeRobot

Website: www.BeRobot.com; www.GeStream.com

# The Company

GeStream is a Robotic Designer. We design and manufacture STEM Educational Robot, AI Health Care Robot, AI Surveillance Security Robot, Industrial Robot Arm, Automated Guided vehicle, Robotic Control boards, Robotic Sensors, Servo motor, IOT modules, and Robotic Curriculum and Competition for Elementary, High school, University. Our productive team members provide excellent leading designs in mechanism, electronics, electric-machinery; embedded system, optoelectronics, semiconductor, interactive sensors, communication, and AI cloud system. Innovation and commitment to quality and clients have allowed GeStream to produce cutting-edge, high-performance products that offer the best value in the Robotics market at the most competitive price.

# The Challenge

At the moment there are a multitude of "Smart City" applications and service providers, all competing in different silos with simple but immature solution. Cities often overlapped investing in different robots with similar and simple functions. Is it possible to have a robot with total solutions? Is it possible to specially customize a particular set of requirements for the robot with affordable cost?

#### The Solution

GeStream has kept on continuously developing newest technology including Artificial Intelligence, Robotics, Brain wave control, 32 D.O.F motor control, Gesture control, Voice command, sensor interactive control, Mechanical design, electronic design, firmware design, and software design... Integrating more and more these technologies enable GeStream to create multifaceted total solutions and applications from Smart Education to Smart Health industries.

# The Opportunity

• GeStream has developed BeRobot system with 30 levels of Robotic STEM education curriculum for Elementary, High school, University.

- GeStream has developed health care robot for elders.
- GeStream can help customize special requirements for cities and form the basis for compelling 'Smart City' solutions.
- GeStream can deliver major improvements in smart Education, smart Health.

# 37. GIANTech Co., Ltd.

Category: Smart Health, Smart Governance

# The main products or services:

The core philosophy of GIANtech is to provide the integrated services for customer from domain know how, system analysis, and development to establish the win-win situation for customers, partners, and GIANtech.

GIANtech has started from medical insurance and has successfully assisted a number of iconic customers in the medical and financial industries to use information technology to perfectly achieve the business goals that customers care about.

#### How to contact

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Tel: +886-2-2964-1177 LINE: paullai2015

Website: www.gianttech.com.tw

#### The Company

In the autumn of 2007, Paul Lai, the company's founder and technical director, saw the strong demand for integrated consulting services in the medical information industry, then recruit the experts in information technology and data analysis field to establish GIANtech in Taipei.

The core philosophy of GIANtech is to provide the integrated services for customer from domain know how, system analysis, and development to establish the win-win situation for customers, partners, and GIANtech.

GIANtech has started from medical insurance and has successfully assisted a number of iconic customers in the medical and financial industries to use information technology to perfectly achieve the business goals that customers care about. GIANtech currently has 5 employees and the capital of GIANtech is NT 15 million dollars. GIANtech core technology includes business intelligence (BI), data integration (DI or ETL), ASP & ASP.NET web programming, and is a software company with database design, analysis & integration.

# **GIANTech core competency**

- Development of medical insurance information system.
- Big data aggregation and analysis.

# GIANtech professional skills and advantage

More than 15 years on medical and insurance information system field, In-depth understanding current status and technical requirements of Taiwan health insurance and medical information industry, GIANtech can provide customers with complete services from consultants to system analysis, design and development.

#### **GIANtech success stories**

- Far east bank data warehouse upgrade Informatica Power Center 9
- MasterLink securities data warehouse establish
   Informatica Power Mart4.7~Informatica Power Center6.X + BO + ASE + IQ
- MasterLink securities data warehouse expansion Informatica Power Center 8.6.1
- South china insurance decision support system Informatica Power Center 6.X
- Hua nan financial holdings data warehouse establish
   Informatica Power Center 8.6.1 + Informatica Power Exchange 8
- China development financial holding data warehouse establish Informatica Power Center 6.X
- Bank of communications information supermarket establish Informatica Power Center 6.X + BO + ASE + IQ
- ING data warehouse establish Informatica Power Center 8.1
- ING data warehouse expansion Informatica Power Center 8.6.1 + BO
- CTBC Bank corporate trust data warehouse establish Informatica Power Center 8.6.1
- China development industrial bank data warehouse establish Informatica Power Center 7
- China development industrial bank system maintenance Informatica Power Center 8.6.1 + ORACLE
- Synnex technology data warehouse establish Informatica Power Center 8.6.1
- Bank of Taiwan data warehouse establish Informatica Power Center 8.6.1
- Taiwan corporative bank data warehouse establish Informatica Power Center 8.6.1
- Taiwan mobile Informatica Power Center 8.6.1 HA establish + Informatica Power Exchange 8.6.1 HA establish + Teradata
- 96-108 community integrated screening system maintenance
- 99-108 New Taipei city elderly health care system development and maintenance
- 96-108 Taiwan women and children association member websites development and maintenance
- 99-108 Chang Gung hospital hemophilia system development and maintenance
- 99-108 National Taiwan university hospital hemophilia system development and maintenance
- 103-108 Lead Corporation base station management system development
- 96-108 Wanmei textile ERP system development and maintenance
- 104-108 GFGIS fabric inspection system development and (Android APP)
- 105-108 Taipei Fubon commercial bank Informatica establish

# **GIANTech** project case II

Customer Name	Health Promotion Administration, MOHW
Project Goal	When the country and city health bureaus do the community integrated screening test and send the data to the system, they can use the system to generate various evaluate indicators which can be effectively, quickly and correctly to provide the result for this time community integrated screening test.

# **GIANTech** project case I

Customer Name	Bureau of National Health Insurance
Project Goal	<ol> <li>Synchronize Taiwan health insurance data into central system, so the data is consolidated and centralized</li> <li>When the huge amount of date of health insurance declarations is calculated, system will make sure the key indicators has been checked.</li> <li>Through real-time visualization of analysis data charts which presented in the full screen to control whole picture of system</li> </ol>

# **Screen Shot**



# **Screen Shot**





# 38. Global Power Technologies, Ltd.

Category: Smart Governance

The main products or services: airside driving simulator

#### How to contact

Name and Title: Summer, Sales Email: summer@gptt.com.tw Tel: +886-2-8791-6811 ext.111

LINE: BIGCAT520

Website: www.bigxreality.com

# The Company

Big x Reality is a division of Global Power technologies. Our mission is to create revolutionary, realistic, and immersive virtual experiences using cutting-edge technologies. We design and develop integrated solutions for AR/VR training simulation system, disaster prevention training, driving simulator, data analysis, 3D modeling and Geographic information service application purposes, customized for our clients.

#### The Challenge

The BXR Airside Driving Simulation Systems is a driver trainer for simulating real-world airport airside scenarios. The purpose of this system is to train the following:

- 1. The best way to learn is "learning through mistakes". In our virtual Airside Driving Simulator, students are free to make mistakes in a safe virtual environment that is modeled after the actual airport.
- 2. Allow students to get familiar with the airport virtually in a realistically modeled virtual airport before physically driving in the actual restricted area.
- 3. Saves time and man power required by conventional Instructor and test agents.
- 4. Simulate conditions and scenarios that cannot be practically trained with conventional method. For example, bad weather or late night timing.
- 5. Recreate scenarios up-close to a virtual aircraft, with moving ground service virtual vehicles all in motion.
- 6. Cost: The potential savings to the airport that the Airside Driving Simulator can provide far outweigh the cost of the simulator itself, even if the simulator only reduces the number of accidents by a small percentage.

#### The Solution

The Airside Driving Simulator by GPT caters to the increasing demand from International Airports around the globe to provide safe virtual environment for ground vehicle staff to train in. In addition to the basic simulation module, a VR module with motion platform can alleviate motion sickness, allowing drivers to train in comfortable, immersive virtual settings, to experience feedback from the motion

platform for high speed, collision, acceleration and slope movement. Through scenario editor, the instructor can setup various environmental settings, mission assignments and events. Through the back office database, instructor and keep track of the user violation report, with data analysis and history data search, and innovative AI control tower simulated response, this simulator can completely replace the limitation of conventional training.

# The Opportunity

The BXR Airside Driving Simulation System is a driver trainer for simulating real-world airport airside scenarios. The purpose of this system is to train the following:

- 1. Increase location recognition and awareness of individual airport's ground environment and signages in various weather, time and traffic conditions.
- 2. Gain knowledge of speed limits, vehicle type zoning permissions and various driving regulations in different zones of the airside.
- 3. Develop situational awareness to avoid potentially dangerous situations.
- 4. Coordinate activities with other vehicles through communication with towers, ground or ramp controllers.

# 39. Hamastar Technology Co., Ltd.

Category: Smart Infrastructure

The main products or services: MeetingHub; Paperless conference system,

EventHub; Exhibition Conference System

#### **How to contact:**

Name and Title: Yi-Cin Wu, International trade representative

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LINE ID: tukle1102

Website: www.hamastar.com.tw

# The Company

The company's "Hamastar Technology" has a completely innovative technology research and development team. A series of products-MeetingHub paperless conference system and EventHub exhibition and conference platform have successfully solved the dilemma of incomplete information transmission in meetings and exhibitions. These systems are combined with cloud technology, professional knowledge, and knowledge management to provide enterprises and users the most outstanding product use experience and achieve good results in the market. At this stage, our company is not only committed to software technology research and development and services, but also VR, AR and other products, our goal is to become and international software company and actively promote cooperation opportunities in various multinational industries.



#### The Challenge

The development of smart cities aims at solving people's lives problems and emphasizes a low-carbon society for sustainable development. However, Asia uses technology as a starting point and emphasizes the application, but ignores the basic requirements of the initial smart cities. The problem remains unresolved.

#### The Solution



MeetingHub paperless meeting system makes attending greatly facilitates meetings: just store the required information files in the system before the meeting, and participants can easily read them with a tablet instead of printing as people often do.

During the meeting, the system can be used for electronic sign-in and check-out directly, no additional sign-in documents need to be taken. The meeting documents can be set to read

permissions to protect confidential information. Then, you can synchronously follow the reporter to browse the same page of information or make a page selection, and watch the reporter's on-site notes or marks.

After the meeting, you can also upload or download the materials by publishing meeting information across the platform. No need to worry about data loss, reinvent meetings, combine convenience and environmental protection.

# EventHub exhibition and conference platform quickly grasps the venue map and surrounding

**EventHub** exhibition and location information. Even if these

are updated in real-time, the organizer can broadcast, update files at any time, allowing participants to grasp first-hand information. The system is mainly customized for the needs of the organizer. It provides a platform not only for him but also for manufacturers and participants to communicate with each other. Moreover, through the manufacturer's area and electronic business card communication, it can successfully expand the company's marketing and achieve promotional benefits.

# The Opportunity

The paperless conference system is overturning the traditional conference mode: it can solve the shortcomings of the traditional conference mode, can improve meetings efficiency and reduce its costs. Paperless meetings are getting more and more attention from enterprises and conference organizers. Besides, in terms of current trends, it is also in line with the environmental issues advocated.

The EventHub exhibition and conference platform provides practical software for exhibitor information. Vendors can put products or business information on EventHub, provide it to people at the exhibition site so that they can download it on their mobile phones or tablets. By obtaining exhibition electronic data, the visitors can use the exhibition positioning function to be directly guided to their goals. Finally, the post-exhibition data statistics functions allow organizers to easily investigate the exhibition issues and figures of various data.

# 40. Hung Chun Bio-S Co., Ltd.

**Category:** Smart Health

The main products or services: Innovative Dental Implant Guide Operator System

#### How to contact

Name and Title: Edward Cheng, Marketing Director

Email: Edward@hc-bios.com

Tel: +886-7695-5369

Website: tione-dental.com

# The Company

Combining over 30 years of metal fabrication experience with advanced biotechnology, Hung Chun Bio-S proudly presented the cutting edge TIONE Implant System in the year of 2007, with outstanding quality certified by CE and FDA. TIONE Dental Implant features a state-of-the-art SLAffinity surface treatment technology, which leads to greater stability at initial stage and then faster osseointegration. Up to the date, we have not stopped innovating on the dental implant technology. We proudly announce that the new product for faster and more accurate solution for dental implant surgery, TIONE digital implant system will soon launched in 2020. The Challenge With more and more dental implant player in the market, to provide an alternative implant as choice isn't drawing enough attention to the specialist any longer. We have also need to provide a better, wiser, user orientation accessory system or service to establish the difference and show our superiority than other implant manufacturer in the world. It's a challenge to seek the difference in a same category of product. We need to keep doing research, listen to our users and identify the problem which is not yet fully addressed by products from other competitor.

#### The Solution

After years of data collecting and research, we realized not only the dental implant itself is the factor of a successful implant surgery. There are too many factors are inevitable and uncompromised to finish an operation. What we can provide is a system with the aid of 3D imaging and oral scanning technology, as guidance for the implantologists while doing surgeries. With our new innovated digital implant system, the human error can be reduced to zero and reducing the operation time considerably. This system is a new era of implantology and a solution to all the problems during the implant surgery.

# The Opportunity

With our system, implantologist from different back ground can operate with our system. And the design with the help of the imaging technology nowadays of the

digital implant system can massively reduce the possibility of human error while performing the surgery. With this system, the using the operation procedure would become easier and more accurate which is a huge factor to a successful operation. It's foreseeable that our dental implant along with this guidance system will start a new era in implant industry.

# 41. Hygeia Touch Inc.

Category: Smart Health

**The main products or services:** Self-test strips for urinary tract infections (UTI) and sperm fertility with mobile App aided management

#### How to contact

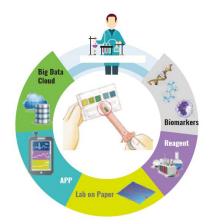
Name and Title: Marina Tsai, CEO Email: marina@hygeiatouch.com

Tel: +886-2-2394-1052

Name and Title: Lance Yang, CTO Email: cyyang@hygeiatouch.com

Tel: +886-3-667-5616

Website: www.hygeiatouch.com/en/index.html



# The Company

Hygeia Touch Inc., a modern diagnostics company dedicated to making healthcare more convenient and accessible and was specialized in innovative home-based self-screening kits. By applying the "lab on paper" technology with digital analytics system, a complete healthcare platform is established to guard women's intimate health from the threat of cervical cancer and infections. The FDA approved paper-based test device for home use can provide users with a private, convenient and comfortable solution anytime basis. The digital analytics system support users and their medical professionals with an easy way to track and measure over time. This system enables personalized treatment in precision. The aim is to provide the women highly worldwide with professional-grade, effective, user-friendly and self-administered healthcare products.

# The Challenge

#### For UTI:

Urinary tract infections can now be treated through telehealth services for women between the ages of 18 to 65 in US (approved by MDLIVE). Also, there are several teleservices in Thailand for UTI. However, virtual visits for UTIs relied on patient-reported symptoms for diagnosis. Recent studies suggest that this approach results in 30-50% of cases being treated inappropriately with antibiotics. With the growing threat of antibiotic resistance and the call for improved antibiotic stewardship, clinicians are now more judicious in how we treat common infections like UTIs.

# For sperm fertility:

The global fertility rate has drastically decreased over the last decade. This trend has also been observed in Thailand (birth rate was decreased from 5.2 to 1.58). The total

fertility rate in Thailand decreased by approximately two-thirds over last three decades. More couples have chosen to delay childbearing, making natural conception more difficult, and assisted reproductive technology is more often needed to achieve pregnancy. There's no one single reason as to why people need fertility treatment. It can be caused by many different reasons, the 4 most common of which in Thailand include: (a) endometriosis, (b) polycystic ovarian syndrome, (c) uterine fibroids, (d) **low sperm count and poor sperm quality**.

When couples are encountering difficulties conceiving, unfortunately our society is such that the woman is typically assumed to be the only one with infertility problems. However, male infertility contributes to about 30 percent of all infertility cases, and male infertility alone accounts for around 1 in 5 of all cases. Infertility tests and treatments can be expensive in Thailand, so it's a good idea to test at home first for better understanding before visiting hospitals.

#### The Solution

#### For UTI:

Using the Hygeia Touch test kit and the Hygeia Touch iOS or Android app, people can quickly and accurately determine whether they have a high concentration of leukocytes and nitrites in their urine, also the range of pH value, indicating that they could have a UTI. Hygeia Touch's test provides a result in as little as two minutes, with the same diagnostic accuracy as a urinalysis performed in a clinic. Through a partnership with a telehealth company that enables patients to quickly, safely and inexpensively receive care online, people across the country can now diagnose UTIs using Hygeia Touch's test and app, then receive immediate treatment from a telehealth physician or nurse practitioner.

# For sperm fertility:

The purpose of sperm fertility self-test is to determine whether a sample is above or below the WHO cut-off point for fertility, 15 million per mL of sperm. This test kit allows a man to test his fertility potential, privately and discreetly in their own home.

# **The Opportunity**

- UTIs are a common, painful medical condition prompting 10 million doctor visits in the United States each year.
- Recurrent urinary tract infection (UTI) is one of the major health problems of Thai children because of its high rate of occurrence.
- Hygeia Touch's innovative at-home UTI test will help our clinicians treat more people by providing patients a convenient, fast way to provide clinically reliable diagnostic information to their online doctor.
- There is a steady increase in the global infertility rates both in the developed and developing nations.
- Prevent falling fertility rate by introducing pronatalist policies by Thailand government.

# 42. ICP DAS Co., Ltd.

Category: Smart Energy/Environment

# The main products or services:

Energy Monitoring Management, Power Management System

#### How to contact

Name and Title: Alvin Huang, Sales Email: Alvin\_huang@icpdas.com

Tel: +886-5973366 ext.3320 Website: <u>www.icpdas.com</u>

# The Company

With more than 25 years of experience in the Taiwan industrial market, ICP DAS focuses on data acquisition, industrial control and communication as one complete system solution, with the most extensive product line and rich technical application experience, gradually occupying its proper place in the global industrial market. ICP DAS has distributors spread across five continents, and by working with local distributors to help all industries create the foundation of the Internet of Things.

# The Challenge

- 1. The traditional basic measurement of electricity because the meter cannot be used for communication and networking, and manual meter reading is required, which often wastes a lot of manpower and time costs; Except that the user cannot know immediately the power consumption of the entire plant and whether excessive energy consumption is caused by the damage of a certain machine, it will receive a considerable \_ne bill when the power is exceeded.
- 2. If equipment status and field equipment cannot be obtained in real-time, unexpected downtime due to failure may result in huge economic losses.

#### The Solution

- 1. Can be built on a cloud platform, integrating ICP DAS Wise, PMC and PMD to provide stable system architecture for the Internet of Things.
- 2. Create a central control center for the equipment to reduce the on-site inspection manpower by automation.
- 3. Provide the concept of field group and operator group management to improve the convenience and security of equipment management.
- 4. Real-time monitoring of sensor data, providing field group data management, and operators can quickly switch monitoring fields.
- 5. Basic data analysis and visual presentation, itemized data drawing, real-time review of historical trend data.
- 6. Operator group structure, responsibilities and responsibilities are divided into

monitoring groups.

# **The Opportunity**

- 1. Complete the benefits of energy management through smart meter functions.
- 2. Use ICP DAS IoT star management software to complete the management of power consumption information across fields and regions.
- 3. Acquire environmental information, collect sensor module data and I/O module data real-time and historical data visualization.

# 43. iLu Co., Ltd. (Xmethod Network)

**Category:** Smart Governance, Smart Building & Housing, Smart Infrastructure, Smart Energy/Environment

# The main products or Service:

- 1. SDN total solutions for next generation network management/IoT Integration
- 2. PoE product, switch, injector, splitter
- 3. Managed/unmanaged/Din Rail/Fiber Switch/Routing switch
- 4. Ethernet Accessories

#### How to contact

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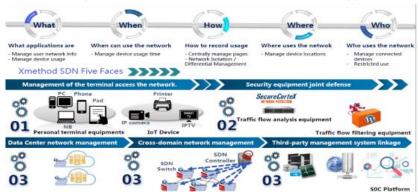
TEL: +886-2-8286-3598

LINE: styventseng

Website: www.ilucoltd.com; www.xmethod-network.com

# The Company

Xmethod Network is a Taiwan registered brand name host by iLu Co., Ltd., which has strong background and knowledge on Ethernet and applications, providing SDN (software Defined Network) total solutions, PoE product, legcy ethernet switch and ethernet accessories to the market. Xmethod Network product has been widely used in various fields such like Enterprise network, Campus network, Government office network, Industrial Park network, Smart Lighting management with IoT integration, and Smart water application which specifically reflect that the products from Xmethod Network are suitable for the construction and use of Smart Governance, Smart Building & Housing, Smart Infrastructure, Smart Energy/Environment.



# The Challenge

Smart city in a narrow sense is the use of various advanced technologies, especially information technology to improve the operation of the city, indeed, Internet and network management play a very important role. Current status of network management is each system has its own management system and there is no management system for terminal devices so far. This will cause problems such like

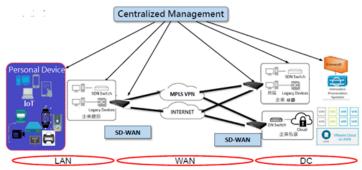
unknown in charge terminal devices, unknown terminal connected target, network reachable status unknown, terminal devices error status unknown. In addition, security threats to enterprise network is hard to prevent from internal attack, for example computer virus, a variant of 2017 WannaCry ransomware, furthermore, most IoT devices use external IP owing to easy accessing from outside, it causes extortion and threat to network printer.

#### The Solution

Xmetod Network SDN solution provides End-to-End Centralized management with wide end-to-end coverage like SD-LAN, SD-WAN, DataCenter and SD-DataCenter. All terminal devices like PC, notebook, printer, card machine, IP camera, Server, VM, storage, WiFi AP, L2/L3 switches are real name managed. Third party software also could be combined via API. The service network could be on-premise or public cloud installation. Xmethod Network SDN hardware includes switches cover PoE, nonPoE, 1GE/10GE/25GE/40GE/100GE media types with rich flow table and IoT SDN mesh gateway. The solution has various features like, real-name management, auto detection for devices, access control list, ARP mitigation, network isolation, network tapping, security on demand, network configuration on different time based, QoS and Rate limiting, centralized portal management, (Maintenance) Decentralization /Division Management of Maintenance Staff, visualized network topology, real-time/history traffic monitor, terminal device search, Unknown device list, switch port diagnosis and log management, energy and gas metering.

# The Opportunity

- Use of Xmethod Network SDN solution in joint Defense network security
- Integration Xmethod Network SDN solution in Data Center
- Use of Xmethod Network SDN solution for terminal devices management (Authentication/Authorization/Accounting)
- Use of Xmethod Network SDN solution in Bank office network
- Use of Xmethod Network SDN solution in Smart Campus network
- Use of Xmethod Network SDN solution in industrial park network with paid/add-on service
- Use of Xmethod Network SDN solution in cross-regin management without regional limitation



# 44. InSynerger Technology Co., Ltd.

Category: Smart Buildings & Housing, Smart Infrastructure, Smart Energy/

Environment

# The main products or services:

"Smart Park Cloud AI Manager" mainly emphasizes on outdoor applications, including streetlight management, air quality monitoring, public safety early warning and energy management to improve park management can be implemented through a single platform.

#### How to contact

Name and Title: Polon Chuang, General Manager

Email: polon@insynerger.com Tel: +886-2-7713-4828 ext.105 Website: insynerger.com/en/

# The Company

As a cloud solution provider on energy management and smart city, InSynerger provides 24-hour services for energy and equipment monitoring and data analysis to achieve energy saving, high performance and intelligence applications. Working with cloud-based AI manager, InSynerger can be your intelligent consultant for making decisions.

#### The Challenge

The challenges of smart city are infrastructure. Smart city utilizes sensor technology to gather and analyze information to improve the quality of life for residents. Therefore, it is essential to install and maintain sensors which are costly and complicated infrastructure. In addition, another challenge is different applications will be managed through different platforms. Due to the diverse applications of smart city, most solution providers emphasize on a specific field. Therefore, it is difficult to manage the whole city through a single platform.

#### The Solution

#### **Smart Park Cloud AI Manager**

"Smart Park Cloud AI Manager" provides multiple applications to meet different demands in the market, including streetlight management, air quality monitoring, and public safety early warning and energy management. In addition, "Smart Park Cloud AI Manager" supports wired and wireless (such as sub G, NB-IoT) communications with high flexibility of the integration with device and system.

#### Streetlight Management Solution:

The solution of streetlight management supports multiple field management to reduce costs of workforce to inspect streetlight and energy and provides functions, including the status of power consumption, remote control and fault reporting (self-diagnosis). In addition, streetlight can be controlled in real-time according to the weather conditions.

### Air Quality Monitoring Solution:

Air monitoring solution provides real-time information and statistic analysis to track the phenomenon of pollution flow through NB-IoT connectivity, including PM 2.5, CO and NO. In addition, the system integrates the data from EPA (Environment Protection Administration) to provide air forecast service when the detection of air quality is abnormal. What is more, the solution can be applied in micro weather station to monitor wind direction, wind speed, rainfall and atmospheric pressure and provide real-time weather information.

## Public Safety Early Warning Solution:

Public safety early warning solution sets up monitoring network to remotely detect environmental safety with real-time information to monitor disaster situations. Before the disaster is getting worse, warning messages can be informed through CMS (Content Management System) board and communication software (Line). Therefore, public safety early warning solution can speed up disaster relief operations 15 minutes early.

## **Energy Management Solution:**

The solution of energy management is to monitor the conditions of water, electricity, lighting and air conditioning to visualize the power consumption and quality of buildings, factories or equipment. Therefore, it is helpful to prevent the waste of energy and evaluate the quality of power. In addition, equipment operation can be controlled according to different demands to achieve energy saving which can reduce from 10 to 15% of energy consumption.

- Streetlight management solution is cost-effective for human workforce to inspect streetlight and achieves energy saving.
- Air quality monitoring solution provides 24-hour monitoring to get real-time information and trace the source of air pollution.
- Public safety early warning solution can quickly control disaster situations to speed up disaster relief operations 15 minutes early.
- Energy management solution can visualize the power consumption and quality to prevent the waste of energy and guarantee the electric power quality. Also, controlling equipment operation to reduce from 10 to 15% of energy consumption.

#### Streetlight Management Solution

- Multiple field management
- High flexible
- Cost effective for maintenance

#### Public Safety Early Warning Solution

- Remotely monitor environments
- Speed up disaster relief operations
- Real-time information





#### **Energy Management Solution**

- Real-time notification
- Intelligent analysis
- Supports Web and App interface

#### Air Quality Monitoring Solution

- 24 hours monitoring
- Real-time information
- Air forecast service



# 45. IOEZ Inc.

Category: Smart Health, Smart Infrastructure

**The main products or services:** Combined AI algorithms with 3D LiDAR and radar to improve healthcare.

#### How to contact

Name and Title: Jennifer Wu, Product Line Management

Email: jennifer.wu@ioezio.com

Tel: +886-2-2218-0545 Website: <u>www.ioezio.com</u>

#### The Company

IOEZ INC was founded in 2018. A group of senior technology people who embraced cutting-edge innovative 3D sensing and AI adhered to the values and philosophy is to make "LIFE SAFER & BETTER".

We strongly believe that, in the mean time when we enhance ourselves, this industry where we have been located is also moving forward actively with us.

## The Challenge

The world is facing an ageing population, and healthcare is gradually gaining attention. It is expected that healthcare demand and spending will continue to expand, and medical staff might be insufficient. Besides, according to WHO statistics, fall is the second leading cause of accidental death worldwide. An estimated 646,000 people die each year from falls. It shows that there are many problems need to be solved in medical industry.

#### The Solution

AI Care Power System is a non-contact sensing system. It can continuously measure patient's physiological value, and it can also detect patient's fall. If abnormal behavior is detected, the system will issue an alert immediately. Besides, in order to protect patient's privacy, the image captured by our system only shows the outline of body movement rather than the facial image.

- improve hospital's and long-term care center's safety
- aid medical staff in providing patients personalized care
- reduce manpower expenditure

# 46. Jei-Qiao Co., Ltd. (supply chain partner for Far EasTone)

Category: Smart Infrastructure

The main products or services: The main products or services are integrated with the Internet of Things, expandable 4 generation and 5 generation, AI-equipped tools, providing the display of PM2.5, temperature detection and free wireless Wi-Fi. Using some devices, monitors within the areas could send information back to the administration, and thereafter enable license plate recognition, smoke detection, and other AI-related recognition, ensuring the safety for the public.

#### How to contact

Name and Title: Nick Huang, Project Manager

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Tel: +886-6200-5230

#### The Company

The services provided by Jie-Qiao Co., Ltd. range from software development, smart-city, and Internet of Things, to service planning and systematic development of innovated fields.

Following the guideline of the development in smart city from Tainan city. We help to formulate the policy for the development of smart city. Moreover, we actively integrate the existing resources and the industry chains to create open experimental fields.

- The design and development of dashboards and cloud maintenance to City Government.
- Vehicle recognition (automatic number-plate recognition / RFID)
- Smart Energy Management System Solution
- IoT device integration solution (street light application / environment detection / drone)

### The Challenge

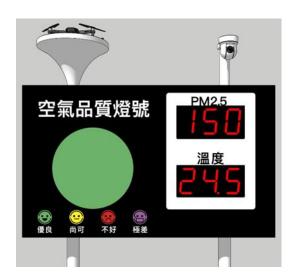
Air pollution, articulate matter (PM2.5), is the popular issue. The term of PM2.5 denotes the particle size of the suspended particles less than 2.5  $\mu$ m. Over inhalation can cause inflammatory reactions in different organs of the human body. It will also lead to different health effects and even diseases in different ethnic groups, regardless of the gender and age!

We cannot change the air in our surroundings, so we hope to adopt the simple method to warn people who live in surrounding. Moreover, we base on this fundamental development to design the sustainable and developmental device platform.

#### The Solution

In recent years, applications and systems such as AI, big data, and cloud have been gradually matured. Popularization of technology as IoT and 5G will change people's

living style. We organize the concept of IoT, Expandable 5G and AI Enabled Wearables for "Smart Air Quality Light Dashboard". We're excepted to provide the latest air quality with inductive, temperature detection, free WiFi hotspot and environmental monitoring. In the future, depending on demand, we can add enabled cloud AI technology to detect image, automatic number-plate recognition. Moreover, we can also provide the platform for 5G micro base station.



- Obtain the air situation in surrounding immediately instead of via the websites or mobile phone.
- Provide the Wireless WiFi functionality to make people surfing on webs conveniently.
- Solve the issue of environment without internet or inconvenient to set cable via transferring the image back and saving by the monitor.
- Implement the Proof of Concept to be one of case about to Smart City implement in people life.
- Introduce the service of 5G and application of IoT to the goal of Smart neighbor step by step, integrating the policies of Smart City into people life.

# 47. Kingwaytek Technology Co., Ltd.

Category: Smart Mobility

The main products or services: The autonomous transit service

#### How to contact

Name and Title: Renee Lin, Marketing Director

Email: renee.lin@kingwaytek.com

Tel: +886-2363-5445 ext.613

LINE: loverenee88

Website: www.kingwaytek.com

#### The Company

Kingwaytek Technology is the main provider for digital maps in Taiwan. We also provide Smart City solution, including digital maps; connected navigation, traffic big data and 4G connected AVN in Car. Besides, integrated all the content and data we have, we also provide autonomous driving solution in Taiwan. We develop HD maps for autonomous cars, by collecting dynamic map information to build 3D point cloud through mobile mapping system and reach centimeter-level accuracy. Combining the strength of lane-level navigation and telematics, we have laid the foundation for self-driving.

Our autonomous vehicles equipped with various sensors to collect traffic data, and integrate HD maps and accurate identification to achieve self-driving and automatically navigate to the destination. In the future, the autonomous bus can be used to support public transportation according to the rate of people flow and will bring great convenience to society.





# The Challenge

In the future, transit services during the night-time or in the rural area are unable to meet people's needs due to the increasing population in elderly people and the high cost of manpower for overtime.

#### **The Solution**

The autonomous vehicle can also be applied in logistics and transportation services.

- Obtaining new cooperation opportunities with autonomous vehicles vendors, who want to enter Taiwan Market.
- Combining the automotive electronics industrial chains and self-driving technology will lead the electric vehicles and self-driving technologies to become more mature and commercially.

# 48. Kuan Kun Electronic Enterprise Co., Ltd.

Category: Smart Infrastructure

## The main products or services:

If *Internet of Things* (*IoT*) is used universally, we'll have smart home, such as smart white goods, audio and so on. Our products are aluminum electrolytic capacitors which are used on the power PCB.

#### How to contact

Name and Title: Ariel Lin, Sales Specialist

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Skype: ariellinnov

Website: www.su-scon.com

### The Company

We are one of professional Aluminum Electrolytic Capacitor Manufacturers with 40 years experiences. In term of quality, Su'scon acquired the certifications for ISO 9001, ISO 14001, IATF 16949, QC 080001 and OHSAS 18001 standards. The application of our products include smart home appliance, power supply, GPON.

## The Challenge

One of challenge 'Smart City' is its high cost and its popularity rate. The new technology will bring a more convenient life but people will spend more money in the beginning and need to change their life style.

#### The Solution

The internet and WiFi are popular in the world. The next step is to promote the smart city. Once *IoT* is used universally, everything will be so easy. If the related infrastructure, building and housing are connected with internet. We're working hard to be more competitive and with higher quality. Once the cost is lower, we'll have a smart city early.

## **The Opportunity**

Our brand is Su'scan, and our E-Cap is with high quality. We supply most famous companies in the world. We're used on many kinds of power PCB. Also, the utilization of big capacitors contains solar pumping inverter, wind mill generator, boats and trucks. It will bring an easier and more comfortable life.

# 49. L.K. Machinery Corp. (Taiwan)

Category: Smart Manufacturing

The main products or services: 4.0 Smart Manufacturing

#### How to contact

Name and Title: Sabrina Chang, Marketing Executive

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Website: www.lk.world/

## The Company

L.K. Group provides intelligent, energy-saving machines, integrated advanced technologies from the intelligent control system, energy-saving control system and network management system etc.

It would help to improve the existing machine from the local factories to enter a new generation. In the era of industry 4.0, L.K. Group reached international standardization by offering automation technology solutions to various customers throughout the world.

## The Challenge

Need to learn more about the equipment used in Industry 4.0 and smart production. Also, L.K. Group provides a chance for customers to know more about how our automation solutions can bring them to success.

#### The Solution

The intelligent energy-saving unit is our main product for local market, aiming to offer a one-stop full-automatic solution to customers. It will assist downstream industries to make breakthrough progress and get closer to industry 4.0.

- As the automotive industry continues to grow, the manufacturing industry in the region has shifted from making low-end products such as household and daily necessities to higher-end products such as automotive and in the 3C industry.
- This change phased out old equipment to make room for the more advanced ones. Such a new opportunity can have taken actions to gain market share preemptively.

# 50. Long New Technology & Research Co., Ltd.

Category: Smart Infrastructure

The main products or services: With excellent design and engineering team provide products development, mold manufacture, assembling, packaging, shipment. Wide range of consulting from idea to market!

#### How to contact

Name and Title: Mickey Chen, Marketing Executive Vice President

Email: longnew@ms13.hinet.net

Tel: +886-2-2685-5111

Website: www.longnew.com.tw

### The Company

Eastablished in 1984, majors in molds making and plastic molding, packaging solutions such as shrink sleeves, film and printing.

Long New is a muti-faceed product development & manufacturer, offers a wide range of consulating products development, from idea , production to market!

### The Challenge

At the moment there are a multitude of 'Smart City' application and service providers, all competing in different silos. Cities often end up investing in different architectures, one for each solution (e.g. parking, smart lighting, and environmental monitoring). This is very efficient in both use of infrastructure and cost. Solutions in the 'Smart City' sector are all unique, and often one size doesn't fit every problem — each geography has a particular set of requirements.

#### The Solution

AAA has been working with III to develop the technology behind their wireless Smart Street Lighting Solution. This enables the use of AAA in Smart City applications, anchored around the energy and cost savings generated by the Smart Lighting system. This same radio network can be utilized for a multitude of additional applications, from Smart Parking, Environmental Monitoring to Smart Refuse.

- use of AAA radio standard for global compliance, power efficiency, security, symmetric 2-way communications
- wireless network which forms the basis for compelling 'Smart City' solutions deliver major improvements in smart energy

# 51. Luckpump Machinery Co., Ltd.

**Category:** Smart Energy/Environment, Smart Infrastructure, Smart Buildings & Housing

## The main products or services:

- Energy Saving Solution/Management
- Cost-Effective Water Saving
- Safety and Disaster Prevention
- Health Care Delivery Concept
- Comfortable, Convenient and Secure Living

#### How to contact

Name and Title: Jeffrey Lin, Senior Product Manager

Email: jeffrey@luckpump.com

Tel: +886-2-2365-4026 LINE: luckpumptec

Website: www.luckpump.com

### The Company

Luckpump Machinery Co., Ltd. was founded in 1970s, with its headquarters in Taipei. We are the first professional manufacturer engaging in constant pressure booster pumps water-supply system in Taiwan. In 1987, the 1st generation of our pump was born and was installed in Linkou Gymnasium, Taoyuan. Luckpump has come a long way since the launch of the first generation; this year, the 16th generation H-L dual constant pressure V.S.D. pump has just released to the world.



We have earned our reputation by selling good quality products and providing great services over the years. Luckpump has always had a very strong emphasis on product innovation and technology leadership. We have whole teams of people specializing in hydraulics, electronics and electromechanical dedicate to research and development.

Luckpump develops and manufactures its products, such as constant pressure controller, pressure transmitter, control panel and interface with Multi-Scenario Control CPU. Cooperating with our SEACloud platform, all of the mode notification/real-time data/ trend analysis/ alarm states and causes will be optimal Integration.

Since the year 1997, we have obtained patents in Taiwan, Mainland China, US and South Korea. Today Luckpump's products are sold worldwide. We have entered Taiwan, Shanghai, Hong Kong, Southeast Asia, South Korea, Europe and US

markets.

Luckpump is the only company that can deliver complete water supply solution for today's world. With years of expertise in the industry and solid R&D, Luckpump has confidence to continue our excellent services, exceed customers' expectations and become one of the successful global leading manufacturers in the pump industry in the near future.

#### The Challenge

At the moment there are a multitude of 'Smart City' application and service providers, all competing in different silos. Cities often end up investing in different architectures, one for each solution (e.g. smart energy saving, smart lighting, and environmental monitoring). This is very efficient in both use of infrastructure and cost. Solutions in the 'Smart City' sector are all unique, and often one size doesn't fit every problem – each geography has a particular set of requirements.

#### **The Solution**

Luckpump has been working with many kind of industry to develop the "safety/energy/automation/cloud" solution. This enables the use of Luckpump in Smart City applications, anchored around the energy, human resources and cost savings generated by the SEACloud platform.

# The Opportunity

Multi-Scenario Control

- Daily energy saving and water resources optimization, not only achieving energy saving but improving comfort.
- Fire and water damage prevention and detection scenario control.

#### Action Schedule flexible Setting

• Electricity usage Tracking & Analyzing - associated with a "time-of-use" electricity rate structure helps you realize power demand control.

#### Mobile Rights Management

• Different levels of user authorization. Distribute different levels of management permissions for different users, according to their positions and responsibilities.

#### Environmental Monitoring & Analyzing

- Including water pressure/ water quality/ water quantity/ water temperature/ water level detection/ ambient temperature/ energy consumption and other environmental monitoring projects.
- Smart Integration on our SEACloud Platform
- Mode notification/ real-time data/ trend analysis/ alarm states and causes, get the info you need anytime and anywhere.

# **52.** Medimaging Integrated Solution Inc.

Category: Smart Health

The main products or services: Telemedicine Total Solution

#### How to contact

Name and Title: Johnson Chang, Manager

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Tel: +886-3-579-8860 Website: <u>www.miis.com</u>

#### The Company

Our device (Digital Hand-held Diagnostic Set) is designed for Telemedicine, Clinics and Hospitals which develops the concept of 'Device to Device'. Collecting medical image such as eye, ear, dermis, epidermis and oral and data of vital sign with Bluetooth in a few seconds and then integrating all data to device which highly improves the progress of operating. With Wi-Fi transmission to multi-platform, it increases medical efficiency, making case history completed, to reach precision medicine ideal, improve the medical environment, and reduce costs associated with healthcare.

## The Challenge

Around ten years ago, doctors and patients had a difficult time trusting the devices. Nowadays, public opinion has largely changed, and the world has embraced digitization to a far greater extent, so we would say patients are far being more trusting. Every government has some form of cyber security regulation, and there is technical documentation that we must provide to get approval. Furthermore, this is why we developed our own software, so patients and doctors can keep their data to themselves rather than it being shared and potentially stolen. Every medical device should be certified and verified by the cyber security guidance and we make sure to follow these strict regulations.

#### The Solution

Driven by emerging medical services such as mobile medical and telemedicine, MiiS designs the best quality, reliability, portable and practical products, allowing hospital quality products and better medical services during the screening phase. User-friendly platform for all patients and doctors combined with image analysis and cloud processing. MiiS provides doctors the best diagnosis equipment. It reduces the problem of medical resource allocation gap, helps patients find symptoms in advance, and treat them immediately, to achieve the benefits of preventive medicine.













- User-friendly, Real-time message sharing
- Highly integrated pathology data without using other devices, immediate interpretation
- Lightweight and portable medical image device for telemedicine

# 53. Merit Lilin Ent. Co., Ltd.

Category: Smart Mobility

The main products or services: Smart Transportation

#### **How to contact:**

Name and Title: Enzo Chang, Marketing Manager

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Tel: +886-2-2298-8988

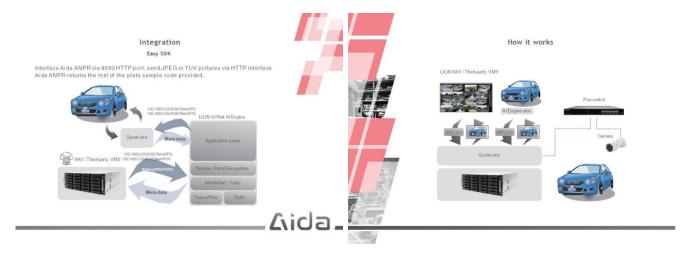
Website: www.meritlilin.com

### The Company

LILIN Aida software is the latest deep learning technology which allow to apply multiple VPUs to support license plate recognition and object classification. LILIN Smart Transportation Management Solution arises from solving the problems of traffic congestion by utilizing a synergy of new information technology for simulating, controlling, and optimizing real-time transportation networks. Aida is made up of advanced devices and applications which aim to provide innovative services relating to different modes of transport and traffic management, enabling various users to be better informed and make safer, more coordinated, and 'smarter' use of transport networks.

LILIN builds its own license plate labeling tool in order to build a large number of country / state license plates around the world in the shortest time. LILIN Aida software is familiar with the application platforms of major manufacturers. The Aida deep learning identification interface is compatible across platforms and supports NVidia cuDNN and OpenVINO, which can be identified under different CPU platforms. In addition, AI research and development results will be introduced into embedded NVRs and IP cameras.

In practice, with embedded software applications, a combination of LILIN Aida & our IP camera series can be installed in a traffic control centre and on board at a transportation vehicle to simulate and control traffic by collecting and analysing traffic status promptly, including availability of lanes, vehicle/passenger counts in designated zones, and the occurrence of accidents/traffic violations or an indication of construction/road blocks, thus guiding vehicles to take alternative routes or get in and out of certain zones at alternative times. Moreover, not only can LILIN NAV (Aida ANPR Server) function but also it can connect with IP cameras to form surveillance system, providing ubiquitous monitoring function to a driver to ensure public safety. Besides, all data collected at far ends can be transferred back to traffic control center for remote management, thus enhancing overall resource allocation, traffic coordination and infrastructure integrity.



# The Challenge

Difficulties LILIN encountered when introducing AI ANPR license plate recognition, car factory logo recognition, and object recognition applications include:

- 1. Collection of license plate data photos, car brand photos and object identification data photos.
- 2. A lot of labor is spent manually marking the license plate.

To realize intelligent transportation applications, identification of the license plate is an important link. In order to have a certain accuracy and practicality, considerable investment and cost are required to build them at early stage, such as training of AI, establishment of recognition models for various types of texts and alphabets in various countries.

In this case, LILIN mainly use LILIN series products, including 12 NVRs, 6 Aida NAV, and LILIN NAV Control Server central management host NCS3600, which can manage the tree structure of LILIN's full NAV recording hosts. The main host can be connected to more than 4000 NAV video host at the same time. Real-time monitoring and management of the TV wall can be performed through LILIN NAV Control Server central management host. Through the combination of various NAV hosts, a maximum of 64 sets of TV walls can be set, and each group can splice up to 144 screens, display 1 to 144 channels images at the same time. The screen and image can be arbitrarily set and bridged that allows users to flexibly stitched display style.

In addition, LILIN self-developed AI engine to overcome the above problems:

- 1. Automatic labeling.
- 2. Photo rotation and FOV amplification.
- 3. Verification and other functions after marking.
- 4. Photo composition.
- 5. Batch download of online photos.
- 6. How to quickly expand the training set.

#### The Solution

- 1. LILIN High-speed license plate recognition: We are Taiwan's first and only high-speed 200KM/h multi-country license plate, high-wide angle, automotive and high-flow, high-speed motorcycle detection license plate recognition and the world's only set of Black and white list multi-language recognition system.
- 2. Interval speed detection: A point in and B point out, can be used for high speed, effcient recognition time, long license plate can be recognized, vehicles can change lanes to grasp the average speed, and allow the license plate high angle  $\pm$  15, 30 degrees
- 3. Vehicle object classification: the only solution of various receognition of vehicle brand logo/model color/model in Taiwan. It can identify motorbike and bicycle license plates and perform flow calculation at the same time. The vehicle license plate recognition interval speed detection application uses two cameras to calculate the average speed of the vehicle, and can take snapshots and videos to prove the speeding violation of the vehicle. Urban traffic management—AI objects identify trucks driving into the city center illegally, and bus stop illegal parking.
- 4. Vehicle counting statistics—AI object identification vehicle counting function system to avoid traffic jams.

LILIN self-developed Aida, which is the only and first integrated brand recognition and license plate recognition company in the industry in Taiwan. In addition to identifying models and brands at the same time, the built-in black-and-white list also performs license plate recognition to report illegal vehicles. Targeting traffic hubs can alleviate the situation of heavy traffic.

After two years of research and development of Aida software that includes deep learning, AI automatic labeling tools, data amplification and label verification technology. It has 440,000 license plates from various countries and 100,000 object photos.

- 1. High-speed 120KM/h multi-country multi-lane license plate recognition system.
- 2. Applied to the identification technology of multi-VPU and multi-layer AI network modules at the same time, flexible function expansion.
- 3. Supporting OpenVINO CPU internal pattern recognition can save costs, without using an image acceleration card.
- 4. Patented technology for AI license plate recognition and license plate calibration, and obtained a new patent from the Intellectual Property Bureau of the Ministry of Economic Affairs, and applied for Taiwan and the United States invention patent.
- 5. AI automatic marking tools, data augmentation and inspection technology significantly reduce labor costs.

### **The Opportunity**

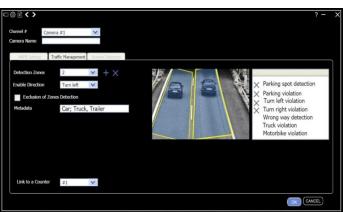
LILIN Aida software is compatible with its own NAV VMS image management system for access control and license plate management. At present, Aida software is being developed for various business logics, providing solutions including retail, banking, logistics and transportation, including:

- 1. Business logic Windows program development, which will step into retail traffic flow management, queuing detection, speedy license plate recognition, familiar customer management, depot identification and accurate smart electric signage marketing and hotspot management
- 2. The AI cross-platform project supporting ARM and X86 Linux is introduced to the development of embedded NVR and IP Camera. It is expected to be launched in Q1 and Q2 in 2020.
- 3. AI tools are mass-produced for use in the medical and defense industries, and AI self-tagging, engine quick install and use.

LILIN Deep Learning

**GLILIN** 









# 54. Mirle Automation Corporation

Category: Industrial Control & Building Automation

The main products or services: Water Treatment Industry, Smart Building

#### How to contact

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Website: www.mirle.com.tw

### The Company

Recently, application of automation control has extended beyond industrial field all the way to residential building & commercial building. In order to provide safer and more comfortable environment to the public, Mirle Automation is devoted to completely automate all kinds of systems and devices. Mirle is able to provide integrated total solution for water treatment as well as for building automation. Mirle integrates water supply pump and air blowers with unit control panel and area control panel together with PC SCADA via programmable logic controller, to ensure that users manage the whole system efficiently.

For surveillance of control level, Mirle also provides LED screen wall and control interface for remote control management, which provide a comprehensive total solution of monitoring system. Besides application of water treatment, Mirle Controllers are also able to share the site information to the central surveillance platform via cloud system. Users can monitor the status of water supply anywhere he prefers to.

As for smart building, Mirle provides controllers for air condition: the small & large controller MXC-100, SC-600, SPLC-4, which are able to monitor status of light control, air conditioner, environment, security alarm, electricity supply etc. Furthermore, Mirle Controllers are equipped with abilities of data acquisition, data analysis & control, which enable application of automation and smart building to the highest level.

### The Challenge

During the development of Smart City, many challenges and difficulties come with the rapid growth of database. First of all, due to the massive data generated from everyday life, it is a great challenge for system integrators to transform massive data into useful information. What's more, without complete system integration, it would be difficult to ensure all devices work perfectly at the same time. Last but not least, information security becomes an issue due to the development of Smart City. Data could be stolen and entire city could be paralyzed.

#### The Solution

Mirle Automation has been dedicated to manufacturing, research & development of controllers for more than 30 years. Not only our controllers pass CE/UL/SIL2 Certification, but they are also capable of multiple applications including redundant control pair and remote I/O drop, in order to meet different requirements from our customer.

For either water treatment or smart building, Mirle has the ability to not only carry out analysis and concretization of big data, but also transform the information into the specific forms to meet customers' need.

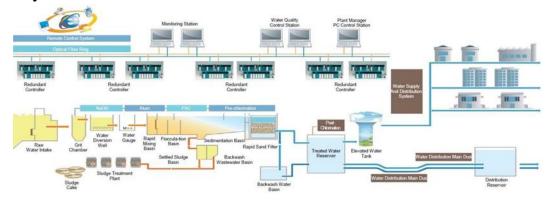
With integrated equipment resume, Geographic Information System and anomaly analysis, operators are able to control real-time conditions of every system. In the near future, users can monitor water supply status with their mobile device and receive anomaly alert immediately. With this advantage, shorten information transferring time, and fulfill an Energy Saving Smart Solution can be expected.

### **The Opportunity**

Upload information to remote cloud platform, and reduce cost of labor by monitoring real-time information online.

By monitoring the real-time status of every devices & detector, customers are able to keep track on device conditions precisely, and to reduce cost of maintenance by prevent malfunctioning of device.

Improve efficiency of operation by energy saving management, and device efficacy analysis.



# 55. MiTAC Information Technology Corp.

Category: Smart Infrastructure, Smart Governance

The main products or services: Smart City Total Solution including Cloud, AI-IoT Platform, Edge Computing Server/Gateway, Automated Fare Collection System, Automated Border Control System, Access Control, Smart Governance Solutions, RFID Smart Library System.

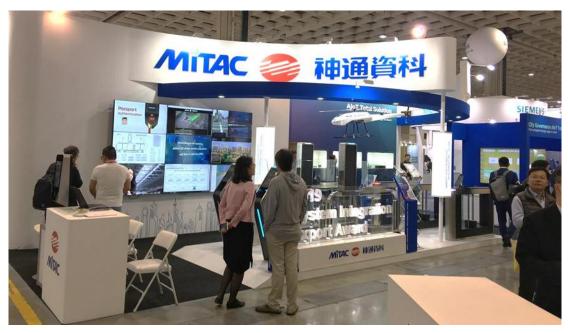
#### How to contact

Name and Title: Cait Chen, Marketing & Planning Sr. Executive

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#### The Company

MiTAC Information Technology Corp., a solution provider of AIoT with cloud, edge and system integration. Established in October 2010, MiTAC has inherited rich experiences in system integration and core technology from MiTAC Inc, and accumulated technological capabilities in various fields. In past 20 years, MiTAC has been cooperating with governments and enterprises, helping customers from end to cloud, from Electronization to AI, and achieved numerous success cases including E-Gate System, Communication/Electronics/AFC systems in public transportation and RFID system in the Public Library of New Taipei City.



### The Challenge

At the moment there are a multitude of 'Smart City' application and service providers, all competing in different silos. Cities often end up investing in different architectures, one for each solution (e.g. parking, smart lighting, and environmental monitoring).

This is very efficient in both use of infrastructure and cost. Solutions in the 'Smart City' sector are all unique, and often one size doesn't fit every problem – each geography has a particular set of requirements.

#### The Solution

MiTAC offers an OpenAIoT platform connecting IoT sensors or other edge devices to a central server (on-prem or cloud based). All IoT data will be converted to the OGC IoT standard data format. AI predictive models would be created thru machine learning technology which will provide scalability, security and data privacy protection. As a key leader of Smart City applications in Taiwan, MiTAC has developed successful business models in smart transportation, smart education, smart healthcare, smart manufacturing, smart enterprise, smart banking, e-government and many other fields.



In smart transportation, MiTAC participated in the development of the Taiwan High Speed Rail (THSR), the Taiwan Railways Administration (TRA), the Taipei Rapid Transit Corporation (TRTC), EasyCard and ETC system. MiTAC's Automatic Fare Collection System (AFCS) was also successfully replicated in China and Southeast Asia countries including Vietnam, Indonesia, Thailand, and India.



MiTAC's e-Gate Automatic Immigration Clearance Solution offering biometric application was also successfully applied at airports or ports in Taiwan and Philippine. In city safety network, MiTAC helped establish surveillance system on more than 20,000 units of road monitoring devices in Taipei City and New Taipei City. In smart education, MiTAC's RFID Intelligent Library application has contributed to 24-hour automated library services.



# **The Opportunity**

Provide with powerful AIoT platform, Edge Device and IoT connection technology which are to boost global smart cities' "Digit Transformation" adoption.

Deliver major improvements in City/Nation Safety, Transportation Management, and Smart Library & Education.

# 56. NEXCOM International Co., Ltd.

Category: Smart Mobility, Smart Infrastructure

The main products or services: NEXCOM Mobile Computing Solutions (MCS) Business unit provides full line of Mobile Computers included in-Vehicle Telematics Box Computers, Monitors, all-in-one Vehicle Mount Computers and Railway Computers.

#### How to contact

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Website: www.nexcom.com

### The Company

Founded in 1992 and headquartered in Taipei, Taiwan. NEXCOM is committed to being your trustworthy partner in building the AI and IOT Industrial Embedded solutions. Mobile Computing Solutions (MCS) can turn smart mobility into reality and increase efficiency and productivity for commercial fleets and field operations.

## The Challenge

From our long years of experience in the telematics markets, we found numerous challenges including frequent redesigns of I/O interfaces, high research cost, long development cycle, delayed time-to-market, and virtually no vendors taking on projects due to low MOQs.

As system requirements vary by project, NEXCOM is rolling out MVS Express Service, which can help clients customize the I/O and expansion interfaces to unique project needs with plug-in modules.

#### The Solution

NEXCOM Mobile Computing Solutions (MCS) Business unit provides full line of Mobile Computers included in-Vehicle Telematics Box Computers, Monitors, all-in-one Vehicle Mount Computers and Railway Computers. With dedicated RD/PM/Sales team to provide Mobile Computers for transportation market in a decade and continuously develop product roadmap with more than 60+ standard models to serve solution customers time-to-market worldwide. The product ranges are covered from entry gateway, mid-range Communication Hub to high computing with Graphic-Driven AI Servers. Each product is with defined IO and rich expandable features meet for various application purposes in Public Transportation, Public Safety and Material Handling vehicles.

- Public Sectors (Public Transportation Bus & Rail, Public Safety, Public Works Vehicles, Taxi and Autonomous Drive Vehicles)
- First Response (Law Enforcement Police Car & Roadside, Ambulance and Fire Truck)
- Materials Handling (Port Management, Fleet Management, Warehouse Management, Construction Vehicles)
- AI technologies related (Factory Automation, Parking or Mobile ANPR/LPR, Face recognition, Machine Vision)



## 57. NextDrive Co.

**Category:** Smart Energy/Environment

### The main products or services:

By deploying our smallest energy gateway in the world, we provide the following solutions:

(1) HEMS (Home Energy Management System)

Ecogenie is our HEMS product which can connect to a smart meter and control home appliances via wireless connection including BT, Wi-Fi, Wi-SUN etc. With Ecogenie, you can finally monitor and control all of your home electricity usage from a single and easy-to-use App.

(2) CEMS (Community Energy Management System)

CEMS platform integrates devices such as smart meters, energy storage devices, and solar panels to dispatch electricity in the community efficiently and easily track the electricity consumption.

(3) IoE Platform

NextDrive has strong abilities to vertically integrate software, hardware and cloud services to fulfill highly-customized needs.

#### How to contact

Name and Title: Kevin Wang, Business Development Manager

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## The Company

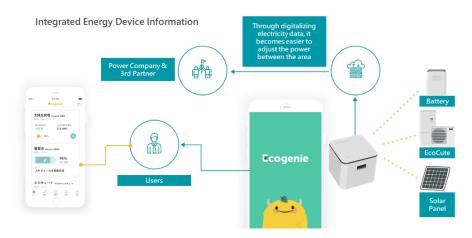
Founded in 2013, NextDrive's vision is "Makes Every Energy Count" through the integration of internet technology and energy technology. NextDrive provides the total solution of energy management including software, hardware and cloud services. By advanced communication technology, our modular platform architecture is able to control energy equipments and integrate various energy datas. NextDrive creates a more efficient and energy-saving lifestyle through energy visualization and smart appliance control.

## The Challenge

Utility transformation is driven by the "5Ds", including Decarbonization, Depopulation, Deregulation, Decentralization and Digitalization. Utility should become a horizontally interactive business instead of a vertically integrated service. Connectivity among various devices is the beginning of transformation while good usage of the data colleted is the key success factor to make utility smart.

#### The Solution

### (1) HEMS – Zero Energy Home



In addition to connecting to a smart meter, Ecogenie integrates various energy sources in real-time so the electricity generation, power consumption and the electricity status of battery can be monitored. Furthermore, "Schedule Function" automatically helps you consume electricity saving in the battery when it's peak-time.



#### (2) CEMS Platform

NextDrive CEMS platform provides three main features: 1. Connect to various Energy Devices, 2. An intuitive Power Visualization Platform, 3. Power Distribution – By analyzing data on peak hour electricity consumption, CEMS platform allows managers to maintain community microgrids that ensure both efficiency and stability.

- HEMS makes daily life convenient, cost efficient and green.
- CEMS helps people maintain microgrids and better dispatch the electricity generated.
- Makes Every Energy Count!

# 58. Parkxper

Category: Smart Mobility, Smart Parking

The main products or services: Intelligent Parking Management System

#### How to contact

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#### The Company

Parkxper, the parking expert is here to provide Intelligent Management Solutions for parking lots. Parkxper is an innovative brand from Telexper, a professional manufacturer and provider of IP CCTV solutions since 1992. We already have over 27 years of experiences in video processing, software & hardware research and development, and system integrations.

With our extraordinary expertise in video analytics, IP network infrastructure and R&D, we introduce Parkxper, a comprehensive solution for automatic number plate recognition, gate control, smart parking guidance, car finder, interactive surveillance, public address and more. We wish to expand our legacy into parking solutions and provide our best value and service to customers like you. Let Parkxper prosper your parking facility!

The current challenges that parking lots are facing is traffic congestion going in and out of the lot. Drivers are having a hard time searching for an empty space. There isn't a clear guidance showing them where to go for available parking spaces. For VIP customers, there are no special features to attract them from keep coming back to park at the lot. From the management standpoint, they are unable to detect long-term parking vehicles. These are all the challenges that parking lots are currently facing. Parkxper is made to solve all these problems.

Parkxper camera-based smart sensor is core to our intelligent space guidance system. It is flexible and adaptable to various layouts of parking facility. Compared to traditional sensor camera, Parkxper LPR camera detects occupancy of the space and captures license plate in megapixel resolution. LPR's Megapixel video gives the manager greater details in each parking space and its surroundings. All of our equipments are IP network based for easy installation and ability to extend in the future. Parkxper camera-based smart sensor automatically switches LED lights if the parking space is occupied and shortens drivers' time in finding parking space. LED color is adjustable to different colors to vacant (green), occupied (red), handicapped

(blue) and Parent & Child space (pink) and so on.



More than 50% of guests forget where they park their vehicles. With Parkxper's Car Finder Kiosk, you can find your vehicle in no time. Minimizing staff's man hours in car search assistance will optimize your parking lot management and efficiency. You can search your vehicle by inputting car license plate, parking space number or the estimated arrival time. Parkxper's Car Finder Kiosk, designed with friendly GUI and ergonomic design is easy to operate by any users at any age, Full HD touch screen monitor can clearly show a dynamic route from your current location to your destination. To add value to your existing self-service kiosk, Parkxper Car Finder Kiosk collaborates with other solution providers. Our Car Finder Kiosk is designed to seamlessly integrate with other existing self-service kiosk or management system.



- Shopping Malls, Retail
- School
- Hospital
- Corporate
- Airport

## 59. Partilink Inc.

**Category:** Smart Health

### The main products or services:

Partilink 4K UHD HDMI/USB Extender over IP is composed of transmitter and receiver to extend HDMI, USB, RS232 and IR over IP via Cat5e/Cat6 cable and Gigabit Ethernet switch. It can be applied for point to point, point to multi-point and multi-point to multi-point to be a video wall. As the digital signage is becoming more common for medical applications, Partilink multiview solutions provide high-resolution visuals which match to medical imaging systems and telemedicine. Our high-end performance products suit to health technology which is constantly evolving though new innovation.

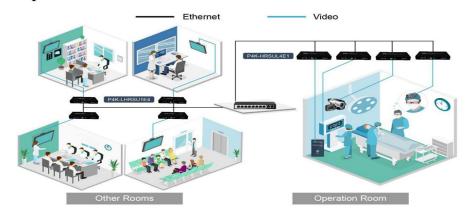
#### How to contact

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LINE: linsherry8

Website: www.partilink.com



# The Company

Partilink Inc., based in Taipei, Taiwan, is senior engineers with over twenty-year expertise in Pro-AV, design and manufacture innovative world-class, pro audiovisual, technologies.

Partilink Inc. brings real life vision through wide screen and video wall for AV, Digital Signage, Broadcast, Control Management, Medical and Education markets.

## The Challenge

Globally, the medical device manufacturers are shifting from a transaction-based approach to an approach that involves focusing on creating value for providers. To providing surgical instruments and medical tools that are highly cost-efficient, innovative about the product quality special the device of high resolution. The medical device manufacturing industry is expected to grow by leaps and bounds

owing to the rising aging population, increasing health concerns, and sky-rocketing health care costs. As a result, medical device manufacturers are undertaking new product development projects at breakneck speed, especially in the emerging markets such as China, Thailand and India. However, a key point to remember here is that the medical equipment manufacturing companies would require a proper execution strategy to address the needs and concerns of the key stakeholders in the market.

#### The Solution

Partilink Inc. has been working with channel partner to develop the technology behind their 4K@60Hz high resolution of a series of Multiview, Video Wall, Extender, Splitter, Repeater, Converter solution. Partilink HDMI 2.0 to Display Port 1.2 Converter with 4K/2K@60 4:4:4 color sampling enables the use in smart health applications, anchored around the energy and cost savings generated by the smart health system.



Partilink products can be utilized for a multitude of additional applications, from Smart Building, Surveillance, Bank and stock market, Shopping Environmental Monitoring to smart building.



- 1. Another technology with niche applications in medical device manufacturing is high resolutions and quality. The 4K@60Hz of video processer can provide the capability to process different products through the same system and are reconfigurable for new products, thereby reducing costs, improving production flexibility, and shortening product development life cycles.
- 2. The Hardware devices will also continue to play a major role in medtech innovation allows Partilink extender devices to transmit patient data to doctors, manage documentation and records, and provide identification and traceability of medical devices.
- 3. Many medtech companies are enhancing their products with service offerings that offer additional value for their customers, such as increasing operating room efficiency or reducing hospital visits.
- 4. To improved Medical system and the usage of connected devices will overcome the costs in the short term, providing beneficial tools for improving the patient health.

# 60. QB Tech Co., Ltd.

Category: Smart Infrastructure

The main products or services: PaaS platform

#### How to contact

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Website: www.qbtech.com.tw

### The Company

QBtech distributing German IoT platform "Cumulocity." Platform now allows IoT applications to be hosted in the Cumulocity cloud. In addition to a set of application enablement features around data, platform and device management, Cumulocity now makes it easier to deploy IoT applications. The platform allows the enterprise or an integration partner to build and deploy web-based (HTML/JS/CSS) IoT applications hosted in the Cumulocity cloud. This makes it easier for companies that do not have a strong IT presence to launch IoT solutions built on top of the platform.



## The Challenge

There are three difficulties in the construction of smart cities: Collect message, Information Integration, Information applications

The construction of smart cities includes the collection and storage of massive information. Therefore, the essence of smart city construction is the construction and

integration of data resources. Massive data fusion and interoperability between different departments, different industries, different systems, and different data formats. Dig deep into data resources to form new data sources that support decision making. Therefore, in addition to hardware construction, the foundation of the construction of a smart city is more important than the construction of a data resource platform. Without a platform, there is no source of wisdom, and there is no smart application based on data integration and development.

#### The Solution

Cumulocity IOT Platform is designed for Internet-of-Things (IoT)/ Machine-to-Machine (M2M) solutions. An IoT/ M2M solution enables an end-user, for example an enterprise customer, to manage and control remote assets that are equipped with sensors (such as GPS devices, electricity meters and humidity sensors) and actuators (such as switches and valves). In addition real time data analytics is used to implement business rules for specific application use cases.

The platform has been designed right from the beginning as cloud software. One of the key advantages for end users is that they do not have to provide own, dedicated computing resources for their IoT/M2M solution. Cloud also means no or significantly lower up-front investments, and very fast deployment.

The platform is offered as fully managed service and accessible through common Internet browsers on computers, tablets or smart phones.

- Everything we do is geared to delivering what enterprises need to be successful as a connected device business.
- Minimize the operational costs for the operator to make M2M profitable.
- Continuous innovation by virtue of a SaaS platform that leverages the best practices and input form the largest base of enterprise deployments.



# 61. Simplive Technology Co., Ltd.

Category: Smart Health

The main products or services: Innovative wireless network which revolutionizes smart health and personal location real time monitor in cities

#### How to contact

Name and Title: Sam Cho, Director

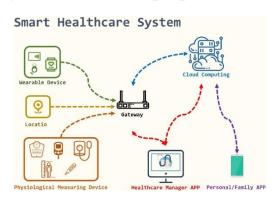
Email: sam@simplive.com Tel: +886-2-2278-9856

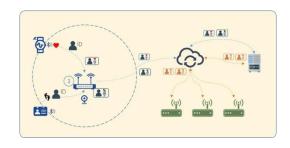
LINE: sam\_cho

Website: www.simplive.com

### The Company

Simplive is founded in Feb., 2012 by a group of experienced R&D who has average over 15 years' experience in system integration, S/W & H/W development. They have designed world 1'st slim Android platform tablet and win 2012 Taiwan excellence Award. With plentiful hardware & software developing ability, Simplive provides Smart Home solutions. It included home entertainment, home automation (wireless control, smart metering) and Health Management. Simplive aims to provide turnkey solution to make people's life more convenient; simpler.





## The Challenge

At the moment there are a multitude of 'Smart City' application and service providers, all competing in different silos. Cities often end up investing in different architectures, one for each solution (e.g. parking, smart lighting, and environmental monitoring). This is very efficient in both use of infrastructure and cost. Solutions in the 'Smart City' sector are all unique, and often one size doesn't fit every problem — each geography has a particular set of requirements.

#### The Solution

In terms of technology, smart health care focuses on precise measurement and personal privacy as the main research and development direction, while considering user convenience. In addition to the basic physiological monitoring records, the smart

health care system developed by Simplive Technology Co., Ltd. can provide security and real-time, so that relatives and friends can always care about the location and status of family members, and use a simple personal device to take into account the user's sense of privacy.

# **The Opportunity**

The rapid development of the smart health industry, Simplive services have expanded to include sensing devices, cloud service links and platforms, including wearable devices, mobile health services, personnel positioning management, cloud services, etc., and become smart solutions for providing health care.

# 62. Sinotech Engineering Consultants, Ltd.

Category: Smart Energy/Environment

The main products or services: Sponge City Technology

#### How to contact

Name and Title: Yi-Jen Hwang, Acting Associate Vice President of Business and

**Contract Department** 

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## The Company

Sinotech Engineering Consultants, Ltd., one of the most reputable engineering consulting firms in Taiwan, offers all manner of engineering consulting services. Sinotech is renowned for engineering quality in soil and water conservation, geotechnical engineering, energy, industrial development, environmental protection, transportation, urban and rural infrastructure, and mechanical and electrical engineering.

Sinotech offers world-class professional services in planning, design, construction supervision, operation management, and project management in the following fields:

- 1. Architecture and Civil Engineering: Architecture, Transportation, Airports and Structural Engineering.
- 2. Water Resources and Power Development: Water Resources, Harbor Infrastructure, Tunnels, Coastal and Ocean Engineering.
- 3. Environmental, Mechanical and Electrical Engineering: Electrical Engineering, Mechanical Engineering, Railway Core Systems, Air Pollution Control.
- 4. Rail Engineering: Railways, High-Speed Rail, Mass Rapid Transit
- 5. Construction Management for the above mentioned fields.

## The Challenge

Smart City utilizes sensor technology to gather and analyze information. The usage of high volume of expensive sensors makes Smart City susceptible to flooding. Furthermore, the flood event is getting worse in recent years due to climate change. Therefore, an effective yet affordable flooding prevention mechanism is mandate to support Smart City operations.

#### The Solution

In response to the global climate change, either urban renewal or new urban development, need to be introduced into the sponge city concept during planning and design stage. Sinotech has experiences on sponge city planning and design in both Taiwan and China.

Our experience in Taiwan that the sponge city concept is integrated with urban

renewal by using the LID (Low Impact Development) facilities increasing the Blue-Green spaces. This development pattern can also be called "micro-scale sponge." It will increase the disaster resilience of a developed city.





As for our experience in Pingtan Island China, that the urban development shall be considered with the water-balance, water-regulation, water-resource, water-environment of the whole island by using "infiltration, detention, retention, purification, usage and drainage" strategies. This development pattern can also be called "macro-scale sponge." The concept can be applied to even undeveloped or developing cities.

# **The Opportunity**

Sponge city solution needs to be customized to the local conditions due to the variations of the natural (such as climate characteristics, geographical environment), social and economic environment (such as industrial development, urban scale) in different cities. The experiences of sponge city planning and design from Sinotech can be useful to Thailand and other Southeast Asian countries for future urban development.

# **63.** Skwentex International Corp (SIC)

Category: Smart Energy/Environment

The main products or services: Arc Solar Box, sustainable IOT power solution offering IOT device operate independently without power line connection. Customer can integrate Arc Solar Box with IOT, GPS, LPWAN device for variety application that are free from power line connection limitation.

### How to contact

Name and Title: Brian Huang, Specialist

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## The Company

Founded in 1989, SIC has been engaged in international trade business for value added products such as wrapping materials, construction materials, PCB boards, IT-related components, raw plastic materials, fully finished and half-finished plastic products.

Electronics and New Energy Group was established in 2008 to branch out into the renewable energy industry. We focused on



Wildfire detector

solar energy and cloud services in order to provide one stop solution.

SIC is committed in solar photovoltaic, LED lighting and electric vehicles, etc. We simply see it as an implementation of civil responsibility, and contribution to the community by protecting the environment.

# The Challenge

When more and more IOT devices deployed in the field, how to ensure these devices operate with sufficient power across whole life of service become imperative. IOT devices also need to get rid of power line limitation for reaching more coverage. IOT device with battery will face replacement issue after deployed in scattered and untracked field for a period of time. Sustainable energy solution is key to IOT business success.

#### The Solution

Arc solar box consisted of proprietary waveguide packaging technology that integrated with solar panel to achieve waterproof and UV resistance. Our specialized energy management system can enhance efficiency up to 40% more comparing with

regular solar panel. Lifetime is up to ten years that fully support IOT device service duty. Arc-solar box sustainably provides power to IOT device for collecting data without interruption.

- Arc solar box can integrate with variety IOT sensors such as gas, temperature, water meter, pressure, PM2.5, soil moisture, etc.
- Arc solar box fully support powering LPWAN system (Sigfox, LoRa, NBIoT, Zigbee, Sub-G, etc).
- Arc solar box fully support powering GPS, parking sensor for tracking/monitoring application.
- We provide arc solar box as embedded solar solution
- 10 years product life, waterproof and UV resist
- Vertically installed without light angle limitation
- Specialized IC with MPPT function
- Shape-able, colorful solar module fit into customer industrial design
- Below diagrams are proven business application for arc solar box





# 64. Smart Ageing Tech Co., Ltd.

**The main products or services:** Smart Nursing Solution provides cloud healthcare platform and data science services to facilitate long-term care.

#### How to contact

Name and Title: I-ling Chen, Brand Manager

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LINE: x10dd0214

Website: www.jubo.health

### The Company

Smart Ageing Tech spins off from a research team at National Taiwan University led by Prof. Shih-Chung Kang in 2018. Smart Ageing Tech is focused on developing healthcare technology that applies in various long-term care scenarios. We provide cloud healthcare platform and data science services to facilitate long-term care. Considering family-oriented culture in Asia, we create a platform that connects the care professionals, the senior, and the family. We believe care communication can be facilitated by the use of technology, and a warm care environment can be created.

### The Challenge

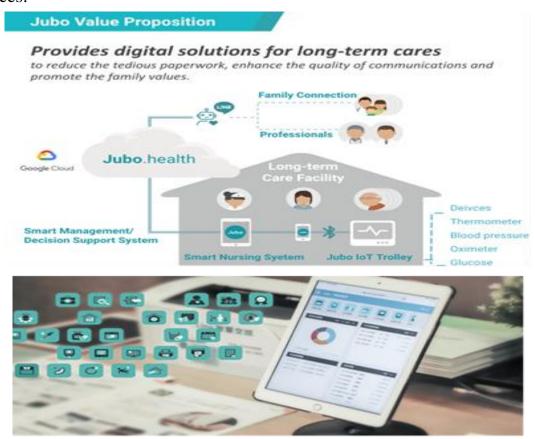
In Asia, the elderly dependency ratio will be doubled from 1:4 to 1:2 in the following 20 years. 50% of the elderly may have difficulty finding the caregivers if we do not change the methods of care giving. Smart Ageing Tech provides digital services to increase the productivity of caregivers, engage the families to reduce the dependence of caregivers, and lower the bar to serve as caregivers by the help of smart devices.

#### The Solution

Smart Ageing Tech launched the first product: Jubo Facility Solution. It includes four parts: (1) IoT trolley: to reduce the efforts on the measurement of vital signs at the bedside; (2) Smart Nursing Information System: to increase the quality and accuracy of the nursing record through smart input interface; (3) Facility Management Chatbot: to facilitate real-time and effective management via integration with LINE; (4) Family Communication Chatbot: to enhance the family engagement in long-term care.

- Using the digital tool to reduce the needs of caregivers and increase the care quality.
- Smart digital tools for caregivers to deliver high-quality care with fewer efforts.
- Link social media and nursing information to keep the family in the loop.

• Operate on mobile platform to attract more caregivers providing on-demand services.



# 65. Smart Cities Consulting (SSC) Technology Co., Ltd.

**Category:** Smart City Strategic Planning/Governance/Mobility/Energy/Environment

The main products or services: Starting with Smart City Strategic Plan for the client city/industry park/community, then based on specialized diagnostics and demand analysis, SCC Technology provides clients with demand-driven smart solutions, rather than just hardware and software products, with a business model to help the clients' operation and maintenance needs. SCC Technology's products and services include AI and machine-based smart mobility, smart street lights, integrated incident management, smart travel, smart governance, and smart flood control and

management solutions.

### **How to contact**

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## The Company

Smart Cities use latest technologies to overcome various economic, environmental, and social challenges. Smart City initiatives can lead to important innovations supporting further development of the knowledge economy and unlocking the potential for further private sector development. Building smart cities with local characteristics is an important factor for cities to secure a place in the competition of globalization.

Smart Cities Consulting Technology Co. Ltd. (SCC Technology) is a smart city technology company using strategies of AI, Blockchain, Cloud, Data & Digitalization, international Expertise & Experience or ABCDE strategies, to conduct smart diagnostics, bridge smart cities with Smart Services and Smart Solutions. Working with its client city/industry park/community, SCC develops smart city strategic plan for local municipalities with demand analysis, feasibility studies, technical design, and prioritized action plans. SCC Technology provides integration services on AI & machine vision technologies in smart city applications. SCC Technology works with cities to embrace healthier life, to build livable communities, and to seek a better future.

## The Challenge

Technology alone will not make a city smart. Technology must be instrumented and interconnected, to involve and inform stakeholders, to inspire innovations, so to make people more intelligent in making decisions in a livable community. A smart city is a complex, cross-domain system. At present, the development of most smart cities

often lacks overall strategic planning. The development of smart cities is based on emerging technologies such as the Internet of Things, cloud computing, mobile internet, and big data. However, having a city with these technologies does not mean it becomes smart. The development of many smart cities is still far from "smart", which may cause inefficient construction, creates more disconnected islands in urban applications, leading to the phenomenon of not-so-smart "smart cities". Because most cities do not have the experience to develop smart cities, they often rely too much on hardware and the application of new technologies when they rely heavily on information technology companies, and ignore the issues that cities must deal with. Smart cities should be demand-driven, problem-oriented, integrate technology into the governance structure, promote the transformation of industrial sector, and solve urban problems.

### The Solution

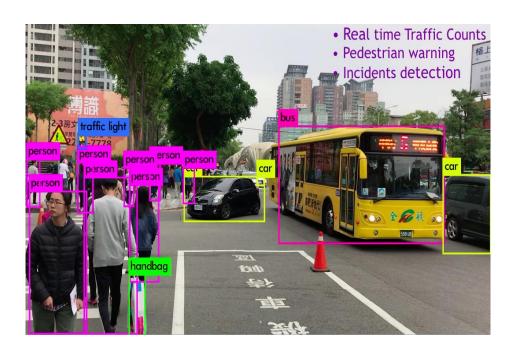
Smart cities need to start from the characteristics of the city and find appropriate development paths and models. Conduct a strategic plan has become an essential element for decision makers in smart cities. Working with its client city/industry park/community, SCC Technology develops smart city strategic plan for local municipalities with demand analysis, feasibility studies, technical design, and prioritized action plans. SCC Technology provides integration services with AI & machine vision technologies in smart city applications. SCC Technology works with cities to embrace healthier life, to build livable communities, and to seek a better future. SCC Technology discusses opportunities, strategies, and action plans to consider moving toward investments in Smart City Solutions:

- 1. What is Smart City?
- 2. Every city is different! Let's start with Smart City Strategic Plan for your city.
- 3. What Artificial intelligence/Machine vision can do for us?
- 4. Let's make our Street Light Smart.
- 5. Let's make our Mobility Smart with Mobility as a Service & Smart Parking.
- 6. Let's prevent Traffic Accidents from happening with Integrated Incident Management System.
- 7. Let's provide Tourists with a Smart travel experience.
- 8. Let's make our Kids Smart with Smart Education.
- 9. Let's make our government more efficient with Smart Governance.
- 10. Let's protect our community with Smart Flood Control and Smart Disaster Prevention.

# The Opportunity

The development of global smart cities has been fully launched. Each city faces different urban issues, has its own resources and advantages, and has a diverse range of applications and a wide range of development areas. According to Marketsand

Markets market research agency, the global smart city market size was 308 billion US dollars in 2018, and it is expected that this number will grow to 717.2 billion US dollars by 2023, with a forecast annual compound growth rate of 18.4% in 2018-2023. The report points out that the increasing demand for public safety; urban population and government construction are the main driving forces for the growth of global smart cities. However, most smart cities currently lack of overall strategic planning. The development of many smart cities is still far from "smart", leading to the "smart city" not-so smart. Most cities often place too much emphasis on hardware infrastructure and the application of new technologies, while ignoring the issues that cities must deal with. Cities should develop smart city shared visions and customized key areas for smart city development, develop and analyze a list of key issues for smart cities with implementation strategies for each key area, and develop an action plan that includes a plan for prioritized smart city solutions with a series of recommendations, taking into account the financial feasibility and operating model of each smart city focus area. Experience has proven that technology alone does not make cities smart. Technology must be tested and interconnected, and stakeholder engagement plans must be tailored to involve stakeholders and provide them with information, incentives for innovation, and effective communication of action plans among stakeholders. This enables people to make smarter decisions in livable communities.



# 66. Smart Frequency Technology Inc.

**Category:** Smart Infrastructure, Smart Mobility, Smarting Building&Housing, Smart Emerging/Environment

## The main products or services:

- 1. Broadband wireless transmission system (Super WiFi)
  - (1) frequency is from 1 to 5GHz.
  - (2) throughput can up to 90Mbps
  - (3) Super WiFi procusts, e.g., UAV radio, ground radio, and manpack
- 2. Narrowband wireless transmission system (Super TaiRa):
  - (1) frequency range is sub-1GHz
  - (2) Super TaiRa products, e.g., Industry 4.0 transmission system, smart grid, smart meter, smart bus stop with green power, parking space management, positioning tracking (9Axis, GPS), security/emergency system
- 3. Mini-AESA radar
- 4. Radar

#### How to contact

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### The Company

Smart Frequency Technology Inc. was a J.V. company between Acer Group and National Chung-Shan Institute of Science & Technology (NCSIST) on August 21, 2019. It is the official authorized agent by K-Best Technology Inc. and NCSIST and responsible for marketing development in domestic and foreign markets. Our distribution products include Coastal RADAR, Warship RADAR, Phase Array RADAR, Synthetic Aperture RADAR, UAV, Communication Radio System, Super TaiRa wireless technologies for IoT/Smart City/Industrial 4.0 and Super WiFi Technology for broad band video streams transmission which can be customized. We can provide commercial and military regulations product. The product features are long distance, anti-interference, high security, high reliability and low power consumption.

## The Challenge

Nowadays, "Smart city" have been regard as a inevitable trend in every country and it has been invested huge amount of money in this project. However, there are some limited of current wireless transmission system, such as 3G, 4G, NB-IoT, Zigbe which have to be build up numerous base stations. And it is very difficult to transmit data, photo and real-time image without the coverage of base station, e.g., rural area, basement, sophisticated types of public utilities or pipeline at factories, industrial

park and metal factories. Moreover, high-tech companies and governents have to pay highly attention to the network security problem because public internet has to face high risk of hacking issue.

### The Solution

Smart Frequency can provide broadband (Super WiFi) and narrowband (Super TaiRa) products, also, our broadband product (Super WiFi) can transceive narrowband product (Super TaiRa) to provide intergrated services and to support different types of inquiries of smart city requirements. One of Super TaiRa's characteristic is high anti-interference ability and high penetration ability which can transmit data and photo at difficult areas, such as rural area, high mountain, basement, metal factories and industrail parks. In addition, it is time-consuming and high cost to establish a base station. The advantage of Super TaiRa is that it is easy to set up without a base station and it has improved software and firmware digital signal processing which can reduce interference during signal transmission to secure data collection is both qualititive and quantitative. In addition, Super TaiRa is a closed network system which means that Super TaiRa can increase enterprise information security and secure transmission quality to avoid the rick of hackers.

- Use Super WiFi and Super TaiRa wireless transmission products to organize a complete transmission system in rural area, basement and industrial parks.
- Use Super TaiRa to overcome the transmission problems in smart energy.
- Use Super TaiRa SOS system to increase security of smart city.
- Integrate with Super WiFi and Super TaiRa to interface with Industry 4.0 equipments to form the basis for compelling "Smart City" solutions.
- Super TaiRa Positioning and Tracking system can be used for boats and vessels and the transmission distance can up to 60km.
- Use AESA radar to improve security of airport and wind farm

# 67. Soteria Biotech Co., Ltd.

Category: Smart Health

The main products or services: Innovative medical cloud services for the diagnosis and treatment of obstructive sleep apnea.

#### How to contact

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Website: www.soteriabio.com

## The Company

Soteria Biotech is committed to integrate medical and engineering research and services; our specialties are in fluid dynamics related calculation, medical imaging and cloud computation where it has been applied to the areas of ear, nose, oropharynx, and thorax. Currently our main focus is on Obstructive Sleep Apnea (OSA) related research and products and we have more than eight years of experience.

Our researchers are PhDs, MDs and medical personnel with experiences in high speed calculation, computation in fluid dynamics and biological fluid dynamics. Beside aforementioned, we also have experience in applying IRB and regulatory product certification.



### The Challenge

OSA is the most common type of sleep apnea, it accounts for 84% among sleep apnea. It is caused by partial or complete obstructed upper airway.

Obstructive sleep apnea can cause daytime sleepiness, snoring, depression, difficulties with concentration, and loss of memory.

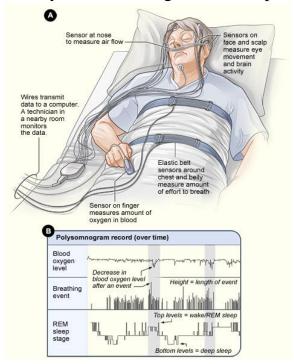
Patients with OSA have an increased risk of:

- 1. Motor vehicle accident,
- 2. Hypertension,
- 3. Nocturnal dysrhythmias,
- 4. Pulmonary hypertension,
- 5. Right and left ventricular failure,
- 6. Myocardial infarction,
- 7. Stroke

Traditionally, polysomnography (PSG) in an attended setting (sleep laboratory) has been used as a reference standard for the diagnosis of OSA. Polysomnography in a sleep laboratory is time-consuming and expensive.

The sleep laboratories have the following disadvantages:

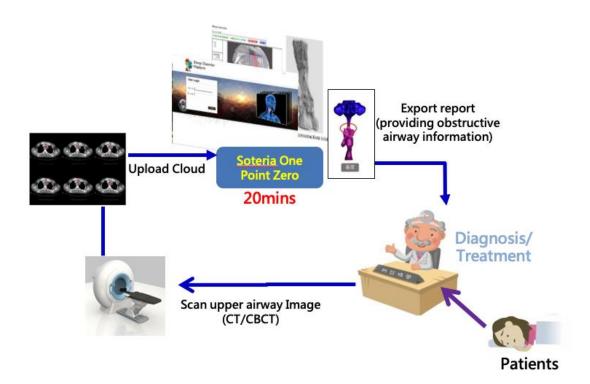
- 1. Polysomnography in a sleep laboratory is time-consuming. (6 to 8 months)
- 2. The maintenance cost of a sleep center is expensive.
- 3. Too few sleep laboratories.
- 4. Polysomnography in a sleep laboratory is complicated and inconvenient for patients.
- 5. Children's OSA is not easy to make a diagnosis in sleep laboratories.



Gold standard test is polysomnography (PSG)

#### The Solution

The patients have to go through a process, first take CBCT scan of the head and neck region, and then these scanned images are uploaded to the software which runs an analysis generating a report which provides flow velocity and pressure within the airway. With this information, the obstructive condition of the airway can be found.



Who	Benefit
Patients	Reduce waiting time
Doctors	Improve treatment success rate
Hospitals	Increase service volume
Oral Appliance Manufacturers	Increase oral appliance sales volume

- Patients: faster and easier method to get diagnosis, reduce waiting time.
- Hospitals, Doctors: faster method to find patient suitable for oral appliance treatment, increase number of patients that could be diagnosed in a fixed amount of time.
- Sleep treatment manufacturer: easier to sell treatment to patients who need it.
- Cloud network which forms the basis for compelling 'Smart Health' solutions.

# 68. Speed 3D Inc.

Category: Smart Infrastructure

The main products or services: Innovative wireless network which revolutionizes

smart lighting and energy in cities

#### How to contact

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LINE: ariel3667

Website: www.spe3d.co

## The Company

Speed 3D Inc. is a foremost pioneer in Augmented Reality (AR) application, well known for our professional techniques in creating sophisticated 3D content. In 2017, we began devoting ourselves to the AR field, providing cross-platform ser- vices known as: Interactive AR Ads. Through integrating social media and AI facial recognition on technique platforms, we combine traditional brand marketing concepts with various art technologies to create infinite possibilities for the interac- tive marketing. After noticing our out- standing skills in "Programmable 3D Con- tent", Facebook selected us to be ap- proved as their certified AR Technical Col- laborator from Taiwan.

# The Challenge

Traditional photo booths are outdated and required exterior props to create themes. Their technology can easy be replaced by smart phone.

### The Solution

Using augmented reality and motion sensing lens to create fun interactive photo booths that have built in custom designed frames and props. Smart phones cannot get this level if interaction.

# **The Opportunity**

Picbots are a new generation smart photo booths that are designed in-house and manufactured by our partners here in Taiwan. It boasts of smart technology powered by our own software design and the only immersive picture experience of its kind that allows for both online and offline fun.

Picbot's technology uses Artificial Intelligence, to implement an Immersive Experience using Augmented Reality, Motion Control, and Real Time Capture. From Software Engineering to Content Curation, from UI/UX Design to Client-based Customization, are all done in-house by the Speed 3D Inc. team. Currently, Speed 3D already provided this new marketing method to brands. Furthermore, we cooperated with NCFTA Yilan Park this year; bring more immersive experience to the audience.

# 69. Superior Mechanical Solutions Corp.

Category: Smart Health

The main products or services: Innovative health management device.

#### **How to contact:**

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Tel: +886-965-844-132 LINE: meilianatalia

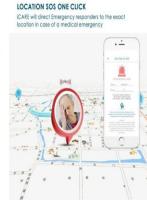
Website: www.smshomecare.com



## The Company

Nowadays, companies working on the "smart innovation" project. In this era of globalization, to deliver the message of "smart device" no matter in what types of industries, we pursue the future business invention as to support the quality of life. We strive to be close to the needs of every people and listen to their needs. Every people can truly improve the quality of life through our products, and then having a better life. We are constantly developing and working in various home care products, in order to meet the needs of the people. To provide people a basic health management for "smart health," our product, iCare is purposed to maintain the health condition of the user. This product uses the Bluetooth connection to user's smart phone. The data of health record that user measured with this product will perfectly safe in the application. Then, user can explore the records of their health through the graphs. This also will help doctor to analyze the condition of the user. We are continuing and developing harmonized business model that will improve the quality of life for many people.







App reminder for taking medicine, makes you get better soon.

## The Challenge

At the moment there are plenty of companies who also work in this field. We are all competing to be selected by the user. We are all competing to innovate and develop our business. Consumer trust is one of the important tasks for us. "Trust is hard to gain, but easy to lost". Many people considered about the product itself. Is it good? Is it worth to buy? Etc., more than that, consumer always considering the price of the product. But we want to tell them that, smart health management or smart health system can lead to the proper healthy life for many people.

### The Solution

We are working to promote this health management product to support and maintain consumer health situation. We are offering the affordable price for consumer to having the smart health management. We also keep innovating to improve our business model that not only beneficial for company, but also beneficial for the people who use it.

We want to raise consumer awareness to support this smart health management.

- iCare have a long-lasting battery, so we can save the using of energy.
- Bluetooth that connected to everyday useable user's smartphone
- Med-reminder for those take medicine regularly
- SOS function for emergency situation
- Sharable health journal

# 70. SYSCOM Computer Engineering Co.

**Category:** Smart Energy/Environment

The main products or services: Smart Health/Smart hospitals

### How to contact

Name and Title: Eric Kuo, Business Development

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Tel: +662-6340305~6

Website: <a href="https://www.syscom.com.tw/english/">www.syscom.com.tw/english/</a>

### The Company

Syscom, established in 1975, is Taiwan's "the best representative of information services provider". The company provides professional services, including system integration services, IT consulting, outsourcing services, maintenance, training and education and software / hardware selling, to enterprises and the government to build the IT mechanism in their operation. In the past decades, Syscom's territories comprise smart city, banking, securities, insurance, healthcare, government, telecommunication, and manufacturing industries, and have gained excellent reputation among our customers.

## The Challenge

Physicians often need to inquire about the medical records such as the summary of medical records for admission and discharge, consultation data, and medication records. The earliest way of patrolling is to follow a doctor's patrol by pushing a cart of paper medical records. Later it turned out that when the attending physician took several residents to patrol, each resident's memory needs to be good to write down physician's order when returning to the nursing station. Thus their working time is increased.

### The Solution-"Dr. Rounds"

After the medical records and all medical examination data were all digitized and integrated into the HIS (Hospital Information System), now that the mobile patrol system is introduced. Physicians can not only view medical records in real time using a tablet PC, but also help explain the condition to patients and then have well-understanding discussion for the coming medical order decisions.

- For physician on rounds, it provides access to all relevant patient information, including vital signs, inspection reports, medical records summaries, active orders, medicine records, and doctor shift records.
- For nurses, they can query all active or past prescriptions, treatments records, inspection schedules, drug identification pictures, and improve medication safety items.

# 71. Sysinno Technology Inc.

Category: Smart Buildings & Housing, Smart Energy/Environment

The main products or services: Air quality detector and solution

### How to contact

Name and Title: Veronica Chen, Sales manager

Email: veronica.tc.chen@sysinnotec.com

Tel: +886-3-573-0550 ext.3810 Website: www.sysinnotec.com



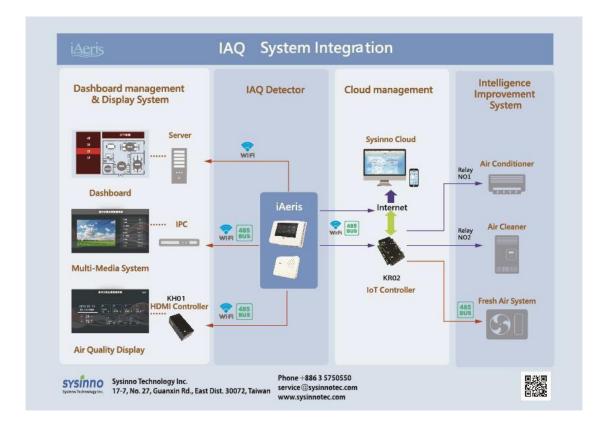
# The Company

Sysinno Technology Inc. was established in August 2012, mainly concentrates on providing various types of sensor design, application and services. The team members have more than 20 years of experience in the industry, thinking of the small sensor technology will bring a great change in human daily life in the future, and therefore we combine different kinds of miniature sensing elements, including physical, chemical, biological sensing factors, and introduce the appropriate mathematical algorithms to develop intelligent sensing products. Our goal is to help people to achieve a better quality living environment.

## The Challenge

- Difficult to monitor the air pollution accurate outdoorsy.
- Design limitation due to strict requirements including waterproof, dustproof, temperature, and air flow.
- The equipment needs to be certified by local Environment Protect Agency.
- Big data recording, storage, computing and communication.

# **The Solution**



- Smart street light
- Smart commercial/residential building
- Smart factory

# 72. TaiHao Medical Inc.

Category: Smart Health

The main products or services: Medical imaging software with computer-aided

system for breast ultrasound scanning

#### How to contact

Name and Title: Ellie Lai, Marketing Specialist

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Tel: +886-2-2736-5679 Website: taihaomed.com



# The Company

TaiHao Medical Inc. is an artificial intelligence company developing software for medical imaging. Currently, we provide solutions for both handheld and automated breast ultrasound system to help medical professionals manage the increasing workloads. The image processing methodology with artificial intelligence is evaluated to be helpful in assisting physicians in breast cancer detection.

## The Challenge

During the scanning with the handheld breast ultrasound, the sonographers usually need to focus on the screen and the transducer at the same time. They may overlook some frames or miss the suspicious area. Furthermore, they need to spend some time recording the positions of the region. While reviewing the ABUS images with the viewer, the physicians have to review a lot of images. All these conditions increase the workload and are really time-consuming for the professionals.

### The Solution

We provide two products, "BR-FHUS Smart System", "BR-Viewer", focusing on breast screening to meet the upcoming requirements. BR-FHUS Smart System is a screening solution for handheld ultrasound, and BR-Viewer is a viewer for ABUS. Either for images from handheld ultrasound or ABUS, the corresponding computer-aided system is developed. So the system can detect and diagnose the suspicious region automatically. Also, it can produce structured report and a report template. It helps to improve the workflow, and to increase quality control of scanning the breast.

- Elevating the additional value of ultrasound equipment
- Improving the detection and diagnosis efficiency to find and treat breast cancer as soon as possible
- Establishing a standard SOP to get quality control of the scanning for images

# 73. Taiwan Optical Platform Co., Ltd. (top MSO)

Category: Smart Mobility, Smart Governance

## The main products or services:

1. Autonomous bus

Resolve the operation & service issues of public bus transportation below

- Lack of driver
- Aging driver, Fatigue driving
- Insurance fee rising with human negligence
- Financial loss in rural route, but social participation
- Lower carbon, Efficient scheduling
- On demand public transport
- 2. Smart flood alarms system on TV

Provide location based, dynamic, and real time video alarm system that can inform household how flood approaching, and also gather the requirement earlier for senior alone when evacuation is needed.

3. Smart factory

Establish a platform integrated IOT devices that can simulate the smart factory and city governed in 3D way.

### How to contact

Name and Title: Herbage Liao, Project Manager

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Tel: +886-4-3707-5788 LINE: herbage587

Website: www.topmso.com.tw

### The Company

Taiwan Optical Platform Co., Ltd. (top) is a Multiple System Operator (MSO) established on August 2, 2006. Today, top is the country's fourth largest MSO, and is working towards comprehensive 4C integration.

### Advantages:

- 1. Cable TV reaches communities and households.
- 2. The set-top box has the capability of two-way networking and has passed NCC and Google certification.
- 3. The customer service center and network management center provide 7\*24 customer service.
- 4. Software development and information security maintenance technology, ISO27001 certification, information security endpoint protection technology (firewall, hardware DDoS detection alarm, system information security monitoring), vulnerability analysis, personal asset protection (separation control, records tracking, exception management), etc.
- 5. System planning and information integration capabilities.

### The Challenge

- 1. Autonomous bus
  - (1) System stability and reliability for safety are the important key for deployment.
- (2) Efficient and low-cost vehicle building and wayside construction will be the key for deployment.
- 2. Smart flood alarms system on TV
  - (1) Need build enough cameras nearby community and household, but not just river side.
  - (2) AI system analysis dynamically how deep the flood could be, and also the distance from household.
  - (3) Seniors need more education for surviving in flood, and more social care and interaction before tragedy happened.
- 3. Smart factory
  - (1) There is no proper field for smart factory demonstrations, and also city governance, especially in visualize 3D way.
  - (2) Need a deep integration with 3D simulation system.

### The Solution

- 1. Autonomous bus
  - (1) Modular communication and computing platform, including mission critical radio and reliable message event pipeline and big data vehicle control unit (VUC).
  - (2) Sensing, including hi sensitivity and night vision stereoscopic cameras, Lidar
- (3) Edge computing gateway, including HD map storage, GPS, IMU, CAN bus interface
- (4) By wire control, including throttle, brake, steering
- (5) AI decision making
- (6) Wayside fiber, radio, signal control box, CMS, camera and video gathering and distribution system.
- 2. Smart flood alarms system on TV
  - (1) A platform includes cloud & STB, integrated with community video and AI system.
  - (2) Provide interactive video programs to seniors who need care, training, and vacuation.
- 3. Smart factory
  - (1) A 3D platform integrated with IOT devices and Dassault systems.
  - (2) Automatic alarm via instant message system when water, air pollution, or other sensors reach threshold.

# **The Opportunity**

1. Autonomous bus

Public transportation revolution, intelligent and cheaper, and become part of MaaS.

2. Smart flood alarms system on TV Avoid people and property loss in disaster.

3. Smart factory

Simulation all in visual 3D way before really do it, especially in smart factory and smart city progress, which can avoid mistake and achieve more efficiency.

# 74. Taiwan Power Company

**Category:** Smart Energy/Environment

# The main products or services:

The smart grid in Taiwan is aim to integrate Power systems with automation, information and communication technology (ICT) to enhance the connection between generation, transmission, distribution, and customers for improved efficiency, reliability, and quality.

#### How to contact

Name and Title: Tzu-Wei Yu, Project Manager

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Tel: +886-2-2360-1291

Website: <a href="mailto:smartgrid.taipower.com.tw/en/index.aspx">smartgrid.taipower.com.tw/en/index.aspx</a>

### The Challenge

The goals of increasing the use of the green/renewable energy (Renewable 20% at 2025 in Taiwan), conservation of energy, and reducing CO2 emission.

### The Solution

TPC's main Topics of Smart Grid will focus on Smart Dispatch and Generation, Power grid Management, Energy Storage, Demand side Management, Information and Communication Infrastructure, and Regulation & Workforce.

## **The Opportunity**

To achieve the 20% renewable energy, our government has set the objectives of installation of 6.9GW of wind power (onshore 1.2GW, offshore 5.7GW) and 20GW of photovoltaic systems (17GW of ground systems and 3GW of roof-top systems) by 2025. Bureau of Energy, MOEA has promoted the "2-Year Photovoltaic Power Generation Program" to install photovoltaic systems on the roofs of buildings of public agencies, factories, and agricultural facilities; and the promotional program of "Participation in Green Energy Roof by All Citizens" to encourage participation by all households via incentive measures. In addition, Executive Yuan and Bureau of Energy of MOEA have also inventoried various lands for potential photovoltaic installation, including some lands for salt industry, water space, subsidence area, and infertile area, to attract investments.

# 75. Taiwan Smart Energy Industry Association (TaiSEIA)

**Category:** Smart Energy/Environment

The main products or services: Smart home solution

#### How to contact

Name and Title: Wen-Ying Chang, Secretary

Email: kelvin@itri.org.tw Tel: +886-3-591-5012

Website: www.taiseia.org.tw

### The Company

We are focusing on the development of the industrial standards for smart energy including smart home and green data center. The national standards of communication protocols for smart home in Taiwan are developed, promoted and certificated by TaiSEIA. Our members include appliance companies (such as Tatung, Sampo, Panasonic, Hitachi, Teco, Sakura, Heran, Daikin, Samsung, LG, etc.), system and networks companies (Chunghwa Telecom, ASUS, Gemtek, etc.), Security companies (such as SECOM, SHIN KONG), Research institute (such as ITRI, III), power supply and management companies (Delta, Marketech, etc.)

## The Challenge

The connection and Integration between different sub-systems such as smart meter, smart lighting, smart building and smart home, etc. will be a big challenge.

### The Solution

We are now providing the smart home solution which is able to connect with smart meter.

## **The Opportunity**

The smart home devices connecting with smart meter can provide the opportunity of residential demand response application for electricity utility company.

# 76. Tatung System Technology Inc.

**Category:** Smart Infrastructure, Smart Mobility

## The main products or services:

Intelligent IoT Exception Message Cloud Center tiCC Omni-Channel intelligent Contact Center

#### How to contact

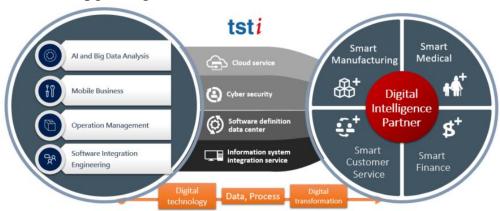
Name and Title: Toby Chiang, Senior Deputy Director

Email: Toby.Chiang@etatung.com

Tel: +886-2-5562-5710 Website: <u>www.etatung.com</u>

## The Company

Tatung System Technology Inc. (TWSE ID: 8099) was established in May, 2000. The Company paid-in capital is 672 million NTD, and is ranked amongst the top 500 companies within the services sector in Taiwan. tsti provides valuable ICT solutions to customers allowing a reduction of operating costs or raising values of products through increased competitiveness. tsti strengthening the value proposition be a professional partner in the digital transformation of customers. Provide digital technology to assist the government and enterprises in digital transformation to enhance operational efficiency and decision analysis. Provide intelligent solutions, consulting services, cloud services, integrated communication systems, data security and uninterrupted service. tsti is a professional company for digital transformation services and information innovation applications. Providing digital technology to promote industrial upgrading and make life more convenient.



# The Challenge

At the moment there are a multitude of 'Smart City' application and service providers, all competing in different silos. Cities often end up investing in different architectures, one for each solution (e.g. parking, smart lighting, and environmental monitoring). This is very efficient in both use of infrastructure and cost. Solutions in the 'Smart City' sector are all unique, and often one size doesn't fit every problem — each geography has a particular set of requirements.

#### The Solution

## tiCC Omni-Channel intelligent Contact Center

The functionality of tiCC is totally fulfilling the contact center, including inbound call, outbound call, and system monitoring and supervisor administration. The communication modalities, between customer and contact center agent, are including voice call, web chat, social media chat, e-mail, and web video. Major Features of tiCC:

- Omni Channel and Intelligent Service
- Uniform routing for all communication channel
- Uniform User Interface for Customer Service
- Omni-channel Seamless integration for customer contact history
- Social Media User Binding
- Real-time monitoring and management for supervisor
- Module design, easy for customization and system expansion

Furthermore, the tiCC also integrated chat bot to provide smart service. Customer can self-service themselves through chat bot to solve their problem without real agent's help. This kind of services can not only reduce the usage of man power, but also increase the service level for customer.

## Intelligent IoT Exception Message Cloud Center

Provide the planning for customer product innovation, assistance for sensor selection and cooperation in the IoT echo-system.

- The IoT Event Triggering Management Provides the event management in all fields of IoT solutions.
- Each field can through the open API to deliver different kinds of events, according to type, severity, location and other important feature of each event, the platform can perform the necessary disposal.

- The functionality of tiCC is totally fulfill the contact center system which forms the basis solutions for all walks of Smart City industry, finance, insurance, transportation, tourism, etc.
- The tiCC integrated chat bot to provide smart service. Customer can self-service themselves through chat bot to solve their problem without real agent's help. This kind of services can not only reduce the usage of man power, but also increase the service level for customer.
- Intelligent IoT Exception Message Cloud Center Provide the planning for customer product innovation, assistance for sensor selection and cooperation in the IoT echo-system which forms the basis for compelling 'Smart City' solutions.

# Omni Channel Contact Center



A whole new way to interact between your company and customers beyond telephones, texts and emails.

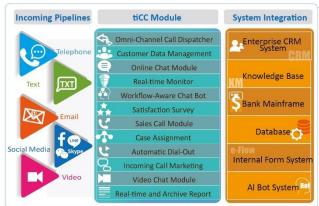








tiCC can help you improve your customer satisfaction. Designed to provide great service experience for mobile generation. More refined and tailored service experience, increases customer loyalty. Combine with intelligent contact center and big-data analysis, it can greatly improve your service efficiency.







Company: Tatung System Technology Inc.

Contact person: Toby Chiang (Senior Deputy Director)

E-Mail: Toby.Chiang@etatung.com Website: www.etatung.com

Tatung System Technology Inc. (TWSE ID: 8099) provide Systems Integration Services coverage from Taiwan to China.

# 77. THI Consultants Inc.

Category: Smart Mobility

## The main products or services:

THI provides professional services in the planning, engineering, operations and management of transportation as well as smart technologies solutions for municipal services land development projects. For smart transportation, the scope of service includes system planning and architecture design...and so forth.

#### How to contact

Name and Title: Allen Su, Vice President

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Website: www.thi.com.tw

### The Company

Established in 1989, THI Consultants Inc. provides smart transportation related planning and consulting services. Our company has cross-domain planning experiences which we have conducted smart transportation system architecture planning and technical support, general traffic consulting, large-scale project engineering, urban planning, transportation integration database and decision platform developing, etc. THI delivers quality services in transportation field as we were recognized and awarded the "20th National Award of Outstanding SMEs" in 2011 by Ministry of Economic Affairs. Our team is built up by diverse professionals with different area of interests that include ITS, GIS, data analysis, bus operation and management, numerical simulation, etc. THI is thrived to provide comprehensive technical consulting services for smart transportation.

For smart transportation, THI provides technical services and solutions include: (1) Intelligent Transportation System (ITS); (2) Transportation Planning; (3) Big Data Technology; (4) Traffic Engineering; (5) Sustainable Transportation.

### The Challenge

The industry of the development of smart transportation for smart city is booming all around the world. Additionally, with the rapid development of mobile communication technology, the speed and scale of smart transportation system development further increased. In order to solve the modern and complicated traffic problems, using advanced information technology to supplement the traditional transportation or traffic engineering is a trend.

### The Solution

The technical service and solution of smart transportation can be categorized into five main domains as below. The smart solution can be utilized to solve traffic congestion, increase transportation safety, reduce air pollution, and improve public transportation services. Finally, achieving "Smooth Transportation Network", "Safe Mobility Environment", "Seamless Public Transportation", and "Innovative Life Application".

Service/ Solution	Description	
Intelligent Transportation System (ITS)	<ul> <li>System Architecture Planning - Transportation Planning of ITS and Smart City Development</li> <li>Advanced Public Transportation System - Planning and Design of Public Transportation Management and Real-time Information System</li> <li>Advanced Traffic Management System - Planning and Design of Transportation Management Strategies and Smart Traffic Signal Control</li> <li>Advanced Traffic Information System - Planning and Design of Traffic Information Announcement and Value-added Service</li> <li>Electronic Toll Collection System- Planning and Design of e-ticket Integration and eTag Applications</li> <li>Commercial Vehicle Operation - Building, Management and Maintenance of the Could System of Cross-disciplinary Integration</li> </ul>	
Transportation Planning	<ul> <li>Analysis of Transportation Model Building - Macro and Meso Model Building and Analysis of Freight and Passenger Demand</li> <li>Public Transit System Planning And Evaluation - Feasibility Study, Planning, and Benefit Evaluation of Public Transit and Multi-Model Vehicle</li> <li>Road System Planning and Evaluation - Feasibility Study, Planning, and Benefit Evaluation of Freeway, Highway, and Urban Road</li> <li>Policy Study and Communication - Communication with the Public, Development and Management Policy Planning of Different Modes of Transportation</li> <li>Model Building and Analysis of Energy Consumption - Road Model Building and Application Analysis of Energy Consumption and Air Pollution</li> </ul>	
Big Data Technology	<ul> <li>Application of Big Data Technology -Big Data Analysis and Data Mining of Traffic and Online Public Opinion</li> <li>Construction of Traffic Database - Storage, Cleaning and Construction of Traffic Real-time Data, Weather Data, Online</li> </ul>	

Service/ Solution	Description	
	<ul> <li>Public Opinion, Information and Communication Data</li> <li>Development of Transportation Decision-making Platform - Review and Decision Support of Transportation Plan, Planning and Design of the Supporting Platform of Transportation Planning, and Customized Operations</li> <li>Development of Model for Transportation Evaluation - Big Data Integration, Evaluation Model of GIS and Transportation, Construction of Multiple Assessment Instruments</li> <li>Application of Early Warning Mechanism for Traffic Management - Application of Traffic Forecasting and Real-time Information for Traffic Management, Development of Forecasting Model and Data Dashboard</li> <li>Development of Transportation Information Products - Development and Management of Transportation and Bus</li> </ul>	
Traffic Engineering	<ul> <li>Virtual Platform of Autonomous Cars - Planning and Analysis of the Simulation Site for Autonomous Cars and Technical Verification</li> <li>Traffic Engineering and Control - Traffic Engineering, Traffic Signal Optimization, and Improvement of Congested Bottleneck Intersection</li> <li>Traffic Maintenance Plan - Traffic Management and Improvement for the Period of Construction and Events</li> <li>Parking Planning - Planning and Design of Parking Lot, Examination of Equipment Efficiency, and Planning for Traffic Flow</li> </ul>	
Sustainable Transportation	<ul> <li>Sustainable Transportation Planning - Planning and Promotion of Green Low-Carbon Transportation and Ecological Community</li> <li>Assessment of Traffic-related Air Pollution - Evaluation of Vehicle Air Pollution and the Performance of Strategy of Emission Reduction</li> <li>Vehicle Carbon Emission Modeling - Construction and Application of Model of Real-life Energy Consumption and Carbo Emission of Vehicles</li> <li>Strategy of Emission Reduction and Energy Saving - Traffic Greenhouse Gas Modeling and Evaluation of the Policy of Emission Reduction and Energy Saving</li> </ul>	

- The planning of different city's smart transportation system architecture and blueprint.
- Planning and design services of ITS.
- Systematic data analysis services for Big Data, AI technology and other related data technology.
- Provide simulated driving training and testing for self-driving cars before hitting the road.

# 78. Turing Drive Inc.

Category: Smart Mobility

The main products or services: Autonomous Driving System, Autonomous Shuttles

and Special-Purposed Vehicles

#### How to contact

Name and Title: Stephen Liu, Executive Director

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Tel: +886-2-2706-6918; +886-903-378-427

Website: www.turing-drive.com

## The Company

Specializing in sensor fusion, heterogeneous computing, and dynamic control, Turing Drive devotes itself to autonomous driving system development and application. The Taipei-based startup currently operates AV shuttle service in an amusement park and a train depot, respectively. The team has also been commissioned by private entities to retrofit commercial vehicles for self-driving's purpose, harnessing the firm's autonomy and system integration expertise.

## The Challenge

As cities grow smarter, maintaining efficiency, safe and affordable mobility services becomes harder than ever before. Ancient transport issues remain—traffic congestion, shortage of drivers, violation, accidents, and so on. The issue may gravitate in places where public transport is not always readily available and where mixed traffic flow (especially with scooters) is a norm.

#### The Solution

Autonomous driving and connected vehicles are expected to provide seamless and reliable solutions, not only for public transport but also for public services such cleaning, maintenance, or any labor-intensive driving tasks.

## **The Opportunity**

Turing Drive supplies the core autonomous driving system and hardware/software integration. Selective models of autonomous driving passenger shuttles can be delivered jointly by Turing Drive and its vehicle partner. Working with vehicle manufacturers, Turing Drive can also apply the system to special-purposed vehicles such as streetsweepers, tunnel inspectors, agriculture machines, etc...

- Autonomous Shuttle Solution (For Enterprise and Operators)
- Advanced Driver Assistance System (Module Sales)
- Autonomous Driving Solution by Retrofitting (Co-Development and Licensing)
- 4-Meter Turing OPAL
- 6-Meter Turing SAPPHIRE



# 79. Trade-Van Information Services Co.

Category: Smart Governance

The main products or services: Cyber Security, Network Security Solutions, Big

Data/Information Management

#### How to contact

Name and Title: Kevin Cheng, Assistant Business Planning Specialist

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Tel: +886-2-2655-1188 ext.533 Website: <u>www.tradevan.com.tw</u>

## The Company

As the leading application service provider in Taiwan, Trade-Van's mission has always been to create information value and to provide trustworthy comprehensive services for our customers. Ever since the foundation of the company in 1996, we have developed deep connections with both government and private sectors, providing information managing solutions in custom clearance, online tax filing, food and drug safety and quality, supply and demand chains for retailers and suppliers, land administration, insurance, big data analysis and other business areas. In order to ensure the safety of the massive and sensitive data Trade-Van handle, we have developed our information security service at the national level. Trade-Van, granted with ISO 27001, 20000, and 27018 laboratory certification, provides our customers with a comprehensive and integrated solutions when it comes to managing cyber security.

# The Challenge

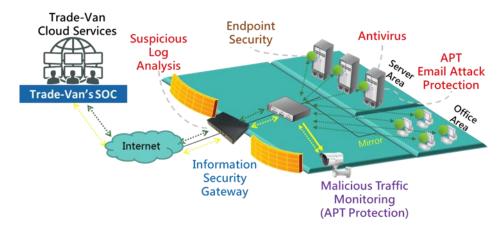
A smart city incorporates information and communication technologies to enhance the quality and performance of its services. The interconnectivity across the virtual and physical infrastructures brings efficiency to the city, yet each additional access point can be an exposed vulnerability to security breaches. Smart cities can be susceptible to numerous cyber-attack techniques including malware, data manipulation, DDoS, remote execution and signal jamming. According to The Global Risks Report 2019, Cyber-attacks: theft of data/money and Cyber-attacks: disruption of operations and infrastructure ranked fourth and fifth on the risks most expected to increase in the following year.

### The Solution

Trade-Van provides a thorough cyber security solution for our customers. We offer orientation and training on information security. Our security services include SOC planning & constructing, anti-hack monitoring, antivirus monitoring, system and website vulnerabilities scanning, mobile app information security and code review, and penetration testing. Our 24-7 security operation center ensures that there are no security blind spots. All potential threats will be notify instantly, follow by a thorough

solution, analysis, and forensic procedures from our security experts.

To secure the entire network, Trade-Van offers layers of protection. The information security gateway serves as a firewall, providing basic protection at the entrance to the network. The switch is a tool by which we can analysis the traffic of the network, discovering all suspicious actions. Endpoint security and antivirus software installed at the computer terminal are able to detect, block, and to recover potential threats. Each node in the network is monitored and protected under the solution Trade-Van provides.



Trade-Van's Comprehensive Security Management Solution

## The Opportunity

Trade-Van's solution can be adapted in all domains of a smart city, as there is always interconnectivity across virtual and physical infrastructures. We provide a comprehensive cyber security solution that secures all nodes in the connected network. A secured cyber environment is the foundation of a successful smart city, and only when the environment is secured, will the users and developers willingly adapt to the digitalization of the city.

# 80. Tronco Electric Machinery Inc.

**Category:** Smart Buildings & Housing

#### How to contact

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TEL: +886-2-2204-4168 FAX: +886-2-2206-4168 Email: info@tronco.com.tw

LINE: @kog9226k

Facebook: TRONCO TW Website: www.tronco.global

#### The Company

According to the different building needs and intelligent applications, TRONCO could propose the proper automatic door systems and solutions.

CS Series-Automatic Sliding Door

FD Series-Automatic Folding Door

HS Series-Heavy Duty Automatic Sliding Door

RS Series-Automatic Rolling shutter

**RV Series-Automatic Revolving Door** 

SG Series-Automatic Sliding Gate

US Series-Automatic Curved Sliding Door

TS Series-Automatic Telescopic Door

SW Series-Automatic Swing Door

Appropriate intelligent control applications; enjoy the convenience and safety of automation.

## The Challenge

- 1. Budget: It is the biggest challenge for the user.
- 2. Professional Skill: It needs more expertise for the promotion of Smart City.
- 3. Door Leaf Specification: It needs more installing experience for the variety of door leaf manufacturing and design.
- 4. Infrastructure: The more infrastructures are inquired. Ex: The Internet and power supply chains.

Smart Cities are based on the variety of information technology and innovative ideas, to compose an intelligent concept.

By applying the new information technology to integrate the composition system of the city, to optimize city management and services, to improve the quality of city life and to achieve economic development solutions.

However, before realizing the Smart City, we have to first consider how to solve the barriers that hinder the success.

#### The Solution

The below solutions provide us while using the automatic doors in our daily lives:

- 1. Easy Access-Convenience of the door(s) opening automatically.
- 2. Energy Control-Energy efficiency of the door(s) keeping the cool air in.
- 3. Access Control- Security of access control systems.
- 4. Hygiene Control-Hygiene of preventing diseases from spreading.

The automatic Door provides the convenience to somewhere needs the automatically open or somewhere is limited mobility.

Such as convenient stores, shopping malls, hotels, offices, barrier-free space, airports, technology plants...and so on.

To adjust the indoor and outdoor temperature and avoiding the improper losing of air conditioners, the automatic door provides a mechanism to close automatically and avoid energy consumption.

Such as offices, shops, hypermarkets, department stores, hotels, edifices, airports...and so on.

To satisfy the access control of smart house, automatic door provides the IT controlling of the door leaves and also meet the protection of security personnel and the users.

Such as Home, community gates, commercial buildings, garages, factoriesK and so on.

To prevent the spreading and contacting of the germs and pollution, the automatic door provides a touch-less switching solution.

Such as hospital, laboratory, highly polluted space...and so on.

# The Opportunity

In every smarts city, the requirements of automatic doors increase year by year. From the living areas, commercials buildings, entertainment areas to the industrial areas, airports...and other places in need. The trends and developments in the future, automatic doors not only provide the solutions for security but also close to our lives. Bringing the favorable development by intelligent technology and market trends.

Around seventy million people live in Thailand, the huge population benefits and commercials modes will have different demands and create the values in the future architecture buildings. The requirements for various automatic doors will be the most important parts and needs of the construction of Smart City in Thailand, and brings the great benefits.

## 81. Ubiik Inc.

**Category:** Smart Energy/Environment

The main products or services: LPWAN solutions for IoT in smart metering,

energy management and microgrid

#### How to contact

Name and Title: Clément Dieudonné, Corporate Strategy Director

Email: clement@ubiik.com Tel: +886-2-2599-2809 Website: www.ubiik.com

### The Company

Ubiik Inc. is a leading Industrial IoT solution provider for energy management, mainly focusing on Advanced Metering Infrastructure (AMI) and microgrid by leveraging the Weightless LPWAN and analytics technologies to meet the industrial IoT projects serious requirements.

Ubiik has been awarded Taiwan's electricity AMI tender for the second year in succession which is the largest IoT project in Taiwan, aiming a full-fledged AMI for 12 million electricity meters over the next 15 years. Ubiik won the US\$8 million and US\$15 million contracts in 2018 and 2019 for the installation, operation and maintenance of the AMI for more than 270000 residential, industrial, and Solar PV smart meters in several regions of Taiwan. Founded in 2016 and now a team of 40 ambitious colleagues in Taiwan and Japan, Ubiik is expanding its AMI business globally based on its successful deployments in Taiwan while entering the energy management market through turnkey solutions combining IoT connectivity, AI or machine learning technologies, and SaaS offerings.

## The Challenge

Global energy transformation issue has been taken seriously in recent years. AMI is regarded as a key to enhancing the efficiency of the power grid, the analytics enabled help to balance its supply and demand, and therefore the country can save precious energy.

With the growing demand for the electricity meters deployment, the lower cost solutions that require the minimum hardware infrastructure and the lightweight software have become highly sought-after by utilities and energy companies.

#### The Solution

Ubiik's expertise resides in high-performance, cost efficient, fast-to-market turnkey products and services. Its AMI is the groundbreaking innovation by leveraging a LPWAN technology (the open standard Weightless<sup>TM</sup>) in long range, low power, low cost, highly reliable smart metering. Thanks to the advantages of its leading LPWAN technology: spectrally efficient, high-capacity, high-reliability, and truly

bi-directional wireless networking, the solution fulfills the Taiwan Power Corporation's challenging requirements including 5-minute interval meter readings, downlink for acknowledgement, controls, on-demand reading requests and over the air firmware updates.

With the validation of its connectivity expertise, Ubiik expanded its portfolio of Electricity Advanced Metering Infrastructure deployments to integrate NB-IoT and other Cellular-grade connectivities.

By mid-2019, the AMI solution has already connected over 63,000 smart electricity meters across Taiwan. Around 6 million messages are sent and received daily through Ubiik's Weightless communication network and infrastructure. A rigorous verification and testing process in the field has demonstrated the coverage and reliability of Ubiik Weightless AMI solution with up to 17 km range in suburban environment and typically 2 km in denser urban environment, while achieving deep indoor penetration of electricity meters in basements with metal enclosures.

- (1) Collecting and analyzing data via Ubiik AMI solution to improve energy efficiency
- (2) Vertically-integrated hardware, networking and software with the innovative LPWAN technologies to speed to market
- (3) Longer communication range with fewer Data Concentrator (DCU) to reduce the deployment cost



# 82. Verdigris Technologies Inc.

**Category:** Smart Governance, Smart Building & Housing, Smart Infrastructure, Smart Energy/Environment

## The main products or Service:

- 1. High frequency Non-intrusive AIoT submetering of electricity
- 2. Power consumption data configuration through AI engine
- 3. Adaptive Automation specialized on HVAC system
- 4. Forecasting trend of energy consumption

#### How to contact

Name and Title: Jacky Wu, Business Development & Sales Manager

Email: jacky@verdigris.co

TEL: +886-2-2536-2271; +886-981-124-375

LINE: prologon Wechat: ALAYA8 Website: verdigris.co

#### The Company

Verdigris is a leading AI company based in historic NASA research park in Silicon Valley, California with offices in the US and Taiwan. Verdigris is a privately held Stanford-StartX alumni company backed by prominent investors including Verizon Ventures and The Data Collective, and has developed several award-winning products for commercial and industrial energy management. It helps your team make smart decision about energy, while identifying issues that could affect building occupants. Our AI analyzes electricity consumption-from end use categories down to individual devices-helping buildings stay on top of expensive inefficiencies and catch unseen errors before they become problems.

We enable granularity of data that's never been possible before, our smart sensors sample at extremely high frequency to get your data insight, better and faster. For the sustainability minded, Verdigris is the best analytics solution with 24/7 real time monitoring mission-critical facility either in building management or manufacturing site. With AI solutions, Verdigris has partnered with Global Electrification leader, ABB, bringing Verdigris's machine-learning applications to ABB's global line of connected low-voltage switching fabric products to predict unplanned surges in power consumption for commercial and industrial sites. What we honored as:

"Fast company names Verdigris one of the top 10 innovative companies in Energy" <a href="https://www.fastcompany.com/company/verdigris">https://www.fastcompany.com/company/verdigris</a>

"Verdigris recognized as one of the "GSMA 100" an initiative to Advance Next Generation of Digital and Connectivity Service."

https://www.gsma.com/newsroom/press-release/gsma-launches-gsma-100-initiative-to-advance-next-generation-of-connectivity-and-digital-services/







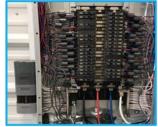


8000 Hz frequency of granular data detect

Cloud system via 4G / WiFi

Intuitive dashboard to data insight

Easy installation







Expandable to monitor up to 42 circuits

Use case of distribution power panel

Use case of main power panel

## The Challenge

Nowadays, worldwide energy consumption is facing difficulties on efficiency and sustainable availability, especially statistics shows that most power waste up to 40 % occurs in commercial buildings without proper management. Most energy waste cases happen without corresponding effective way to catch anomalies and examine health degree in energy system; not mention further to fix and improvement. Hence, an effective energy monitoring mechanism is critical to determine how a Smart city works better and smart. As to "Energy Management" being core booster to embody value in smart city project, what we need to pursue not only for cost reduction only, an "efficiency" mechanism linked to power grid also play a key role in upcoming future.

#### The Solution

An innovative device clamp onto monitored circuits in power panels, featured with 8000/sec high frequency to collect granular data enrich database further to reveal details once upon anomalies occur implicitly but difficult to detect in electricity consumption. Through expandable approach up to 42 circuits maximum to monitor in single system, continuously upload collected data via either WiFi/4G/BacNet/Modbus to perform configuration and consuming pattern simulation by AI engine embedded in cloud, simultaneously intelligent alarm for total consumption/peak demand; plus forecasting function and cost estimation to handle energy budget more timely and precisely. All of these configuration and data insight present in an intuitive visual interface and reports to reach "EFFICIENT" systematic monitoring mechanism in real time.

- Innovative device designed for easy installation without power suspension
- 24/7 real time data accessible to monitor and report
- Intelligent alarm to manage strategic energy reduction and invisible issues

- Data configuration through cloud AI engine with minimum hardware cost & human-behavior maintenance
- Forecasting energy consumption enhance overall budget control
- Flexible API to integrate configured data into BMS or SCADA system
- Expandable devices install in each breakers to reach cost efficiency

# 83. Veryya Co., Ltd.

Category: Smart Energy/Environment

## The main products or services:

Bee Box Smart Technology Service: Collect long-term environmental information with friendly environmental microbial monitoring stations, upload intelligent beekeeping sensing fusion image AI platform, and provide a service system for environmental change models and warning

#### How to contact

Name and Title: Willy Lee, General Manager

Tel: +886-2-2458-3457 Email: willy@veryya.com Website: www.veryya.com

## The Company

Veryya Co. Ltd mainly provides system integration solutions for monitoring the environment with fixed and mobile sources, combining biological data and acoustic image recognition through visual display and interactive mode of geospatial information.

## The Challenge

The population density of global cities continues to increase, bringing many challenges to transportation, safety, pollution and medical issues, and it is necessary to combine different disciplines or professional fields to find solutions.

The main challenge for a city to change from tradition to smart city

- 1. Government policies
- 2. Implementation budget
- 3. Application of technology and business model
- 4. local connection

To implement the policy and budget in combination with industry, government, academic research, and extensive use of information and communication technologies, including: sensing technology, wired / wireless networks, mobile networks, and cloud computing as the foundation, not only drive industrial innovation and create economic value It can also promote the combination of culture and history, help the sustainable development of the ecological environment, and combine civil forces to encourage citizens to participate in improving the quality of people's lives in order to achieve sustainable urban development and enhance urban competitiveness.

#### The Solution

Veryya Co. Ltd. mainly forms a service alliance with Taiwan's largest commercial gene sequencing company Kelon Meeks and the Asia-Pacific Smart Green Building Platinum Award-based smart green building engineering consulting firm Yonglu Automation and Yilan University's cross-domain industry-academia cooperation

service group. Fusion with environmental big data. It also connects the industrial ecosystem of Taiwan's local intelligent beekeeping and environmental monitoring stations under the economic development of the ground and forests. It provides bee-box friendly environmental biological micro-stations, and monitors air quality and bee ecology with "bee-box" sensors and image sound waves. Use biotechnology to collect accumulated data of environmental microbial data for long-term management analysis, provide environmental microbial monitoring and environmental change real-time variation analysis and early warning services to facilitate observation of friendly environmental indicators and policy reference for environmental regulation and treatment.

The innovative value of this service lies in the advantages of linking Taiwan's undergrowth economy. It can also provide local creative solutions. What's more important is the use of biotechnology technology to find out the particularity of product quality of service output to create products. Ben dream than.

- 1. Introduce smart technology to establish a scientific and technological beekeeping model and develop experiential solitary bee beekeeping to provide environmental microbiological monitoring and instant variation analysis and early warning services of environmental changes
- 2. Promote beekeeping and product development training in forests of local residents and indigenous peoples, and increase economic income and employment opportunities
- 3. Strengthen the multi-purpose utilization and development of the forest economy and cooperate with the region to develop leisure tourism
- 4. Develop high value-added products for bee products
- 5. Improving the economic competitiveness of forests and sustainable management capabilities to reduce environmental load and coexist with the environment

# 84. VIA Technologies Inc.

Category: Smart Buildings & Housing

The main products or services: IVIA Smart Home System

#### How to contact

Name and Title: Steven Huang, Sales Manager

Email: StevenYIHuang@via.com.tw Tel: +886-2-2218-5452 ext.866630

Website: www.viatech.com

## The Company

VIA Mobile 360 LPR,VIA Smart Facial Recognition Security System,Smart Gateway ARTiGO A630,Vpai Smart Security Panoramic IP Camera, Qualcomm SOM-9X20 Industrial module VIA fabless semiconductor design and embedded system development for AI, Enterprise IoT, Computer Vision, and Autonomous Vehicle applications.

### The Challenge

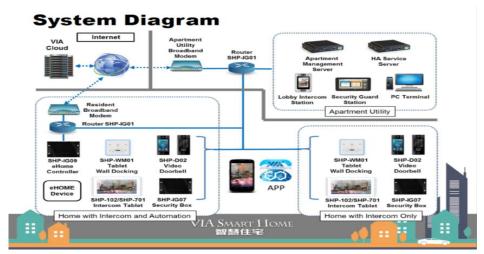
At the moment there are a multitude of 'Smart City' application and service providers, all competing in different silos. Cities often end up investing in different architectures, one for each solution (e.g. parking, smart lighting, and environmental monitoring). This is very efficient in both use of infrastructure and cost. Solutions in the 'Smart City' sector are all unique, and often one size doesn't fit every problem — each geography has a particular set of requirements.

#### The Solution

- 1. Smart City Solution Intercom/ ehome/ Security surveillance for Apartment building
- 2. Smart Video Wall Solution Multi screen stictching for various type of application
- 3. Smart Logistic/Transportation Solution Smart AI Dash cam, Vehicle Surround View, ADAS, Driver Behavior Monitoring

## The Opportunity

By using VIA solution, End customer could enjoy better security, efficiency and cost-effective on their project. Customer will leverage VIA Solution to integrate to their existing service. Customer also could increase effectiveness in managing their property, Assest and Vehicle by using VIA Solution





# 85. Wishing-Soft (supply chain partner for Far EasTone)

**Category:** Smart Energy/Environment

The main products or services: Intelligent ESH Management Software Platform

#### How to contact

Name and Title: Penny, Business Development

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## The Company

Wishing-Soft self-proclaimed as the cultivator of "Environment, Safety and Health" (ESH) management software, we possess professional ESH knowledge and background. Our team members cooperate closely with occupational safety consultant group, associations, and ISO certification companies. Meanwhile, we continuously improve ESH relevant knowledge, even set up the website and App, EHS TW, for contributing to the industry and public. Wishing-Soft is able to provide the best cloud solutions to enterprises with different requirements and scales of cooperation.

## The Challenge

1. Employee engagement.

Employee engagement isn't just a safety issue—it's a workforce issue. However, the issue is so all-encompassing that it can have an extremely detrimental effect on your safety culture and safety performance.

2. Employees taking shortcuts or ignoring rules.

This is a different angle of employee engagement, one that is more obviously safety-specific. One of your best assets for addressing this challenge is other employees—in an effective safety culture, employees will notice when others are taking unnecessary risks or otherwise behaving unsafely, and with proper training, they will speak up. This communication may mean even more coming from a fellow employee than from management.

3. Supervisor participation in safety programs.

One way to address this challenge is to remind your frontline supervisors to communicate safety every day. This doesn't have to be a structured, burdensome chore; in fact, once supervisors are in the habit of it, it will come as naturally as any other casual interaction with employees, of which they have hundreds every day.

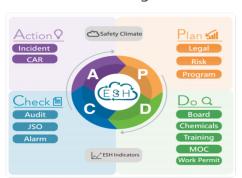
 $Source: \underline{https://ehsdailyadvisor.blr.com/2019/04/the-top-3-safety-challenges-of-2019/04/the-2019/04$ 

#### The Solution

## Our Solution – ESH Clouds

-Modularized Intelligent ESH Platform-





- Web Base
- Modularization
- User Friendly



#### **Key Features**

- 1. Low Deployment Barrier
- 2. Flexible Modularization
- 3. AI + ESH Solution
- 1. Legal management: Suitable for small to large enterprise, provides powerful management from different country, branch offices and tracking of the revised regulations.
- 2. Chemical management: Easily meet governmental requirements and industry standards, and protect workers and the environment through proper care in shipping, use, storage of chemicals.
- 3. License management: Manage all your license data on one platform, enables enterprise to lower administrative burdens relating to the tracking, organizing, and monitoring license's expiry date.
- 4. Risk management: Establish procedures to avoid potential risk, minimize their impact should they occur, and ultimately create a safe working environment for all the companies and employees.

## The Opportunity

Drive Business Value with Digital Transformation

- 1. Business insight: intelligent analysis for predicting the potential risk
- 2. High compliance rate: meeting the supply chain or international headquarter's request
- 3. Reduction in annual downtime
- 4. ESH brain of enterprises: Built-in regulatory standards for all the user to identify the regulated chemicals, risks, or potential violation
- 5. Safer, more efficient work practices
- 6. Implementation of corporate policy into practice

# **86.** Wistron Medical Technology

Category: Smart Health

## The main products or services:

1. Dialysis solution

2. Chronic disease healthcare platform

3. Smart hospital solution

#### **How to contact**

Name and Title: Zoe Lin, Product Manager

Email: zoe lin@wistron.com

Tel: +886-2-6612-3339

Website: www.wistronmedtech.com

## The Company

Wistron Medical Technology is a wholly owned subsidiary of Wistron Corporation, a Fortun Global 500 and publicly listed company. We have in-depth expertise with a wide array of healthcare technologies and years of experience designing and manufacturing in-vitro diagnostic equipment, multiplex analyzers, healthcare robotics, imaging equipment, as well as delivering smart healthcare solution using advanced tehenologies such as IoT, AI, and big data analytics for informative, digitalized and intelligent healthcare outcomes.

## The Challenge

Issues and challenges

Rising cost

Aging population

Environmental egradation

Emerging economies' needs

Shortage of healthcare providers

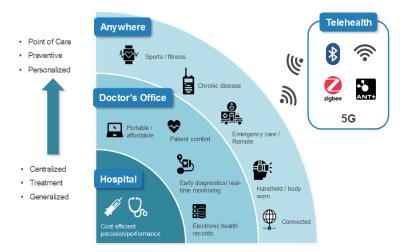
**Pandemics** 

Bad diet/habits/lifestyle (chronic diseases)

The Solution

Aside from hardware design and manufacturing expertise, software is also our core strength. Our key software technologies and solutions include:

- 1. Data mining for human body
- 2. Integrating structured/unstructured medical data
- 3. Medical image recognition
- 4. Natural language processing
- 5. Machine learning in healthcare
- 6. Computer-assisted medical decision-making
- 7. Speech recognition and speech-to-text transcription



- 1. From centralized to personalized
- 2. From treatment to preventive
- 3. From generalized to point of care

Informatization	Digitalization	Intelligentization
1. Nursing Record 2. Surgical Record 3. Medical Supplies 4. All-in-one Vital Signs	1. Cross-Platform Clinical Information Query System 2. Smart Hemodialysis 3. Tele-Wound Care 4. Operating Theater 5. Chronic Disease Case Management 6. Tele-care Platform for Chronic Care 7. Facility & Equipment 8. Cycling AR Fitness for 3-Hypers 9. Dementia Assessment & Treatment 10. Frailty Assessment & Treatment	Decision Support Solution for Hemodialysis     Hepato Al Computer-Aided Diagnosis     Voice Al Medical Assistant     Intelligent ICD-10-CM Recommendation System     S.Contactless Vital Sign Info System

# 87. WFE Technology Corp.

Category: Smart Buildings & Housing

The main products or services: Innovative electronic locks and total security solution including wireless access control system, home automation, and property manage system, hotel system and can be integrated with building automation, fire alarm system and other systems in the smart buildings and housings.

#### How to contact

Name and Title: Johnny Lien, Executive Assistant

Email: johnny.lien@waferlock.com Tel: +886-4-2230-5023 ext.110 Website: www.waferlock.com

## The Company

WFE Technology Corp. is a company dedicated to providing security solution to the global countries such as Germany, America, and Japan for over 15 years. We are currently extending our factory and office in Central Taiwan Science Park and it will get LEED Platinum



Certification and also Intelligent Building Label with Diamond Grade in Taiwan after the completion. We have our own engineering team in multiple fields including mechanism, firmware, and software. With specialized developing team for about 30 engineers, our WAFERLOCK products can follow up the future market and develop the systems including hotel solution, access control system, home automation, and innovative property management system for smart buildings which can communicate with building automation, parking solution, fire alarm system, access control system, and surveillance system. Besides, we have our low power team who can design the drawing for smart buildings and also do the low power construction. With these expertise and experience of promoting smart buildings and factories, we can link different systems together and collect all the data from other systems in the smart building as well as provide customers a total solution for the Smart Buildings and Housing in the city.

#### The Challenge

Currently, there are many application and systems for Smart City in the market. The concept of Smart City has been well encouraged and being implemented. However, each solution has its own provider and might not be compatible with other systems

(e.g. fire alarm, parking, video surveillance, lighting, and environmental monitoring) due to the different system structures and requirements. In this situation, cities might spend much money but with less efficiency as it could be.

How to save the cost and implement Smart City more efficiently between different systems is an important issue which needs to be solved.

#### The Solution

WFE Technology Corp. has been working with system integration and dedicated to providing a total solution for Smart Buildings which combines smart home automation, access control, smart parking, video surveillance, energy monitoring, fire alarm, and environmental monitoring applications. WFE Technology Corp. specializes in the security solution providing the wireless access control system with door locks which is more cost efficient and also provide high security. Besides, TCP/IP structure is used for the building management and control system which is compatible for the communication with other smart systems.

- Wireless locking solution can save the cost of installation and achieve the cost efficiency.
- Experienced engineering team can design the low power structure for Smart Buildings.

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