

MAKE CLINICS  
SMARTER,  
MAKE LIFE  
BETTER\_\_\_\_\_.

VATECH Networks  
Company Profile  
2020

**vatech**

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We expand

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Who we are

Leading Global Healthcare Group  
**VATECH Networks**

We provide dental imaging solutions,  
healthcare services and veterinary imaging solutions.

vatech





2002

Discovered  
the possibilities

Transitioned into  
the dental X-ray  
business

2003 □ 2004

Made the Dream  
a reality

Launched  
Korea' s 1st digital  
panoramic imaging  
system (PaX-300)

2005 □ 2009

Expanding Into  
Global Markets

Launched the  
world' s first 3-in-1  
digital X-ray system  
and created  
a paradigm shift

2010 □ 2017

Secured innovative  
products and  
outstanding □uality

Gained competitive  
edges with low  
dose technologies,  
through vertical  
integration

2018 □

Global No.1  
Leader

Beyond No.1  
in dental imaging,  
we are also No.1 in  
parts, materials, SW  
and the veterinary  
medical field

A man in a white lab coat is shown from the chest up, looking intently at a medical device. He is wearing a headset with two microphones. The device has a white base and a black control panel with a screen. In the background, a wall with a logo is visible.

We Expand

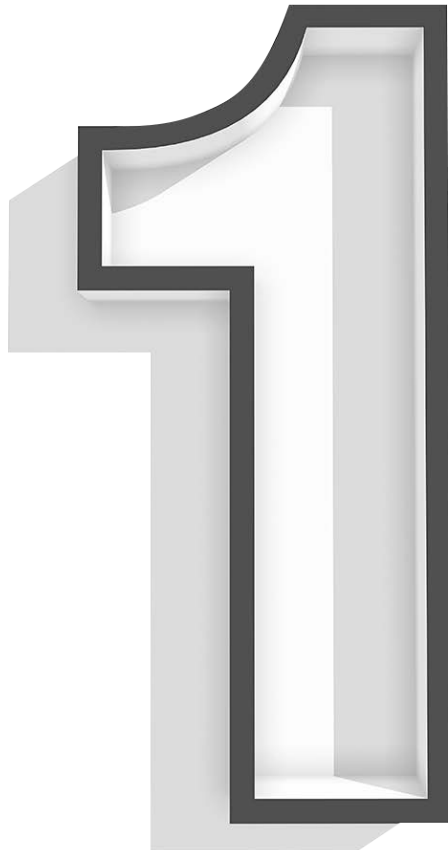
# Everywhere, Vatech Networks

We lead the market  
with innovative technologies and products  
in various healthcare sectors across the world.

# Successful businesses on every continent with 22 subsidiaries worldwide

## Global presence: Subsidiaries & Offices by continent (2019)





## **Dental Imaging**

- No.1 Korean dental X-ray market share
- No.1 Global 3D dental diagnostic equipment sales
- No.1 Global dental oral sensor market share
- No.1 Global patent applications for dental imaging in the last 5 years
- No.1 American 3D X-ray market share
- No.1 Global dental X-ray diagnostic software market share
- No.1 Southeast Asian dental X-ray market share
- No.1 Chinese 2D X-ray market share

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## **X-ray System**

- No.1 X-ray detector sales among Korean companies

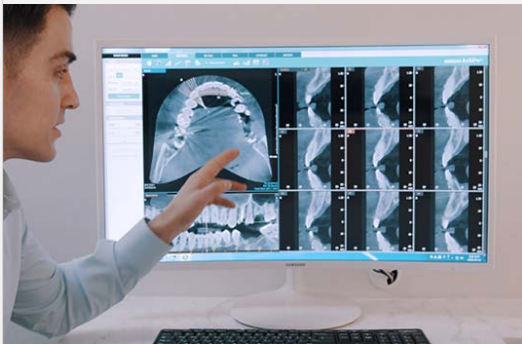



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## **Veterinary**

- No.1 Korean veterinary electronic medical chart market



## Business expansion based on our core competencies for □happier and healthier lives□

|               | Smart Clinic Bi□  | Parts □ Materials Bi□  | Vet Imaging □ Solutions Bi□  |
|---------------|---|--|--|
|               |                                   |                               |                  |
| Business area | Supply of imaging equipment that improves the accuracy of dental care and total solutions with enhanced convenience | Development of detectors, which is the key component of a digital X-ray, and prosthetic material zirconia powder | Supply of veterinary imaging equipment and veterinary clinic solutions, including PMS                |
| Subsidiary    | <b>vatech</b> <b>vatech</b> mcis <b>ewoosoft</b>  | <b>rayence</b>   |  <b>woorien</b> |



A grayscale photograph of a woman with long hair, smiling broadly while sitting in a dental chair. A dental mirror is positioned near her mouth, and a dental probe is visible in the lower right. The background is blurred, showing other people in a clinical setting.

We Innovate

# Breakthrough technologies to build a better world

**We constantly challenge ourselves to develop  
new technologies** that improve the quality of life  
& enhance the medical environment.

## The World's First History

2005



Launched a 3-in-1 digital x-ray system (Panorama, Cephalo, CT)

Created a paradigm shift in the global dental diagnostic market

2013



Launched a low dose system that features a 4.9 second scanning time and 75% reduced dosage

Created the 'Green' category in the global market

2014



Launched a system that can take 2D and 3D images at once

Enhanced convenience for staff and patients

2015



Launched a flexible oral sensor

Can provide patient-oriented medical service by reducing pain during scanning

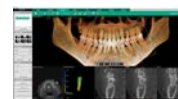
2016



Universalization of medical CNT

Enhanced convenience and accuracy of scanning with the use of an ultra-light portable x-ray

2017



Introduction of AI Application in dental diagnostic software

AI and telemedicine enabled advanced medical treatments for anyone in the world

2019



Application of IGZO technology to TFT detector

20 times faster speed and lower noise than a-Si TFT

2019



Launched an animal-only CT

Can diagnose soft tissue  
Led the universalization of CT in animal hospitals

Faster and clearer images with lower radiation dose.

Green Technology **created a new paradigm of**  
□ **low-dose treatments** □ in the global dental industry.



## The Smart M specializes in pneumonia diagnosis and contributes toward creating a healthy world.

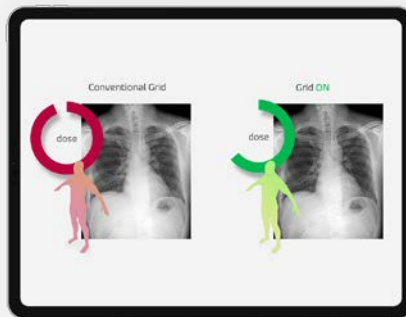
COVID-19 pneumonia diagnoses can even be conducted in small and medium-sized hospitals that are incapable of housing CT machines.



From low dose x-ray detectors to software,  
**we provide the best solutions so** doctors can diagnose  
more accurately and patients can rest assured.

30%

Radiation reduction rate  
when using Grid ON function



Low-dose SW algorithm Grid ON



1717 Dynamic X-ray detector

Our innovation has further developed the medical environment by improving doctor's treatment plans and relieving patient pain.

3 KG  
Weight of  
previous portable x-ray

→

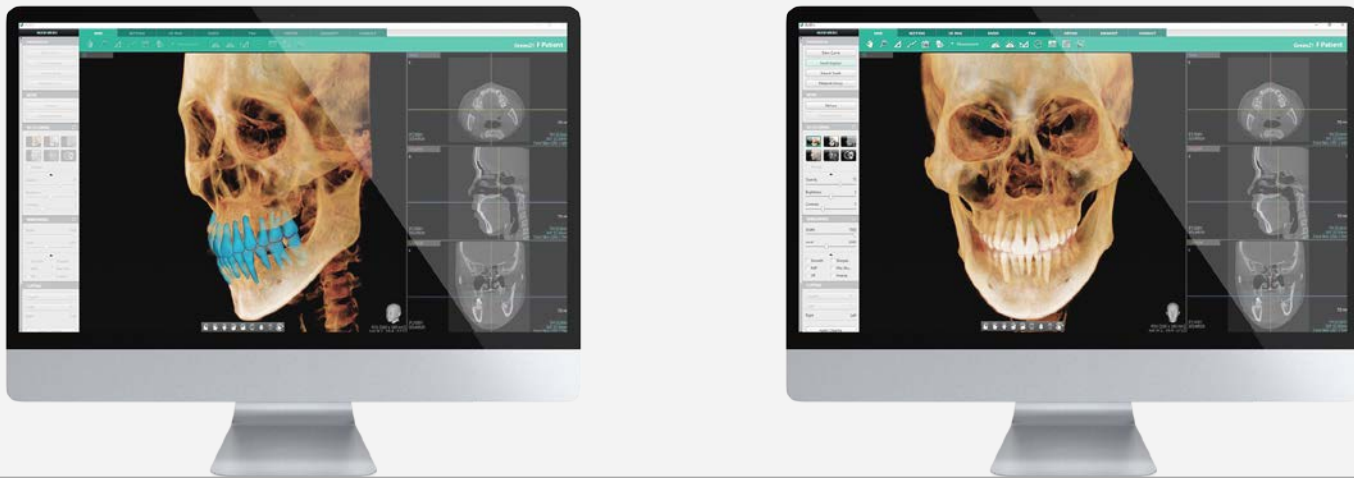
**1.5 KG**  
**Weight of**  
**EzRay Air P**



EzRay Air P : The world's first medical CNT-based portable x-ray

Easier and more convenient diagnoses  
with AI (Artificial Intelligence).

Our innovation is making the medical environment smarter.



Medical imaging software E3D-i with the AI solution



The world's first animal-only CT expands the field of innovation

for the happiness and health of animals that coexist with humans.



A black and white photograph of a person in a cleanroom environment. The person is wearing a dark hood, a white surgical mask, and white gloves. They are focused on a task, with their hands positioned over a metallic component that has several circular holes. The background is blurred, emphasizing the person and their work.

How we do it

## **A group of experts focused on customer satisfaction**

**We ensure customer satisfaction** by providing the best products and solutions, while constantly challenging ourselves through continuous innovation.

Based on expertise and efficiency,  
**we believe the fastest way to □customer satisfaction□** is  
by thinking and visualizing from the customer' s perspective.



For the best x-ray image quality and service,  
we perform our own R&D, production and manufacturing  
of core technologies and components.



### R&D

The world's first  
3-in-1 system  
source technologies  
for low dose image



### Detector design & production technology

Core technologies for  
scintillator deposition and  
TFT/CMOS detectors  
manufacturing



### Medical imaging technology

High resolution  
imaging process algorithm,  
2D/3D diagnostic  
SW technologies



### Integrated manufacturing process

High-quality  
integrated manufacturing  
system optimized for  
precision medical devices

R&D is at the center of Vatech Networks' foundation of innovative leadership.

**We change the medical environment by rapidly providing customers with technologies they want.**

**30%**

R&D workforce  
(% of the total workforce)

**25%**

R&D Investment  
(% of 2019 Sales)

**No. 1** patent applications

For dental imaging  
equipment in the world

**Awards**

2015 Patent management prize  
2018 The best employee invention  
compensation prize

## Vatech R&D Networks



Optic Solution  
K-GIST



CAE Solution  
Kyung-hee Univ



X-ray Physics  
Yonsei Univ. (VYSION)



Applied Physics  
UNC Chapel hill



Sensor Design  
□ Imaging  
Yonsei Univ. (CARI)



X-ray Detector  
□ Robotics  
Busan Univ. (CAMER)



## Clinical Research

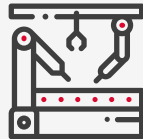


# Adopt the Smart Factory process to improve productivity and quality.



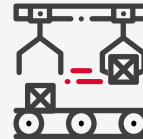
## **AGV System**

20% increase in process productivity by building an automation system linking AGV (Automatic Guided Vehicle) with Vatech MES



## **Process Automation**

3 times increase in productivity and 97% achievement of process yield with the introduction of the Vatech exclusive video inspection facility and efficient workforce distribution based on IT system



## **Carousel System**

Optimization of logistics/workflow through the introduction of the automated parts inventory system



## **Quality first culture**

24/7 real-time response using issue-tracking system and continuous communication for quality improvement





We Work for

# Happiness, the value we pursue

**We create a better society**  
in our own way.

# The more we share, the greater the happiness.

We practice sharing to create a happier society.

## Medical expenses support

Present new life opportunities to neighbors in blind spots



## Volunteer activities

Build long-term relationships and trust with neighbors in the community



## Technology sharing

Contribute to creating a better world with our technologies



## Sharing in our lives

Share what we have and make it a habit to be appreciate ourselves and our daily lives





## Beyond sharing, we fulfill our CSV (Creating Shared Value) obligation.

As a Korean company running businesses in Vietnam,  
we are committed to enhancing friendly relations between Korea and Vietnam.  
By supporting the next generation of Vietnam, we take win-win approaches for all communities.

### **xãnhào Đại Từ! – Vatech Networks' CSR project in Vietnam**



#### **Dream Seed**

Support elementary, middle and high school education and living expenses through the 1-on-1 support program between local children and our employees



#### **Supports for local communities**

Provide technical education and cultural space needed for local communities



**Establishing a foundation for  
a self-sustaining community**

# We believe that happy people can create a better world.

At work, we support our employees to relieve their daily life and family concerns,  
and help them fully focus on life and happiness.

## A daycare center



Raising healthy children  
with my company

## Vawoomi Program



Leave the hassle to my company,  
focus on myself and my family

## A fitness center



Make my day lively with exercise  
and care that suits me

## Cafeteria & Food culture



Reduce worries about eating  
and spend free time with myself



# Vatech Networks

We contribute to creating a better world  
with new technologies and products.



**VATECH Networks is a Leading Global Healthcare Group,** consisting of 8 domestic companies/subsidiaries and 22 overseas subsidiaries. They are controlled by VATECH ewoo holdings and VATECH ewoo holdings provides centralized management and administration.

**vatech ewoo holdings**

Holding Company





vatech

[www.vatech.co.kr](http://www.vatech.co.kr)

Beyond being the No.1 global  
dental imaging provider,  
**we are a small CT specialist.**

#### Business Scope

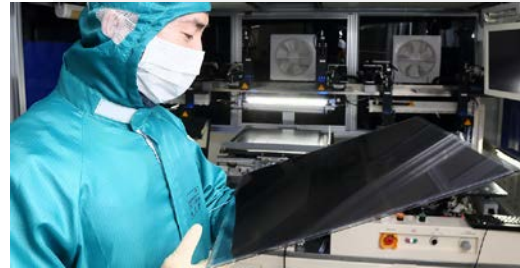
Vatech provides total solutions that make clinics smarter. Vatech rapidly joined the dental imaging market with the integration of medical device R&D, manufacturing and sales. Vatech competed with leading medical device companies and has become the top global player within 15 years of business.

Vatech possesses a full lineup of dental radiography equipment that provides differentiated customer value. For the first time in the world, Vatech universalized dental CNT and applied AI in dental SW.

As a small CT specialist, Vatech has manufactured and exported more than 24,000 small dental CTs worldwide.

In 2020, Vatech is causing a stir in the global infectious disease prevention and pneumonia diagnosis/treatment market, with the development of a low-dose, high-resolution CT that can be used for partial body diagnosis.





**rayence**

[www.rayence.co.kr](http://www.rayence.co.kr)

## **The digital x-ray parts and materials specialist**

### **Business Scope**

Rayence specializes in digital x-ray imaging solution parts and materials.

For the first time in the world, Rayence has secured TFT, CMOS detector core technologies and established a full lineup of manufacturing. Rayence has supplied dental, medical and industrial detectors and I/O sensors (intra oral imaging sensors).

Rayence is the No.1 Korean detector company and has the largest market share in the global I/O sensor market.

In 2020, Rayence expanded its business to the dental materials and veterinary healthcare markets, based on its core competencies.

Through its subsidiary Woorien, Rayence has entered the veterinary medical imaging equipment market with high growth potential, and changed the paradigm of the global veterinary market. As the only Korean company that has successfully developed zirconia materials, we are developing various dental materials including a high-quality zirconia powder.



**vatech mcis**

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

## **The dental integrated solution specialist**

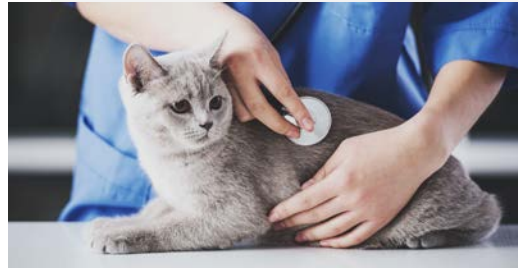
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### **Business Scope**

Vatech MCIS is the largest dental device distributor in the Korean market.

In 2019, Vatech MCIS celebrated the 10th anniversary of its founding and its name was changed from Vatech Korea to Vatech MCIS. Vatech MCIS expanded its business as a medical device distributor to also becoming a dental integrated solution provider. Vatech MCIS manufactures/distributes solutions required for an entire workflow, including materials for prosthetics, SW, and HW.

Providing integrated solutions that facilitate dental care and clinic management is the differentiated strength of Vatech MCIS. With the No. 1 know-how in the domestic dental distribution market, we are expanding the business by pioneering new overseas markets.



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

## **The animal imaging equipment / solution specialist**

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### **Business Scope**

Woorien specializes in animal imaging equipment and integrated solutions.

Woorien is planning on providing all necessary solutions for animal hospitals, focusing on 'animal-only' and 'veterinary care environment improvement'.

Woorien is targeting the global veterinary market with the world's first dental panorama and CT for animals.

Woorien continues to expand the business solution optimized for animal hospitals, such as veterinary imaging medical devices, veterinary medical information systems, and animal mobile apps.



**vatech eng**

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

## **The comprehensive manufacturing specialist**

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### **Business Scope**

Vatech Eng is a Korean top-tier comprehensive manufacturing and service company.

Equipped with precision assembly lines for manufacturing finished products, Vatech Eng provides one-stop total engineering services that include sheet metal, processing, painting, injection, and assembly.

Vatech Eng provides high-quality painting services with its state-of-the-art facilities and has export companies/ large companies as customers.

Annually, it has production capabilities of more than 7,000 medical diagnostic devices, semiconductor facilities, and industrial devices, as well as technical personnel and state-of-the-art equipment.



# ewoosoft

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

## The dental diagnostic software specialist

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### Business Scope

Ewoosoft is a specialist in dental diagnostic software & solutions.

Ewoosoft is a company that researches and develops solutions that improve the accuracy of dental care. in accordance with advanced development processes.

For the first time in the world, Ewoosoft applied AI in dental SW and obtained the first KFDA approval for it in 2019. In 2020, Ewoosoft also obtained FDA approval for the AI technology and has become a world-class technology company in the field of dental diagnosis.

Its flagship products are EzOrtho (orthodontics), EzDent-i (2D diagnostics), and Ez3D-i (3D diagnostics). During development, Ewoosoft considers user convenience and aims for SW that is easy to learn and use.



**vatech** s&c

## Service & Culture

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### Business Scope

Vatech S&C is a catering business that provides food services for corporate businesses, and specializes in premium postpartum cuisine.

### 以食爲天

With the motto of food being fundamental and cherishing it the most, Vatech S&C aims to improve the quality of life through a food culture that goes beyond just providing a meal.

Vatech S&C uses high-quality ingredients grown on our own farms and provides differentiated food culture services, such as scientific recipes developed with the utmost care.