

# VIRNECT specialized in AR·DT

We provide optimal solutions for solving problems in industrial sites.

2020 Q1

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**VIRNECT** 

# What's the status in your worksite?

Dangerous industrial worksite, ineffective work

# Average of 2 people pass away every day due to accidents, bottom-level labor productivity among OECD countries (28<sup>th</sup> place among 36 countries)



Risk of falling or electric shock while working in high places



Need to share the burden of the responsibility for equipment accidents with subcontractors and power plant(contractor)



Missing / Injury / Death due to explosions in chemical plants



Ineffective communication, inadequate response in worksite



Ineffective inspection, manual recording



Ineffective guidance and insufficient safety training in worksite

# What is the reason?

Problems in worksite, control room, and company







#### **Problems in worksite**

- Difficulty in searching, understanding, modifying, memorizing, recording data
- · Difficulty in work training
- · Lack of specialty
- · Increase in work time
- ...

#### **Problems in control room**

- Difficulty in understanding, managing, supporting worksite
- Difficulty in checking safety
- · Increase in work time
- ...

#### **Problems in company**

- · Overtime allowance
- Additional recruitment
- Increase in risk for safety accident
- Penalty in case of violation of Occupation Safety and Health Acts
- · Decrease in company reliability
- Decrease in financial solvency
- Deterioration in competitiveness
- ...

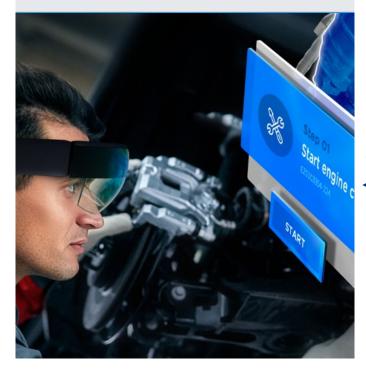
# **VIRNECT Solution**

Optimal solution for solving problems in industrial worksites

#### **Worksite**



Effectively conducting work in the site



Work information
Progress information
Collaboration information

Control Room

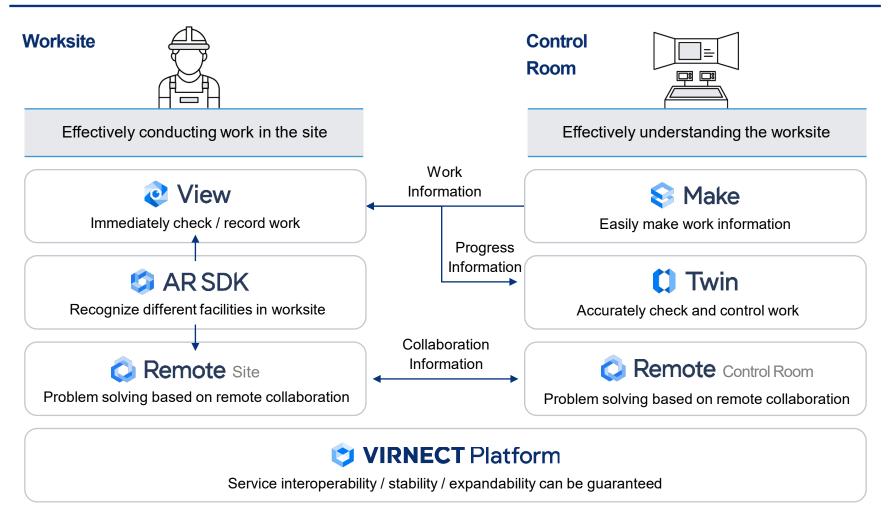


Effectively understanding the worksite



# **VIRNECT Solution**

Optimal solution for solving the problem in industrial worksite



# VIRNECT Service

#### Optimal solution for accurately diagnosing customer's problem



Consulting

✓ Duty/Environment analysis

✓ Economic analysis

- √ Stability analysis



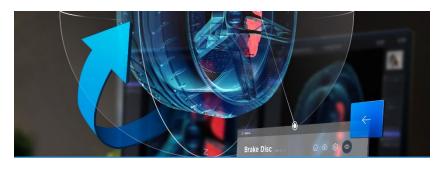
Seminar / **Education** 

- √ Technology introduction
- ✓ Product training and experience
- ✓ Introduction of success cases



**Proof of Concept** (PoC)

- ✓ Use minimum function
  ✓ Verify introduction
- ✓ Review potential for introduction
- effect



Making AR, DT contents

- Digital transformation of data
- √ 3D scanning, modeling, conversion

Planning/Making

AR contents

#### Best company in South Korea specialized in AR/DT

**Mission** We aim to provide improved industrial safety, highest work efficiency,

and best convenience to our customers.

Vision 'World's most customer-oriented company' for solving the customers' problems

Year of Number of Intellectual AR project Certificate Liquid assets **Establishment Employees** property rights performance and award 79<sub>people</sub> 54<sub>cases</sub> \$ 5.7<sub>M</sub> 2016 **109**<sub>cases</sub> 20<sub>cases</sub> (Top class of Korean AR companies)

- 79 employees + (20 top experts having master's and doctorate degree, 45 R&D personnel, 5 QA personnel)
   100 research papers (Top class of Korean AR companies)
- Investment attraction: \$7 million (series A, Top class of Korean AR companies)
   Compound Annual Growth Rate (CAGR): 75.4% Current Ratio: 876%
- Company Satisfaction Level: 4.15 rating (5-point scale, company having excellent 'work and life balance')

#### VIRNECT is continuously growing

#### Compound Annual Growth Rate (CAGR): 75.4%

2019

#### **Business Expansion**

- ✓ Launching of VIRNECT Make
- √ 8 awards including Minister Prize
- ✓ Investment attraction of \$7 million
- √ 1st grade in GS certification
- ✓ Selected as innovative product by Public Procurement Service

2020

#### ✓ Launching of **VIRNECT Twin**

- ✓ Established research center in Vienna
- ✓ Recruitment of AWE USA as sponsorship global partner

2018

#### 2017

#### Solution **Development**

- ✓ Launching of **VIRNECT Remote**
- ✓ Established research center affiliated to company
- √ 1st place in KT 5G contest

#### **Market Entry**

- ✓ Launching of **VIRNECT View**
- ✓ Award in VR/AR Expo
- √ 4 awards including Minister Prize

#### VIRNECT

#### **Establishment**

✓ Launching of AR viewer. 'SEEREAL' Viewer

2016

✓ Geneva's Special / Gold Prize for Invention

**Overseas Expansion** 

#### Best company in South Korea specialized in AR/DT



#### VIRNECT Experience Center (Seoul)

#### CEO Ha, Tae-Jin

Doctor of Engineering, KAIST (UVR Lab)

Former research professor, KAIST

Research papers in world-famous academy (60 papers;

ISMAR etc.)

3 patent rights in USA



#### **VIRNECT Vienna Research** (Austria)

#### Research Director Kim, Gi-Young

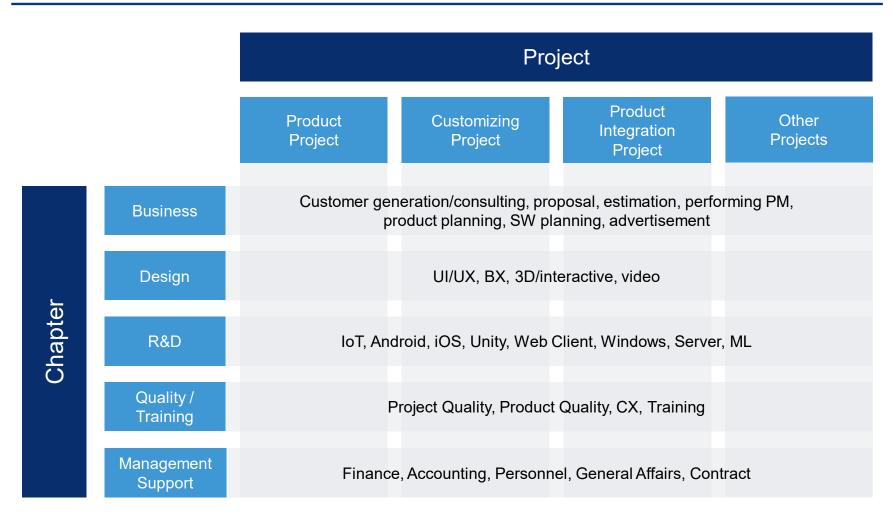
Doctor of Engineering, GIST (UVR Lab)

Former Qualcomm Austria (Vuforia Engine), DAQRI

Research papers in world-famous academy (ISMAR etc.)

7 patent rights in USA

### Taking prompt action based on agile structure



# **Certificates and Awards**



Ministry of Science and ICT

Digital Contents Industrial
Contribution
Ministry of Science and ICT
Minister Prize



1st grade in GS Certificate (VIRNECT Make & View)



2019 Innovative product (VIRNECT Make & View)



VIRNECT Remote V&V performance verification



Korea Grand Prize
ICT Innovation
Special Prize for Excellent
Company



2019 Korea Electronics Contest Innovation Prize in Best Content (VIRNECT Remote)



Innovation Prize in WIS 2019 (VIRNECT Make & View)



VIRNECT View V&V performance verification



Smart City
Business Fair
Designated as top 10
outstanding companies



Ministry of Science and ICT

SW market support business Minister Prize, Ministry of Science and ICT (VIRNECT Remote)



3D Fusion Industry Association Certificate of Merit for Industrial Development



Table-Top V&V performance verification



Seoul VRAR Awards Award in AR



1st grade in GS Certificate (VIRNECT Remote)



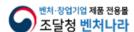
2017 KT 5G Service Contest Grand Prize (VIRNECT Remote)



Korea BIM Academy Prize for outstanding research paper



Real-time wireless
video transmission and
monitoring program
V&V performance verification



Registered as venture company by Public Procurement Service (VIRNECT Make & View)



VIRNECT AR SDK
V&V performance verification



UWB sensor error range measurement V&V performance verification



Company overview 11

# **Customer References**

# Public Sector

























# Private Sector



































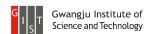


multicampus















# **Letters of Recommendation**



VIRNECT Remote is currently supporting a lot of work related to overseas manufacturing worksites.



It is seen as one of the best tools that can be used for facility maintenance without limitation in time and space.



- VIRNECT Solution can be helpful in improving productivity in power plants and easily sharing information.
- power plants and easily sharing information.
- Object detection function provided by VIRNECT AR SDK can provide the platform for managing measurement information in industrial worksites.
- VIRNECT Solution suggests systematic information management and optimal safety management platform in the field where high reliability is required.

AR solution is used for worksite maintenance, leading to a better understanding of work and improvement in work efficiency.

VIRNECT AR Solution used for worker's inspection has significantly improved customer satisfaction.

**SAMSUNG SDS** 

VIRNECT, specializing in AR devices that are able to compete with global AR companies, provides its differentiating core solution. It will be used as an essential partner for improving productivity in worksites.

# Find VIRNECT Solution for solving the problems in industrial worksites!

# **VIRNECT**