

Connecting the Real to Meta-World

# COMPANY PROFILE

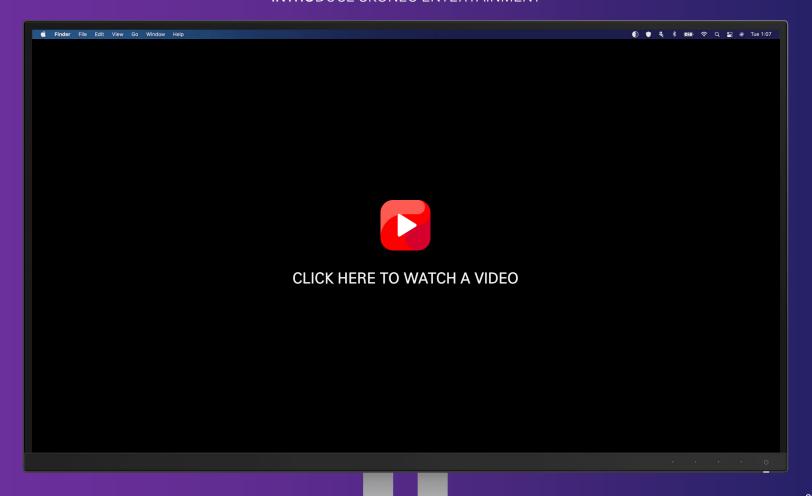


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### **INTRO**DUCE SKONEC ENTERTAINMENT



I. About II. References III. Business Area IV. Works V. Vision VI. Appendix

### About

# SKONEC, CREATORS OF XR CONTENT FOR THE METAVERSE

SKONEC has been developing content since 2002 with the goal of becoming a leading metaverse XR content development company that connects the real world to the metaverse.

Corporate Name SKONEC Entertainment Co., Ltd. (KOSDAQ listed corporation)

C.E.O DAE SIL HWANG

Founding Date April 16, 2002

Business Area VR Game, XR Education & Training, Metaverse Business

Employees 75

Location 577 Seolleung-ro, Gangnam-gu, Seoul

Website www.skonec.com

Subsidiary Company SKONEC (CN) CO., LTD. (China)

SKONEC ENTERTAINMENT USA, INC. (U.S.)

SKONEC XR CO., LTD.



### References

# **DEVELOPMENT AND RELEASE OF OVER 150 CONTENTS**

With extensive experience in content development for various platforms including arcade, console, PC, and mobile, SKONEC is expanding its business as an IP holder with expertise in AR/VR and MR.

PHASE I (2002~2011)

PHASE II (2012~2019)

PHASE III (2020~)



MAGIC THOUSAND CHARACTER CLASSIC (CONSOLE)



OPERATION GHOST (ARCADE)



BUBBLE BUBBLE FOR KAKAO (SMART PHONE)



K-POP DANCE FESTIVAL (CONSOLE)



MORTAL BLITZ (VR)



#BEFEARLESS (VR)



EDDY;SEAN (METAVERSE PLATFORM)



STRIKE RUSH (VR)



ARCADE, CONSOLE, PC, MOBILE APP. etc.

**ABOUT** 

**80** PJTs.



METAVERSE XR CONTENTS INTERACTIVE CONTENTS, VR GAME, XR TRAINING etc.

**ABOUT** 

**70** PJTs.

### **Business Area**

# DESIGNING A FUTURE WITH METAVERSE XR TECHNOLOGY

SKONEC's flagship division is VR game development, but the company is also undertaking large-scale XR-based education and training projects, as well as metaverse projects that combine various technologies.

### METAVERSE XR TECH. → METAVERSE XR CONTENTS

# METAVERSE XR GAMES ON PICO STEAMUR

- Escape Room Unline based on voice chat and cooperative play in development (Scheduled for release in the second half of 2023)
- 'Strike Rush', a multiplayer-based VR FPS game with a global match-up network in development through joint investment and development with META (Scheduled for release in the first quarter of 2024)
- · B2C VR game publishing business in progress



- Large-space XR walking system (Chemistry, firefighting, national defense, public safety)
- Development of large-space training system, and standardization of Metaverse convergence technology with Korea Information, Communications Technology Association (TTA) and others / standardization of large-space XR walking system in the process through IEEE2888 WG



- · Developed V-Conec LIVE (Virtual creator production solution)
- B2B, B2G realistic contents project management (Virtual art museum, Space-based interactive content, Digital heritage, etc.)
- Real-time non-face-to-face communication such as conferences, classes, and social R&D in progress



### **Business Strategy**

# ENDLESSLY PERSUASIVE FUN & IMMERSIVE EXPERIENCES

SKONEC's METAVERSE XR game business is divided into three parts: self-development, collaboration with global partners, and VR game publishing. The company is focusing on securing high-quality content.

STRATEGY 1
EXPANSION OF
THE SELFDEVELOPED
CONTENT.

Develop the capacity to independently plan, develop, and provide VR games for a global audience.

STRATEGY 2.

DEVELOPMENT OF COLLABORATIVELY CREATED CONTENT

Collaborate with external partners like Strike Rush® and Escape Room® Online to expand SKONEC's original IP. STRATEGY 3.

PUBLISHING
AND
DISTRIBUTION

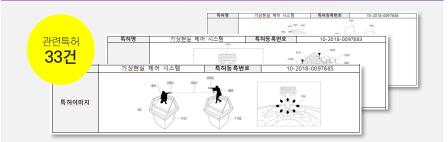
Discover and collaborate with other developers to establish a service environment, contributing to the expansion and development of the VR ecosystem through the discovery of excellent domestic and foreign content.

Launching More Than 15 Global XR Services for CLOSE-to-LIFE TYPE & GAMING CONTENT by 2025 is OUR AIM

### **Business Strategy**

# DEVELOPMENT OF GLOBAL CONTENTS UTILIZING PROVEN TECHNOLOGY

# Acquire VR Game Development Technology & Know-How Holds 33 registered and applied domestic/foreign VR-related patents



### VR GAMING CONTENTS DEVELOPMENT TECHNOLOGIES

- ► Reduction of VR motion sickness
- ► Spatial perception enhancement tailored for VR FPS games
- ► Optimization of firearm mechanisms tailored for VR
- ▶ Player damage feedback in VR content that utilize virtual objects

### SONY PSVR AND CONSOLE PLATFORM OPTIMIZATION TECHNOLOGY

- Expertise in development processes for Sony PlayStation VR (PSVR) and console platforms
- ► Profile Guided Optimization (PGS)
- ▶ Multi-platform Expansion

# Globally Recognized VR Game Content Development Capability 42 program certifications registered since 2016



- ① 'Mortal Blitz for PSVR' was introduced as an outstanding case of VR technology by the VR Technical Director at the 2016 CEDEC in Japan
- ② At the first launch of PSVR, the demo of 'Mortal Blitz for PSVR' was included in the distributed promotional demo disc



### KEY MILESTONES of MORTAL BLITZ for PSVR

- ► Commercial Version Released in April 2017
- ► Ranked #1 in U.S Download Rankings in April 2017
- ► Ranked #1 in Japanese Download Rankings in May 2017
- ► Ranked #1 in Europe Download Rankings in June 2017

### Self-Developed Contents

# WORLD 1ST COMMERCIALIZED VR FPS GAME

Mortal Blitz® SONY PSVR Ranked #1 Global Downloads





GENRE FPS PLAYER Single Play

RELEASE 2015 DURATION -

URL https://www.youtube.com/watch?v=zPacQu5tRfQ&t=8s

In 2015, SKONEC released the Gear VR demo of the world's first VR shooter game, \( \)Mortal Blitz\( \), through cooperation with Samsung Electronics and Oculus (Meta). In 2017, \( \)Mortal Blitz\( \) for Sony PSVR was the only Korean-developed game included in the PSVR demo disc and achieved #1 in downloads in the North American, European, and Japanese PSVR markets.



# Mortal Blitz Combat Arena (2020)

GENRE FPS, PVP PLAYER 1-4

RELEASE 2020 DURATION approx. 10~15

URL https://www.youtube.com/watch?v=H21LFNqlWwE

Mortal Blitz: Combat Arena is a free-to-play, competitive FPS game for up to 4 players that uses the 2020 Mortal Blitz IP and features a hexagon-shaped map where players use firearms and terrain to gain advantages over opponents.

### Self-Developed Contents

# DEVELOPMENT OF MULTI-PLAYER VR GAMES

Specialized for Walking Attraction Environments





GENRE FPS PLAYER Single Player
RELEASE 2016 DURATION approx. 10~15min
URL https://www.youtube.com/watch?v=3hgAlbF3lbI

(Mortal Blitz for Walking Attraction) is a popular game in urban indoor theme parks such as CLUB SEGA in Japan and JOYPOLIS in China, offering exciting battles with biomorphic androids set in the near future.



# Operation Black Wolf: Battle of The Desert (2018)

GENRE FPS, PVP PLAYER 3

RELEASE 2020 DURATION approx. 10~15min https://www.youtube.com/watch?v=liTLy6ON8TI

⟨Operation Black Wolf: Battle of The Desert⟩ is a FPS VR game for up to 3 players to co-op and save hostages in real-time, with less motion sickness and better immersion. It is currently being operated commercially at various locations including Lotte World and Nonsan Military Theme Park.

Development of collaborative contents

# FOCUSING ON DEVELOPING MEGA-HIT CONTENTS

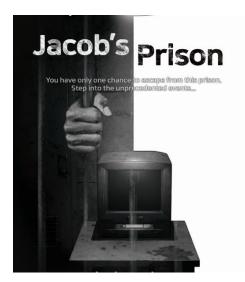
Collaborating with big-tech companies



### Development of collaborative contents

# ADVENTURE XR ROOM ESCAPE GAME ON MULTIPLE PLATFORMS

Collaboration with Game Developers and Studios





GENRE Puzzle, Horror PLAYER 4
RELEASE 2023(Expect) DURATION 1hour

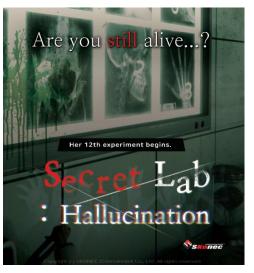
Dr. Jacob's Laboratory is a room escape series where players must escape from a genetics researcher's lab, avoiding a mutant born during his secret research to cure his daughter's incurable disease.





GENREPuzzle, HorrorPLAYER4RELEASE2023(Expect)DURATION1hour

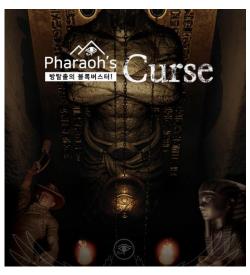
A room escape series where players must solve puzzles and receive items from a friend trapped in an isolated space to save their friends and free Amy's soul trapped in a doll in her room.





GENRE Puzzle, Horror PLAYER 4
RELEASE 2023(Expect) DURATION 1hour

Players must uncover hidden secrets and escape from cells in a room escape series, before the administered drugs spread and turn them into monsters, in a facility run by researcher Clara.





**GENRE** Puzzle, Horror **PLAYER** 4 **RELEASE** 2023(Expect) **DURATION** 1hour

An adventure game where players must escape an underground pyramid after falling into a trap set by an angry Pharaoh, all while searching for ancient artifacts.

### Publishing and Distribution

# EXPANDING VR GAME LINE-UP THROUGH PUBLISHING BUSINESS

Identify Talented Developers and Studios



Expansion of entertainment business

Diversification of business into sectors

such as web novels and webtoons

such as Blockchain and NFT

Confirmation of agreement for

User and event management

trademark registration and use

Discovery of promising VR games

Support launch of Global market

platform

### **SKONEC ENTERTAINMENT 12**

Assisting the growth of SME

technology and manpower

investment

developers through support and

Networking for the acquisition of



### Possessing Technologies

# LARGER-SPACE XR EDUCATION AND TRAINING SYSTEM

Establishment of XR Education and Training Systems in various facilities such as military training facilities, VR LBE (Location Based Entertainment), and local government/public institution education and training facilities.

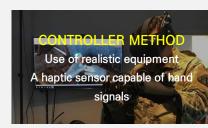
SKILL DIFFICULTY

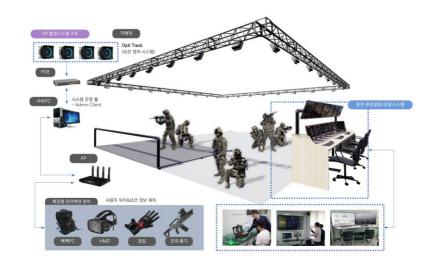
Stationary VR (i.e., 360 VR video) Room-Scale Single-User Service Room-Scale Multi-User Service

Large Space Multi-User Service









Large-Space Based XR Walk-Through Technology

Latency Matching Technology

Match Real Objects with Virtual Objects

Multi-Collaborative Training System (Multi-Player)

Integrated Operation (Admin)
/ Analysis System

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### Possessing Technologies

# STANDARDIZATION OF XR PLATFORMS PROMOTED BY IEEE

Standardization of the core technology for XR Training business, Large Space XR Walk-through, was domestically standardized by TTA in 2020 and plans for international standardization by IEEE in 2024 are currently underway.





LARGE SPACE SENSOR

LARGE SPACE ACTUATOR

LARGE SPACE DIGITAL TWIN

LARGE SPACE USE CASE

Strengthening of Global Competitiveness by Enhancing Public Confidence

Accelerating Global Advancement by Resolving Technical Barriers

Creating Platform Business Opportunities

Generating Profits by Using Standard Patents

### Establishment of Large-Space XR Walk-Through Education & Training System (6Dof) Platform



Tactical Training



Chemical Spills



Fire Drills



Security



CBR

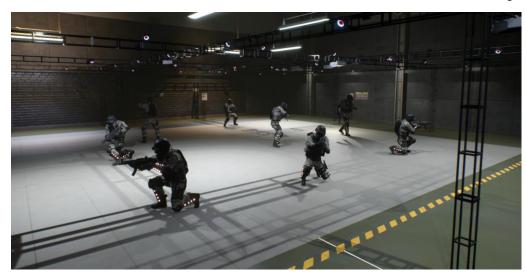


In progress

### XR Walk-through technology for large spaces

# A SIMULATED TEAM TRAINING IN A REAL, LARGE SPACE

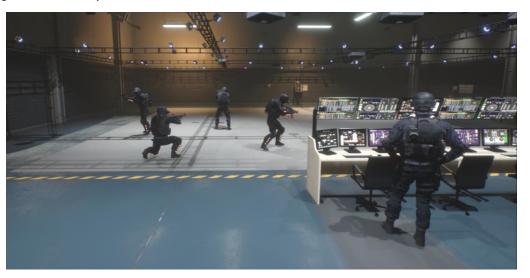
Tactical Training using Extended Reality





### **HYBRID VR INTEGRATED TRAINING SYSTEM (2023)**

- An interactive special forces squad-scale military training simulation system with large-space XR walk-through technology aimed at overseas markets.
- ▶ Both large-space tactical training and CQB training are possible with the combination of walkthrough and controller control methods Multi-collaborative training possible for up to 8 people, the largest among existing virtual training spaces.
- A 15m x 15m training area was constructed with motion-tracking cameras and structural
- Utilizes advanced immersion equipment, and supports real-time environmental modifications including training themes, climate, Al, and more.



### ♦ UDT/SEAL TRAINING SYSTEM (Release in 2024)

- Support of XR training system that combines high-speed precision tracking technology and virtual reality technology for large-space training, Establishment of a network synchronization-based training environment accommodating up to 28 people in Korea (10 walk-throughs, with additional 18 people connected to PCs such as headquarters/command/sniper)
- Pre-training: Supports PC-based pre-training system that can be linked with virtual training or operated independently.
- Training management: Supports a control system that can manage, control, and command training scenarios and trainees
- Post-evaluation: Supports post-analysis system that enables review and evaluation of saved training data after completion

### Technology for walking through large XR spaces

# HIGH-PRECISION SENSING & COMMUNICATION TECHNOLOGY COMBINATION

Connecting physical and virtual spaces through digital twins





- Developed approximately 70 scenarios based on the Chemical Accident Manual as contents of the XR training center of the Osong Chemical Safety Institute in Chungcheongbuk-do
- If gestures made such as closing the hydrochloric acid valve in the physical environment and purifying the leaked gas with a scrubber set, the action is reproduced by the digital twin in the virtual environment
- Provided a single-person system and multi-user collaborative training system for accident response training
- In both the 2018 and 2019 global OECD forums, SKONEC 'Chemical Accident Training Simulation'
  was cited and introduced



# **S** PATRIOT MISSILE VR TACTICAL TRAINING (2022)

- Developed the world's first VR-based missile movement, loading, and shooting training system
- ► VR education and training system of ⟨Patriot Missile⟩, the Korean Missile Defense System, training up to 10 people at the same time
- ECS Radar Training: Managed Patriot operation and maintenance; ECS internal devices are composed of communication devices and cryptographic devices, communicating with RS and ICC, while operating the entire equipment
- Missile Launching Training: Support of the LS—PAC2, LS—PAC3 launch pad training

Technology for walking through large XR spaces

III. Business Area

# VARIABLE SYSTEM IMPLEMENTATION FOR VARIOUS CONDITIONS

**Public Safety XR Training** 





- In a joint R&D project with the Electronics and Telecommunications Research Institute (ETRI), oxygen cylinders, thermal suits, motion recognition sensors, haptic reactive nozzles, and fire extinguishers were implemented for more effective training
- In addition to firefighting training for firefighters, depending on the training environment, individual training, cooperative training (2 people), commander training (4 people), and large-scale firefighting (10 people) are organized accordingly



## STRENGTHEN POLICE OFFICER'S CAPACITY (2022)

- Support of 8 types of VR training programs based on the police training manual, a training evaluation system that can analyze and check the entire process, and a voice recognition system for easy interaction. Implementation of simultaneous access environment and the simulated placement of a 2-person teams when the police are dispatched in real life
- All equipment necessary for training, such as HMD, touch monitor, and haptic device (taser gun, pistol and baton) are included in one bag, so that field officers can train at their place of work without going to the training center



### Metaverse Art Platform

# LOVE THE ART, FIND NEW FRIENDS, ENJOY OUR METAVERSE WORLD!



### Medical Therapy

# UTILIZING VIRTUAL EXPERIENCES TO ENHANCE PROFICIENCY

XR Exposure Therapy & Overcome Disorders





- A social contribution campaign in which Samsung Electronics recruited social phobic patients from Europe and the Middle East, and exposed them to the same virtual situations to help them overcome their fears through repeated treatments
- Experience climbing a high cliff, boarding a glass elevator, gliding from a helicopter, and walking on the rooftop of a skyscraper, all in VR



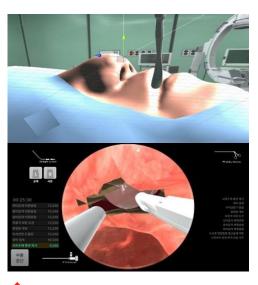


- A social contribution campaign in which Samsung Electronics recruited social phobic patients from Europe and the Middle East, and exposed them to the same virtual situations to help them overcome their fears through repeated treatments
- Virtual scenarios such as meals with superiors, 3-on-1 interviews, and project presentations are provided to reduce and relieve potential stage fright





- Support for the simulation of actual orthopedic artificial hip replacement surgery environment to help students experience the same feeling as in real surgery
- In the simulation, practitioners can make any number of mistakes without endangering the patient contributing to improving proficiency through repeated experience





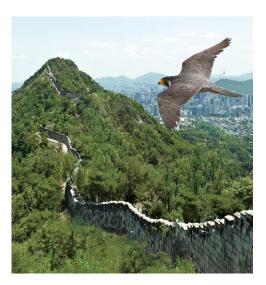
### ENT Surgery (2018)

- The image data obtained through highresolution CT of an actual patient is graphically rendered with a computer to produce a scene that is almost identical to the actual surgical scene
- Contributed to the safety of patients and training of medical staffs by implementing highly realistic virtual surgery practices for complex and dangerous lesions surgeries such as sinusitis, nasal tumors, and cranial base diseases

### Digital Heritage

# USING THE METAVERSE FOR MUSEUM EXHIBITION CONTENTS

Conventional Methods to the Digital World





- The Fortress Wall of Seoul, or Hanyangdoseong, is a national defensive structure built as a wall using the natural resources surrounding Hanyang, the former capital of Korea. Presently, it has lost its original function due to demolition and damage
- A VR program that enables users to reexperience the old Fortress Wall of Seoul has been created through a multilateral Public-Private Partnership involving national and local governments, as well as corporations.





- Participated in the digital restoration project of 'Donuimun (Seodaemun)' that disappeared in the late Joseon Dynasty in 1915
- Presented a new alternative to handing down digital heritage by reproducing realistic restoration challenges, such as traffic or compensation issues at the place where Donuimun was located through advanced video technology





- Production and construction of immersive contents based on our cultural heritage in the Realistic Image Hall at the National Museum of Korea; the most prominent museum in Korea
- Implemented 8K ultra-resolution VR of interactive content based on the theme of cultural assets, such as Gameunsa Temple's reliquary and Goryeo celadon in the museum's collection



VI. Appendix



### VR GUNGISI RELICS (2023)

- Established together with the founding of the Joseon Dynasty and responsible for the manufacturing of weapons and other military supplies, the government office of the Joseon Dynasty, 'Gungisi', was digitally restored 100 years after its demolition, now with cultural tourism convergence experience content implemented
- Utilizing VR devices, one can see Gungisi in its entirety, and virtual experience contents for traditional weapons, including the world's first rocket 'Shingijeon', has been implemented

### XR Convergence

# CONVERGENCE OF CONTENT & PHYSICAL SPACE THROUGH TECHNOLOGY

XR Technology for Activating Cultural Business





- Virtual tour VR attraction placed inside Kakadu Cafe in Seoul Botanic Garden
- Fantasy VR adventure where you take a hot air balloon to the unfamiliar primeval forest of Kakadu at dawn
- Provides a fantasy experience by implementing a living Kakadu mural, a spirit character reflecting the characteristics of the forest, as well as a glowing night forest





- Suncheon City has remodeled a building that has been used as a granary for more than 50 years since 1961 into a youth start-up base camp. Once a granary, is a place where young cultures are shared as the youth come together, share food, and enjoy good times.
- Right next to the warehouse is the VR SQUARE®, adding more youth to the place.





- The main experience facility of 'Tongritantan Park', a theme park that utilizes the legacy of an abandoned mine in the Tongri area of Taebaek City, (Gun Slayers) is a shooting game within a game setting that requires saving Taebaek from danger
- Applying SKONEC's FPS game technology, simulated guns owned by players are linked with multi-sided images without delay, enabling a highly engaging virtual experience





### **XR Testbed**

- Contribute to the immersive content by creating a 'XR Testbed' with content production infrastructure such as Live motion capture, Chroma-key, AR/VR Devices etc.
- Supporting move-in and infrastructure for creators and start-ups in the Metaverse Content Field

### Entertainment

# IMPROVING VIRTUAL PRESENCE WITH A MOTION SIMULATOR

VR LBE Attraction Line-Up



## FLY SHOOTING VR VR FUTURE RIDE

Launch a mission to remove the archenemy's giant battleship by moving snow mountains and cities while wiping out the enemy.



ARCADE VR
JUICY PANG PANG

Juicy Pang Pang is a cartoon–style gun shooting game for two players or single play to pop fruits and score high.



# HORROR VR THE ROAD OF FEAR

Experience a woman's perspective waiting for a bus on a deserted rural road when suddenly kidnapped by a tough man driving an old truck, running into zombies and ghosts.



ADVENTURE
VR BUNGEE JUMP

Bungee jumping experience in space with VR equipment and instruments to feel the acceleration of gravity.



# VR RHYTHM GAME BEAT SABER

Play the branded single player VR attraction, Beat Saber Arcade Machine, to slash beats in a well-known VR Rhythm Slash game.



ROOM ESCAPE VR ALTAR OF SUN

VR Escape Room based on the traditional Escape Room layout enhanced by virtual reality technology with the theme of two explorers searching for the "Blood Alter" in ancient Mavan ruins.



RACING VR
OVERTAKE VR

Experience the most immersive VR racing with tire burning street races where you can feel the drift and all the action.



ROLLER COASTER NO-LIMITS 2

Ride existing rollercoasters or build your own with the ultimate roller coaster simulation game, No Limits, focused on realism and speed..



EXCITING VR
MAGIC CARPET RIDE

Fairy tale-themed roller coaster rides with three contents to choose from: Sinbad, Pinocchio, and Peter Pan.



VR 4DRIDE
WALL OF CHINA

Rocket-powered rickshaw ride on top of one of China's famous wonders with an immersive 360° cinematic VR experience in real stereoscopic 3D.

II. References IV. Works V. Vision I. About III. Business Area MISSION NO.1 GLOBAL-LEADING METAVERSE XR CONTENTS COMPANY. VISION **CONNECTING THE REAL TO META-WORLD** DEVELOPMENT TECCHNOLOGIES FOR THE METAVERSE XR CONTENTS **SKILLS** VR 3D **MOTION DIGITAL BLOCK** H/W CONTROL **HUMAN FACTOR TRACKING TWIN CHAIN INTERLOCKS TASKS** Tech, for Metaverse XR Game Tech. for XR Education & Training Tech, for Futuristic Metaverse **TACTICAL CONSUMER** WALKING DISASTER **MEDICAL** DIGITAL VR GAME **ATTRACTION TRAINING SAFETY THERAPY** HERITAGE **CORE VALUES** Sincerity Enjoyment Change Initiative Knowledge Openness Newness Pursuit of constant Positive impact Optimal working Valuing diversity Preparation for and Development of through sincere methods based on among team adaptation to the innovative and fresh change and services for continuous selfmembers as a future, aiming for innovation to lead content for endless development.. driving force for the new horizons the global market customers and user enjoyment. beyond business and drive progress. society. company. boundaries.

VI. Appendix

Global VR Gaming Contents Compound Annual Growth Rate (CAGR) 30.5% Expansion of VR Game Investment by Major Game Company Expected High-Speed Growth due to Growing Consumer Demand in the High-Tech Entertainment

Transition to 31.5% Rapid Growth Compared to the Previous Year from 2023

Expected Continuing Growth by More than 30% per Annum in the Future

Due to launch of SONY and APPLE, With Leading Company META, ByteDance

### META QUEST STORE APP. SALES STATUS

NUMBER OF GAME APP. LAUNCHED IN META QUEST STORE

400 **1** 



NUMBER OF APPS ACHIEVED REVENUE OVER \$5 MILLION

55 🦅

NUMBER OF APPS ACHIEVED REVENUE OVER \$10 MILLION

33



### FEATURED VR HEADSETS COMING IN 2023



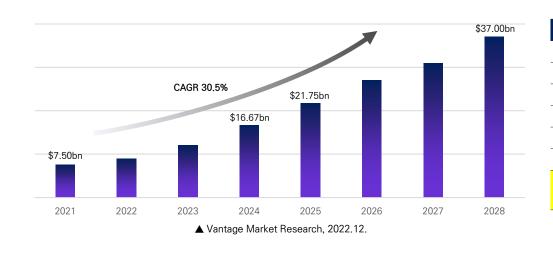




APPLE REALITY PRO

APPLE REALITY PRO (Expectation)

### GLOBAL VR GAMING CONTENTS MARKET (2023 ~ 2027)

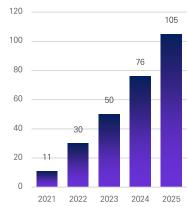


### VR HMD DEVICE MARKET SHARE / XR HEADSET SUPPLY PROSPECTS

UNIT: 1,000 (EA)

**PARTS** META 16,990 7,000 8,000 10,000 12,000 7,000 3,000 5,000 SONY 1,000 1,200 1,500 2,000 HTC 650 1,500 3,000 5,000 BYTEDANCE 2,000 4,000 6,000 APPLE 1,000 3,000 5,000 SAMSUNG 8,650 26,500 37,000 16,700 TOTAL 25,640 42,340 105,840 16,990 68,840

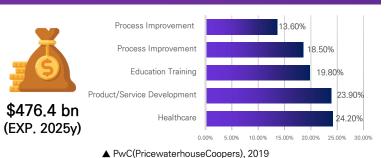




▲ Counterpoint Research, 2021

Expected GDP Scale Created by XR Industries: \$476.4 bn (2025)
Easy Links to Various Interaction Data and Physical Devices with
Application of Distributed Processing Technology by Advance of 5G Tech,
Rapid Growth of XR Realistic Content Production Environment

### SCALE OF GLOBAL XR-RELATED INDUSTRIES



### SCALE OF GLOBAL XR MARKET ('21 to '30, USD BILLION)



Expansion of Demand for XR Education and
Training Due to Core Tech of 4th Industry,
For Workers who have limitations in repetitive training or work in unsafe places,
Expected to Provide Solutions to Educate in the Virtual World

### XR-BASED EDUCATION AND TRAINING APPLIED INDUSTRIES



- Introduction of military XR TECH became a global trend due to advantages of reduced cost and risk
- Increased Demands for XR education and training: Where training costs are High for expensive equipment e.g. submarines and fighter jets



- Buildings became Larger, Higher-rise, Underground, and Denser
- Constant training is required due to fire accident
- (3 firefighters killed in 2022 warehouse fire in Pyeongtaek)



- Difficulty in effective training and agent due to difficulties in experiencing chemical accidents and chemical terrorism
- Requiring regular training on response management system (Explosion at Yeocheon NCC chemical plant in 2022 caused 8 casualties)



- Expected Growth in Worldwide Aviation MRO Market, From \$77.4 bn (2018) To \$114.7 bn (2028)
- Demand for education and training through virtual space due to high cost of maintenance and space constraints



- Expected Growth of Global CNC market: From \$83.56 bn (2018) To \$128.86 bn (2026)
- Increased demands for application due to frequent injuries by accident (classified as top 10 fatal accidents)



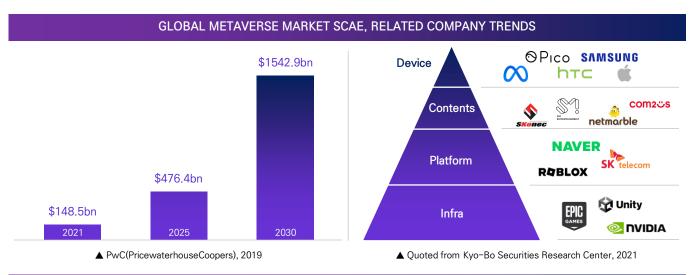
- Expected growth of global welding market: From \$200 bn (2016) To \$306.3 bn (2021)
- Increased Demands for education: Risks factors in welding situations are diverse and induced by process changes (smart factories)

▲ Analysis of use in education and training using virtual and augmented reality (XR) National IT Industry Promotion Agency (NIPA), 2020. 12.

# METAVERSE is mainly based on content market, it is expected that the industry will be expanded by combining various industries such as media technology and XR in the future

The Asia-Pacific market has the highest growth potential by global region.

The Asia-Pacific and North American markets are expected to account for a large portion in 2025.



# McKinsey & Company Value creation in the metaverse Separating 'hype' from reality November 2022

▲ McKinsey & Company, 2022

### **VALUE CREATION IN THE METAVERSE**

McKinsey & Company released a report (VALUE CREATION IN THE METAVERSE) stating that the metaverse field is becoming a huge market. The metaverse market has the potential to grow up to \$5 trillion by 2030, E-commerce (\$2.6 trillion) overtakes virtual learning (\$270 billion), advertising (\$206 billion), and gaming (\$125 billion) to be the largest sector constituting the global economy.

\$120bn+

METAVERSE INDUSTRY OVER \$120 BILLION INVESTMENT INFLOW BY 2022 95%

METAVERSE EXPECTED TO AFFECT POSITIVELY FOR THE RELATED INDUSTRY WITHIN 5 TO 10 YEARS 31%

METAVERSE EXPECTED TO FUNDAMENTALLY CHANGE WAYS OF OPERATION IN RELATED INDUSTRY **>15%** 

WITHIN THE NEXT 5 YEARS, 15% OF COMPANY REVENUE ON THE METAVERSE PLATFORM EXPECTED TO BE CREATED

### Production Results (1/6)

### CONSOLE

SEQ.	YEAR	NAME OF TITLE	PLATFORM	ETC
1	2002	PSYVARIAR For PS2	SONY Playstation2	Shooting Game
2	2004	PSYVARIAR-2 For Dreamcast	Dreamcast	FULL 3D Shooting Game (Dreamcast)
3	2004	PSYVARIAR-2 For PS2	SONY Playstation2	FULL 3D Shooting Game (PS2)
4	2004	PSYVARIAR-2 For X-BOX	X-BOX	FULL 3D Shooting Game (X-BOX)
5	2005	HOMURA Launched For PS2	SONY Playstation2	Released in Europe, Japan, Korea
6	2006	NDS Portable Game 'Fairy Table Puzzle' Released	Nintendo NDS	
7	2006	NDS 'Dino King Battle' Launched	Nintendo NDS	
8	2007	NDS 'Sudoku 10000' Launched	Nintendo NDS	
9	2007	DS Soft "Touch RO Puzzle" Launched	Nintendo NDS	
10	2007	DS Soft Touch 'Picto Image DS' Launched	Nintendo NDS	Released in Europe, North America, Japan, Korea
11	2007	NDS 'World Board Game' Developed	Nintendo NDS	
12	2008	NDS 'Horror Puzzle high school girl run away' Developed	Nintendo NDS	
13	2008	NDS 'Tornado' Developed	Nintendo NDS	
14	2008	NDS 'Kekikarananpre 2500' Developed	Nintendo NDS	
15	2008	NDS 'DS Vitamin Great Mead' Developed (Japan NINTENDO head office 2nd)	Nintendo NDS	
16	2008	NDS 'Daily 10 minutes Overcoming Drawbacks +200 TOEIC DS' Launched (NOK Distribution agreement)	Nintendo NDS	
17	2009	NDS 'Magic Thousand Character Classic DS' Developed (Japan NINTENDO head office 2nd)	Nintendo NDS	
18	2009	NDS 'Winter Sonata DS' Released in Japan	Nintendo NDS	
19	2010	DSi Wear "Nationwide Concept Mounting Project Nunjibaekdan DS" Developed	Nintendo NDS	
20	2010	DSi Wear "New Ace Touch Korean-English/English-Korean Dictionary" Released	Nintendo NDS	
21	2011	NDS 'Magic Thousand Character Classic DS 2' Developed (Japan NINTENDO head office 2nd)	Nintendo NDS	
22	2013	Wii 'K-Pop Dance Festival' Released (First Korean Game Software for Wii)	Nintendo Wii	
23	2014	OSAWARO Detective OZAWARINA NAMECO Rhythm 3DS Developed	Nintendo 3DS	

### Production Results (2/6)

### Mobile APP.

SEQ.	YEAR	NAME OF TITLE	PLATFORM	ETC
1	2002	Japan For J-PHONE, Mobile Game 'Chiki-Chiki Chikin' Developed	Mobile APP,	Japan For J-Phone
2	2002	Japan For J-PHONE, Mobile Game 'Hoookey' Developed and Commercial Service Launched	Mobile APP,	Japan For J-Phone
3	2002	Development of mobile game 'Chiki-Chiki Chikin' for Japan KDDI	Mobile APP,	Japan For KDDI
4	2003	Completed development of 6 titles of overseas mobile games (3 for Motorola, 2 for J-Phone, and 1 for KDDI)	Mobile APP,	
5	2003	Development of J-Phone mobile game 'Power Ball', a sports baseball game	Mobile APP,	Japan For KDD
6	2003	Commercialization service of SKT mobile game 'Power Ping Pong' launched	Mobile APP,	Korea For SKT
7	2004	Development of mobile game 'Power Cannon', a shooting game	Mobile APP,	Korea For SKT, KTF
8	2004	Development of mobile game 'Legend of Othello', a puzzle game	Mobile APP,	Korea For SKT, KTF
9	2004	Development of mobile game 'Air Hockey', a sports game	Mobile APP,	Korea For SKT
10	2004	Development of KTF mobile games 'Power Hockey', 'Power Ping Pong', 'Save the Chick',	Mobile APP,	Korea For KTF
11	2004	Commercialization service of KTF mobile game 'Power Cannon' launched	Mobile APP,	Korea For KTF
12	2004	Completion of mobile content development "MBC Brain Survivor" linked with terrestrial broadcasting (SKT, KTF, LGT)	Mobile APP,	Live Broadcasting Audience Participated App
13	2004	Development of mobile game 'Table Tennis Master', a sports game	Mobile APP,	For LGT
14	2005	SKT commercialization service of MBC drama 'Era of Heroes'	Mobile APP,	Korea For SKT
15	2005	Development of mobile game 'Wind Soccer', a sports game	Mobile APP,	Korea For LGT
16	2005	Development of mobile game 'Rolling Twist', a puzzle game	Mobile APP,	For LGT, SKT
17	2005	Mobile game 'Human Cannon' shooting game development	Mobile APP,	For LGT
18	2005	Mole Revolution	Mobile APP,	Korea For SKT
19	2005	Japan KDDDI mobile game publishing 32 titles	Mobile APP,	KDDI Publishing
20	2006	Mobile game 'Stage League Match' development completed	Mobile APP,	For SKT, KTF
21	2009	iNavi's 'TOEIC Game Pack for 10 Minutes a Day in the Car' released in Korea	Mobile APP,	
22	2009	KT SoIP Style Phone 'Diet Cooking Method Contents' Service Development	Mobile APP,	
23	2012	Smartphone 'Touch Pop' Rhythm Action Game Service	Mobile APP,	
24	2014	Smartphone 'Boggle Boggle FOR KAKAO' Puzzle Game Released	Mobile APP,	
25	2015	Smartphone 'Puzzle Bubble' Service	Mobile APP,	
26	2015	Smartphone game 'Chuchu Heroes' RPG game development service	Mobile APP,	
27	2016	CJ E&M VR Launcher App Development	Mobile APP,	
28	2016	Smartphone game 'Legend of Heroes' Idle game development service	Mobile APP,	

### Production Results (3/6)

### ARCADE

SEQ.	YEAR	NAME OF TITLE	PLATFORM	ETC
1	2003	Development of arcade game "Psyvariar 2"	Arcade	FULL 3D Shooting Game for Naomi Board
2	2005	Release of arcade game "Homura"	Arcade	
3	2006	Development and release of arcade game "Shikigami no Shiro III"	Arcade	
4	2006	Completion of development of AWP game "Rika-chan no Challenge! Kabutomushi Panic"	Arcade	
5	2006	Completion of development of AWP game "Galaxy Battle"	Arcade	
6	2011	Release of arcade game "Operation Ghost" in North America and Europe by SEGA	Arcade	Released in Japan, North America, Europe, Southeast Asia, China
7	2013	Development of arcade gun shooting game "Teratoma"	Arcade	Released in China, North America, Europe, Southeast Asia (July 2014)

### PC ONLINE

SEQ.	YEAR	NAME OF TITLE	PLATFORM	ETC
1	2011	Online game 'Gunwoong Online' OBT service, official service in November 2011	PC Online	FULL 3D Shooting Game for Naomi Board
2	2014	Online game 'Daemyung Online' OBT service	PC Online	

### EDITOR/ENGINE

SEQ.	YEAR	NAME OF TITLE	PLATFORM	ETC
1	2003	3D WORLD MAP EDITOR V1.0	Editor/Engine	Map Background Creating Editor
2	2003	SMPL (Skonec Multi Platform Lobrary)	Editor/Engine	
3	2003	SMPL (Skonec Multi Platform Lobrary) DreamCast Field	Editor/Engine	
4	2004	Multi-platform library SMPL development completed for PS2 division.	Editor/Engine	
5	2007	SMPL development for Nintendo DS division (SkoCell)	Editor/Engine	SMPL
6	2008	Development of origami engine for Nintendo DS	Editor/Engine	
7	2012	Development of user interface animation tool	Editor/Engine	UI Animation Tool
8	2014	Development of emulator system for integration with 7 types of sensory content devices.	Editor/Engine	Integrated emulator system for 7 types of haptic devices.
9	2014	Development of head tracking bar for head-mounted display (VR integration).	Editor/Engine	Mortal Blitz VR integration system

### Production Results (4/6)

### VR/XR (1/3)

SEQ.	YEAR	NAME OF TITLE	PLATFORM	ETC
1	2015	Mortal Blitz VR	VR/XR	Shooting Game for Gear VR
2	2015	Development of CocaCola-Fanta VR	VR/XR	
3	2015	IDOL Universe VR	VR/XR	Interaction VR Contents
4	2015	Medical VR Befearless Season 1 therapy content for acrophobia (fear of heights)	VR/XR	SAMSUNG Gear VR
5	2015	Development of Samsung Galaxy S6 VR promotional content by Cheil Worldwide	VR/XR	
6	2015	Development of Samsung C&T Construction VR BIM content	VR/XR	
7	2015	Development of LG Electronics HE smartphone R1 VR launcher system	VR/XR	
8	2016	Development of Samsung C&T "Everland Horror Maze VR" content	VR/XR	
9	2016	Development of Samsung Electronics' VR commerce platform and VR shopping mall app.	VR/XR	
10	2016	Medical VR Befearless Season 2 therapy content for arachnophobia (fear of spiders)	VR/XR	SAMSUNG Gear VR
11	2016	Mortal Blitz PSVR	VR/XR	Sony PSVR
12	2016	Mortal Blitz for Walking Attraction	VR/XR	Walking attraction
13	2017	VR Future Ride Mortal Blitz	VR/XR	For Simulator
14	2017	Road of Fear	VR/XR	For Simulator
15	2018	Medical VR artificial joint replacement surgery training program	VR/XR	Connected with surgical equipment
16	2018	Medical VR endoscopic surgery training program in collaboration with otorhinolaryngology and neurosurgery.	VR/XR	Connected with surgical equipment
17	2018	THE DOOR PSVR	VR/XR	Sony PSVR
18	2018	Chemical spill safety virtual reality training program - hydrochloric acid spill	VR/XR	Walking attraction
19	2018	Chemical spill safety virtual reality training program - hydrofluoric acid spill	VR/XR	Walking attraction
20	2018	Beat Saver Arcade	VR/XR	Arcade
21	2018	Hammer Pangpang	VR/XR	Arcade
22	2018	Battle Arena In Mortal Blitz	VR/XR	Walking attraction
23	2018	Operation Blackwolf: Battle of the Desert	VR/XR	Walking attraction
24	2018	THE DOOR EP1: Prison	VR/XR	VR Escape Room
25	2019	Along with the Gods	VR/XR	VR Escape Room
26	2019	Altar of Sun	VR/XR	VR Escape Room
27	2019	Jacob's Prison	VR/XR	VR Escape Room

### Production Results (5/6)

### VR/XR (2/3)

SEQ.	YEAR	NAME OF TITLE	PLATFORM	ETC
28	2019	Virtual reality simulation training for chemical spill safety accidents: Chlorine accident	VR/XR	Walking attraction
29	2019	VR PARTY ROOM	VR/XR	VR Game Launcher System
30	2019	Doll's Room	VR/XR	VR Escape Room
31	2019	Digital Restoration Project of Money Gate using AR and VR technologies	VR/XR	
32	2019	Pharaoh's Curse	VR/XR	VR Escape Room
33	2019	Seoul Botanic Park Kakadu VR Travel	VR/XR	Seoul Botanic Garden
34	2020	Culture and tourism experience VR of Suncheonman National Garden: Addeulun	VR/XR	Simulator linked video content
35	2020	Culture and tourism experience VR of Suncheonman National Garden: Heukduri	VR/XR	Video content
36	2020	Secret Lab: Hallucination	VR/XR	VR Escape Room
37	2020	The Terror: Special Investigative Team CSI	VR/XR	VR Escape Room
38	2020	Galaxy Braves	VR/XR	
39	2020	Mortal Blitz: Combat Arena	VR/XR	SONY PSVR
40	2020	Gods of Olympus	VR/XR	VR Escape Room
41	2021	Virtual reality simulation training for chemical spill safety accidents: Chemical terrorism	VR/XR	Walking attraction
42	2021	Virtual training program for on-site police officers: Emergency response for mentally ill patients	VR/XR	Mobile Device Attached VR
43	2021	Virtual training program for on-site police officers: Response to bar knife violence	VR/XR	Mobile Device Attached VR
44	2021	Virtual training program for on-site police officers: Protection measures for elderly people with dementia	VR/XR	Mobile Device Attached VR
45	2021	Virtual training program for on-site police officers: Response to group violence	VR/XR	Mobile Device Attached VR
46	2021	VR education and training system for (PATRIOT) air defense missile system	VR/XR	
47	2022	Virtual reality simulation training for chemical spill safety accidents: Children's evacuation experience	VR/XR	Walking attraction
48	2022	Virtual Reality Simulation Training for Chemical Spills Safety Accidents, VR Ammonia Accident	VR/XR	Walking attraction
49	2022	Firefighting VR Simulator for One Person, Realistic Experience	VR/XR	
50	2022	Firefighting VR Simulator for Multiple People, Realistic Experience	VR/XR	
51	2022	Virtual Training Program for Police Officers on Domestic Violence Response	VR/XR	Mobile Device Attached VR
52	2022	Virtual Training Program for Police Officers on Realistic Response to Dating Violence	VR/XR	Mobile Device Attached VR
53	2022	Virtual Training Program for Police Officers on Realistic Response to Stalking Incidents	VR/XR	Mobile Device Attached VR

### Production Results (6/6)

### VR/XR (3/3)

SEQ.	YEAR	NAME OF TITLE	PLATFORM	ETC
55	2023	Improvement of performance in the mock training system of the Navy Special Warfare Unit	VR/XR	
56	2023	Immersive multi-collaborative military training simulation	VR/XR	
57	2023	Virtual reality mock training for chemical spill safety accidents	VR/XR	
58	2023	Digital restoration "Gun-gi-si" Project	VR/XR	Umi Hope Foundation

### Facility/hardware construction (시설/하드웨어구축)

SEQ.	YEAR	NAME OF TITLE	PLATFORM	ETC
1	2021	Production and installation of eco-friendly VR simulator experience zone for kids	Facility/hardware construction	
2	2021	Construction of experience zone integrating animation museum (Toy Robot Exhibition Hall) and sense technology	Facility/hardware construction	GICA
3	2020	Creation of night landscape in Hampyeong Expo Park through VR experience	Facility/hardware construction	
4	2020	Development of interactive media for Taebaek slow restaurant	Facility/hardware construction	
5	2020	Introduction of AR/VR training equipment for chemical accident prevention and response	Facility/hardware construction	National Institute of Chemical Safety
6	2020	Establishment of VR/AR production center in Chungnam	Facility/hardware construction	CTIA
7	2020	Establishment of VR/AR production center in Gyeonggi	Facility/hardware construction	GCON
8	2020	Establishment of VR/AR production center in Gangwon	Facility/hardware construction	GICA
9	2020	Establishment of VR/AR production center in Incheon	Facility/hardware construction	ITP
10	2019	Development and construction of VR experience zone for youth center	Facility/hardware construction	
11	2019	Development and construction of AR/VR content and experience zone for Seoul Botanic Park	Facility/hardware construction	SH
12	2019	Supply of realistic VR simulators for rest areas in Goseong-gun	Facility/hardware construction	
13	2019	Supply of realistic VR simulators for rest areas in Inje-gun	Facility/hardware construction	
14	2018	Establishment of testbed space for global hub center tenant companies	Facility/hardware construction	KOCCA
15	2018	Establishment of VR Square SKONEC in Uijeongbu	Facility/hardware construction	
16	2018	Establishment of VR Square SKONEC in Ilsan	Facility/hardware construction	
17	2018	Establishment of VR Square SKONEC in Hongin Univ.	Facility/hardware construction	

### PR Film

VR GAME			VR LBE ATTRACTION	
► MORTAL BLITZ	https://bit.ly/3L3yegx	٠	Escape room VR	https://youtu.be/pu6hXnxTwms
► MORTAL BLITZ COMBAT ARENA for PSVR	https://bit.ly/39el8yT	٠	MORTAL BLITZ Walking Attraction	https://youtu.be/3hqAlbF3lbI
MORTAL BLITZ COMBAT ARENA trailer	https://bit.ly/3whEonY	٠	Operation Black Wolf: Battle of the Desert	https://www.youtube.com/watch?v=liTLy6ON8TI
UNTACT CONTENTS		٠	MORTAL BLITZ Battle Arena	https://www.youtube.com/watch?v=8ggv3IESNng
<ul> <li>Virtual Influencer Choi</li> </ul>	https://bit.ly/3FL1p75	٠	Beat Saber Arcade	https://youtu.be/L93zknLtnYw
<ul> <li>Online Press Conference</li> </ul>	https://bit.ly/3stFhsk	٠	Hammer Pang Pang	https://studio.youtube.com/video/jRBwE3belwU/edit/basic
VR E-SPORTS		٠	Magic Carpet Ride	https://www.youtube.com/watch?v=3lclCBZi8oY
<ul> <li>Ongame-net Game Olympics</li> </ul>	https://bit.ly/32GliL9	٠	Horror Road	https://bit.ly/20N5AFH
► GDF2018	https://bit.ly/3fQfuT2	٠	MORTAL BLITZ Future Ride	https://www.youtube.com/watch?v=qr1HGhHA9u0
CONVERGENCE PJTS.		٠	Overtake	https://bit.ly/2CqXUGT
<ul> <li>Restoration of Donuimun Gate</li> </ul>	https://www.youtube.com/watch?v=F2DqskrGDhQ&t=366s	٠	VR party room	https://bit.ly/3hldxyj
National Institute of Chemical Safety	https://www.youtube.com/watch?v=CURj5mNIXTw	٠	White Day	https://www.youtube.com/watch?v=3mHHaKMufW0
Digital exhibition of Claude Monet	https://www.youtube.com/watch?v=AWAGqFVrnsQ	٠	Great Wall of China	https://bit.ly/2CYLcPy
<ul> <li>Firefighting training</li> </ul>	https://www.youtube.com/watch?v=88zS9KGi1Yk	٠	Roller coaster	https://bit.ly/30Dtk4V
► Seoul Botanic Park	https://www.youtube.com/watch?v=VAPih8z86c4&t=23s	٠	Emotion	https://bit.ly/39hYoe6
► Simulation training for otolaryngology	https://www.youtube.com/watch?v=0qo_t1k7FrU	٠	Bungee Jump	https://bit.ly/32GWRwV
► Galaxy Shootout	https://www.youtube.com/watch?v=MhealbbjidU	٠	Hot-Air Balloon Ride	https://www.youtube.com/watch?v=AvGzNgMEfek
► #BeFearless	https://www.youtube.com/watch?v=jeS6zolzRa0	٠	DIDIM Developmental Disability Content	https://www.youtube.com/watch?v=p8VmzUIOykE
Simulation training for orthopedics	https://www.youtube.com/watch?v=BITn4W2s5hc		VR SQUARE	
National Museum of Korea Immersive Gallery	https://youtu.be/e9iFjftSlX8	•	VR Square (VR LBE Franchise in SEOUL)	https://www.youtube.com/watch?v=H85kEb6CQ6I
► Suncheon Bay National Garden	https://youtu.be/nDV5C8g6_CE	٠	Youth Warehouse	https://youtu.be/zEFM8QeDTfE



SKONEC ENTERTAINMENT is developing new services utilizing core technologies of the 4th Industrial Revolution–5G, VR, and XR to meet the growing demand for new education, broadcasting, and performance services in the un–tact era, bringing people together anytime and anywhere.

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