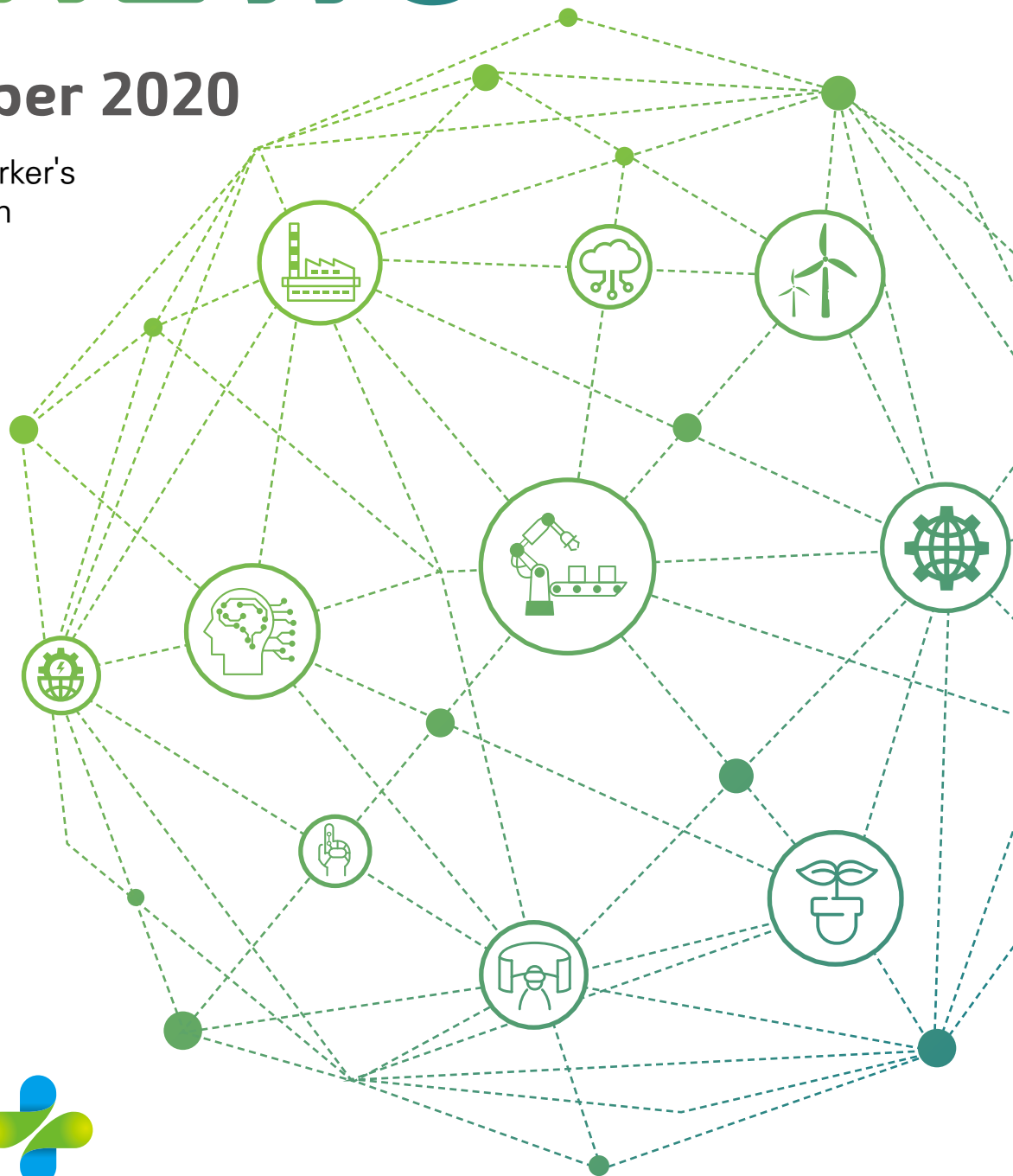


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KOSHA NEWS

December 2020

Protecting Worker's
Life and Health





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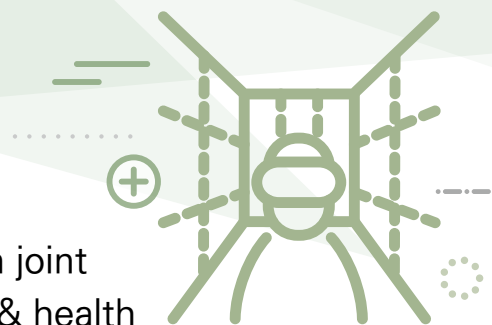
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Merry Christmas and Happy New Year

VR technology to protect future workforce

KOSHA-Eulji University sign business agreement on joint development of VR educational materials for safety & health



The KOSHA (Doo-yong Park, President) and Eulji University (Seong-hee Hong, President) signed the “Business Agreement on Expansion of Safety & Health VR Education” on November 23rd in order to prevent occupational accidents of future industrial workforce.

Cooperative business agreement on expansion of VR education

- Date/Location: November 23rd, 2020 / at Seongnam Campus of Eulji University
- Attended by: Doo-yong Park, President of the KOSHA; Seong-hee Hong, President of Eulji University and other officials

This agreement aims to protect future industrial workforce who will engage in experiment/practical training at colleges prior to employment and work at industrial sites following employment, and both parties are to jointly develop safety & health educational materials using VR technologies.

- ✚ ✚ In particular, this agreement focuses on elevating the educational engagement through indirect experience of risky situations within virtual reality by means of VR technology and by helping them to learn safety working practices.
- ✚ ✚ These two parties plan to not only select the themes for educational materials by accident types frequently occurring at experiment/practice rooms at colleges, such as fire/explosion, gas leakage and electric shock, but also develop educational materials regarding phased safety regulations ranging from accident prevention to countermeasures against reoccurrence.

According to the statistics on occupational accidents, extra efforts are required to protect future industrial workforce before/after employments since new employees with less than six months on the job account for approximately 53% of all victims of accidents for the past three years.

► Information on accident victims based on the length of service for the past three years (2017-2019)

Content	Total	Less than 6 months	6 months – 1 year	1 year – 5 years	5 years – 20 years	20 years or more	Unclassified
No. of Victims (Ratio)	301,395 (100 %)	159,733 (53 %)	30,311 (10.06 %)	64,093 (21.26 %)	33,934 (11.26 %)	13,151 (4.36 %)	173 (0.06 %)

All materials developed will be made public through the safety and health VR Theater (360vr.kosha.or.kr), and they will be freely used by schools and business sites for safety & health training.

✚✚ The KOSHA has developed approximately 550 types of VR educational materials for safety & health until now and unveil them at the VR Theater through constant updates.

“We all need to pay society-wide attention to protect future industrial workforce, future growth engine,” Doo-yong Park, President of the KOSHA stated. “I truly hope high quality VR educational materials developed through the latest business agreement can be widely used making contributions to preventing occupational accidents,” Park added.



Seong-hee Hong, President of Eulji University (left), and Doo-yong Park, President of the KOSHA (right), signed a cooperative business agreement aiming to expand VR education on November 23rd.

Presentation and award ceremony for best practices of health management in construction industry

Lu 1 City SK Leaders VIEW No.1 Site of SK E&C honored with Grand Prize



The KOSHA held the “Presentation and Award Ceremony for Best Practices of Health Management in Construction Industry” at the Northern Seoul Area Office of the KOSHA on November 12th, attended by health managers from five construction sites selected as best practices.

- ✚ ✚ This presentation event in its 6th year since the health manager appointment system in the construction industry was enacted in 2015 has been held in order to identify and expand best practices for health managers enduring hardship while trying to pursue health management activities suitable to the environments faced in construction sites.
- ✚ ✚ This year’s presentation of best practices began recruiting business sites to participate since last October, and five construction sites were named the finalists for the main event after going through the document screening procedure.

Winning the Grand Prize, Lu 1 City SK Leaders VIEW No.1 Site of SK E&C was highly evaluated for implementing improvement activities with three directionalities, including elevation of worker’s awareness, installation and promotion of participation in prevention and development programs for various harmful factors and workers’ health promotion and improvement of working environment, as well as bringing about notable performances.

- ✚ ✚ With the Outstanding Award, the construction site of roadbed at Zone 10 of West Coast by Halla Co., Ltd. was recognized for implementation of “HAHAHOHO*” health activities with the motto of health care service (Health care Assistant), commitment for workers’ health (Health Appointment), happy workplace (Happy Office) and happy life (Happy Our life).

* onomatopoeic words of laughter

- Another winner of Outstanding Award, the phase-2 construction work site of the 1784 Project by Samsung C&T Corporation received good reviews as it performed the “Health Project” for health management focusing on six themes, including health promotion activities (Health), management of enclosed space (Enclosed space), COVID-19 prevention activities (Anti-virus), health management with communication (Listen), time-oriented health management (Time) and hazardous chemicals management (Hazardous chemicals).

- ✚✚ The expressway Anseong–Yongin Zone No.1 site by Hanshin E&C, a winner of Excellence Award, ignited changes within organizational culture by building infrastructure for self-regulatory health promotion activities and expanding the area of health management duties.
- The apartment building construction sites under the Incheon–Daeheon Housing Environmental Improvement Project by Hanjin Heavy Industries Co., Ltd. also won the Excellence Award for its realization of health management tailored to individual characteristics.

Type	Presented by	No. of Businesses	Prize (about)	Presented to
Grand Prize	Award of Minister of Employment and Labor	1	2 thousand USD	SK E&C Lu 1 City SK Leaders VIEW No.1 Site
Outstanding Award	Award of President of the KOSHA	2	1 thousand USD each	Halla Co., Ltd. Construction Site of Roadbed at Zone 10 of West Coast
				Samsung C&T Corporation Phase-2 Construction Work Site of the 1784 Project
Excellence Award	Award of President of the KOSHA	2	500 USD each	Hanshin E&C Expressway Anseong–Yongin Zone No.1 Site
				Hanjin Heavy Industries Co., Ltd. Apartment Construction Site under Incheon–Daeheon Housing Environmental Improvement Project

This presentation and award ceremony was held while all attendees fully complied with the COVID-19 quarantine guidelines by wearing masks and keeping distancing between seats.

“We sincerely hope that this event can contribute to elevating health promotion activities suitable to characteristics of construction business at other construction sites as these best practices further spread around,” Jang-jin Ryu, Director General of the Office of General OSH Programs mentioned. “Furthermore, the KOSHA is dedicated to continue to support in order to prevent occupational disease for workers at constructions sites and build health workplace cultures,” Ryu stressed.



Intensive check to prevent fall accidents at small and medium-sized construction sites

KOSHA, Safety Check at housing construction sites on November 4th



Commemorating the Safety Check Day on November 4th, the KOSHA conducted checks at small and medium-sized business sites where fatal accidents most frequently occur in order to prevent fall accidents in the construction industry.

Seong-weon Choe, Vice President of Education and Culture of the KOSHA, and on-site check team engaged in extensive checks on risk factors for falling by visiting a construction site for new private rental housing located at Guro-gu, Seoul.

Summary of On-site Safety Check

- Date : November 4th, 2020
 - Attended by : Approximately 20 people, including officials from the KOSHA, Head of Seoul Gwanak District Employment and Labor Office, executives of the business site, field manager, labor representatives, Chairperson of Korea Safety Technology Association;
- Constructor & Name of Site : Kolon Global Co., Ltd. / Sindorim construction site for private rental housing (328-4 Sindorim-dong, Guro-gu, Seoul)
- Construction Period & Scale : From September 10th, 2019 to March 18th, 2021 / One unit of building with 3 underground levels and 10 stories above the ground
- Construction Price & Progress Rate : About 10.9 million USD & 49% (currently, the floor works on 8th floor in progress)

✚ ✚ Fatal accidents from falling in the construction industries resulted in 1,369 deaths in the past five years, averaging 270 fatalities every year. The main causes of fatalities are found to be inadequate installation of work plates and absence of safety rails.

- Number of fatalities from fall accidents in Construction Industry for the past five years
(Analysis on occupational accidents by the Ministry of Employment and Labor)

Content	Total	2015	2016	2017	2018	2019
Number of fatalities by falls in construction industry	1,369	257	281	276	290	265

- ++ In particular, the number of fatalities from fall accidents at small and medium-sized construction sites worth less than about 12 million USD reaches 1,098 for the past five years, accounting for 80% of total fatalities from fall accidents.

- Fatalities from fall accidents by scale of construction works for the past years (2015-2019)

Content	Total	Less than 5 million USD	Between 5 and 12 million USD	12 million USD or more	Unclassified
Number of fatalities from fall accidents in construction industry for the past 5 years (ratio)	1,369 (100 %)	1,098 (80 %)		259 (20 %)	12
		990 (72 %)	108		

- ++ On the Check Day, the check team extensively examined the work plates at the construction site, installation of safety rails, covering of openings (holes drilled for the construction) and workers' compliance with wearing personal protective equipments, including safety helmet and safety belt.
- ++ In addition, the team also inspected isolation and removal of inflammable materials and safety level of fire safety equipment and structures in order to prevent fire risks of fire-flakes during welding/fusing works in preparation for the winter season.

Vice President Choe stated, "Prevention of fall accident is the most urgent assignment in order for us to reduce fatal accidents by half."

- ++ "In particular, we all need to work together to prevent fall accidents at small construction sites where business owners should ensure safe environments, such as safety work plates and safety rails, and workers' compliance with safety regulations by wearing personal safety gears," Vice President Choi emphasized.



The on-site check team, together with Vice President of Education and Culture of the KOSHA (the second from the left), emphasized extra efforts for prevention of fall accidents as they performed a safety check at the construction site of Sindorim private rental housing by Kolon Global Co., Ltd. located at Guro-gu, Seoul on November 4th.

Mobile phones, the megatrend for safety & health training

Use of “10-minute Safety Training” increased
by 5 times



With the surging COVID-19 pandemic, the use of safety and health training at industrial sites by means of mobile platform has notably increased.

According to the analysis conducted by the KOSHA on how safety and health training has been taken via mobile platforms this year, the number of times accessing the training has increased over 5 times compared to that of the same period last year.

++ The mobile platform training offered by the KOSHA mobilizes the “10-minute Safety Training” embedded in the “Safety and Health Escaping Risks” App, and it was used for approximately 1.3 million times through September of this year, which showed a sharp rise (↑ 413%) from 260,000 times during the same period of the last year.

Content	2019	2020
Number of times accessing “10-minute Safety Training”	263,151 times	1,349,063 times (↑ 413%)

It is analyzed that the use of “10-minute Safety Training” substantially grew because the demands for small-scale on-site training by each business site were on the rise as the collective training was ceased due to the proliferation of COVID-19.

++ At the same time, as the training via mobile platform is now recognized as statutory training hours pursuant to the amendments made to the regulation on safety and health training* in 2017, the reliance on the mobile platform training has been also elevated.

* Amendments to the Regulation on Occupational Safety and Health Training (Public Notice of the Ministry of Employment and Labor, No. 2017-5 on January 19th, 2017)

++ The advantage of this mobile platform training is in the easy management of the information on trainees and training offerings where trainees are allowed to access various contents without any restrictions of time and locations.

- ✚✚ The “10-minute Safety Training” is composed of a total of 4,279 types of contents, including occupational accident cases, risk factors and preventive measures by business types and occupation types/works. When the program of completion verification provided at the official website of the KOSHA is accessed following the implementation of the training, it is possible to easily manage the details of training courses offered and completed by workers.

* Official website of the KOSHA (www.kosha.or.kr) ▶ Safety & Health Archive ▶ Search Programs of Completion Verified ▶ Download and Installation

▶ Detailed Information on Safety & Health Training through APP



“10-minute Safety Training” can be used after downloading the “Safety and Health Escaping Risks” App from the smart phone app market.

The KOSHA plans to further elevate the effectiveness of the training by additionally developing 600 types of tangible VR contents next year.

“Demands for mobile platform training are exponentially increasing due to COVID-19,” said Gwang-jae Koh, Director General of Education & Public Relations Office of the KOSHA. “We are determined to continue to improve the system in order to elevate the effectiveness of the safety & health training based on time and location by further diversifying the contents for prevention of accidents,” Koh added.

260 cases of information on harmful chemicals disclosed

OSHRI offers easy-to-understand findings from inhalation & genotoxicity tests



Findings from the tests on chemicals affecting human bodies through a respiratory system, i.e. toxic substances from humidifier disinfectant, are now made available in a format of easy-to-understand information.

The Occupational Safety and Health Research Institute (OSHRI; Jae-cheol Koh, Director General) of the KOSHA has summarized and made 260 cases of findings public from inhalation toxicity tests and genotoxicity tests.

✚✚ The inhalation toxicity test is designed to verify the toxicity arising from the exposure of a respiratory system to chemicals mostly used at the industrial sites, and the genotoxicity test is to check the process where chemicals damage DNA (deoxyribonucleic acid) or chromosome to incur the morphological changes or functional anomaly.

The test findings to be disclosed are the outcome developed by the OSHRI, which has conducted the tests for 30 years since 1992 and have only been available through research reports, journals or the Material Safety Data Sheets (MSDS)*.

* MSDS (Material Safety Data Sheets): It contains the information required to safely use and manage chemicals, including the name of manufacturers, name of products, ingredients and properties, precautions for use, applicable statutes and emergency measures upon accidents.

✚✚ The OSHRI ensured the findings from toxicity tests for anyone to easily understand by summarizing and disclosing the essential information, such as “test substances and basic information,” “test methods,” “outcome” and “conclusions,” in a single page based on the numerous toxicity tests in the past.

The disclosing test findings also offer the information on health hazards caused by inhalation exposure against PHMG·HCl (hydrochloride of Polyhexamethylene guanidine), Benzalkonium chloride and DDAC (Didecyldimethylammonium chloride), in other words, toxic substances from humidifier disinfectants.

The latest disclosing data consists of 104 cases of findings from inhalation toxicity tests and 156 cases of findings from genotoxicity tests, which are made available through the official website of OSHRI (<http://www.kosha.or.kr/oshri>).

Director General Koh of OSHRI stated, “We highly expect that this information can make substantial contributions as chemicals-related research institutions and business entities would be able to utilize the information as the basic data for their research as we have summarized and now share the chemicals toxicity information in a highly easy-to-understand manner.” Koh added, “We plan to continue to update the results from upcoming inhalation toxicity tests and genotoxicity tests.”



What changes are coming to working environment at industrial sites?

OSHRI runs the 6th Working Environment Survey until March, 2021



The Occupational Safety and Health Research Institute conducts the “6th Working Environment Survey” in order to establish occupational accident prevention policies and collect basic research data.

✚ ✚ This survey represents the State-certified statistics by Statistics Korea, which was first conducted in 2006 and has been held every three years since the 3rd survey in 2011.

The survey targets employed workers aged over 15 from 50,000 household across the country and focuses on a total of over 130 items, including △ workers' health, △ job satisfaction, △ balance between work and life, △ working hours, △ communication with organizations, △ violence/discrimination and △ exposure to risks within workplaces.

The survey is built with three types of investigations and surveys, such as △ face-to-face interviews, △ survey through internet and △ self-administered questionnaire.

✚ ✚ The face-to-face interview is conducted for about 40 minute as professional investigators pay a visit to the worksites to perform interviews.

✚ ✚ When this face-to-face interview is not feasible, interviewees may log onto an internet address given at the site to fill out the survey or utilize a self-administered method where the printed questionnaires will be given away, filled out by interviewees and collected by the investigators.

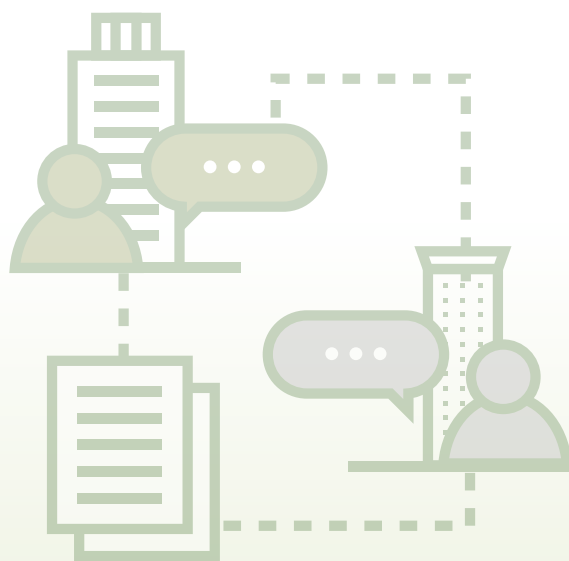
Special surveyors will get a separate training in order to comply with individual health protocols, including frequent use of a hand sanitizer and always keeping their masks on, and ensure thorough health management by frequently disinfecting the investigation equipment.

The 6th Working Environment Survey will be separately conducted on a total of 50,000 people by cities and provinces based on the Population and Housing Census from October 2020 to March 2021.

The findings from the survey will be used as basic data for establishment of occupational safety and health policies and related research depending on the lifestyle and working environments, which have undergone changes since COVID-19.

✚ ✚ The findings can be also useful for comparison of working environments by country, since the survey employs identical questionnaires with the working environment survey performed by the Eurofound under the European Union.

“It is difficult to conduct a door-to-door survey due to COVID-19; however, we will engage in rigorous management of quarantine for professional investigators in order to ensure effective implementation of the working environment survey” Jae-cheol Koh, the Director General of OSHRI said. “I would sincerely like to ask all interviewees to fully cooperate with the survey since personal information of all interviewees will be strictly managed and protected in accordance with the Statistics Act,” Koh added.



Algorithm to prevent fatal accidents of delivery two-wheelers

KOSHA's first development of accident prevention system dedicated to delivery platform



〈Accident cases〉

- #1. (August 2019)** A motorcycle delivering fried chicken in Gwangju suffered an accident colliding with an automobile that was backing up, while taking a u-turn at an unprotected area by failing to spot the automobile at night.
- #2. (August 2020)** A motorcycle delivering beverage in Gunpo slipped on a rainy road when trying to make a sudden stop to avoid crashing into a speeding automobile. The driver had his arms and legs trapped under the motorcycle.

The KOSHA developed "Accident Prevention System for Two-Wheeler Delivery Platform," an information-sharing platform (Open-API*) for wide distribution in order to prevent accidents during deliveries made by two-wheelers.

* Open-API: A program for development released for free for the purpose of developing free application programs

Being installed within a delivery application (APP), this system provides an audio warning message when a delivery worker approaches accident-prone areas or on rainy days.

- ✚ ✚ The KOSHA allowed this system to produce a voice message of warning for 1,851 sites by collecting nation-wide information concerning the areas where delivery accidents frequently occur.
- Moreover, upon initial operation of this delivery application, it provides 120 different types of accident-prevention videos*, including the traffic laws that delivery workers ought to know as well as compliance with guidelines for drivers, for 15 seconds.

* Accident-Prevention videos (120 types): 43 for safe driving, 24 for weather response, 20 for legal guidance, 17 for accident cases, 8 for inspection of two-wheelers and 8 for others.

For anyone intending to use this system, delivery workers will be provided of services for free without having to install separate programs when platform operators request an API authentication key at the homepage of the KOSHA (<http://service.kosha.or.kr/rider>)* and apply the key to the App.

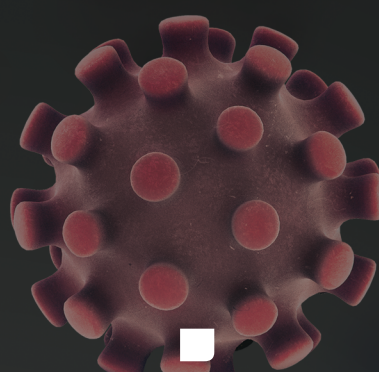
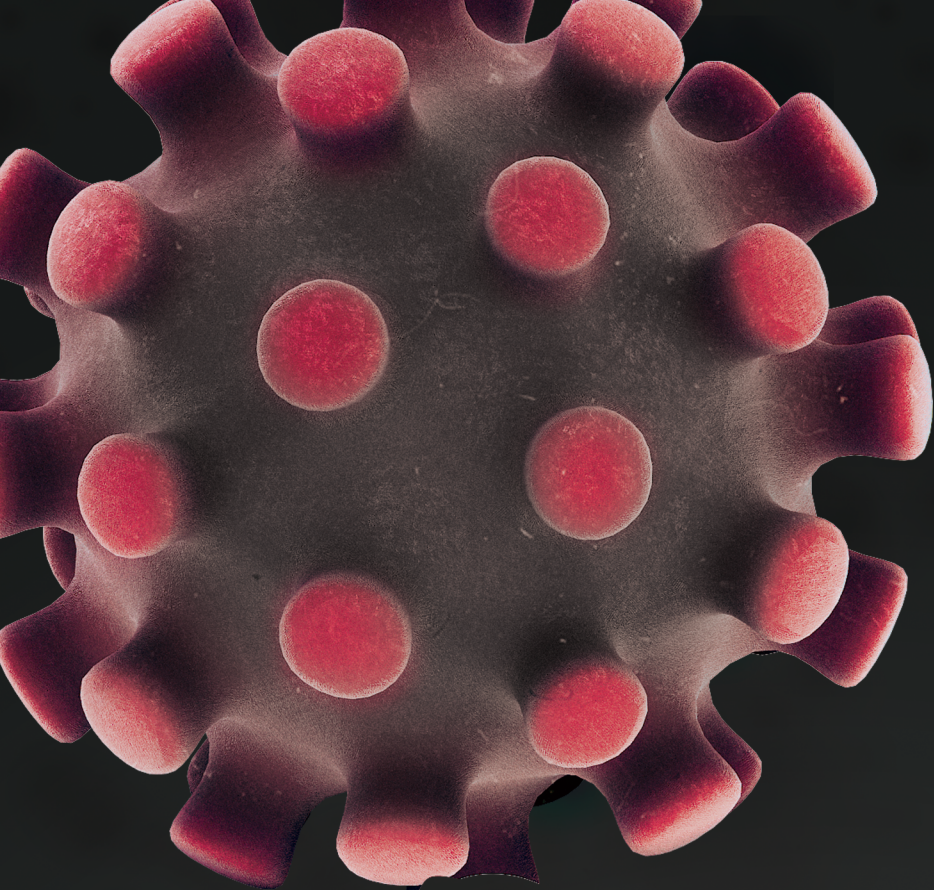
✚ ✚ Nation's representative delivery platform operators such as SAENGGAKDAERO^{Brand} (Logiall Co., Ltd.^{Operator}), Super Hero (Super Hero Co., Ltd.) and Vroong (Mesh Korea Co., Ltd.) are currently applying the system in their App and test run for interlinking is underway as well.

✚ ✚ As of November this year, approximately over 20,000 delivery workers are using this system, and the number of users is estimated to reach over 30,000 in December.

This system was jointly developed by the KOSHA in cooperation with related agencies, including the Korean National Police Agency, by designating the areas prone for traffic accidents and producing a 15-second video for accident prevention.

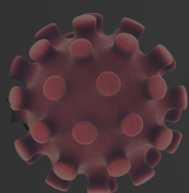
✚ ✚ In addition to accident-prevention information, the KOSHA plans to provide a variety of information through this system, such as “information on intensive enforcement period” and “benefits for delivery workers.”

Yeon-su Lee, Director General of Occupational Safety & Health Future Technology Institute under the KOSHA, said, “With increasing demands for delivery of food products due to COVID-19, accidents are rapidly on the rise.” Lee stated, “The system developed by the KOSHA is expected to reduce fatal accidents effectively by providing the accident-prevention information in a timely manner through the application used by delivery workers.”



Coronavirus Disease 2019

Prevention measures for COVID-19



Resources >



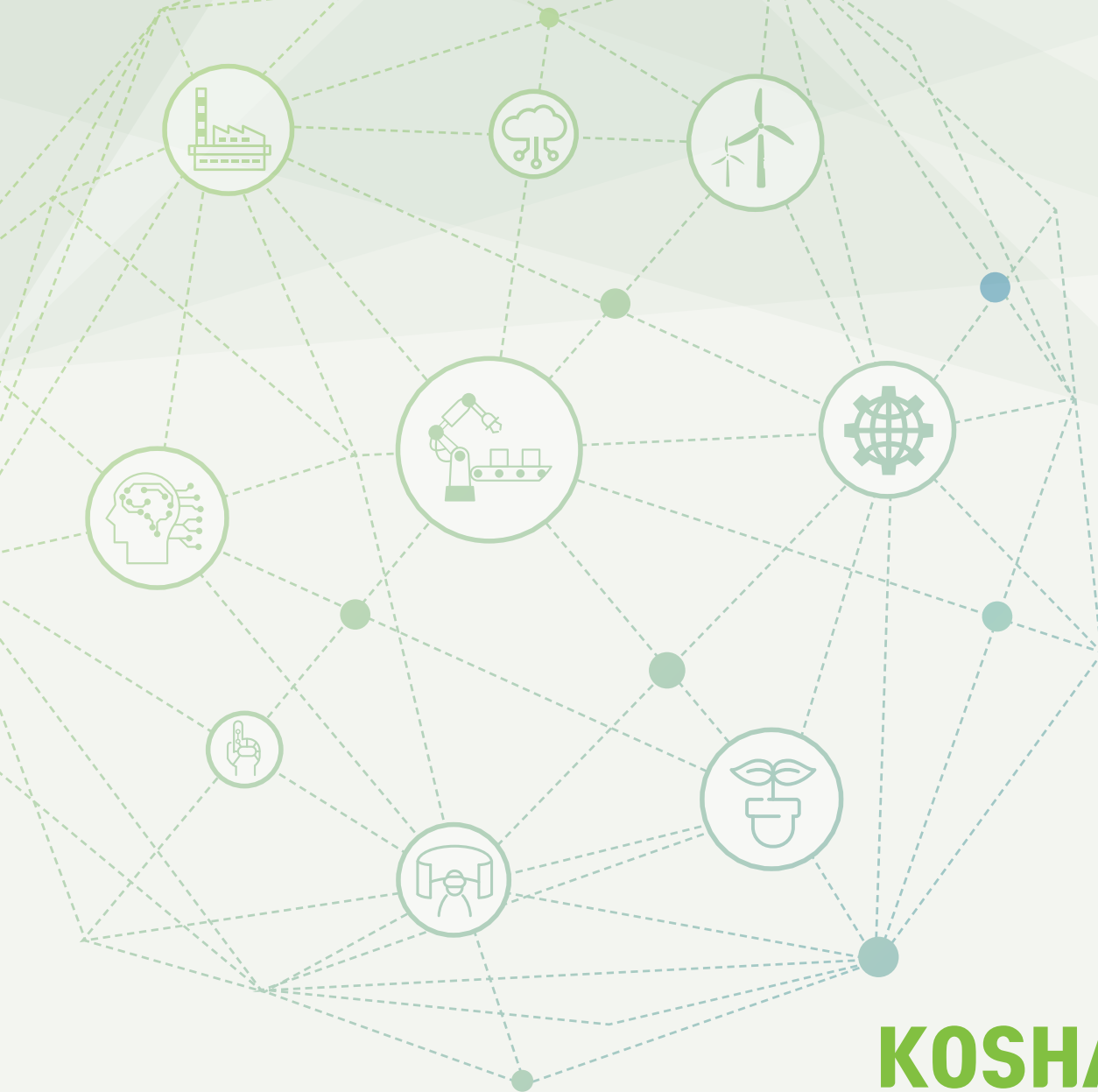
MERRY
CHRISTMAS

— ❄ —

AND

HAPPY NEW YEAR





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Published by

Korea Occupational Safety and Health Agency
400 Jongga-ro, Jung-gu, Ulsan,
44429 Republic of Korea

Tel. +82 52 7030 745

Fax. +82 52 7030 326

E-mail. overseas@kosha.or.kr

Web(Kr). www.kosha.or.kr

Web(En). <https://www.kosha.or.kr/english/index.do>

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