

NOROO



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# Color and Globalization



Special Theme Color & Globalization

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## The Fourth Industrial Revolution and Globalization 4.0

Humans have led the first, second, and third industrial revolutions aligned with the development of new technologies and undergone consequential societal shifts. Now, with the advent of the Fourth Industrial Revolution the utilization of new technologies will push towards the elimination of geographical and ecological constraints, enhance openness, decentralize power structures, and improve individuals' autonomy. However, at the same time, competition among individuals is expected to become more intense beyond state borders, exacerbating inequality. What is the core of the Fourth Industrial Revolution? What future should we aim for and what preparations should we make at the threshold of globalization 4.0?

### 第四次工业革命与全球化4.0

人类在开发技术的同时掀起了第一次、第二次、第三次工业革命，革命带来的是巨大的社会变化。如今，在即将伴随新技术而来的第四次工业革命中，地理性、生态性制约将逐渐消失，开放性将日益提高，权力将变得分散，个人的自主性也将提高。同时，个人的竞争也将超越国境进一步加剧，不平等也可能会继续扩散。第四次工业革命的本质是什么？在随之而来的全球化4.0门槛中我们应当确立怎样的未来目标并作何准备？这些都是我们需要思考的问题。





# About the Fourth Industrial Revolution, which is Sweeping across the Globe

By\_Kang Myung-Koo(the Author of 'A Story about the Fourth Industrial Revolution that No One Told You.', kmkoo77@gmail.com)

Some days ago, I talked about the Fourth Industrial Revolution (FIR) with my friends. Those who had gathered for the meeting were either CEOs of companies specializing in engineering and the sciences, or professionals such as doctors, but surprisingly, none of them could properly define the concept of the FIR. Everybody mentioned talk-of-the-town technologies like AI and blockchain, and asked me if the FIR isn't something related to using those technologies. Likewise, renowned opinion leaders in Korea often only vaguely understand what the FIR is. Nonetheless, they all agree that the FIR is on the way, because day after day, the government and companies associated with it talk about strategies for the approaching era of the FIR. Under these circumstances, it requires courage to raise a question like "What is the Fourth Industrial Revolution, anyway?" It is not an exaggeration to state that everyone pretends to know what it is, while no one actually does.

## 地球上的第四次工业革命，关于第四次工业革命

不久前，在一次朋友聚会上，大家谈起了第四次工业革命。这些朋友，有的是毕业于理工科专业后来自主创业的、有的从事医生等专门职业，然而令我感到惊讶的是，这些朋友中竟然没人能够准确地解释第四次工业革命的概念。大家都在谈论人工智能、区块链等近来备受关注的技术，他们还问我使用这些技术的话不就是第四次工业革命吗，虽然大家都在谈论这些技术，但又并不准确知晓其内容。韩国知名专家们对第四次工业革命的理解也依旧模糊不清。即便如此，大家却都同意第四次工业革命正在进行这种说法，因为政府与企业三天两头地就会提到第四次工业革命时代战略。在这样的社会氛围中，勇敢地说出“第四次工业革命究竟是什么”也并非易事。看似所有人都知道、但又没人真正了解它。

### THE VAGUENESS OF THE DEFINITION OF THE FIR

Is this situation caused by people's ignorance? Not exactly. For example, The Korea Institute of Information & Communication Engineering defines the FIR as "an industrial revolution for the next generation, wherein a radical change occurs due to the fusion of cutting-edge information and communication technologies like AI, IoT, big data, and mobile with the economy and society." This definition merely lists off sophisticated technologies and describes how the FIR is about the radical change caused by their convergence. As the word "revolution" would suggest, the FIR accompanies a great change that distinguishes the period to come from the past, but the definition given by the Institute fails to account for what said change would constitute. It instead only enumerates the technologies which are the means for the change, and leaves the details of said change to one's imagination. Further, it is not easy to have a clear understanding of the FIR, because almost every definition is like this.

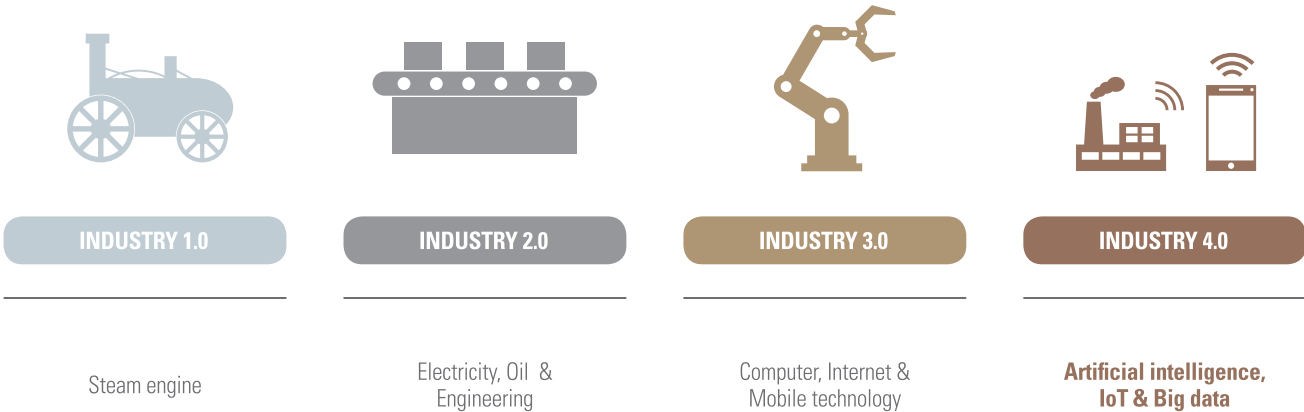
Take the First Industrial Revolution, for instance, which was prompted by the steam engine made by James Watt. In a nutshell, the First Industrial Revolution indicates the social change in which an agricultural society based on self-sufficient systems was transformed into an industrialized

### 第四次工业革命的定义 · 模棱两可

变成这样是因为人类的无知吗？实际并非如此。例如，韩国信息通信学会对第四次工业革命给出的定义是“将人工智能、物联网、大数据、手机等尖端信息通信技术在经济、社会中融合并引发革命性变化的新一代工业革命。”也就是说将各种高难度技术融合并引发革命性变化就是第四次工业革命。第四次工业革命包含“革命”一词，这就意味着需要带来与过去区分开来的巨大变化，但上述定义却并未说明这一点。该定义的不足是将革命性变化的内容交给了大家去想象，仅罗列了变化的工具，即技术。因为对第四次工业革命的说明几乎都是这种形式，所以很难准确理解。

以詹姆斯·瓦特的蒸汽机触发的第一次工业革命为例，第一次工业革命的核心是自给自足的农业社会变成少品种、大批量生产的工业社会。蒸汽机与其他大量技术一

### THE HISTORY OF THE INDUSTRIAL REVOLUTION



one based on the mass production of consumer goods. The steam engine, together with various other technologies, was one of the driving forces of the change. It is important that we do not think that the steam engine itself equals the First Industrial Revolution. Likewise, to understand the Fourth Industrial Revolution, you should look into the direction of the change, rather than the technologies behind that change. AI and blockchain are only a means to an end. Now, let's jump into better understanding the concept of the FIR.

### THE HISTORY AND THE SHADOW OF THE INDUSTRIAL REVOLUTION

Calling it "the Fourth Industrial Revolution" implies that we have passed the third one. So to understand the concept of the FIR and why it is taking place, we will first need to understand the history of the previous industrial revolutions.

The First Industrial Revolution occurred in the middle of the 18th century, and was triggered by the steam engine made by James Watt. From that point, humankind was able to harness artificial power to run machines whenever we wanted, liberating us from reliance on natural power sources such as water and wind. Many factories were established along the river to secure a water source, and industrialization began to take hold in society. The Second Industrial Revolution happened around the year 1900. Along with new energy sources like electricity and oil, engineering and the sciences were developing at an exponential speed. The conveyor belt introduced by Henry Ford led to the creation of a highly efficient production system. Thanks to the Second Industrial Revolution, in tandem with capitalism, our modern social structure, based on mass production and mass consumption, was established. Thus, it can be said that the true industrial revolution which shaped our lives is the second one.

The Third Industrial Revolution spans from the 1960s to the present. A variety of changes occurred during this period, as the computer, Internet, and mobile technology successively emerged on the scene. As the world began to resemble one large, single community, the structural aspects of mass production and mass consumption were increasingly strengthened. In essence, however, it can be said that those changes only heightened the social structure brought about by the Second Industrial Revolution. This is the reason that some scholars are convinced there was no Third Industrial Revolution, and that we are still being influenced by the second one. The paradigm of the Second and Third Industrial Revolutions have dominated the world for over 100 years. However, beginning in 2012, signs began to emerge that this order was starting to break down. The Fourth Industrial Revolution is the term to indicate this change, which is oriented to overcome the shadow of the previous industrial revolutions.

起被用作了社会变化的工具。就像不能将蒸汽机理解为第一次工业革命的定義一样，第四次工业革命也必须理解成变化的方向而非技术本身。人工智能、区块链等技术只是变化的工具而已。

### 工业革命的历史与影子

说起第四次工业革命，也就意味着第三次工业革命的时代已经过去了。只有理解工业革命的历史，才能知晓第四次工业革命到来的原因与概念。

第一次工业革命发生于18世纪中叶，以前面提到的詹姆斯·瓦特的蒸汽机为起始点。曾经仅以水力、风力等自然力量为动力的人类拥有了可随时使机器运转的人工动力。于是人们在可以获得水资源的江边建起大量工厂，开始了工业化与社会变化。第二次工业革命发生于20世纪初前后，这是伴随电、石油等新能源的出现，科学与工程学快速发展的时期。以福特的传送带生产为代表，高效生产系统不断传播。第二次工业革命与资本主义结合，构建了大量生产、大量消费的现代社会结构。可以说，造就今时今日的正是第二次工业革命。

第三次工业革命的时间是20世纪60年代至今。计算机、互联网、手机技术依次登场，引发了诸多变化。世界成为一体，大量生产、大量消费的结构进一步加强。但是，从本质上来看，这只是巩固了第二次工业革命构建的社会结构，并非发生了与从前不同的变化。因此，有的学者认为，没有第三次工业革命，迄今为止都只是第二次工业革命的延续。第二次、第三次工业革命的相同模式主宰了世界100多年。但是，自2012年起变化发生了。第四次工业革命就是为表述该变化而新造的术语。可以说，其变化正在朝着克服过去工业革命影子的方向发展。

过去的工业革命通过少品种大批量生产馈赠了富饶，无条件提高效率一度成为准绳。人们的工作领域变窄、分工进一步细化，少数人垄断了信息巩固了权力，形成了所谓的金字塔式结构。因为所有人都民主地发声时会降低效



Thanks to the previous industrial revolutions, we have been able to enjoy a prosperous life based on the mass production of consumer goods. The key question that needed to be answered at that time was how to enhance efficiency, no matter what it takes. The division of labor served to separate the tasks performed by workers, and the few at the top monopolized the information to expand their power. In every field, this centralization led to the improvement of efficiency — the company with the CEO at the center, the college with the president at the center, and the country with the president at the center. The same applied to how companies related to one another. In the so-called “ecosystem of platforms,” a company occupying the dominant position in an ecosystem could decide the direction of said ecosystem. A well-known case of this is Google’s Android platform. When a new update of Android, which is at the top of the smartphone’s ecosystem, is released, all members belonging to that ecosystem, including smartphone manufacturing companies, communications companies, and app developers, are affected as a result. Thus, Google is able to exert absolute power while monopolizing its profits. The shadow cast by the industrial revolution has darkened. First of all, the uniformity of society has become a serious concern, due to the mass production of consumer goods. As time goes by, the unique features of nations and each new generation weaken as they are increasingly homogenized. The products and services offered by global businesses also play their part in this phenomenon. Such uniformity goes against human nature. In addition, the intensifying centralized structure, wherein the few take power and the many follow them, innately frustrates those of us subjected to it as followers. Since the few with power monopolize the profits, the polarization

率。以市场为中心的公司、以校长为中心的大学、以总统为中心的国家等，所有领域都在以中央集中的方式提高效率。企业间的关系也大同小异，以所谓的平台生态系统形式，由一家企业占据支配地位并决定生态系统的方向。典型的案例有谷歌的安卓平台。位于智能手机生态系统顶端的安卓版本变更时，智能手机制造商、通信公司、应用开发企业等相关生态系统的所有企业都会受到影响。谷歌行使绝对的影响力并垄断利润。

这些工业革命的影子逐渐变得明确。首先，少品种大批量生产带来的社会划一现象加剧。随着时间的推移，民族之间、不同年代的特性逐渐消失，日趋同质化，这都是因为全球企业的产品与服务所导致。这种同质化违背了人类的本性。与此同时，少数人掌握权力、多数人跟随的中央集中式结构的加剧也在打击人类的主体性。掌握权力的少数人垄断利益，所以两极化也日益加剧。为维持利润，支配企业会选择不与生态系统内的参与者或其他平台分享权力的封闭式经营，同时表现出控制内部信息并随意运用的“大哥”姿态。例如，外部人无法监督谷歌、Facebook、苹果等公司是否正确使用其拥有的客户信息，因为这些公司均采用只有内部人士才能监督的封闭式

between the rich and the poor gets worse. The dominant players remind us of Big Brother, which runs its business in a closed way without sharing power with other players or platforms to maintain profits, while maintaining information within the inner circle and using it at its discretion. For example, an outsider cannot monitor whether or not Google, Facebook, or Apple are properly using the information they collect on their customers, because this information is handled only by the insiders. It is for this reason that GDPR (General Data Protection Regulation) was adopted in Europe to regulate platform-centered companies. After experiencing the economic crisis in 2008 and the Occupy Wall Street movement in 2012, people have begun to realize the dangers of centralized power. Consequently, technologies to resist this centralization, such as blockchain, have since started to appear. This means that the technological foundation is ready to support a decentralized business platform, along with existing technologies such as IoT and AI. Through these new technologies, combined with the people’s longing, an up-and-coming challenger has entered the scene to rebel against the existing leading industry players, like Google and Facebook. A challenge has been issued against the established order — hence, it is referred to as the Fourth Industrial Revolution.

#### THE ORIENTATION OF THE FIR

The key to the FIR, which was concretized from Germany’s Industry 4.0 strategy in 2012, is its orientation — from producers to consumers, from the few to the many — power moves. This is the change that is anticipated to overcome the drawbacks of the previous industrial revolution, including uniformity due to the mass production of consumer goods, the monopolization of platform information, and closed management structures, exemplified by the Facebook information leakage. The direction of this change can be expressed with the terms customization, decentralization, and openness. It can be more easily understood when looking into the visions companies have for households (Smart Homes), workplaces (Smart Factories) and cities (Smart Cities). The vision for a Smart Home is offering a customized environment for the inhabitants. This includes automatic controls for temperature, humidity, and illumination intensity, as well as inhabitants’ health, through various sensors. To achieve this, it is preferable for a single AI to be connected to, and operate, every device. Of late, almost every new electronic device provides a connectivity function via IoT, and leading companies, such as Samsung and LG, are releasing AI-based products designed for the Smart Home. However, at this time, the vision of a true Smart Home is still far from being realized, as the closed management practices of each of these companies ensures that they will attempt to retain their own advantage in the ecosystem. For instance, is difficult to control the entire environment of a home through a single AI, because we seldom fill our homes with devices that are produced by the same company. For a true Smart Home, decentralization and openness which follow the orientation of the FIR are essential virtues. These leading companies should aim to adhere to the spirit of the modern age, and allow their products to be controlled by products from other companies. They still have a long way to go, the path from declaration to management lying ahead of them, but decentralization and openness are the only ways to truly create a customized home environment. Until recently, a Smart Factory was considered to be one where the humans had been replaced by computers and robots. However, since Germany unveiled its Industry 4.0 strategy, the goal of a Smart Factory has been concretely understood as a factory for small quantity batch production. If the competitiveness of a factory which mass-produced consumer goods was determined by how the quality of the products was maintained under given conditions, the key point for a factory

经营模式。这也是最近欧洲开始制定GDPR（General Data Protection Regulation）并开始平台中心企业管制的原因。

经过2008年经济危机与2012年“占领华尔街”示威运动后，公众开始意识到中央集中式权力的危险。同时区块链等对抗中央集中形态的技术也相继登场。与现有的物联网、人工智能等技术一起，奠定了支撑分权经营的技术基础。在公众期望与技术支撑下，正在不断涌现出试图对抗谷歌、Facebook等现有工业革命强者的新挑战者。这是对过去积淀的秩序的挑战。因此，可以将它称为第四次工业革命。

#### 第四次工业革命的方向性

在2012年德国的工业4.0战略中变得具体化的第四次工业革命的核心是权力从生产者向消费者、从少数人向多数人转移的方向性。该变化试图克服少品种大批量生产的划一化、Facebook信息泄露事件代表的平台信息垄断与封闭式经营等现有工业革命的影子。因此，变化的方向性可以表述为个性化、分权与开放。从现代企业追求的家庭（智能家居）、职场（智能工厂）、城市（智慧城市）的蓝图来看，很容易就能理解这些内容。

智能家居的蓝图是提供给主人个性化的环境，其中包括温度、湿度、照明等的自动控制与利用多种传感器的健康管理。为此，需要连接家中的所有设备并通过一种人工智能系统进行管理。最近大部分的家电产品都提供物联网技术的连接功能，三星、LG等大企业也在推出面向智能家居的人工智能。但是，真正实现智能家居的时代还很遥远，因为各企业都存在只想营造各自生态系统的封闭性。因为家中的设备不可能全都由一家企业的产品构成，所以很难通过一种人工智能系统调节所有环境。为真正实现智能家居，第四次工业革命方向性带来的分权与开放必不可少。必须使主要企业符合时代精神、宣布开放，使竞争公司也能控制本公司的设备。从宣布到经营，存在很多必须要克服的障碍，但只有分权与开放之路才能实现智能家居的个性化环境。

迄今为止，人们都将智能工厂理解成了用计算机与机器人代替人力的工厂。但是，从德国工业4.0战略开始，目标正在变得明确，那就是多品种少量生产所需的工厂。如果说迄今为止少品种大批量生产工厂的竞争力是能在一定条件下维持质量，那第四次工业革命时代工厂的核心就是在保持生产成本不变的前提下灵活生产多个品种的个性化产品。为此，原材料、工序、设备、人力必须都与人工智能连接并自动地应对变化。因此，与人工成本至关重要的现有工厂不同，软件力量变得越发重要。最近发达国家积极开展重新将制造业引回国内的转移回国（Reshoring）



in the FIR age is to be able to flexibly produce various kinds of customized products at a consistent primary cost. To accomplish this, the raw materials, production process, facilities, and workers should all be connected via AI to automatically respond to changes. Thus, unlike existing factories, where personnel expenses is the key issue, the factory of the future will put stress on software power. This has led to the tendency among advanced countries these days to promote a reshoring policy in order to bring back manufacturing. These countries are convinced that they will be able to beat China and India thanks to the competitiveness of their factories’ software for small quantity batch production, despite the disadvantage that would be created due to personnel expenses. Such a factory as this would be constituted of various sensors and facilities which work together and are controlled like a single entity. This also requires decentralization and openness. As small quantity batch production becomes available, customized products and services can then be realized as well. Likewise, the paradigm of the FIR, orienting toward customization, decentralization, and openness to match people’s desires, will change the future of the house, workplace, and city. Many software technologies, including blockchain, AI, and IoT, will support this change. Of course, software technologies alone will not be enough to achieve this, since information (big data) is forged through hardware. Digital technologies such as AI and blockchain can function based on exact information. Thus, the technology is required to safely link the hardware to the AI and to the various services to be provided. Korea will have an advantage if it connects the software technology to the hardware technology it already has.

OUR ATTITUDE AND GLOBALIZATION 4.0

From the above, you should now have a better understanding of the FIR through the direction of change. Any strategy in the FIR age should be in line with this direction. To describe it another way, when you point at the moon (the direction of the change), you should be looking at the moon, not your finger (technologies). From now on, we should be focusing on the orientation of the change — that is, customization, decentralization, and openness. Only then can we lead the way for the future direction of Smart Homes, Smart Factories, and Smart Cities, and seize the opportunity for success at the individual, organizational, and national level. Finally, let’s briefly look at what Globalization 4.0 means. The term “Fourth Industrial Revolution” has been spreading in use since the 2016 World Economic Forum. The chairman of the Forum, Klaus Schwab, brought up the topic, and it has since become influential throughout the globe. In 2019, the concept of Globalization 4.0 emerged on the scene at the Forum. Globalization refers to the movement of goods, services, and populations beyond borders. The history, periods, and definition of globalization differs according to scholars, but Thomas Friedman claimed there have been three periods of globalization in our history. The first, Globalization 1.0, lasted from the 1400s to the 1800s, and can also be considered the globalization of nations, during which nations came out of isolation and broadened their exchanges with each other. Globalization 2.0 spanned from the 1800s to around 1990, and is characterized as the period during which, thanks to the industrial revolution, mass-produced

ing）政策也是由于这种方向性。因为尽管人工成本很高，但具备软件竞争力的多品种少量生产工厂可以战胜中国、印度等。为此，构成工厂的多种传感器、设备等必须互相联动，能像一个整体那样控制。这也需要分权与开放。分权与开放将使多品种少量生产成为可能，进而实现为消费者提供个性化产品与服务。像这样，按照公众的要求追求个性化、分权与开放的第四次工业革命模式将改变家庭、职场、城市的未来概念。区块链、人工智能、物联网等多种软件技术将为此提供支撑。当然了，只靠软件技术本身并不充分，因为信息（大数据）是从硬件中获取的。人工智能或区块链等数字技术可以在准确的信息基础上发挥作用。因此，从硬件到人工智能、再到各种服务，能够安全连接的技术是关键。拥有硬件技术的韩国只要结合软件技术，就将占据有利条件。

我们的姿态与全球化4.0

前面我们通过变化的方向理解了概念。第四次工业革命战略必须按照该方向制定。可以说，到目前为止，用手指月时都是只见手指不见月，即只看到了技术、没看到方向。现在是时候撇开技术，注重个性化、分权与开放这种变化的方向性了。唯有如此，才能正确引领智能家居、智能工厂、智慧城市的未来方向，个人、组织与国家才能获得成功的机会。最后，我要再说说全球化4.0。第四次工业革命这个术语的传播开始于2016年世界经济论坛。论坛主席克劳斯·施瓦布抛出了这个话题，在全世界引起了反响。2019年世界经济论坛提出了全球化4.0（Globalization 4.0）这个概念。全球化指的是超越国境的财物、服务、人力的移动现象。其历史、时期及定义因学者而异，但托马斯·弗里德曼给出的定义称历史上曾经有过三次全球化。15世纪初到19世纪初叫作全球化1.0，是国家的全球化时期，也可以看成是曾经孤立的国家加强彼此交流新纪元的时期。19世纪中期到20世纪90年代叫作全球化2.0，指的是在工业革命中实现大批量生产的财物跨越国境被消费的时期。20世纪90年代至今则可定义为全球化3.0，指的是随着互联网、手机不断发展，财物与人都受全球化影响的时期。向



goods were able to go beyond borders and be consumed around the world. Lastly, Globalization 3.0, which started in 1900 and has continued to the present, is the period during which the Internet and mobile technology were developed to the point that not only were goods, but humans themselves, were influenced by globalization. An example of this would be how blue-collar workers in developed countries suffered because of their factories moving offshore. The current period, Globalization 4.0, is defined as the period during which white-collar workers are being influenced by common FIR technologies, including AI and blockchain. From one’s own home, without crossing any borders, one can provide customers in other countries with software or services, which means that not only blue-collar workers, but white-collar workers as well, are now exposed to global competition. While workers can now choose when and where to work and customized services have increased, there are also shortcomings to the decentralization prompted by the FIR, such as the weakening responsibility of the nation and the company to individual workers, and the consequentially waning protection for them. The choices made by blue-collar workers whose lives were affected by Globalization 3.0 led to Brexit and the appearance of belligerent leaders like Donald Trump. The World Economic Forum, predicting that the danger will grow if white-collar workers follow in their footsteps, has called for preparations to be made, and proposed governance as an issue. It seems that we cannot go against the flow of Globalization 4.0. In light of this change, the government should not depend on its own substantial power to tackle these problems, but instead band together with the private sector, which will continue to expand and become increasingly important as decentralization progresses. When we clearly understand the orientation of the FIR — customization, decentralization, and openness —we can set in place the correct measures and technological alternatives to prepare for Globalization 4.0

人工成本低廉的国家转移工厂，这使得发达国家的蓝领工人承受了痛苦。现在正在进行的全球化4.0则是定义为白领开始因人工智能或区块链等第四次工业革命基础技术受到影响的时期。无需走出国境、在自己家中即可向其他国家提供软件或服务，白领也像蓝领工人一样陷入了全球竞争。在自己希望的时间、希望的地点工作的机会向人们敞开，个性化的服务也不断增加，但国家与企业的责任变得淡化、对个人的保护范围变得宽松，这也可以看成是第四次工业革命的方向性——分权加强的反作用。因全球化3.0遭受损失的蓝领工人的选择导致了英国脱欧或特朗普等强硬派领导人登场等危机，世界经济论坛预测称，倘若在此基础上加上白领的参与，危机将进一步扩大，因此必须快速制定相关对策，同时抛出了民官合作体系（Governance）的话题。如今，全球化4.0已被视为不可逆之势。在这样的变化中，国家不能像过去一样摆出一副要强势解决该问题的姿态，而是应该接受并联合随着分权进一步扩大、变得日益重要的民间权力。准确理解个性化、分权与开放这种第四次工业革命的方向性，才能制定关于全球化4.0的正确对策与技术应对方案。



## Tumultuous Globalization 4.0 Embrace and Imagine

From January to February of every year, prominent businessmen, politicians, economists, and columnists gather in Davos, a luxurious vacation spot in Switzerland, to take part in the World Economic Forum, otherwise known as the Davos Forum. At this forum, a private organization founded by Klaus Schwab, presentations and debates about a variety of fields, including not only the global economy, but politics, human rights, and culture as well, take place, and what was discussed at the forum spreads all over the world. The Forum tackled the Fourth Industrial Revolution as a theme in 2016, and it has subsequently become a global issue as well. This year, the theme of the Davos Forum was “Globalization 4.0: Shaping a Global Architecture in the Age of the Fourth Industrial Revolution.” What constitutes a sustainable model of globalization based on the changes that will be caused by the Fourth Industrial Revolution in our lives? We will attempt to navigate the path to hope for Globalization 4.0 from the Davos Forum.

### 剧变的全球化4.0包容并想象吧

每年1～2月，世界知名企业家、政治家、经济学家及作家等都会齐聚瑞士的高级疗养胜地达沃斯，参加达沃斯世界经济论坛（World Economic Forum）。该论坛在克劳斯·施瓦布的主导下作为民间机构成立，论坛以世界经济为中心，在政治、人权、文化等多个领域展开广泛发言与讨论，其内容将传播到全世界。第四次工业革命作为达沃斯论坛2016年提出的议题，随即成了全球的热议话题。今年，达沃斯论坛的议题是“全球化4.0：在第四次工业革命时代构建新结构”。在第四次工业革命即将创造的变化中，使人类能够持续发展的全球化模型是什么？达沃斯论坛上预测全球化4.0将变成充满希望的新道路。

#### “GLOBALIZATION IS A PHENOMENON DRIVEN BY TECHNOLOGY AND THE MOVEMENT OF IDEAS, PEOPLE, AND GOODS.”

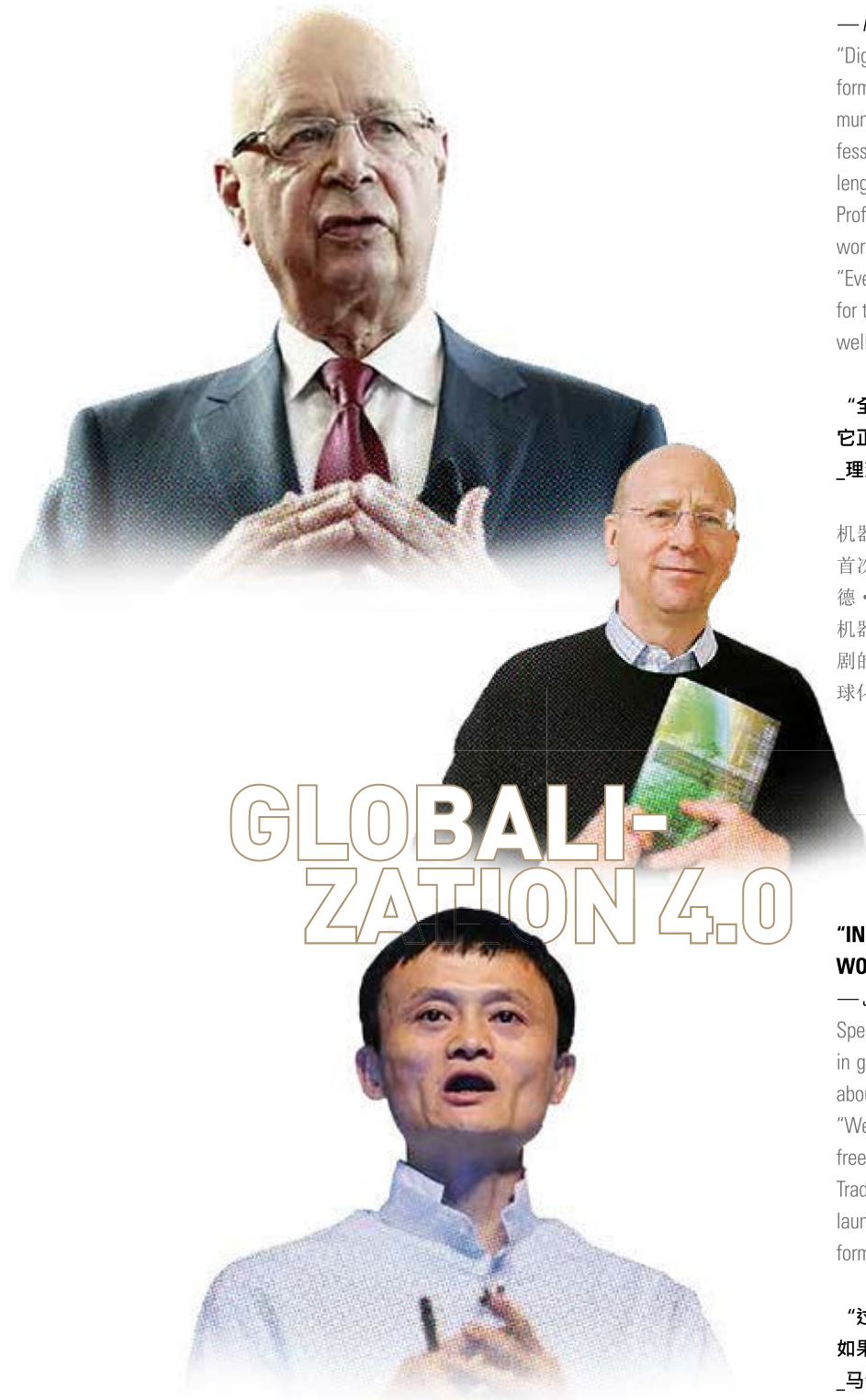
— KLAUS SCHWAB (EXECUTIVE CHAIRMAN, WORLD ECONOMIC FORUM)

At the 2019 World Economic Forum, Klaus Schwab stated, “Globalization is a phenomenon driven by technology and the movement of ideas, people, and goods. Globalism is an ideology that prioritizes the neoliberal global order over national interests. Nobody can deny that we are living in a globalized world. But whether all of our policies should be ‘globalist’ is highly debatable,” and then recommended a cooperative approach that would be in line with the age of the Fourth Industrial Revolution. He insisted that, since the global financial crisis, the populist discourse has eluded the distinctions between globalization and globalism, and hence, rather than adopting protectionism and nationalist politics to close off economies, we should forge new social connections. Also, he emphasized that, to address the divisions between winners and losers created due to the development of technology, open markets, and competition, as well as to resolve the inequality at the national level, the international community and each nation should widen engagement and heighten imagination.

#### “全球化是由技术与思想、人与商品流动带来的现象”

— 克劳斯·施瓦布（达沃斯论坛主席）

克劳斯·施瓦布主席在今天的论坛上说：“Globalization，即全球化，是由技术与思想、人与商品流动带来的现象，全球主义是指将新自由主义世界秩序摆在国家利益前面的理念。虽然任何人都无法否认我们生活在全球化的世界中这个事实，但对于我们所有的政策是否都必须追求‘全球主义者’这点尚存在很大的争议。”同时他还提出了与第四次工业革命时代相符的合作方法。他表示，上次全球金融危机以后，平民主义造成了全球化与全球主义间的混乱，为确保民主主义的持续发展，与通过贸易保护主义与民族主义政治积累经济封闭性相比，更需要新颖又稳固的社会联系。此外，他还强调说，除了在技术的变化、市场的开放与竞争中产生的胜利者与失败者外，为消除国家层面的不平等说导致的分裂，国家与国际社会需要更广泛的包容性与更丰富的想象力。



#### “GLOBALIZATION 4.0 WILL BE VERY DIFFERENT FROM THE GLOBALIZATION WE KNOW TODAY. MOREOVER, IT IS COMING INCREDIBLY FAST —AND IN WAYS FEW PEOPLE EXPECT.”

— RICHARD BALDWIN (PROFESSOR OF INTERNATIONAL ECONOMICS AT THE GRADUATE INSTITUTE, GENEVA)

“Digital technology is tearing down the barriers to wage arbitrage in the service sector and the new form of globalization is being enabled by international freelancing platforms, by advanced telecommunications technology, and by machine translation. Hundreds of millions of service-sector and professional workers in advanced economies will — for the first time ever — be exposed to the challenges and opportunities of globalization. AI-driven automation will displace many workers as well.” Professor Richard Baldwin expresses — as “the globotics upheaval” — the conditions in which most workers ranging from blue-collar workers to white-collar workers will face globalization. He says, “Every great transformation creates triumphs for those who can seize the opportunities and tragedies for those who can’t,” and advises, “future globalization will bring us to a better world if we prepare well and if our governments take care to not let it happen too quickly.”

“全球化4.0与今天我们所知晓的全球化完全不同，它正以令人难以置信的速度向我们走来，公众几乎无法预测”  
— 理查德·鲍德温（日内瓦国际经济研究生院教授）

“数字技术正在打破服务领域的工资壁垒，国际自由职业者平台、尖端通信技术、机器翻译正在造就新形式的全球化。在发达国家，几亿名服务领域与专门职业从业者将首次被推上全球化的试验场。在这里，AI主导的自动化服务也将代替大量人力。”理查德·鲍德温教授称包括蓝领工人及白领的大部分劳动者遭遇全球化的这种情况为“全球机器人剧变（Globotics Upheaval）”。他提出：“所有伟大的变革都会给掌握机会与悲剧的人们带来胜利。倘若我们做好准备，政府调整变化速度并帮我们适应，则未来的全球化将引领我们走向更美好的世界。”

#### “IN THE LAST 20 YEARS, GLOBALIZATION WAS CONTROLLED BY 60,000 COMPANIES WORLDWIDE, IMAGINE IF WE COULD EXPAND THAT TO 60 MILLION BUSINESSES.”

— JACK MA (CEO, ALIBABA)

Speaking in front of the participants of the World Economic Forum, Jack Ma points out, “We believe in globalization, but many don’t believe in it because it is not inclusive,” and what is problematic about a number of free trade areas is that they are designed only for large companies. He states, “We should focus on developing countries, young people, and small businesses,” and there should be free trade areas for small and medium enterprises. Jack Ma has established eWTP (Electronic World Trading Platform), which enables a Rwandan coffee farmer to sell coffee to the Chinese market, by launching the initiative jointly with the WTO and the World Economic Forum. He presented this platform as a pioneering approach that will improve the inclusiveness of Globalization 4.0.

“过去20年，全球化由全世界6万家企业控制。想象一下，如果其规模扩大到6千万家企业又将如何”  
— 马云（阿里巴巴CEO）

马云对达沃斯论坛的与会者们说：“我们相信全球化，但这些人不相信，因为全球化不是总括性的。”他指出，很多自由贸易区的问题在于只为大企业设计。他表示，必须聚焦于发展中国家、年轻人及小规模企业家，同时必须要有面向中小企业的自由贸易区。他曾与世界贸易组织、达沃斯论坛共同发起倡议，构建了卢旺达农民可以直接在中国销售咖啡豆的世界贸易平台eWTP。作为提高全球化4.0总括性的先驱方法论，马云以此为例进行了说明。



+ INFORMATION



Today’s World Through the Fourth Industrial Revolution

In visualizing the Fourth Industrial Revolution and Globalization 4.0, world powers have taken the lead in terms of analysis, strategy, and practice. This movement will result in innovation in the manufacturing industry that brings about other radical changes such as increased customization, broad decentralization, and enhanced openness. Every nation will need to judiciously prepare for the onslaught of coming changes.

第四次工业革命中的世界就在当下

面对第四次工业革命与全球化4.0，世界各国都在进行分析、战略制定与实践。这样的动向开始于制造业创新中，最终将实现个性化、分权与开放的根本性变化。各国在变化趋势中投入的准备也十分激烈。



**The United States** - The U.S. has preempted and commercialized future technologies thanks to its strong venture capital/startup system, and it led technological innovation during the Third Industrial Revolution so it dominates in various fields. Now, it is trying to lead the Fourth Industrial Revolution by focusing on the innovations in the manufacturing industry, like mass customization. The US launched the NNMII (the National Network for Manufacturing Innovation) in 2011-201 and through it has established advanced manufacturing institutes throughout the nation that are specialized in 3D printing, sensors, test devices, biofabrication, and more. A number of American companies have adopted a strategy of reshoring as they move their factories back to their homeland. The U.S. will continue to be prosperous so long as it continues to dominate by innovating in the manufacturing industry and monopolizing industrial platforms. Other countries, which stick only to the manufacturing industry will suffer a more intense crisis.\*

**美国** \_ 美国在强大的创业风险投资体系中，将未来技术商业化并抢占了先机，同时主导了第三次工业革命的技术创新、主宰了多个领域的平台。如今又聚焦于大批量个性化等制造业创新，试图主导第四次工业革命。美国于2011~2012年制定了制造业创新网络政策，2017年前在全国各地成立了3D打印、传感器、检查装备、生物制造等尖端制造业创新研究所。大量美国企业都推出了将工厂重新引进回国的转移回国战略。如能在平台垄断地位的基础上融合制造业的力量，美国的繁荣必将持续，然而那些通过制造业维持的其他国家将变得更加危险。\*



**Germany** - A nation that possessed the largest number of small, powerful companies but which was falling behind the competition when it came to the global platforms, Germany announced the HTS 2020 (High-tech Strategy 2020) in 2010. This policy gave form to the concept of industry 4.0, which pursues flexible, customized production in smart factories that are able to autonomously become more optimized, organized, and intelligent, and heralded in the Fourth Industrial Revolution at the World Economic Forum, in 2016. Along with Industry 4.0, Germany has been striving to build collaborative platforms for German companies in fields like airlines, communication, insurance, and vehicle manufacturing nationwide in order to combat the hegemonic American industry. Although Germany lags behind in fundamental areas of technology, such as the manufacturing of parts like the semiconductor, it has a strong vision and solid software.\*

**德国** \_ 德国拥有全世界最多的强小企业，但在全球平台竞争中却处于落后地位，德国于2010年发表了尖端技术战略（HTS: High Tech Strategy）2020。在这里，利用可自行实现最优化、组织化、智能化并兼具自我诊断功能的智能工厂追求灵活个性化生产的工业4.0概念变得更加具体，而后在2016年世界经济论坛上，第四次工业革命的概念登场。为对抗拥有平台主导权的美国企业，德国正在努力构建工业4.0与本国的航空、通信、保险、汽车等企业公众平台。虽然半导体等基础配件技术不足，但德国在软件与愿景规划方面具有优势。\*

“THE GLOBALIZATION OF CULTURE NO LONGER ONLY COINCIDES WITH AMERICANIZATION. [BTS EXEMPLIFIES] A MORE DIVERSE GLOBALIZATION.”

— PETER VANHAM (COLUMNIST)

In December 2018, an article entitled “Here’s What a Korean boy band can teach us about globalization 4.0” was updated on the official website of the World Economic Forum. Peter Vanham, an author and columnist, argues: the fact that Korean singers and bands like Psy and BTS can make global top pop songs suggests the possibility of diversified globalization. From the end of World War 2 to the 2000s, cultural globalization in many domains, such as film, music, social media, online platforms, and food & beverages, was oriented towards American culture, which spread even faster with the opening of markets and the usage of the Internet. This phenomenon has promoted social integration, while eliminating the uniqueness of local culture. For example, since the 16th century — the earliest era of globalization — the number of spoken languages in the world was halved, and half of the remaining languages are in danger of extinction. However, Peter Vanham remarks that even though BTS sings their songs in Korean, a language that doesn’t even make the list of top 10 most spoken languages worldwide, the boy band has produced a musical sensation, and that “their success is bottom-up, with many fans helping the band voluntarily to translate and subtitle” the music videos and performances of BTS into their own languages. After all, cultures will continue to intersect with each other while being refined and, as the case of BTS shows, the possibility of globalization in diverse ways still leaves much room to be explored.

“文化的全球化将不再是美国化 · 防弹少年团正在展示更多样化的全球化”

彼得·范汉姆 (Peter Vanham · 专栏作家)

2018年12月，达沃斯论坛的网站上刊登了一篇题为“韩国男团可以教给我们的关于全球化4.0的启迪 (Here’s What a Korean boy band can teach us about globalization 4.0)”的专栏文章。专栏作家彼得·范汉姆在这篇文章中表示：“鸟叔与防弹少年团等韩国歌手与组合可以创作世界一流流行音乐的事实向我们展示了多种全球化的可能。”第二次世界大战以后到21世纪初，电影、音乐、大部分的社交媒体与互联网平台、乃至食品饮料领域，文化的全球化无一不向美国倾斜，市场的开放与互联网更是加快了美国文化的传播。该现象在促进社会融合的同时也使地区文化丧失了独特性。全球化初期，即16世纪以后，全世界的口语数减少了约1/2，剩下的语言中也有一半都濒临灭绝。彼得·范汉姆关注的是防弹少年团使用未列入全世界使用人数前10的韩语唱歌并引发音乐热潮，甚至全世界的粉丝将他们的歌曲与视频自发翻译成本国语言并在网上完成“自下而上”式传播。也就是说，最后文化将不断交叉并净化，就像防弹少年团向世人展示的那样，多样化的全球化可能依然存在。



**China** - China’s rate of growth has been gradually diminishing. As a reaction to the trend of reshoring being used by more developed countries, China has employed a strategy called “Made in China 2025” to evolve from a country of “mass manufacturing” into a country of “robust manufacturing” by upgrading the standards of its manufacturing industry. With the goal of developing an efficient and integrated industrial sector and localizing its core components, the country is planning to establish 40 institutes for innovation in manufacturing by 2025. In addition, it is working hard to have Chinese technologies adopted as the international standard.\*

**中国** \_ 中国的增长速度正在逐渐放缓。为应对发达国家的转移回国战略，中国正在对整个制造业的水平进行全面升级，制定并推进由“制造大国”变身为“制造强国”的中国制造2025战略。在打造高效综合产业、实现核心配件国产化的战略目标下，计划于2025年前建设40个制造创新中心。此外，为使中国技术为国际标准采用，也在积极地付出努力。\*



**Japan** - In 2016, Japan presented Society 5.0, a vision for the future which consists of a civilized and expanded Fourth Industrial Revolution. It is aimed at developing the economy with improved productivity and solving societal issues, such as the low birth rate, an aging population, and labor force shortages, through the technologies of the Fourth Industrial Revolution like AI, sensors, and network infrastructure. As a leading player in robots, sensors, and electronics, Japan can once again influence in the world market if these governmental platforms are linked to companies owning these various technologies.

**日本** \_ 2016年，作为新的时代面貌，日本提出第四次工业革命的文明扩充版——社会5.0。其目标是通过人工智能与传感器、互联网基础等第四次工业革命的技术解决低生育率、老龄化、人力不足的社会问题，提高生产效率，从而与经济发展联系起来。倘若拥有各种技术的企业在政府的平台上联合起来，那么在机器人与传感器设备等方面保持世界最高水平的日本将重返世界舞台。

\* A Story about the Fourth Industrial Revolution that No One Told You, Kang Myung-Koo, Key Media, 2018

\* 参考《不为人知的第四次工业革命故事》（姜明求，KEY出版社，2018）





# From connection to togetherness - And now, evolution

## 2019 NOROO Paint & Coatings VIP Exclusive Agencies-Invited Seminar

A man in a white robe stepped onto the stage at the Grand Ballroom of LOTTE Hotel Jeju. His heart enraptured by the beat of the drum, the man danced with his brush across the paper. The delicate lines of a small brush were complemented by the bold lines captured with a brush too big for one hand, seemingly penned the word, “evolution,” a word passionately resonating with the heart and mind of the audience. And so begun the 2019 NOROO Paint & Coatings VIP Exclusive Seminar.

## 在共鸣中同行，如今即将飞跃

### 2019 NOROO涂料股份有限公司VIP特约店特邀研讨会

济州乐天酒店大宴会厅，一个身穿白色长袍的人登上了舞台，伴随着震彻心扉的隆隆鼓声，在大型画布上挥毫泼墨，他用一支大到用两只手才能握住的大毛笔画出粗大的线条，又使用小毛笔细腻地勾勒着细节，在画布上写下了“飞跃”二字，传达出一种强烈的精神。2019年NOROO涂料VIP特约经销商大会就此拉开了帷幕。

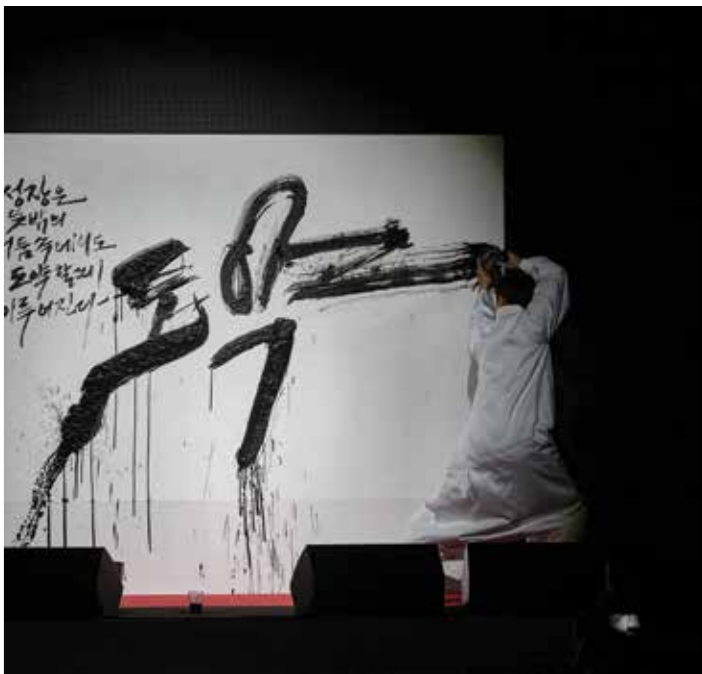
### CONNECTION & TOGETHERNESS, PASSION & PARTNERSHIP

The calligrapher's bold performance instantly called upon the eyes and ears of the audience to the stage. Just following the performance, Kim Yong-kee, the Vice Chairman of NOROO Paint & Coatings Co., Ltd., held the audience's attention as he expressed his gratitude for all the hard work last year and spoke about what it means to “evolve.” During the economic recession of 2018, amid the costs of raw materials rose and economic growth declined, NOROO Paint & Coatings managed to increase its sales volume. “This was thanks to all of your passion and partnership,” Vice Chairman Kim added, as he thanked everyone. His resolute speech continued as he expressed, “Two years ago, the theme of our seminar was connection, which was followed by last year's theme of togetherness. We decided for our 2019 theme to be “evolution,” to solidify our mindset geared toward evolution upon the successful foundation we have built based on a shared connection and togetherness. We vow to become a brand that establishes a connection while staying together during these difficult times in order to evolve forward.” These words communicated an even stronger message as board members and staff bowed in unison from the stage and across the entire room. Indebted to the dedication and hard work of these people, the event continued with new product introduction, followed by passionate cheers from the audience.

### 共鸣与同行·热情与合作

书法家的激情表演让听众的视线与注意力瞬间都集中到了舞台上，紧接着NOROO涂料股份有限公司的金容基副会长登上舞台，对大家过去一年的努力给予感谢，并谈到了飞跃的意义。在原材料价格上涨、经济增长率下降的2018年经济危机中，NOROO涂料的销售规模仍然保持正增长，金容基副会长感言“这得益于各位社长的热情与合作！”同时他也表示：“我们的经销商大会前年的主题是共鸣，去年的主题是同行。为了体现出在共鸣与同行的基础上更上一层楼的美好寓意，我们将2019年研讨会的主题定为‘飞跃’。越是困难的时刻，大家越要团结一致，努力发展为共鸣、同行、奋力飞跃的NOROO。”舞台上一字排开的高管人员和台下职员们发自肺腑的道谢与坚定的决心，更加重了这句话的份量。紧接着，活动在热烈的掌声中正式进入到了新产品介绍环节。





GREEN 2019

The presenters for the new product, Senior Research Director, Kim Jae-hak, and Technology Research Institute Assistant Manager, Jamie Jung, explained, “Last year’s seminar allowed us to explain that regulated eco-friendly products were trending. This year, however, is the year in which the market paradigm will shift gears toward that of eco-friendly products. In response, we focused our research on eco-friendly products.” They then went on to provide an explanation about the changes to environmental regulations applied from 2019, as well as 14 new products. Construction use-based products, including Soon & Soo’s Water Guard, Radon Guard, and the Energy Saver Cool Warmer, all of which are ground-breaking water-based paints, received much attention from the audience with their eco-friendliness and ability to create a safer living space. Soon & Soo Water Guard features antifungal and antibacterial properties and can even be painted over humid concrete spaces. Soon & Soo Radon Guard paints over all surfaces and demonstrates superior elasticity that stands well against cracks on surfaces. If the inner layer is painted with Soon & Soo Water Guard and the outer layer with Soon & Soo Radon Guard, the occurrence of cancer-causing radon can bring about a reduction reaching over 20%. Energy Saver Cool Warmer has thermal conductive micro-air particles that keeps the home cool in the summer and warm in the winter. Soon & Soo 100 Plus, an upgraded version of the current Soon & Soo 100, was introduced as the best indoor water-based product for its price. For slippery-prevention paint, the eco-friendly, odorless, and easy-to-use EASY NON-SLIP was also introduced, which as also requires being shaken prior to use. Eco-friendliness was also a featured property in waterproofing materials, flooring, and primer for metal pre-treatment. Moreover, not only can inner and middle layers be painted with a water-based, elastic, and waterproof system, the system can now be painted on the outermost layer, while minimizing heavy metals and odors. Eco Elastic Paint and Cleanthane are also newly improved, following the environmental regulations with their MOCA-free floor materials, abrasion

2019 · 环保元年

“在去年的经销商大会上我曾经说过，符合各种规定的环保产品是大趋势，今年则将成为用环保产品改变市场模式的元年。为此，我们重点研发了环保产品。”新产品发布人——技术研究所金载学所长与丁淳美代理仔细地介绍了自2019年开始实行的环境法规修订事项以及14种新产品。建筑涂料领域的纯&秀Water Guard与Radon Guard、Energy Saver Cool Warmer等能够打造更环保、更安全的生活环境的新概念水性涂料赢得了大家的广泛关注。具有抗霉菌、抗细菌功能的纯&秀Water Guard可在潮湿的混凝土面上涂刷。纯&秀Radon Guard的涂膜致密、弹性高，墙面产生裂缝时也能保持涂膜。将纯&秀Water Guard用作底漆后再用Radon Guard进行面漆涂装，致癌物质氡的释放量将减少20%以上。Energy Saver Cool Warmer则可形成降低导热率的空气微粒涂膜，实现冬暖夏凉的效果。同时还介绍了将现有纯&秀100的性能全新升级的纯&秀100 plus，这是一款性价比极高的内墙用水性涂料。此外NOROO还推出了在防滑涂料的基础上增添环保性能的EASY NON-SLIP，这种产品无味，摇晃后即可立即使用。NOROO在防水材料与地板材料、金属预处理用底漆等领域也突出了环保性。随着水性弹性防水体系的成功开发，继底漆、中涂之后，如今面漆也有了最大限度减少重金属与气味的水性防水体系。环保弹性聚氨酯涂料与Cleanthane作为符合环境规定的MOCA（环境部公告有毒物质）

durability as a waterproofing material, durability, and alike. The automobile use-based, completed version of Water-Q was introduced as the Water-Q FULL SERIES. This is an eco-friendly paint system for maintenance that has been prepared for the regulation of VOCs that will begin from 2022, and it comes in various colors despite the fact that it is water-based. Furthermore, the company plans increase development of putty products, a relatively weak sector of the company, with HiQ Anyone Putty, featuring an effectively drying formula that is abrasion-resistant and minimizes air bubbles.

2019, EVOLVING FORWARD WITH BOLD NEW PRODUCTS

Time flew by at the seminar with the introduction of innovative and newly-improved products. The speaker for the second half of the event, Yoo In-kyung, who spoke on “Promises to Myself for New Evolution,” expressed that she was so amazed by how diverse the world of paint is, something she had not been familiar with prior to that day. The Marketing Department, who had prepared this event, remarked, “NOROO Paint & Coatings produces products that value our customers and offer technological and color features that they can trust and use. The VIP Exclusive Seminar is a place for the company and VIPs to partake in a discussion centered around new products and information while sharing strategic benefits.” Moreover, Representative Director, Jin Myung-ho, emphasized, “NOROO Paint & Coatings operating with VIP business partners based on our technical capabilities and trust will not only ensure our competitive edge in the long term, but also discuss with the VIPs to gain a competitive edge in regional markets for us to truly evolve forward.” The new products introduced at seminars every year prove that the sky is the limit for technological development, while amid the striving efforts the company has exhibited over 2018, as well as that which was dedicated toward new product development, we are anticipating are very fruitful year head.

Free型地板材料、防水材料，耐磨损性、耐久性等各项性能也都变得更加优秀。同时NOROO还介绍了汽车修补漆Water-Q的完成型版本Water-Q FULL SERIES，这是应对2022年VOCs规定的环保修补漆体系，可在水性基底的基础上稳定地展现多种颜色。另外，具有非常优秀的干燥性与磨损性、气泡最少的HiQ Anyone Putty将在腻子市场率先上市。

强大的新产品作为跳板 · 实现飞跃的2019

在惊叹于新产品的创新性与性能改善的过程中，研讨会逐渐拉下了帷幕。第2部分的演讲者是刘仁敬讲师，他的演讲题目是《为实现新飞跃我做出的承诺》，演讲中他感慨到“我以前不知道，原来涂料的世界如此广阔、如此丰富多彩”。负责筹备本次活动的营销组表示：“NOROO涂料拥有提高消费者价值的技术与色彩，致力于生产令消费者放心的产品。VIP特约经销商大会是总公司与特约经销商分享新产品与新信息、谋求战略性利益的场合。”另外，陈明浩代表理事强调说：“以过去积累的技术力量与信赖为基础，与特约经销商一路同行的NOROO涂料今年也将确保中长期竞争力，为在地区商圈竞争中快速抢占先机，将与特约经销商共思考，齐飞跃！”每年特约经销商大会上发布的新产品都会让人切身感受到技术的发展无止境这一事实。将孤军奋斗、一路走过的2018年作为助跑，以新产品为踏板，NOROO涂料与特约经销商在2019年也将实现更高的飞跃。





## Creating a Safer Space. NOROO Paint & Coatings is here to help!

NOROO Paint & Coatings Co., Ltd.  
Deputy General Manager of Construction Technology Department 1, Ahn Yoon-soo

The growing problem of particulate matter has gone beyond that of mere concern, but rather become the source of fear. We make an effort to stay indoors as much as possible, yet it's not even safe indoors, either. Sealing all the doors and windows closed doesn't provide any guarantees as particulate matter finds its way into our homes. Not only that, according to field experts, the VOCs and Radon found in furniture and construction materials contribute to the air quality indoors, possibly becoming more harmful than that of air quality outdoors. So then, how can we create a safer space? Well, NOROO Paint & Coatings is here to help.

### NOROO涂料帮您打造更安全的空间

NOROO涂料股份有限公司建筑技术1组安胤琇次长

连日来不断升高的PM2.5数值如今已不再是担不担忧的问题了，而是让我们感到恐慌。可以的话，大家都想一直待在室内，然而室内其实也并不安全。有专家分析指出，即使关紧门窗，可雾霾颗粒物也会从缝隙钻进来，另外，室内的家具或建筑材料中释放的VOCs、氡等也可能使空气质量变得比外面更危险。那如何才能打造一个更安全的空间呢？为此，NOROO涂料股份有限公司站了出来。

#### WORSENING INDOOR AIR QUALITY

Concerns regarding the air quality at home began to arise far before particulate matter became an issue. They actually began from the Sick Building Syndrome (SBS). SBS is a medical condition caused by chemical materials that circulate indoors. It is widely known that VOCs, such as formaldehyde and toluene, which are found in construction materials of buildings, as well as pollutants like Radon, can be released into the air, leading to asthma, atopic skin diseases, cancer and other respiratory illnesses. Although many were aware that this is an issue, nothing much has changed. New houses and apartments are still built with construction materials that release harmful chemicals into the air. To get rid of these chemicals, residents are waging a war against them by doing bake-outs, ventilating the place, using air purifiers and alike. In the midst of it all, particulate matter has now become a serious matter weighing down on the public's mind. What is then needed to improve upon this situation? If we paint indoors with an indoor finisher, would we be able to at least form some sort of a line of defense? This topic, itself, served as the very research topic for Ahn Yoon-soo of NOROO Paint & Coatings' Construction Technology Department, as he conducted research and experiments looking into the matter. This eventually led to the future release of Pantone AirFresh Paint in 2018, followed by Soon & Soo Water Guard and Radon Guard of this year.

#### 变得更加严峻的室内空气质量

其实在雾霾以前，关于空气质量的问题最早开始于新居综合症。所谓新居综合症（Sick House Syndrome）是室内化学物质引发的人体疾病。众所周知，室内建筑材料中包含的甲醛、甲苯等挥发性有机化合物（VOCs）、氡等污染物质释放到空气中，将会引发哮喘等呼吸道疾病与特应性皮肤病、癌症等。人们在很早以前就认识到了问题的存在，但情况却并没有太大改变。新建的住宅或公寓中使用的建筑材料依然在释放有害化学物质。为抵御这些有害化学物质，消费者们在烘干、通风、空气净化器等方面开始了力不从心的持久战。如今又多了一个雾霾出来“助阵”，让战况变得更加严峻了。

如何才能稍稍改善一下这种情况呢？作为室内装修材料，涂料能否成为最终防线呢？NOROO涂料建筑技术1组的安胤琇次长进行了反复的研究与试验。继潘通AirFresh涂料（2018）之后，今年又陆续推出了soon&soo Water Guard、Radon Guard等产品。



**PAINT, THE FINAL LINE OF DEFENSE**

According to Korea Conformity Laboratories (KCL) research results, Pantone AirFresh can absorb formaldehyde 11 times better than regular water-based paint. The product has acquired certifications relating to both outstanding eco-friendly and antimicrobial properties, leading approval from the Ministry of Land, Infrastructure and Transport as efficiently absorbent paint recommended when building health-friendly homes. How is it possible for paint to improve upon air quality by adsorbing chemical materials?

Deputy General Manager Ahn explained, “Pantone AirFresh Paint has a special nano pore-sized stoma and van der Waals force, a force that attracts molecules together that enables it to absorb low-weight molecules, like ammonia, and even break down formaldehyde, ultimately utilizing physical adsorption and chemical reactive properties.”

Pantone AirFresh eliminates harmful chemicals in the air, while the newly-launched Soon & Soo Water Guard and Radon Guard help prevent their release. He added, “Soon & Soo Water Guard paints well, even in humid conditions. It dries efficiently and even has antibacterial and antifungal features. Bacteria and fungi live on walls and float around in the air, but this product prevents that.” Moreover, Soon & Soo Radon Guard prevents the emission of radon, a chemical often referred to as a “silent killer.”

“Radon is a natural radioactive material that is colorless, odorless, and tasteless. It is a grade 1 carcinogen causing lung cancer if inhaled for a long period of time. Recently, radon has been discovered in not only construction materials, but also in mattresses and marbles, causing a stir among the people. Radon is also found in all corners of our daily lives, indicating a clear need to alleviate this issue. The radon gas emission rate is high in cracks of concrete, cement mortars, and plastered walls, but Soon & Soo Radon Guard is high in elasticity that allows it to be able to fight against these cracks, effectively lowering the radon gas emission rate. The high elasticity also prevents the product from cracking, even during cold winter weather.”

All three products developed by Deputy General Manager Ahn improve air quality and eliminate harmful chemicals, creating a safety net indoors. The products have made great contributions to making a safe indoor space for people. In this sense, NOROO Paint & Coatings is the ultimate line of defense against bad indoor air quality.

**NOROO PAINT & COATINGS, CREATING CLEANER AIR**

To develop these products, Deputy General Manager Ahn has been in touch with social issues and collected data over the long term, going back and forth between researching and experimentation. Functional paint takes a longer time to develop than other products. From following the global environmental policy and technology trends, selecting safety-approved materials and following the strict national regulations, NOROO Paint & Coatings offers products that are functionally superior to imported brands. He went on to explain, “We are inventing new paint products that go beyond being simply odorless and eco-friendly paint, without the use of harmful chemicals, and can go on to provide an effective means for bettering the environment.” Amid continuous efforts toward product development, NOROO Painting & Coatings delivers eco-friendly products that enable us to breathe fresher air, creating a safer space around us.



**涂料将成为最终防线**

韩国建设生活环境试验研究院的试验结果显示，与普通水性涂料相比，潘通AirFresh表现出11倍以上的甲醛吸附率。这款产品不仅取得了环保认证标志与抗菌标志认证，还通过了韩国国土交通部制定的健康住宅建设建议标准之一的吸附型建筑材料性能评估标准。涂料竟然能吸附化学物质、改善空气质量，这是如何实现的呢？“潘通AirFresh涂料通过特殊纳米孔结构，利用微气孔与分子间相互吸引的力量，即范德华力吸附氨等低分子量的物质，进而吸附、分解甲醛，通过物理吸附与化学反应机制发挥作用”，安胤琇次长解释道。

如果说潘通AirFresh是消除已经漂浮在空气中的有害物质，那最近推出的纯&秀 Water Guard与Radon Guard则是阻断有害物质释放的产品。“纯&秀 Water Guard在潮湿的场所中涂刷也非常顺利，涂膜的干燥性优秀，同时具有抗细菌、抗霉菌功能。细菌与霉菌在墙壁上寄生的同时也会漂浮到空气中，这两款产品就是从源头上防止这种情况的发生”。与此同时，纯&秀 Radon Guard则可以阻断被称为沉默杀手的氡的释放。

“氡是一种无色、无臭、无味的自然放射性物质，长时间吸入时会引发肺癌，属于1级致癌物质。最近建筑材料及床垫、大理石等都检出了氡，引发了国民的强烈不安。生活环境各处都能发现氡的存在，因此必须要努力减少它的释放量。混凝土、水泥灰浆、石膏板裂纹中的氡气释放量很大，纯&秀Radon Guard具有很高的弹性，可有效抵抗裂缝，减少氡气的释放量。低温条件下也有很好的伸展率，冬季也不容易开裂。”

安胤琇次长开发的三种产品全都能改善空气质量、阻断有害物质排放，在室内形成防御膜，以此帮助客户打造安全的生活环境。至此，我们已经可以拍着胸脯说“保护室内空气质量的最前线由NOROO涂料守护”了。

**NOROO涂料·提供更清新的空气**

为开发这些产品，安胤琇次长坚持思考社会性问题，长期收集资料，反复进行研究与试验。功能性涂料从开发阶段开始就需要投入更多的时间。掌握全球的环境政策与技术趋势，选择安全性已经得到验证的原料，严格遵守国内的相关规定，在此基础上开发的NOROO涂料产品具有比任何进口产品都更优秀的性能。安胤琇次长表示：“超越没有气味与有害物质的环保涂料范畴，我们正在生产能够为改善环境贡献一份力量的新概念涂料。”未来，不断开发的NOROO涂料环保产品将使我们在更安全的空间中自由呼吸更清新的空气。

Pantone  
AirFresh



Soon & Soo  
Water Guard



Soon & Soo  
Radon Guard







NOROO HOSTS GENERAL, REGULARLY-SCHEDULED MEETING FOR SHAREHOLDERS



NOROO PAINT & COATINGS RECEIVES THE ENVIRONMENTAL SERVICES AWARD FROM THE UNITED ALLIANCE OF ANYANG ENVIRONMENTAL ORGANIZATION



THE 2019 PRAYER RITUAL TAKES PLACE TO PRAY FOR A DISASTER-FREE YEAR

NOROO Holdings Co., Ltd.

NOROO控股股份有限公司

NOROO HOSTS GENERAL, REGULARLY-SCHEDULED MEETING FOR SHAREHOLDERS

On March 21, NOROO Holdings held their 73rd general meeting for shareholders and NOROO Paint & Coatings held their 13th general meeting for shareholders at NOROO Anyang Welfare Center, with both shareholders and employees in attendance. At this meeting, each company presented their operating revenue and net profit for each term of the 2018 business year, as well as performance records of subsidiary companies and equity method investment companies, including a consolidated statement of profits and losses detailing the sales and net profit for each term. Furthermore, the balance sheets and income statements detailing the performance of each company were approved and dividends for ordinary shares and preferred stocks in the surplus appropriation statement (draft) were approved respectively.

召开NOROO定期股东大会

NOROO控股股份有限公司第73届定期股东大会与NOROO涂料股份有限公司第13届定期股东大会于3月21日在安养总公司NOROO福利馆召开，股东及公司员工出席了此次股东大会。本次股东大会公布了各公司2018年度的营业收益与当期净利润，包括总公司与持股投资公司业绩在内的合并销售额与当期净利润等。同时批准了关于公司成果的资产负债表与损益表，另外还分别批准了关于留存收益表（案）的普通股与优先股分红。

NOROO Paint & Coatings Co., Ltd.

NOROO涂料股份有限公司

NOROO PAINT & COATINGS RECEIVES THE ENVIRONMENTAL SERVICES AWARD FROM THE UNITED ALLIANCE OF ANYANG ENVIRONMENTAL ORGANIZATION

The 21st Environmental Services Awards Ceremony took place on February 22, with members of the Gyeonggi Province and Anyang-si councils and leaders of different environmental organizations in attendance. The event was co-hosted by the United Alliance of Anyang Environmental Organizations and the Gyeonggi Institute of Environmental Issues. This event was organized to initiate environmental movements and raise citizens' environmental awareness by supporting excellent environmental organizations. Each year, two NGO's, one from the social environment category and one from the industrial environment category, are selected to receive the Environmental Services Award of the Year. NOROO Paint & Coatings received the award in the industrial environment category, being recognized for their cleaning activities along the Anyangcheon Stream, as well as many other initiatives to preserve the environment in the region and to coexist with local communities. Park Yeon-soo, the Chairperson of the Labor Union, attended the ceremony to receive the medal and the plaque. The President of the United Alliance of Anyang Environmental Organizations said, "Just as the awarded organizations have been doing, let's continue to protect the environment with a heart full of dedication and service." NOROO Paint & Coatings plans to continue making various social contributions to protect the local environment.

荣获安养地区环境团体联合会主办的环境志愿服务大奖

安养环境团体联合会与京畿环境问题研究所主办的第21届环境志愿服务大奖颁奖典礼于2月22日举行，京畿道与安养市议员、多个环境团体长官共

同出席了本次活动。本活动意在支援优秀环境团体活动，借此活跃环境运动、提高市民的环境意识。通过本次活动，地区NGO团体分别评选出了社会团体环境领域与企业环境改善领域的年度环境能手并授予了环境志愿服务大奖。NOROO涂料过去开展的安养川净化活动等为保护地区环境所做出的努力以及为与地区社会实现共赢发展而开展的诸多志愿服务活动等受到高度好评，被授予了企业环境改善领域的环境志愿服务大奖。工会委员长朴然洙出席了颁奖典礼，颁发了奖章与奖牌。安养环境团体联合会会长表示：“让我们像今天获得环境志愿服务大奖的会员们一样，秉持献身与奉献的精神守护环境吧。”未来NOROO涂料也将为保护地区环境继续开展多种社会贡献活动。

THE 2019 PRAYER RITUAL TAKES PLACE TO PRAY FOR A DISASTER-FREE YEAR

On March 9, approximately 300 NOROO employees attended a prayer ritual at Surisan Mountain in Anyang where they prayed for a disaster-free year. Thanks to the clear skies and low levels of particulate matter in the air, the NOROO employees bonded with one another while hiking and hoped for a disaster-free 2019, The head of the ESQM Department read the New Year's resolution of hopes for safety and caution. Jin Myung-ho, the CEO of NOROO Paint & Coatings, said "In 2019, let us achieve our business goals for the year and grow as a global corporation that can lead the global market." Lee Han-bok, the Vice Chairman of NOROO Coil Coatings, added, "Although the business field is becoming more difficult these days, and it seems that it will stay in this state for the whole year, let's use this time as a chance to stand as one and create our own opportunity." Soorisan Mountain, which is where the prayer ritual takes place every year, was named Soorisan because the mountain takes the form of a soaring eagle. As the NOROO employees climbed this mountain, they prayed that this year will not only be safe, but also a year in which NOROO can soar like an eagle.

举办2019年无事故祈愿祭

3月9日，在安养修理山举办了无事故祈愿祭，300多名NOROO员工出席了本次活动。在晴好天气里，NOROO员工开展了增进友谊的登山活动，同时共同参与了2019年的无事故祈愿祭，听取了由祈祷安全的ESQM组负责人朗读的决议书。NOROO涂料代表陈明浩表示：“让我们努力实现2019年的事业目标，作为全球企业引领世界市场吧！”此番话语凝聚了NOROO员工的决心。NOROO卷钢涂料副社长李汉福强调：“事业环境变得越发艰难，预计今年也不会很容易，但希望NOROO的全体员工可以团结一心，在危机中创造机会。”每年无事故祈愿祭的地点都在修理山，修理山因形似秃鹫耸立的样子而得名。今年员工们也团结一心，祈祷百分百无事故的同时预祝了NOROO的2019年也像高耸入云霄的修理山一样更上一层楼。

SEOUL NATIONAL UNIVERSITY IS PAINTED WITH PANTONE'S COLOR OF THE YEAR

NOROO Paint & Coatings painted the new engineering building at Seoul National University with Pantone's color of the year, PANTONE 16-1546 Living Coral. Living Coral, which is the color of coral reefs, is a bright orange with a hint of golden sunlight that not only gives warmth and comfort, but also stimulates minds to become more active, encouraging people to actively interact with one another. In this day and age when online social networking is fully driving changes in the offline world, Living Coral delivers a message of connection and immersion experience. The color also calls attention to coral reefs, which in turn raises awareness of the rapidly deteriorating global environment. Living Coral is the fifth color that is being used to paint the school, after the Marsala color, which was used in 2015. By painting the second floor with Pantone's 2018 color, then the first floor with Living Coral, NOROO demonstrates the change in color trends over time. Moreover, NOROO installed signs on the wall that introduces each color, NOROO Paint & Coatings, and Pantone, attracting the attention of many passersby. Every year, the main walls at the





SEOUL NATIONAL UNIVERSITY IS PAINTED WITH PANTONE'S COLOR OF THE YEAR



2019 "COVER ALL" COLOR BOOK IS RELEASED

entrance of the new engineering building at Seoul National University are painted with Pantone's Color of the Year. This not only conveys the color sense of NOROO Paint & Coatings, but it also acts as an advertisement for the diverse colors available at NOROO Paint & Coatings.

#### 在首尔大学应用潘通年度流行色

NOROO涂料在首尔大学新工程学馆应用了潘通年度流行色“PANTONE 16-1546珊瑚橙（Living Coral）”。珊瑚橙是珊瑚草的颜色，是一种如同洒满金色阳光般明亮的橘黄色，不仅能给人以温暖与舒适之感，还能刺激活动性，诱导人与人的积极交流。在活跃的线上社交网络引领线下变化的当今时代，珊瑚橙传递着联系与沉浸的体验。与此同时，唤起人们对珊瑚草的关注，唤醒人们对正在快速破坏的地球环境的警觉。继2015年应用玛萨拉酒红之后，这次已经是第5次应用潘通年度流行色了，2楼墙面使用的是2018年的流行色，1楼墙面使用的是今年的流行色，2种颜色的流动清晰分明、一目了然。另外，相应墙面上安装有标志牌，介绍颜色相关内容以及NOROO涂料与潘通公司，引发了使用者的关注。在首尔大学新工程学馆入口正面的墙面上应用每年的潘通年度流行色，将它作为传递NOROO涂料色彩感性 with 色彩效果的宣传墙。

#### 2019 "COVER ALL" COLOR BOOK IS RELEASED

NOROO Paint & Coatings has published the "COVER ALL" paint color book with newly updated colors, which was then distributed to paint shops throughout Korea. The newly-published "COVER ALL" color book contains 1,512 colors in total, based on the different colors that were popular each year. The publication is intended to make color selection more efficient and easier for designers, painters, and consumers. The color book displays several color categories: bright-toned Off White (WT) that are used as a main colors, Monochrome that plays with brightness using shades of grey, Chic Neutral & Accent Neutral that shows the differences between low-chroma colors, Moderate Feather/Punch that is higher in chroma

than Neutral and is warm and bright, Bright Crush that is sharp, gorgeous, and is high in both brightness and chroma, Vivid Surprise that is high in chroma and similar to prime colors, as well as Deep Black that leaves a gentle impression with its low chroma and intense mixed colors. This type of color categorization increases the usefulness of the book by allowing readers to see colors depending on different atmospheres at just one glance. In 2011, NOROO Paint & Coatings signed a strategic cooperative agreement with the global color standard-setting company, Pantone, and has been producing 2,300 Pantone paint colors since. NOROO Paint & Coatings is the only company that meets the strict standards of Pantone and produces superior results that meet the needs of both interior designers and consumers. An official from NOROO Paint & Coatings described that, "The 'COVER ALL' color book, which is produced based on NOROO Paint & Coatings' excellent color-making skills for painting cities and homes, will be highly useful. Consumers will be able to find the exact paint color they want at any shop selling NOROO Paint & Coatings products."

#### 推出2019『COVER ALL』色卡手册

NOROO涂料推出了使用新颜色的『COVER ALL』色卡手册，并分发给全国的涂料代理商。新推出的『COVER ALL』色卡手册将各年份的人气颜色整合成数据库，共整理了1,512种颜色，设计师、涂装专家与普通消费者均可轻松快速地选择并使用自己想要的颜色。色卡手册的颜色可分为用作主色调的亮色系颜色Off White (WT)、灰色系中表现亮暗的明暗阶段的Monochrome、表现低彩度颜色差异的Chic Neutral & Accent Neutral、与Neutral相比彩度更高且给人以明亮温和感觉的Moderate Feather/Punch、明度与彩度高且鲜艳明亮的Bright Crush、高彩度组合中接近于原色的Vivid Surprise、低彩度深混合色中整体给人以沉稳感的Deep Black等多个种类，构成合理，多种氛围的涂料颜色一目了然，大大提高了色卡手册的利用率。NOROO涂料于2011年与提出全球色彩标准的潘通公司签订了战略合作协



THE THAILAND BOARD OF INVESTMENT AND A GROUP OF BUSINESS DELEGATES TO VISIT THE KIBAN'S R&D CENTER



议，致力于生产潘通公司2300种颜色的涂料。作为唯一一家具备潘通要求的严格颜色实现能力的企业，准确地用涂料表现室内装饰设计师与消费者们想要的颜色，创出了卓越的成果。NOROO涂料相关人员表示：“选择城市建筑与室内装饰色彩时，凝聚NOROO涂料强大技术力的『COVER ALL』色卡手册，将表现出卓越的利用率。另外，消费者还可以通过NOROO涂料代理店准确地找到相应颜色的涂料。”

#### Agricultural Corporation THE KIBAN Co., Ltd. 农业公司法人THE KIBAN

**THE THAILAND BOARD OF INVESTMENT AND A GROUP OF BUSINESS DELEGATES TO VISIT THE KIBAN'S R&D CENTER**  
On February 26, a team composed of corporate officials from the Thailand Investment Corporation visited THE KIBAN's Anseong R&D Center. In 2018, THE KIBAN established a corporate R&D Center in Chiang Mai, Thailand, and the center has been actively contributing to research since. The team visited to benchmark THE KIBAN's developed technologies. The Thailand Investment Corporation's team first heard about how THE KIBAN was established, its processes, objectives, development, motivation, and plans for the future. Next, the team visited facilities within the center, such as the biotechnology center, seed manufacturing center, breeding house, etc. After their visit, the team expressed that it had been a memorable visit, adding that they "are excited to see how THE KIBAN will grow in the future." They also thanked THE KIBAN for establishing the R&D Center in Chiang Mai. The Director of THE KIBAN R&D responded by saying, "It is a pleasure to have you visit here," adding that he "hopes that the Thailand Investment Corporation team will continue to support the R&D Center in Chiang Mai."

THE KIBAN plans to continue branching out to different regions and countries through cooperation with national bodies and corporations, as well as to contribute to local development.

#### 泰国投资厅和企业访韩团访问THE KIBAN研究基地

由泰国投资厅及企业相关人员组成的访韩团于2月26日访问了THE KIBAN安城研究基地。THE KIBAN于2018年在泰国清迈成立了当地法人研究所，致力于开展活跃的研究活动，泰国投资厅和企业访韩团为实现对先进企业技术的标杆学习，特意企划了此次访问。泰国投资厅和企业访韩团听取了THE KIBAN的成立过程与目标、增长动力与未来规划，参观了生命工程中心、种子加工中心、栽培大棚等研究基地内的多处设施后，纷纷表示“此次参观令人印象深刻”、“非常期待THE KIBAN的增长”，同时对THE KIBAN在清迈当地成立研究所表示了感谢。THE KIBAN的R&D本部部长表示：“对于各位的访问，我们深感荣幸。希望各位能对清迈的法人研究所也予以更多关注与支持。”THE KIBAN未来也将通过与多个国家与机构合作扩大基础，为各地区的发展付出更多努力。

#### GIMJE MEISTER HIGH SCHOOL AGRICULTURAL SCIENCE HOSTS A TEACHERS' CONFERENCE

On February 19, THE KIBAN invited teachers from Gimje Meister High School Agricultural Science to the Anseong R&D Center to attend a teachers' conference on agricultural science. Gimje Meister High School Agricultural Science was established in 1951 and has played a role at the center of agricultural education in Jeollabuk-do Province. In 2017, the school was renamed as a Meister Vocational High School that fosters interest in students for becoming future workers in the agricultural field by training these students in the seed industry and on the latest agricultural technologies. This conference was hosted so that teachers could directly experience the agricultural industry themselves, and in turn, be able to teach their students in a way they can understand. The conference was held over three days during





GIMJE MEISTER HIGH SCHOOL AGRICULTURAL SCIENCE HOSTS A TEACHERS' CONFERENCE



A GAME OF YUT IN CELEBRATION OF 2019'S FIRST FULL MOON OF THE LUNAR CALENDAR

which the participating teachers explored the facilities, were introduced to on-site crossbreeding, and more. After the conference, teachers commented that, "In the short period of three days, we saw the bright future of the agricultural industry. We also learned about how much effort and dedication goes into running the industry. When we teach our students in the future, we will try to teach them more practical skills and foster in students the momentum for becoming leaders of tomorrow."

开展金堤农生命Meister高中教师研修

2月19日, THE KIBAN在安城育种研究所接待了金堤农生命Meister高中的教师研修团, 并为他们提供了农生命产业相关研修。金堤农生命Meister高中成立于1951年, 一直以来都发挥着全罗北道农业教育的核心作用, 2017年以职业高中、即如今的Meister高中建校, 致力于在种子产业、尖端设施等学科领域培养未来农生命产业的人才。本次研修意在为教师们提供亲身体验农生命产业现场并为学生提供更个性化教育的学习机会。参与研修的教师们在为期3天的培训中开展了实务体验, 如参观设施、在栽培大棚内进行杂交作业等。教师们在结束研修后表示: "在3天的短暂时光里, 我们看到了农生命产业的可能性, 也知道了该产业需要付出多少汗水与努力。未来指导学生时, 我们会努力将他们培养成具备现场个性化实务能力且足以引领未来农生命产业的人才。"

A GAME OF YUT IN CELEBRATION OF 2019'S FIRST FULL MOON OF THE LUNAR CALENDAR

On February 19, all employees of THE KIBAN Anseong R&D Center gathered to celebrate the Day of the First Full Moon of the lunar calendar by playing a game of yut. The first full moon is on the 15th day of the New Year on the lunar calendar and it is traditionally a significant day in Korean culture, as the country was founded on agriculture. Traditionally speaking, it is as important as New Year's Day on the Gregorian calendar. Such is why traditional ceremonies take place on this day to wish for wellness and abundance in the

new year. THE KIBAN annually hosts festivities to continue the unique Korean traditional customs, as an agricultural corporation, to promote the company's future growth and to encourage bonding between employees. This year, employees shared rice cakes and other snacks, and formed their own teams to participate in a game of yut, truly celebrating the day of the First Full Moon.

2019年正月十五掷柶游戏

2月19日, 为迎接正月十五, 全体员工齐聚THE KIBAN安城育种研究基地, 开展了趣味十足的掷柶游戏。正月十五是阴历的第一个满月日, 在以农耕为本的韩国文化中, 有着堪比春节的重大意义。因此, 在正月十五这天, 有很多祈祷一年安康与丰饶的岁时风俗。农生命企业THE KIBAN为传承韩国固有的风俗、谋求公司发展与员工团结, 每年正月十五都会举办活动。今年, 员工们在享用事先准备的年糕与茶点的同时自由组队参与掷柶游戏, 度过了一个很有意义的正月十五。



This photo of the VIP's was taken at the entrance to the Grand Ballroom of the Lotte Hotel Jeju, where the 2019 NOROO Paint & Coatings VIP Exclusive Seminar was held. Thank you to all the VIP's and their energetic expressions for being featured in this photo for our theme of the year, "Takeoff!"

在召开2019 NOROO涂料VIP特约店研讨会的济州乐天酒店大宴会厅入口进行拍摄的特约经销商们, 在此特别感谢他们摆出像飞跃二字一样有力的姿势!



This is the bright appearance of the new How Hom Interior Store located in Eulji-ro, Seoul. HowHom Interior, which has been designing colors for interiors, has now expanded to provide living construction services to convey the beauty of color and give the convenience of living to more customers, through this store.

在乙支路开设的HOWHOM室内装饰卖场, 内部看起来十分敞亮。HOWHOM室内装饰卖场的业务范围现已扩大到室内色彩装饰及生活施工服务, 公司计划通过该卖场向更多顾客传递色彩的美丽与生活的便利。



NOROO

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