

NOROO



Winter. 2017

Color & Protect

NOROO Quarterly Magazine | No.45, 2017

NOROO

NOMAD NOROO!

Secure Opportunities through Market Leadership!

Dear NOROO family members,

With the arrival of year 2018, the year of the golden dog has dawned. May 2018 bring your family plenty of health and happiness.

In 2017, under the vision of 'Young NOROO, Secure Opportunities through Market Leadership,' we demonstrated our unique spirit, passion, energy and sense of accountability as a Young NOROO more vividly than ever. In the chemicals sector, despite fierce competitions, we succeeded in securing a leading differentiated position largely through our strategic sales expansion. In the agriculture and life sector, we completed THE KIBAN Anseong R&D Center, which is Korea's largest agriculture and life research cluster, in 2017 as part of our efforts to lay the groundwork for active business expansion and diversification in the sector. All the achievements that we made in 2017 are entirely due to your tireless efforts, for which I am deeply grateful to you all.

Dear NOROO family members,

In 2018, the world economy is expected to gradually shift to a recovery phase led mainly by those industries directly related to the fourth industrial revolution. However, the Korean economy is anticipated to face more severe uncertainties and difficulties in 2018 in terms of both its competitiveness and its business environment. In order to overcome such difficulties, we must not only demonstrate our abovementioned mental virtues as NOROO family members but also equip ourselves with wider perspectives and stronger dynamism. In Korea, we must continue to create diverse business opportunities with an aim to further expand our market dominance. Overseas, we will have to make an all-out effort to develop new markets for us so that we can pursue a higher level of strategic turnaround in our international business competency than we have tried in the past.

Given our domestic and overseas situations, I would like propose "NOMAD NOROO, Secure Opportunities through Market Leadership" as our group's vision for the year 2018. The vision tells us what direction we should take in the midst of worsening business environment. It also implies that we must equip ourselves with broader perspectives and advanced tactics. We now live in a new era where we can achieve sustainable growth only when we

are armed with new perspectives, which is different from what we were used to in the past. In the chemicals sector, we must focus on implementing the following two mandates: First, based on NOMAD's perspectives, we must not be content with our market-leading position in existing markets but must move on to new markets to secure strategic positions there as early as possible. Second, we must work hard to maximize our organizational efficiency to back up our efforts mentioned above.

In the agriculture and life sector, we must focus on implementing the following two mandates: First, we must commercialize our overseas projects and find stable sources of revenue as soon as possible. Second, we will have to mobilize all our capabilities in order to achieve the break-even point as early as possible by establishing the seed business base quickly.

Meanwhile, at the group level, we will have to strengthen the group's integrated management capabilities and establish a future management base through governance structure reforms and organizational culture innovations in order to boost the synergistic effect among group companies while continuing to discover new growth engines.

Please understand that 2018 will become a more dynamic year for us than ever, despite plenty of new types of uncertainties which are to be anticipated, and we will have no choice but to march forward enthusiastically.

Finally, I would like to express my heartfelt gratitude to the Chairman of the NOROO Paint & Coating labor union, the Chairmen and Executive Officers of the affiliated companies' labor unions, and all the union members, for their strenuous effort to create a more mature labor-management culture in the group.

Happy New Year to Everyone!

January 2, 2018
Chairman **Han Young-jae**

游牧NOROO! 引领市场，把握机遇!

NOROO家族的各位成员!

新年伊始，2018年(戊戌年)正生机勃勃地向我们走来。
值此新春之际，祝全体NOROO员工身体健康，阖家幸福!

去年，在“年轻的NOROO! 引领市场，把握机遇!”的经营方针指引下，青年NOROO的霸气、热情、魄力和责任意识比任何时候都要突出。化工部门在激烈的竞争环境中通过战略调整扩大经营规模，确保了领先和差异性的优势地位；农业生命科学部门通过建成了国内最大的农业研发基地——The KIBAN安城研究所,奠定了坚实的事业基础。这所有的一切都与大家的不断努力是密不可分的，在此表示衷心的感谢!

NOROO家族的各位成员!

“第四次工业革命”给全球经济带来了巨大的冲击，虽然今年经济整体预测呈逐步复苏趋势，但韩国经济的竞争力和市场环境会因存在诸多不确定因素而进一步萎缩。为了迎接挑战，需要我们持续发扬NOROO人的精神，广泛思考，充分发挥我们的活力。与此同时，在国内市场我们需要持续创造更多新的事业机会，从而扩大我们的市场支配地位；为开拓海外新市场，我们需要孤注一掷，谋求新局面的战略高度。

我提议将2018年的经营方针定为“游牧NOROO! 引领市场，把握机遇!”在恶性的市场环境下，它为我们指明了方向，其中还蕴藏着广泛思考和高明的战术。只有从全新的视角，用与以往完全不同的经营方式来武装自己，才能迎来持续发展的时代。为此，化工业务部门首先要用游

牧民思考方式将业界的领先优势进一步拓展到更广泛的新市场，尽快巩固战略地位；其次，我们要努力强化弹性的组织效率。

农业生命科学业务部门首先要维持海外项目的稳定发展，发掘稳定的收益来源；其次，迅速构筑育种事业的基础，集中力量尽早实现收支平衡。

集团层面要进一步强化集团综合管理功能，通过管理结构的完善和组织文化的革新奠定未来的经营基础，持续发掘集团新的生长动力，强化集团下属公司之间的协同效应，实现集团事业的多元化发展。

2018年在新的不确定环境中更需要我们发挥活力，希望大家能够继续奋勇前行!

最后，向为构建和谐劳资关系辛勤付出的NOROO涂料工会主席、各下属公司工会主席以及全体工会成员表示衷心的感谢!

祝大家新春快乐!

2018年 1月 2日
会长 **韩荣宰**



02 New Year's Message NOMAD NOROO! Secure Opportunities through Market Leadership!
游牧NOROO! 引领市场，把握机遇！

Special Theme	Color & Protect
06 Essay	The potential of a protector 保护者的潜力
08 Information	The protector of Earth, Superman 守护地球的超人
12 interview	Coating the coil to intensify strength and beauty Technology Team 4, NOROO Coil Coatings Co., Ltd. 更加坚固、更加美观卷钢涂层 (株) NOROO卷钢涂料有限公司技术四部

With the most beautiful and
the sturdiest protective coating,
to safely protect customers and the environment,
NOROO always puts top priority on technology development.

最美的涂层，最坚固的保护膜，
为守护客户与环境，
NOROO一直走在技术开发的前沿。

NOROO People	
16 Focus on NOROO	NOROO INTERNATIONAL COLOR TREND SHOW 2018 ASSEMBLAGE of COLORS
20 Social Contribution	NOROO X POW!WOW! Picturing Seoul anew <POW!WOW! X NOROO in Korea> NOROO和POW! WOW! 画出首尔的新样子
24 News Briefing	
29 Behind Cut	

Protect, and be protected

The act of protection creates a protector and the protected. The two may seem like they contradict each other, but they are in fact very reciprocal. As one receives protection, they become stronger and as one protects, they also become stronger. Just as the coating of steel protects the steel from rusting, the steel becomes a sturdy foundation for the coating. Protection becomes a support foundation for both the protector and the protected.

保护与被保护

保护这一行为涉及两个主体，一个是保护者，另一个是被保护者。二者看似相对，实则具有很强的相互性，因为被保护者会具有安全感，而保护者会变得更加强大。就像钢铁表面的涂层可以让钢铁免于生锈，而钢铁本身又是涂层得以依附的基体一样，无论是保护者还是被保护者，都互为依托。

The potential of a protector

保护者的潜力

By_No Ji-yang



I was talking on the phone to a school friend who I haven't talked to in a while to set up a get-together before the end of the year. My friend said it would be difficult for him to make time these days as he was busy taking care of his twins. He added that his children fight every day to sleep next to their mother and that they play rock-paper-scissors to decide on a week-long schedule of who will take the spot next to their mother. I was able to feel my friend's complex emotions of his love for his children's bright laughter and affection while going through a tough time. Then, I suddenly thought of what my seniors and people around me said. I told him that this was all temporary, that that's how they grow and later he'll miss this time. I wanted to tell him that I didn't realize what that meant before, but now I understood. Protecting and taking care of someone by offering one's time and strength was not a one-sided sacrifice. In fact, I received even more strength and became a different person thanks to the experience. And that the incredibly boring time of pushing swings at the playground turned out to be quite short.

Hope Jahren, an American scientist who gained insight into life by studying the birth and growth of plants, wrote this in her book Lab Girl after having children. "Watching him grow, giving him what he needs and making him feel loved is one of the biggest privileges of my life. The person who sows seeds with tears may be the one who

我和好久没有联络的一个同学通电话，想在年末时候约个时间见面。这位朋友告诉我说，她要一个人抚养双胞胎孩子，所以暂时很难抽出时间。她还说两个孩子天天晚上为了谁睡在妈妈身边这件事吵架，有时候甚至用剪刀石头布的方式决定接下来的一周时间内谁可以睡在妈妈的身边。我能感觉到这位朋友既欢喜于孩子们明朗的笑容和小小的娇气，又苦于心有余而力不足的复杂心情。我不由得想起身边的长辈和前辈说过的话，说那都是一时的，孩子们就是那样长大的，等孩子长大了反而会怀念这个时期等等。当时不太理解这些话的含义，但现在好像明白了，明白把我的时间和精力交出来保护和照顾某个人的行为并非是我单方面的牺牲，明白我反而得到了更多，也因此成为了更好的人，明白曾经推着秋千觉得无聊的日子并没有想象中的那么漫长。

美国科学家Hope Jahren喜欢在研究植物的诞生和生长的过程中洞察人生，她在生下儿子后写下的《实验室女孩——树、科学还有爱》一书中称道：“也许看着他长大、给予他所需要的、让他毫无负担地接受我的爱是我人生中最奢侈的特权之

achieves real happiness. Maybe I can also achieve this happiness.”

Since coming into a position where I must protect someone, I am beginning to realize that I have received the most special gift of my life.

I heard that a protector must have a strong mind and body. They must be meticulous and patient. They must study, understand and grow. They must become a strong tree that can supply water to young trees deep into the ground. The character that does not easily appear when you are only receiving affection and protection begin to develop as you become a protector.

When I was young, I used to walk down the street with a person who would suddenly move to the side of the street as if he'd forgotten an important duty and wrap his arms around me. Being protected by someone made me feel comfortable and relaxed, and it was my sense of pride. Now, when I walk with my children, I always stand to the side of the road and look around for any potential dangers. I don't dislike my new self that has become brave and agile like a wild animal. The senses and energy that develop while protecting someone has made me a brave person at other places as well. After realizing that the well in my heart has been filled, the selfishness in me was replaced by a sense of stability and confidence.

People tend to waver when it comes to the weak. But when you become a protector, your behavior changes in a detailed way. A person who raised a cat will set a bowl of water for stray cats that hide under cars during cold winters, and a person who has revived a dying flower will stay in front of a rare species or nurse a tree at a botanical garden for a long time.

At a national wildlife sanctuary in South Africa, there was a 6-month old elephant name Telva that lost its mother. Another female elephant that could take care of Telva didn't appear, so the keeper had no choice but to leave Telva into the care of a sheep named Albert. The two were awkward at first, but gradually began to mimic each other's behaviors and become close. Unfortunately, Telva left this world two years later, but Albert continued to take care of a baby zebra and gnu that lost their mothers. Albert took the maternal love she acquired from Telva and shared it with other animals. In fact, sheep are one of the most intelligent and affectionate animals after pigs, and they are said to be able to read the emotions of animals that they become friendly with through facial expressions. For Albert, this instinct had grown through relationships.

My child has already become a middle school student who doesn't come out of his room or call when he's out, and I sometimes feel like I don't know what to do with my empty hands and heart. My child will probably grow even more and leave the nest, but the strength that he planted in me will not disappear as easily. When we talk about potential, we tend to think of talent or accomplishment. However, I think the potential of the "ability to protect" is what protects the world and keeps it moving. The potential of love, which was merely a small seed, blooms into a flower, taking responsibility for a life, and becomes an exuberant tree. We don't know what we will protect and take care of in the future. It could be a withering geranium, a stray dog abandoned by its owner, aging parents or needy children who are cold and in pain. I am waiting for the opportunity to use this small strength that comes from my empty hands. I believe that I can fulfill the role of a protector happily. I also think that in order to keep this privilege of being a protector for a long time, I must stay health and continue to grow.

一，也许流着眼泪播种的人才能收获真正的喜悦，也许这些事我也可以做得到。”在被放到必须守护某种存在的位置后，我慢慢领悟到我得到的是一份我生命中最特别的礼物。

作为保护者，身心要足够强大，要足够细心和忍耐，要不断充电、领悟和成长，要成为足够坚强的一棵树，尽全力从深深的土壤中汲取水分来滋养幼苗。那些在只接受爱和保护的时期不曾轻易显露出来的品性也在我成为保护者之后慢慢形成。

年少的时候，我身边有个人，走着走着就好像突然想起一件非常重要的任务般，边说“对了！”边迅速绕到车道一侧，用一只胳膊搭住我。被一个人保护的感觉真得很暖、很安心，也很自豪。现在和孩子走在一起，我也会习惯性地走在车道一侧，观察身边有没有潜在的危险因素。我并不排斥自己变得像野生动物一样机敏和勇猛，因为这是为了守护某人而形成的敏锐触觉和能量，而且这样的变化让我在其他地方也同样勇敢。比想象中更为充实的内心带给我的是安全感和自信感，而不是自私。

面对一个脆弱的存在，每个人都会有所触动，但如果他曾作为直接的保护者，这样的触动就会转为具体的行动。养过猫的人看见寒冷的冬天缩在汽车下面的流浪猫，会递给小家伙一碗水，精心呵护过濒死花草的人看到植物园里的稀有品种或保护品种，会出神地看上半天。

南非的国立野生动物保护区内曾有一只出生仅六个月就失去母亲的小象叫特尔瓦。因为没有可以照顾特尔瓦的合适母象，管理员无奈之下只好把特尔瓦交给一只叫做埃尔伯特的母羊。让人惊奇的是，两只动物虽然刚开始很生涩，但随着时间一天天过去，它们开始相互模仿对方的动作，变得越来越亲密。虽然特尔瓦遗憾地在两年后死去，但埃尔伯特在那之后又继续给失去母马的小斑马和牛羚充当了母亲的角色。它把给予特尔瓦的母爱分享给了其他动物。据说羊的智力和情感仅次于猪。一旦亲密，就不会忘记对方的长相，能够通过表情读取对方的情感。也就是说这样的本性在相处过程中更加发达了。

孩子不知不觉已长大，现在一关上房门就不出来，出门也不会刻意联系，所以我时常有一种茫然地、心手无处安放莫名情绪。孩子长大了离开我是迟早的事，但他赋予我内心深处力量却不会轻易消失。我们通常把潜力和才能、成就联系在一起，但我觉得改变和守护这个世界的，是所有人内心深处的另一种潜力，就是“保护的能力”。人不过是一颗不起眼的小芽，但正因为有了潜力，才敢于承担一个生命的重量，勇敢地开花并成长为一棵参天大树。我们不知道未来我们要照顾和保护的是何种生命，或许是一盆即将枯死的天竺葵，或许是不幸被主人遗弃的流浪狗，又或许是年迈的父母、忍受饥寒交迫的穷人。但我空空的双手在时刻等待着一个发挥小小能力的机会，我也相信自己能够开心地胜任保护者的角色。同时，为了让这份特权更加长久，下定决心要像现在一样健康、比现在更加包容。

The protector of Earth, Superman

Protecting and keeping things. Doesn't it sound so grand? However, we are all protecting and keeping things every day of our lives. We keep the time, keep safety regulations, and keep the law. We protect nature, protect our bodies, and protect the people around us. Aren't the combinations of these small acts of protection what protect us, families, companies, societies, countries and the Earth? As one little boy once called his office worker father Superman in a commercial, we, who protect these small things, are all Supermen.

守护地球的超人

保护和守护听起来像是一件很伟大的事。但我们每天都在保护和守护着某些人、事或物。比如，守时、守安全守则、守法。再如我们保护自然、保护身体、保护周围的人。正是这些小小的行动合在一起，我们的家人、公司和社会、国家和地区才得以受到保护不是吗？就像广告中某个小家伙骄傲地说在公司里工作的爸爸是超人一样，从守护小的人、事、物做起的我们，每个人都是超人。

PROTECTING NATURE

The first time I saw the word 'protect' was when I was young, it was on a sign that was sticking out from the lawn of a park that read 'protect the lawn.' Signs stating 'people protect nature and nature protects people' could also be easily found anywhere that had trees. When thinking back to this statement that I never really cared to think about, I feel that the mutual relationship between people and nature is quite frank. This is because people can continue living thanks to the existence of nature, but they are also nature's biggest enemy.

Protect nature became a slogan after the beginning of industrialization, when urban development was causing a lot of damage to the environment in the 1970's. However, protecting nature was an obvious concept ever since the olden days. To our ancestors, who thought of farming as a great fundamental of the world (農天下之大本), nature which provided land and gave rain was an awe-inspiring being. Since about 1,000 years ago during the Three Kingdoms Period, the royal families enforced various bans to protect nature, and protecting nature was a natural thing for people as well. At the time, the economic activities or daily lives of people did not interfere with the principles of nature, but with the development of various artificial technologies, people surpassed utilizing nature to exploiting nature. They extracted oil and polluted the atmosphere, created waste that will never rot, and brought up water to throw out as wastewater and created deserts. What about the disappearance of honeybees due to electromagnetic waves? It's been about 40 years since the slogan 'people protect nature, nature protects people' came out. Now, the direction of technological development is beginning to change gradually. Electricity is generated through solar power and people ride in electric cars. Today, the desperate needs of people, who have realized that protecting nature is protecting humankind, are beginning to create co-existence and symbiosis.

保护自然

小时候，第一次接触“保护”这个词是公园草坪里写着“保护草坪”的小牌子。“人护自然，自然护人”这句口号也一样，但凡是有树的地方，都能看到。可这句随处可见的话认真想起来，却真实道出了人与自然的关系。人类依附自然而存在，但也是自然最大的敌人。

人类高唱“保护自然”的口号是随着工业化发展，城市愈加发达而自然破坏愈发严重的20世纪70年代开始的，但保护自然却是从很久以前就有的自然而然的事情。正所谓“农天下之大本”，大自然把土壤和雨露慷慨地赐予以农业为本的大韩民族的祖先，当然值得被敬畏。约从一千年前的三国时代起，王室就颁布了各种禁令来保护自然。在民间，保护自然也像呼吸一样理所当然。当时人类的经济活动或日常生活还没有大肆侵犯自然的法则，但随着各种人工技术的发展，人类开始利用甚至榨取自然资源。采石油污染大气、制造多少年都不会腐蚀的垃圾、不顾沙漠化肆意抽水再无限制排放污水，还有制造电磁波环境逼迫蜜蜂离开等等。“人护自然，自然护人”的标语已经出现了40多年。技术的发展方向在一点点地发生变化。人们开始利用太阳能发电、路上的电动汽车也愈来愈多。人类再次醒悟保护自然就是保护自己，开始学会采取无退路的自救方式来谋求人与自然的共存和共生。



PROTECTING OUR BODIES

Just as Superman wears tights and briefs, Batman wears his bat suit and Iron man wears an armor suit, we, who are heroes of our lives, also need various protective equipment to spend each day safely. These include a wide range of things including sunscreen that protects our skin from sunlight, masks that block the cold wind or helmets, dust masks and work shoes that protect us from various dangerous elements on site. If so, what were some types of protective equipment of the past? One of the first things that come to mind is armor. Armor, which was worn during war for protection against swords and arrows, was first made of leather and gradually expanded to various materials. Goguryeo was good at making steel armor in particular, and it is said that they even made armor for their horses as well. According to literature, King Taizong of the Tang Dynasty sent a man to Baekje to retrieve a colorful gilt armor for himself, verifying Baekje's outstanding armor-making skills. The Joseon Dynasty Era also created various armor by connecting metal or leather pieces with rope. This type of armor that we see in historical films are extremely heavy, making it difficult to move around if one has not had sufficient physical training. One actor that appeared in a historical film even fell off of a high place and got injured due to the 20kg armor he was wearing. We can only imagine how harshly the generals of the time dealt with themselves wearing this type of armor to war. Thanks to the light and convenient protective equipment we have today, our bodies are comfortable, free and safe. However, we must be careful to keep a tight hold on our vigilance.

保护身体

就像超人的紧身衣和三角裤、蝙蝠侠的蝙蝠战衣还有钢铁侠的钢铁装一样，我们作为日常生活中的英雄，也需要各种护具帮我们安全度过每一天。比如保护皮肤免受紫外线辐射的防晒霜和阻挡冷空气的口罩、施工现场防范各种危险因素的安全帽和防尘口罩、作业靴等等。那过去有什么护具呢？铠甲便是一个代表。战争时期枪箭无眼，人们为了保护身体，起初使用动物皮制作铠甲，后来制作材料越来越多样化，到了高句丽时期，铁甲的制作工艺已经非常成熟，连战马都披上了铁甲。据文献记载，唐朝的太宗甚至派遣使者到百济寻求五色浓烈、金光灿烂的金漆涂铁甲，可见当时百济的制作技术之优良。朝鲜时期也曾采用以线连接金属或皮质碎片的方式制作各类铠甲。据说我们在历史剧中看到的铠甲都具备相当的重量，没有经过一定高强度身体训练的人穿上后很难行动自如。有报道甚至说，出演历史剧的一位演员因为重达20公斤的铠甲从高处跌落受伤。不得不让人慨叹，穿着这样笨重的铠甲驰骋战场的将军是如何严苛地锻炼自己的。得益于现在轻便的护具，我们的身体可以在舒适自由中享受安全，但危险无处不在，时刻提高警惕、遵守安全守则仍然非常必要。



PROTECTING INFORMATION

From the things we must protect, there is also “information.” One of the most important issues of this generation, which produces and shares a vast amount of information through computers, is security issues. To protect this information, we change our passwords regularly, bring up verification certificates and continue to download security programs that we don’t even know about. In the past as well, information protection was a very important task and as a result, various codes were used. Code technology is historically classified into three types. Codes using a computer are called modern codes, machinery/electronic codes through wireless communication are called pre-modern codes, and the elementary code technologies of the past are called ancient codes. Julius Caesar, who was an emperor of Rome, used a movement code by moving the location of letters regularly and sent secret messages. On the day he was assassinated, he received a code that read “Beware of assassin,” but ended up being killed by Brutus, who he least suspected, leaving the message “And you, Brutus?” The movement code he used has been coined the “Caesar code” in modern times. Codes have also given birth to unexpected technological developments as well. After the two world wars, each country created their own safe codes and made efforts to crack the codes as well. The German army used an enigma machine that looked like a large typewriter during World War 2 to create a code that was near perfection. The delivered message was put back into the enigma machine, and the dial and wiring had to be adjusted in order to crack the message. The English army created a cryptography team with mathematicians and data processors to decrypt the codes, and thanks to their long efforts, the Allied Forces were able to reduce damage. The decoder created by the scholar Alan Turing during this time became the technological foundation for electronic computers, and therefore, Alan Turing is often called the father of computer science. The Turing Award, which is known as the “Nobel prize of computer science” was also named after him.

保护信息

我们要保护的还有“信息”。在今天这样一个通过计算机生产和交换各种信息的时代，保护信息也是最重要的安全课题。为此，我们定期更换密码、使用公认证书、不断更新各种搞不懂的安全程序。即便在过去，保护信息也是很重要的事情，所以人们尝试用各种途径加密。据说历史上的加密技术大致可以分为三种，有利用计算机加密的现代密码，那之前利用无线通信技术设置的机械性、电子性近代密码，还有更早期原始的古​​代密码。罗马的皇帝尤利乌斯·凯撒曾使用规律性移动罗马字母的移动密码文来收发绝密信件。被暗杀的那一天，他收到“注意刺客”的密码文，随即死于他从未怀疑过的布鲁图斯之手，留下了“布鲁图斯，连你也……”的遗言。今天的人们把他使用的移动密码称为“凯撒密码”。密码也催生了意料之外的技术。经过两次世界大战后，世界各国开始研究安全加密和解码的技术。德日军在第二次世界大战当时，利用形如巨型打字机的英格玛创造出了近乎完美的密码。接收的文件也必须再输入英格玛，经拨号和排队才能被解读。英国军为了解开这个密码，调集了顶尖数学家和电算学者组建了解码组，在一系列持久的努力之后，联合军才得以减少所受伤害。这个时期，叫做艾伦·麦席森·图灵的学者制造的解码机为电子计算机的技术奠定了基础，艾伦·麦席森·图灵本人也因此获得了“计算机科学之父”的称谓。有“计算机科学诺贝尔奖”之誉的图灵奖也是以他的名字命名的。

PROTECTING PRODUCTS

In fact, there is nothing that does not protected or is not protected. All products are protected before being provided to consumers. They are wrapped in packaging, put into boxes and taped before being delivered back and forth. Cosmetics are put into pouches and dry-cleaned clothing is wrapped in plastic. Laptops are protected by bags and money is protected from becoming wrinkled by wallets. And what about the smart phone, which has become an essential item of our lives? We attach glass strengthening films to the screens and prevent shock by using a thick phone case. This is inevitable since new smart phones cost nearly 1 million KRW. Even so, it is difficult to protect the phone 100%, so we even added insurance. Other than product protection that we can know intuitively, there are hidden protection abilities as well. Paint is one of them. Because painting is first perceived visually, its protective abilities can be overlooked, but it has an outstanding ability to protect surfaces. Waterproof paint prevents water from soaking through or leaking, and flameproof paint delays the speed of burning. There is also paint that protects buildings or machines from corrosion by blocking rust, energy-saving paint that blocks temperatures within a building from rising by blocking heat, antibacterial paint that blocks mold and bacteria, and even electrification-preventing paint that prevents static electricity. These paints protect the buildings we live in, the products we use and various modes of transportation by coating them. Products are protected from places that we can and cannot see, and knowing that we are also protected gives us a sense of reassurance.

保护产品

细细想一想会发现，这世界上没有不保护或者不受保护的。所有的商品都是用空气袋等保护材料包裹后装箱、打包再送出，以最完好的保护状态投递给消费者。化妆品放在化妆包里，洗好的衣服用塑料罩住，笔记本有电脑包，钱有钱包。还有我们的生活中离不开的智能机，液晶屏幕表面贴有强化玻璃膜，最外层还有手机壳防止冲击伤害。新上市的智能机价格直逼百万韩元，看似过度的保护也在情理之中。即便是这样，也无法保证产品100%安全，所以出现了相应的保险商品。除了这些直观可见的保护以外，还有隐藏的保护产品。涂料就是一例。因为视觉上可见，涂料的保护能力是显而易见的，但事实上，涂料在保护物体表面方面发挥着更加低调却出色的作用。防水涂层能够阻止水分渗入或渗出，阻燃涂层能够延缓燃烧速度，此外还有保护建筑或机械免于腐蚀的防锈涂料、通过绝热阻止建筑内温度上升的节能涂料、屏蔽霉菌细菌的抗菌涂料以及洁净室内防静电用的抗静电涂料等等，他们保护着我们生活的建筑和使用的产品、各种移动手段等。诸如这些以或可见、或不可见的方式保护着产品和人类的存在，也让我们的心里多了一份安全感。



Coating the coil to intensify strength and beauty

Technology Team 4, NOROO Coil Coatings Co., Ltd.

Shall we take a look around ourselves? We will probably be able to find at least five steel plates in our daily lives within one minute. Steel plates used for TVs, air conditioners, refrigerators, microwaves, interior/exterior materials for buildings, elevators and fire doors are quite common. However, because they come in various colors and patterns, we sometimes forget that they are made of steel. This is because the steel is coated with color and function. NOROO Coil Coatings Co., Ltd. is a company that makes these types of coating materials.

更加坚固、更加美观卷钢涂层

(株) NOROO卷钢涂料有限公司技术四部

把注意力暂时转移到周围，我们会发现日常生活中很容易在一分钟之内找到五种以上的钢板。电视、空调室外机、冰箱、电磁炉、建筑内外装修材料、电梯还有防火门等等，都无一例外地用到钢板。但因为它们“穿”着各种颜色和花纹的衣服，让我们常常忘记它们都是钢板组成的事实，因为表面的涂层赋予了它们不同的颜色和功能。（株）NOROO卷钢涂料有限公司就是制造这种涂料的地方。

COIL COATING THAT PROTECTS STEEL PLATES

General Manager Seo Jeong-woog of NOROO Coil Coatings Technology Team 4 explains, “In 1971, NOROO Coil Coatings Co., Ltd. began supplying paint for coil coating for the first time in Korea. PCM (Pre Coated Metal) coatings are applied onto steel plates first, so that the product can be completed immediately after metal processing such as molding, assembly, etc. Advantages of this type of coating include high productivity, consistent quality and shortened processing time. The coated steel plates secure functionality, corrosion resistance and weatherability, so that products can be protected for long periods of time. If steel plates used for interior/exterior materials for buildings are not coated, they can easily rust and form holes creating high repair costs. If it wasn't for paint coating, the beauty of home appliances could not be portrayed either. Steel plates can be protected and portrayed more beautifully thanks to coil coating technology.”

保护钢板的卷钢涂料

来自（株）NOROO卷钢涂料有限公司技术四部的徐廷旭部长说道：“（株）NOROO卷钢涂料有限公司1971年成立，是韩国首个卷钢涂料的供应商。PCM (Pre Coated Metal) 是先把涂料涂布在钢板上，以保证材料经过成形组装这些加工工序后可直接变成成品。不仅生产性好、质量稳定，而且还能缩短工时。涂装后的钢板具备优秀的功能，而且耐腐蚀性和耐候性都很出色，能够长久保护产品。建筑行业使用的内外装修材料如果没有涂层，很容易生锈、穿孔，导致维护成本大大提升。还有家电产品，离开涂层这道工序，就很难表现设计之美。因此可以说保护钢板并让其更加美观，卷钢涂料技术是一大关键。”



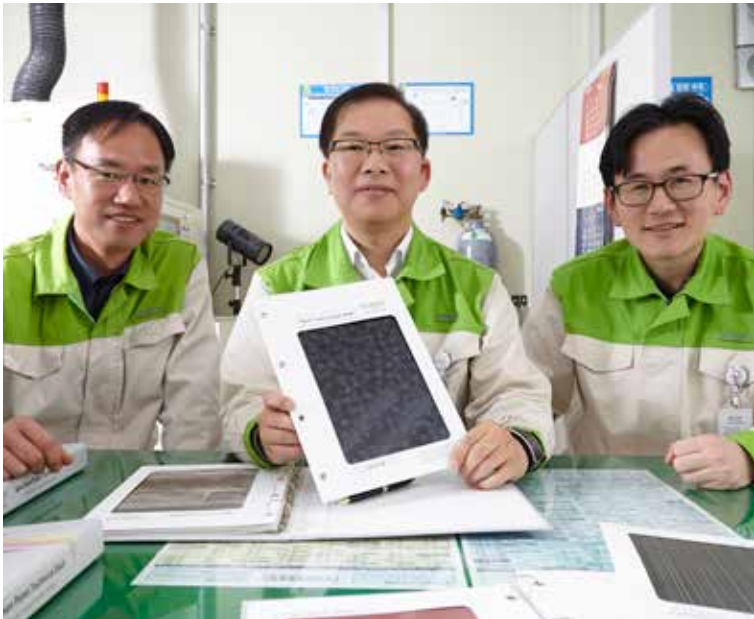
NOROO Coil Coatings Co., Ltd. is leading the market in not only color paints, but also print ink for marble or wood patterns, design/functional paints that provide softness and a wrinkled effect, and new material paints for home appliances. Repair services regarding coil coating are very fast and the company has the largest domestic market share due to the fact that they are providing a total solution for the first time in Korea. They are currently supplying aging solutions and print paints to Dongkuk Steel, Dongbu Incheon Steel, Hyundai Steel and Posco C&C. The world's #1 home appliances company, Haier, of China was also interested in the technology of NOROO Coil Coatings Co., Ltd., and is now receiving supplies for paint as well. Furthermore, the Technology Team 4 is developing various patterns and supplying hatched products to consistently expand Haier's sales in the global market.

In order to rapidly respond to the changes of the coil coating market that is soon to come, the Technology Team 4 led by General Manager Seo Jeong-woog, Manager Park Jong-tae and Manager Kim Chul-hoe is developing various products such as UV paints, water paints and film adhesives to create new markets. The technological development efforts of these people are very important in leading the coil coating market.



(株) NOROO 卷钢涂料有限公司不仅在彩色涂料领域，还在表现大理石或树木纹理的印刷涂层、表现柔滑到皱纹肌理的设计性、功能性涂料以及新型家电用涂料领域引领着市场发展。凭借迅速的售后服务和韩国首个综合性解决方案，目前占据韩国市场第一位宝座，向东国制钢、东部仁川制钢、现代制铁、POSCO C&C等大企业提供底漆和面漆、印刷涂料等产品。位列家电企业世界第一位的中国海尔也在使用(株) NOROO卷钢涂料有限公司生产的涂料。为了继续扩大向海尔这一国际客户的销售规模，技术四部正全力研发不同类型的产品，提供高显影性的产品。

由徐廷旭部长和朴宗泰科长、金哲会科长带领的技术四部就是负责多样化产品研发任务的部门。他们为了快速应对卷钢涂料市场的变化而开发环保UV涂料和水性涂料，为创造新市场利润而开发薄膜粘合剂等各种产品。他们在引领卷钢涂料市场发展的过程中发挥着至关重要的作用。



NOROO COIL COATINGS CO., LTD. CREATES A SAFE LIVING ENVIRONMENT

Coatings protect steel, but they also protect the user. NOROO Coil Coatings Co., Ltd. has stepped forth to develop products that are harmless to the human body to create a safe living environment. "From 2006, we have been applying non-toxic paints to our home appliances and recently, we have been making an effort to develop products that can reduce organic solvents. UV paints, which are dried with UV rays, are eco-friendly paints that don't contain organic solvents, so they enhance the quality of home appliances. Currently, Manager Park Jong-tae is developing these. We also plan to develop water paints and lead the market. In addition, we are also developing nonflammable paints to overcome the damage caused by fires."

General Manager Seo Jeong-woog continued, "Ha Won-soo, an executive of the Technology Division is leading product development with passion. Our team members are also very passionate about their work" and expressed their gratitude. Manager Park Jong-tae and Manager Kim Cheol-hoe also added their gratitude toward their team members who they worked with and shared a sense of achievement with.

"The fact that we are always changing is the same, but the speed of change is gradually increasing. At a time when we just compete in the global market, we must surpass that speed." General Manager Seo Jeong-woog's speech contained his pride towards NOROO Coil Coatings Co., Ltd. As coatings make coil stronger, pride for technology and history will strengthen the NOROO Coil Coatings Technology Team 4. As a result, we will be able to live in a safe environment with excellent products.

追求安全生活的(株) NOROO卷钢涂料有限公司

除了保护钢板外，保护使用者也是一个优质涂料应具备的属性。

(株) NOROO卷钢涂料有限公司 为营造安全的生活环境，在研发对人体无害的产品方面先人一步。"公司从2006年起就在家电产品的制造过程中开发了无毒性涂料，最近还在加快能够减少有机溶剂使用的产品开发进程。借助紫外线干燥的UV涂料是不含有机溶剂的环保涂料，能够提升家电产品的档次，目前由朴宗泰科长带领的团队负责研发。水性涂料的研发和上市也在计划之内。此外，火灾引起的建筑倒塌是威胁人身安全的重要原因，所以克服这类隐患的防火涂料也在抓紧研发中。"

徐廷旭部长继续补充道："技术部的领导河元秀正全身心地投入在产品研发事业上，每个团队成员对目标的征服热情也很高涨。"并借此向辛苦的团队成员们表达了感激之情。朴宗泰科长和金哲会科长也向共同克服研发难题、一起分享成就喜悦的团队成员们表示了感谢。

"我们一如既往地保持着积极变化的姿态，但变化速度越来越快。我们面临的是来自世界各地的竞争对手，因此先人一步是我们对自己的要求。"徐廷旭部长的这番话隐约显露出了(株) NOROO卷钢涂料有限公司的自尊所在。就像涂层让卷钢更加坚固一样，(株) NOROO卷钢涂料有限公司在技术和历史方面的自信将让(株) NOROO卷钢涂料有限公司技术四部变得更加强大。得益于此，我们的日常生活也可以在更为卓越的产品保护下变得更加安全。



NOROO INTERNATIONAL COLORTREND SHOW 2018

ASSEMBLAGE of COLORS

The 7th <NCTS 2018: NOROO INTERNATIONAL COLOR TREND SHOW> was held on November 16 at DDP. The <NOROO INTERNATIONAL COLOR TREND SHOW> has become the most important event for professionals in the color industry by proposing color trends according to the flow of change that occurs within the industry and society in general. The <NOROO INTERNATIONAL COLOR TREND SHOW 2018> was a place for the audience and lecturers to exchange thoughts, for the meeting of arts/society and science/architecture with color, and the connection between the present and future.

一年一度的第七届NOROO国际流行色彩发布会(NCTS 2018: NOROO INTERNATIONAL COLOR TREND SHOW)于11月16在DDP举行。“NOROO INTERNATIONAL COLOR TREND SHOW”通过读取产业界乃至社会各方面的变化并提出色彩流行趋势，现已成为色彩领域专家最为重视的活动之一。围绕色彩这一主题，让听众和演讲者互动交流,让艺术和社会、科学还有建筑碰撞出灵感,让现在和未来相系相接，便是“NOROO INTERNATIONAL COLOR TREND SHOW 2018”的意义所在。

“Welcome to Asia’s largest color show.” The <NCTS 2018> began with greetings from Announcer Kim Jung-geun, the event host. This was followed by a series of speedy video clips that showed glimpses of various places around the world. The video, which was titled “Life is All Connected. We Cover All”, showed colors of life in crowded cities and rugged environment of nature, and left a strong impression on the audience. Even before the lingering image of the opening video was gone, the first lecture immediately began. The lecture was titled “The Art of Science” by Fabian Oefner, a Swiss photographer and visual designer.

Fabian Oefner takes photos of scientific phenomena in daily life with high-speed, close-range cameras. He has been introduced on BBC and CNN, and is also a popular lecturer of TED. He uses water and oil to create magnificent and powerful images, like those of a total eclipse or the sun exploding into a solar flare, which he then photographs. Moreover, he immediately captures the colors that are created while freezing, melting, and scraping away metals, and in this way, perfects his abstract artwork. He reveals the beauty in nature that is not visible to the naked eye, but definitely exists, and rehearses the process of artwork creation himself. He said, “I want to combine art and science. If we see the things that are hidden with our eyes, we will be struck with awe,” and expressed that he hopes people will gain inspiration for color in his work. The next invited lecturer on the podium was Ico Migliore, an Italian architect and space designer who is working on numerous global projects. He said, “An artist must utilize his or her client’s identity and diversity. Utilizing color is very helpful for this task.” In addition, he advised to see color not only with your eyes, but with your experience as well. He said that, in this way, emotion is incorporated into the color and is left in your memory for a longer period of time.

Next was Artist Lee Gwang-ho and Hair/Makeup Designer Katsuya Kamo, in part 2 of the lectures. Artist Lee Gwang-ho won the <2011 Artist’s Award> from the Ministry of Culture, Sports, and Tourism and the <2017 Writer’s Award> at the Design & Art Market in Brazil. He creates new shapes and forms by making knots by hand, using materials that can easily be seen at any ordinary construction site. Like Fabian Oefner Lee Gwang-ho re-interprets ordinary materials and, in his work, one can see colors of varying depth achieved through overlapping materials. The last invited lecturer, Katsuya Kamo, who is a Japanese hair/makeup designer, introduced his work in three categories: black & white, gold & silver, and colorful. He showed how hair and makeup varied in the rapidly changing fashion industry.

“欢迎大家来到亚洲顶级规模的色彩秀!”。“NCTS 2018”在主持人金正根先生的问候语下绚丽启幕。紧接着，取材自世界各地的影像片段在大屏幕上迅速切换。这一段自由穿插于复杂的都市和自然原生态而展现世界色彩的视频，以“Life is All Connected.We Cover All”的句子收尾，给听众留下了强烈的印象。余韵尚未散去，第一个演讲接踵而至，即瑞士出身的摄影师兼形象设计师Fabian Oefner带来的“The Art of Science”。

Fabian Oefner是使用超高速、超近距摄像机拍摄日常生活中科学现象的摄影师，曾出现于BBC和CNN节目中，也是TED的人气演讲者。他或用水和油表现日全食般迷幻的图案，或拍摄太阳爆炸般充满力量感的照片，或用色彩捕捉金属冻结融化和刮擦的瞬间来完成抽象的艺术作品。他甚至以亲自演示作品创作过程的方式来告知人们那些肉眼看不到却分明存在于自然界中的美妙。Fabian Oefner说道：“我想把艺术和科学结合起来，用眼睛去直观感受隐藏于周围的事物，你会有惊奇的发现。”并表示希望自己的作品能够激发人们对于色彩的灵感。

第二位登上讲坛的受邀嘉宾是意大利建筑师、空间设计师Ico Migliore。目前身兼多个国际项目的他说道：“艺术家应该调动自己和客户的认同价值和丰富性，这时候色彩是非常有效的沟通渠道。”同时，他还主张看色彩并不单单是眼睛一个器官的事，还应结合自己的经验，把自己的感性体验融入进去，才能创作出有生命力和影响力的作品。

接下来是由艺术家李光镐和发型化妆设计师加茂克也（Katsuya Kamo）带来的第二部分演讲。艺术家李光镐先生曾获得文化体育观光部授予的“2011年度艺术家奖”和巴西设计&艺术市场的“2017年度创作家奖”。他以单纯的打结方式为日常劳动现场中常见的材料赋予新的形态。和Fabian Oefner一样以平凡的材料为媒介，通过层层叠加的方式表现不同深度感的色彩。最后一位演讲嘉宾加茂克也以黑白、金银和多彩三个部分介绍了自己的创作作品，并以此分享了他对于发型和化妆如何主导和迎合节奏变化最快的时尚界方面的看法。

Life is All Connected

Fabian
OefnerIco
Migliore

Lee Gwang-ho

Katsuya
Kamo



The invited lectures that combined various categories including science/photography, architecture/design, everyday materials/handwork, and glamorous fashion/hair styling were gathered under one theme, “ASSEMBLAGE”. Meaning “gather, assemble or integration” in French, it signifies the gathering of various objects to create installation works. Why did <NCTS 2018> select ASSEMBLAGE for its theme? Senior Researcher Hyeon Jeong-oh of NPCI presented on “2018-19 NPCI CREATIVE INSPIRATION & COLOR” and gave us the answer to the changes of society and humankind. “As the historian Yuval Harari said, we will soon become ‘humans turned into gods’ based on our intellectual capacity. If so, what would humans that have become gods make? We will view and reconstitute everything in a new way. Different things will be juxtaposed and combined randomly to draw in interest. ASSEMBLAGE is the most creative method for the coexistence of conception/abstraction and imagination/reality.” Senior Researcher Hyeon Jeong-oh then proceeded to present ASSEMBLAGE’s representative method of expression and proposed colors according to the method. As the clear colors of 2018-19, which can be regarded as the main subject of <NCTS 2018>, came up on screen, cameras from the audience began to flash simultaneously. The colors captured by the cameras will serve as a clear traffic light for the world of design and industry, which is speeding towards the 2018-19 season. This is the same for the <2018-19 NPCI Proposal Color>, for which Researcher Kim Seung-hyeon analyzed the 48 colors presented by Senior Researcher Hyeon Jeong-oh. Despite the random mixture, the colors that create a delicate balance – red, green, blue and other ambiguous and rich colors that are becoming extremely powerful – light the present that we live in and have reflected this light into the future. Color is one of the filters used for viewing life. We confirm the changes of society through color and incorporate this back to tint society with color. <NCTS 2018> was the first event to show which color filters will be used for 2018-19.

ASSEMBLAGE



Hyeon Jeong-oh



Kim Seung-hyeon

这些涉及科学和摄影、建筑和设计、日常材料和手工作业、华丽时装和发型设计等丰富领域的特邀演讲都归纳在一个主题下，那便是“集合艺术（ASSEMBLAGE）”。法语“ASSEMBLAGE”蕴含“聚集、集合、汇集”之意，也指把多个物体组合在一起的造型作品。那么“NCTS 2018”为什么选择“ASSEMBLAGE”作为主题呢？NPCI的首席研究员玄正午先生在发表“2018-2019 NPCI CREATIVE INSPIRATION & COLOR”演讲时，从社会和人类发展变化的角度给出了答案。

“正如历史学家尤瓦尔·赫拉利所说，我们即将凭借智力发展为‘成为神的人类’。那么成为神的人类会创造什么呢？我们会以全新的角度审视和重组，会尝试着把互不相同的事物随机并列和组合，从中找出吸引点。集合艺术是让构想和抽象、想象和现实共存的最具创意性的方法。”紧接着，玄正午首席研究员依次展示了集合艺术的代表性表现方法和相应的提案色彩。这部分可以说是“NCTS 2018”精华的2018-2019明晰色彩一经在大屏幕显示，此起彼伏的闪光灯一致聚焦于此。它们无疑将为2018-2019年度设计界和产业界提供鲜明的指示。金胜轩研究员在分析玄正午首席研究员发表的48个色彩基础上提出的“2018-2019 NPCI Proposal Color”也是同样，这些在随机组合中构成玄妙平衡的色彩，无论是极端强烈的红绿蓝，还是中立却丰富的其他色彩，都将照亮现在、投射于未来。

色彩是我们与世界之间的一扇过滤窗。通过这扇窗我们了解社会变化，再借助色彩将我们的理解归还给社会。“NCTS 2018”是最先告知我们2018-2019将会以何种色彩走向我们、走向社会的一个预报。



At the event, sketches by Ico Migliore, works by Lee Gwang-ho, a collaboration by Finn Juhl and metal craft artist Lee Sang-min, and a collaboration by Tomo Glass and NPCI will be exhibited. The audience will be able to view the exhibit while talking to the artists before, after and during the break of the event.



NOROO X POW!WOW! Picturing Seoul anew

NOROO和POW!WOW! 画出首尔的新样子

<POW!WOW! X NOROO in Korea>

In September 2017, NOROO group held the <POW!WOW! X NOROO in Korea>, an urban renewal project showcasing culture, in concert with POW! WOW!, a global street artist group. In a beautiful pairing between the spirit of patriotism of entrepreneurship well-demonstrated time and time again by NOROO Group carrying out social contribution activities through painting and artistic value, <POW! WOW! X NOROO in Korea> brought fresh vitality to the streets of Seoul.

2017年9月，NOROO集团和国际街头艺术家组合POW! WOW! 共同推进了城市再生文化项目“POW!WOW!X NOROO in Korea”。将一直以来以涂料为媒介，从事社会贡献活动的NOROO“事业报国”的精神和传统、艺术价值结合起来而策划的这一项目为首尔市的各处街道注入了新鲜活力。

OPEN YOUR EYES AND TRUST THE POWER OF PAINTING!

If we come across something strange, we would often think we have seen something wrong. In this regard, we would like to say such cases should occur more often in the Seoul area. We say this because there were huge wall paintings painted all over Seoul in September 2017. There are baby goblins playing the guitar at an elementary school building. You stumble upon Mandala in such an unexpected place. A woman in a traditional hanbok trims her hair. There is no need to think that you have seen something weird. Call it a new painting. These mural paintings were created by POW!WOW! and NOROO as an amazing gift of <POW!WOW! X NOROO in Korea>.

POW!WOW!, which started back in 2010 at a small exhibition held by artists in Hong Kong, expanded into a creative community for artists from round the world to draw wall paintings traveling around countries. Their name, POW!WOW!, is a combination of 'POW,' a swish sound of a fist punching a face seen in a comic book, and 'WOW,' an expression of amazement. POW!WOW! is an expression of the value to inform the emergence of new art and to bring amazement to life. POW!WOW! spices up mundane life through murals, brings people together and makes the streets vibrant. The Huffington Post once commented on their works as follows: "The art of the street is not only extravagant but also culturally sensitive, and sometimes provocative, and, most notably, very, very, very interesting."

The POW!WOW! projects had been carried out mostly in Hong Kong, Hawaii, Japan, and Taiwan and this is their first appearance in Seoul in 2017 in collaboration with NOROO. NOROO planned this to elevate the positive image of Seoul by presenting works reflecting the city's unique art, culture and sentiment. This event was made possible because NOROO, prioritizing the spirit of patriotism of entrepreneurship by focusing on contribution and communication to the public and customers as a whole, shares the same sentiment with what POW!WOW! seeks after. Above all, both believe in the power of painting that changes the environment.

睁开眼睛，相信涂料的力量！

在第一次看到陌生事物的时候，我们很容易抱有怀疑之心，不过在首尔，这样的事情也许更多一点。因为2017年9月，首尔很多地方都“横空”出现了不少巨型壁画。看到小鬼在小学校园里弹着吉他、曼陀罗花在意料之外的地方盛开，又或者穿着韩服的女人在优雅梳妆，可千万不要惊讶。这些都是使用新的涂料演绎出的杰作，是POW! WOW! 和NOROO联手奉上的惊喜礼物“POW! WOW! X NOROO in Korea”。

自2010年一帮艺术家们在香港发起的简朴展览会开始慢慢成形的POW! WOW! 现已发展成为来自世界各国风格迥异的艺术家们巡回各国涂鸦的一个创意社区组织。把漫画中拳头飞过来的声音“POW!”和表现惊奇的感叹词“WOW!”组合起来的“POW! WOW!”，名字本身便传递了“传播新的艺术形式，让生活充满惊喜”的价值取向。POW! WOW! 通过一幅幅墙上涂鸦作品，掀起日常生活中的情绪波澜，在吸引人们目光的同时让街头充满生机活力。《赫芬顿邮报》对此盛赞“街头艺术不仅带来了视觉上的华丽美感，还挑动着文化上的敏感神经，偶尔还有挑衅的味道，总之非常非常有趣”。

POW! WOW! 项目在香港、夏威夷、日本和台湾等地都有举行，今年与NOROO的合作，是第一次在首尔的亮相。项目将通过一系列反映首尔特有的艺术和文化、情绪的作品，提升地区积极向上的形象。时刻把对国民和顾客的贡献和沟通视为第一价值的NOROO“事业报国”精神和POW! WOW! 所追求的价值有着异曲同工之妙，而合作得以展开的更为基础的因素，在于双方都相信涂料具有改变环境的力量。



PAINTING AS A GIFT. ART AS A CONTRIBUTION.

"People do not realize the presence of a wall that they pass by every single day. That changes once they see a painting on these walls. When people see a mural, they stop by to take a look, take a picture and then look for a restaurant or shops in the area and eventually start meeting others in the area. This explains one of POW!WOW!'s goals. Another goal would be to discover new artists and help the artists around the world connect with each other through their work activities," says Jasper Wong, a founder of POW!WOW!, about their roles and goals. He filled up the footpaths in Yeonnam-dong with a cheerful atmosphere by painting multiple characters running.

On the outer wall of the Handpicked Hotel in Sangdo-dong, a dragon ascends to the sky with the desire of eternal peace. The artist who created this work is Tristan Eaton, whose work is in permanent display at New York's Museum of Modern Art (MoMA), and Persue, who is famous for his unique character, Persue bunny. Tristan Eaton explained the background of the work by saying: "Peace as universal value seems more important to Korea." Meanwhile, Korean artist Royyal Dog, who was covered in major media including CNN for his portrayal of a black woman wearing a hanbok on a building wall in LA, also participated in this occasion. He drew a Korean woman in a hanbok near the Sookmyung Women's University and remarked: "I wanted to draw something that is most Korean. I am glad to be able to do a painting here," expressing it as a joyous experience. Others include 10 Korean and foreign artists including Jay Flow who is known as the master of street artists, Sixcoin, Yoonhyup, XEVA, CRYPTIK, and more and they left their beautiful artworks in Hapjeong-dong, in front of Hongik University, Seoul Mullae Elementary School, and Seoul Upcycling Plaza.

Last but not least, they wrapped up the project as the finale event of the Seoul International Fireworks Festival (SIFF), titled "Artists Live Painting," together with citizens. Andy Song, Director of POW!WOW! Korea, said: "POW!WOW! is a festival that gives artists a complete freedom of creation," and added: "Our first event in Korea ended on such a high note thanks to the full support from NOROO Group."

NOROO Group has been engaging in a lot of social contribution activities in the means of painting. We contributed to improving the crime prevention environment by brightening up dark places while redoing the paintwork in aged areas to establish a safer and more pleasant living environment. Indeed, this <POW!WOW! X NOROO in Korea> project expanded the breadth of social contribution with artists. The surprise factor that makes people take a look once more while blinking their eyes, led to a refreshed vision and vitality, which was a present to citizens of Seoul.

涂料与艺术的完美结合

创立POW! WOW! 的Jasper Wong就组织的定位描述道：“人们很少刻意去注意一堵墙的存在，但有了壁画之后就不一样了。会有想拍照的冲动，在看壁画的同时，也会寻找附近的餐饮店、商店，在那里和陌生人邂逅。这是POW! WOW! 追求的目标之一。发掘新的创作家、让来自世界各国不同风格的创作家通过作品互相沟通也是我们的目标之一。” 延南洞步行路上不同卡通角色一起奔跑的快乐图案即出自他的手。

上岛洞Handpicked酒店外墙上一条龙带着永远和平的心愿腾空而起。其创作者是在纽约现代美术馆（MoMA）设有永久展示作品的崔斯坦·伊顿（Tristan Eaton）和以特立独行的兔子Pursue bunny有名的Persue。谈及作品的创作背景，崔斯坦·伊顿表示：“觉得和平这一大众性的主题在韩国更为重要。”在LA绘制穿着韩服的黑人女性壁画而被CNN等诸多媒体报道的韩国艺术家Royyal Dog也加入了POW! WOW!。对于这次在淑明女子大学附近涂鸭的穿着韩服的女性作品，他表示：“想画出最韩国的作品。能在这里创作作品很开心，这是一次非常快乐的经历。”除此之外，还有正统街头艺术家Jay Flow、Sixcoin、Yoonhyup、XEVA和CRYPTIK等十名国内外创作家在合并洞和弘大前、文来小学和首尔升级再造中心等地留下了作品。之后在首尔世界烟花节（SIFF）上作为压轴节目和项目的最后收尾，和市民一同完成了“艺术家现场涂鸭”。POW! WOW! 的韩国支社社长Andy Song表示：“POW! WOW! 是彻底赋予艺术家们自由创作的庆典。因为有了NOROO集团的积极赞助，POW! WOW! 在韩首次活动得以成功举行。”

一直以来，NOROO以涂料为媒介，为社会做出了诸多的贡献。无论是让黑暗的地方明亮起来，营造预防犯罪的阳光环境，还是旧貌翻新，让老旧的地方重新变身为安全舒适的生活环境，都是NOROO众多努力中的一个侧面。本次“POW! WOW! X NOROO in Korea”则携手众多出色的艺术家，把这一社会贡献的范围进一步扩大。让人忍不住一看再看的出奇创意无疑会给首尔市民带去愉悦放松的时刻和活力。



News Briefing



NOROO GROUP CELEBRATES ITS 72ND ANNIVERSARY

NOROO Holdings Co., Ltd.

NOROO控股股份有限公司

NOROO GROUP CELEBRATES ITS 72nd ANNIVERSARY

On October 31, 2017, NOROO Group held a ceremony at NOROO Welfare Center to celebrate the 72nd anniversary of NOROO. In this event, Chairman & CEO Han Young-jae remarked: "For the past 72 years, NOROO has been embarking on a new level of creation and took on challenges, embracing the chemistry, agriculture and biotechnology business," and added: "Ambition and passion, moxie and a sense of responsibility that young NOROO has are the driving force that made all this possible." He also revealed a plan for 2018 to further increase market share domestically and globally, pursue internally empowering management by expanding cost competitiveness, while fully undertaking the new overseas projects and growth engine businesses in the agriculture and biotechnology field to achieve stabilization in the related business activities. To that end, he urged the NOROO people to think broadly and act proactively to come up with strategies. In this ceremonial event, long-term workers were honored with awards and took celebratory pictures. They donated the wreaths and 'rice of love' they received as gifts to the community.

举行NOROO集团创立72周年纪念活动

为迎接NOROO集团创立72周年，2017年10月31日，公司在NOROO福利馆举行了纪念活动。韩荣宰社长在活动致辞中说到：“NOROO在化学和农生命领域走过了72年不平凡的岁月，目前正集中力量，全面步入健康发展快车道。年轻NOROO的雄心、魄力、热情和责任意识正是实现一切的源动力。”同时，明确提出了2018年在化学事业领域进一步扩大国内外市场占有率、提升成本竞争力以充实企业内部经营实力，在农生命事业领域正式推进新的海外项目和育种事业，并表达了对NOROO人拓宽思



MOU WITH JUNGSAEAEGYO CHEMICAL GROUP IN CHINA

MOU WITH JUNGSAEAEGYO CHEMICAL GROUP IN CHINA

NOROO Holdings signed an MOU with JungsaeaeGYO Chemical Group in China on November 29, 2017 on the 3rd floor meeting room of the main building at the Anyang Plant. With this MOU, the two companies agreed to make continuous efforts in technological cooperation for automotive water-based paints, technology exchange in color development and manufacturing production. Ryusin, President of JungsaeaeGYO Chemical Group, noted: "According to the Chinese government's environmental policy, the need for water-based coatings is increasingly on the rise as demands for environmentally friendly coatings increase in the process of the rising production of electric vehicles. This is the best opportunity for the Chinese local automotive paint companies to grow." Likewise, Chairman & CEO Han Young-jae of NOROO Group remarked: "As far as the business in China is concerned, NOROO aims to grow into a leading company in China in partnership with JungsaeaeGYO, and it is crucial to make small successes one after another for mutual cooperation."

与中国中山大桥化工集团签订MOU

NOROO 控股股份有限公司于2017年11月29日在安养工厂本馆三层的会议室和中国中山大桥化工集团签订了业务合作MOU，同意在汽车水性涂料、色彩开发和制造生产的技术交流等方面展开持续的合作。中山大桥化工集团的总经理刘欣说到：“电动汽车领域在中国政府的环境政策支持下大幅发展，因此眼下是环保涂料需求量增长的一个起点，也是中国本土汽车涂料公司发展的最佳时机。”NOROO集团会长韩荣宰表示，NOROO希望通过与中山大桥的合作，成长为中国最优秀的汽车漆企业。考虑到日后长远的合作，重要的是稳扎稳打，从推动小案例成功做起。



2018 NOROO GROUP NEW YEAR'S KICK-OFF CEREMONY

2018 NOROO GROUP NEW YEAR'S KICK-OFF CEREMONY

On 2 January 2018, NOROO Group held its new year's kick-off ceremony at the Welfare Center of its Head Office located in Anyang, Korea and consolidated its commitment to doing its very best throughout the new year. Chairman Han Young-jae began by expressing his gratitude to all NOROO family members for their tireless efforts in 2017 to make positive results in the chemicals sector and the agriculture and life sector. He then proposed "NOMAD NOROO! Secure Opportunities through Market Leadership!" as the group's vision for 2018. The 2018 vision emphasizes that NOROO employees must be armed with broad perspectives and strong dynamism, in addition to YOUNG NOROO's fighting spirit, passion and sense of accountability. It also calls on us to arm ourselves with new perspectives that are different from what we used to have for our past business performances so that we can achieve sustainable growth down the road. Chairman Han Young-jae also stressed that at the group level, NOROO must continue to develop the group's growth engines through the establishment of its unique future management base. The ceremony was concluded with the presentation of the certificates of appointment to new executives.

NOROO集团举行2018年始务式

2018年1月2日，NOROO集团于安养总公司福利馆中举行始务式，发表了新一年的经营决心。在当天的始务式上，NOROO集团会长韩荣宰发表致辞。韩会长在致辞中对2017年化学部门和农生命部门全体员工的不懈努力与辛勤工作表示感谢，称2017年是努力与汗水结出丰硕果实的一年，并提出2018年集团的目标是“游牧民NOROO！以引领市场为机遇！”。韩会长强调称，在依旧不明朗的韩国经济环境中，必须发挥青年NOROO的雄心、热情、责任精神以及开拓思维与活力才能实现这一目标。在以往的经营方式基础上，用崭新视角去武装，以此实现可持续发展。韩荣宰会长还表示，同时也要在集团层面构建未来经营基础，持续开发增长动力。此外，始务式上还就高管人员的人事变动事宜向相应对象分别颁发了委任状。



JOINT UNDERTAKING OF ROOFTOP COOL ROOF AT SCHOOLS TO IMPLEMENT ANSAN ECO SCHOOL

NOROO Paint & Coatings Co., Ltd.

NOROO涂料股份有限公司

JOINT UNDERTAKING OF ROOFTOP COOL ROOF AT SCHOOLS TO IMPLEMENT ANSAN ECO SCHOOL

On November 2, 2017, NOROO Paint & Coatings Co., Ltd. concluded a business agreement with the Ansan Office of Education and Ansan Evergreen Foundation to provide support to the rooftop cool roof for the implementation of Ansan Eco School at elementary, middle, and high schools in Ansan. Rooftop Cool Roof is an adiabatic system that protects the surface heat from being transferred to the inside by applying heat shield paint that reflects the infrared rays among sun rays on roofs. This prevents the temperature inside the building from rising, thus reduces the energy required for cooling while mitigating the heat island phenomenon of the city. Under this agreement, the Ansan Office of Education will conduct a basic survey and publicizing to select schools to receive installation of the rooftop cool roofs and Ansan Evergreen Foundation will provide support for the selection and construction of the schools, and NOROO Paint & Coatings will provide instructions on eco-friendly technology and business effect analysis for mutual cooperation. Ansan Evergreen Foundation said: "This agreement enabled us to build a sustainable cooperation system to build an environmentally-friendly educational environment by implementing Ansan Eco School," and added: "Alleviating the urban heat island phenomenon will also contribute to creating Ansan, a city of mountains, by 2030."

为建设安山生态学校共同推进学校生态楼示范项目

NOROO涂料股份有限公司为了给安山市的小学、中学和高中建设安山生态学校，决定赞助生态屋顶项目，并于2017年11月2日完成了与京畿道安

News Briefing



CORPORATE SOCIAL RESPONSIBILITY: GIMJANG FOR CHARITABLE SHARING



ULTRA VIOLET, PANTONE COLOR OF THE YEAR IN 2018



NOROO BEE CHEMICAL AWARDED 30 MILLION US DOLLAR EXPORT TOWER

山教育支援厅和京畿安山环境财团的业务协议签订。生态屋顶是利用涂布在楼顶的特殊隔热涂料反射太阳光中的红外线，从而阻止表面热量传递至内部的隔热系统，不仅可以阻止建筑内部温度上升、节约能源，还能够缓解城市的热岛现象。协议约定，由京畿道安山教育支援厅进行生态屋顶项目适用学校的基础调查和宣传工作，由安山环境财团负责选定项目适用学校并支持施工过程，由NOROO涂料股份有限公司提供隔热涂料、环保技术指导并进行项目效果分析。安山环境财团就此表示，通过本次协议，能够建设安山特有的生态学校，在构建环保教育环境方面得以建立可持续的合作体系。同时，缓解城市热岛现象也有助于安山2030年建设林中城市的目标。

CORPORATE SOCIAL RESPONSIBILITY: GIMJANG FOR CHARITABLE SHARING

On November 25, NOROO Paint & Coatings engaged in social contribution activities at Anyang Welfare Center titled as <Gimjang for Charitable Sharing with NOROO Paint & Coatings>. NOROO Paint & Coatings, which strives to achieve warm companionship with its neighbors through sharing and mutual benefit, prepared this event to be of help to the wintering of the underprivileged. Gimjang kimchi made on this day was distributed to 150 households of the elderly living alone and veterans' families as the company did last year. General Manager Choi Kyung-soo who participated in the volunteer activities, said: "We will continue communicating with the local community and engage in various social contribution activities so that a culture of warm sharing may expand." NOROO Paint & Coatings continues to carry out diverse social contribution activities for the local communities including delivery of briquettes and gimjang for charitable sharing events each year based on our employees' active volunteering spirit.

分享爱心泡菜社会贡献活动

时值越冬泡菜的准备季节，NOROO涂料股份有限公司于11月25日在安养福利馆举行了主题为“和NOROO涂料一起分享爱心泡菜”的志愿者活动。(株)NOROO 涂料股份有限公司希望通过本次活动给弱势群体送去温暖，帮助他们顺利越冬。和去年一样，今年NOROO也把做好的泡菜直接送到了独居老人和捐助家庭等150户困难家庭中。参与这天泡菜志愿活动的NOROO 涂料股份有限公司的崔景秀部长说：“我们将继续和地区社会保持沟通、开展各种社会贡献活动，传播温暖的分享文化”。NOROO涂料股份有限公司的员工积极参与志愿活动，每年都会开展烟炭送到家和越冬泡菜分享等活动，以各种社会贡献活动延续着服务地区社会的使命。

ULTRA VIOLET, PANTONE COLOR OF THE YEAR IN 2018

PANTONE, a US corporation headquartered in New Jersey, selected 'Ultra Violet (PANTONE 18-3838)' as the PANTONE Color of the Year in 2018. 'Ultra Violet' is a unique and imaginative color, reminiscent of an endless night sky, a symbol of possibility and a color that evokes the desire to go beyond the present age.

Leatrice Eiseman, Executive Director of the Pantone Color Institute, noted: "We live in an age of imagination and creativity," and explained: "Ultra Violet based on blueness inspires creative inspiration and boosts our perception and potential" as the reason of its selection.

The energetic purple shade has long been a symbol of anti-culture, unorthodoxy, and artistic talent, stimulating imagination and expanding the way of thinking in a more creative direction. In this regard, Laurie Pressman, Vice President of the Pantone Color Institute, stated: "PANTONE Color of the Year reflects the needs of the times beyond representing global design trends," and continued: "As people around the world become enthusiastic about color and gradually realize the deep message and meaning that the colors deliver, designers and brands should be able to be inspired by colors and also influence others."

潘通选定的2018年代表色彩——紫外光色

全球专业色彩公司“潘通”把“紫外光色 (Ultra Violet, PANTONE 18-3838)”定为了2018年代表色。紫外光色是兼具独创性和丰富想象力的色彩，是浩瀚无边的夜空和藏于其中的各种可能性的象征，也是唤醒超越现代渴望的色彩。

潘通色彩研究所的莉雅翠丝·艾斯曼 (Leatrice Eiseman) 这样描述选择紫外光色的理由：“我们处于需要想象力和创意力的时代，以蓝色为基调的紫外光色不仅能够唤醒创意性灵感，还能够带动我们的知觉和潜力。”充满能量感的紫色作为很长时间以来反文化、非习惯性和艺术性才能的象征，有着刺激想象力向更富创意的方向拓展的特点。潘通色彩研究所副总裁劳瑞·普雷斯曼 (Laurie Pressman) 表示：“年度色彩已超出了流行色的定义，而成为了反映时代需求的一种存在。随着全世界人对色彩愈发关注，了解色彩传递的深层讯息和意义，设计师和品牌更应注重从色彩中获得灵感并以此影响人们对美的观念。”

NOROO BEE Chemical Co., Ltd.

NOROO碧化学有限公司

NOROO BEE CHEMICAL AWARDED 30 MILLION US DOLLAR EXPORT TOWER

On December 5, NOROO BEE Chemical Co., Ltd. was awarded the '30 Million US Dollar Export Tower' by the Korea International Trade Association (KITA) celebrating the 54th Trade Day. Shin Joon, CEO of NOROO BEE Chemical, attended the Trade Day event held at COEX, Samseong-dong, and received the '30 Million US Dollar Export Tower' while Senior Director Lee Seibu received a Commendation Award by the KITA. 'Trade Day' is a legal anniversary established for the purpose of achieving balanced growth of trade and further

solidifying the will to build the country as an international trade powerhouse. The specific date was set on November 30 back in 1964 to celebrate the export record of US\$ 100 million achieved by South Korea for the first time, and then, the date changed to December 5 when the trade volume reached the US\$ 1 trillion in 2011. The Trade Day event has been held on December 5 since 2012, marking its 54th anniversary this year. This year's commemoration ceremony on Trade Day held at COEX in Samseong-dong, Seoul, was attended by more than 2,000 persons including South Korea President Moon Jae-in, men of merit in trade, and officials from the related government organizations to renew a sense of importance of trade. For the 2017, Korea re-entered the US\$ 1 trillion mark in three years after its first achievement and saw its global ranking step up by 2 levels as the 6th largest country by exports. Meanwhile, other enterprises that shared the honor of the '30 Million US Dollar Export Tower' other than NOROO BEE Chemical included Hyundai Global Motors Inc. and Kakao Games Corp.

NOROO碧化学有限公司，喜获三千万美元出口之塔荣誉

12月5日第54届贸易日，NOROO碧化学有限公司获得了韩国贸易协会授予的“三千万美元出口之塔”奖。代表理事申峻出席了在三成洞COEX举行的贸易日活动并作为代表领奖，表彰奖由常务李涉作为代表领取。“贸易日”是为了促进贸易的均衡发展和稳固贸易立国的意志而定下的法定纪念日，于韩国首次达成出口额一亿美元的1964年11月30日设立。2011年12月5日贸易规模达到一亿美元后，贸易日自2012年起变更为12月5日，迄今已过了54个年头。本次贸易日纪念仪式上，包括文在寅总统在内的贸易有功者及政府相关机构等两千余人出席，再次凸显了贸易的重要性。韩国在2017年时隔三年再次达成出口额一亿美元，出口排名世界第三，相比去年上升两个排名。和NOROO碧化学有限公司同获此殊荣的还有(株)Hyundai Global Motors和(株)Kakao Games等企业。