

NOROO



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*Color & Information*

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**NOROO**

## NOROO Soars as a Nomad! Turning Crisis into Opportunity!

Fellow NOROO family! We celebrate the 2019 Year of the Golden Pig. It is my hope that your homes will be filled with health and happiness, and I'd also like to express my gratitude towards the staff members overseas who are putting forth their best efforts around the globe for the increased competitiveness of NOROO.

Last year, we put forward our utmost effort, never relaxing even for a single moment, based on the management index 'Nomad NOROO! Opportunity as a market leader!'

The chemicals business further secured its leading industrial position through the expansion of strategic businesses, yet it faced difficulties gaining profitability due to continuous problems with the supply and demand of raw materials along with rapidly rising prices. The agricultural businesses endeavored to construct a business foundation and fortify themselves, and yet, it was concluded that stable commercialization was out of their power. There were areas that did not live up to our expectations, but I appreciate the efforts of the staff members who persistently ran towards the goals set in 2018, and I sincerely thank you all for a smooth end to another year.

Dear NOROO family!

As you are all aware, the business environment this year was filled with uncertainty, so much so that it is difficult to foresee even an inch ahead. The continuing trade war between the U.S. and China, the slowdown of China's growth, globally rising interest rates, and the economic crisis of emerging nations simultaneously emerged to rapidly deteriorate foreign business environments. With such conditions, the continuing stagnation of the local economy and various business-regulating policies resulted in great difficulties in terms of company management. The costs of raw materials are expected to remain unstable this year as well, which is expected to add hardship to the securement of profitability. We have indeed entered a time where we will experience true 'survival.' Despite the uncertain environments that await us globally and locally, the chemicals business must fortify distinction as a leader in its area and bet life and death on securing the profitability that it failed to acquire in the previous year. The agricultural businesses must also strengthen competitiveness in the seed and Smart Farm businesses in order to further business stability as soon as possible. To accomplish these things, we must search for diverse business opportunities and revitalize the pioneering of foreign markets to design a new, strategic plan for change.

In acceptance of such global and local conditions and to elevate our status, I'd like to announce this year's management index for NOROO Group: 'NOROO Soars as a Nomad! Turning Crisis into Opportunity!' This index is the integration of the thinking methods and action values that we must pursue and act on, and our will to boost pride in our efforts, calmly analyze long-time customs, and break through the poor business environment.

In more specific terms,

**First, we must continuously pursue nomad-style globalization.**

As we aim for a nomadic style of thinking, we must create new demand in the

domestic market while expanding the pioneering of overseas markets. Westward policy through the emphasized nomadic strategy must be more powerfully unfolded and become the first year of the sturdy construction of our position in the ASEAN market.

**Second, we must pursue the beauty of fusion.**

Cooperation between individuals or groups is crucial at the point where the paradigm of competition has changed. Until now, we used different policies to develop each company's particular market qualities. Now, we have entered into a time when we must accentuate the strengths of each company and fuse them together to create new values. Within each company, new mutual goals must be set in terms of consumer sharing, technology development and utilization of resources. In particular, technology development must center on NOROO Paint's research center in order to develop new material projects, actively share related findings and strive to secure the company's competitiveness.

**Third is the construction of a digital system that takes advantage of the Fourth Industrial Revolution and the 5G generation.**

Creation of a market starts with the resolution of consumer inconvenience in everyday life. New opportunities form only when we think from the consumers' points of view. We have grown accustomed to the traditional analog format in our ways of thinking and from a systematic aspect. To survive and grow in these times, we must think outside the box, which means that we must actively pursue datafication, smartification, and digitalization.

**Fourth, the fortification of liquidity based on stability.**

It is expected that the economy will suffer in the future, that there will be difficulties coming close to the extent of a financial crisis. In such critical overall conditions, strengthening of liquidity is fundamental and absolute in order to secure continuous business. The management of each company must devote themselves more to asset soundness, while sustaining this with thorough bond and inventory management.

Fellow NOROO members!

We can expect this Year of the Golden Pig to, more than ever before, be filled with hardships in the midst of new uncertainties. We must stick together with confidence to display the sagacity to wisely conquer such times of crises, and it is my hope that together we will create a more dynamic and differentiated year.

Lastly, I would like to express my deepest gratitude towards the Chairman of NOROO Paint who works hard for the creation of a progressive labor-management culture, the executive departments and union chairpersons of our subsidiaries, and the union members.

Everyone! Happy New Year.

January 2, 2019  
Chairman **Han Young-jae**

## 凭借游牧主义精神翱翔的NOROO! 化危机为机遇!

NOROO家族的各位成员!

2019年(己亥年)新年伊始。值此新春之际,祝大家身体健康,阖家幸福,同时向今天依然奋斗在世界各地的NOROO全体海外员工致以诚挚的敬意!

过去的一年,在“游牧主义NOROO! 引领市场,把握机遇!”的经营方针指引下,为了提高集团竞争力所有NOROO人全力以赴,没有放松一丝一毫。

化工部门通过战略调整扩大经营规模,虽然确保并巩固了业界的领先地位,但由于原料的供求问题及价格的持续暴涨等原因对收益性造成了严重影响。而农业生命科学部门在构筑事业基础和充实内部实力方面虽付出了多番努力,但尚未步入健康稳定发展的轨道。过去的一年,虽然有很多不尽如人意的地方,但全体NOROO人仍然能够朝着年初设定的目标坚持不懈地努力,在此,对各位在过去一年的艰辛付出表示衷心的感谢!

NOROO家族的各位成员!

众所周知,2019年的经营环境仍然充满了许多不确定性,经济前景尚不明朗。受美中贸易战、中国经济增长放慢、全球利率抬升以及新兴市场国家的经济危机等多重影响,整个经营环境急剧恶化。加之韩国经济的持续低迷以及各种针对企业的限制政策的出现,使得企业经营面临着巨大的压力。同时,今年原料价格的持续波动,将加重影响企业的收益性。可以说,当今时代让我们真切感受到了“生存”的意义。在国内外各种不确定的环境因素影响下,化工部门作为市场坚强的领导者要进一步加强差别化发展战略,不惜一切努力坚决确保企业收益性;农业生命科学部门也要强化种业和智能温室事业的市场竞争力,只有不断探索各种商机,开拓海外市场,谋求战略新布局才能快速步入稳定发展的轨道。

面对当前的国内外情势,为进一步提升NOROO的威望与地位,我宣布将2019年的经营方针定为“凭借游牧主义精神翱翔的NOROO!化危机为机遇!”。这一经营方针,凝聚了我们不懈追求与实践的思考方式和行动价值,不仅可以提高我们努力的自信心与自豪感,同时还能够对过往进行冷静客观地分析,是我们克服恶劣经营环境的意志体现。

这一经营方针的具体内容包括以下四点:

**第一,坚定不移地实现游牧主义式全球化发展。**

通过游牧主义思考方式,在国内寻找新的内需市场并积极拓展海外市场。通过游牧主义战略更好地响应西进政策,将

2019年作为抢占东南亚市场的元年。

**第二,追求融合之美。**

如今,竞争格局已经发生变化,个人之间、组织之间的合作尤为重要。过去,我们实行分公司战略,按照各个公司的市场特性去发展;今后,我们要在保持各自优势的同时,实现融合发展,创造出新的价值。因此,各公司要在客户共享、技术开发、资源活用等方面设定新的共同目标齐头并进。特别是在技术开发方面,要以纳路涂料股份有限公司的研究所为中心,推进新材料研发,通过积极共享努力打造企业竞争力。

**第三,借力第四次工业革命和5G时代,构筑数字化体系**

建立市场要从解决好客户问题着手,要站在客户的立场思考问题才能发现新的机遇。过去,在思考方式和体系方面,我们多采用的是传统的模拟方式;企业今后若想生存和发展下去,就要从现在起突破思维边界,积极推进数据化、智能化、数字化建设。

**第四,以安全性为本,强化流动性**

今后,世界经济将逐渐走向更加艰难的局面,其艰难程度不亚于一次经济危机所带来的影响。面临这种综合的危机形势,要想确保企业的持续发展,强化流动性是根本的,绝对的。希望各公司领导层通过深入开展债权和库存管理加强并完善企业的资产健全性。

NOROO家族的各位成员!

2019年新的不确定性中将带给我们更多的困难与挑战。我们只有团结一心,群策群力才能智渡难关。希望大家新的一年更加积极进取,力争在2019年创出一番佳绩。

最后,向为构建和谐劳资关系辛勤付出的NOROO涂料工会主席、各子公司工会主席和执行部门,以及全体工会成员表示衷心的感谢!

祝大家新春快乐!

2019年 1月 2日  
会长 韩荣宰



# Color and Information



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INFORMATION IS OPPORTUNITY

## Information is opportunity

The typical greetings of nomads who built the largest empire in the history of mankind was “What has happened where you came from?” Alexandros the Great, explorer and conqueror, used to tenaciously ask visitors about the economy, geography, and major personnel of their countries. Rome has always valued the collection of information, and Caesar was able to conquer Gallia thanks to his outstanding utilization of information. The importance of information cannot be emphasized enough. Also, information must move from procurement to utilization. Craig Mundie of Microsoft once said that data is the new raw material of business. Today, humankind is capable of creating as much data in one day as they have over the past two millennia. What kind of new value and meaning would be created from such abundance of raw materials? The door to opportunity is open before us.

## 信息就是机会

创造史上最大帝国的游牧民族的问候语曾经是“你来的地方发生过什么事？”曾经的探险家与征服者亚历山大大帝固执地向访客询问地区的经济信息、地形、主要人文信息。罗马一直都很重视信息的收集，凯撒利用优秀的信息征服了高卢。再怎么强调信息的重要性都不足为过。人类不仅要掌握信息，更要灵活地运用信息。微软公司的克瑞格·蒙迪（Craig Mundie）称，数据是商业的新原材料。如今，人类仅需一天就能创造出超过2000年的数据。在这丰富的原材料中能够创造哪些新价值与意义呢？机会之门已经向我们敞开。



# Now, raising the class of information

By\_Lee Sang-ok

Even when you briefly do a search online to purchase something, the screen is flooded with an overwhelming amount of information. A smartphone connects to the online world in an even faster and easier way. Before you know it, you simply lifting your smartphone just to check the time and you find yourself endlessly touching and clicking the screen that is overflowing with information. Amid such inundation of data, people of modern times often cannot find or utilize appropriate information. Information also has class. In today's world, we need utilization, in place of collection of information.

## 快来提高信息的格调吧

为买一样东西在网上稍加搜索，屏幕上就会弹出让人目不暇接的海量信息。再加上智能手机的出现，让人们可以更快、更方便地使用网络。本来只是想看一下时间，结果却发现自己已经不知不觉地点击着屏幕上铺天盖地席卷而来的信息。现代人大多数时候都无法在信息的洪流中顺利地找到自己需要的信息并加以有效利用。信息也有格调，如今已不能再专注于信息的收集，更需要对信息进行有效利用。



### AGE OF INFORMATION SUPERFLUITY CLOUDED BY DATA SMOG

The more information you have, the better it is. But inaccurate or unnecessary information present fatigue and stress to users, and if the amount is large, it also reduces the analytical ability of a user, leading to weakened confidence in his/her own decision making, an irony of data, which is supposed to help people decide, providing an obstacle instead. Such superfluity of low-quality information is known as data smog.

Data smog places consumers under the Hamlet Syndrome, a state of inability to make decisions in the midst of too much information. To help solve this issue, the curation service has emerged. Curation refers to classification and distribution of already created contents into different purposes. The importance of this service continues to grow, analyzing big data created through diverse channels at a fast speed and then selectively providing information suitable for each user. Korea's top 3 social commerce companies, Coupang, Ticketmonster and Wemakeprice, are quickly catching up with the open market with consumer-tailored strategies using the curation service. The service, which helps decide for a Hamlet-type consumer with a more considerate approach for individual users, is needed not just in the distribution industry but throughout all fields.

### FROM “QUANTITY” TO “QUALITY” TO “CLASS OF INFORMATION”

Until recently, the term “sea of information” has been used to express the abundance of information in a positive way. However, this “sea” has now become a “boundless ocean” with too much information and is often viewed in a negative light. From now on, we must

### 因数据迷雾变浑浊的信息过剩时代

信息越多越好，但不准确的信息或不必要的信息会使用户感到疲惫与压力，其数量如果很庞大的话，还会降低用户的分析能力，无法判断自己的决定是否正确。本应帮助用户做决定的数据反而妨碍用户做出决定，这种矛盾现象越来越普遍。我们把这种质量低劣的信息过剩现象叫“数据迷雾”。

数据迷雾会使消费者患上选择困难症，即在大量信息中陷入一种无法做出决定的选择性障碍状态。为此，信息的综合处理（Curation）服务应运而生。综合处理的意思是根据目的对已经制作完成的内容进行分类并分发。该服务通过各种渠道的信息分析快速生成的大数据（Big Data），根据用户特点筛选并提供适当的信息，其重要性正在日益凸显。韩国社区化电子商务的三大巨头企业Coupang、Ticket Monster、We Make Price采取利用综合处理服务的客户定制战略，目前正在快速抢占市场。流通行业乃至所有产业领域都需要综合处理服务，因为综合处理服务能从更高层面去关怀贴近个人用户，为患有选择困难症的消费者提供有效信息，帮助他们下定决心。

### 从“量”与“质”到“信息的格调”

“信息的海洋”这种说法直到不久以前还是积极肯定信息丰富性的一种表达。但这片海洋如今却因信息过剩变成了“茫

茫大海”，呈现出消极、否定的意思。未来，信息必须从量跨越到质以及格调。对用户的关怀将成就信息的格调。

Let us take restaurants, for instance. Information of good restaurants updated by countless numbers of people is combined with recent real-time location data to be provided based on user's current location. The quality of information service has been improved. Subsequently, credit card companies, which analyze consumption patterns and understand users' preferences based on combination of card payment history, location data, and store information, are able to offer information of restaurants in a discriminate manner. For a user who often uses his/her credit card at a barbecue restaurant before a café, sending a text message saying that “there is OO café nearby where card discount is available” after he/she makes a payment at a barbecue restaurant would be an example demonstrating the class of information service. Information that predicts a user's demands and is delivered right when the user needs it allows the consumer to experience a differentiated service known as “consideration.” For the class of timely information service, sharing among users is necessary. A user provides his/her payment patterns, current locations, etc. to receive suitable services. If a limitation is set on provision of information due to fear of potential leakage of private data, the level of services one may receive would be limited as well. Thus, those who receive VIP services actually want their information to be utilized.

Online news channels, search portals, shopping malls, and other players that routinely pour out new information and products daily must now think about class, instead of quality. Because it is the users who judge the class of information, the information supplier needs to read the minds of users and provide information accordingly. For this end, there have been various attempts to accurately analyze the user preferences by using not only big data but also open platforms such as Google and Naver, in addition to social networks including Facebook and Twitter. There are also Watcha that recommends movies based on reviews of films you have already seen, Laftel that selects comic books of readers' preferences in a similar way, Smartchoice that analyzes smartphone usage patterns to propose the optimum plan, Siks in that displays restaurants based on locations, and an app called Fund Supermarket that recommends customized fund products once you enter various information such as fund scale, risk tendency, management period, and management company.

The future market will be dominated by companies with competent curation services that guide the consumers who are wandering aimlessly in the sea of information toward the right direction and help them save both time and money. To captivate wavering consumers, a focus must be on locating the desires hidden behind their data.

### UTILIZE DATA SHREWDLY TO SURVIVE

Big data analysis and customized curation that raise the class of information serve an important role in establishing future business strategies. Companies utilize data in almost all areas as they increase market share, reduce cost, improve productivity, and enhance products and services. Also, distributors use big data to optimize cost, predict demands, recommend products, and improve stock management while manufacturers utilize it to respond to customers' requests and optimize the supply network. The real-time data room of Alibaba, the largest online distributor in China, is similar to the mission control room of NASA. A great number of up-and-coming companies have appeared in the data analysis service scene and global conglomerates such as IBM, Microsoft, Oracle, and SAP have spent several billions of dollars in the last few years in taking over software development companies for data analyses.

Companies in the past grew in scale by concentrating their core competency on proven strengths. However, alacrity, not size, is becoming more and more important. Information is like public goods nowadays. A company's success and failure will hinge on what is extracted from this information and how it is utilized before anybody else. Quickly and accurately analyzing information and curating it into your own with class is a must-have trait in this rapidly changing era.

茫大海”，呈现出消极、否定的意思。未来，信息必须从量跨越到质以及格调。对用户的关怀将成就信息的格调。

以美食店信息为例，最近无数人更新的美食店信息与实时定位信息融合，根据用户的当前位置提供相关信息，信息服务的质量也有所提高。在融合银行卡付款明细与位置信息、加盟店信息的基础上，分析消费模式，掌握用户喜好的银行卡公司可以在此基础上提供差异化的美食店信息。例如，针对吃完烤肉后习惯喝咖啡的用户，当他们在烤五花肉店付款后立即向他们发送“附近的XX咖啡厅可享受银行卡优惠”这样的短信提示，就是展现信息服务格调的一个例子。预测用户的需求、在用户需要的瞬间提供的信息可以使消费者感受到“关怀”的差异化服务。为确保时机适当的信息服务格调，共享用户信息是必不可少的。用户提供自己的付款模式与当前位置等信息后才能享受与之对应的服务。如果担心个人信息泄露而给信息提供设限的话，自己享受的服务水平自然也只能存在局限。不知道是不是因为这样的原因，调查结果显示，享受VIP服务的人反而更愿意公开必要的个人信息。

网上新闻频道或搜索门户、购物商城等每天都会涌现出大量新信息与产品，如今它们也该考虑信息的格调而非质量了。信息是否具有格调是由用户来判断的，因此信息提供者必须读懂用户的心意并提供与之相符的信息。为此，利用大数据、谷歌、NAVER等开放性平台与Facebook、Twitter等SNS准确分析用户喜好的多种尝试也在有条不紊地展开。通过用户对已观看电影的评价提供电影推荐服务的WATCHA，通过类似方式推荐符合读者喜好漫画的Laftel，分析智能手机使用模式并推荐最佳资费套餐的Smartchoice，根据用户位置推送美食店信息的Siks in，用户输入基金规模、风险倾向、运用时间、运用公司等信息后可推荐最佳基金商品的Fundsupermarket，这些应用都是典型的例子。

为彷徨于信息的海洋中的消费者指明正确方向，帮助消费者节约时间与金钱的信息综合处理服务企业将占据未来的市场。为俘获消费者，必须集中力量找出隐藏在消费者数据中的各种诉求。

### 只有灵活运用信息才能生存

提高信息格调的大数据分析与定制型综合处理服务将在今后树立事业战略方面发挥重要作用。企业在提高市场占有率、节约成本、提高生产效率、改善商品与服务等几乎所有领域都会运用数据。流通企业利用大数据实现价格的最优化并预测需求，推荐商品，改善库存管理。制造企业利用大数据生产定制商品，应对客户要求或构建最优化的供应网。中国最大的线上流通企业阿里巴巴的实时数据分析室的规模不亚于美国国家航空航天局（NASA）的任务控制室。数据分析服务领域的新生企业犹如雨后春笋般涌现，在过去几年里，IBM、微软、甲骨文、SAP等跨国企业也在收购分析数据所需的软件开发企业方面投入了数十亿美元。

过去，企业通过集中核心力量强化优势来发展壮大，但如今比起规模，灵活性正变得愈发重要。如今，信息近乎于公开财产。企业的成败取决于谁能最先从这些信息中提取出有效价值并加以灵活运用。快速、准确地分析信息，利用具有专属格调的信息综合处理服务，将成为剧变时代必备的素质。



**+ INTERVIEW**

from the left  
Researcher Kim Jun-ha, Baek Hyang-ku and Na Jong-hyun

## A small seed with great information

Seed Research & Development Complex of Agricultural Corporation The Kiban Co., Ltd.

At times I get surprised. It is surprising how countless videos, photos, words, and numbers can be saved in a microchip that is smaller than a fingernail. If you look at a seed in the same way, it is beyond surprising and even mysterious. A seed changes its surroundings as it changes itself. It sprouts, stretches out its stem, bears fruit, makes food, changes its culture, and grows to over a few hundred times its size to make shade and even a scenery. A seed has as much information as a microchip while holding great possibilities and values within.

### 蕴含伟大信息的小小种子

榑The KIBAN育种研究基地

有时我很惊诧，惊诧于比指甲还小的微芯片中竟然蕴含着大量的视频、照片、文字与数字等信息。无独有偶，在看到种子时，我在惊诧的同时还感受到了神秘。种子可以同时改变自己和周围的环境。发芽、抽茎、结果、生产粮食、改变文化，长到几百倍的大小，形成绿荫和风景。种子也像微芯片一样，蕴含着大量信息，同时又具有伟大的可能性价值。

### A SEED BECOMES CULTURE

The changes that arise from a seed do not only indicate the changes of appearance for growing crops. After cottonseed, a plant that could be cultivated in large quantities, entered South Korea, citizens were able to make warm cotton clothes and blankets to sleep with, and with sweet potato slips, people in the southern regions were able to overcome the barley hump. Maize helped develop the civilization of Central America, and tea made appearances at critical moments in history all over the world.

At the heart of these seeds that change agriculture, environments, and become the rudder for the future is The Kiban Seed Research & Development Complex. Researcher Na Jong-hyun specializes in cabbages, Researcher Baek Hyang-ku in pepper, and Researcher Kim Jun-ha in radishes to cultivate seeds that can be grown not only in Korea but overseas as well. Since the development of a new breed takes a minimum of eight years and up to fifteen years, taking the right direction in breed development is crucial. Thus, collection of diverse information is essential.

Researcher Na Jong-hyun states that “In order to develop seeds, one must not only have knowledge about seeds but also about the eating habits of the region in question. Cabbages for example are generally thinly chopped and eaten as salads in Korea but in Europe, cabbages are salted, stored, and eaten for long periods of time. That is why hard-headed cabbages are preferred there. However, in Turkey where cabbages are wrapped around meat and steamed, cabbages with leaves that fall off easily are preferred. We need information like these to establish a direction for seed growth.” It is a researcher’s duty to figure out the eating habits of each market, collect and compare different seeds, grow and test new seeds on the basis of the results. In order to fulfill such duties, there must be a varied collection of original information on seeds and the seeds themselves.

Researcher Kim Jun-ha explains, “If a seed were a product, there would need to be information for product development as well as information for the launching of the product. Cultivation techniques, dissertations,



### 种子传承文化

种子造成的变化不只意味着某种作物生长的单纯外形变化。韩国引进可以大量栽培的棉花籽后，百姓们得以穿上暖和的棉衣、盖上厚实的棉被；引进红薯种子后，南部地区得以顺利地度过春荒。玉米推动了中美洲的文明发展，茶叶也于历史性时刻在世界各地亮相。

种子可以改变农业、改变环境，甚至成为未来的方向舵，而榑The KIBAN育种研究基地正是开发种子的地方。其中罗钟弦（Na Jong-hyun）研究员（专攻甘蓝）、白享九（Baek Hyang-ku）研究员（专攻辣椒）、金俊夏（Kim Jun-ha）研究员（专攻萝卜）作为不同植物种子领域的专家，为使相应品种可以在韩国国内乃至海外栽培，积极地投身于育种工作中。开发新品种少则需要8年、多则需要15年以上，所以首先确定种子开发的方向至关重要。为此，收集各种各样的信息是必不可少的。

罗钟弦研究员表示 “为开发种子，必须准确掌握种子的相关信息及相应地区的饮食生活习惯。以甘蓝为例，韩国通常会切成薄片、做成沙拉后食用，但欧洲则有用食盐腌制后长期储存食用的习惯。所以欧洲更偏爱硬实的甘蓝。但在用甘蓝把肉包起来蒸着吃的土耳其，则更喜欢单个叶片容易分开的甘蓝。只有知道这些信息，才能确立种子开发的正确方向。” 掌握每个市场的不同饮食生活习惯，收集各种各样的种子进行栽培比较，以结果数据为基础开发、测试新品种，这些都是研究员的工作。为此，研究员们还必须掌握多种多样的种子信息。

金俊夏研究员介绍说 “把种子看成产品的话，那就要有产品开发所需的信息、产品上市所需的信息。基因库、农业遗传资源中心、各大学或研究所的新种子培育技术、论文、传统书籍等都是开发所需的信息，饮食文化和栽培地区的气候等则是产品上市所需的信息。”

### 具体、系统化的信息可开发更优秀的种子

为快速获取大量信息，必须进行各种各样的交流。白享九研究员表示 “我们也与外国企业在多个方面分享各种





and traditional books of gene banks, National Agrobiodiversity Center, outside universities, and institutions are necessary information for development, and information about food cultures and climates of cultivation areas, etc. are needed for launching.”

### CONCRETE AND SYSTEMATIC INFORMATION MAKE BETTER SEEDS

There must be a variety of exchanges in order to quickly receive more information. Researcher Baek Hyang-ku commented, “We share a wide variety of information and cooperate with foreign companies. We request information from overseas universities about seeds. International expos are also centers of important information. They help us grasp which companies grow what kinds of seeds in what direction. The seed industry can get a general idea of trends that will arise five years from now, but it is difficult to predict how trends will change ten or fifteen years later. That is why we need to form our own conclusions with various information.” Researcher Na Jong-hyun has exported cabbage seeds to India in the past through a successful prediction. In the 1980s when cabbages were rare, he began his research to develop a seed that protects itself against damage from diseases and harmful insects, and his efforts succeeded in India. He smiled as he said, “It made me proud to think that the 1.3 billion people in India would eat cabbages that I have developed.” He went on to mention Europe. “I made a visit to Europe recently, and I saw that the diseases found in cabbages of tropical regions were also in Europe. Cabbages that survive the high temperature and humidity of summer in Korea could be favorable in Europe as well. This was an opportunity for a new market creation.” Direct inspections of sites increase concreteness of information. The same goes for domestic cases. Seed companies run trial cultivations on farms before the actual launching. Researchers sometimes hear news about the state and results of such cultivation from shrewd sales persons, but they also check out the sites in person. Researcher Kim Jun-ha stressed the need for concrete and systematic information on the region and market information for the development of seeds.

信息并开展合作，同时也向各国的大学寻求种子与相关信息。国际博览会也是重要的信息收集渠道，我们可以通过博览会掌握什么公司正在向什么方向培育什么品种。整个行业都可以大体地推测出5年后的趋势，但却很难预测10年～15年后的趋势。所以各公司必须依据各种各样的信息做出各自的判断。”

罗钟弦研究员凭借过去的成功预测，曾经开发出出口印度的甘蓝种子。他从甘蓝尚很罕见的80年代开始开展研究工作，成功开发出抗病虫害能力强的品种，并在印度取得了成功。罗钟弦研究员面带微笑地说：“一想到13亿印度人吃上我开发的甘蓝，我就觉得很开心。”他又提到“最近我去了一趟欧洲，原来在热带地区甘蓝上发生的病害在欧洲也有发生。所以能在高温潮湿的韩国夏季气候中存活的品种可能在欧洲也有市场。”

像这样，亲自去现场考察也能提高信息的具体性。韩国国内也一样，在产品正式上市前，种子公司会让农户试种。这些栽培情况和结果会被快速地反馈给销售人员，与此同时，研究员们也会亲自去现场确认。金俊夏研究员也强调，为开发种子，需要具体、系统化的地区信息与市场信息。

#### 在信息中增添创意

除信息外，开发种子还需要育种师，也就是研究员的创意。罗钟弦研究员介绍说“举个例子，过去春天不能栽培萝卜。一个育种师带着‘为什么春天不能栽培萝卜’的疑问，进行了创意性育种并成功开发出了新品种，后来使

#### ADD IDEAS TO INFORMATION

Researcher Na Jong-hyun states that along with information, a cultivator, or a researcher's idea, is essential for seed development. “For example, long ago, radishes could not be grown in spring. One cultivator then asked the question, ‘Why can't radishes be grown in spring?’ and he took this idea to develop a seed, and now consumers can easily find radishes to eat in summer. What must an aging farm with a lack of manpower do to make pepper farming easier? A pepper must be bigger in size to make harvesting easier. Farmers must also take into consideration the changing palate of people who cannot eat spicy food.”

Researcher Kim Jun-ha says that his goal is to hear these words from farmers: “These seeds helped me raise my kids.” Researcher Baek Hyang-ku's goal is to create representative pepper seeds that would create new markets. As Researcher Na Jong-hyun predicted, the benefits of good seeds return to farmers, consumers, and companies. Furthermore, knowing that there are many markets left for this virtuous cycle is a great motivation for researchers.

“Before the 1970-80s in Korea, seeds were mostly native, or purebreds, and they grew disease-tolerant and in harvest amount through crossbreeding, which has changed the market. Crossbreds have an advantage of being heterotic. There are many markets throughout the globe that still rely on purebreds. We are waiting for the opportunity to colonize the seed market and develop its value.” From Researcher Baek Hyang-ku's story, which is in a way more like a resolution for the future, the word ‘heterotic’ lingers. Just as two different things come together to make something stronger, great amounts of information meet the researchers’ ideas to be developed into stronger seeds. It is possible that within the seeds are new scenes of culture and farms, companies and nations.

消费者在夏天也能吃上萝卜了。要想使老龄化严重、人手不足的农户轻松种植辣椒该怎么办呢？当然是让辣椒的个头变大、使收获变得更容易了，同时也必须考虑逐渐不那么能吃辣的消费者口味的变化。”

金俊夏研究员表示，他的目标是听到农民对自己说“用了这个种子后，种庄稼和养子女两手都做得很好。”白享九研究员则称自己的目标是开发可以形成新市场的辣椒代表品种。他们的目标没有什么不同，因为就像罗钟弦研究员举的例子那样，优秀品种的利益将回馈给农民、消费者及企业所有人。目前这种良性循环的市场潜力巨大，这对研究员们来说是莫大的激励。

“在韩国，70～80年代以前，本地品种占大多数，但之后通过育种开发出杂交品种，提高产量与抗病性的同时也改变了市场，因为杂交品种具有杂种优势的优点。目前世界上依然有很多依赖本地品种的市场，有大量开拓种子市场、提高市场价值的机会在等着我们。”

白享九研究员口中的“杂种优势”这个词让人尤其印象深刻。就像不同的事物相遇后会变得更强大一样，大量信息在遇到研究员们的创意后将开发出强大的种子。这种子中是否也蕴含着农户与企业、国家与文化的新风景线呢？





## Big data, Informatization of all things

When you hear the word, “information,” you may think of something that is rare or valuable, but depending on how you view and utilize things, anything may become information. A snow-covered road is an inconvenience to pedestrians but is a cash cow for snow removal businesses. Also, the menu at a cafeteria to which you normally pay little attention is an important piece of information that nearby restaurants must refer to. Meanwhile, the time it took for you to wait for public transportation, which used to be largely based on luck, is now conveniently displayed on applications and now turned into valuable information. Just like what poet Kim Chun-su wrote in his poem that says, “A thing that had been a mere movement of a body became a ‘flower’ once its name was called,” everything around us is accumulated and utilized to become information. Information is something that is not only searched but also created.

## 大数据，一切的信息化

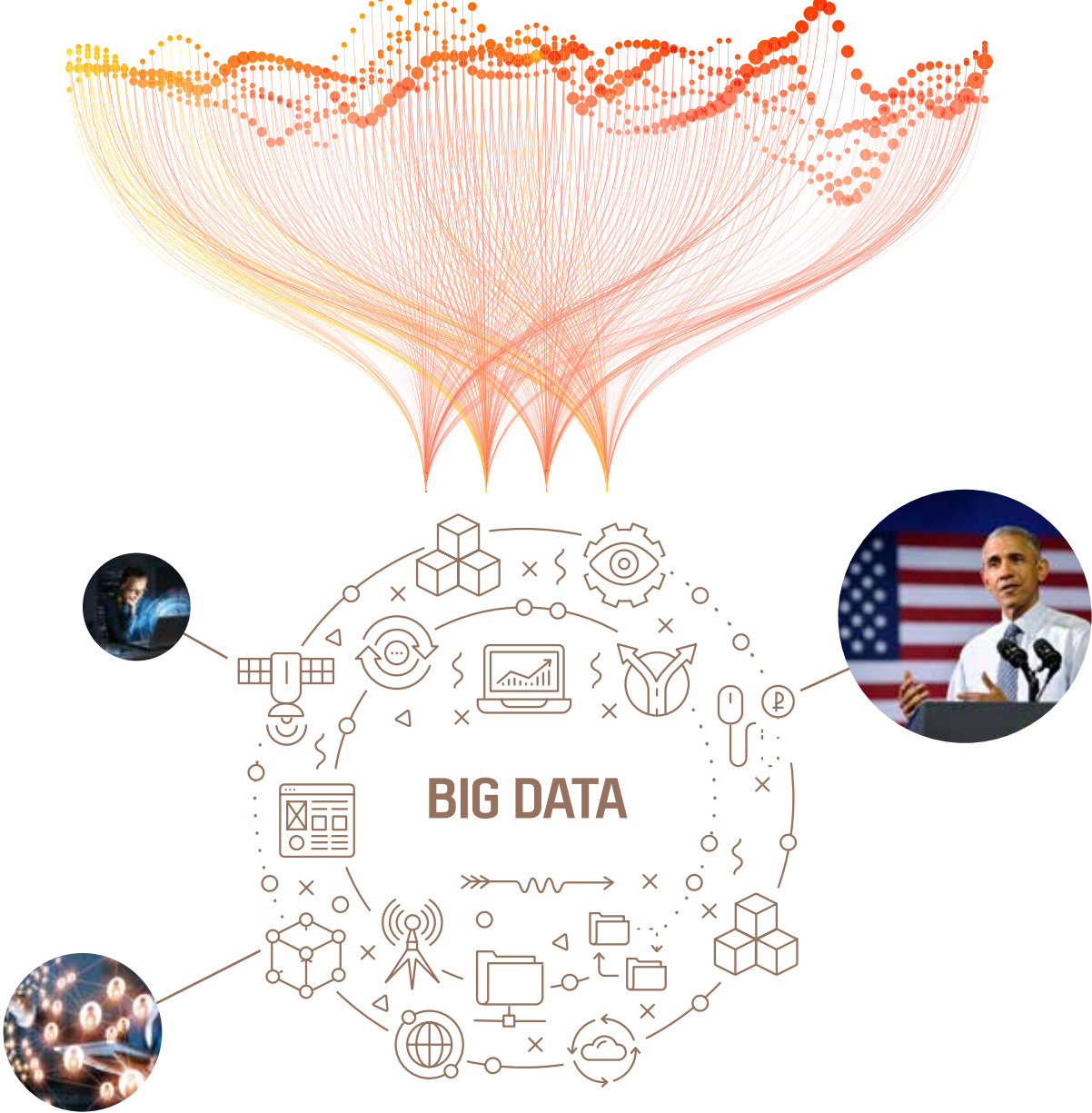
提到“信息”，很多人可能都会想到稀有或有价值的东西，但因想法与运用方法不同，一切都能成为信息。被雪覆盖的道路对于路人而言是不方便的，但对于除雪企业来说却是能够赚钱的生意。企业内部食堂的菜单可能是值得附近餐厅参考的重要信息。以前赶公交全靠运气，如今在应用程序中显示的公交进站时间成了宝贵的信息。就像金春洙在诗歌《花》中所描述的那样，“不过是一种姿态，当我呼唤它的名字时，它来到我身旁，成为了一朵花”。我们身边的一切在积淀与运用时都会成为信息。信息不仅要寻找，同时也要创造。

### WHAT IS BIG DATA?

Wikipedia defines big data as “a large volume of typical or atypical data sets beyond data collection, storage, management, and analysis capabilities of existing database management tools as well as technology that extracts value from and analyzes the results of such data.” A computer that understands and informatizes natural language such as words or writing that people normally use and situations recognized based on images or sensors, rather than computing commands, is the beginning of big data. Programming to analyze such large volume of information and using various statistics techniques and artificial intelligence (AI) programs such as machine learning to analyze and deduce complex meanings contained in the information is the big data analysis. The recent big data technology has produced a large amount of data. Let us assume that there is a 10g-bag of data. In the past, only 2 to 3 types of 1g pieces of information could be dug, but 10 pieces of information weighing 1g each may be acquired now. This information often intersects with one another to be processed into 20 to 30 pieces of information. As you can see, the characteristics of big data must be defined not by its gigantic capacity but rather by the fact that situations and behaviors, which could not be information in the past, can now be informatized and processed in real time. This is why big data needs to be used in a suitable

### 什么是大数据

维基百科对“大数据”给出的定义是指无法在一定时间内用常规软件工具对其内容进行抓取、管理和处理的数据集合。大数据技术，是指从各种各样类型的数据中，快速获得有价值信息的能力。以人们平时使用的语言或文字等自然语言、视频或传感器为基础对某种现象进行识别并将其信息化就是大数据的开始。为分析收集到的大容量信息进行编程，使用多种统计方法、机器学习等人工智能程序，分析蕴含信息的复合含义并推理，即为大数据分析。最近的大数据技术创造出了大量数据。假设有10g大小的数据堆，如果说过去可以挖掘出1g大小的2、3种信息，那现在则可以过滤出1g大小的10个信息。有时这些信息互相交叉，甚至还能加工成20个、30个信息。如此一来，大数据的特点，就应从迄今为止未能成为信息的情况与行动，以及尚未实时处理这些数据的两点中寻找，而并非庞大的数据量。所以《谈大数据》的作者郑雨珍强调说，大数据必须用于与之相符的服务中。大数据在运用于人类逐一处理起来太过庞大或太费时间的



service, according to Jeong Woo-jin, the author of *Speaking of Big Data*. Big data carries significance when it is used for tasks of vastly wide ranges or that which take too much time for a person to process individually, that offer alternatives tailored to each user, and which have been too difficult to be solved until now. The important thing is not the big data itself but the creation of a service model that uses it. Big data is a tool. When it is used for a clear purpose, its value would shine.

### OBAMA'S BIG DATA STRATEGY

An example of a success from effective utilization of big data is the Obama camp that won the 2012 United States presidential election. *Science behind Big Data Victory* introduces the big data election strategy in an interesting way. Jim Messina, the head of the Obama camp, announced that “everything about the election campaign will be measured by numbers” when taking the position as the campaign manager. Then with about 300 experts including 50 data analysts, 50 software engineers and 200 digital media team staff, political profiles of more than 200 million qualified voters were examined for 18 months and a variety of databases were integrated, analyzed, and utilized to set up election strategies tailored to individuals. All IT activities related to the election used

工作、向所有用户个体提供定制方案的工作、迄今为止未能解决的难题工作中时，才能获得它应有的意义。重要的不是大数据本身，而是创造利用大数据的服务模型。大数据是工具，只有用于确凿的目标时，它的价值才会发光。

### 奥巴马的大数据战略

有效利用大数据取得成功的案例中就有在2012年美国总统选举中取得胜利的奥巴马竞选团队。《大数据胜利的科学》介绍了有趣的大数据选举战略。奥巴马团队的总负责人吉姆·梅西纳担任选举运动本部长职务，他宣称：“必须用数字测量选举运动的一切。”由50名数据分析师、50名软件工程师以及200名的数字媒体组等共300名专家在18个月里掌握2亿名选民个体的政治简介，为制定针对不同选民的定制选举战略，整合、分析并运用了各种数据库。与选举有关的所有IT活动都使用了亚马逊网络服务的云中心。数据分析组作为组织内部的顾问活动，为每个重要事件的



the cloud center of Amazon web service. The data analysis team acted as consultants inside the organization and proposed objective data for decision making on each of the critical agenda. For instance, they designed an application program that analyzes newspaper articles in different regions, responses from citizens, and the most referenced sentences for each of the speeches that President Obama made, which then allowed the speech writing team to understand how the message has been actually delivered and how people were responding to it in order to reflect their findings in the following speech. Also, when planning a fundraising event, a correlation analysis was performed on the participants, unit cost of funds, and a combination of preferred celebrities, which resulted in a banquet event with George Clooney where \$14.5 million of funds could be raised in one night. Starting on the day after Obama’s victory, these engineers and data analysts were highly coveted by large corporations that wanted to learn the technology and know-how in analyzing the data of 200 million people, containing about 1,000 pieces of information per person, in such an elaborate manner. <The Washington Post> named Obama’s election campaign, which was carried out strictly based on data, as “Moneyball campaign” where Moneyball is the title of a film based on a true story of a professional baseball team’s success by applying statistical analysis to the sport of baseball.

**WEATHER FORECAST TURNING NATURE INTO INFORMATION** Weather can be said to be a form of big data with a long history. Based on climate change information that has been observed and gathered for a long time, humankind has defined seasons and predicted the weather. In the modern era, development of technology has enabled a more accurate weather forecast, and as big data analysis technology is applied to the weather information that had typically been used for disaster prevention, its scope of utilization continues to expand. Statistics says that more than 80% of all industries are influenced by the weather, and thus accurate weather data directly leads to business success. Gimpo Logistics Center of E-mart Mall has developed a stock management system utilizing big data, and it reflects information such as weather and product indices that show monthly product sales charts in order to predict demands and place product orders. SPC has created a

决策提供客观数据。例如，开发分析各地区对奥巴马总统演说的报纸报道与人们的反应、引用最多的演说词等的应用程序后，演说词编写组可以通过该应用程序掌握实际信息传达情况与反应并立即在下次演说中反映。企划筹款活动时也对参与对象、单位金额、偏好的知名人士组合进行相关分析，企划了与乔治·克鲁尼的晚宴活动，一次就筹集到了1450万美元的赞助资金。据说奥巴马总统当选的第二天，就有大企业接二连三地向这些工程师与数据分析师伸出了橄榄枝，就是为了获得可以如此精确地分析每个人涉及1000多个信息，共2亿人数据的技术与经验。据悉，《华盛顿邮报》甚至给完全以数据为基础进行的奥巴马选举运动起名为“点球成金选举运动”。点球成金是以在棒球中结合统计分析并取得优胜的真实故事为素材改编的电影题目。

**将自然变成信息的气象预报** 天气可以说是历史悠久的大数据。人类利用长期观察并积累的气候变化信息制定节气、预测天气。到了现代，随着科学技术的不断发展，更准确的气象预报成为了可能，在主要用于预防灾害的天气信息中结合大数据分析技术，运用范围正在进一步扩大。有统计结果显示，全部产业的80%以上都受到天气的影响，准确的天气信息与事业的成功息息相关。易买得商城金浦物流中心开发利用大数据的库存管理系统，通过反应天气与每月商品销售指数等资料，预测需求并提前订购商品。SPC分析全国分店的5年气象观测资料与10亿条各店铺的商品销售数据后制成天气销售指数，实时提供给所有卖场的终端设备。韩国电力交易所与气象厅气象研究所共同构建气象信息系统，运用民营气象企业，预测电力需求，制定相关对策。2015年，IBM以大约2万亿韩元的价格收购了天气信

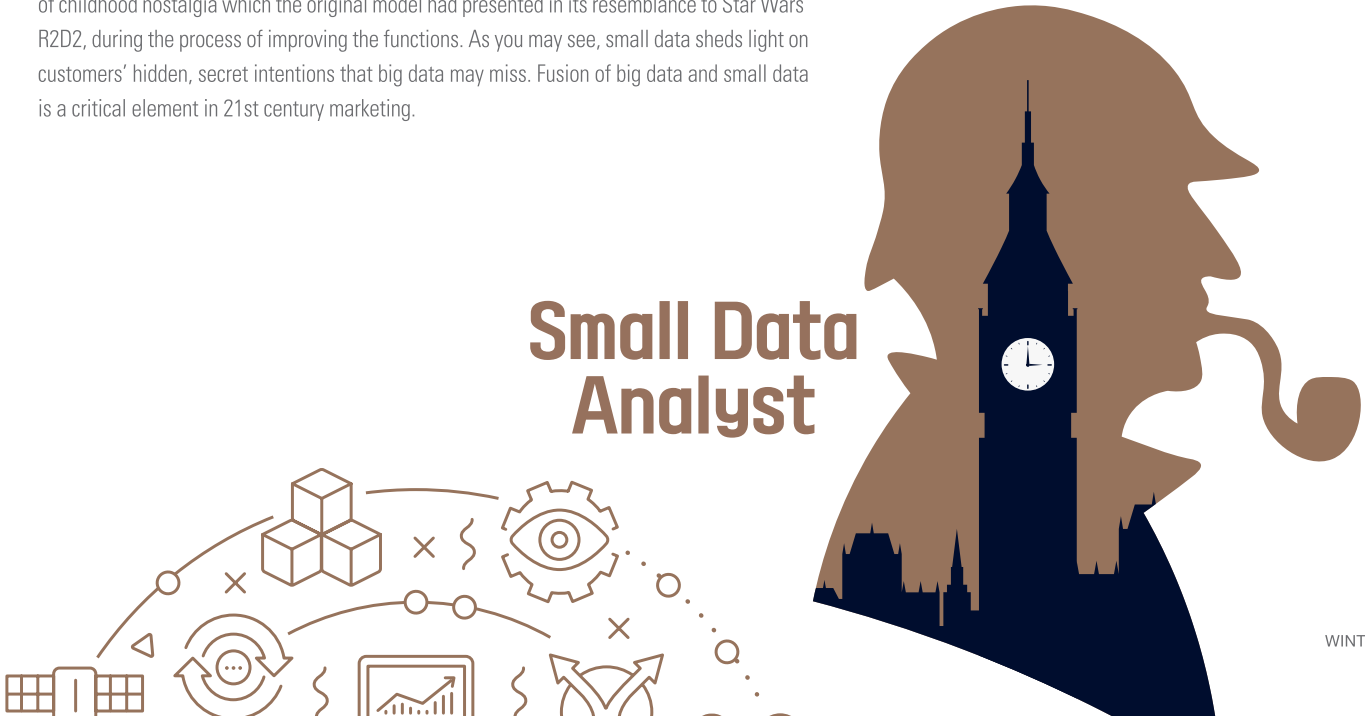
weather sales index, which analyzes 5 years of weather observation data and 1 billion pieces of product sales data at all of its stores nationwide, and provides it to their terminals in real time. Meanwhile, Korea Power Exchange has established a climate data system along with Meteorological Research Institute of Korea Meteorological Administration and also utilized private weather companies to predict power demands and prepare necessary measures. IBM took over an enterprise specializing in weather data, the Weather Company, with about 2 trillion KRW in 2015, as the weather information accumulated over several decades in combination with IBM’s AI was expected to bring 3 trillion KRW in sales. In 2012, JoongAng Ilbo emphasized the utilization of climate data through a column entitled “failed weather management to lose 10% of GDP” written in 2012. To increase the level of utilization of such climate information, Korea has been implementing the private forecast project system since 1997 which allows private climate data firms to offer a variety of customized information. Changes within nature that has always existed like air is being processed as premium information nowadays.

**SHERLOCK HOLMES, THE DATA SCIENTIST** “He was a fisherman. The scarred pattern from fish hooks on his hands is very distinctive. Seeing that they are quite old now, it suggests that he has been unemployed for some time. Not much industry in this part of the world, so he’s turned to his widowed mother for help. She has a man’s wedding ring on a chain around her neck, which is clearly her late husband’s and too big for her finger. She’s well-dressed but her jewelry’s cheap. She could afford better, but she has kept it. Sentimental.” These are lines spoken by Sherlock Holmes, the leading character of the BBC drama, <Sherlock>. Great at reasoning with exceptional observation skills, he is able to read such information by simply taking a peak at people sitting at another table of a restaurant. Though they called Sherlock Holmes a detective in the 19th century, we may very well call him a “small data analyst” in today’s world. Small data refers to the types of information, which includes personal preferences, needs, health conditions, lifestyles, and petty behaviors, gained from observation or face-to-face investigations for different purposes, and it complements the qualitative analysis of big data with elaboration that can often be missed. For example, software can understand the emotional state of a user with 70% accuracy from the way he/she types words and the number of typing errors. Small data based on observation is needed for the remaining 30%. Google employs consultants for these tasks. Martin Lindstrom, the author of *Small Data* and a branding expert, is a master of small data analyses. To set up brand strategies of Roomba, a robot vacuum cleaner whose sales hit a slump, he interviewed users to find out that the issue lies not in technology but in sensitivity. Although they did not explicitly elaborate on it, the users showed feelings through expressions and body gestures, revealing that they think Roomba is cute and are even proud of it. The problem of the product was not in its functions, but rather in the loss of childhood nostalgia which the original model had presented in its resemblance to Star Wars’ R2D2, during the process of improving the functions. As you may see, small data sheds light on customers’ hidden, secret intentions that big data may miss. Fusion of big data and small data is a critical element in 21st century marketing.

息企业The Weather Company，因为IBM公司预计The Weather Company在数十年里积累的气象信息与IBM的人工智能结合后将提高3万亿韩元的销售业绩。2012年，中央日报以“如不能进行天气经营，GDP将蒸发10%”为题，强调了利用气候信息的重要性。韩国为提高这些气象信息的利用率，自1997年起开始实施民营预报事业制度，民营气象信息公司正在提供多种定制信息。如空气般存在的自然变化正在被加工成高级信息。

**大数据科学家·夏洛克·福尔摩斯** “那个人是个渔夫，从他手上的钓鱼钩疤痕就能看出来。不过他的手上没有新的疤痕，所以应该是很长时间没工作了，目前手头上应该也没有钱。坐在他面前的人是位母亲，也是位寡妇。挂在项链上的结婚戒指应该是她死去的丈夫的，估计是因为尺寸太大，所以没能戴到手上。她的衣服穿得很体面，但戴着的宝石全都是便宜货，她应该买得起更好的，但却一直戴着，所以她应该很多愁善感。”这是BBC电视剧《夏洛克》中夏洛克·福尔摩斯的台词。凭借优秀的观察力做出推理的夏洛克在餐厅中看到旁边桌子坐的客人时读取到了这些信息。夏洛克·福尔摩斯的原型生活在19世纪，人们称他为侦探，但如今似乎称他为“小数据分析师”才更合适。

小数据指的是通过观察或符合目的的当面调查等掌握个人喜好或需求、健康状态、生活方式、细微行为的信息，弥补大数据的定量，分析可能会错过的细节。例如，软件可以依据用户输入文字的方式与错别字数，以70%的准确率掌握感情状态。为确保剩余30%的准确率，就需要通过观察取得小数据。谷歌为该课题聘请了顾问。《小数据》的作者、品牌推广专家马丁·林斯特龙就是一位小数据分析大师。为制定销售率低迷的扫地机Roomba的品牌战略，他在采访用户后得出了问题不在技术、而在感性的结论。虽然用户没有直说，但在语气和肢体动作中都透露出了他们觉得Roomba像宠物一样可爱、招人喜欢。产品的问题不在于功能，而是在功能改善过程中，酷似《星球大战》中的R2、D2的早期模型带给人们的童心要素消失了。诸如这般，小数据发现了大数据可能会错过的顾客潜在内心诉求。大数据与小数据的结合是21世纪营销的重要因素。







# Remembering the foundation before a new future

## Memorial exhibition in honor of the 20th anniversary of the late founder and chairman Han Jeong-dae

A memorial exhibition in admiration of the late founder and chairman Han Jeong-dae was held at the NOROO Paint & Coatings Co., Ltd. Anyang Factory Smart Center from October 29 to November 7, 2018. In honor of the 20th anniversary of the passing of the late chairman Han Jeong-dae, this memorial exhibition displayed historical moments, documents, and articles left behind by the late founder, together with images that reminded guests of NOROO's great start and growth throughout history, to help them dream about NOROO's future in a hundred, two hundred, and three hundred years.

## 面向未来牢记根本

### 创始人已故韩鼎大会长逝世20周年纪念展

2018年10月29日至11月7日，NOROO集团在NOROO涂料股份有限公司安养工厂智能中心举办了纪念集团创始人已故韩鼎大会长逝世20周年纪念展，通过各种记录着历史场景的照片、历史资料、遗物及视频回顾了NOROO伟大的诞生与成长历史，憧憬着NOROO百年、两百年、三百年后的未来。

### FOR MY HOMELAND

Greeting visitors who step into the exhibition center is the peaceful smile of the late chairman Han Jeong-dae. Next to this photo, taken at his office in 1908, are the words “For my homeland.” Also the title of this exhibition, “For my homeland” is the entrepreneurship spirit and central ideology of NOROO Group, which is powerful in that it makes the hearts of NOROO members beat. With the cultivation of the late chairman Han Jeong-dae, who spent his lifetime practicing this idea, together with the establishment of NOROO, these words continue to make hearts beat. This memorial exhibition added to the spurring of this energy. Just as the heart beats to fill blood with new oxygen that courses through the body, the memorial exhibition looks back at both the history of NOROO and the life of the late chairman Han Jeong-dae to add vitality and speed to NOROO members who are heading towards a new future.

### GREAT MINDS CREATE HISTORY

The photos of the memorial exhibition are separated into two time periods. 1945 to 1999, and 2000 to 2018. The photos begin with faint black-and-white photos, and gradually grow higher in resolution to display vivid colors and the flow of time. The photos tell the dream of a patriot who began a business at the age of twenty-five in a ruined land, the stability attained through arduous efforts, the diverse projects that were undertaken in response to the government's export policies, and the quality improvements made through technical innovations that led to rapid growth, as shown in squared frames, to send a message of possessing a challenging spirit. In the photos, the late chairman Han Jeong-dae shoveled the first hole at the factory's groundbreaking ceremony, and smiled at the camera with employees at the completed factory. In an unfamiliar country, the chairman was a gentleman in a fedora who visited for business inspections, in the photo where he received the President Merit Award for three consecutive years he was a symbol of the pillars of industry with several medals, and at the 41th company anniversary rally he appeared free and easy as he shouted with joy alongside employees. These photos will help guests experience how the journey of one man with great purpose created history. The photos from 2000-2018 show the growth of NOROO that remained unchanging even after the passing of the late chairman Han Jeong-dae in 1998. Chairman Han Young-jae, who assumed office in 2000, established a future-oriented value system on the foundation of a patriotic spirit that contributed to both the nation and society in a time of new changes that

### 为了我的祖国

走进展厅，最先映入眼帘的是已故韩鼎大会长温和的微笑。1980年，在他自己的办公室中拍摄的这张照片旁边，醒目地写着“为了我的祖国”几个大字。“为了我的祖国”既是此次纪念展的主题，也是NOROO集团的创业精神与中心思想。对于NOROO人而言，这几个字依旧具备让人心潮澎湃的强大生命力。已故韩鼎大会长在创立NOROO后毕生都在努力践行这一思想，所以NOROO人每每听到这句话，都会不由地热血沸腾。本次纪念展再次让NOROO人心潮澎湃。正如心脏需要有力地搏动才能给全身的血液注入新的氧气并重新输送到全身各处一样，回顾NOROO历史与已故韩鼎大会长生平的记忆展给面向未来的NOROO人增添了动力，提高了速度。

### 伟大的精神创造了历史

纪念展上展示的照片大体可分为两个时期，一个是1945年至1999年，另一个是2000年至2018年。从最早模糊的黑白照片到如今清晰度高、颜色鲜明的彩色照片，照相技术的变迁证明了时间的流逝。正值二十五岁的青春年华，在战争废墟上，已故韩鼎大会长的事业报国之梦正式启航。创业后他凭借刻苦的努力不断夯实企业成长基础，积极响应政府的出口政策，通过多元化事业、技术创新提高产品质量，取得飞跃发展，这些时期的爱国精神和挑战精神透过照片一一展现在我们面前。已故韩鼎大会长在工厂奠基仪式上破土开工，在竣工的工厂中与职员们一起开怀大笑，这些珍贵的场景都被相机镜头记录了下来。不论是在异国他乡视察的头戴礼帽的绅士、因连续3年荣获总统出口功劳奖而佩戴多枚勋章的产业精英、还是在纪念创业41周年内部团结大会上与职员们一起高声欢呼的潇洒模样，他的众多照片让人们再一次感受到了一个怀揣远大目标的人是如何通过努力创造历史的。2000年至2018年的照片则向人们展示了1998年韩鼎大会长去世后NOROO依旧势不可挡的增长趋势。2000年就任的韩荣率会长在新时代的变化中以贡献国家与社会的事业报国精神为基础，确立了面向未来的价值体系，并加快了向世界市场进





FOR MY HOMELAND  
为了我的祖国

1945~1966

FLOURISHING DREAMS  
AMONG YOUTH OF A COUNTRY TURNED TO RUINS.



2000~2009

TURNING OF CRISIS INTO OPPORTUNITY  
UNDER INNOVATIVE LEADERSHIP.



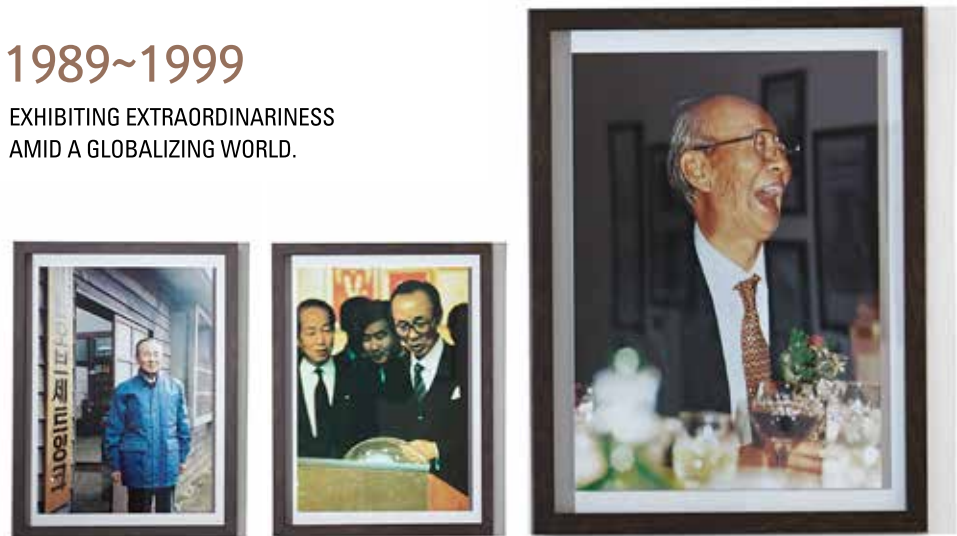
1967~1988

REALIZING A BOLSTERED  
COMPETITIVENESS AND RAPID GROWTH.



1989~1999

EXHIBITING EXTRAORDINARINESS  
AMID A GLOBALIZING WORLD.



2010~2018

WE BOLDLY PURSUE  
GREATNESS DRIVEN BY  
SUSTAINED GROWTH  
TO BECOME THE GLOBAL NO. 1.



arose and continued to press forward into the world. As a new growth engine, NOROO newly unfolded the agricultural business to create ‘A path that doesn’t exist in the world, a new path made by NOROO.’ The vivid colored photos at the exhibition show images of staff members with Chairman Han Young-jae at NOROO in the present times and tell how today’s footsteps will leave a mark in history. The frame for the Design Concept Award, received at the 2018 Reddot Design Awards, does not only illustrate the quality of NOROO, but also NOROO’s capacity in global design competitiveness.

A NEW PATH, A NEW BUSINESS PATRIOTISM

This exhibit opened in light of the 73rd anniversary of the company. Chairman Han Young-jae and members who took part in the anniversary event viewed commemorative images, viewed the photos at the exhibition, and chatted with one another. The voices that spoke of past times and memories as they looked into the photos were filled with yearning and pride. Like the fading photos, their hair grew a little whiter than they were before, but their affections

军的步伐。同时，将农业生命科学事业作为集团新的增长动力，致力于“世上本没有的路，由NOROO来开拓”。展厅中一张张色彩鲜明的照片，将每一个精彩的瞬间定格下来，生动地记录着目前仍然工作在一线的韩荣宰会长与公司的领导和员工们在一起时的情景。而在2018红点设计大奖上荣获设计理念奖的照片则展示了在品质与设计方面都具有世界级竞争力的NOROO地位。

新的发展道路·新事业报国

本次展览的开展正逢NOROO集团创立73周年。出席创立纪念活动的韩荣宰会长与公司高管一起观看了纪念视频并参观了本次展览。一边看着照片，一边回想当时的情景，分享共同的回忆，谈笑声中饱含对过去的怀念与欣慰。就像在岁月中逐渐模糊的照片一样，他们的头发也一点点变白了，但对

and passion for business patriotism remained unchanging. Groups of young employees who visited the exhibition center shared the same spirit. The late chairman Han Jeong-dae spoke to them.

“All successful companies in developed nations had histories of a hundred, two hundred, and three hundred years. Let us base our foundation on integrity towards consumers to strive for a hundred, two hundred, and three hundred years.”

The late chairman Han Jeong-dae’s most treasured spirit encompassed passion, ambition, energy, and responsibility. To go from seventy-three years to a hundred, and then to three hundred years, NOROO will create a path yet to be found in the world through passion and ambition and open a new tomorrow with energy and responsibility. This memorial exhibition, which retraced the footsteps of the late chairman Han Jeong-dae through his photos, articles, and historical records, became the stepping stone for a spirited take-off. With this, NOROO will achieve new business patriotism in the twenty-first century.

NOROO的热爱与事业报国的热情依旧如故。来到展厅参观的年轻职员们也是怀揣同样梦想与热情的NOROO人。已故韩鼎大会长很早便对他们作出了一番嘱托：

“在去发达国家考察的时候，我发现所有国家的成功企业都有着100年、200年、300年的历史。让我们以对客户的诚信为基础，为100年、200年、300年NOROO的繁荣而共同努力吧！”

已故韩鼎大会长最看重热情、雄心、魄力与责任感。为将73年的历史延续100年乃至300年，NOROO将以热情与雄心开拓前所未有的道路，以魄力与责任感开启崭新的明天。本次纪念展既通过已故韩鼎大会长的照片、遗物和历史资料，重新回顾了NOROO集团的历史足迹，同时也成为了集团再次飞跃的踏板，凭借这股动力NOROO将实现21世纪新事业报国的宏伟蓝图。



# NOROO INTERNATIONAL COLORTREND SHOW 2019

## “ESSENCE”

The 8th <NCTS 2019: NOROO INTERNATIONAL COLOR TREND SHOW> opened at Dongdaemun Design Plaza (DDP) last year on November 15. With top global experts invited from the fields of architecture, furniture, and spatial design, this year's NCTS saw an early sellout of over 1,000 seats which demonstrated the interest and anticipation of industrial and academic circles. NCTS has firmly established itself as a global event that diagnoses the present and foresees the future within the quickly changing trends of color and design.

### NOROO国际色彩流行趋势展(NCTS 2019) “ESSENCE”

第8届NOROO国际色彩流行趋势展(NCTS 2019)于11月15日在首尔东大门设计广场（DDP）举行。建筑与家具、空间设计等全球设计界的顶级专家受邀参加本次活动，千余张门票提前售罄，再次证明了业界与学界的热切关注与期待。在快速变化的色彩设计潮流中，NOROO国际色彩流行趋势展如今已经成为分析现在、预测未来的全球性活动。



### EXPERIENCING THE TASTE OF COLOR

How can we perceive the changes of the times? The past can be summarized with a few sentences, but it is difficult to clearly figure out the times we live in even though we may feel the changes. It is only when major cases are enumerated that we can figure out where the changes began and where they are heading. The great masters of these times showed and taught us about the changing moments in culture, arts and design through images, videos and voices at NCTS.

The first speaker, Rafael de Cárdenas, remains active around the globe as an American spatial designer who expresses bold colors and sensibility. He spoke on the topic of ‘The Color Leopard’ and explained how inspiration from the patterns of the leopard were applied to color, texture and space. Similar patterns were repeatedly exhibited at Madonna’s performances and nightclubs, and the characteristics of the leopard that created a sense of unity and movement were extracted as examples. He used the connection between his works and Gentle Monster, Nike and the French luxury crystal brand Baccarat to demonstrate a freedom of expression that developed from one substance to other various forms.

England’s representative contemporary artist Ian Davenport gave the advice of approaching colors with intuition. Davenport uses gravity in place of the strokes of a brush to let different pigments stream downward to illustrate magnetism of colors. He stated, “I understood colors through intuition and senses and not through scientific analysis or prediction,” and he gave the advice that in order to successfully use colors, one must carefully observe his surroundings while keeping an eye on the past and the future. The third speaker, Lyndon Neri, also stressed the connection with the past. As a globally rising and promising architectural designer and founding partner of Neri & Hu, he takes multidisciplinary approaches to his works that communicate past values to the future. He left the audience in deep contemplation by emphasizing that the role of an architect is “not to be an immortal being but one who prevents discoloration of significance.”



### 感受色彩的味道

该如何了解时代的变化呢？逝去的过往可以用几行文字来概括，但我们生活的时代却不然，即使可以感受到变化，也很难准确地了解。只有罗列出一系列的重大事件后，我们才能从中察觉到变化的轨迹。当今时代的巨匠们在NOROO国际色彩流行趋势展中通过图片、视频、声音向我们全方位展示并讲述了文化、艺术、设计变化的瞬间。

第一位演讲者拉斐尔·德·卡德纳斯(Rafael de Cárdenas)是大胆表现色彩与感性的美国空间设计师，活跃于世界各地。他以“The Color Leopard”为主题，讲述了如何将从豹纹中获得的灵感应用于色彩、质感与空间中。麦当娜的演出与夜总会的空间设计中都有相似的图案在重复，他提取了创造统一性与生动感的豹纹特点，并以此为例，结合Gentle Monster、耐克、水晶品牌Baccarat卖场等自己的设计作品，展示了由同一本质向多种形式演变的自由思维。

英国的代表性当代艺术家伊恩·达文波特(Ian Davenport)给出的建议是直观地接近色彩。他擅长利用重力代替画笔创作出各种颜料自然流淌的作品，展示了色彩的魅力。他表示：“我不依赖科学分析和预测，只通过直观与感性理解色彩。”他提出建议说，为更好地利用色彩，在聚焦过去与未来的同时应该仔细地观察周围的环境。第三位演讲者郭锡恩(Lyndon Neri)也强调了色彩与过去的联系。郭锡恩是近来备受世界瞩目的建筑设计师，经营着如恩设计研究室(Neri&Hu)，用他的话讲，在“疯狂变化的中国”，向未来传递过去价值的工作正在多学科间交叉展开。他说强调的“建筑在变，人文不变”在观众间引起了巨大的反响。



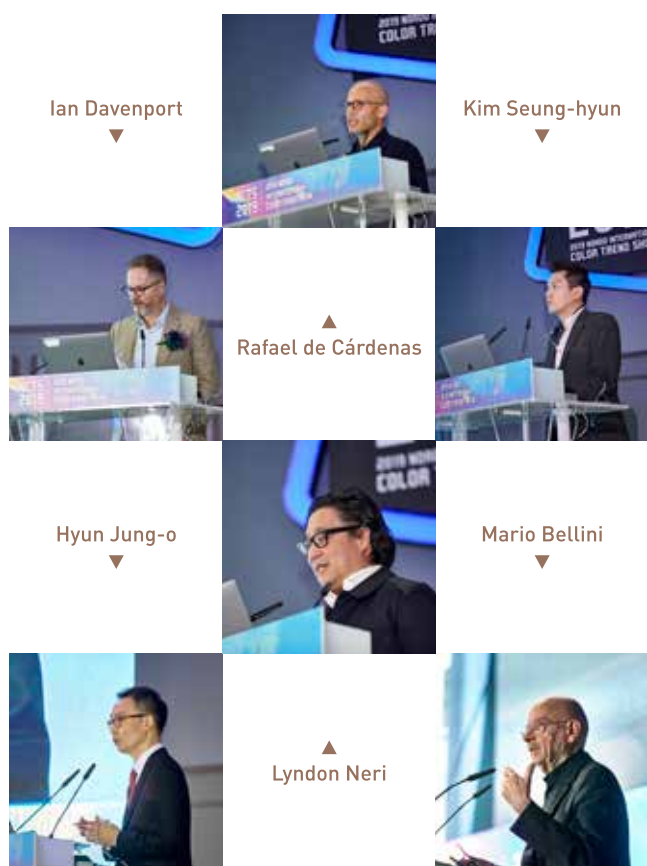




## AGAIN, ESSENCE. 'ESSENCE'

Then what is the color concept essential to creators who must create futuristic value in cultural heritages? NPCI's answer to this was 'ESSENCE,' or the fundamentals. Chief of NPCI Hyun Jung-o stated that "People relate to fundamental formative elements in infinite time and space." He visualized colors through the categorization of this idea by the 'Layer of Time' that reveals time, the 'Archetype' that looks toward the simple and geometrical composition of lines and sides, the 'Bell Époque' that is a retro style of new senses, and 'Authenticity' which depicts regional characteristics. With the intense red, slightly discolored gold and yellow, romantic blue, warm and emotional black colors that exploded on the screen, the audience got busy capturing the colors on their smartphones. Chief of NPCI Kim Seung-hyun introduced the eight tendencies and direction to note for the effective utilization of the trending colors as proposed by Hyun Jung-o. He used the keywords 'Assimilate,' which allowed humans to recognize organic matter in concrete nature, 'Investigate,' for investigation of humans who continuously take on challenges amidst incompleteness, 'Reinterpret,' which spoke of new recycling, and 'Indulge,' for indulgence in the practice of personal expression. Each keyword was vividly depicted in its own colors as a clear guiding post for the audience contemplating the direction of the following season.

The last speaker Mario Bellini contributed greatly to adding meaningfulness to this event. Having been active in his field since the 1960s, he has worked with products, furniture, and architecture and became known as the 'Renaissance Man.' Although he has traveled around the world, this was his first time visiting Korea, and hence his lecture at NCTS 2019 during which he personally introduced 50 years of work from recent to past projects was a noteworthy experience. His works awakened the audience to the unchanging essence of creation through his incorporation of unique ideas and bold designs. The audience took part in the Q&A session and raffle that followed the lectures with passion and curiosity. The world that surrounds us is composed of a great number of colors that also continuously change. NCTS 2019 shared with the audience the major turning points that captured the distinct views of artists and creators, the database of NPCI, and the meaningful flow of colors which were shaped by accumulated know-how. The colors that filled the event center gave the audience a taste of the spirit of our past, present and future. Here we purposely reflect on the meaning of NCTS 2019 as was included in Ian Davenport's lecture. "The color is a beauty and sensational subject matter, and it is both dynamic and mysterious. I hope that you will see color in its richness and experience its true taste."



## 重新·回归本质，“ESSENCE”

那么对于必须在文化遗产中创造未来价值的创作者们来说，目前需要的色彩概念是什么呢？对此，纳路潘通色彩研究所(NPCI)给出的答案是“ESSENCE”，也就是本质。NPCI首席研究员玄正午表示“在无限的时间与空间中，人们会对根本性的造形要素产生共鸣。”与之相关的主流可以分为显露时间的“Layer of Time”、面向线与面等单纯几何学构成的“Archetype”、新感性的复古风格“Bell Époque”以及展示地域性的“Authenticity”，并利用色彩将这些要素表现出来。浓烈的棕红色，略微褪色的金黄色，浪漫感性的蓝色，温暖深情的黑色等，每一个画面的出现，都会让观众应接不暇，争先恐后地用手机拍下来。针对玄正午首席提出的流行色彩及其效率化应用，NPCI首席研究员金升贤提出了需要关注的方向和8种倾向。具体包括识别自然有机物的“Assimilate”、人类在不完整中不断挑战的“Investigate”、意指全新回收再利用的“Reinterpret”、实践性自我表现的“Indulge”这些关键词，并将每个关键词用鲜明的色彩衔接起来，为正在思考下一季方向的观众们提供了明确的指引。

最后一位演讲者马里奥·贝里尼(Mario Bellini)也赋予了本次活动巨大的意义。自20世纪60年代起一直活跃在设计界的马里奥·贝里尼涉足产品、家具、建筑等多个领域，被誉为“文艺复兴人”。他的足迹遍布全世界，但这次却是首次访问韩国，他在NCTS 2019的演讲中介绍了包括近期作品在内的本人近50多年的设计历程，让本次活动更显珍贵。他的作品采用独特的创意与大胆的设计，在漫长的岁月中也提醒着人们不变的创新本质。

演讲环节结束后，还设有Q&A、抽奖活动，让前来参加展会的观众们意犹未尽。我们所存在的世界是由无数种色彩组成的，同时也是在不停变化的。NCTS 2019与观众们分享了被艺术家与创作者的视线所捕捉的主要转折点、NPCI的数据库以及如何利用经验解读色彩潮流的意义。整个活动现场色彩斑斓，让人们仿佛穿越于过去、现在与未来。伊恩·达文波特(Ian Davenport)的演讲中，特意再次重温了NCTS 2019的意义，“色彩是美丽、性感、优秀的素材，也是充满活力的神秘存在。希望大家可以在丰富的色彩中品尝到其真正的味道。”



## \* Color & Trend Book <COVER All Vol.3>

The Color & Trend Book <COVER All> that is published yearly with NCTS in limited quantity offers a color and design solution that reflects the newest trends. On the cover of this issue <COVER All Vol. 3> is the work of last year's speaker Fabien Oefner. The issue saw an early sellout in Korea and gained much attention through the launching event of the Tsutaya Bookstore at Ginza Six in Japan.





NOROO GROUP CELEBRATES ITS 73rd ANNIVERSARY



PAINT SUPPORT FOR THE MURALS AT INDEPENDENCE HALL OF KOREA



GIMJANG SHARING EVENT WITH MANAN SOCIAL WELFARE CENTER IN ANYANG CITY



PILOT PROJECT FOR ROAD SAFETY MURAL AT ELEMENTARY SCHOOLS WITH KOREA TRANSPORTATION SAFETY AUTHORITY

NOROO Holdings Co., Ltd.

NOROO控股股份有限公司

NOROO GROUP CELEBRATES ITS 73rd ANNIVERSARY

On October 31st, 2018, NOROO Group held a ceremony at the NOROO Welfare Center to celebrate its 73rd anniversary. In his celebratory speech, Chairman Han Young-jae stated, "By being rooted in the management philosophy of 'NOROO creating a new path in unexplored territory' and the management policy of 'NOROO The Nomad! Creating new opportunity by leading the market,' we are always striving to take on new challenges," which helped the employees to understand that NOROO people's gumption, passion, aggressiveness and sense of responsibility will work as a driving power to overcome crisis in the midst of current difficulties in the same way that they had overcome the Asian Financial Crisis and the Bankruptcy of Lehman Brothers. Notably, a tribute video to the first NOROO Group chairman and late founder, Han Jeong-dae, was played to mark the 20th anniversary of his passing to remind all of his entrepreneurial spirit and the patriotism of entrepreneurship ("For My Country") in the context of the history of NOROO Group. Employees who attended the memorial event for Han Jeong-dae at the Anyang Plant Smart Center were able to renew their sense of company foundation. Meanwhile, long-term employees were awarded and had a commemorative photo session, and the sacks of rice and the award wreaths given to the awardees were later donated to the community.

举办NOROO集团创立73周年纪念活动

2018年10月31日，为纪念集团创立73周年，NOROO集团在NOROO福利馆举办了纪念活动。韩荣宰会长在纪念词中表示：“以‘世上原本没有的路，由NOROO来开拓！’的经营哲学和‘游牧主义NOROO！引领市场，把握机遇！’的经营方针为发展基石，坚持不断迎接新的挑战！，顺利度过了过去的IMF危机与雷曼兄弟事件等并不断发展至今。面临当前的困难，NOROO人的雄心壮志与热情、魄力、责任心都会成为克服危机的原动力。”韩会

长的话为全体员工注入了力量。此外，在本次纪念活动上，为纪念集团创始人韩鼎大前会长逝世20周年，特别制作了悼念视频，使每一位员工都能通过视频重新回顾NOROO的历史与“为了我的祖国”的事业报国创业精神。参加活动的公司高管还一同观看了在安养工厂智能中心举办的纪念集团创始人韩鼎大前会长的照片展，重新回顾并确认了集团创立的意义。除此之外，还进行了长期工作员工褒奖与拍照活动，并向地区社会捐赠了花环与爱心大米。

NOROO Paint & Coatings Co., Ltd.

NOROO涂料股份有限公司

PAINT SUPPORT FOR THE MURALS AT INDEPENDENCE HALL OF KOREA

Last year, NOROO Paint & Coatings Co., Ltd. sponsored paint products for use with the wall paintings inside the Independence Hall of Korea in Cheonan, Chungcheongnam-do. The Independence Hall of Korea had created the wall paintings over a period of 10 days from September 28th to October 7th to commemorate the year of 2018 as the Millennial Anniversary of the Korean Provisional Government and the March 1st Movement. With a focus on the Nambeol Bridge, this wall painting was constructed in dimensions of 30m in length and 4m in height and on 12 pillars of 4.5m in circumference under the motif of the independence movement, Mugunghwa, the national flower of Korea, and Taegeukgi, the national flag, to induce deep consideration over the spirit of patriotism. As NOROO Paint & Coatings Co., Ltd. which was established in 1945 with the liberation of Korea, carries special meaning when it comes to the liberation and throughout its growth in line with the history of the nation, it added further significance to the creation of murals by being the paint sponsor. The paintings were completed with the eco-friendly water paint products from NOROO Paint & Coatings Co., Ltd. In addition, NOROO Paint & Coatings Co., Ltd. helped them to be preserved longer by

finishing them with the company's new proprietary mural shield for prevention of decolorization, Cupid Clear Coat.

NOROO涂料股份有限公司 · 为独立纪念馆壁画绘制提供涂料

NOROO涂料股份有限公司去年为忠清南道天安市的独立纪念馆内壁画绘制赞助了涂料。为纪念2018年“大韩民国临时政府成立与3·1运动100周年”，独立纪念馆于9月28日至10月7日（为期10天）开展了壁画绘制工作。壁画以独立纪念馆的南伐桥为中心，在长30米、高4米的空间与周长4.5米的12根柱子上绘制独立运动与木槿花、太极旗等可以让人联想到爱国思想的主题壁画，檀国大学地区社会志愿团参与了壁画的制作。NOROO涂料股份有限公司作为1945年韩国解放后于同一年创立的“解放者企业”，见证了大韩民国的历史与成长，在独立中有着与众不同的意义，由NOROO作为涂料赞助企业，更是为壁画绘制增添了深意。壁画使用NOROO涂料股份有限公司的环保水性涂料绘制，最后用NOROO涂料股份有限公司新开发的壁画防脱色保护剂丘比特透明漆给壁画刷上保护层，以保证壁画的意义可以更长久地保存。

GIMJANG SHARING EVENT WITH MANAN SOCIAL WELFARE CENTER IN ANYANG CITY

NOROO Paint & Coatings Co., Ltd. sponsored the 'Happy Recipe for Winter with Kimchi Sharing' event in concert with Manan Social Welfare Center. This annual event held for the second time this year aims to help low-income residents in the area in desperate need of gimjang kimchi for winter, and about 40 employees at NOROO Paint & Coatings and their family members joined in. The participants not only made the kimchi but also delivered it door-to-door to show affection and sympathy towards those in need. In all, the gimjang kimchi made that day were donated to 150 households including the low-income families and the elderly in Manan-gu.

与安养市万安综合社会福利馆共同举办越冬泡菜分享活动

NOROO涂料股份有限公司与安养市万安综合社会福利馆共同举办了分享越冬泡菜赞助活动。今年已经是第二次举办该活动了，意在帮助冬季迫切需

要越冬泡菜地区的低收入居民，NOROO涂料股份有限公司员工及家属40余人一同参与了该活动。参与者们不仅腌制越冬泡菜，还亲自上门配送并与帮扶对象亲切交谈，传递邻居间的温暖情谊。当天腌制的越冬泡菜全都送给了万安区的低收入居民与老人等150户家庭，为他们的冬日餐桌送上了些许温暖。

PILOT PROJECT FOR ROAD SAFETY MURAL AT ELEMENTARY SCHOOLS WITH KOREA TRANSPORTATION SAFETY AUTHORITY

NOROO Paint & Coatings Co., Ltd. undertook the 'Pilot Project for Road Safety Mural' for children's traffic safety in concert with the Korea Transportation Safety Authority and through the collaboration and talent donation by private entities, state-run enterprises and universities. The road safety mural project is intended to prevent traffic accidents that occur frequently during the commute to school and to disseminate the culture of traffic safety. This time, they were painted in Gapcheon Elementary School in Daejeon and Gusan Elementary School in Seoul. Both schools have high rates of traffic accidents and need improvements along the children's route to school. In this area, the 'school zone keeper's yellow carpet' and 'yellow footprints' were drawn together in the child protection zone (school zone) to improve the pedestrian environment so that the children can traverse the crosswalk safely. This project was joined by NOROO Paint & Coatings Co., Ltd., Ministry of the Interior and Safety, Hannam University, Ewha Womans University, KEYNINE Co., Ltd. and Sandbox Friends. The Korea Transportation Safety Authority expressed appreciation and said it plans to expand its road safety mural project nationwide in 2019.

与韩国交通安全公团共同推进小学交通安全壁画示范项目

NOROO涂料股份有限公司与韩国交通安全公团通过民·官·大学间的合作与才能捐献共同推进保障儿童交通安全的“交通安全壁画绘制示范项目”。交通安全壁画绘制项目意在预防上下学时频发的儿童交通事故、传播安全的交通文化，该项目此次在大田市甲川小学和首尔市龟山小学绘制了壁画。两所学校均为交通事故发生率、需要改善上学道路环境的地





NOROO PAINT & COATINGS DEVELOPS FIREPROOFING INDOOR FLOORING



方，为保证儿童可以在这里安全地穿过马路，在儿童保护区域（学校区域）内绘制“学校区域守护者黄地毯”和“黄脚印”，同时改善了步行环境。NOROO涂料股份有限公司与行政安全部、韩南大学、梨花女子大学、Keynine、SANDBOX FRIENDS共同参与了壁画绘制项目，为此，韩国交通安全公团发布消息称，公团对该项目的参与者表示感谢，将以本示范项目为起点于2019年在全国范围内开展交通安全壁画项目。

NOROO PAINT & COATINGS DEVELOPS FIREPROOFING INDOOR FLOORING

As anxieties are on the rise due to the recent outbreaks of fires as seen on the news, NOROO Paint & Coatings Co., Ltd. developed and released the functional flooring with its flame-retardant performance that effectively prevents a fire from turning into a disaster. As can be seen from the large-scale fire incidents, even a small fire could easily turn into a catastrophe unless the interior and exterior materials of the building are made of fire-retardant materials. To prevent this, NOROO Paint & Coatings Co., Ltd. developed a functional flame-retardant flooring product boasting fireproof performance. This new product 'Clean Foxy Flame Retardant Lining' is a flooring material made up of a flame-retardant resin and materials, preventing combustion even if it is ignited, while keeping the release of heavy metals and toxic gas under control. This product had been certified by the Korea Quality Institute of Construction Industry for its suitability as the non-flammable material according to the Notice No. 2015-744 by the Ministry of Land, Infrastructure and Transport and obtained the KS F 4937 (Parking lot surface flooring) and the environmentally-friendliness mark. This is an expandable lining product of high quality and exquisite appearance based on excellent self-leveling performance. Developed with a top priority on fire-retardant performance and safety in accordance with the Enforcement Decree of the Building Act, local government ordinance, and legal standards on the safety and environment, this flooring is applicable to the floors of any buildings requiring flame resistance such as large apartment complexes, office-tels, large discount marts, department stores and factories. An official from NOROO Paint &

Coatings Co., Ltd. Technical Research Center noted, "This new product and its top priority based on the prevention of large fires and safety assurance for large buildings will set a benchmark in the existing flooring materials market and create a new market as a functional product."

NOROO涂料股份有限公司 · 开发不易燃的地板材料

年内各种火灾事故的频繁报道使得人们的不安情绪高涨，为此，NOROO涂料股份有限公司开发并推出了不易燃的难燃功能性地板材料，可有效防止小火灾发展成大型火灾。正如在大型火灾事故中看到的那样，倘若建筑的内外装修材料未使用不燃材料，则小火也能在短时间内迅速蔓延成大型火灾。为阻止这种情况的发生，NOROO涂料股份有限公司在建筑地板材料用涂料中融入不燃性能，开发出了难燃功能性地板材料产品。新产品“CLEANPOXY 难燃衬里漆”是以难燃性树脂和难燃材料为主成分的不燃地板材料，产品本身具有灭火功能，即使着火也不易燃烧，不仅可以防止火势蔓延，还能抑制重金属及有毒气体的释放。该产品已取得韩国建设产业品质院颁发的结果证书，证明该产品符合国土交通部公告第2015-744号（建筑装修材料的难燃成分）的不燃材料标准，同时取得了KS F 4937（停车场地板表面装修材料）与环境标志，属于具有卓越自调平性能、外观优秀的高品质无溶剂型衬里产品。依据《建筑法》施行令、地方自治团体条例及安全与环境相关法律标准的规定，本地板材料将不燃性能与安全放在首位，可适用于大型公寓、写字楼、大型超市、百货店、工厂等要求难燃性的所有建筑地板。NOROO涂料股份有限公司技术研究所相关人员表示：“这款新产品把预防建筑的大型火灾蔓延与安全放在首位，不仅可以取代现在市场上的地板材料，还能作为功能性产品开拓新市场。”

NOROO PAINT & COATINGS CO., LTD. HONORED WITH THE COMMENDATION AWARD FOR CONTRIBUTION TO THE DISSEMINATION OF DONATION CULTURE ON THE DONATION DAY OF ANYANG CITY

On the Donation Day of Anyang City, NOROO Paint & Coatings Co., Ltd. was

honored with the commendation award for its contribution to disseminating a donation culture. Celebrating the 5th Donation Day for the city, it was established to engage in various volunteer activities to help neighbors in need and to create a culture of mutual benefit where everyone can co-exist with one another. NOROO Paint & Coatings Co., Ltd. received the commendation award this year for various and continuous donation and social contribution activities such as wall paintings, gimjang kimchi, generating funds from salary deductions, delivery of rice, etc.

NOROO涂料股份有限公司 · 于安养市捐献日荣获“捐献文化传播功劳奖”表彰

2018年安养市捐献日这天，NOROO涂料股份有限公司安养工厂荣获了“捐献文化传播功劳奖”表彰。安养市捐献日今年已经是第五次举办，意在帮助地区社会的困难邻居，致力于开展多种志愿活动与创造宜居的共赢文化。NOROO涂料股份有限公司因坚持开展壁画绘制、越冬泡菜志愿活动、捐献零钱与配送爱心大米等丰富多样的捐献与社会贡献活动赢得了此次表彰。

NOROO Coil Coatings Co., Ltd.

NOROO卷钢涂料有限公司

21st NOROO FOOTBALL MATCH

On October 21st, 2018, the 21st NOROO Football Match was held at the Cheongna Gongchon Reservoir in Seo-gu, Incheon. Early in the morning, the teams from NOROO Coil Coatings Co., Ltd., NOROO Coil Co., Ltd., NOROO Paint & Coatings Co., Ltd., NOROO BEE Chemical Co., Ltd., NOROO Chemicals Co., Ltd., and NOROO Automotive Coatings Co., Ltd. came together to compete against each other. As the tournament proceeded into the semifinals and finals, time flew and early evening began to set in. Despite this, players kept on going with all their energy while the audience cheered enthusiastically,



21ST NOROO FOOTBALL MATCH

helping give off a feeling of unity for all. At the end of the day, NOROO Paint & Coatings proved to be the winner through intense competition, followed by NOROO BEE Chemical as the first runner-up and NOROO Coil Coatings and NOROO Chemicals as the second runners-up. NOROO Automotive Coatings was named the Fair Play Team. The quality time they spent together on the green field playing outside of the office space and plant was a great opportunity to experience a strong sense of camaraderie.

举办第21届NOROO足球赛

2018年10月21日，在仁川广域市西区青罗公村蓄水池球场举办了第21届NOROO足球赛。本届足球赛于当天一早便拉开了帷幕，NOROO卷钢涂料有限公司与NOROO涂料股份有限公司、NOROO碧化学有限公司、NOROO化工有限公司、NOROO汽车涂料有限公司参加了比赛。比赛分为半决赛和决赛两部分，持续进行到了下午5点，参赛者们赛场上展现出不知疲惫的姿态，赛场外则是热情的助威声，场内外交织成了一片欢乐与和谐的海洋。经过激烈的角逐后，最后NOROO涂料股份有限公司夺得了冠军，NOROO碧化学有限公司屈居亚军，NOROO卷钢涂料有限公司与NOROO化工有限公司并列第三。风格奖的殊荣由NOROO汽车涂料有限公司摘得。离开办公室与工厂，在翠绿的草坪上奔跑、流汗、欢笑的足球赛让员工们感受到了浓烈的同事情谊。

THE KIBAN Co., Ltd.

THE KIBAN有限公司

KOREA SEED EXPO 2018 IN GIMJE

THE KIBAN Co., Ltd. attended the Korea Seed Expo held from October 23rd to 26th in the private breeding complex in Gimje, Jeollabuk-do. As the one and only seed-related event in Korea, the Korea Seed Expo, which was first held from 2017, is hosted by the Ministry of Agriculture, Food and Rural Affairs, Jeollabuk-do and Gimje City, supervised by the Foundation of Agri.





KOREA SEED EXPO 2018 IN GIMJE



THE 'AUTUMN HEAVEN' VARIETY SHOW FOR FALL NAPPA CABBAGES FOR EASY HARVESTING AND SUPERIOR TASTE AND MERCHANTABILITY

Tech. Commercialization & Transfer, and sponsored by the Rural Development Administration, Korea Seed & Variety Service, KOTRA, and Korean Seed Association. Following the last year's theme of "Seeds for Tomorrow," this year's event is themed as "Seeds Influencing the Future". A demonstration field and farm was made to exhibit the themed booths and the growth and forms of crops, and used to display the tomato varieties such as MINI TOP and MINI DREAM, chili pepper varieties including TAEHU and ACETAN, and a range of other varieties of onions, kohlrabi, and other foreign counterparts, thus disseminating the value of the seed companies and excellence of our varieties to overseas buyers as well as regular visitors.

The KIBAN参加金堤国际种子博览会

The KIBAN参加了10月23日至26日在全罗北道金堤民营育种园区举办的国际种子博览会。本次活动是从2017年起开始举办的韩国唯一的种子博览会，由农林畜产食品部与全罗北道、金堤市主办，由农业技术实用化财团承办，由农村振兴厅、国立种子院、KOTRA、(社)韩国种子协会等赞助。2017年的主题为“种子，承载着明天”后，2018年的本届博览会则提出了“种子，改变未来”的新主题，参加博览会的The KIBAN利用现场打造的示范农场（demonstration field）展示了Minitop与Mini Dream等番茄品种与TAEHU、ACE TAN等辣椒品种及洋葱、茼蒿等丰富多样的品种与海外陆运品种，向普通观众与海外客户宣传了企业的价值与品种的优秀性。

THE 'AUTUMN HEAVEN' VARIETY SHOW FOR FALL NAPPA CABBAGES FOR EASY HARVESTING AND SUPERIOR TASTE AND MERCHANTABILITY

The 'Autumn Heaven', a variety show on the fall nappa cabbage variety by THE KIBAN, was held on November 28th at the cultivation field of farmer Heo Jun-ki in Hwangsan-myeon, Haenam-gun, Jeollanam-do. THE KIBAN's 'Autumn Heaven' is a variety that was released in 2017 for the nappa cabbage harvest season of gimjang. The inner leaves are rich yellow and the thick vein vertically crossing the middle is thin with an appropriate amount of moisture, resulting in good taste, easier cultivation and superior merchantability. Farmer

Heo who cultivated the Autumn Heaven nappa cabbage said that its farming was easier because it was free from damages due to blight and harmful effects such as clubroot, and the galea outer leaves were rich in color. He also indicated that he is planning to expand the cultivation field for our variety next year. Other than the appearance, he also remarked that it tastes good, too, saying he is sure that it will catch on with consumers as the preferred nappa cabbage for gimjang. Visitors who marveled at the characteristics and cultivation examples of Autumn Heaven also praised its merchantability and touted its high likelihood to be named the flagship nappa cabbage variety in the fall season. On this note, THE KIBAN remarked that it will endeavor to demonstrate even better varieties to farmers in Korea by stepping up its research and development activities through this evaluation show.

举办易于栽培、味道与商品性优秀的秋白菜“秋季天下”品评会

The KIBAN的秋白菜品种“秋季天下”品评会于11月28日在全罗南道海南郡黄山面许俊基农民的栽培基地中进行。“秋季天下”是为应对越冬泡菜白菜收获季节、于2017年新推出的品种，白菜的菜心结球内叶呈深黄色，中脉（竖着贯穿叶子中间的粗叶脉）较薄，水分含量适宜，味道上乘，且易于栽培，商品性优秀。今年栽培“秋季天下”白菜的许俊基农民表示，这个品种没有根瘤病等病虫害，外叶色深，栽培起来非常容易，明年将进一步扩大栽培面积。他还表示，“秋季天下”不仅外观漂亮，味道也上乘，用来腌制越冬泡菜一定会受到消费者的欢迎。前来参加本次品评会的参与者也都纷纷表示，未来“秋季天下”有望作为秋白菜的代表品种在市场上立足，对其商品性给出了一致好评。The KIBAN表示将通过本次“秋季天下”白菜品评会进一步加快未来的研发脚步，努力为农民朋友推出优秀的品种。



In the morning of October 31st, 2018 when NOROO Group celebrated its 73rd anniversary, the employees headed to the welfare center don't seem to be bothered by the cold wind, which offers strong hints of the end of autumn. This event was all the more special and meaningful since proper tribute was given to the late founder Han Jeong-dae on the 20th anniversary of his death.

NOROO集团创立73周年纪念活动的2018年10月31日清晨，向福利馆走去的员工们丝毫没有受到深秋冷风的影响。今年的活动同时也是纪念集团创始人韩鼎大前任会长逝世20周年因此比往年更加有意义。



At <NOROO INTERNATIONAL COLOR TREND SHOW 2019>, the audience was beaming with joy over the captivating stage. The audience members kept taking pictures of the screen depicting a world of vivid colors with their smartphones. We couldn't be more excited about the upcoming year of 2019 when these colors are ready to truly shine.

“NOROO INTERNATIONAL COLOR TREND SHOW 2019”现场，从舞台到观众席全都灯光闪烁。舞台的屏幕上流动着绚烂的色彩，观众席上则是人们用手机不停地拍照。2019年，期待色彩从这里走向世界。

