

## Changes in Digital Healthcare and Global Enterprise Trends

Danny Park, CEO of Ascent Korea

#consumerintent #SEO #AIcontentproduction #AIwritingtool #digitalmarketing

### Changes in Digital Marketing and Growing Interest in AI Writing Tools

The environment surrounding digital marketing is changing.

When Apple introduced App Tracking Transparency with the release of iOS 14.5 in April 2021, and Google finally implemented a policy to block the use of third-party cookies in Chrome in July 2023 after a two-year delay, people started talking about the end of performance marketing, which has been an important part of digital marketing campaigns. In fact, CRITEO, a company that was one of the first to introduce retargeting ads to the market and became an adtech unicorn, offering a wide range of services based on data from 75% of the world's online users, turned negative this year.

Meanwhile, OpenAI released ChatGPT 3.5 in November 2022 and ChatGPT 4.5 Pro in October 2023, and Google announced Gemini, Google's multimodal AI that scored above human experts in benchmark tests, in December 2023, and integrated it into Google's AI service Bard.

These big tech moves are inevitably changing marketing. Experts say that as retargeting campaigns become more difficult in the cookie-less era, companies need to be able to acquire and leverage first-party and zero-party data, and strengthen their direct-to-consumer and owned media channels. As a result, enterprise marketers are increasingly focused on building content assets that can deliver the information and creative that consumers want, and on search engine optimization (SEO) that can deliver it to consumers when they want it, on the channels they are on.



< Source: Google Trends >

[Increased Interest in "SEO" as measured by Google Trends]

What is SEO from Search Engine Optimization? SEO refers to a series of tasks that improve the structure and content of a website or webpage by considering the characteristics of relevant search algorithms so that websites and webpages can be easily found by search engines (discovery), read thoroughly (crawling), indexed with accurate topics (indexing), and displayed at the top of search result pages (ranking) to increase the quantity and quality of organic traffic.

In fact, SEO is predicated on content that needs to be exposed, so the question for marketers in the midst of various changes in the digital marketing environment boils down to "how to build quality content efficiently in this changing environment?". With the advent of AI based on large language models that can write large amounts of quality content quickly and easily, the content creation process has been automated, and we have the ability to quickly generate personalized content, but it remains to be seen if AI-based writing is actually useful in the marketing field.

#### The ability of AI as a writing tool

The ability of AI as a writing tool is changing the paradigm of content and creative production, especially in marketing. These tools are proving that they can do more than just generate text, they can generate images and videos that look and act the way you want them to on a commercial level. Especially with advances in data analytics to uncover the intent behind consumer behavior, these tools can generate content in a variety of styles and formats that are optimized for SEO and rank highly in search results, all while answering exactly what consumers are asking your brand.

These advances in AI writing tools are likely to have a significant impact on the future of digital marketing. Marketers will no longer be tied to time- and resource-consuming content creation and will be able to focus more on creative and strategic marketing activities. This will help maximize the effectiveness of digital marketing and further strengthen the relationship between brands and consumers.

#### The state and future of AI-powered content creation

AI-powered content creation is one of the hottest technologies in digital marketing right now. The technology is developing at a rapid pace and the possibilities are endless. Going beyond simple text generation, AI writing tools are playing an important role in identifying user search intent and creating content that matches it. This is a major turning point in creating content that performs well in terms of SEO.

Currently, AI-powered content creation tools are evolving in various forms. They are being used to create not only text content, but also image and video content. For example, some AI tools can generate original images or videos based on user requests. This has great potential, especially in social media optimization (SMO), which, along with search, is essential for businesses to provide consumers with the information they want, when they want it, and on the channels they want.

AI-powered content creation tools can also play a big role in personalized content creation. These tools can analyze a user's online behavior, interests, and interactions, opening up the possibility of delivering tailored content. This personalized content plays an important role in improving the user experience and increasing brand loyalty.

#### Top marketing writing AI tools in Japan and the US

Interest in AI tools for marketing writing is a global phenomenon. Examples of this interest can be found in two countries that are very close to us, Japan and the United States. In Japan, the market for marketing writing AI tools is dominated by EMMA Tools, Sakubun, Catchy, Mieruka, and Transcope. These tools have their own characteristics in terms of SEO and research capabilities, and are used for different types of content creation.

In the US market, ChatGPT, MarketMuse, Frase, Jasper AI, All AI and Surfer SEO are known as AI writing tools. Each of these tools has its own characteristics and offers a variety of functions, such as generating promotional content, checking grammar, improving vocabulary selection, and diagnosing and improving SEO.

These marketing writing AI tools are becoming a key component of marketing strategies. They help marketers create effective content while saving time and resources. They also play an important role in making content more personalized and targeted. This helps create a more personalized experience for consumers and increases brand loyalty.

#### How Consumer Intent Interacts with AI Content

Understanding consumer intent is critical in digital marketing. Marketing writing AI tools should also be able to accurately identify this consumer intent and create content accordingly. Different marketing writing AI tools do this in different ways.

For example, services like South Korea's ListeningMind Hubble comprehensively analyze a user's search query, search history, and the content on the search results page to create content that aligns with consumer intent based on personas and their interests. The benefit of this approach is that the content is based on intent validated by data from actual consumer behavior, which not only improves the brand experience for the consumer reading the content, but also helps with SEO on search engines like Google that focus on searcher intent. By using these AI tools for marketing writing, marketers can provide users with more relevant and engaging content.

#### How AI is Affecting SEO and Content Asset Building

Advances in AI technology are revolutionizing SEO and content asset building. Marketing writing AI tools automate keyword research, intent analysis, and content structuring, all of which are essential to SEO. These capabilities can play an important role in helping companies rank higher in search engine results.

Marketing writing AI tools also play an important role in improving the quality of content, which is an asset to a company. If we look at examples from other countries, marketing writing AI tools mostly use features like grammar checking, plagiarism checking, and tone detection to improve the accuracy and professionalism of content. This improves the user experience and contributes to brand credibility. AI can also generate content in a variety of languages and styles, allowing you to create content that appeals to different audiences around the world.

The use of AI tools for marketing writing will eventually automate the entire content creation process and increase efficiency. This will allow companies to build content assets faster and more economically, and eventually connect with marketing automation to improve overall performance. This will ultimately free up marketing teams to spend more time on more creative and strategic tasks, and help companies execute their digital marketing strategies more effectively.

#### Challenges and Opportunities for AI Content Creation

Content creation with marketing writing AI tools offers many opportunities, but it also presents a number of challenges. AI technology is not yet perfect, especially when it comes to creating creative and complex content. AI-generated content can be less original and sometimes difficult to capture human emotion and detail. As a result, content generated by marketing writing AI tools at this stage still requires human oversight and editing before it is published.

The quality of content generated by marketing writing AI tools also depends on the quality and quantity of consumer intent data. Without accurate and diverse intent data, it is difficult for AI to generate effective content. This underscores the importance of collecting and managing intent data, because while content is created by producers, it is ultimately consumed by the people who consume it. Organizations should focus on collecting and managing high-quality intent data so that AI can perform optimally.

Marketing Writing Advances in AI technology will have a huge impact on the future of content marketing. AI will improve the user experience by increasing the efficiency of content creation and enabling personalized content delivery. This will strengthen the relationship between brands and consumers and contribute to increased brand loyalty. AI will also play a key role in maximizing the effectiveness of marketing campaigns and increasing ROI.

### The Future of Digital Marketing Transformed by AI

The advancement of writing technology driven by AI is bringing about innovative changes in digital marketing, especially in the field of content creation. These changes are expected to have a profound impact on marketing strategies in both the short and long term. In the short term, AI writing tools for marketing are significantly improving the efficiency of content production. This enables companies to produce a greater volume of content faster and more cost-effectively, which in turn contributes to improving SEO and user engagement.

In the long term, as AI technology continues to advance, the quality and creativity of content will also improve. AI will have a deeper understanding of user behavior and preferences, allowing for more personalized and creative content creation. This will enhance user experiences and play a crucial role in strengthening the relationship between brands and consumers.

However, there are clear limitations to AI writing. Many AI-generated content tends to be similar and lacking in flavor, as AI cannot fully mimic human creativity and emotions. In such situations, the emergence of tools like ListeningMind Hubble contributes to surpassing the limitations of AI writing by reflecting user intent in the writing. These tools analyze user search queries and behaviors to understand users' real needs and interests. This results in content that is more relevant and appealing to users.

Thus, the current limitations of AI writing tools appear to be gradually overcome with the ongoing development of AI technology and the improved utilization of intent data. AI will acquire more sophisticated language processing capabilities and gain a deeper understanding of user sentiments and preferences. This will play a crucial role in enhancing the quality and creativity of content generated by AI.

In conclusion, the future of content creation through AI appears to be a meaningful advancement. The development of AI technology will simultaneously improve the efficiency and quality of content creation, bringing significant changes to digital marketing strategies. This will ultimately enhance consumer-centricity in the relationship between brands and consumers, shaping the future of digital marketing positively. The advancement of AI writing technology will play an important role in the field of digital marketing and contribute to strengthening the relationship between brands and consumers.

# Search Engine Optimization (SEO) Services Market Trends and Optimization Strategies

#SearchEngineOptimization #SEO #Performance #OptimizationStrategy #DigitalMarketing



Acumen Research and Consulting recently published a report titled "Search Engine Optimization Services Market Forecast, 2022 - 2030". The search engine optimization services market is growing at a CAGR of 17.6% and is expected to reach \$234.8 billion by 2030.

In this report, we'll explore how the growth of the search engine optimization market has transformed the services market and how best practices for content optimization from the leading search engine, Google, can help you drive effective search engine optimization (SEO).

## Changes in the SEO services market

The search engine optimization (SEO) services market has played an important role in shaping the digital landscape and is a dynamic and rapidly evolving industry. The SEO market offers a wide range of solutions and applications that aim to improve a business's online visibility and search engine rankings. With the increasing use of digital technology and the internet, SEO services have become indispensable for companies that want to establish a strong online presence and reach a wider audience.

One of the key drivers of the SEO services market is the growing importance of local search optimization. As more and more consumers rely on mobile devices to search for products and services, it has become necessary for businesses to optimize for local search results.

Another trend in the SEO market is the integration of artificial intelligence and machine learning techniques. These cutting-edge technologies offer many benefits in terms of accuracy, speed, and efficiency of keyword analysis and ranking algorithms. As a result, businesses are relying on SEO companies that utilize these technologies to deliver better results and improve their online visibility.

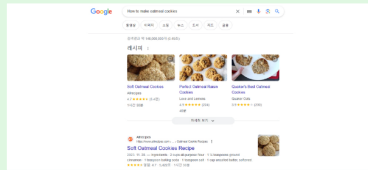
The SEO services market offers a wealth of opportunities for businesses looking to build a strong online presence and reach a wider audience. With a diverse range of solutions and applications, and the growing importance of integrating local search optimization and artificial intelligence technologies, the SEO services market is expected to see continued growth and innovation in the coming years.

## SEO content optimization strategies

The higher up you are in Google's search results, the more likely searchers are to click on your content. Here are a few SEO tactics to help you dominate the search results.

### 1. Align your content with search intent

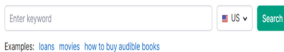
"Search intent," also known as "user intent," is the goal of every search query. Understanding and satisfying search intent is Google's primary purpose, and the content on the first page has passed Google's search intent test. For example, when you search for "how to make oatmeal cookies," the top result is a video, not an ecommerce page selling oatmeal cookies. Google understands that people searching for this keyword are looking to learn, not buy. So, if you want to rank on page one of Google, you need to understand the search intent and create content to match.



Source: Google

## Keyword Magic Tool

Find millions of keyword suggestions for your SEO.



Source: Semrush

### 2. Utilize your main keywords

The primary keyword is the keyword that best represents the topic of the page and is the one with the highest search volume. Therefore, every page on your site should be targeting one main keyword. Where you use your main keyword is also important because it helps you optimize your pages. For maximum effectiveness, include your main keyword in the head of the page and make sure it reads like natural language. Add your primary keyword to elements like the title tag, main header, introduction, and the URL of the page.

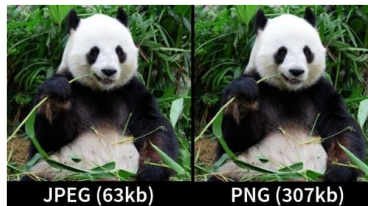
### 3. Write compelling title tags and meta descriptions

The page title and meta description are among the most important meta tags on your page. The title tag is the clickable title that appears on the search engine results page (SERP) and signals to Google what the page is about. The title tag is important for making it easy for users to understand the results, and it's an important piece of information for searchers to decide which result to click on. A good rule of thumb is to keep your title tag between 50 and 60 characters. When writing your title tag, keep in mind the following: include your primary keyword, match search intent, avoid duplicate title tags, avoid keyword stuffing, and be descriptive but concise.

A meta description is a meta tag used to describe the content of a page. You want to make sure that the meta tag is generally a short and concise summary of the page's content. When writing meta tags, keep in mind things like writing unique meta descriptions for every page, using task-oriented copy, including primary keywords, and matching search intent.

### 4. Optimize your images

The most commonly used image formats on the web are JPEG and PNG. JPEG is best for photos, while PNG is best for images that contain text, lines, drawings, etc. WebP is a modern image format that provides excellent lossless and lossy compression for web images, and according to Google, it is 26% smaller than PNG and 34% smaller than JPEG. Since the size of an image contributes to its loading time, page speed is important for user experience, so it's a good idea to compress your images before uploading them to your site.



Source: Semrush

### 5. Update content regularly

About 60% of the top 10 pages in Google's search results are more than 3 years old and are regularly updated. Updating your content regularly and optimizing your meta titles, descriptions, etc. will help your posts reach the top. Above all, your content should be relevant to your audience and keywords, and free of grammatical and spelling errors. Also, include links to other articles or websites.

Google has recently introduced new search features to help website owners get their content to the top of Google's search results. However, complaints have been growing about the amount of false and misleading information that doesn't meet SEO standards. If Google can index forums and social sites and weed out AI-generated information, these complaints will go away.

There are about 2 billion websites in the world. It's very difficult to get your homepage to the top of the list, and many go unnoticed. In this situation, digital marketing is becoming increasingly important. In this age of information overload, you'll need to create a strategy for each search engine in order to get your content noticed.

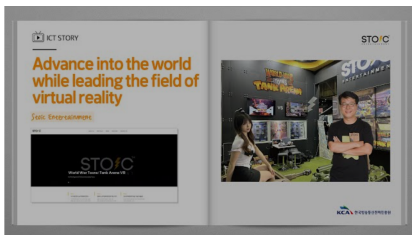
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- Search Engine Optimization Services Market Size Growing at 17.6% CAGR, Set to Reach USD 234.8 Billion By 2030
- Google, Introduce Search Top Exposure New Features
- SEO Best Practices: 10 Ways to Boost Organic Rankings & Traffic
- 11 Best Practices for SEO Content Optimization in 2023

## Stoic Entertainment

## Core Technologies and Achievement Highlights

- Successfully launching a game as a VR game developer in Korea, following the official opening of Meta's Quest Store, the central hub of the VR ecosystem
- Offering "K-Wonderland," a metaverse service based on MBC IP, to ZEPETO, Korea's leading metaverse platform
- Holding a total of 36 technology patents, including 9 patents registered in the United States



## Move forward as a tech company leading the XR field



Encompassing virtual reality (VR), augmented reality (AR), and mixed reality (MR), XR (Extended Reality) technology is considered a key field for innovation and growth. Big tech companies such as Microsoft, Google, Apple, Nvidia, and Samsung are also pointing to the virtual reality field as the next-generation key growth engine and making large-scale investments. XR technology, which revolutionizes various industries such as games, entertainment, education, medical care, manufacturing, and communication, provides a new experience wherein users can freely interact and immerse themselves in virtual worlds in the game field. In the entertainment field, it offers experiences that are impossible in real life through virtual reality. Stoic Entertainment, which has grown by focusing on the XR field such as augmented reality contents and virtual reality games for 9 years, has recently expanded its territory further in response to such growth. Based on the know-how of building virtual space accumulated over the years, we are developing virtual reality technology solutions veering away from simple virtual reality content development and aiming to become a technology company that leads the XR field based on technology. In particular, focusing on content realization technology, we own a total of 36 domestic and foreign technology patents, including 9 US patents such as VR motion sickness education, and we are building the technology for virtual space and mutual communication.

## Realize growth and development by diversifying support projects



The SW high-growth club support project supports the growth of the company itself so it has the advantage of being able to use funds to expand the company's sales and human resources. Stoic Entertainment was also able to utilize funds in all aspects conducive to its growth such as sales and employment as well as technical and global capabilities through the support project. Thanks to this, getting help was possible in various ways, from participating in Expos to internships, internal training programs, and patent applications. The company made great progress through participations in domestic and international Expos, production and execution of advertisements, and utilization of YouTubers in marketing competency/internship programs and educational seminars on human resources, service development, and securing of intellectual property rights in technical competency, and overseas IP contracts and MOUs and overseas user opinions in the process of autonomously setting the number of surveys in global competency. With the support of the SW High Growth Club, Stoic Entertainment participated in Gamescom in Germany and GDC in the US, holding meaningful face-to-face meetings with the Meta Headquarters and managers of companies with platforms in the virtual reality field such as Pico and Sony. Thanks to this, Stoic Entertainment's World War Toons Tank Arena VR game set a record as the first Korean game developer to be serviced after launching the Meta Quest Store, and it was able to receive a lot of help from the Meta manager. In addition, the company achieved outstanding results in securing overall competitiveness, not only strengthening overseas marketing but also holding in-house lectures and seminars on overseas content advancement and success.

## Potential of the ever-growing virtual reality industry

Since all digital content proceeds according to hardware, further development of hardware is required for the field of virtual reality to be industrialized fully. As 8-bit computers run 8-bit games and contents, and 16-bit computers play 16-bit contents, so-called killer contents must be mass-produced to expand the virtual reality industry and hardware development for this is also desperately needed. In addition, if the government more actively supports SMEs that are developing software, such as is expected to be of great help in expanding the virtual reality ecosystem through the coexistence of hardware and software. Over the past 9 years, Stoic Entertainment has developed a total of 12 VR games most of which are games dedicated to VR theme parks that were popular between 2017 and 2019 with Tank Arena VR as the first full-fledged B2C (business-to-consumer transaction) game. Although going through various trials and errors as it does not have much experience in the field, Stoic Entertainment will continue to move forward to grow as a technology-based global VR content and solution developer. In the future, the company plans to do its best to update Tank Arena VR continuously and develop new contents and solutions.

## The future of the virtual reality industry achieved through efforts and cooperation

Currently, Meta is recognized as a prominent global tech company with a strong focus on virtual reality, making significant investments in the field. By rebranding from Facebook to Meta, the company is actively expanding the virtual reality ecosystem. With Meta's acquisition of Oculus and the release of hardware devices like Oculus DK2, Rift, Oculus, and Quest in Korea, Dev United Games has been at the forefront of content development, and Stoic Entertainment is following suit. In this thriving virtual reality game market in Korea, Stoic Entertainment aims to leverage the experiences gained from entering the Quest Store. Collaborative efforts and organic growth among domestic companies can contribute to the advancement and competitiveness of the virtual reality industry in the global market. Stoic Entertainment will continue to pioneer innovative virtual reality content and solutions, meeting expectations and fostering stronger collaborations with both domestic and international partners to play a leading role in the growth and development of the virtual reality industry.

## ICT Funding Project

- **Dedicated Institution** National IT Industry Promotion Agency
- **Business Objective** Expansion of SW industry base
- **Business Description** SW high-growth club

## Company information

- **CEO** Choi Younghwa, Kim Hongseok
- **Type of Business** Virtual reality software development and supply
- **Year of Establishment** 2014. 03
- **Website** www.stoicent.com

## TIME LINE



## Advancing into the era of quantum transition through the development of quantum measurement and control devices

STO/IC

sdt

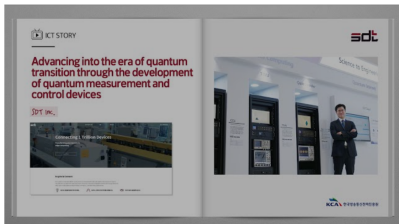
SNPLAB

순돌이소프트  
SUNDOLY SOFT

### SDT Inc.

#### Core Technologies and Achievement Highlights

- Edge computing devices, collecting data generated at industrial sites and performing edge computing
- Cloud services play a vital role in facilitating hardware connection, data transmission, collection, storage, visualization, as well as machine learning training and model creation
- Quantum standard technology is utilized to safeguard important data at industrial sites by applying quantum security measures to industrial device



Development of quantum materials, components, and equipment represents another opportunity for the quantum technology industry to expand!



SDT CCU 10 channels (top), 20 channels (bottom)

Quantum technology is an advanced ICT (Information and Communication Technology) that allows for exceptional performance surpassing the capabilities of conventional technologies. It leverages the principles of "superposition" (where particles at the atomic level can exist in multiple states simultaneously) and "entanglement" (where particles remain connected across vast distances). Quantum technologies, including quantum computing, quantum cryptographic communication, and quantum sensors, are emerging as key strategic technologies for the future, following the trajectory of semiconductor and artificial intelligence (AI) technologies. SDT Inc., established in 2017, is specialized in DX (Digital Transformation) solutions and quantum standard technology. SDT Inc. is preparing for the coming era of quantum transition by developing the quantum standard technology equipment and infrastructure market, including cloud-based quantum ultra-precision measurement/control equipment, based on its expertise in industrial device and cloud development. SDT Inc. recognizes the significance of developing quantum materials, parts, and equipment within the manufacturing industry, which serves as the foundation industry of Korea. While it is crucial to research and develop a 1,000-qubit quantum computer as a strategic move within the competitive landscape of the quantum technology industry, SDT Inc. understands that the creation of high-value applications using quantum technology necessitates various technologies and equipment capable of manipulating small atoms, similar to how electrons are controlled in semiconductors. The commercialization of a 1,000-qubit quantum computer can only be pursued when there are available ultra-precision measurement/control equipment and quantum CPUs. Hence, SDT Inc. acknowledges the importance of parallel development in both quantum computer research and the advancement of related technologies and equipment within the manufacturing industry. SDT Inc. challenged the field of quantum technology with the help of the ICT Funding Project, based on the judgment that high-precision/high-quality hardware and devices, which can handle very small units such as atoms, can be applied to industrial sites to accelerate digital transformation, and it is not far from the existing industrial DX solution business.

#### The development and commercialization of the Simultaneous Coefficient Measurement Unit (CCU)

SDT Inc. has successfully developed and commercialized the CCU (Coincidence Counting Unit) as part of its participation in the ICT Funding Project. Quantum computing, with its unique quantum mechanical properties such as entanglement and superposition, faces challenges due to the nature of measurement affecting the properties of the system being measured. Precise control and measurement of qubits are essential for reliable quantum information technology. The CCU developed by SDT Inc. is a module designed to count coincidences between two or more electrical inputs. It employs multiple single photons to simultaneously input and output signals. As part of its expansion into the quantum technology field, SDT Inc. received quantum technology, including quantum cryptographic communication equipment, from the Korea Institute of Science and Technology (KIST). Within these transferred technologies, SDT Inc. focused on researching CCU technology for localization. The CCU developed by KIST is a high-performance module with a coincidence counting time window of at least 0.46 ns, utilizing a cost-effective FPGA. It enables simultaneous input of signals from 20 channels and counts coincidences ranging from 2x to 20x. SDT Inc. applied for the ICT Funding Project to develop and commercialize the mass production of the technology proved in the research institute environment only and successfully developed products that can implement performance stably, such as the technology transferred from KIST. The performance of the product was proved by the test run by the Telecommunications Technology Association (TTA), and the product can be sold in Korea as it received KC certification in December 2022. SDT Inc. localized CCU equipment for each purchase in Korea, which should be imported or manually produced in the laboratory.

#### Leading technical development and industrial development by distributing quantum measurement and control equipment

SDT Inc.'s quantum materials, parts, and equipment have gained significant demand from prestigious research institutes both domestically and internationally. The competition primarily stems from foreign companies that initiated quantum technology research earlier than Korea. Furthermore, traditional industrial measurement equipment manufacturers have also entered the market by developing and launching equipment for quantum experiments. Additionally, quantum technology startups are entering the market, intensifying the competition further. Despite this competition, the market can still be considered a "blue ocean" because it has not been industrialized for an extended period, and the number of suppliers is relatively limited. TTM (TCSPEC) and Qubit Controller (AWG) developed by SDT Co., Ltd. after CCU can be used in any quantum computing R&D laboratory regardless of the type—ion/photon/artificial particle, or superconductor. This three equipment can be used for precise measurement of qubits, since they are orchestrated in a synchronized state at the desired timing, when used all together. Although SDT Inc. has not yet sold quantum technology products to the domestic and foreign markets in full scale, it is discussing with persons in charge at research institutes and college research centers in Korea, and renowned college research institutes abroad, in order to develop its products at the right time, based on the experience and network of CEO Yoon Jilwon, who worked in quantum research institutes at home and abroad for 10 years. Quantum measurement and control equipment is not only utilized in the field of quantum technology but can also contribute to technological and industrial development in other industries. SDT Inc. plans to distribute its developed equipment and technology to other industries so that they can have a great effect on defense radar testing and semiconductor measurement.

#### ICT Funding Project

- **Dedicated Institution** National Information Society Agency
- **Business Objective** Establishment of quantum cryptographic communication infrastructure (informatization)
- **Business Description** Establishment of quantum cryptographic communication infrastructure

#### Company information

- **CEO** Yoon Jilwon
- **Type of Business** Software research and development
- **Year of Establishment** 2017. 11
- **Website** www.sdt.inc

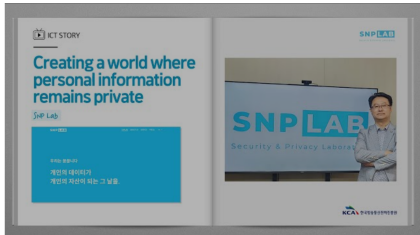
#### TIME LINE



SNP Lab

Core Technologies and Achievement Highlights

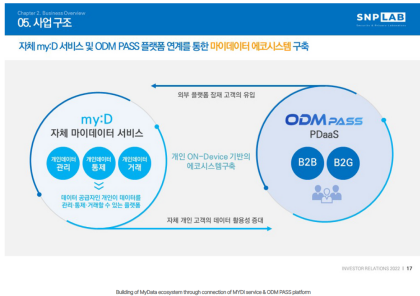
- Execution of the Korea Internet and Security Agency's project for standardization of MyData transmission between binary industries to create a framework for standardization of MyData transmission in Korea
- Execution of the National Information Society Agency's AI learning traffic data project to contribute to development of Korea's traffic infrastructure
- Execution of Korea Data Agency's project for creating a comprehensive base for activation of MyData ecosystems to contribute to expansion of MyData ecosystems



Individuals' self-managed MyData

Recognizing data as a core resource in the Fourth Industrial Revolution, the Korean legislature proposed a revision of the three major acts on data in 2018 to promote the data industry. What followed as a new industry was the MyData industry which gathers dispersed information in one location for integrated management and guarantees the individual's information sovereignty to enable individuals' active use of MyData in asset management and other personal endeavors. SNP Lab is a company dedicated to personal information protection. Founded in December 2018, its primary goal is to restore data sovereignty to individuals and establish a world where data remains private property. The company's flagship product is 'myD', a MyData transaction brokerage platform. Developed over two years, myD is a service that allows individuals to treat their MyData as personal assets, enabling them to sell it to interested parties and receive payment for the sales. This platform ensures that individuals retain control over their personal data throughout the process. Personal information protection is the mission of SNP Lab, which has developed a technology for anonymizing various types of data for privacy violation prevention, a personal data store technology which enables data transactions without data collection by a broker, a local differential privacy technology which enables statistical calculations without privacy violation, and a security-by-design technology which prevents leaks of personal data from hacking or human error at the source, among other source technologies. These technologies are designed to reduce risk of personal data leaks and privacy violation to zero. SNP Lab's myD will see the traditional marketing without compensation for supplied data superseded by new and improved marketing based on personal needs.

The foundation for data distribution platforms in Korea



The global recognition of data as a valuable asset, akin to currency or real estate, has led to the emergence of a data economy as a significant undertaking. SNP Lab plays a crucial role in assisting Korean companies to navigate and adapt to these transformative changes. The company actively participated in the 2022 K-Startup Data Protection Company Development Program, a government-led initiative aimed at achieving secure and legally compliant distribution of personal data within the expanding ecosystem of related platforms in the Korean data market. Through its participation in the project, SNP Lab formed a MyData ecosystem for converting personal data into property, ultimately increasing Korea's national competitiveness and benefiting its communities. The MyData ecosystem created enables individuals to collect, manage, and sell their own MyData to companies, many of them small businesses, venture companies, and startups to which such MyData provides much practical value. For SNP Lab itself, the achievement has been a major growth engine, giving the company much and varied practical experience sure to aid its success in related future developments. SNP Lab has expanded its pool of potential customers and set a foundation on which small and medium businesses can grow and MyData technology can advance as a result of the achievement.

Efforts to expand the MyData ecosystems

Indeed, as MyData gains attention, striking a balance between personal information protection and data distribution becomes an important task. While businesses seek to leverage MyData for innovative services, lightened personal information protection regulations can limit the extent of data usage. This can hinder businesses from fully harnessing the potential of MyData technology. To address this issue, it is crucial to develop new regulatory frameworks that protect personal information while enabling businesses to safely utilize MyData. Furthermore, it is essential to educate small and medium-sized companies that utilize MyData technology. Many of these companies currently face challenges in understanding and effectively applying MyData in their operations. It is crucial to offer these companies education, mentoring, and practical training. By providing comprehensive support, including educational programs, mentoring initiatives, and hands-on training, small and medium-sized companies can enhance their understanding and proficiency in leveraging MyData. These efforts will enable these companies to overcome barriers and effectively utilize MyData, contributing to the growth and development of the overall MyData ecosystem. SNP Lab frequently takes part in events and investor relations opportunities internationally to discover new foreign markets. It was awarded in the category of "operators" in the MyData Award organized by MyData Global, an organization based in Finland in Europe, where privacy is highly valued. SNP Lab will continue its efforts to enhance data quality and create ecosystems where data is used without privacy violation.

ICT Funding Project

- **Dedicated Institution**: Korea Internet and Security Agency
- **Business Objective**: Global ICT Innovation Cluster formation
- **Business Description**: Information protection cluster

Company information

- **CEO**: Lee Joeyoung
- **Type of Business**: Online personal information services, development and distribution of application
- **Year of Establishment**: 2019. 12.
- **Website**: www.snplab.io

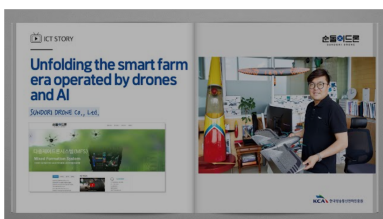
TIME LINE



## SUNDORI DRONE Co., Ltd.

## P Core Technologies and Achievement Highlights

- Agricultural drone with automatic pest control function and easy operation
- Multiple control program (MFS) that allows an operator to control multiple drones in real time
- Industrial drones, military drones, educational drones, etc.

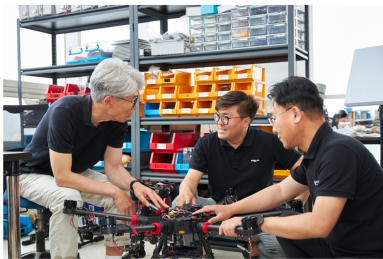


## Drone industry expanding its scope, spanning military use to hobbies



There is a growing need for new agricultural technologies to respond to prevailing trends such as overall population growth, climate change, and changes in consumption patterns. As a solution to rural problems such as sluggish crops due to abnormal weather and labor shortage due to aging industries that combine existing agricultural technologies with new cutting-edge technologies are emerging. Among them, SUNDORI DRONE Co., Ltd. is leading the way in the smart farm field using drones. SUNDORI DRONE is the largest drone production company in South Korea that develops military drones, agricultural drones, educational and special-purpose drones, and drone control programs. In particular, to lead the rapidly changing industry 4.0 market, SUNDORI DRONE has established an affiliated research institute, and recruited experts with master's and doctorate degrees to continuously research and develop new products. CEO Cho Soonsik, who heads up SUNDORI DRONE, is the first-generation of the drone industry in South Korea. He fell in love with radio-controlled airplanes ever since he was an elementary school student. He won awards in various competitions such as the 1st Presidential Cup Air Sports Competition and Radio-Controlled Hand Launch Glider 2nd Division (High School Division) with his favorite hobby turning into a job for him. After studying professionally in earnest, he was put in charge of radio control and airplane manufacturing training for local people at a Chinese airline company that recruited him with a job offer. Afterward, while keeping an eye on the growth of China's drone industry, after returning to South Korea in 2015, he founded his company SUNDORI DRONE and focused on developing agricultural drones.

## Agricultural drone system that manages crops based on commands



The Smart Farm Drone Station developed by SUNDORI DRONE consists of a drone that collects vegetation information and automatic pest control by applying ICT technology, as well as a smart pole that collects information on the farming environment. SUNDORI DRONE's agricultural drones control 1.5~2ha (about 5,000 pyeong) in 20 minutes per flight. It saves about a third of the time compared to working with a conventional vehicle. The drone recharges pesticides (in units of 20 liters), automatically replaces batteries, and attempts autonomous take-off and landing. When a command is entered into the system, the drone takes off from the container-shaped drone station and lands on the station rails based on commands. When batteries need to be replaced and pesticides recharged, drones come into the station to do the work. Moreover, the multi-spectral camera mounted on the drone analyzes the soil vegetation index and crop growth information, and the drone automatically selects and sprays pesticides or nutrients based on this. This accumulated data enables more scientific farming using AI, and it is the drone station integrated control system that controls all of this. In this control system, the flight environment and real-time video can be manually controlled by remote control, and through this, operation information of the drone can be checked in real time in addition to the smart farm information. The smart pole acquires farmland climate information (temperature, humidity, wind direction) and collects farmland images in real time.

## SUNDORI DRONE, flying toward the world such as Mexico and the Philippines

SUNDORI DRONE's representative agricultural drones include the Quad agricultural drone (10L), the Hexa agricultural drone (10L), and a 20L drone. A 10-liter agricultural drone can control 3,000 pyeong in 8 to 10 minutes in the hands of skilled users. Moreover, it is easy to control and has good durability, so even elderly people in their 60s and 70s can use it easily. In particular, through technology development and cost reduction, the price was lowered by about 50% compared to the previous one. It is attributed to design and manufacture with an emphasis on convenience with intuitive and simple functions suitable for actual users of farmhouses. Thanks to this meticulous development, SUNDORI DRONE's smart farm drone station system further enhances the convenience of controlling one to many drones on a computer, and we are looking forward to exporting services agricultural-based countries, such as the Philippines, Vietnam, and Brazil through the development of demonstration services in Jeungpyeong-gun (Chungcheongbuk-do). Moreover, SUNDORI DRONEs are specially manufactured for military, surveillance, and firing purposes, and are used as mission drones in various industries. Domestically, we are conducting national R&D for air traffic control systems, weather observation drones, and military drones. Overseas, we have established an exclusive sales network in the Philippines in cooperation with the Philippine Ministry of Agriculture and Forestry and forestry and overseas sales network establishment projects in Mexico and Ecuador are also underway. In the future, SUNDORI DRONE plans to bring change to daily life step by step with drones. We look forward to what tomorrow holds in store for SUNDORI DRONE, which will connect the world with drones and open the future.

## P ICT Funding Project

- **Dedicated Institution** National Information Society Agency
- **Business Objective** Distribution and diffusion of smart villages
- **Business Description** Distribution and diffusion of smart villages

## P Company information

- **CEO** Cho Soonsik
- **Type of Business** Discovery and demonstration of smart village services
- **Year of Establishment** 2015. 3.
- **Website** www.sun-dori.net

## TIME LINE

