

# Innovation for Society





# “Innovation for Society”

The “Innovation for Society” project is an initiative undertaken by PTT Group, running from 2021 to 2023. The project’s primary goal is to advance the grassroots economy by providing support to farmers and communities to boost their income, reduce expenses, improve their production processes, and enhance the quality of their agricultural products. Another objective is to promote the development and use of local products, services, and community-based tourism to generate business opportunities for the community.







The project is being implemented in 45 areas across various provinces in the country. It comprises Smart Farming, Smart Marketing campaigns, developing local products for branding and packaging, and Community-Based Tourism initiatives.

The project also supports job creation through the “Restart Thailand” program. This program involves recruiting recent graduates to

work with the PTT Group and focus on local community development. By working closely with the community and the PTT Group, graduates can identify specific needs and come up with innovative ideas and techniques to tailor solutions for local farmers, resulting in sustainable and profitable outcomes for their hometowns.



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# The fundamental problems faced by farmers and communities

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The project brought together communities with a diverse range of farmers, including professionals, new-generation farmers, workers turned farmers, and farmers from vulnerable groups. However, each of them faces fundamental issues such as soil degradation, water management, energy management, and waste management.

They also encounter problems related to improving the quality and quantity of their products, addressing market challenges, developing the community, and fostering the next generation of farmers.



Although farmers and communities in the regions have different backgrounds, conditions, and potential, they share common issues. PTT Group's problem-solving strategies are tailored to alleviate these challenges in each community's local context.

The PTT Group leverages its knowledge, expertise, innovation, and technology to help farmers by connecting three main areas: Smart Farming, Smart Marketing, and Community-Based Tourism. This approach focuses on using networks, knowledge, innovation, technology, communication channels, and the PTT Group's expertise to solve economic challenges faced by communities.



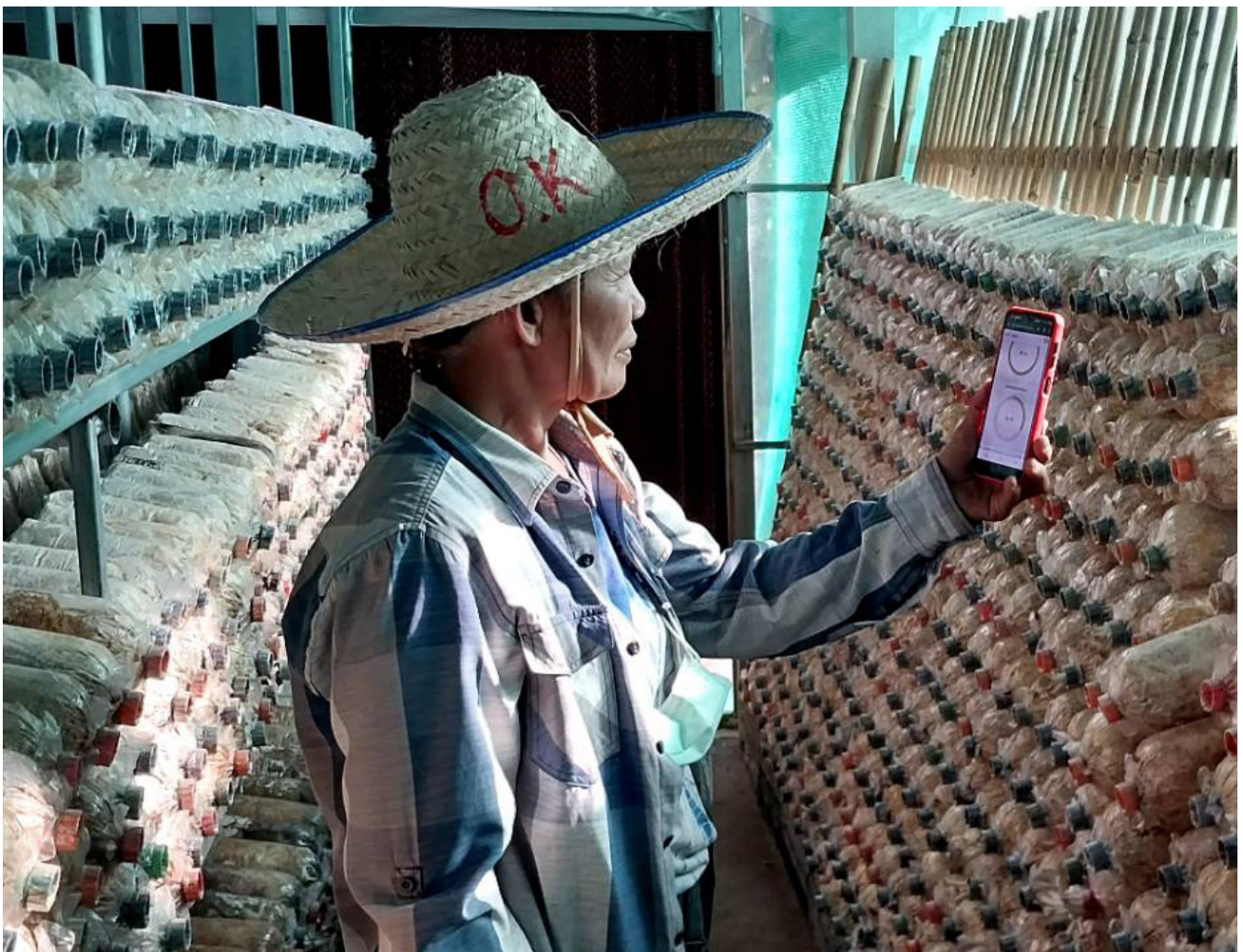


## Smart Farming

The PTT Group is actively promoting the adoption of smart farming practices among farmers. This involves utilizing technology and innovation to optimize agricultural processes, increase productivity, and improve resource management. By implementing smart farming techniques, farmers can make data-driven decisions that can lead to better crop yields and efficient resource management.

Smart farming is the utilization of technology to reduce manual labor, increase the quality and quantity of agricultural

production, and tailor practices to the specific context of the area. Various advanced technologies are employed in this project, including automatic and solar powered water pumps, IoT-based irrigation systems, biochar soil amendments, community-based charcoal kilns, biogas fermentation, agricultural drones, solar-powered drying domes, and cabinets. These technologies are designed to address issues such as water scarcity, soil degradation, energy costs, and labor, and ultimately enhance production efficiency.





## Smart Marketing

The success of agricultural products heavily relies on marketing. PTT Group provides support to farmers in expanding their reach to wider markets and obtaining better prices for their produce. By implementing marketing strategies that incorporate technology and data driven insights, farmers can improve their competitiveness in the market. In the realm of smart marketing, three key principles, known as the 3 Ps, are applied:

**Profit:** Profit entails business planning to analyze the potential of products and services within the community, identifying competitive advantages or selling points that attract sales. It involves developing income statement data to analyze the prospects of the business.



**Product:** Product marketing focuses on discovering and showcasing the unique qualities of products and the local community. Storytelling about the community can be used to enhance marketing opportunities, and achieving certification for standards and quality can be a big help. Additionally, it involves responding to customer needs.

**Platform:** Platform marketing involves leveraging digital technology to improve marketing capabilities and elevate the business's competitiveness in the market. This includes expanding marketing channels both offline and online.



## ***Community-Based Tourism***

Another important area of focus in generating income for communities is community-based tourism. PTT Group assists communities in developing tourism initiatives that showcase their unique culture, heritage, and natural resources. This not only generates income for the communities but also promotes sustainable tourism practices. The key to successful community-based tourism lies in discovering and presenting the community's identity. It is not just about generating revenue, but it also plays a crucial role in instilling a sense of pride in the community's way of life and identity.



## **Learning Values**

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### ***Smart Farming***

Farmers involved in this project have the opportunity to lower their production costs and daily living expenses by carefully observing, studying, and understanding the root causes of their expenses. They can then use appropriate methods and tools that are suitable for their specific operational context and available resources to address various issues without resorting to costly or complicated solutions. For instance:



- **Reducing Costs with Natural Energy:**

Farmers can reduce costs by using natural energy sources like solar power for agricultural equipment such as crop drying devices and tools.

- **Mitigating Weather-Related Issues:**

Greenhouse cultivation with IoT systems can control temperature and humidity, schedule irrigation, and reduce weather challenges via smartphones or tablets.

- **Time Savings with Agricultural Drones:**

Agricultural drones can be utilized for tasks such as watering, fertilizing, and pest control. These drones not only reduce various costs for farmers but can also become an additional source of income through drone piloting services.



By adopting these methods and tools, farmers can enhance their agricultural practices, reduce expenses, and improve their overall livelihoods while minimizing the environmental impact of their activities. In addition to reducing costs and expenses, innovations also help address environmental issues and improve degraded resources.

For example, raising chickens for eggs on fishponds to use chicken manure as fish food, or fermenting animal manure into biogas, are ways to transform agricultural waste and surplus materials into valuable assets. Another approach is to improve and rehabilitate soil conditions using organic substances such as producing organic fertilizer from leaf litter, crop residues, or animal manure. Additionally, the production of vermicomposting, biochar, or bio-charcoal can also be beneficial.



## Smart Marketing

With the concept of Smart Marketing, farmers and communities can create sustainable income and jobs while preserving their local culture and natural resources. This approach values local wisdom and uses it as a foundation for enhancing the community's potential. By embracing innovative technology, it helps farmers with marketing and distribution while preserving their values.

To cater to the specific needs of different consumer groups, it is important to understand and get to know them. By adopting this approach, farmers and communities can leverage modern technology to enhance their marketing strategies and distribution channels while keeping their local wisdom and values intact. Smart Marketing empowers farmers and communities to create a better future for themselves and their environment.



## Community-Based Tourism

Community-based tourism is a sustainable approach that can help revive and develop a community's economy. It is a unique form of marketing that focuses on storytelling, history, and the origins of the area. Community-based tourism connects these narratives to tourism activities, products, and services within the community, creating a more authentic and meaningful experience for visitors.







## Sustainable Communities

The project aims to support a sustainable future. The results and impacts of the project are in line with the Sustainable Development Goals (SDGs) of the United Nations, both directly and indirectly, which can be divided into 5 dimensions as follows:

**People:** The project plays an important role in job creation, which helps develop careers within the community and distributes income to support the social system foundation. Additionally, the project focuses on resource conservation, minimizing the use of harmful chemicals, and preserving the environment and ecology. All of these factors contribute to the overall well-being of people in the community.

**Prosperity:** The project helps reduce communities' dependence on fossil fuels and creates opportunities for innovation in clean energy. Sustainable agriculture creates economic value, preserves the environment, and raises the skills and potential of youth.

It also promotes local suppliers and the use of technology in the production process. The project strengthens the community and reduces migration while encouraging a good environment for living and making the area more resilient to natural disasters.

### Direct Action:



### Indirect Action:





**Planet:** The project has inspired and empowered communities to conserve and care for water resources. By promoting ethical consumption, responsible production processes, and a circular economy, the project reduces environmental impact and encourages the efficient use of resources. It aims to improve the quality of life for people in the community while maintaining the soil and ecosystems' quality and restoring degraded environments. Through community action, the project supports ecosystem and biodiversity conservation and raises funds and resources from the sector.

**Peace:** Project development allows communities to participate in equal and fair access to local resources, which in turn creates job opportunities, reduces conflicts, and promotes sustainable careers. At the same time, community groups that emphasize participation promote responsibility, transparency, and good governance, leading to stronger and more self-sufficient communities. Exploitation within the community is mitigated through these efforts.

**Partnership:** The project aims to promote community participation in sharing financial resources, knowledge, skills, and environmentally friendly technology, in order to enhance the community's competitiveness and align with the country's development policy and direction.





The project aims to contribute to a sustainable future by addressing various challenges in multiple dimensions through aligning with these SDGs. However, achieving sustainable success requires a few key principles and factors, including collaborative thinking, collaborative action, and collaborative learning. This means active participation from the community and creating collaborations.

Farmers have a unique and in-depth understanding of the challenges they face. Addressing these issues effectively

requires the cooperation and expertise of multiple parties, and building strong collaborative networks is key to achieving this goal. By working together, farmers can not only strengthen themselves but also their communities, enabling effective communication, coordination, and access to valuable resources. This approach is essential for ongoing development and progress, and it's clear that collaborative thinking and action are crucial components of sustainable communities.





# Towards Change

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## *The personal benefits of applying innovation in agriculture include:*

**Time Savings:** Farmers can save time in their work, allowing them to use their free time for activities according to their needs.

**Increased Independence:** Innovations in agriculture can lead to greater self-sufficiency, enabling farmers to have more control over their lives.

**Family Proximity:** Farmers can work while staying close to their families, promoting a better work-life balance.

**Job Creation:** Innovation in agriculture can create jobs and income opportunities for people with disabilities, the elderly, or those who are chronically ill, allowing them to support themselves and their families.

**Accessible Farming:** Even inexperienced or small-scale farmers can pursue agriculture a profession by utilizing innovation.

**Health Benefits:** Agriculture can also have therapeutic effects, benefiting the physical and mental health of those who have experienced stress or chronic illness while working in urban areas.







## *The societal and environmental results of innovation in agriculture include:*

### **Improved Community Relationships:**

Farmers develop better relationships with their surrounding communities as they prioritize agricultural practices that consider the impact on their fellow community members and the environment.

**Enhanced Environment:** By prioritizing agriculture that considers environmental factors, a positive impact is made on the environment, leading to its improvement.

### **Mindset Change:**

Farmers can enhance their management skills by learning, experimenting, and sharing experiences within their networks, leading to increased self-confidence.







## Lesson Learnt

*Farmers face three fundamental challenges that require attention.*

**Climate Change Impact:** The changing climate has a significant impact on agricultural production and can cause unpredictable weather patterns, resulting in low crop yields. To mitigate these effects, farmers need to adapt and find innovative solutions.

**Lack of Production Resources and Knowledge:** Many farmers face challenges related to the scarcity of production resources and a lack of knowledge in effective management. This can hinder their ability to optimize their agricultural practices and yields.

**Succession and Knowledge Transfer:** The transfer of knowledge and skills to the next generation is crucial for the sustainability of farming communities. However, the shortage of younger generations willing to carry on farming traditions and inherit community wisdom is a pressing issue. To address these interconnected issues, it is essential to collaborate with various stakeholders, including farmers themselves, local communities, and relevant organizations.



The following actions can be taken:

**Reducing Impact:** Implement conservation efforts to minimize environmental impact. This includes preserving natural resources, ecosystems, and biodiversity, using clean energy, efficiently utilizing resources, managing waste, and promoting resource recycling.

**Adaptation:** Embrace new technologies, innovations, and information to adapt circumstances. Develop public infrastructure and utilities and establish collaborative networks to enhance resilience.

**Creating Value:** Focus on sustainable product and service development, adhere to product standards, innovate new business models, and embrace digital marketing strategies to create value.

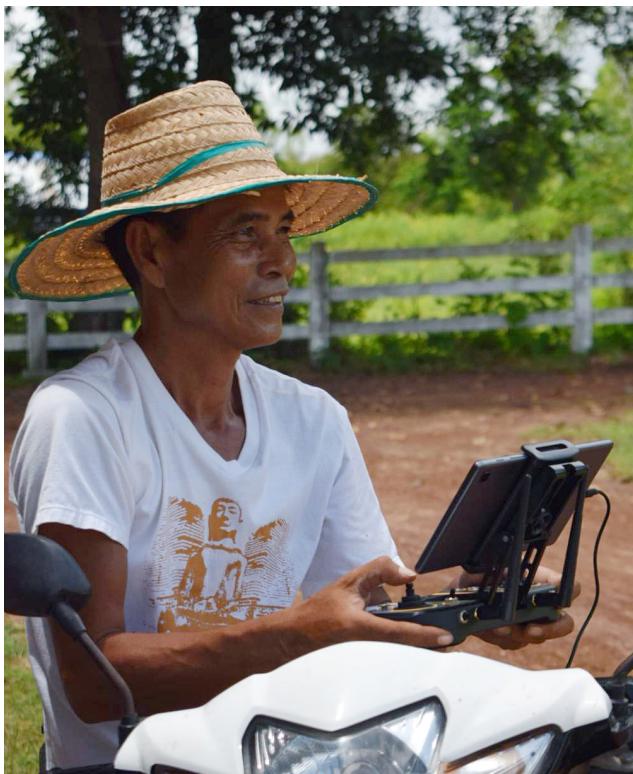
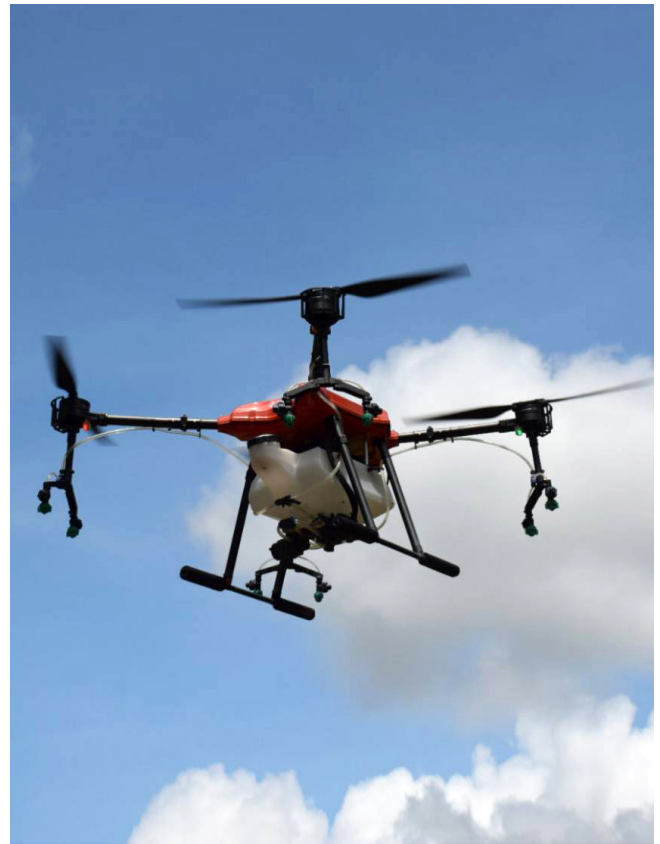
To address the issue of a lack of new generations entering agriculture, it is crucial to have coordination and cooperation among different age groups within the community. The 1st generation can mentor and pass down knowledge, the 2nd generation can play a central role in management, and the 3rd generation can bridge the traditional values of the community with the demands of the modern world. This way, the community's heritage can be connected with contemporary contexts.





In order to create a positive and long-lasting impact in a community, it's important to focus on self-development, participation, and establishing transparent and collaborative group management mechanisms. Sustainability goes beyond merely tackling problems; it also involves empowering individuals and fostering transparent and cooperative group dynamics.

The factors contributing to success and sustainability may vary depending on the specific conditions, limitations, and opportunities of each area or community. Therefore, local context and needs play a significant role in determining the path to lasting change and development.



In essence, sustainable change involves fostering active participation, empowering individuals within the community, and creating transparent and cooperative group dynamics. All of this should be done while adapting to the unique circumstances and opportunities of the community in question.