

NECTEC PUTS EMPHASIS ON RESEARCH AND DEVELOPMENT >> 4B

Nectec puts emphasis on R&D

SEVEN FOCUS GROUPS TO BENEFIT FROM BREAKTHROUGH PROJECTS

JIRAPAN BOONNOON
THE NATION

WITH THE aim of improving the quality of life of Thai people and developing research and development to meet the needs of the country, Nectec is focusing on utilising R&D as well as information technology to support seven focus groups.

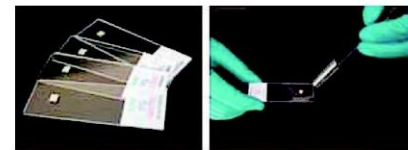
Sarun Sumriddetchkajorn, executive director of National Electronics and Computer Technology Center (Nectec), said the agency has a three-year plan – from 2014-16 – to utilise R&D projects for supporting seven key sectors – food and agriculture, healthcare and public health, manufacturing, service, rural and community, environment and energy, as well as security. The agency now has more than 10 R&D units, and 28 R&D laboratories, which are covering various core technologies such as image processing, power electronics, cybersecurity and data analytic to apply and support the seven sectors.

With the food and agricultural sector, the agency has developed the “what2grow” project, which offers agricultural zoning solutions that gather and analyse information on soil, weather and logistics to provide agricultural zoning so as to improve the quality of life of Thai farmers. As result, farmers will be able to have alternative choices to plant rice and other crops such as sugar cane at their farm. They will derive much more benefit from their farms after utilising the agricultural zoning system.

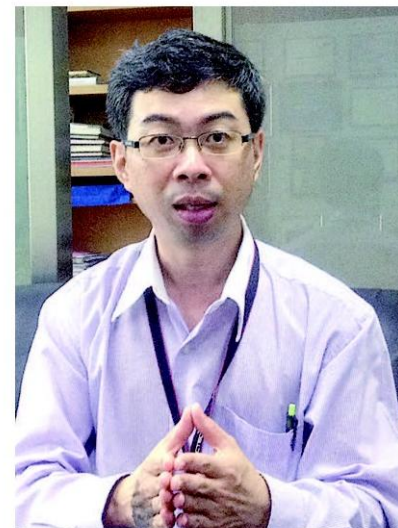
The agency this year conducted a “what2grow” prototype at Kamphaeng Phet province and next year the agency will provide pilot projects to 16 other provinces. The agency, moreover, also provides Thailand agricultural mobile information system (TAMIS), an information system that integrates the use of smartphone with Internet connection, cloud computing and smart card. An officer uses TAMIS to register data related to Thai farmers via a smart card and collects the farm location based on Google Maps.

The TAMIS is designed with a dynamic database and tools for creating forms with flexibility and it complies with various stakeholders’ requirement. It also can connect and integrate with the “what2grow” project. As result, it would be able to improve the quality of agricultural products. The TAMIS has developed prototypes as a pilot project at Khon Khaen and Pathumthani provinces before expanding to other areas in the next step.

“The what2grow and TAMIS projects will allow farmers and the government to have accurate information about the plantation; the farmers will also get the knowledge to



Surface Enhance Raman Scattering



Sarun Sumriddetchkajorn, executive director of National Electronics and Computer Technology Center

increase farm productivity,” said Sarun.

For healthcare and public health, the agency is developing a healthcare information management system that will integrate 600 government hospitals in the metropolitan areas and upcountry. This will enable the government to create policy that will help and manage database in order to support people in the communities and nationwide.

With the manufacturing and service industries, the agency is partnering state enterprises and the

Thailand Agriculture Mobile Information System (TAMIS)



The Thailand agricultural mobile information system (TAMIS) is an information system that integrates the use of smart phone with Internet connection, cloud computing and smart card. An officer uses TAMIS to register data related to Thai farmers via a smart card and finds the farm location based on Google Maps.

private sector to develop software and solutions to support small and medium enterprises (SMEs) and state enterprises such as by developing electric vehicles, electric motorcycles and charging stations for the electric vehicle project.

"We will develop new information technology, R&D and will pass on the technology to the private sector, which can transfer the technology and knowledge to business partners so that they will be able to create new products in the next step," said the executive director.

For the rural and community, the agency is joining hands with government partners to develop software as a tool to support students with disability so as to improve their quality of life. The agency is also developing and providing 1,000 hearing-aid devices for people with disability. Moreover, the agency also provides digital society in rural areas in order to reduce inequality of the digital device and society. The agency will also utilise the solar cell system and provide knowledge to

support people located in rural areas such as Mae Sot district in Tak province.

"We have a mechanism that is able to produce prototypes and join hands with partners to create a sustainable project that can improve the quality of life of Thai people as a whole," said Sarun.

For environment and energy, the agency is working with state enterprise Egat to develop a dam monitoring system. The first step is to devise a system to monitor the Rajjaprabha Dam, with all 13 dams being covered by next year.

Lastly, for the security sector, the agency has been successful in developing Surface Enhance Raman Scattering for drug and bomb detection.

He said that business partners of Nectec who are successful in R&D might be given the licensing to develop R&D prototypes for commercial production. Next year the agency will pump in about Bt100 million for research and development.



Electric motorcycle by Nectec