



Making science
work for you

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DOST pitches locally-developed innovative products to investors

By Alan Mauro V. Marfal
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Homegrown innovators recently staged innovative products to prospective investors even as the Department of Science and Technology (DOST) gave the biggest push for this convergence.

Said convergence, dubbed "Leaders in Innovation Fellowship (LIF) Demo Day," was held recently at the Asian Institute of Management (AIM) in Makati City by the Royal Academy of Engineering and AIM, with support from DOST.

The LIF featured 15 selected technology products to exhibit and present their ideas, and to locate possible business investors and customers. Prior to that, these innovators have undergone courses for 10 months at AIM and in the United Kingdom to hone their entrepreneurial skill set by teaching them how to develop ideal business plan.

DOST Undersecretary Rowena L. Guevara said that the science department has spearheaded various programs to encourage and empower many Filipinos in terms of conducting researches, as well as product development, that could offer appropriate and timely solutions to country's pressing problems.

She asked the public and stakeholders to look closely at these innovative products and assess how these could help in improving their respective products and services.



Dr. Rowena Cristina L. Guevara, undersecretary of Department of Science and Technology (DOST) for Research and Development, gives her remarks during the Leaders in Innovation Fellowship Demo Day recently at the Asian Institute of Management Conference Room in Makati City. Dr. Guevara was proud to say that there are many Filipinos who are naturally innovative and creative, and the government and private sectors just have to empower them. She asked the public and stakeholders to look closely at these innovative products and assess how these could help in improving their respective products and services. **(Photo from AIM Facebook Page)**

Guevara stated that the agency spends P 3 to 5 billion every year to fuel research and development. The last two years, she said, made them realize that the technologies they are working on are readily available for technology transfer, inspiring them to spend more on it.

"We go as far as formulating guidelines we call 'Fairness Opinion Report' which is necessary for any government-funded R&D so they can transfer it to their private partners. We realize that we cannot do it alone; we need partners

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Filipino astrophysicist Dr. Rogel Mari Sese.

Prop up space education, Filipino scientist tells in DOST forum

The Philippines needs to focus on space education, according to eminent Filipino astrophysicist Dr. Rogel Mari Sese, project leader of the National Space Development Program and focal person for the Philippine Space Science Education Program under the Department of Science and Technology (DOST).

An aspiring astronaut at the age of five, Sese shared his knowledge and thoughts on space science during a forum organized by DOST's Science Education Institute (SEI). The forum, dubbed as TEC Talk: Space Science, was held at the

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like Royal Academy of Engineering and AIM to make these things happen," she said.

In her remarks, Guevara was proud to announce that the ranking of the Philippines, when it comes to innovation, has climbed to number 48 from 11 in 2009.

Meanwhile, DOST-Philippine Council for Industry, Energy and Emerging Technology Research and Development Executive Director Carlos Primo David agreed with Usec Guevara about "DOST's ultimate goal of making S&T work for the country." He said that the DOST's goal is to reach beneficiaries and contribute to the nation's economy through the growth of technology-based processing.

He added that since last year the DOST has developed a system called 6Ps which stands for products, patterns, process, publications, people and powering.

David also expressed satisfaction over DOST researchers' transformation in terms of teaching skills. He asked for the continued support of DOST's partners, such as the Royal Academy of Engineering, AIM, and



Developers of JOLT, a power hub with dual-mode chargers and solar panels that can be integrated into a home energy storage, communications and security system, answer the inquiry of one of the attendees of Leaders in Innovation Fellowship Demo Day last August 05 at Asian Institute of Management Conference Room in Makati City. **(Photo from AIM Facebook Page)**

business sectors; and congratulated their project leaders for a job well done.

Moreover, he believes that technology in the Philippines is doing great. "Sa siyensya, may pagasa (There is hope in science). We are shaping future leaders of Asia," he ended.

Some of the products and services presented during the Demo day were DOST's Food Innovation Center, AgMULA RTA Rice Transplanter Attachment for Hand Tractors, Jolt: A Home Energy System, Smart System, Relief Vent, Pinpoint, Heart Smart, Visser, and Guaviderm.

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UP Diliman-National Institute of Physics (UPD-NIP).

Space science has its applications in agriculture and environment, meteorology, disaster risk reduction, national security navigation, communications, and exploration and discovery. However, various challenges have led to the country's failure to mount a space program.

In his talk titled "Reaching for the Stars: How Do We Start the Journey?" Sese emphasized the need to prop up space education in the Philippines. He also cited some of the challenges in mounting a space program in the country, namely, lack of public awareness about space science, lack of exposure in the basic educational system, space science not being a conventional choice of study for students, lack of universities offering space-related courses, and lack of financial support for students.

Moreover, another eminent Filipino physicist Dr. Ian Vega said "knowledge of space science gives us a better sense of the world."

He added that, "we deserve a science policy that is aware that our greatest resource is our people."

Vega, head of the gravity group of UPD-NIP's theoretical physics group, added that knowledge of space science leads to progress.

To address the challenges, Sese suggested that plans should be in place to encourage students to pursue STEM careers, push for a



Dr. Ian Vega, gravity group head of UPD-NIP's theoretical physics group

greater integration of space science into the basic education curriculum, get more universities to offer space-related degree programs, train teachers and educators in the field, and develop culturally appropriate educational materials on space science in English and local languages.

Strengthening outreach activities to increase public awareness of space science and

establishing strong regional collaborations and linkages are also important, Sese emphasized.

Currently, Sese and the National Space Development Program team are engaged in talks with both the public and private sectors for the development of space industries, possible investment opportunities, and potential collaborations, among others.

Meanwhile, the Philippine Space Science Education Program has various activities such as telescope viewing and the National Water Bottle Rocket Competition where winners get to compete internationally.

"Even though we are lagging behind, we are doing what we can," Sese remarked, "so you guys can benefit from it."

Aside from Sese and Vega, TEC Talk was also attended by Dr. Jose Perico Esguerra, Professor II and coordinator of UPD-NIP's theoretical physics group; and Dr. Apollo Arquiza, a DOST Balik Scientist who worked at the International Space Station, studying foods for space habitats. The forum was attended by DOST scholars from UP Diliman, Ateneo de Manila University, and Rizal Technological University.

Part of the National Science and Technology Week celebration, TEC Talk was a TED Talks type of forum where renowned Filipino scientists shared their experiences to entice DOST scholars to work in space science and be part of the country's efforts for national progress.



DOST XI preps up Davao's Lumad children for school

Students were eager to pose for the camera with their new school supplies. (Photo courtesy of DOST-XI)

ABOUT US

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Days before classes officially started this school year, the Department of Science and Technology Region XI went to Sitio Upian Elementary School in Davao City's Marilog District to distribute school supplies and hygiene kits to the Lumad students.

"Kulang ang isang araw para dito. Gusto man namin na lahat kami makasama pero walang sasakyan (One day is not enough for this. We wanted that all of us could be here but there's no vehicle)," said Eduardo P. Tesorero, Assistant Regional Director for Financial Administrative Services Division, who spoke on behalf of 16 DOST XI employees who helped in the outreach program.

The DOST XI staff organized games and fun activities for the children. They also taught them how to wash their hands properly. At the end of the program, they distributed lunch packs to the hungry but happy children.

"Nalipay kami sa inyong gihatag (We are happy with what you have given us)," said Jerry Sulutan, a Grade 5 student.

His 23-year old cousin who accompanied him, Cheryl Langhi, added "Hinaot nga makabalik mo kay may nalang malipay ang mga bata (I am hoping that you could come back so that the children would be happy)"

Likewise, the teachers of the Sitio Upian Elementary School who were present in the activity also expressed their gratitude.

"In my three years of teaching diri nga skwelahan, lisod nga magtudlo sa ilaha nga wala'y sulod ilang tiyan. 9 or 10 palang sa buntag, murag nadaot na ilang mga dagway, (In my three years of teaching in this school, it is difficult to teach students with their empty stomachs. As early as 9 or 10 in the morning, they already have wry and dull faces)" said Elmer Garcia, a Grade 4 teacher.

"That's why kanang gipangbuhat ninyo karon, dako ni siya nga tabang (What you have done today is already a big help), he added.

Every year, DOST XI visits Marilog District to monitor their projects. Aside from monitoring, the department also conducts outreach programs for the Lumad community.

Brighter health care with solar power

Solar power is brightening up the health care delivery in MIMAROPA.

After some 750-watt solar home systems (SHS) were put in place in rural health facilities in barangays Bantay and Maniwaya in Boac and Sta. Cruz respectively, health workers and concerned local government officials are now more confident that their health care services will go the extra mile.

The solar home systems were installed through the collaboration of the departments of science and health in MIMAROPA, in partnership with the local government of Marinduque.

After the systems' installation, the rural health facilities now have power for lighting, ventilation, and cold storage of vaccines. The power also enables the facilities to be operational on a 24-hr basis.

The basic system consists of solar panel, charge controller, battery and inverter installed in a way that could get the maximum energy from sunlight.

Now with a reliable power supply, the health facilities can also already fully use the RxBox for checkups to safeguard patients' health, especially those of expectant mothers.

Like most medical devices, the RxBox runs on electricity. However, this telehealth technology was not fully maximized because of the struggle to connect to the grid and maintain a reliable power supply.

In another development, the local government units of Gasan and Boac proposed for the roll out of solar home system technology in three of the most isolated areas in Marinduque-- barangays Pinggan (Gasan), Tumagabok, and Binunga (Boac). A birthing facility in Brgy Binuga soon will also have a solar home system to address the dire need for consistent power supply. This paves way to an improved and sustainable healthcare access



Photos show (clockwise) Rural Health Unit in Brgy. Maniwaya, Sta Cruz, Marinduque is now equipped with a 750-watt Solar Home System. The SHS set-up inside RHU-Bantay with 5 (6sm) batteries, sine wave inverter, and solar controllers. PSTD Bernardo T. Caringal and Mr. Renato Jogno oriented and demonstrated to Dr. Rowena Grace Garcia the newly installed Solar Home System in RHU-Bantay.

even to farthest communities in the province.

A 750-watt Solar Home System set-up inside RHU-Bantay with 5 (6sm) batteries, sine wave inverter, and solar controllers

The establishment of solar home systems is the result of the advocacy of the Department of Science and Technology-MIMAROPA (DOST-MIMAROPA) Regional Director Ma. Josefina P. Abilay to provide meaningful healthcare improvement in rural communities across the region through innovative

solutions. DOST-MIMAROPA's persistent efforts convinced the Department of Health-MIMAROPA (DOH-MIMAROPA) and local government units in Marinduque to move first in electrification of health facilities in Marinduque using the solar home system.

The project is part of DOST's initiatives in empowering the countryside with the right technology to solve the everyday problems of the Filipinos.



Science and Song. Promoting the 2016 National Science and Technology Week (NSTW) through a mini-concert was one of the new things that happened for this year's biggest S&T event. Through the partnership of the Department of Science and Technology (DOST) and with Enchanted Kingdom, the BOB Band staged a mini-concert at the Enchanted Kingdom Bandstand on July 16 and 23. In between songs and the rhythm of rain, DOST and the EK through the BOB Band infused fun and knowledge about the 2016 NSTW. **(By Alexandria Dennise San Juan, S&T Media Service, DOST-STII)**