

AAIG 2021 SUMMIT WEBINAR 2 TRANSCRIPT – SEC. RAMON LOPEZ

Keynote Speech Of Secretary Ramon M. Lopez, National Multisectoral Summit For Educational Transformation: Aaig 2021

Ladies and gentlemen, a pleasant morning to the organizers and participants of this webinar series!

I just a few slides pero na-inspire ako doon sa talk ni Dr. Fenix, actually totoo po iyon, internet connectivity is really very important. In fact, I would consider it even as a basic human right nowadays.

It's access to information that would really be a great equalizer in our society. Imagine, anybody, as long connected even at the far-flung areas in our country can have the same access to information as those from the city. They're expose to designs, information, and many things in the internet. Worldwide info will accessible to them, that alone is really important.

I will digress a bit, that is the reason why recently after two decades of closure of the satellite service industry, President Rodrigo Roa Duterte issued another Executive Order (EO) that basically opens up satellite service. The satellite services is one service that can open up the access to interconnectivity and not depending on the tempos.

So, once we have that and of course, in addition to all the projects and programs of DICT, mapapadali na 'yung interconnectivity, lalo na sa malalayong lugar, access to education and information. And to me, again, I must state that is really now a basic human right.

Let me begin my brief presentation with the status of the Philippine manufacturing sector in terms of its readiness to transition to Industry 4.0.

The Philippine's manufacturing sector still has yet to maximized its level of technology utilization. To note some findings, it was recorded that 44% of companies lack maintenance systems and act only when problems arise-; 31% have shopfloor status pushed via scheduled report; 35% control their data using paper-based approaches and another 35% use Excel sheets but don't integrate them with manufacturing systems; 53% control and track manufacturing activities through a manual, paper-based system, and 58% have no manufacturing equipment connected to the network.

However, looking at the openness of the Philippine manufacturing enterprises to industry 4.0, in terms of familiarity by different levels of enterprises, 77% of micro level enterprises are familiar with industry 4.0 while 67% of small and medium enterprises are familiar and lastly 83% of large enterprises are familiar. The primary consideration for shifting to industry 4.0 is if it can improve productivity and competitiveness. This is something we really have to invest one.

Innovation and technology advancement; as well as cost and investment and funding share second place with 13% each. Meanwhile, the primary barriers to industry 4.0 are lack of financial capability and unfamiliarity.

Industry 4.0 has already changed the employment landscape of the Philippines with AI, data analytics, and AI related jobs rising in prominence. The top 5 emerging jobs in the Philippines, in order, are robotics engineer, cybersecurity specialist, customer success specialist, data scientist, and sales development representative.

Due to the changing landscape, there is a need to upskill and reskill our young given that the Philippines has a relatively young population with a median age of 25. We need to develop a highly educated workforce for the future. There are over 790,000 annual college graduates in the country and over 200,000 of these graduates are in the engineering, information technology, and medical-related fields.

This is the often-cited factor while many of the foreign investors now located in the country are here. Parati po nilang sina-cite ito, in other countries they see the lack of all these critical talents and human resources.

That is why one advantage the Philippines has and the reason why we continue to attract investors. Of course, we have to do a lot more than this, that is also the why we have a lot of liberalization moves in terms of economic reforms, like the Retail Trade law, the Public Service Act revisions, the CREATE Act that we acted and was recently issued by the President last February and has brought down income tax rates and rationalized investment incentives.

So, many reforms are being done to attract investments. But definitely, 'yung manpower resources and talent pool that we have is a clear attraction for foreign investors.

The pandemic situation has resulted in the accelerated adoption of digital tools and automation of tasks in all levels of our lives. 55.1% of enterprises are expected to modify their value chain by 2025, and 34.5% are expected to expand their workforce due to automation. Likewise, the technologies most likely to be adopted by 2025 are cloud computing, big data analytics, Internet of Things (IoT), encryption and cyber-security, and artificial intelligence. The two most planned adaptations in response to the pandemic are the acceleration of digitalization of work processes at 84%, followed by providing more opportunities to work remotely at 83%.

Amid Industry 4.0 and global developments, our new innovation-centered and science- and technology-based industrial policy, Inclusive Innovation Industrial Strategy, i3S, aims to grow innovative and globally competitive manufacturing, agriculture, services industries. Kasama na po diyan ang micro, small and medium enterprises (MSMEs), whenever we talk of MSMEs, we are not talking of the micro being only a micro, we are trying always to

upgrade them and increase their innovativeness being globally competitive. These are training we provide to them, we want them move up that corporate ladder.

Of course, we want to strengthen their linkages into domestic and global value chains. So, they supply us and we supply to the other companies in other countries. Under i3S, the government coordinates policies and provide support measures for industries to take advantage of market opportunities, overcome challenges, and act as an engine for sustained and inclusive growth, as well as job creation and poverty reduction.

Furthermore, our Inclusive Filipinnovation and Entrepreneurship Roadmap aims to increase the country's ability to innovate. With innovation at the core of the country's strategic industry development policies and programs, we are working towards establishing an inclusive innovation and entrepreneurship ecosystem in the country. Our ultimate aim is for the country to be constituted by connected and creative communities in various regions of the country.

In partnership with DOST and other agencies, we are building Regional Inclusive Innovation Centers (RIICs) in different parts of the country. The RIIC consist of a network of innovation agents that collaborate in order to commercialize market-oriented research towards competitiveness in the regions. It is a government initiative in cooperation with the industry and the academe, which aims to generate better employment opportunities, more entrepreneurial activities, and sustainable economic prosperity in the country's regions.

The RIIC initiative adopts an ecosystem-wide approach to bridge the gaps in the country's innovation and entrepreneurship ecosystem. This involves mapping ecosystem agents and the R&D competencies of higher education institutions.

We have four pilot RIICs to date: Legazpi in Region 5; Cebu in Region 7; Cagayan de Oro in Region 9; and Davao in Region 11. And another four are currently being established in Cagayan Valley, Central Luzon, Calabarzon, and Zamboanga. To sustain the initiative per RIIC region, a Core Group of regional stakeholders from government, academe, and industry is formed to drive efforts forward. The RIICs are also receiving active support from these regions' business groups and MSMEs, local SUCs, and the regional offices of national agencies.

Some of the collaborations in the RIICs are expressed through government-academe-industry partnerships, business matching, mentorships, access to shared service facilities as well as R&D laboratories, co-working spaces, fabrication laboratories, startup incubation and acceleration centers.

Currently, over 60 MSMEs across the RIICs are substantively engaged with other local partners, covering initiatives such as research partnerships with a local state university or college, technology deployment in the market, and product development. Some of these

engagements have translated into formal proposals for funding from DOST, others qualified for local grants-in-aid, and a number are being funded by the firms themselves.

Again, to clarify we are greeted to link now with research institutions meet industry. Ibig sabihin the innovation culture is passed on to the industry and any product development or innovation that the industry would like to do or industry problems that they would like to be solved, they now partner with the school that will give them the framework, R&D, and all that.

So, it is what I referred to as research-based innovations. Now, consider this, the other way naman is that even the research being done by academic institutions are those demanded by the industry, it now becomes market-based research studies.

Hindi lang research for research purposes, kung hindi, these are really the ones needed by the industry. That's the reason why this is a really beautiful approach, in terms of really having a symbiotic relationship between the academe institution and industry.

Moving to DTI's Industry 4.0 Approach is to support manufacturing firms from end-to-end—from awareness to adoption. DTI provides support throughout the journey of Industry 4.0 transformation of manufacturing enterprises covering all facets of production: skills, financial support, and technology expertise.

Industry 4.0 Workshops, meanwhile, gather C-level company executives of leading manufacturing firms in the Philippines to introduce Industry 4.0 concepts and technologies and discuss how these can be leveraged to future-proof their factories.

To date, we have conducted Industry 4.0 workshops to more than 200 C-level Executives in the automotive, electronics, aerospace, chemicals, food manufacturing, and the construction materials sectors.

DTI has partnered with Siemens, the Asian Development Bank, and the World Economic Forum (WEF) to scale up the adoption of Smart Industry Readiness Index (SIRI) as a digital maturity assessment framework to assess the Industry 4.0-readiness of Philippine manufacturing companies, including MSMEs.

SIRI, developed by the Singapore Economic Development Board (EDB), is a suite of frameworks and tools to help manufacturers – regardless of size and industry – start, scale, and sustain their Industry 4.0 transformation.

Through SIRI, manufacturers will be equipped with the right insights to better navigate their Industry 4.0 journey, namely:

1. Assessment of the Industry 4.0-readiness of the company's production dimensions;
2. Benchmarking of the company's current performance compared to its local and international peers in the industry which have also taken the SIRI Assessment;

3. Determination of the prioritized areas for improvement based on their impact, viability, and alignment to the company's overall growth strategies.

Through the implementation of the Global SIRI Initiative in the Philippines, we are continuing to pilot the adoption of SIRI in select companies across industries with the goal of attracting more companies to be interested and be familiar with SIRI as well.

Consistent with our i3S (Inclusive Innovation Industrial) Strategy, we are implementing the Philippine Skills Framework (PSF) Initiative, which is an inter-agency effort to build the skills and competencies of our human capital and better prepare our country's workforce for the future economy. It involves the development of sector-specific skills frameworks that will guide the country's workers in enhancing their skills for particular job roles.

This will provide relevant sectoral information, including its employment landscape; the various occupations/job roles, which describe the skills requirement, work context, and expected profile of the worker performing the occupation/job role; the skills description, which defines the performance expectations from each skill; the career pathways, or how these occupations/job roles in the sector are structured progressively; and possible training programs, which link the skills identified under particular occupations/job roles to programs available.

Through the PSF, employers will be able to identify the skills and competencies a potential employee must have to be able to effectively fulfill a job role. Companies can also use the framework to design progressive human resource management and talent development plans for their employees.

For their part, job-seekers will be able to define ways forward or upward in a particular industry by specifying the skills and competencies that he or she would need to acquire in order to advance in his or her chosen career path. Furthermore, educational and training institutions can use the skills framework to revise existing curricula or design new courses that would capacitate workers with the competencies demanded by industry currently and in the future.

Under our PSF Initiative, we are prioritizing the following sectors: construction, creatives, food (agriculture and fishery); health and wellness; IT-BPM; logistics and supply chain; manufacturing; and tourism.

DTI, in partnership with the Logistics Services Philippines (LSPH) Associations, has launched the first-ever PSF – the PSF for the Supply Chain and Logistics sector – which has been prepared through the collaboration between DTI, PTTC, TESDA, PRC and our stakeholders from the local supply chain and logistics industry, with the assistance of consultants from the Singapore Institute of Materials Management, Accelebator, and Thames International Business School.

Our intention is for the various PSFs to be integrated and harmonized with their corresponding Industry Roadmaps, which have been guiding our industry development initiatives under our Manufacturing Resurgence Program.

On Digital Economy Initiatives, some other DTI initiatives for capacity building towards the digital economy include:

ASEAN SME Academy – a one-stop multi-platform online learning and information resource which aims to provide training and mentorship to enhance ASEAN SMEs' capabilities to grow and compete regionally and internationally.

CTRL + BIZ: Reboot Now! – a series of FREE webinars that we have been doing since the start of the pandemic, so that we can digitally transform a lot of our MSMEs. Those who did not even have their emails or Facebook, Instagram connections, and all that. We wanted them to continue their marketing part and of course, their research and development part by allowing and teaching them how to digitalize.

Tech Tools for MSMEs during COVID19 – a Google site developed by DTI to provide information to MSMEs on the different technology tools, applications, platforms and resources available in coping with the challenges of the community quarantine.

Trabaho and Negosyo Skills Pathway –For this project, the DTI E-commerce group will be spearheading the launching of Trabaho Skills Pathway which compose of tracks on entrepreneurial skills for online enterprises and digital skills pathway for MSMEs, as well as tracks on Pivot and Embrace Technology (PET), consisting of workshop series that aims to cater to those who are seeking remote employment or wish to adopt alternative careers.

We also partnered with many institutions with this one, in fact, dito ka-partner natin ang Informatics, alumnus din ng UST po iyan.

AI technologies can unlock 1 trillion USD to Southeast Asia's GDP; 92 billion of which goes to the Philippines GDP. AI technology can be used in a wide range of fields and industries. These include but are not limited to: precision farming, knowing what to farm, where to farm, what kind of crop, where AI can be used to forecast supply, demand, as well as the weather or autonomous vehicles, which can make use of AI in order to further develop autonomous driving systems or predictive maintenance; smart manufacturing, making use of AI in the Internet of Things (IoT), intelligent sensors, automation, and many more that are connecting many of the machines. AI can also be used to make AI-powered customer assistants, AI-powered human agents, and predictive call routing.

Looking at the global state of AI as of 2020, the most commonly adopted uses for AI revolves around product innovation, optimization of service operations and customer service, risk modelling, and energy and output optimization.

To this end, DTI, in coordination with other concerned national government agencies and in consultation with key stakeholders from industry and the academe, launched the National Artificial Intelligence (AI) Strategy Roadmap to guide the adoption of AI in the country and its utilization in the agribusiness, manufacturing, and services industries.

The country's National AI Roadmap will position the Philippines as a regional hub for big data processing and analytics building on its large footprint in the global IT and BPM sectors. It also envisions AI to be a catalyst of digitalization among our MSMEs. Take note, kasama po ang ating MSMEs whenever we talk about AI.

A key strategic imperative of the Roadmap is to accelerate innovation with AI by establishing a National Center for AI Research (N-CAIR). The NCAIR will serve as a hub where multinational companies, even small companies, can explore various R&D projects with the Philippine government, its researchers, and/or its linkages with higher educational institutions (HEIs) and research and development institutions (RDIs).

Just like 'yung na kuwento po natin kanina sa regional inclusive innovation centers, symbiotic relationship between industries and the research centers, this is the same relationship with the NCAIR and industry. Just like any national research center, N-CAIR will serve as an incubator for collaboration between universities, industries, startups, and other government research units.

NCAIR aims to offer consultancy services, AI tech products, and data literacy training, with focus on manufacturing, services, construction, finance/banking, healthcare, and/or agriculture industries. Which is envisioned to be a technology provider and research leader in areas that include, among others, precision agriculture, smart city, resilience technology, and smart manufacturing.

New technologies can drive inclusive, resilient, inclusive, sustainable, and industrial development for the Philippines. Smart manufacturing introduces innovation and competitiveness transforming how goods are produced and what goods are produced. In the process, it provides better job and income opportunities, creates new industries, and promotes environmental sustainability, builds industrial competitiveness, and enhances linkages of enterprises to other industries.

In closing, let me emphasize that investments in new technologies, digitalization, and innovation are investments on resilience, sustainability, competitiveness, and long-term business growth which are all necessary as we enter our economic recovery. Together, let us help create a strong manufacturing industry that will build back better a more competitive and innovative Philippines, as envisioned by President Rodrigo Roa Duterte.

Maraming salamat po at mabuhay tayong lahat.

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