

AGRICULTURE 4.0

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“Agriculture is dying in. This is a sad reality of the country” – *www.philstar.com, 2018*

“The average age of our farmers as of date is 57 years old. And our youth are no longer interested in agriculture except the ‘Farmville’ in the Internet” - *Ranibai Dilangalen, Agriculture Undersecretary, 2018*

“Enrollment in agriculture courses has been declining over the years.. labor productivity in the agriculture sector is the lowest compared to industry and services sectors.” – *NEDA, 2018*

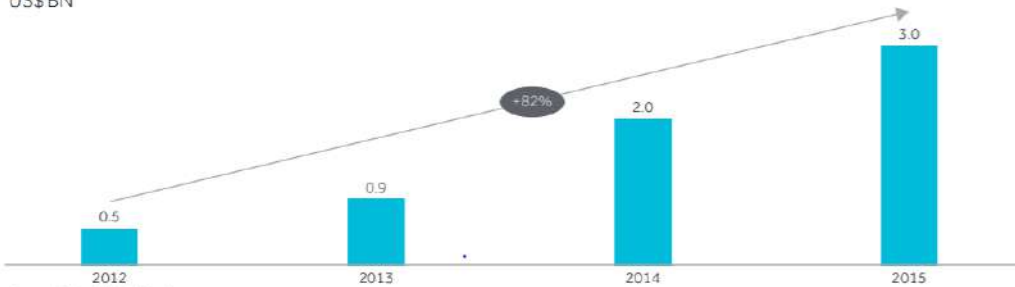


THE GLOBAL TRANSFORMATION

In 2017, more than **\$700 million** were invested into **AgTech**

Source: Food and Agriculture Organization of the United Nations.

GLOBAL VC INVESTMENTS IN AGTECH 2010-2015
US\$ BN



RECENT NEWS

Bloomberg NEWS

SoftBank Vision Fund Lead \$200 Million Bet on Indoor Farms

The SoftBank Group Corp. chief's Vision Fund is leading a \$200 million investment in Silicon Valley startup Plenty, which says it has cracked the code on growing crops indoors super efficiently.

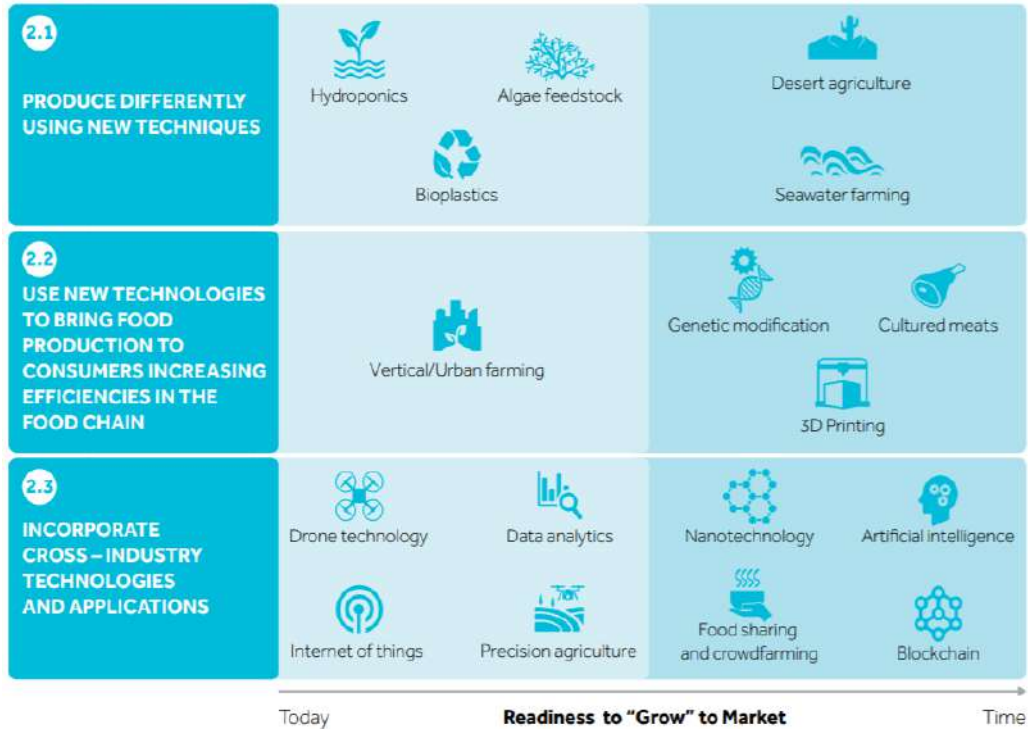
Bloomberg Technology

Bill Gates and Richard Branson Back Startup That Grows "Clean Meat"

IKEA, David Chang and the ruler of Dubai invest \$40 million in AeroFarms vertical farming

KKR invests \$100 million in arid climate agriculture firm

MAP OF TECHNOLOGIES AND MATURITY



By **2024** the **AgBot** industry is estimated to be a **\$5.7 billion** industry – five times market size compared to 2016.

Source: Food and Agriculture Organization of the United Nations.



THE FUTURE OF CUCUMBER HARVESTING

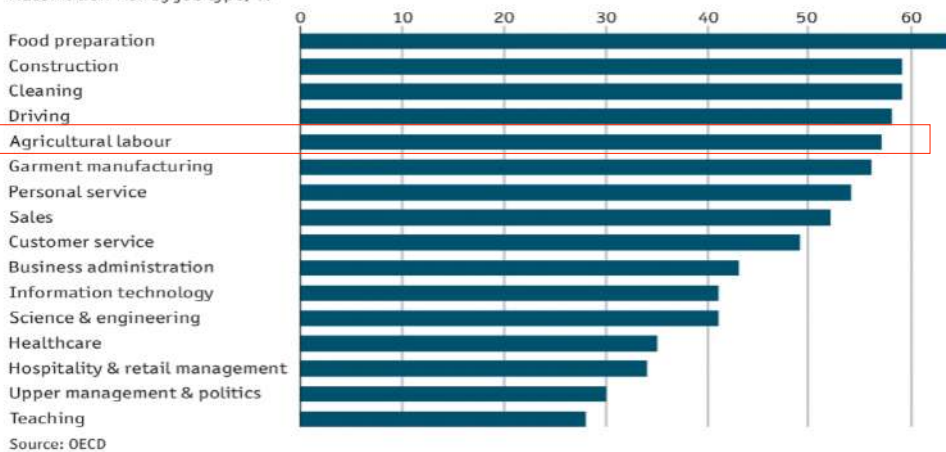


It is expected that by year **2050**, the world population will be **9.1 billion** and farmers globally must increase food production by **60-70%** compared to 2007 to meet the needs of the growing population.

Source: Food and Agriculture Organization of the United Nations.

Automated for the people

Automation risk by job type, %



Source: OECD

Economist.com

THE WAY TOWARDS AGRI 4.0

Leverage on technological advancements

Enhancement of skills through certification trainings

Entrepreneurial awareness to raise business opportunities

Government support in Agri 4.0 (DA, DOST, DICT, CHED)

Enhancement of Agriculture curriculum that will address Agriculture 4.0

Appointment of good administrators to lead DA

Strengthen University and Industry Partnership

Thank You!

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AI2 PROGRAMS FOR COLLEGE AND PROFESSIONALS

PROGRAM	DESCRIPTION	OUTLINE
Certified Artificial Intelligence Professional (CAIP)	At the end of the program, students are expected to come up with a business proposal that solves a specific real-life issue using A.I. They are also expected to create their own simple chatbot.	<ul style="list-style-type: none"> • Introduction • Principles of AI • Core Technologies: Essential Mathematics, Data Science, Machine Learning, Deep Learning, Reinforcement Learning • Bots
Certified Cloud Systems Analyst (CCSA)	At the end of the program, students are expected to come up with a business proposal that aims to show the benefit of using cloud computing in an organization	<ul style="list-style-type: none"> ▪ Cloud Definition and History ▪ Infrastructure Components ▪ Cloud Technology ▪ Cloud Services ▪ Software Defined Architecture
Certified Blockchain Professional (CBP)	At the end of the program, students are expected to come up with a business proposal that aims to show the benefit of using Blockchain applications in an organization. Students learn to compute for potential income in crypto mining, concept and application of cryptography, creating their own block, and how dApps work	<ul style="list-style-type: none"> • Blockchain definition and history • Blockchain Basic Structure and Forms • Blockchain Applications • Blockchain and Cryptocurrency • dApplications

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PROGRAM	DESCRIPTION	OUTLINE
Certified Python Application Analyst (CPAA)	Goes directly into building simple applications using Python, this program doesn't teach in dept programming language but rather, it teaches students how to build applications using tools being used in the industry such as Jupyter. At the end of the program, students are expected to create their own Python based applications like a Webpage, Data Science, Game, Tools, etc.	<ul style="list-style-type: none"> • Introduction • Built - in Data Types and operations • Flow Controls • Functions • Exercises • Game Development with PyGame • Object Oriented Programming • Intro to Data Science • Web Applications • Chatterbot
Certified Information Security and Data Privacy Practitioner (CISDP)	Talks about the importance and best practices of Information Security and Data Privacy. At the end of the program, students are expected to know how to properly protect data in a given scenario	<ul style="list-style-type: none"> • Information and Communication Systems • Overview: Information Privacy and Security • The Information Economy • Legal Requirements • Industry Standards • Special Problems on Privacy

AI2 PROGRAMS FOR COLLEGE AND PROFESSIONALS

PROGRAM	DESCRIPTION	OUTLINE
Certified Digital Marketing Professional (CDMP)	Talks about the end to end process of Digital marketing using the platforms used in the industry such as Facebook, Google, Instagram, YouTube and other biggest AdNetworks in the industry	<ul style="list-style-type: none"> • Introduction to Digital Marketing • Introduction to SEO • Importance of Content • Introduction to Social Media Marketing • Soc-Med and Google Paid Media • Reporting and Analysis • Creating Marketing Campaign Plan and Proposal
Microsoft Office Specialist (MOS) 15 CPD points for Teachers	Microsoft Excel (Basic) Microsoft Excel (Advanced) Microsoft Word (Basic) Microsoft Word (Advanced) Microsoft PPT Microsoft Access Microsoft Outlook	