

Tentative Plan Visiting Professor

Topic: Technology, Data Science and Sustainability: How to Incorporate Technology to Build Sustainable Business and Community.

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Coordinator: Dr.Kunlagan Mewes, Department of Business Administration, Faculty of Management Sciences, Prince of Songkla University

The proposed date: 29th August 2022

Time: 9 am-12 am (3 hours)

Participants: BBA students who enrolled in **472-101 Psychology & Entrepreneurial Spirit**

Objective and the importance of this topic:

Small and medium-sized enterprises (SMEs) and start-ups are one of the most significant drivers and foundations of the Thai economy, contributing to approximately 45% of the Thailand's gross domestic product (GDP) or around \$215 billion. According to the Office of SMEs Promotion (OSMEP) (2019), there were approximately 3 million companies considered SMEs, which accounted for 99.8% of the total number of companies, in 2018. Moreover, SMEs generate 14 million jobs, equal to 86% of the total employment. However, SMEs participation in international trade and global value chains (GVCs) remains limited. One of the reasons is due to limited access to foreign high-quality inputs and technology. Without technology and products upgrade, this becomes a vicious cycle since SMEs cannot participate in GVCs or move up value chains¹.

Therefore, it is important that we build upon that foundation and strengthen it. Today's business climate is increasingly competitive with many factors that can contribute to the success or failure of the business. It is important that SMEs and start-ups are aware of these opportunities and challenges and can make strategic decisions that will affect them positively - to scale up their business and be more competitive in the marketplace².

It is imperative to emphasise the importance of continuous learning and developing a learning mindset for entrepreneurs – help entrepreneurs to acquire a better understanding of how constant changing of digital technologies can affect business, either by adding values or disrupting the status-quo of any businesses and/or industries. This can help to develop the next

¹ <https://www.adb.org/sites/default/files/publication/604661/adbi-wp1130.pdf>

² <https://home.kpmg/th/en/home/media/press-releases/2021/12/thai-start-ups-and-smes-en.html>

generation of entrepreneurs equipped with informed business education, cutting-edge technologies and entrepreneurial mindset to grow and thrive in the 21st century.

The following sections are designed to cover the aforementioned points.

- 1) Digital Innovation and Digital Technologies
 - a. Introduction of Digital Innovation and Sustainable Technologies
 - b. Participation - Interactive discussion
- 2) Entrepreneurship – the background. To set the scene - the importance of this, how those businesses get started, entrepreneurship landscape in Thailand and ASEAN?
- 3) Entrepreneurial mindset and some examples of influential tech entrepreneurs?
 - a. Study of some secrets of successful entrepreneur's mindset.
 - b. Participation - Interactive discussion
- 4) Digital Technologies
 - a. *Internet of Things (IoT). Internet of Things (IoT) which is transforming the everyday physical objects that surround us into an ecosystem of information that will enrich our lives.* Practically any physical device can be embedded with sensors or software that collect and transmit data without needing human intervention. From the fitness trackers we wear to the fleet-management solutions that tell us when our packages will arrive, the IoT is now embedded in the lives of consumers and the operations of enterprises and governments.

The implications are profound: By 2030, the IoT could enable between \$5.5 trillion and \$12.6 trillion in value globally. *With the enormous of data that is collected, data* science serves a crucial value creation function by taking and utilising the collected data to transform them through analysis and visualisation into something that can create value for an organisation or business. The data can also be used to support the work of artificial intelligence, such as machine learning (ML).

Another example, is Predix³. It is the operating system for the Industrial Internet that powering digital industrial businesses that drive the global economy. By connecting industrial equipment, analyzing data, and delivering real-time insights, Predix-based apps are unleashing new levels of performance of both GE and non-GE assets.

³ <https://www.ge.com/digital/iiot-platform>

- 5) Future technologies that could change the world
- a. Case study of related paper
 - b. Some other technologies to solve some of the challenges. e.g. Blockchain, AI, metaverse, 3D printing
 - c. Participation - Interactive discussion
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