

亞洲生產力組織中華民國理事辦公室 函

地址：221 新北市汐止區新台五路一段79號2樓
聯絡人：蔡佳吟
電話：02-26982989#02952
傳真：02-26982976
電子郵件：02952@cpc.org.tw

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台中市西屯區科園路19號

受文者：台灣中部科學園區產學訓協會

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速別：普通件

密等及解密條件或保密期限：

附件：如文

主旨：有關本（110）年8月25日至8月27日亞洲生產力組織（APO）於我國舉辦「智慧製造物聯網應用訓練課程（Training Course on IoT Applications for Smart Manufacturing）」，敬邀貴單位於本年8月2日前推薦適當候選名單一事，請查照賜復。

說明：

- 一、本案依據APO 2021年6月30日21-CP-02-GE-TRC-B計畫通知（Project Notification）辦理；計畫原文說明請參閱附件一。
- 二、旨述研習課程規劃下午透過視訊會議參與國際專家之專題演講及實作，備有同步口譯；上午規劃現場邀請國內專家進行經驗交流與分享，屆時並將依據防疫等級另行通知是否改為視訊，計畫活動說明、目的、內容等如附件二。
- 三、敬請貴單位推薦候選人，填送下列資料至本中心〔以下（一）、（二）項表格之電子檔請洽本案聯絡人取得〕。
 - （一）個人資料表（Candidate's Biodata）；個人資料蒐集、處理及利用告知聲明暨同意書及報名單各1份。



(二) APO活動提名人選旅遊規劃聲明書。

四、有關出席計畫活動之相關費用如下：

(一) 毋須繳交參加課程費用，課程辦理地點以外差旅住宿學員每人每晚補助2,000元整，惟差額須由學員或其所屬機構負擔。

(二) 會議期間由執行單位安排午餐及茶點。

五、為評估及擴散計畫效益，請參加人於計畫活動後1個月內提送心得報告至本中心。本案連絡人：蔡佳吟小姐、鄭詩蓓小姐，電話：(02) 2698-2989轉02952、03015。

正本：台灣中部科學園區產學訓協會

副本：



亞洲生產力組織中華民國理事辦公室

110 年亞洲生產力組織
「智慧製造物聯網應用訓練課程
(Training Course on IoT Applications for Smart
Manufacturing) 」

一、活動說明：本研習會係 APO 為提高對智慧製造的認知，並因應工業 4.0 時代趨勢，期藉由本訓練課程協助制訂工業 4.0 策略，優化工廠營運效率及提高安全性，並提供技術相關援助，將分享物聯網應用的實際經驗，協助各國提高營運績效、生產敏捷性和整體生產力，同時促使學員向所屬相關組織與企業分享其學習成果，進而擴大效益，維持市場競爭力。

二、活動目標：

- (一) 探討物聯網 (IoT) 在製造業中的應用。
- (二) 通過線上實作，演練工廠及企業數位化流程
- (三) 瞭解 IoT 在製造業之採行與應用及原理、關鍵要素和基礎技術

三、辦理時間：110 年 8 月 25 日~27 日(共 3 天)

四、國內學員報名截止日：2021 年 8 月 2 日前

五、辦理地點：台中，國立中興大學

六、課程方式與內容：講座、實作、個案研究及討論。

七、推薦人選資格要求：

- (一) 經歷：中小企業、產業協會代表、顧問、製造管理相關生產力從業人員及研究、制定製造產業相關政策或策略發展之學術單位及相關單位
- (二) 語言：上午中文，下午以英語進行，備有同步口譯
- (三) 出席：學員應全程出席，由 APO 頒發結業證書

八、課程承辦人：中國生產力中心 蔡佳吟 02-2698-2989#02952
報名表請郵寄至：02952@cpc.tw

九、議程主題：

日期	內容
8 月 25 日，星期三	物聯網與智能製造：概念、關鍵技術和基礎應用 製造業
8 月 26 日，星期四	智能工廠：跨設施和產品生命週期管理的應用 線上實作：連接和收集來自物聯網設備的信息
8 月 27 日，星期五	製造業中的物聯網應用：經營範例、挑戰和解決方案 線上實作：依策略制定可視化信息

十、議程：

8 月 25 日 (星期三)		主持人/講者/場域
1000-1130	<u>國內專家分享</u>	國內專家
1130-1300	午餐	—
1300-1600	<u>專家演講：</u>	APO 秘書處計畫官 Ta-Te Yang
	Session 1: The Internet of Things (IoT) and Smart Manufacturing (TBC) - This session will discuss the concepts, key technologies, and basic applications of the IoT in manufacturing, developing an understanding of why the IoT is one of the first steps for smart manufacturing and digital transformation.	國外專家
	休息時間	
	Session 2: Hands-on Activity: Configuring IoT Devices and Connecting them to the Internet (TBC) - This session will demonstrate how to use basic programming commands to configure IoT devices to transfer data to and retrieving data from the Internet. The hands-on experience is provided for participants at beginner's level.	國外專家
8 月 26 日 (星期四)		主持人/講者/場域
1000-1130	<u>國內專家分享</u>	國內專家
1130-1300	午餐	—
1300-1600	<u>專家演講：</u>	APO 秘書處計畫官 Ta-Te Yang
	Session 4: Smart factories: Applications across Facilities and Product Life Cycle Management (TBC) - This session aims to provide an overview of IoT applications in the manufacturing to understand how IoT technologies support the management of the shopfloor, facilities, and product life cycles, indicating key elements	國內專家
	Session 5: Hands-On Activity: Connecting and Collecting Information from IoT Devices (TBC) This session will explain how to connect IoT devices and collect information from different devices. Participants will go through hands-on exercises to collect data from sensors and identify useful information from the collected data.	國外專家
8 月 27 日 (星期五)		主持人/講者/場域
1000-1130	<u>國內專家分享</u>	國內專家
1130-1300	午餐	—

1300-1600	<u>專家演講：</u> APO 秘書處計畫官 Ta-Te Yang	
	Session 7: IoT Applications in Manufacturing: Business Use cases, Challenges, and Solutions (TBC) - This session will share good practices of IoT applications by showcasing use cases from the industries. It will also examine the opportunities brought by the adoptions of IoT, the accompanying challenges emerged from cybersecurity and data management, and possible solutions for these concerns.	國內專家
	Session 8: Hands-On Activity: Visualizing Information for Strategy Development (TBC) - This session will demonstrate how to manage the operation of an IoT dashboard to visualize and analyze the data. Participants will practice consolidating data and present them in a easily understandable manner, which helps to analyze data and monitor operational processes	國外專家



PROJECT NOTIFICATION

Ref. No.: 21-CP-02-GE-TRC-B-PN2100050-001

Date of Issue	30 June 2021
Project Code	21-CP-02-GE-TRC-B
Title	Training Course on Internet of Things Applications for Smart Manufacturing
Timing and Duration	25–27 August 2021 (three days)
Hosting Country(ies)	Republic of China
Modality	Digital Multicountry
Implementing Organization(s)	China Productivity Center and APO Secretariat
Participating Country(ies)	All Member Countries
Overseas Participants	19
Local Participants	12
Qualifications of Participants	SME executives, representatives of industrial associations, consultants, and productivity practitioners with experience in manufacturing management; and government officials and policy research officers involved in industrial policy and development strategies for the SME and manufacturing sectors
Nomination of Participants	All nominations must be submitted through National Productivity Organizations of member countries
Closing Date for Nominations	6 August 2021

1. Objectives

- a. Develop an understanding of the Internet of Things (IoT) and its applications in manufacturing and digital transformation.
- b. Impart knowledge of digitization in factories and enterprises through interactive hands-on practice.
- c. Disseminate knowledge of the principles, key elements, and fundamental technologies of smart manufacturing.

2. Background

The IoT is a system of interconnected physical devices embedded with sensors, software, and other technologies for the purpose of capturing and transferring data over a network such as the internet. These devices range from machines, computers, and vehicles to home appliances and other ordinary objects in daily life. The deployment of the IoT in manufacturing connects devices and facilities physically and digitally; it also enables management and employees to collect and retain data from entire product life cycles in digital format and real time. These characteristics are the foundation of smart manufacturing, and the IoT is therefore one of the first steps for manufacturers to embark on the Industry 4.0 journey.

With connected devices, exchange of data, and data analytics, seamless communication is enabled among people, processes, and facilities, which helps to optimize operating efficiency in factories, reduce errors, improve safety, and predict needs for maintenance and even market demand. The Asia-Pacific region, as a major manufacturing base for the global market, thus needs to adopt IoT technologies to improve operational performance, production agility and flexibility, and overall productivity, especially during the COVID-19 pandemic when supply chains are disrupted by restrictions on human and product movement. As indicated in international research conducted by Vodafone in late 2020, among the countries in Asia with higher manufacturing capacities and access to technologies, 38% of manufacturers have adopted a certain level of IoT technologies, 82% of which also planned to accelerate IoT deployment because of the pandemic and its effects on business, showing that the benefits of the IoT in manufacturing have been recognized but still need further dissemination in the region.

The APO has conducted various activities to raise awareness of smart manufacturing, assist in the development of Industry 4.0 strategies, and provide technical assistance. This training course aims to impart knowledge of IoT applications in manufacturing and provide interactive practice in configuring IoT devices to enhance understanding of their potential contributions to smart manufacturing.

3. Scope, Methodology, and Certificate of Attendance

The duration of each day's sessions will be around three hours, comprising presentations by experts, group discussions, and other relevant learning methods. The indicative topics of the presentations are:

Day 1:

- The IoT and smart manufacturing: Concepts, key technologies, and basic applications in manufacturing
- Interactive hands-on practice: Configuring IoT devices and connecting them to the internet

Day 2:

- Smart factories: Applications across facilities and product life cycle management
- Interactive hands-on practice: Connecting and collecting information from IoT devices

Day 3:

- IoT applications in manufacturing: Business use cases, challenges, and solutions
- Interactive hands-on practice: Visualizing information for strategy development

The detailed program and list of speakers will be provided two weeks prior to the sessions with announcement of the names of the selected participants.

The participants are required to attend all sessions. This full participation is a prerequisite for receiving the APO certificate of attendance.

4. Financial Arrangements

- a. The APO will meet the assignment costs of overseas resource persons and honorarium for up to two local resource persons.
- b. The host country will meet the costs for a virtual site visit(s), either broadcast live or recorded as applicable.

5. Implementation Procedures

Please refer to the implementation procedures for APO digital multicountry projects circulated with this document.

A handwritten signature in black ink, appearing to read 'Mochtan', with a long, sweeping horizontal stroke and a sharp upward curve at the end.

Dr. AKP Mochtan
Secretary-General