經濟部
Ministry of Economic Affairs

出 國 報 告(出國類別：其他(國際會議))

參與亞洲生產力組織(APO)第 64 屆各國生產力機構主管工作會議(64th Workshop Meeting Of Heads of NPOs)

服務機關：經濟部產業發展署
姓名職稱：吳振華組長
派赴國家：土耳其
出國期間：112 年 10 月 15 日至 10 月 20 日
報告日期：113 年 1 月 5 日

目　　錄

壹、前言(出國目的)

APO 工作會議為亞洲生產力組織年度重要大會，係由各會員國工業代表、農業代表各 1 名及顧問與會。工業代表多數由負責 APO 計畫規劃、執行與協調聯繫之國家生產力機構首長(NPO Head)擔任。會中除檢討評估往年各項計畫之執行情形，並確認次年計畫項目與推行要點。本(第 64)次會議於 112 年 12 月 17 日至 19 日於土耳其安卡拉舉行。

APO 工作會議可視為 APO 理事會議前之「幕僚會議」，其所審議之各事項則於翌年提交 APO 理事會議決議。我國透過積極參與會務，善盡國際組織會員國之責任義務，以確保我國於 APO 之地位與權益；同時於會議中，我國透過會務參與及辦理相關計畫活動與秘書處及會員國保持友好密切之關係。

貳、 團員及任務分工

一、 團員組成

計畫內編列之人力為 2 人次，分別為 APO 中華民國理事辦公室薛夙晴經理兼 APO 中華民國聯絡官及陳敔彤助理管理師，渠等均以顧問身份與會。本次會議我國代表團實際出國人次為 5 人，除前述 2 員外，另有工業代表中國生產力中心張寶誠總經理、產業發展署永續發展組吳振華組長、農業代表農業部國際事務司粘立慈科長。

二、 任務分工

(一)、張寶誠團長：代表我國生產力機構率團參與 WSM 會議。

(二)、產業發展署吳振華組長及農業部國際事務司粘立慈科長：代表經濟部產業發展署及農業部參與會議。

(三)、薛夙晴經理

1. 協助我國代表於會中確認 2024、2025-2026 年將在我國辦理

之各項計畫。

2. 執行聯絡官之相關溝通協調工作，與其他會員國聯絡官討論未來雙方合作之計畫。

(四)、陳敔彤助理管理師

1. 陪同我國代表於會中確認 2024、2025-2026 年將在我國辦理之各項計畫。
2. 陪同聯絡官與會員國聯絡官討論未來合作計畫。

單位/公司	團員	職稱	備註
中國生產力中心	張寶誠	總經理	代表團團長
產業發展署	吳振華	組長	顧問代表
農業部	粘立慈	科長	顧問代表
中國生產力中心	薛夙晴	經理	兼APO中華民國聯絡官
中國生產力中心	陳敔彤	助理管理師	

參、 行程表

Day 1: 112 年 10 月 15 日星期日	
19:30	出發前往土耳其
Day 2: 112 年 10 月 16 日星期一	
07:00	抵達伊斯坦堡新機場接轉機
08:05	抵達安卡拉愛森柏加國際機場
18:00	參加 APO 秘書長雞尾酒會
Day 3: 112 年 10 月 17 日星期二	
08:30 - 09:30	報到 / 地點：安卡拉珀恩特酒店 Point Hotel Ankara (以

	下會議場地皆位於此)B1 鑽石宴會廳
09:30 - 10:15	1. 土耳其 APO 理事致歡迎詞 2. APO 秘書長致詞 3. 土耳其工業與技術部長致開幕詞 4. NPO 代表介紹
10:15 - 11:00	合照及茶敘
11:00 - 12:30	1. APO 主席與副主席遴選 2. 議程確認 3. 2022 年 APO 計畫評估 4. 2025 年 APO 願景：暫停與反思
12:30 - 14:00	午宴 / 地點：15 樓 Point View 餐廳
14:00 - 15:00	1. 2023 APO 聯絡官會議 2. 提升 APO 數位化能力
15:30 - 16:30	1. 未分配盈餘運用 2. 支持多國性計畫之在地執行成本
18:30 - 20:00	土耳其理事歡迎晚宴 / 地點：白金宴會廳 A 層
Day 3: 112 年 10 月 18 日星期三	
09:00 - 10:00	各國 NPO 國情報告 / 地點：B1 A 廳 (鑽石宴會廳)
10:00 - 10:30	茶敘
10:30 - 12:30	2024 年計畫重新確認及討論 1. 多國性計畫 2. 單一國家計畫 3. 研究計畫

	4. 視訊計畫
12:30 - 13:30	午宴 / 地點：15 樓 Point View 餐廳
13:30 - 16:00	1. 2025 – 2026 雙年度計畫討論 2. 多國性計畫 3. 實體計畫 4. 研究計畫 5. 視訊計畫
16:00 - 16:30	茶敘
16:30 - 17:30	1. 第一天之會議摘要報告 2. 臨時動議 3. 閉幕致詞
18:30 - 20:00	APO 秘書長晚宴 / 地點：白金宴會廳 A 層
Day 4: 112 年 10 月 19 日星期四	
09:30 - 12:30	論壇 / 地點：B1 鑽石宴會廳 1. 示範工廠對企業效率角色 2. 引領雙重轉型：新創企業的永續性與效率
12:30 - 13:30	午宴 / 地點：15 樓 Point View 餐廳
14:00 - 19:00	人文參訪 / 安納托利亞文明博物館和安卡拉城堡
17:40	搭機返台
Day 5: 112 年 10 月 20 日星期五	
01:35	抵達伊斯坦堡新機場接轉機
17:55	抵達桃園機場

肆、 工作內容

一、本屆 APO 工作會議於 2023 年 10 月 17 日(星期二) 9 時 30 分進行開幕式及大合照，隨後秘書處即針對各項會議議題進行報告。

圖 1、土耳其工業與技術部長 H.E. Mehmet Fatih Kacir 開幕致詞

圖 2、全體與會者合照

圖 3、我國代表團與 APO 秘書長 Dr. Indra Pradana Singawinata 合照

圖 4、會議現場照片

二、本屆工作會議討論事項共七項，分別為(1) 2022 年計畫評估報告、(2) APO2025 願景：暫停與反思報告、(3) 2023 APO 聯絡官會議、(4) 提升 APO 數位化能量、(5)未分配盈餘運用、(6)支持多國性計畫之在地執行成本及(7) 2025-2026 雙年度計畫。其議題討論重點說明如下：

(一) 2022 年計畫評估：

評估結果重點關注目的、方法及主要發現。其目的係評估計畫對於實現 APO 2025 願景之貢獻。評估範圍包括多國性計畫、自我學習線上課程以及單一國家計畫。

評量主要發現在關聯性方面，有平均 98%的意見反饋認為多國性與單一國家計畫與參與者的需求相符，而 96%的意見認為在辦公處所使用數位學習平台的潛在乘數效應是非常好的。與有效性相關之多國性及單一國家計畫之混合學習方式，評價為 89%。

(二) APO 2025 願景：暫停與反思行動

該行動已於 2023 年 5 月獲得第 65 屆理事會核准。該活動旨在重新審視 2025 APO 願景之監測及評估(M&E)框架不足之處。報告強調 TWG 在 2023 年 8 月 1 日及 8 月 31 日線上會議中提出的初步建議，包含提供願景之明確預期結果(影響、成果及產出)、強化資訊收集系統與過程、回報追蹤過程及願景之預期成果完成度、以及使用暫停與反思行動所獲得之調查結果並建議準備下一個願景工作。這些建議提供可立即進行改善的建議，並且為 2025 年後願景工作做準備。暫停與反思行動及其提出之建議，供指導委員會與第 66 屆理事會進一步討論。

(三) 2023 年 APO 聯絡官會議：

秘書處介紹了 2023 年 APO 聯絡官會議(LOM)之背景和議程，該會議於 2023 年 2 月 14 日至 16 日於日本東京舉行。會議中透過分組討論，突顯關鍵問題，其討論重點包含每年以實體方式執行 LOM 之重要性、鼓勵 NPOs 組織外展活動並分享新聞及資訊，並可將資訊上傳到其網站及社群媒體上、與數位模式相比，實體計畫之有效性，以及強化 APO 網絡的需求。

LOM 每兩年舉行一次，以接收有關行政及後勤問題之更新資訊。因此，下一次聯絡官會議訂於 2025 年舉行，在財務狀況允許前提下，秘書處將規劃每年舉辦一次聯絡官會議。

(四) 提升 APO 數位化能量：

秘書處報告策略數位能力(SDC)計畫之進展，此計畫於 2021 年第 63 屆理事會議中批准。目的係為所有會員國在 2021-2025 年間，著重系統整合、強化能力、改善連線能力以及促進計畫管理平台統一之發展。

1. 第一階段，SAP Business ByDesign (ByD) ERP 系統已於 2022 年 9 月 1 日正式完全上線，此系統整合簡化了許多過程，包含從發出計畫通知書到管理財務等。
2. 2023 年 2 月開始執行第二階段，其涉及參與者 Salesforce CRM 系統及專家管理之同化，並希望將第一階段的系統能力延伸至所有 APO 會員國。為運作效率最大化，刻正進行中 SAP ByD 與 Salesforce 之整合，預計在 2023 年第 4 季正式上線。目前正實施 Salesforce Shield 加強資料安全作業，以確保隱私權獲得最佳保護。

(五) 未分配盈餘運用：

秘書處提出了關於有效利用未分配盈餘之活動方案，首先介紹了截至 2022 年財政年度結束時未分配盈餘之最新狀況，金額為 9,040,342 美元。秘書處說明了五個未分配盈餘運用之提案，這些提案將在 2024-2025 年執行，其包括以下內容：NPO 高階領導力計畫、碩士學位獎學金計畫、重組 NPO 校友網絡、非會員考察研習計畫、建立非會員國參與及援助基金。

主席 Mr. Abdullah Basar 確認第 64 屆 WSM 同意將提案 1 及提案 5 提交至理事會審議及核准。考量代表們的意見，本次會議並未核准提案 2 至提案 4，會後將規劃由 APO 會員國組成小組，以進一步討論相關細節。

(六) 支持多國性計畫之在地執行成本：

APO 秘書處表示，2020 年第 62 屆理事會已核准財務支援提案，支付 2021-22 雙年度多國性計畫之部分當地非用，而 2023-24 之類似安排也已獲核准。

(七) 2024 計畫及 2025-2026 雙年計畫

會中確認 2024 年將辦理之計畫，並討論新增計畫與主題調整；另初步確認 2025-2026 雙年計畫，摘要如下：

1. 會中核定 2024 年辦理 90 項多國性計畫，我國將辦理 7 項，列表如下：

項次	計畫代號	計畫主題
1	24-CL-03-GE-OSM-A	Multicountry Observational Study Mission on Digital Innovation for SMEs 中小企業數位創新多國性考察研習團

2	24-CP-27-GE-WSP-A	Workshop on Digital Communications Strategy for the Public Sector 公部門數位通訊傳播策略研習會
3	24-CP-39-GE-WSP-A	Workshop on Green Business Models 綠色商業模式研習會
4	24-CP-41-GE-TRC-A	Training Course on Greening Supply Chains through Industry 4.0 工業 4.0 綠色供應鏈訓練課程
5	24-IP-20-GE-TRC-A	Training Course on Gamification And Game Design for Customers and Employee Engagement 透過遊戲化與遊戲設計促進客戶及員工參與訓練課程
6	24-CP-52-GE-TRC-A	Training Course on Smart Manufacturing Specialist 智慧製造專家訓練課程
7	24-IP-24-GE-TRC-A	Training Course on Innovative Technologies in Vegetable Farming 蔬菜種植創新技術訓練課程

2. 2025 年規劃辦理 71 項多國性計畫，我國將辦理 7 項，列表如下：

項次	計畫代號	計畫主題
1	25-CP-14-GE-WSP-A	Workshop on Digital Industry Strategies and Implementation 數位產業策略與執行研習會
2	25-CP-19-GE-WSP-A	Workshop on the Circular Economy through Digital Solutions 透過數位解決方案實踐循環經濟之研習

		會
3	25-IP-01-GE-OSM-A	Multicountry Observational Study Mission on Smart Manufacturing and Digital Supply Chains 智慧製造與數位供應鏈之多國性考察研習團
4	新提案	Training course on Carbon Reduction for industrial sectors 產業減碳培訓課程
5	新提案	Workshop on Driving business towards ESG and the Sustainable Development Goals (SDGs) 促進企業邁向 ESG 及永續發展目標研習會
6	新提案	Workshop on Service Innovation in the Food and Beverage Industry 餐飲業服務創新研習會
7	新提案	Workshop on Artificial intelligence & Sustainability Applied in Aquaculture 智慧與永續養殖漁業研習會

3. 2026 年規劃辦理 71 項多國性計畫，我國將辦理 7 項，列表如下：

項次	計畫代號	計畫主題
1	26-IP-09-GE-WSP-A	Workshop on Smart City Development 智慧城市發展研習會

2	26-CL-09-GE-TRC-A	Training Course on IoT Applications in SMEs 中小企業 IoT 應用培訓課程
3	26-CL-12-GE-WSP-A	Workshop on SME Management Capability Development 中小企業管理能量發展研習會
4	新提案	Conference on Global Trends in Policies on Marine Debris and SMEs 海洋垃圾與中小企業政策之全球趨勢研討會
5	新提案	Workshop on Green Productivity and Net-zero Emission Targets 綠色生產力與零碳目標研習會
6	新提案	Multicountry Observational Study Mission on Circular Economy Development to Achieve Net-zero Emissions 發展循環經濟實現淨零排放多國性考察研習團
7	新提案	Multicountry Observational Study Mission on Net Zero Recycle- Intelligent Agriculture 淨零循環—智慧農業多國性考察研習團

三、我方發言

會中我方也針對 2025-2026 年將在我國執行之計畫主題及規劃方向提供建議，可透過計畫辦理方式將我國政府現階段推動之政策及做法分享給各國學員，以促進未來多邊交流之機會，強化產業跨國合作，提高產業競爭力。

我方亦表示，透過辦理產業論壇與 APO 計畫活動，分享最新

的技術發展、市場趨勢和合作機會，使 APO 成為另一個為企業提供促進合作和交流的平台，同時也創造更加靈活的國際人才流動機制，使得優秀的人才能夠更自由地在不同國家的企業之間流動，不僅有助於知識和經驗的交流，還能夠促進國際產業合作。

圖 5、我方參與會議並於會議中進行發言

四、其他事項

此次 APO 第 64 屆工作會議，秘書處請各國撰寫國情報告，主題包括疫情期間，就當前 APO 多國性計畫包含培訓課程和研討會之設計與各種商業或非商業機構提供之平台，包括數位模式之可行性提出建議；另對於強化 APO 作為智庫、催化劑和區域顧問角色之新舉措提出建議；以及鑒於生產力機構(NPOs)資源有限，建議加強 NPOs 參與的同時，如何優化 APO 計畫之執行，同時亦能強化可能之替代網絡/機制。

另為了有效管理時間，國情報告由各會員國決定口頭陳述或書面報告，我國代表以書面方式表述。其報告內容詳參附件。

伍、 結論

一、透過出席 APO 工作會議了解秘書處之內部運作，並熟悉會員國之間的互動與關注之議題，將有助於了解各國最新發展趨勢，後續團隊在執行各項業務時能發揮其綜效。

二、我方經會中與會員國代表交流過程中發現，我國在 APO 組織中確實扮演其重要之角色，不僅執行計畫數最多，在綠色生產力及智慧製造領域上之技術發展也趨於領先地位，我國積極參與 APO 各項活動，確實有效展現在國際組織中之影響力與實力。

三、本次會議第三天安排產官專家分享示範工廠及轉型創新等議題，從分享中可知土耳其非常重視增進生產力以及加速數位化轉型，而用於實現這個目標的關鍵政策及工具之一是示範工廠計畫，該計畫提供企業可持續精進的訓練及諮詢服務、提倡精實生產、及加強數位化轉型。

陸、 建議

一、此次會議有多位生產力機構首長及聯絡官均為新任代表，未來我國除積極關注會員國動態，亦應透過 APO 計畫活動與秘書處及會員國保持友好關係，多尋求接觸機會以獲得未來更多實質上的合作。

二、本次首次接觸土耳其在地的產業，我國可透過 APO 平台與土耳其產業在生產力提升及數位化轉型之相關領域上合作，包含共同參與示範工廠計畫、合辦培訓和研討會等，促使兩國企業進行對接找到合作夥伴，進而促進實質合作。

三、我國積極參與 APO 會務，獲得不少正面評價，近年秘書處遇到會員國無法執行業務之狀況時，第一時間會詢問我方之接辦意願，未來可借重秘書處對我國之信賴基礎，促成更多合作機會，

強化我國在國際組織中的地位。

四、借助於本次會議中獲得之資訊與觀點，更多交流將有助於協助我國產業創新與發展。惟目前往來國家多為新南向六國，發掘與其他會員國潛在合作機會是將來要思考的方向，不僅與更多國家建立友好關係，還可發掘更多跨國產業合作機會。

五、綜上,可更多利用產發署 APO 執行計畫及綠色/智慧製造卓越中心平台，與 APO 秘書處及會員國深度合作，同時尋求進一步合作之機會，包含共同研究、技術交流及資源共享等模式。

柒、檢附相關資料

一、我國國情報告

64rd Workshop Meeting of Heads of NPOs

Country Paper

I. Exploration of APO's multinational training programs and seminar design in comparison with existing diverse platforms

1. **International networking and collaboration**: APO courses facilitate mutual exchanges, collaboration, and network building among participants from various member countries. This fosters an international professional community for sharing knowledge, experience, and best practices, and enhances opportunities for cross-border and cross-discipline exchanges and professional knowledge sharing.
2. **Accommodation of the digital transformation trend**:
   (1) APO programs are executed both physically and virtually, leveraging digital platforms to significantly reduce travel, accommodation, and other related costs without the constraint of geography or time. Meanwhile, they can serve participants from all member countries simultaneously, thus contributing to the efficiency and coverage of APO programs. The flexibility of digital delivery allows participants to engage in training at their own pace and timing to accommodate their work arrangements. Through digital platforms, online programs offer a wider range of training courses and seminars, aligning with the current trend of using technology to reach broader audiences and deliver content

efficiently and economically.

(2) Digital platforms enable the APO to customize training courses based on specific needs for different industries or themes. Collaboration with universities, domain experts, and professional training institutions allows the incorporation of emerging technologies such as Virtual Reality (VR), Artificial Intelligence (AI), and interactive simulations into programs, offering participants immersive and interactive learning experiences through such new technologies.

(3) Digital platforms enable real-time monitoring of participant progress and engagement, allowing the APO to collect valuable data concerning participant performance, feedback, and program effectiveness to facilitate continuous improvement and optimization of training projects. Adopting a digital approach enables the APO to align with evolving training landscapes, reach a broader audience, and maximize the impact of its productivity enhancement initiatives.

II. Recommendations of new measures to strengthen APO's roles as a think tank, promoter, and regional advisor

1. Establish partnerships with international organizations to jointly integrate resources, share expertise, and undertake joint research projects to address regional productivity issues. Collaborate with universities, research institutions, and businesses to jointly develop projects addressing productivity challenges in the Asia-Pacific region.

2. Establish an advisory committee consisting of the APO and external experts to provide organizations with well-based strategic recommendations. Develop productivity-related strategy briefs and recommendations. Utilize massive productivity-related data analyzed by artificial intelligence to provide valuable insights and recommendations to stakeholders for their reference.
3. Engage in community participation strategies to involve non-profit organizations (NPOs) and broader communities in addressing productivity challenges and solutions. Harness collective intelligence for project development and leverage social media and digital platforms to amplify promotional information and reach a wider audience.
4. Create research scholarships and programs to attract top talent in the fields of productivity and economic development, providing them with resources and support for high-impact research. Offer research funding and awards to encourage researchers, scholars, and practitioners to conduct research in productivity-related areas and share their findings with the APO for its reference. Establish a comprehensive impact assessment framework to evaluate the impact of APO programs to achieve continuous improvement while aligning with strategic goals.

III. **Recommendations, in light of the limited resources of NPOs, on optimizing NPO participation and enhancing possible alternative networks/mechanisms to implement APO programs**

1. Foster collaboration partnership, promote experience sharing, and

work with like-minded NPOs or those with similar developments to establish formal partnership, jointly integrate resources and manpower, share operational experience, professional knowledge, training facilities, and jointly execute programs, which contribute to enhancing the impact of programs.

2. Create an online knowledge repository, covering knowledge related to productivity improvement, program implementation, outcome reports, and other relevant knowledge. Make it accessible to NPOs, encouraging their active participation in content sharing and interaction with online communities. Enable NPOs to participate in program impact assessment, solicit their feedback on the efficacy, achieve continuous improvement, and enhance the efficiency of program execution.
3. Thematic and resource focus: Within a diverse range of program types and themes, conscientiously prioritize enhancement or focused areas, such as the COE areas in each member country. Allow for the planning of related follow-up actions based on the needs and capabilities of NPOs, providing corresponding support to ensure efficient resource utilization and broader participation and diffusion.

二、會議簡報 1

Agenda Item 2.2
APO Vision 2025: Pause-and-reflect Activity

Ref. Paper No. 1 and Attachments

Agenda Item 2.2 – APO Vision 2025: Pause-and-reflect Activity

I. Background

FOCUS AREA	EXPERT
Centrality of Productivity	**Kelvin Chan Keng Chuen** Director and Principal Consultant, Teian Consulting International Pte. Ltd., Singapore
Innovation for Productivity	**Zahid Ismail** Director General, Malaysia Productivity Corporation, Malaysia
Inclusive Productivity	**Alex Glennie** Senior Policy Manager, Innovation Growth Lab, Nesta, United Kingdom
Regional Catalyst	**Joselito Bernardo** Senior Vice President, International School of Sustainable Tourism, Philippines
Strengthening of NPOs and Policy Advisory	**Muhammad Alamgir Chaudhry** Chief Executive Officer, National Productivity Organization, Pakistan
Monitoring and Evaluation	**Susan Morawetz** Independent M&E Consultant, United States

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Agenda Item 2.2 – APO Vision 2025: Pause-and-reflect Activity

I. Background

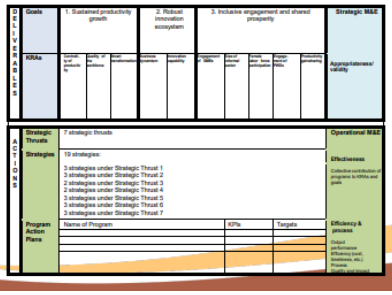
65th GBM Approval

Stage	Time Frame	Activities
1	June 2023 (ongoing)	Reconvene the Technical Working Group to update the M&E framework, focusing on strategic and operational results, indicators, and targets
2	October 2023	Give an update on progress to the 64th WSM and receive its inputs and endorsement
3	December 2023	Reconvene the Vision 2025 Steering Committee and receive its inputs and endorsement
4	May/June 2024	Receive inputs and approval from the 66th GBM

Agenda Item 2.2 – APO Vision 2025: Pause-and-reflect Activity

I. Background

Table 3 of the APO Vision 2025 Document



Agenda Item 2.2 – APO Vision 2025: Pause-and-reflect Activity

II. Findings and Recommendations

Existing Gaps in Vision 2025

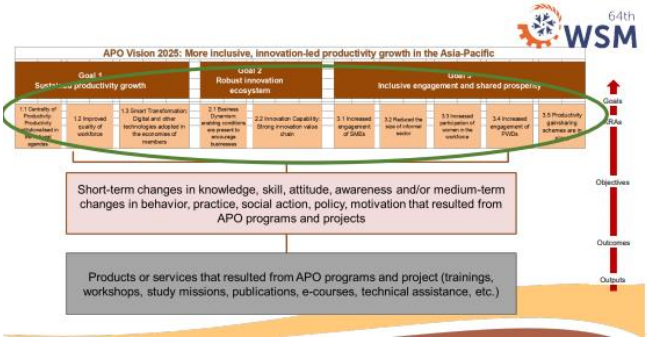
M&E level/result chain and their corresponding terms in the vision	Are the intended results articulated?	Are indicators identified?	Are targets set?	M&E stakeholders responsible
Strategic M&E				
(Impact) c/o goals/KRAs	Yes	Yes	No	APO members
Operational M&E				
(Outcome) c/o strategic thrusts/ strategies/programs and projects	No	No	No	NPOs APO Secretariat
(Output) c/o strategic thrusts/ strategies/programs and projects	Yes	Yes	Yes	

Agenda Item 2.2 – APO Vision 2025: Pause-and-reflect Activity

II. Findings and Recommendations (continued)

Strategic M&E

Recommendation	Key APO Stakeholder Responsible	Timeline
1. Instead of just adjusting the current KRAs, the APO could start focusing on how challenges could be addressed in preparation for the post-2025 vision. Recommended activities for the next two years to prepare for the post-2025 vision include: • Assess current KRAs and their relevance to APO roles and programming. Identify which changes the APO could influence or be accountable for. • Conduct an audit of existing KRAs for which high-level data are not available in APO members. Explore generating or publishing (e.g., GCI) alternative data or collaborating with other organizations (e.g., WEF, WB, and IMD) to ensure consistent data collection while fostering international benchmarking.	• APO members (or APO Committee comprising experts from each member) • NPOs • APO Secretariat* • External party (next visioning and relevant audit/baseline study/system improvements) • Other organizations/ international organizations (to partner in relevant initiatives) *to facilitate/coordinate	2024–25 (to feed into the post-2025 vision)

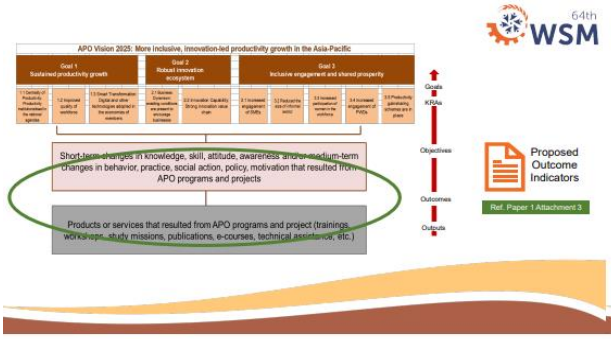


Agenda Item 2.2 – APO Vision 2025: Pause-and-reflect Activity

II. Findings and Recommendations (continued)

Strategic M&E

Recommendation	Key APO Stakeholder Responsible	Timeline
1. Instead of just adjusting the current KRAs, the APO could start focusing on how challenges could be addressed in preparation for the post-2025 vision. Recommended activities for the next two years to prepare for the post-2025 vision include (continued): • Track high-level data of KRAs collected from members by developing a central interactive M&E dashboard harmonized with the current APO project management system (ERP). The high-level data could also be included in the annual *APO Productivity Databook*.	Continued	Continued
2. While clarity on KRA data availability is pending, the APO could collect and report aggregated data at the operational level based on existing KRAs or goals.	• NPOs • APO Secretariat	2024–25 (for reporting of current vision)



Agenda Item 2.2 – APO Vision 2025: Pause-and-reflect Activity

II. Findings and Recommendations (continued)

Operational M&E

Recommendation	Key APO Stakeholder Responsible	Timeline
For tools, systems, and processes (continued):		
5. Develop a central interactive M&E dashboard harmonized with the current APO project management system (ERP).	Continued	Continued
6. Replace internal annual evaluations (currently carried out at the end of all training courses, workshops, conferences, study missions, etc.) with postproject and follow-up surveys with modifications: a) separate instruments for postproject and follow-up evaluation (6–12 months later); b) develop new survey questions to capture data needed to track performance indicators; and c) expand response categories in surveys (using a Likert scale) and allow open-ended comments.		
7. Continue external impact evaluation carried out every two years with modifications: a) analyze results by program area, strategic thrust, or KRA; b) include examples to demonstrate impacts of APO achievements and priorities; and c) consider complementing survey data with qualitative data collection (e.g., focus group discussions or interviews) that could yield richer evaluation findings.		
8. Consider development of annual surveys of NPOs and APO staff to assess satisfaction with and relevance of APO services.		

Agenda Item 2.2 – APO Vision 2025: Pause-and-reflect Activity

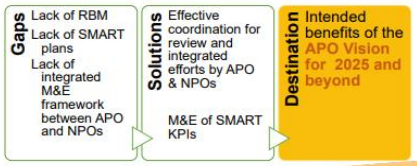
II. Findings and Recommendations (continued)

Operational M&E

Recommendation	Key APO Stakeholder Responsible	Timeline
For formulation of outcomes, outputs, and their indicators:		
1. Enhance/develop SMART outcome and output indicators with performance indicator reference sheets to facilitate systematic, standardized data collection and monitoring.	• NPOs • APO Secretariat • External Expert	2023–24 (for reporting of current vision)
2. Standardize indicators to measure the same things and enable consistent collection of comparable indicator data from multiple program initiatives simultaneously (refer to Annex 1 for proposed outcome indicators). Come to a consensus on a solid set of standard indicators to quantify proposed outcomes.		
For tools, systems, and processes:		
3. Strengthen existing data collection tools and develop new ones to measure the proposed outcomes (e.g., surveys to measure results of training, index, or scorecard to assess improvements in organizational capacity).	• NPOs • APO Secretariat • External Expert	2023–24 (for reporting of current vision)
4. Enhance data collection and incorporate quantitative results in reporting.		

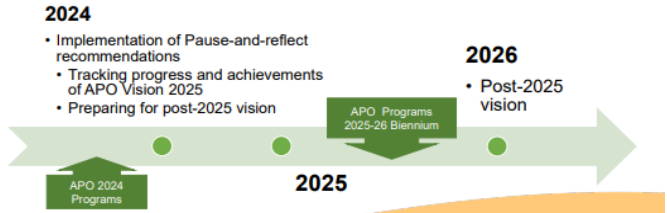
Agenda Item 2.2 – APO Vision 2025: Pause-and-reflect Activity

III. Summary and Conclusion



Agenda Item 2.2 – APO Vision 2025: Pause-and-reflect Activity

III. Summary and Conclusion (continued)



Agenda Item 2.2 – APO Vision 2025: Pause-and-reflect Activity

Recap of the Recommendations

1. Provide clarity on the vision's intended results (impact, outcome, output).
2. Strengthen systems and processes for data collection and reporting to track progress and achievements of the vision's intended results.
3. Prepare for the next visioning exercise using the findings and recommendations of the Pause-and-reflect Activity, which could commence in 2024.

三、會議簡報 2

ASIAN PRODUCTIVITY ORGANIZATION

64th Workshop Meeting of Heads of NPOs
17-19 October 2023, Ankara, Turkiye

The Role of Model Factories in the Efficiency of Firms

Learn & Transform Programs

Güneş Ümit Artuk
Director of Adana Model Factory

What is Model Factory?

What is Model Factory?

What is Model Factory?

Model Factory - Learn & Transform Program

Learn: *Model Factory Trainings (3 days a month, Σ 12 days)*
Transform: *Site Visits (Once a week, Σ 12 days)*
Presentations: *Site Visits (Once a week, Σ 2 days)*

1. Session		2. Session		3. Session		4. Session		
Diagnosis		Design		Application		Sustainability		Final Presentations
3 Days	3 Weeks	3 Days	3 Weeks	3 Days	3 Weeks	3 Days	3 Weeks	2 Weeks
Learn	Transform	Learn	Transform	Learn	Transform	Learn	Transform	Presentations

Σ 18 Weeks

Model Factory Lean Subjects

In-Class Trainings (Theoritical)

Workshop Trainings (Scenarios)

Model Factory - Learn & Transform Program – Training Days

Day 1 & Day 2 & Day 3 (0,5 day)

Theoritical Trainings in Class

Practical Training in Workshop

Day 3 (0,5 day)

Participants present their progression slides

Planning visit plans and what to do at site visits after trainings

Model Factory Lean Subjects

1. Session: Diagnosis	2. Session: Design	3. Session: Application	4. Session: Sustainability
1 Lean Philosophy	1 Performance Tracking with Performance Dashboard	1 Gemba Problem Solving	1 JIT – Production Planning
2 Lean Walk	2 Affecting Techniques	2 Jidoka	2 JIT - Heijunka: Production Leveling
3 Activity Sampling and Shadowing	3 SMED – Single Minute Exchange Die	3 FMEA – Failure Mode and Effects Analysis	3 Keeping Standards by Kamishibai
4 Performance Management and KPIs	4 JIT (Just In Time)	4 FMS (Flexible Manufacturing Systems)	4 Standard Audit
5 Standard Time Measurement	5 JIT - Yamazumi: Line Balancing	5 Standardized Work	5 Coaching
6 VSM: Value Stream Mapping	6 Cell Design	6 JIT – Pull System ve Kanban	6 Maintenance Strategy ve TPM
7 OEE: Overall Equipment Effectiveness	7 5S & Work Station Design	7 JIT: Milk-Run Design	7 Autonomous Maintenance
	8 Future Situation Design	8 Observation of Future Situation Line	8 Calculation of Return of Investment
		9 Feedback	9 Lean Management & Lean Organization
		10 Performance Dialoges	10 Lean in Office and Services
			11 Lean Transformation

Model Factory - Learn & Transform Program – Site Visits


Consultancy and couching are provided to firms by visiting their sites once a week


Model Factory - Learn & Transform Program

Model Factory - Learn & Transform Program

What is your expectation from Learn & Transform Program?

These numbers?

- **Daily Production Quantity** + %140
- **Shiftly Production Quantity** + %66
- **Production Quantity / Operator** + %20
- **Production Unit Cost** - %18
- **OEE** + %41
- **Overtime** - %100
- **Capacity** + %20
- **Changeover Time** - %45
- **Area Saving** %39

People who realize these numbers?

➢ Let's watch model factory videos

Model Factory – Best Practices - Savings (Adana)

Adana Model Factory			
Year	**Number of Firms**	**Savings (million TL)**	**Lean Applications**
2020	12	19,1	VSM, OEE, Kaizen, 5S, SMED, Autonomous Maintenance, Performance Management
2021	18	23,6	Problem Solving Technique, 5S, JIT, OEE, SMED, Kaizen, VSM, Autonomous Maintenance, Line Balancing, Layout
2022	26	30,6	OEE, 5S, Autonomous Maintenance, Problem Solving Technique, JIT, SMED, Kaizen, VSM, Layout, ERP, MES, Standard Time Measurement, Shadowing, Standardized Work, Performance Management, Waste Walk, FMEA, Dojo, Line Balancing

Total	56	73,4	
Inflation (included)		212	7,6 million USD
Saving / Firm		3,8	136 k USD

Model Factory – Best Practices - Savings (Adana)

Industry	Area	Saving (TL)	Saving (USD)
Electrical	Warehouse, Coiling	42.826.662	1.535.006
Electrical	Laser/Plasma Cutting	16.800.446	602.167
Machinery-Metal	Warehouse, Technical Service, Assembly	12.878.395	461.591
Machinery-Metal	Press Brake	12.669.759	454.113
Pipe	Production	11.281.292	404.347
Textile	Yarn, Rope Unwinding	10.695.050	383.335
Machinery-Metal	Factory, Pres Brake, Roll-Form	10.108.809	362.323
Textile	Yarn	9.086.063	325.665
Textile	Yarn	7.524.718	269.703
Machinery-Metal	CNC, Welding	7.185.315	257.538
Machinery-Metal	Warehouse, Radial Drilling	6.818.293	244.383
Machinery-Metal	Warehouse, Assembly	6.817.597	244.358
Textile	Yarn	6.331.976	226.953
Machinery-Metal	Projects	6.124.681	219.523
Plastics	Extruder	4.370.241	156.639
Furniture	Warehouse, Sizing	3.469.270	124.347
Machinery-Metal	Production	3.316.893	118.883
Machinery-Metal	Shipment, Dyehouse	2.985.204	106.997
Machinery-Metal	Factory, CNC	2.975.421	106.646
Plastics	Assembly	2.557.020	91.649
Plastics	Extruder	2.444.463	87.615

Model Factory – Best Practices - KPIs (Adana)

Industry	Area	Before	After	KPI Improvement
Machinery-Metal	Warehouse	Average Stock on Hand Cost = 100 unit	Average Stock on Hand Cost = 9 unit	91%
Machinery-Metal	Warehouse	Average Stock on Hand Cost = 100 unit	Average Stock on Hand Cost = 15 unit	85%
Food	Production	Daily Production Quantity = 400 kg/man	Daily Production Quantity = 800 kg/man	100%
Plastics	Assembly	Shiftly Production Quantity = 1.000 pcs/man	Shiftly Production Quantity = 2.000 pcs/man	100%
Food	Production	Daily Production Quantity = 1.200 pcs	Daily Production Quantity = 1.600 pcs	33%
Chemical	Production	Defects = 5.349 kg	Defects = 884 kg	84%
Chemical	Production	Defects = 7.258 kg	Defects = 3.170 kg	56%
Machinery-Metal	Projects	Lead Time Delay = 14 days	Lead Time Delay = 6 days	60%
Machinery-Metal	Factory	Average Lead Time = 66 days	Average Lead Time = 58 days	12%
Textile	Rope Unwinding	OEE = %45	OEE = %91	102%
Machinery-Metal	Roll-form	OEE = %55	OEE = %94	62%
Machinery-Metal	Plasma Cutting	OEE = %59	OEE = %85	44%
Machinery-Metal	CNC	Annual Active Working Time = 3.847 hours	Annual Active Working Time = 5.040 hours	31%
Machinery-Metal	Shipment	Average Shipment Time = 200 minutes	Average Shipment Time = 25 minutes	88%
Machinery-Metal	Welding	Annual Welding Time = 5.000 hours	Annual Welding Time = 2.500 hours	50%
Electrical	Coiling	Average Changeover Time = 151 minutes	Average Changeover Time = 52 minutes	66%
Textile	Yarn	Average Changeover Time = 16 minutes	Average Changeover Time = 10 minutes	38%
Machinery-Metal	CNC	Daily Material Search Time = 88 minutes	Daily Material Search Time = 8 minutes	91%
Plastics	Extruder	Yearly Material Search Time = 500 hours	Yearly Material Search Time = 150 hours	70%

Model Factory – Best Practices (Adana)

- Textile
- 1950-Adana
- 1300 employee
- Poduces fabric from cotton, viscose, polyester, linen, lycocell, wool
- 18 million m2 yearly fabric production capacity

- Vater lines couldn't feed enough the next process, roving lines.
- Vater lines couldn't process enough semi-finished products coming from roving lines, and therefore stock amount between roving and vater lines was high.
- Performance tracking couldn't be performed.

- Bottleneck process were found as vater lines after VSM.
- OEE was calculated and stoppage analysis was performed.
- Kaizen, SOP and SMED were done to increase OEE.
- Performance management system was implemented and dashboard was designed.

KIVANÇ TEKSTİL SANAYİ VE TİCARET A.Ş.

OEE
+ %4

Annual Yarn Production Quantity
+ 251 ton

Changeover Time
- %20

Model Factory – Best Practices (Ankara)

- Wood
- 1984-Ordu
- 692 employee
- Produces MDF
- Export to 21 countries

- Changeover time was long.
- Unnecessary movements.
- Unstandardized works.
- Space constraints.
- Uncertainties in production plans.
- OEE was %60.

- Wastes were determined by shadowing.
- Changeover time was reduced by SMED.
- 5S at production lines.
- Performance dashboard was designed and KPIs were introduced on dashboard.
- OEE was raised.

CAMSAN ORDU AĞAÇ SANAYİ VE TİC. A.Ş.

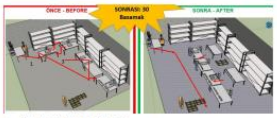
Daily Production Quantity
+ %33

Changeover Time
- %66

OEE
+ %34

Model Factory – Best Practices (Bursa)

- Sliding Stairs
- 2005-Bursa
- 40 employee
- Produces sliding stairs
- Export to 18 countries



- Overstocks due to changes in weekly production plans because of coming urgent orders.
- Time losses due to material searching.
- Over production losses.
- Unproductivity of manpower.
- Overload unbalancing between operators.
- Wastes of overstock and motion were eliminated.
- Production planning was developed.
- Overload unbalancing between operators were eliminated by Yamazumi.
- Layout was revized according to process flow. Therefore, waiting wastes between processes were eliminated.

ENGİN OTO

By-product Stock Quantity
- %90

Daily Production Quantity
+ %200

Model Factory – Best Practices (Gaziantep)

- Medical Products
- 2000-Gaziantep
- 12.000 m2
- Produces 1.6 billion baby diaper, 78 million patient diaper and 10 million wet towel yearly
- %70 export (42 countries)

- Liquid filling process time was long.
- Work process of liquid filling was not standard.
- High stoppages at liquid filling lines.
- Sub processes of liquid filling line were unbalanced.
- Changeover time at liquid filling process was very long.

- SOPs were formed.
- Number of operators at filling lines were reduced by line balancing.
- Autonomous maintenance was implemented.
- Changeover time loss at liquid production line was eliminated by Kaizens.

SAĞLIK ÜRÜNLERİ A.Ş. Fakten

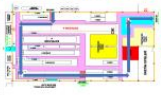
Changeover Time
- %100

Filling Capacity
+ %83

Production Capacity
+ %23

Model Factory – Best Practices (İzmir)

- Insulation
- 1991-İzmir
- 15.000 m2
- Produces insulation, HVAC, packaging, industrial foam, furniture forming products
- Export to 9 countries



- No SOPs.
- Layout was not proper for process flow.
- Too many non-value adding activities in processes.
- Too many breakdowns.
- Changeover time was long and changeover process was not srandard.
- No performance management.
- SOPs were formed for all processes.
- Layout was revized.
- Autonomous maintenance was implemented.
- Changeover time was reduced.
- KPIs were determined and then performance dashboard was designed.

Yalıtımda dinamik Çözüm

Filter Change Time
- %92

Changeover Time
- %40

Model Factory – Best Practices (Kayseri)

- Radiators
- 1991-Çorum
- 118 employees
- 9.000 M2
- %80 export (35 countries)
- Produces radiators (agricultural, machinary, vehicle, generator, forklift)

- Cycle times and lead times were long.
- OTIF was low.
- Overtime due to lower capacity efficiency.
- Some cycle times were wrong or missing.

- Process cycle times were measured.
- Product cycle time was reduced.
- To increase capacity, shipment and dyehouse were maintained to work everyday.
- Gemba meetings were introduced to increase OTIF. Team leaders were provided to track production by data and responsibilites of team leaders were raised.

armor

Daily Production Quantity
+ %20

OTIF
> %90

Product Cycle Time
- %78

Model Factory – Best Practices (Konya)

- Agricultural Machinery
- 1973-Konya
- 110 employees
- Produces Agricultural machinery
- Export to 50 countries

- Planning problems due to producing familiar products at different assembly lines.
- Too many breakdowns at production lines.
- Internal logistics problems for assembly materials.
- Lower productivity of assembly lines and therefore overtimes.
- Layout constraint. No space for new space needs.

- One piece flow system was introduced by combining three different assembly line.
- Waitings and stoppages were reduced.
- Internal logistics problems were mainly solved by line balancing.
- OEE was raised by reducing wastes.
- Overtimes were eliminated and space saving by one piece of flow system.

ÖNALLAR

OEE
+ %145

Operator Efficiency
+ %46

Space Saving
+ %61

Model Factory – Best Practices (Mersin)

- Agricultural Machinery
- 1962-Mersin
- 7.000 M2
- Produces agricultural machinery and accessories

- No SPOs.
- Too many stoppages due to missing material or out of spec materials.
- Layout problems.
- Waiting between processes and bottlenecks.
- Time waste due to searching materials and equipments.

- SOPs were formed.
- Production and stock area were organized by 5S.
- Quality processes were shortened.
- Bottlenecks at assembly lines were removed by time measurements and necessary improvements such as line balancing.

BOLAT

Assembly Time
- %24

Production Capacity
+ %33