

**SME Development Fund (SDF)/
Dedicated Fund on Branding, Upgrading and Domestic Sales (BUD Fund)
(Organisation Support Programme) (OSP)**

Final Report on Approved Project

Project ref. no.	:	<u>D16 002 003</u>	
Project title	:	<u>Hong Kong foundation industry towards “Industry 4.0”: Formulate a “Short-Mid-Term Strategic Upgrade Mapping” and develop a “ Practical Implementation Guideline” for Hong Kong foundation industries based on the new business & manufacturing concept & standard of Industry 4.0</u>	
Period covered	:	From <u>01/03/17</u> (dd/mm/yy)	to <u>31/07/19</u> (dd/mm/yy)

1. Project Details

(Please mark with "*" if any of the following project details is different from that in the project proposal appended to the project agreement.)

Project Summary (in about 150 words)

In order to assist Hong Kong foundation industry (i.e. plastics, metals, electronics and machinery equipment) in the era of "Industry 4.0", Industry practitioner, Hong Kong and international experts will work together to formulate "Sector-specific Industry 4.0 Benchmarking Models" to establish a standard guideline for Industry 4.0 maturity and Research Questionnaire for SMEs to self-evaluate and collect overall industry status, then the result will be reflected in "Short-Mid-Term Strategic Upgrade Mapping". Based on mapping, "Practical Implementation Guideline and Case study" will be developed to guide SMEs how to select and implement the project ideas derived from industry 4.0 requirements.

Project Objective(s) (in about 80 words)

To assist HK SMEs of four Industries sectors to migrate their legacy manufacturing operation and production into Industry 4.0 gradually by formulating a "Short-Mid-Term Strategic Upgrade Mapping", developing a "Sector-specific Industry 4.0 Benchmarking Model" and a "Sector-specific practical implementation guideline" in order to provide a solid reference protocol to assist them to ride on this new management and manufacturing concept and standard as well as assist them to master the know-how of step-by-step realisation towards Industry 4.0.

Grantee/Collaborating Organisation/Implementation Agent

Grantee : Hong Kong Federation of Innovative Technologies and Manufacturing Industries Limited

1. Hong Kong 3D Printing Association
2. Federation of Hong Kong Industries
3. Hong Kong (SME) Economic and Trade Promotional Association
4. Hong Kong Surface Finishing Society
5. Hong Kong Plastic Bag Manufacturers' Association
6. Hong Kong Electrical Appliance Industries Association
7. Hong Kong Electro-Plating Merchants Association
8. Hong Kong Netrepreneurs Association
9. Hong Kong Critical Components Manufacturers Association
10. Hong Kong Foundry Association
11. Vocational Training Council
12. Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies
13. Inno Quality Academy
14. Hong Kong Research Institute of Textiles and Apparel
15. Hong Kong Opto - Mechatronics Industries Association
16. American Society for Quality
17. Hong Kong Mould & Die Council
18. Hong Kong Automation Technology Council
19. Hong Kong Plastic Industry Council
20. Hong Kong Plastic Machinery Association
21. Hong Kong Metal Electronics Industries Gen Union
22. Chinese Manufacturers' Association of Hong Kong
23. Toy Manufacturers' Association of Hong Kong
24. Hong Kong Screw & Fastener Council
25. Hong Kong Electronic Industries Association
26. Hong Kong Toy Council
27. Hong Kong Metal Merchants Association
Collaborating Organisation(s) : 28. Hong Kong Mould and Product Technology Association Limited

Implementation Agent(s) : Hong Kong Productivity Council

Key Personnel

		<u>Name</u>	<u>Company/Organisation</u>	<u>Tel No. & Fax No.</u>
Project Co-ordinator	:	<u>Mr Lee Yuen Fat</u>	<u>FITMI</u>	<u>3188 0240 / 3586 2765</u>
Deputy Project Co-ordinator	:	<u>Mr William Yim</u>	<u>FITMI</u>	<u>3188 0240 / 3586 2765</u>

Project Period

	<u>Commencement Date</u> (day/month/year)	<u>Completion Date</u> (day/month/year)	<u>Project Duration</u> (No. of months)
As stated in project agreement	<u>01/03/17</u>	<u>31/07/19</u>	<u>28</u>
Revised (if applicable)	<u></u>	<u></u>	<u></u>

2. Summary of Project Results

Project Deliverables

(Please list out the project deliverables as stated in the project proposal appended to the project agreement and provide details related to the actual result achieved for each of them.)

	Project deliverable (e.g. First seminar)	Quantifiable target (e.g. 100 participants)	Actual result achieved (e.g. 90 participants)	Reasons for not achieving the target, if applicable (e.g. The total number of registered participants was over 120. However, some of them did not show up eventually. Will strengthen promotion and try to make up for the shortfall in the following two seminars.)
1)	To form "Project Steering Committee"	1 group	1 group	
2)	To establish "An Interactive League Platform of Hong Kong Industry 4.0"	1 platform	1 platform	
3)	To organise "Half-day Awareness Conference"	1 half-day conference (100 participants)	1 half-day conference (96 participants)	
4)	To formulate a "Sector-specific Industry 4.0 Benchmarking Models" and Research Questionnaire	Four Sector-specific Industry 4.0 Benchmarking Models	Four Sector-specific Industry 4.0 Benchmarking Models	
5)	To organise "High-level Seminars on Industry 4.0 Implementation"	5 seminars (one full-day seminar (120 participants) plus four half-day seminars (50 participants each))	1 full day seminar (120 participants); 4 half day seminars (50 participants per seminar)	
6)	To formulate the "Short-Mid-Term Industry 4.0 Strategic Upgrade Mapping"	Four Sector-specific Strategic Upgrade Mapping	Four Sector-specific Strategic Upgrade Mapping	
7)	To compile a "Sector-specific Practical Implementation Guideline and Case Analysis"	Four Sector-specific Practical Implementation Guidelines and Case Analysis	Four Sector-specific Practical Implementation Guidelines and Case Analysis	
8)	To organise "Half-day Dissemination Conference"	1 half-day dissemination conference (100 participants)	1 half-day dissemination conference (100 participants)	
9)	To organise a "Industry 4.0 Implementation Workshop Series"	3 workshops, 2.5 days in total	3 workshops, 2.5 days in total	
10)	To compile project achievements and distribute to HK SMEs through webpage of	"Interactive League Platform of Hong Kong	"Interactive League Platform of Hong Kong	

	"interactive League Platform of Hong Kong Industry 4.0", 21 trade associations' website, HKPC website or other channels for free access	Industry 4.0", 21 trade associations, HKPC	Industry 4.0", 21 trade associations, HKPC	
11)	To conduct industry-wide promote on Industry 4.0 and the SDF programme	- 4 pages (2 pages each x 2) Supplements - 6 Technical Articles - 6,000 copies of promotion pamphlet - EDM of project events and items	- 4 pages (2 pages each x 2) Supplements - 6 Technical Articles - 6000 copies of promotion pamphlet - 26 rounds of EDM	- 2 pages of newspaper supplements of awareness conference (11 Dec, 2017) - 2 pages of newspaper supplements of dissemination conference (29 Jul, 2019)

Details of the deliverables (e.g. date, duration, venue, speaker, topic discussed, etc.)

(Please list out in table format if necessary.)

	Deliverable	Quantity	Details
1)	To form "Project Steering Committee"	1 group	To form a group of "Project Steering Committee" which consisted of representatives from project applicant, HKPC, scholars, retired independent professionals, professional body representative and collaborating organizations, etc. Committee Member: 1. Mr. Lee Yuen Fat, Chairman of FITMI 2. Mr. William W. L. Yim, President of Hong Kong Critical Components Manufacturers Association 3. Mr. Vincent H P Kong, Vice-Chairman of Hong Kong Foundry Association 4. Dr Lui Sun Wing, Professional Advisor of FITMI 5. Mr. Alan F.H. Suen, Chairman of Hong Kong Metals Manufacturers Association 6. Ms. Grace P.K. Tai, Chairman of Hong Kong Plastic Machinery Association 7. Mr. Robert Z.J. Yan, Executive Vice President of Hong Kong Mould and Product Technology Association 8. Professor Chan Kei Biu, Honorary Chairman of Hong Kong Electronic Industries Association 9. Mr. Raymond M.Y. Shan, Principal Consultant, Industry 4.0 & Additive Manufacturing in HKPC
2)	To establish "An Interactive League Platform of Hong Kong Industry 4.0"	1 platform	Website: https://i40.hkpc.org/ launched on 24 Mar 2017
3)	To organise "Half-day Awareness Conference"	96 participants	Held on 11 th Dec 2017 from 9.30am to 12.30pm
4)	To formulate a "Sector-specific Industry 4.0 Benchmarking Models" and Research Questionnaire	A Sector-specific Industry 4.0 Benchmarking Models and Research Questionnaire	- Research Questionnaire was distributed through "Interactive League Platform of Hong Kong", associations and HKPC websites. - Sector-specific Industry 4.0 Benchmarking Models was finished.
5)	To organise "High-level Seminars on Industry 4.0 Implementation"	1 full day seminar (120 participants);	- 1 full day seminar: "Industry Perspective and Insight on Industry 4.0 Deployment" – 3 Sep 2018

		4 half day seminars (50 participants per seminar)	- 4 half day seminars : “Smart Enterprise practical training - Smart factory Principle, Operation and Demonstration of Industry 4.0” were held on 4 Sep 2018, 24 Sep 2018, 15 Oct 2018, 29 Oct 2018 .
6)	To formulate the “Short-Mid-Term Industry 4.0 Strategic Upgrade Mapping”	Short-Mid-Term Industry 4.0 Strategic Upgrade Mapping	- Short-Mid-Term Industry 4.0 Strategic Upgrade Mapping was finished.
7)	To compile a “Sector specific Practical Implementation Guideline and Case Analysis”	Sector specific Practical Implementation Guideline and Case Analysis	- Sector specific Practical Implementation Guideline and Case Analysis was finished.
8)	To organize “ Half-day Dissemination Conference ”	Half-day Dissemination Conference (100 participants)	Half-day Dissemination Conference : “The upgrade roadmap and strategy of Industry 4.0 for Hong Kong SMEs” – 29 Jul 2019
9)	To organize a “ Industry 4.0 Implementation Workshop Series ”	3 workshops, 2.5days in total	Workshop 1 : “Industry 4.0 Market and Technological Trends Analysis and Practical Tools and Technology” (1 day) – 18 Mar 2019 Workshop 2 : “Industry 4.0 Technical Contents of Pilot Project the Key Components, Design Principles, Capability Projects, Integrated Features and Enterprise Maturity” (1 day) – 1 Apr 2019 Workshop 3 : “Industry 4.0 Implementation Strategic Focus and Steps” (0.5 day) – 12 Apr 2019
10)	To compile project achievements and distribute to HKSMES through webpage of “Interactive League Platform of Hong Kong Industry 4.0”, 21 trade associations’ website, HKPC website or other channels for free access	“Interactive League Platform of Hong Kong Industry 4.0”, 21 trade associations, HKPC	Website: https://i40.hkpc.org/
11)	To conduct industry-wide promote on Industry 4.0 and the SDF programme	- 4 pages (2 pages each x 2) Supplements - 6 Technical Articles - 6000 copies of promotion pamphlet - 26 rounds of EDM	- 4 pages (2 pages each x 2) newspaper supplements: Published in 19 Dec 2017 , and 7 Aug 2019 (Hong Kong Economic Times; Sing Tao Daily) - 6 technical articles: 2 x HKPC’s publication “智營” (Aug 2017 and Feb 2018); 1 x publication on Hong Kong Economic Journal (Jun 2018); 1 x publication on Federation of Hong Kong Industries “Hong Kong Industrialist” (Jul 2018); 1 x publication on Sing Tao Daily (Aug 2018); 1 x publication in HKPC website (Jul 2019); - Designed and printed promotion pamphlet (Completed in Sep 2017 for 3000 copies, and in Jul 2019 for 3000 copies) 26 rounds of EDM: To promote project events and items in Nov 2017 to Jul 2019 (17 Nov 2017, 22 Nov 2017, 11 Jul 2018, 25 Jul 2018, 6 Aug 2018, 9 Aug 2018, 13 Aug 2018, 20 Aug 2018, 28 Aug 2018, 12 Oct 2018, 29 Oct 2018, 3 Jun

			2019, 4 Jun 2019, 5 Jun 2019, 6 Jun 2019, 14 Jun 2019, 17 Jun 2019, 19 Jun 2019, 26 Jun 2019, 28 Jun 2019, 2 Jul 2019, 4 Jul 2019, 8 Jul 2019, 9 Jul 2019, 15 Jul 2019, 24 Jul 2019)
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Milestones (in chronological order)

(# Please indicate if the milestone is completed (C), deferred (D) or not achieved (N). If it is deferred, please indicate the revised completion date. For those milestones which are deferred or not achieved, please also provide the reasons under item 2.4.)

	<u>Milestone</u> (as set out in the approved project proposal appended to the project agreement)	Original target completion <u>date</u>	Revised target completion <u>date</u> (if applicable)	<u>Status</u> (C/P/D) #	Reason for deviation from its original target <u>completion date</u>
(a)	Project Steering Committee Group	31/05/17		C	
	An Interactive League Platform of	31/05/17		C	
(b)	Hong Kong Industry 4.0				
(c)	Half-day Awareness Conference	30/11/17	11/12/17	D	To avoid collision of other i4.0 related event
(d)	1 st Technical Article	28/02/18	31/08/17	C	
	Pamphlets	31/05/17	30/09/17	D	Extra time used to prepare content of the article
(e)	1 st Supplement at newspapers	30/11/17	19/12/17	D	As the Half-day awareness conference delayed, the supplement is also delayed accordingly, and scheduled on 19/12/2017
(f)					
(g)	2 nd Technical Article	28/02/18		C	
	3 rd Technical Article	28/02/18	30/06/18	D	Extra time used to prepare content of the article
(h)					
	“Sector-specific Industry 4.0 Benchmarking Model” and Research	28/02/18		C	
(i)	Questionnaire				
	Distribute Benching Research	31/08/18		C	
(j)	Questionnaires to HK SMEs				
	Select and conduct 20 enterprise for	31/08/18		C	
(k)	onsite evaluation				
	High-level Seminars on Industry 4.0	31/08/18	31/10/18	D	Extra time needed to invite speakers
(l)	Implementation				
	Short-Mid-Term Industry 4.0	31/08/18		C	
(m)	Strategic Upgrade Mapping				
(n)	4 th Technical Article	28/02/19		C	
	5 th Technical Article	28/02/19		C	
(o)	Sector-specific Practical Implementation Guideline and Case	28/02/19		C	
(p)	Analysis				
	Pamphlets	28/02/19	26/06/19	D	Extra time used to prepare content of the pamphlet
(q)					
	Half-day Dissemination Conference	28/02/19	31/07/19	D	Extra time needed to invite speakers
(r)					

	Industry 4.0 Implementation	30/06/19		C	
(s)	Workshop Series				
	2 nd Supplement at newspapers	30/06/19		C	
(t)	6 th Technical Article	30/06/19	31/07/19	D	Extra time used to prepare content of the article
(u)					
	Project achievement compiling and distribution	30/06/19	31/07/19	D	Delay in organising the dissemination conference
(v)					

Future Plan for Promoting the Project Deliverables (Nil if not applicable)
