

**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. : D14 002 010  
Project title : To promote adoption of automation technology to  
enhance productivity of Restaurant Industry  
Period covered : From 25/06/2015 to 24/12/2016  
(dd/mm/yy) (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)

There were 15,760 restaurants in Hong Kong's catering market. The total number of persons engaged in restaurant industry reached approximately 178,000 by December 2013, representing approximately 6.5% of the total number of employment in Hong Kong (Source: Census and Statistics Department). According to the Association of Restaurant Managers in May 2014, the industry is facing a relentless challenge of labour shortage with the workload of 10 persons always shared by 7 persons. Dish washing worker (洗碗工), waiter (侍應) and cook (廚師) are the most sorely lacking manpower jobs in a restaurant. To cope with the challenge of manpower shortage, restaurants have to adopt automation technology to enhance their productivity.

Although the SME restaurant practitioners are in search of various automation solutions to relieve the pressure of manpower shortage, they lack awareness on what and how automation technology can enhance the productivity for their kitchen (廚房) operation such as dish/utensil cleaning, food processing and cooking, and frontline operation (樓面) such as order taking. Except several sizable restaurants and projects such as the adoption of stir fry machine (炒鑊機) for automatic cooking in Tai Hing Catering Group (太興飲食集團) and the adoption of electronic menu (電子菜單) in Itacho Sushi (板長壽司) for self-service to relieve the pressure of manpower shortage, the adoption of automation technology is still at the infancy stage. Thus, the project activities include (i) organizing restaurant automation technology seminars to promote the application of a wide range of modern, practical and cost effective automation technology for kitchen and frontline operation and to conduct a survey study to identify the adoption criteria for developing a practical guide to the restaurant industry, (ii) developing editorial articles to promote the benefits of technology adoption and publishing them in newspapers and industry journals, (iii) organizing technology visits to facilitate experience sharing, (iv) developing educational videos to increase the awareness on technology adoption for kitchen and frontline operation, (v) developing a practical guide with a self-assessment checklist to examine the readiness of adopting relevant technology and tips of selection and implementation, and (vi) organizing a dissemination seminar and technology exhibition to disseminate and display the good practice for a Smart Restaurant with the adoption of automation technology.

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### Project Objective(s) (in about 80 words)

- **To increase the awareness of restaurants in Hong Kong to adopt automation technology** via (a) organizing restaurant automation technology seminars and conducting a survey study with restaurant practitioners to promote the adoption of modern, practical and cost effective automation technology and to define the adoption criteria such as space, cost, maintenance, potential manpower saving and return on investment, etc., (b) organizing technology visits for experience sharing and facilitating restaurant practitioners to visualize the new operation if using automation technology, (c) developing editorial articles to promote the benefits of technology adoption in newspapers and industry journals.
- **To enhance the knowledge of restaurant practitioners so as to accelerate the adoption of automation technology** via (a) developing educational videos to illustrate the application of various automation technology and their benefits to enhance the productivity of kitchen (廚房) and frontline (樓面) respectively, (b) developing a practical guide to highlight the good practice of a Smart Restaurant, a checklist to assess the readiness on technology adoption, tips for selection and implementation and case examples, and (c) organizing a dissemination seminar and technology exhibition to disseminate and display the good practice of a Smart Restaurant.

**Grantee/Collaborating Organisation/Implementation Agent**

Grantee : The Hong Kong Federation of Restaurants & Related Trades Limited  
1. The Association for Hong Kong Catering Services Management Limited  
2. Institution of Dining Art Limited  
3. Chamber of Food and Beverage Industry of Hong Kong Limited  
4. Hong Kong Science and Technology Parks Corporation

Collaborating Organisation(s) : 5. The Hong Kong Electronic Industries Association Limited

Implementation Agent(s) : Hong Kong Productivity Council

**Key Personnel**

	<u>Name</u>	<u>Company/Organisation</u>	<u>Tel No. &amp; Fax No.</u>
Project Co-ordinator :	Dr. Lee Yuen Hong	The Hong Kong Federation of Restaurants & Related Trades Limited	2523 6128 / 2523 2638
Deputy Project Co-ordinator :	Mr Howard Wong	The Hong Kong Federation of Restaurants & Related Trades Limited	2523 6128 / 2523 2638

**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	25/06/2015	24/12/2016	18 months
Revised (if applicable)			

## 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	Quantifiable target number (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.)
a)	1 <sup>st</sup> seminar	320 participants	96 participants (50 evaluation forms were received)	
b)	2 <sup>nd</sup> seminar		100 participants (28 evaluation forms were received)	
c)	3 <sup>rd</sup> seminar		84 participants (18 evaluation forms were received)	
d)	4 <sup>th</sup> seminar		83 participants (29 evaluation forms were received)	
e)	1 <sup>st</sup> technology visit	60 participants	33 participants	
f)	2 <sup>nd</sup> technology visit		38 participants	
g)	3 <sup>rd</sup> technology visit		59 participants	
h)	Seminar promotion leaflets	2,000 copies (500 copies x 4 seminars)	2,000 copies (500 copies x 4 seminars)	
i)	Technology visit promotion leaflets	1,500 copies (500 copies x 3 visits)	1,500 copies (500 copies x 3 visits)	
j)	Survey studies	1 time	100 questionnaires were collected	
k)	4 editorial articles	4 times	2 times on HKFORT journal  2 times on Ming Pao newspaper	
l)	Technology visits video-tapping	3 times	3 times	
m)	Educational videos	2 videos (20 mins each)	2 videos (20 mins each)	
n)	Smart restaurant practical guide	2,000 copies	2,000 copies	
o)	e-version of Smart restaurant practical guide	1 time	1 time	
p)	Good practice	300	308	

	dissemination seminar	participants	participants (9 evaluation forms were received)	
q)	Good practice dissemination seminar promotion leaflet	2,000 copies	2,000 copies	
r)	Good practice dissemination seminar handout	330 copies	330 copies	

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

(Please list out in table format if necessary.)

- The 1<sup>st</sup> restaurant automation technology seminar was organized at Hong Kong Productivity Council on 4 Nov 2015 with 96 participants. Topics included electronic ordering, mobile payment, kitchen automation and 3D food printing. 500 copies of promotion leaflet were printed to promote this seminar. (Target: 4 seminars with total 320 participants)
- The 2<sup>nd</sup> restaurant automation technology seminar was organized at Hong Kong Science and Technology Park on 15 Mar 2016 with 100 participants. Topics included kitchen automation, electronic ordering apps, table reservation apps and innovative food preparation technology. 500 copies of promotion leaflet were printed to promote this seminar. (Target: 4 seminars with total 320 participants)
- The 3<sup>rd</sup> restaurant automation technology seminar was organized at The Mira Hong Kong Hotel on 15 Jun 2016 with 84 participants. Topics included kitchen automation, WeChat mobile payment and enhance the customer's management apps. 500 copies of promotion leaflet were printed to promote this seminar. (Target: 4 seminars with total 320 participants)
- The 4<sup>th</sup> restaurant automation technology seminar was organized at Hong Kong Productivity Council on 14 Sep 2016 with 83 participants. Topics included water bar automation, electronic payment automation and financial operation automation. 500 copies of promotion leaflet were printed to promote this seminar. (Target: 4 seminars with total 320 participants)
- The dissemination seminar was organized at Regal Kowloon Hotel on 7 Dec 2016 with 308 participants. Topics included kitchen cleaning automation, electronic wallet automation and automatic cooking technology. The total of 15 automation technology vendors displayed and demonstrated the latest automation technologies in the exhibition. 2,000 copies of promotion leaflet and 330 copies of good practice dissemination seminar hand-out were printed to promote this seminar. (Target: 1 dissemination seminars with total 300 participants)
- The 1<sup>st</sup> technology visit was organized on 4 Nov 2015 with 33 participants. The content included the technology visit to a dish washing machine company in Yuen Long, a cloud based service restaurant in Yuen Long and a dish washing workshop in San Po Kong. 500 copies of promotion leaflet were printed to promote this technology visit. (Target: 3 technology visits with total 60 participants)
- The 2<sup>nd</sup> technology visit was organized on 15 Mar 2016 with 38 participants. The visit included a green and automated kitchen in North Point and a restaurant using electronic menu and ordering apps integrating to the point of sale system in the Hong Kong Science and Technology Park. 500 copies of promotion leaflet were printed to promote this technology visit. (Target: 3 technology visits with total 60 participants)
- The 3<sup>rd</sup> technology visit was organized on 31 May 2016 with 59 participants. The visit arranged to a Central kitchen located in Hong Kong International Airport. 500 copies of promotion leaflet were printed to promote this technology visit. (Target: 3 technology visits with total 60 participants)
- A questionnaire was designed for the survey study. Total 100 questionnaires were collected from the two restaurant automation technology seminars which were held on 4 Nov 2015 and 15 Mar 2016.
- Two editorial articles were published in HKFORT journal (飲食薈萃, 2015年11月號; 飲食薈萃, 2016年5月號) featuring the good practice of a cloud based service restaurant and the benefit on the adoption of automation technology e.g., dish washing machines. Other Two editorial articles were publish in newspaper (明報, 2016年10月3日 A21版; 2016年11月14日 A6版) reported the seminar highlights, survey findings and promote the automation technology to public. (Target: 4 times of editorial articles)

- The 1<sup>st</sup> technology visit video-tapping was carried out on 4 Nov 2015, the 2<sup>nd</sup> technology visit video-tapping was carried out on 15 Mar 2016 and the 3<sup>rd</sup> technology visit video-tapping was carried out on 31 May 2016. All shooting editing was completed and uploaded on HKFORT Website. (Target: 3 times of technology visit video-tapping)
- The shooting of the two smart restaurant educational videos (one kitchen automation and one frontline automation) were finished and upload on HKFORT Website to promote automation technology. (Target: 2 educational videos, 20 mins each)
- Smart restaurant practical guide book with a self-assessment checklist was published on 30 November 2016 and disseminated to the participants on the dissemination seminar and members of HKFORT. The practical guide book was illustrated the readiness of adopting relevant technology and tips of selection and implementation, case examples with reference to the survey result. E-version of the practical guide book was also uploaded onto HKFORT's website. (Target: 1 Smart restaurant practical guide book & 1 e-version of Smart restaurant practical guide book)

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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/N) #
	- Form working team committee	31/8/2015		C
(a)	- Formulate detailed implementation plan			
	- Co-ordinate with practitioners, technology providers, potential restaurants for Restaurant Automation Technology Seminars, a Survey Study and Technology Visits	30/9/2016		C
(b)				
	- Organize 4 Restaurant Automation Technology Seminars	30/9/2016		C
(c)				
	- Organize and conduct survey from the participants in the 4 seminars	30/9/2016		C
(d)				
	- Organize 3 Technology Visits	30/9/2016		C
(e)				
	- Design the storyline and script for the Technology Visit Videos	30/9/2016		C
(f)				
	- Source and co-ordinate with video production house to produce the Technology Visit Videos	30/9/2016		C
(g)				
	- Videos taping, editing and dubbing, etc.	30/9/2016		C
(h)				
	- Post the videos on HKFORT's website for public access	30/9/2016		C
(i)				
	- Liaise with relevant trade associations to develop hyperlink for viewing accessing these videos	30/9/2016		C
(j)				
	- Promote the hyperlink of these videos in the HKFORT website in the promotional materials	30/9/2016		C
(k)				
	- Play the videos starting in the technology seminars once ready and in the Good Practice Dissemination Seminar	30/9/2016		C
(l)				
	- Design 4 Editorial Articles to promote Smart Restaurant with the adoption of automation technology to enhance productivity	30/9/2016		C
(m)				

(n)	- Identify and co-ordinate with newspapers, industry journals or magazines to advertise the promotional materials or articles	30/9/2016	C
(o)	- Design the storyline and script for the Educational Videos	30/9/2016	C
(p)	- Source and co-ordinate with video production house to produce the Educational Videos	30/9/2016	C
(q)	- Videos taping, editing and dubbing, etc.	30/9/2016	C
(r)	- Post the videos on HKFORT's website for public access	30/9/2016	C
(s)	- Liaise with relevant trade associations to develop hyperlink for accessing these videos	30/9/2016	C
(t)	- Promote the hyperlink of these videos in the HKFORT website in the promotional materials	30/9/2016	C
(u)	- Play the videos starting in the technology seminars once ready and in the Good Practice Dissemination Seminar	30/9/2016	C
(v)	- Develop the Practical Guide including self-assessment checklist, selection and implementation tips and case examples	30/9/2016	C
(w)	- Publish the Practical Guide in the form of printed copy and e-version for posting on the HKFORT and other relevant industry associations' websites to widen the dissemination	30/9/2016	C
(x)	- Organize the Good Practice Dissemination Seminar and Technology Exhibition	30/11/2016	C
(y)	- Co-ordinate with speakers and promote the seminar	30/11/2016	C
(z)	- Invite and co-ordinate with automation technology vendors as many as possible to display their products	30/11/2016	C
(aa)	- Design the promotion leaflet	30/11/2016	C
(bb)	- Design and print the seminar handout for dissemination	30/11/2016	C
(cc)	- Complete project report	24/12/2016	C

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

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