

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

Final Report on Approved Project

This report is for (please put "√" in either one box only):

SDF Final Report

BUD Fund (OSP) Final Report

Project ref. no. : D15 001 005
Project title : To upgrade the competitiveness of local SME watch
companies by adopting the manufacturing and quality
system of NIHS standards developed by SWISS
Period covered : From 01/04/2016 to 31/12/2017
(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)

Hong Kong watch industry has developed and produced a large quantity of products and components to the overseas markets especially for the low to medium end market. However, the exported volume of Hong Kong timepiece is continually decreased from 354.4M units in 2012 to 315.1M units in 2014, whilst China exported timepieces is increased from 662.5M units in 2012 to 669M units in 2014. With the competition of the China watch industry, how to increase the added value to the Hong Kong timepiece will be a major direction in rival the falling trend of the production volume. Therefore, uplifting the values generated by enlarge the sharing of the high end market will be a considerable way for the future of Hong Kong watch industry. In order to further enhance our capability and competitiveness for entering the high end market, it is necessary to make the products and components in a more consistence way in terms of quality and standards.

One of the major hurdles for Hong Kong watch manufacturers to enter the high end market is to overcome the inconsistent quality and the nonconformity of quality standards. The problem is due to the lack of common industrial requirements in the manufacturing and quality control of watch parts and products across the local watch industry. Today, they mainly follow the individual buyer or brand requirements and it causes a large variety in quality standards for components and watch manufacturing. It is noticed that the quality standards from Swiss watch industry is the most preferable over the global watch markets. However, the national standard of Switzerland for watch industry (NIHS) is hard to interpret and adopt by SME especially the documents are written in French. Most of the SME companies did not have the capability and resources to interpret, analyse as well as translate the standards and put it into practices.

With a very hard negotiation with the Federation of the Swiss Industry, HKPC and HKWMA has successfully obtained the copyright for translating the Swiss Standards (NIHS), the major and most important Swiss standard for watch manufacturing and quality control, to Chinese language. In order to allow the SME to comply and adopt the standard requirements, we would like to develop a comprehensive program to help the industry in upgrading to the Swiss standards and further enhance their capability in watch and component manufacturing.

The comprehensive program will include the development of a technical handbook, conducting a gap analysis, producing a teaching video as well as organization of an oversea training course and two dissemination seminars.

Project Objective(s) (in about 80 words)

To develop a technical handbook with guidelines for the know-how in achieving the NIHS standards requirements in term of manufacturing and testing methods

To analyze the existing gap between the capability/practice of the SME companies and the requirements listed in the NIHS, and provide suggestions and methodology to achieving the requirement of standards

To develop teaching video for demonstrating the know-how on the major requirements of the standard

To organize an oversea training course to provide professional training with on site demonstration and experience sharing by the expert

To organize 2 half-day dissemination seminars for introducing the requirements of watch parts & components, manufacturing technique, quality criteria and testing requirement of the NIHS standard. It could provide guidance to teach SMEs how to achieving the NIHS standards.

Grantee/Collaborating Organisation/Implementation Agent

Grantee : Hong Kong Watch Manufacturers Association Limited (HKWMA)
Collaborating Organisation(s) : The Federation of Hong Kong Watch Trades & Industries Ltd. (FHKWTI)
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	Kenneth WONG	Hong Kong Watch Manufacturers Association Limited	Tel: 2522 5238 Fax: 2810 6614
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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	01/04/2016	30/9/2017	18 months
Revised (if applicable)	01/04/2016	31/12/2017	21 months

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	Actual result achieved	Reasons for not achieving the target, if applicable
a)	Development of a comprehensive set of Technical Handbook	1000 sets of hardcopy will be produced and distributed through various associations.	1000 sets of hardcopy was produced and distributed through various associations	
b)	Development of the gap analysis	About 10 SMEs will be selected for conducting the analysis.	17 SMEs were arranged for conducting the analysis.	
c)	Production of the tutorial video	The duration of the teaching video will be about 15 minutes.	1 teaching video with duration about 15 minutes was produced. 17 test methodologies were filmed and 20 major test equipment were demonstrated.	
d)	Organization of 1 st dissemination seminar	Around 100 participants attending the seminar	The half-day seminar was held on 24.11.2017. 72 participants attended the seminar.	The two seminars were promoted at the same time. Reason of deviation is because participants could have different interest of topics in the two seminars. The total number and average number of participants in the two seminars matched the target number.
e)	Organization of 2 nd dissemination seminar	Around 100 participants attending the seminar	The half-day seminar was held on 15.12.2017. 128 participants attended the seminar.	
e)	Organization of the local training course	40 participants will attend the training. The duration of the local training will be about 5 days.	The 5-day local training course was held during 11.12.2017-15.12.2018. 71 participants completed the course.	Remarks: Regarding the approved change request dated 25 and 28 Sep 2017, the overseas training course was changed to the local training course and the target number of participants was changed from 10-15 to 40.

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

(Please list out in table format if necessary.)

1. Development of a comprehensive set of Technical Handbook

A technical handbook namely “瑞士鐘錶業國家標準技術指引” was developed. 1000 sets of hardcopy was produced and distributed through various associations to the SMEs.

During the development of the technical handbook, a full set of the national standard of Switzerland for watch industry (NIHS) was obtained. Each standard was studied, analysed and evaluated. Consequently, framework of the handbook was established and the chapters summarized for each standard were designed, covering different manufacturing process of watch components, including watch dial, case, bands, glasses, hands, screws and movement, and important quality standards for complete watch such as reliability tests, shock resistance test and water resistance test.

2. Development of the gap analysis

11 Site visits were conducted at 8 SMEs, including initial assessment and additional follow-up for 3 companies. In addition, interviews were conducted with 9 companies. Site visits and interviews were arranged to different watch components manufacturers to study their current production method, process, facilities and method. Problems and advantages were identified during site visits and interviews. The findings of gap analyses including the difference of practice on the usage of materials, tolerance requirement of components and the quality checking procedures with the NIHS were summarized, advices and suggestions were incorporated into different chapters of the technical handbook. The result of gap analysis was also disseminated through the two dissemination seminars. In the first seminar, the gap analysis of each major standard of the NIHS was detailedly briefed. In the second seminar, the best practice and methodology of Swiss watch industry to minimise the gap were shared. The information of the gap analysis was also disseminated through watch publication “Hong Kong Watches #37”, “Hong Kong Watches #38” and the publications were uploaded to the webpage of HKWMA.

3. Production of the tutorial video

A teaching video with duration about 15 minutes was produced. 17 test methodologies were filmed and 20 major test equipment were demonstrated. The video was taken in the laboratories of a watch assembly factory and Hong Kong Watch & Clock Technology Centre. The teaching video was disseminated to the SMEs through various associations and it was shown during the 2nd dissemination seminar on 15.12.2017.

The link to the teaching video:

https://drive.google.com/file/d/1pWBMVLEcPqr4pghs8_cvstaJiH_n-KiR/view

4. Organization of a local training course

Swiss watch expert Mr. Patrick Rossi was invited to conduct a 5-day training course “Swiss Watch Manufacturing and Quality Standard Training Course 2017” in Hong Kong Productivity Council between 11.12.2017 and 15.12.2018. The training course was promoted through HKWMA and FHKWTI, and sending eDM. 71 participants completed the course. Topics of the course including:

- i. NIHS norms for technical design
 - Watch casing, Parts matching and fitting requirements,
 - Parts matching and fitting requirements
 - Key elements of a mechanical watch movement
 - Operation and its mounting techniques
- ii. NIHS norms for components
 - Matching and determination of tolerance of other watch sub-assemblies
- iii. Quality
- iv. Regulatory & Legal compliance
- v. NIHS & ISO lab / quality /reliability norms
 - Correction and control of timepiece
 - Measuring instruments and operation procedure
- vi. Manufacturing & industrial process improvements
 - Tools and support used for the manufacturing
 - Experience sharing with the expert and professional

Participants were also arranged to attend an on-site demonstration in Hong Kong Watch & Clock Technology Centre. The content of the training course was disseminated in the 2nd dissemination seminar on 15.12.2017.

5. Organization of two half-day dissemination seminars

Two half-day seminars were held on 24.11.2017 and 15.12.2017 respectively in Hong Kong Productivity Council. The training course was promoted through eDM and the webpage of HKWMA and FHKWTI. 2,000 pcs of promotional pamphlet were produced by own cost of HKPC. These seminars covered requirements of watch parts & components, manufacturing technique, quality criteria and testing requirement of the NIHS standard. The content of the training course was also disseminated in the 2nd dissemination seminar on 15.12.2017.

For the first seminar, there were 72 participants. The followings are the details of topic and speaker.

- i. 「介紹“採納瑞士鐘錶製造及品質的國家標準(NIHS)，提升本地中、小型鐘錶企業的競爭能力”項目」 - Mr. Jason Chu, Hong Kong Productivity Council
- ii. 「NIHS標準內容重點介紹」 - Mr. Bob Chan, Hong Kong Productivity Council
- iii. 「表面處理技術及材料測試」 - Dr. Lo Wai Yin, Hong Kong Productivity Council

For the second seminar, there were 128 participants. The followings are the details of topic and speaker.

- i. “Summary from the Training Course” – Mr. Patrick Rossi, Improve-U
- ii. “Technical and industrial challenges of the watch industry” – Mr. Patrick Rossi, Improve-U

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)	<u>Original target completion date</u>	<u>Revised completion date</u> (if applicable)	<u>Status</u> (C/D/N) #
(a) • Establishment of the technical handbook	31/03/17	31/12/2017	D
(b) • Development of the gap analysis	31/03/17	31/12/2017	D
(c) • Production of the tutorial video	31/03/17	31/12/2017	D
(d) • Organization of 1 st dissemination seminar	31/05/17	30/11/2017	D
(e) • Organization of 2 nd dissemination seminar	31/07/17	31/12/2017	D
(f) • Organization of the local training course	30/09/17	31/12/2017	D

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

N.A.
