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

<u>Final Report of Approved Project</u>

Project ref. no. : D13 001 002
Project title   : To Popularize the Adoption of Computerized Mould
                     and Product Development Solution for Critical ODM
                     Upgrades & Work Efficiency Enhancement
Period covered   : From ____1 Sept 2013____ to ____30 Apr 2015____
                              (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 Reference and Title

To Popularize the Adoption of Computerized Mould and Product Development Solution for Critical ODM Upgrades & Work Efficiency Enhancement

Project Summary (in not more than 150 words)

HKSMEs are eager to upgrade from OEM to ODM since last decade in order to increase engineering content, value added and hence profit margin to maintain their competitiveness. However the paradigm shift requires them to acquire relevant knowledge and hands on experience on many new tasks in the upfront product development process. Furthermore, it also requires dedicate and precise control of the entire development process that HKSMEs have little experience on due to the guidance provided by their direct buyers as an OEM in the past. Local SMEs who wish to become an ODM need to take up the aesthetic, material, dimensional, functional and reliability design of both the product and the manufacturing process to ensure that the product development process outcome is feasible for mass production while meeting customer requirements and related export rules and regulations.

In this project, we successfully launched an industry-wide enhancement programme so that the manufacturing industry can understand what is the application and concept of PLM (Product Life Cycle Management) which can be a future solution for them to enhance their product design, production efficiency and manage different change management.

Project Objective(s) (in not more than 80 words)

To assist HKSMEs of mould and product industries to enhance and upgrade their engineering development process through establishing a best practice and popularized adoption of computerized mould and product engineering development solution.

Grantee /Collaborating/Implementation Organisation Agent

Grantee	:	Hong Kong Mould and Product Technology Association Limited
Collaborating Organisation(s)	:	Nil
Implementation Agent(s)	:	Hong Kong Productivity Council

Key Personnel

		Name	Company/Organisation	Tel No. & Fax No.
Project Co-ordinator	:	Lai Ling Maria CHIANG	Hong Kong Mould and Product Technology Association Limited	2788 5058/ 2788 5543
Deputy Project Co-ordinator	:	Ming Yin Raymond SHAN	Hong Kong Productivity Council	2788 5330/ 2788 5543

Project Period

	Commencement Date (day/month/year)	Completion Date (day/month/year)	Project Duration (No. of months)
As stated in project agreement	1 September 2013	31 Dec 2014	16 Months
Revised (if applicable)	1 September 2013	30 April 2015	20 Months

Methodology Employed

- To conduct desktop search for identifying and reviewing relevant industry standards and applicable product development tools.

- To conduct on-site review and analysis on mould & product engineering development processes applied in different product categories.

- To benchmark with relevant industry standards and on-site review result to design and establish the framework of the best practice of the mould and product development processes.

- To conduct process mapping and develop the detailed best practice of mould and product engineering development processes.

- To computerize and customize the developed best practice through the use of a free generic open source computerized solution to be sponsored by Aras Innovator. A customization partner of Aras will do the customization work based on the project team's inputs and requirements. HKPC will verify and validate the customized system whether meet our developed best practice and all defined requirements in detail prior next phase trial.

- To verify and validate the functionality, applicability and suitability of the developed computerized mould & product engineering best practice through 12 product categories before system release.

- To conduct a series of dissemination events for creating industry awareness, knowledge transfer and experience sharing from time to time under this programme.

- To upload the developed computerised solution to the website of HKMPTA for HKSMEs to download for enhancing their mould and product development processes and the electronic set of materials including the case book, training materials and the implementation manual with all 12 product cases will also be uploaded to the website for easy industry reference.

2. Summary of Project Results

Project Deliverables

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

(i) A best practice model on mould and product engineering development process, with computerisation and customisation solution from a free generic open source system.

(ii) Electronic case book, training material and implementation manual.

(iii) One conference, one dissemination seminar and four technical workshops.

(iv) A website for promoting the project deliverables for free download.

Actual Benefits to SMEs/Enterprises

(Please indicate *in clear, specific, tangible and quantifiable terms* the benefits of the project and its contribution to enhancing the competitiveness of Hong Kong's SMEs / enterprises in general or SMEs / enterprises in specific sectors / assist Hong Kong enterprises in general or in specific sectors in developing brands, upgrading and restructuring business operations, and promoting domestic sales in the Mainland, in not more than 400 words.)

This project has successfully developed a best practice model on mould and product engineering development process, with computerization and customization by the free open source Aras Product Life Cycle Management (PLM) solution. Throughout the project implementation, we have carried out detailed evaluation and analysis for around 12 typical product categories such as: automotive parts, electrical appliances, audio products, decorative products, lighting products, computer peripheral, toys, telecommunication accessories, personal healthcare products, mould bases, power tools and medical devices. We have successfully deployed the sector-specific PLM solution throughout the project implementation with the 10 pilot companies. The PLM platform enabled the pilot companies to understand their PLM requirements for different product types and the system was fine-tuned during the processes. The system assisted them to enhance the overall effectiveness in different aspects, such as new product development, projects management, engineering change management, configuration management with reference to ISO10007. The system enhancement has been practically useful when the companies performed their daily work with traditional reporting and recording system. But now, they can make the best use of this developed PLM solution so that the engineering projects involved can be visualized and clear to the stakeholders. Hence, we can make use of the success from the implementation experience and share among the industries.

In order to promote industry awareness, we successfully organized a conference, four technical training workshops and a dissemination seminar during the project implementation period. All these events attracted a total of 331 participants from local industries to join and learn the PLM, so that they can have a better understanding on how to upgrade their mould and product engineering for particular product OEM/ ODM types through the PLM solution.

Electronic case book, training material and implementation manual were created and compiled. The HKSMEs can download from the HKMPTA website (http://www.hkmpta.org/sdf/PLM.html) for free and this website will also be used for promotion purposes, in which local manufacturing industries can be benefited.

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.)

Milestone (as set out in the approved project proposal appended to the project agreement)	Original target completion date	Revised target completion date (if applicable)	Status (C/D/N) #
- Literature search			
(a) - On-site review and industry analysis	30/11/2013		C

	- Design and establish the framework of the best practice of the mould and product development processes - Organization of a conference for			
(b)	industry awareness	31/01/2014		C
	- Process map and develop the detailed best practice of mould and product engineering development processes - Computerize and customize the developed best practice through the use of a free generic open source computerized solution from Aras Innovator. - Organization of a series of seminar			
(c)	and training workshop	30/04/2015		C
	- Verify and validate the developed computerized solution - Conduct system trial run for 12 product categories for different industry and fine tuning - Conduct User Acceptance Test (UAT)			
(d)	of the computerized solution	30/04/2015		C
	- Prepare the training material, implementation manual and case books in the form of CDROM for industry dissemination - Upload all project deliverables to the website of HKMPTA - Conduct Dissemination seminar for announcing the success of an industry			
(e)	wide enhancement program	30/04/2015		C

Marketing/Dissemination Activities (in chronological order)

(Please provide details of all completed and on-going promotional and/or dissemination activities for each of the project deliverables.   Such activities may include advertisements, seminars, workshops, etc.)

Date/ Period	Description	No. of beneficiaries (SMEs/Enterprises*) *please delete as appropriate
17th February 2014	Conference - New era of mould & product engineering development processes optimization (0.5-day)	72
18th February 2014	Introduction of Computerized Mould and Product Engineering Development System (1-day)	48
19th February 2014	Implementation know-how of computerized mould and product engineering development solution (1-day)	48
9-10th June 2014	Enhancement of mould and product engineering development process through ISO 10007 and other advanced product development tools (2-day)	45
15-16th January 2015	Technical competency & essential skills of computerized mould and product engineering development solution setting and customization (2-day)	50
27th April 2015	Dissemination seminar for announcing the success of an industry wide enhancement program (0.5-day)	68
	Total no. of beneficiaries :	331

Future Plan for Promoting the Project Deliverables

We will consider organizing different promotional seminars and training workshops among the industries so that the project deliverables can be further beneficial to more local SMEs.