

**SME Development Fund  
Final Report of Approved Project**

**(covering from [01/06/10] to [31/12/11])**

Project Title : To upgrade Hong Kong SMEs to comply with AS  
(Reference No.) 9100:2009 – the global aviation quality  
management standard for entering into the aviation  
parts manufacturing industry (D09 003 007)

Period covered : From 01/06/10 to 31/12/11  
(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 upgrade Hong Kong SMEs to comply with AS 9100:2009 – the global aviation quality management standard for entering into the aviation parts manufacturing industry

### Project Summary (in not more than 150 words)

The rapidly expanding aviation industry worldwide signifies the extremely large demand for civil aviation products, devices and components. All prime aircraft manufacturers (i.e. Boeing and Airbus) and their main tier suppliers worldwide require suppliers to have immediate AS 9100 compliance and registration as an initial condition of doing business with them. HK SMEs are very keen to seek AS 9100 compliance but they encounter great difficulties without proper assistance and guidance. A programme is launched in order to assist them to overcome the standard compliance barrier and support their diversification:

- To compile an implementation guidance describing the steps and resources necessary for AS 9100 implementation in order to help CEOs of SMEs understand the requirements of developing their operation systems in compliance with AS 9100.
- To compile a generic implementation manual with three level of documents including quality manual, a series of operation procedures and a series of working instructions for the management teams of HK SMEs to follow.
- To assist 2 local SMEs to trial implement the developed model in order to testify the practicality and feasibility.
- To organize 8 dissemination events including business & technical conference, technical workshops and experience sharing sessions to provide in-depth understanding of AS 9100 and disseminate the technical knowledge, know-how and news to the industry.

By adopting the project deliverables and participating in the programme activities, it is expected that HK SMEs can enhance their operation systems in compliance with AS 9100 by reducing the total investment and the lead-time required for AS 9100 implementation and certification processes.

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

To upgrade Hong Kong SMEs to comply with AS 9100:2009 – the global aviation quality management standard for entering into the aviation parts manufacturing industry.

### Recipient/Collaborating/Implementation Organisation

Recipient Organisation : Hong Kong Aviation Industry Association Limited

Collaborating Organisation(s) : SAE International – Hong Kong (SAE-HK)

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	: <u>Mr. Calvin Tan</u>	<u>Hong Kong Aviation Industry Association Limited</u>	<u>Tel: 2788-5624 Fax: 2788-6196</u>
Deputy Project Co-ordinator	: <u>Mr. K. K. Lee</u>	<u>Hong Kong Productivity Council</u>	<u>Tel: 2788-5678 Fax: 2788-5900</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>01/06/10</u>	<u>31/12/11</u>	<u>19 months</u>
Revised (if applicable)	<u></u>	<u></u>	<u></u>

## **Methodology Employed**

Stage 1 – Industry Evaluation & Mapping - To conduct a gap assessment and field study for the Hong Kong industry and to evaluate the operational requirement of aviation parts manufacturing industry in order to establish an appropriate operation model with a list of operation best practices.

Stage 2 – Operation Model and System Development - To develop an operation model including the operation best practices based on the requirements of AS 9100, national and international rules and regulations and relevant OEM requirements.

Stage 3 – On-site Trial Implementation - To conduct on-site trial implementation of the developed best practices at two pilot companies to test the feasibility and applicability.

Stage 4 – System Fine Tuning – To fine-tune the developed best practices and the implementation guidance.

Stage 5 – Dissemination - To disseminate the project deliverables to the local industry and present the successful case of AS 9100 implementation.

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## 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.

#### Stage 1 – Industry Evaluation & Mapping

- Gap assessment and field study for the Hong Kong industry and evaluation of the operational requirement of aviation parts manufacturing industry completed.

#### Stage 2 – Operation Model and System Development

- Operation model and system development completed.
- An operation model including the operation best practices based on the requirements of AS 9100, national and international rules and regulations and relevant OEM requirements was completed.
- Implementation Guidance and Generic Implementation Manual were completed.

#### Stage 3 – On-site Trial Implementation

2 pilot companies have been identified to participate in trial implementation through open recruitment by email invitation and advertisement.

Detail of vetting committee:

A vetting committee responsible for identifying and selecting the 2 pilot companies was jointly formed by HKAIA and HKPC to ensure that the selected companies will best reflect the industry norm and practice. The selection criteria included organization size, plant location, sales markets, manufacturing processes involved and status of operation system.

Vetting committee:

- Dr. Jackson HO, MH, President of Hong Kong Aviation Industry Association Limited.
- Mr. TAN Che Keung, Vice-President, Manufacturing of Hong Kong Aviation Industry Association Limited.
- Mr. CHAN Hon Hung, Committee of Hong Kong Aviation Industry Association Limited.
- Mr. LEE Kwok Keung, Principal Consultant, Manufacturing Technology Division of Hong Kong Productivity Council.
- Mr. SHAN Ming Yin, Raymond, Senior Consultant, Manufacturing Technology Division of Hong Kong Productivity Council.

Name of pilot companies identified:

- Keensound Industries Limited  
Manufacture of precision metal parts for aviation and automotive and precision metal/ plastic parts and thermostats for home appliances.
- Universal Aviation Industrial Limited  
Manufacture of moulds, plastic parts and movement/transmission mechanism applied in robotics, home appliances, automotive, aerospace, medical industries.

#### Stage 4 – System Fine Tuning

- The developed Implementation Guidance and Generic Implementation Manual were applied to the pilot companies. Through practical AS9100 system implementation, the developed Implementation Guidance and Generic Implementation Manual were fine-tuned to suit for the industry need.

#### Stage 5 – Dissemination

- 500 copies of the implementation guidance, 500 copies of the generic implementation manual and 500 copies of CD-ROM with content of the implementation guidance and the generic implementation manual were compiled to local industry to implement the system. The manual consists of: Level 1 – Quality Manual, Level 2 – Procedures and Level 3 – Core Tools. The simplified versions of both “Implementation Guidance” and “Generic Implementation Manual” had been uploaded to the official homepage of the HKAIA:  
Implementation Guidance: <http://www.hkaia.org.hk/UserFiles/Image/news/AS9100/Implementation.pdf>  
Generic Implementation Manual: <http://www.hkaia.org.hk/UserFiles/Image/news/AS9100/System.pdf>
- Two local SMEs were invited for trial implementation of the developed implementation guidance and generic implementation manual in order to test the feasibility and applicability.

- A series of dissemination activities including technical visit, conference and technical workshops were conducted to disseminate the know-how and techniques to the industry.

#### Dissemination activities:

##### Seminar:

Event No.	Event Name	Date	Time	Venue	Number of participant		Speakers	Duration (Day)	
					Plan	Actual		Plan	Actual
1	Programme launching seminar on Global Aviation Quality Assurance System to Hong Kong	10/01/11	0930 – 1230	The Terrace, 4/F., HKPC Building, 78 Tat Chee Avenue, Hong Kong.	20	20	Mr. Wilson Tsui, DNV Dr. Jackson Ho, HKAIA Mr. Horace Leung, HKPC	0.5	0.5
2	Business and Technical Conference : AS 9100 – New Era of Aviation Manufacturing Industry Standard	24/01/11	1430 – 1730	The Terrace, 4/F., HKPC Building, 78 Tat Chee Avenue, Hong Kong.	20	38	Dr. Jackson Ho, HKAIA Ms. Kate Alvarado, DNV Mr. Horace Leung, HKPC	0.5	0.5
3	Technical Workshop on Global Aviation Quality Management System AS 9100	30-31/05/11	0930 – 1700	Room 1018, 1/F., HKPC Building, 78 Tat Chee Avenue, Hong Kong.	20	20	Mr. Horace Leung, HKPC	2	2
4	Certification Process and Requirement of AS 9100	25/01/11	0930 – 1700	Room 1018, 1/F., HKPC Building, 78 Tat Chee Avenue, Hong Kong.	20	32	Ms. Kate Alvarado, DNV	1	1
5	Executive Understanding on International and National Rules and Regulation adopted on Global Aviation Manufacturing Industry	26/05/11	0930 – 1700	Room 1016, 1/F., HKPC Building, 78 Tat Chee Avenue, Hong Kong.	20	23	Mr. Ivan Christiansen, Baines Simmons	1	1
6	Technical Workshop on Understanding and Application of Core Tools on Aviation Manufacturing Industry	29-30/06/11	0930 – 1700	Room 1018, 1/F., HKPC Building, 78 Tat Chee Avenue, Hong Kong.	15	20	Mr. Horace Leung, HKPC	2	2
7	Technical Workshop on Risk-based Process Audit adopted on Aviation Manufacturing Industry	26-27/01/11	0930 – 1700	Room 1018, 1/F., HKPC Building, 78 Tat Chee Avenue, Hong Kong.	15	32	Ms. Kate Alvarado, DNV	2	2
8	Experience Sharing Workshop on Implementation of AS 9100	23/12/11	1000 – 1300	The Terrace, 4/F., HKPC Building, 78 Tat Chee Avenue, Hong Kong.	20	33	Dr. Angus Cheung, HKAIA Mr. Li Wei Wen, DNV Mr. Horace Leung, HKPC	0.5	0.5

##### Promotion / Advertisement:

News on this project and AS9100 disseminated to HK foundation industries including plastics, metal and mould & die, through placing technical articles:

- HK Auto Parts Industry Association and SAE International – HK Membership Directory of the 6th Board in Year 2010.
- HK Mould and Die Technology Association Magazine [12th edition, 11/10].
- Press supplement in HK Economics Times on 30/12/11.
- 500 copies of Promotional Pamphlet disseminated to HK industries in December 2011.

##### Actual Benefits to SMEs

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 in general or SMEs in specific sectors, in not more than 400 words.

An implementation guidance and a generic implementation manual (with CD-ROM) were compiled to local industry to implement the system. The manual consists of: Level 1 – Quality Manual, Level 2 – Procedures and Level 3 – Core Tools. The simplified versions of both “Implementation Guidance” and “Generic Implementation Manual” had been uploaded to the official homepage of the HKAIA.

Two local SMEs were invited for trial implementation of the developed implementation guidance and generic implementation manual in order to test the feasibility and applicability.

A series of dissemination activities including technical visit, conference and technical workshops were conducted to disseminate the know-how and techniques to the industry.

All HK SMEs who would like to diversify into aviation industry, including those who are located in Pearl River Delta region engaging in foundation industries including plastic, metal, fabrics, electronics, electrical appliance, toys, mold and die, etc. are the project target users. The size of beneficiaries was recorded as 218 participants, 12280 readers and 107 SMEs.

### 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 project proposal appended to the project agreement)	<u>Original target completion date</u>	<u>Revised target completion date</u> (if applicable)	<u>Status</u> (C/D/N) #
(a)	Industry Evaluation Mapping	31/08/10	N.A.	C
(b)	Operation Model and System Development	28/02/11	N.A.	C
(c)	On-site Trial Implementation	31/08/11	N.A.	C
(d)	System Fine Tuning	30/11/11	N.A.	C
(e)	Dissemination	31/12/11	N.A.	C
(f)				
(g)				

### 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.

<u>Date/ Period</u>	<u>Description</u>	<u>No. of beneficiaries</u> (Please specify whether they are SMEs or not)
10/10	Technical article in "HKAIA Circular on 25/10/10"	Around 50 readers
11/10	Advertisement and Technical article in "HKAPIA and SAE-HK Membership Directory of the 6th Board in Year 2010"	Around 4000 readers
11/10	Technical article in "The Hong Kong Mould and Die Technology Association magazine (12 <sup>th</sup> edition, 11/10)"	Around 3000 readers
01/11	Promotional pamphlet in "HKAIA Circular on 06/01/11"	Around 50 readers
01/11	Promotional pamphlet in "HKAIA Circular on 19/01/11"	Around 50 readers
01/11	Promotional pamphlet in "HKPC circulation database to foundation industry manufacturer on 19/01/11"	Around 130 readers
10/01/11	Launching seminar: "Global Aviation Quality Assurance System to Hong Kong" at The Terrace, HKPC Building, Kowloon Tong, HK.	20 participants from 11 SMEs
24/01/11	Business and Technical Conference: "AS 9100 – New Era of Aviation Manufacturing Industry Standard" at The Terrace, HKPC Building, Kowloon Tong, HK.	38 participants from 19 SMEs
25/01/11	Technical training on "Certification Process and Requirement of AS 9100" at Room 1018, HKPC Building, Kowloon Tong, HK.	32 participants from 17 SMEs
26-27/01/11	Technical workshop on "Risk-based Process Audit adopted on Aviation Manufacturing Industry" at Room 1018, HKPC Building, Kowloon Tong, HK.	32 participants from 17 SMEs
26/05/11	Executive Understanding on International and National Rules and Regulation adopted on Global Aviation Manufacturing Industry.	23 participants from 9 SMEs
30-31/05/11	Technical Workshop on Global Aviation Quality Management System AS 9100.	20 participants from 7 SMEs
29-30/06/11	Technical Workshop on Understanding and Application of Core Tools on Aviation Manufacturing Industry.	20 participants from 7 SMEs
23/12/11	Experience Sharing Workshop on Implementation of AS 9100	33 participants from 20 SMEs
30/12/11	Press Supplement in HK Economics Times	Around 5000 readers
Total no. of beneficiaries - no. of SMEs		: 218 participants / 12280 readers / 107 SMEs
no. of companies which are <u>not</u> SMEs		: Nil

### Future Plan for Promoting the Project Deliverables

Upon project completion, the project deliverables including the "Implementation Guidance" and "Generic Implementation Manual" will be continuously promoted and marketed through free seminars, pamphlets distribution and associations' website.

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