

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

Final Report of Approved Project

Project ref. no. : D10 004 010
Project title : To establish a strategic road map for future development of local Solid State Lighting Industry through a study of worldwide lighting development trend in LED and an in-depth study of local lighting industry capability and gap
Period covered : From 01/07/2011 to 31/03/2013
(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

D10 004 010: To establish a strategic road map for future development of local Solid State Lighting Industry through a study of worldwide lighting development trend in LED and an in-depth study of local lighting industry capability and gap.

Project Summary (in not more than 150 words)

In order to respond on the development of local Solid State Lighting Industry, this project intended to assist the Hong Kong SMEs through the following works:

- i. Collated, established and defined value chain of LED lighting industry;
- ii. identified various technology and sources necessary and overall market situation in LED lighting industry with special emphasis for Mainland China;
- iii. identified the patent and copyright situation and strategy for Hong Kong SME Internal Sales in Mainland China;
- iv. identified branding strategy for Hong Kong SMEs to excel in the market;
- v. identified standards/schemes available for the market

This project started off with a Kickoff Conference followed by a number of Workshops and Dissemination Seminars. The project results will be supported by Help-Desks provided by HKPC, HKEIA and HKETA for related users and posting in respective web-sites. All such information will be consolidated into an in-depth Study Report, including interviews with at least 20 SMEs in various position of the value chain.

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

The objectives were to provide new-comers and local SMEs in LED lighting industry for acquiring the understanding and knowledge on:

- i. LED lighting industry value chain;
- ii. technology involved and the available sources of partnership and support;
- iii. market situation with emphasis in Mainland China;
- iv. patent and copyright situation with emphasis in Mainland China;
- v. recommendations on branding strategy with emphasis in Mainland China;
- vi. standardization effort/progress, the relevant schemes and the available test labs.

Grantee/Collaborating/Implementation Organisation Agent

Grantee : The Hong Kong Electronic Industries Association Limited (HKEIA)

Collaborating Organisation(s) : Hong Kong Electronics & Technology Association

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 :	Basil Wai	The Hong Kong Electronic Industries Association Limited (HKEIA)	2778 8328 2788 2200
Deputy Project Co-ordinator :	Raymond Chiu	Hong Kong Productivity Council	2788 5921 2788 5405

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	01/07/2011	31/12/2012	18
Revised (if applicable)	01/07/2011	31/03/2013	21

Methodology Employed

Stage 1: Organisation of a Kickoff Conference-cum-seminar

The project team invited speakers to speak at the conference. HKEIA, HKETA, HKPC/HKSSLIC will recommend some renowned speakers for this event. The conference topics covered the interests across various LED lighting industries.

Stage 2: Compile an in-depth Study Report including Interview Report:

An in-depth study report presenting the strategy road map applicable for future development of local LED lighting industry was developed including:

- i. Market study covering Mainland China in depth and coverage of world-wide;
- ii. Overseas customer requirement, branding recognition, Standard & Certification;
- iii. Overview of the current status and capabilities of local LED lighting manufacturer;
- iv. Categories of LED lighting product – indoor / outdoor lighting;
- v. The trend in styles, functions and the features of traditional lighting;
- vi. New development in styles, functions and the features of LED lighting;
- vii. Time-line of LED adoption in global market, including China;
- viii. Emergence of new lighting technology;
- ix. Common technologies adopted in manufacturing LED lighting;
- x. Recommendations for future development strategies of the local lighting industry;
- xi. Industrial support and resources required

The study was conducted through desktop research from the following information:

- i. Reference material on market situation and trends from market research company reports;
- ii. Documents from Industry regulatory bodies, e.g. EnergyStar, IEC (International Electrotechnical Commission), CIE (International Commission on Illumination), UL (Underwriters Laboratories Inc.), including standards and test methods;
- iii. Documents from Government regulatory bodies, e.g. EMSD, FCC (Federal Communications Commission), 國標 (GB), including standards and test methods;
- iv. Documents from commercial companies on product portfolio and classifications;
- v. Technical paper and magazine for technology updates and trends;
- vi. Some of the information will be based on HKPC staff's past experience with the LED industry including those with HKSSLIC members together with the update discussion / interview with the LED industry players

Interviews with local SMEs were conducted for experience sharing and information related to the status of Hong Kong Solid State Lighting Industry.

Stage 3 : Organisation of three (3) workshops

The project team and external speakers were invited to speak at the workshops. The workshop topics focused on the critical concerns in LED lighting industry with the following approaches:

- i. Collected information for technology applied and productization approaches from LED lighting industries;
- ii. Analyzed the information and identifying typical technology applied in LED lighting;
- iii. Invited the speakers for conducting workshop from overseas and local experts;
- iv. Developed promotion pamphlets for recruitment of local LED manufacturers to be surveyed;
- v. Provided guideline to the speakers for creation of presentation material;
- vi. Launched promotion recruitment in phase by phase
- vii. Conducted workshop on schedules

The useful material collected act as a reference for the study report.

Stage 4: Organization of two (2) dissemination seminars

Two dissemination seminars introducing the LED lighting strategy road map were arranged at the last stage of the project implementation period.

Stage 5: Web based distribution of project results through HKPC / HKSSLIC, HKEIA, HKETA web-sites.

Stage 6: Help Desk support by HKPC / HKSSLIC, HKEIA, HKETA

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.)

1. A Kickoff Conference-cum-seminar:

A Kickoff Conference was conducted on in HKTDC 2011 Hong Kong International Lighting Fair (Autumn Edition) 29 October 2011 with the attendance of 151. It served to introduce the SME Development Funded project about establishment of a strategic roadmap for future development of the Solid State Lighting Industry of Hong Kong, the industry development status in Mainland China and the updated information related to LED lighting technologies, LED regulatory testing requirements and product characteristics.

2. An in-depth Study Report presenting the strategic road map, including an interview section:

An in-depth Study Report covered the following aspects:

- i. The current development status and trend of LED lighting industry in worldwide
 - LED lighting industry value chain analysis;
 - Current Research & Development status and market analysis in worldwide
 - The strategies and the policies of the Governments in response to the development of LED lighting;
 - The market trend and technical development trend of LED lighting in worldwide and the trend of LED lighting applications
- ii. The current development status and trend of LED lighting industry in Mainland China
 - The regional status of LED lighting industry
 - The distribution of upstream and downstream
 - The technical and market issues related to LED lighting industry
 - The development roadmap of LED lighting in Mainland China
- iii. Analysis of LED lighting industry patent and copyright
 - The status and the development changes of LED lighting industry patent in worldwide
 - The specific concerns of patent in LED lighting value chain
 - The current status and development strategy of patent and copyright in Mainland China and Hong Kong with recommendations
- iv. Testing and certification of LED lighting
 - The development status of testing and certification of LED lighting in worldwide
 - The involved product categories China Compulsory Certification (CCC) and China Quality Certification (CQC) in Mainland China with recommendations.
 - The development status of critical LED lighting standards and the trend of interchangeable LED lighting products
- v. Branding strategy of LED lighting industry
 - Product branding building and corporate branding building
 - Brand promotion strategy
 - Importance of Brand protection

The Study Report, namely “香港半導體照明產業發展策略指南”, took the form of a ready-to-use and practical handbook providing guidance to new-comers and less experienced SMEs. The interview section with 20 SMEs was merged with the Study Report for experience sharing. A summary of industrial support and resources available was also included. Study Report was printed into 1,000 hardcopies, and 904 hardcopies were distributed to Hong Kong industries.

3. Three (3) workshops were successfully held on 19 December 2011, 5 March 2012 and 23 March 2012 respectively:

- 1st workshop, namely “Hong Kong Solid State Lighting Technical Workshop (Part I) – Latest Update on LED Lighting Standards, Testing and Certification”, was held in HKPC on 19 December 11 with the attendance of 184. It covered the concerns about LED lighting standards, testing, and certification, regulation and enforcement.
- 2nd workshop, namely “Hong Kong Solid State Lighting Technical Workshop (Part II) – LED Lighting Marketing Strategy and Brand Building”, was held in HKPC on 5 March 2012 with the attendance of 68. It covered the concerns about the marketing status of LED lighting industry, marketing strategy of Lighting

Industry and Brand Building.

- 3rd workshop, namely "Hong Kong Solid State Lighting Technical Workshop (Part III) – Patent Mapping, Portfolio Strategy & Copyright", was held in HKPC on 23 March 2013 with the attendance of 81. It covered the concerns about patent and copyright in LED lighting industry
- 4. Two (2) dissemination seminars, namely "LED Lighting Industry Strategy Roadmap – Part I" and "LED Lighting Industry Strategy Roadmap – Part 2", which were held on 30 October 2012 (with the attendance of 93) and 19 November 2012 (with the attendance of 143) respectively, intended to introduce the main content of the Study Report and the highlighted issues in LED lighting industry (e.g., development trend of LED lighting, branding strategy)
- 5. "香港半導體照明產業發展策略指南" was uploaded in HKPC-HKSSLIC, HKEIA, HKETA web-sites for providing the download links for Hong Kong Industries.
- 6. Help Desk supported by HKPC / HKSSLIC, HKEIA, HKETA were provided in order to answer enquiry from industry with reference to this project.

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.)

The benefits of the project are as follows:

1. Near Term Benefits to the Industry

- i. Kept SMEs/Enterprises abreast the development and advancement of LED lighting as to get acquainted with the updated technical/market information;
- ii. Assisted SMEs/Enterprises to realize the potential needs and applications of LED lighting in the market;
- iii. Assisted SMEs/Enterprises, especially for LED lighting manufacturers and project contractors, to realize the importance of quality of LED lighting;
- iv. Assisted SMEs/Enterprises, especially for those are involved in architecture and product design, to realize the flexibility of LED lighting which facilitates the development of new innovative designs and products;
- v. Assisted SMEs/Enterprises, especially for the testing and certification bodies, to identify the needs of testing services of LED lighting in Hong Kong as to enhance local testing capabilities of LED lighting

2. Long Term Benefits to the Industry

- i. Build up the awareness on the continuous needs of local expertise in LED lighting
- ii. Facilitate SMEs/Enterprises, especially for LED lighting manufacturers, to build up their own technologies in enhancing the manufacturing quality and efficiency by vertical integration as to cut down the costs
- iii. Facilitate SMEs/Enterprises, especially for testing and certification bodies, to enhance the local testing platform and relevant experience in providing the quality testing of LED lighting
- iv. Encourage the adoption of LED lighting for commercial use by the diversified lighting applications and design
- v. Build up Hong Kong as a brand in LED lighting industry as to consolidate the substantial productivity gains in downstream

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 target completion date</u> (if applicable)	<u>Status</u> (C/D/N) #
Organize a Kickoff	31/10/2011	N/A	C
(a) Conference-cum-seminar			
Prepare the Study Report & conduct	31/03/2012	31/03/2013	C
(b) Interviews			
Organize three Technical Workshops	31/03/2012	N/A	C
(c)			
Organize two Dissemination Seminars	30/06/2012	30/12/2012	C
(d)			
Web-based distribution and Help Desk	31/12/2012	N/A	C
(e) support			
(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 (SMEs/Enterprises*)</u> *please delete as appropriate
September - October 2011	The advertisement of Kick-off Conference in HKEIA Bulletin (September-October 2011)(Issued by HKEIA)	1500
October 2011	The advertisement of Kick-off Conference in Industry Focus (October 2011)(Issued by HKPC)	1500
29 October 2011	Kick-off Conference (namely " <i>Hong Kong Solid State Lighting Industry Conference – The Road Ahead</i> ")	151
November - December 2011	The report of Kick-off Conference in HKEIA Bulletin (November - December 2011)(Issued by HKEIA)	1500
December 2011	The advertisement of Technical Workshop #1 in Industry Focus (December 2011)(Issued by HKPC)	1500
19 December 2011	Technical Workshop #1 (namely " <i>Hong Kong Solid State Lighting Technical Workshop (Part I) – Latest Update on LED Lighting Standards, Testing and Certification</i> ")	184
January – February 2012	The advertisement of Technical Workshop #2 & #3 and the report of Technical Workshop #1 in HKEIA Bulletin (January – February 2012)(Issued by HKEIA)	1500
February 2012	The advertisement of Technical Workshop #2 & #3 in Industry Focus (February 2012)(Issued by HKPC)	1500
5 March 2012	Technical Workshop #2 (namely " <i>Hong Kong Solid State Lighting Technical Workshop (Part II) – LED Lighting Marketing Strategy and Brand Building</i> ")	68
23 March 2012	Technical Workshop #3 (namely " <i>Hong Kong Solid State Lighting Technical Workshop (Part III) – Patent Mapping, Portfolio Strategy & Copyright</i> ")	81
March - April 2012	The summary report of the Technical Workshops in HKEIA Bulletin (March - April 2012)(Issued by HKEIA)	1500
October 2012	The advertisement of Dissemination Seminar #1 & #2 in Industry Focus (October 2012)(Issued by HKPC)	1500
September - October 2012	The advertisement of Dissemination Seminar #1 & #2 in HKEIA Bulletin (September - October 2012)(Issued by HKEIA)	1500
30 October 2012	Dissemination Seminar #1: LED Lighting Industry Strategy Roadmap – Part I	93
19 November 2012	Dissemination Seminar #2: LED Lighting Industry Strategy Roadmap – Part II	143
March 2013 – April 2013	Dissemination of hardcopies of the Study Report with Interview Report	904
Total no. of beneficiaries - no. of SMEs		: 1500

Future Plan for Promoting the Project Deliverables

The remaining hardcopies of Study Report and the softcopy of Study Report can be distributed to local SMEs/Enterprises in the project activities for the BUD project (BUD 12 2 015).