

For information
on 15 June 2010

Legislative Council Panel on Commerce and Industry

**Progress Report on
Research and Development (R&D) Centres
for 2009-10**

PURPOSE

This paper updates Members on the 2009-10 operation of the R&D Centres set up under the ITF.

BACKGROUND

2. Starting from mid-2007, we briefed Members on an annual basis the operation of the five R&D Centres -

- (a) Automotive Parts and Accessory Systems R&D Centre (APAS);
- (b) Hong Kong Research Institute of Textiles and Apparel (HKRITA);
- (c) Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies (LSCM);
- (d) Nano and Advanced Materials Institute (NAMI); and
- (e) Hong Kong R&D Centre for Information and Communications Technologies (ICT) under the Hong Kong Applied Science and Technology Research Institute (ASTRI).

3. In April and May 2009, we briefed Members on the findings of a Mid-Term Review of the R&D Centres (vide Papers ref. CB(1)1286/08-09(07) and CB(1)1551/08-09(05)) and the funding proposal for extending the operation of the Centres by 3 years. On 19 June 2009, Finance Committee (FC) approved an increase in the funding commitment from \$273.9 million to \$642.9 million to meet the operating expenditure of

the Centres up to March 2014. In approving the funding proposal, FC and the Panel made the following comments and requests –

- (a) the R&D Centres should strengthen their commercialisation efforts to ensure the R&D deliverables meet the needs of the industry for moving up the value chain; and
- (b) the Centres should explore means to reduce the level of operating expenditure where practicable and to enhance their corporate governance.

The Administration then undertook to conduct -

- (a) a review of the institutional setup in 2010 to look into the *modus operandi* of the R&D Centres to see if there is any room for achieving greater savings and higher cost-effectiveness; and
- (b) a full review in 2011 on the R&D Centres' operation and overall performance for the first five-year period, taking full account of their experience in technology transfer and commercialisation.

4. The background on the setting up of R&D Centres as well as our proposal on how to proceed with the review are elaborated in a separate submission to the Panel on the Comprehensive Review of R&D Centres. The purpose of this paper is to report the progress in the last financial year (2009-10).

PROGRESS IN 2009-10

(a) R&D Project Expenditure

5. The 2009-10 annual progress reports from the R&D Centres are at Annexes A to E. During the period, the R&D Centres commenced a total of 96 platform and nine collaborative projects at a total cost of \$619.9 million. Amongst the on-going projects, 73 were completed during the year and the Centres are now taking steps to commercialise the R&D results. Details are as follows –

Summary of R&D Projects (2009-10)

| | No. of projects completed | | No. of new projects commenced | | No. of on-going projects | |
|-----------|---------------------------|--------------------------|-------------------------------|--------------------------|--------------------------|---------------------------|
| | 2009-10 | % of change over 2008-09 | 2009-10 | % of change over 2008-09 | As at Mar 2010 | % of change over Mar 2009 |
| APAS | 11 (0) | +10% | 17 (0) | +70% | 19 (0) | +46% |
| HKRITA | 9 (0) | +28% | 13 (0) | +8% | 24 (1) | +14% |
| LSCM | 3 (0) | -40% | 9 (2) | +0% | 18 (2) | +50% |
| NAMI | 6 (3) | +200% | 18 (5) | +157% | 24 (7) | +100% |
| ICT/ASTRI | 44 (4) | +29% | 48 (2) | +4% | 49 (4) | +9% |

Notes: the brackets denote the number of collaborative projects.

6. Under these projects, more than 1 200 R&D positions were provided in 2009-10 and 150 patents filed/registered. Nine projects received local/international industry awards. A breakdown of the Centres' R&D expenditure in 2008-09 and 2009-10 is as follows –

R&D Project Expenditure
(in \$ million)

| | 2008-09 | 2009-10 | Industry contribution received (Notes [*]) | |
|-----------|---------|---------|---|---------|
| | | | 2008-09 | 2009-10 |
| APAS | 20.0 | 40.7 | 3.9 | 4.1 |
| HKRITA | 30.7 | 29.6 | 3.3 | 8.9 |
| LSCM | 39.4 | 40.4 | 6.0 | 5.5 |
| NAMI | 5.9 | 32.4 | 5.6 | 10.2 |
| ICT/ASTRI | 238.6 | 272.8 | 39.4 | 46.0 |

Notes^{*}

1. This includes financial sponsorship from industry and income from licensing fees and contract research/consultancy services (which are funded entirely by industry and does not involve ITF funding).
2. Under ITF platform projects, the project team is required to secure industry contribution of at least 10% of the estimated project cost, while the ITF will fund up to 90% of the project expenditure; whereas under ITF collaborative projects, the industry partners are normally required to contribute 50% of the R&D project cost i.e. ITF provides a 50-50 matching grant.

7. In 2009-10, the Centres received a total of \$61.0 million from commercialisation (e.g. licensing fees) and contract research/ consultancy services.

(b) Operating expenditure

8. The operating expenditure of the R&D Centres in 2009-10 is summarised as follows –

| | <u>Operating Expenditure[#]</u> (in \$ million) | | | |
|---------------------|---|---------|--------------------------------|------------------------------------|
| | 2008-09 | 2009-10 | % of change over 2008-09 | No. of staff (as at March 2010) |
| APAS | 12.7 | 17.1 | +35% | 21 |
| HKRITA | 9.4 | 10.2 | +9% | 17 |
| LSCM | 15.0 | 16.3 | +9% | 40 |
| NAMI | 11.0 | 27.1 | +146% | 39 |
| ASTRI ^{##} | 91.2 | 116.3 | +28% | 567 |

[#] The operating expenditure includes staff salaries and fringe benefits, accommodation for administrative and research personnel and administrative/ support services, marketing and promotion for commercialisation, etc.

^{##} The operating expenditure is supported by Government's annual recurrent subvention to ASTRI which were \$111.4 million and \$113.1 million in 2008-09 and 2009-10 respectively.

The increase in the 2009-10 operating expenditure over 2008-09 was partly due to recruitment of more Centre staff and partly due to more projects proceeding to the stage of commercialisation.

(c) Commercialisation

9. During 2009-10, the Centres continued to organise or participate in different promotion and marketing events including exhibitions, trade shows, conferences, seminars, workshops, meetings as

well as undertake visits to various target user groups such as trade associations, research institutions and companies.

10. Each R&D Centre has operated a membership scheme to enable interested parties and companies to gain early access to information on project results and research output and to receive regular updates from the Centres. The total members of the five R&D Centres increased to about 1 900 by March 2010. In addition, the Centres continue to network with different industry sectors, including major players in the Mainland and seek to establish greater collaboration in research and commercialisation. These include annual conferences/exhibitions, making use of e-business communications to reach out SMEs.

11. The Centres have been taking active steps to commercialise the R&D results and have so far licensed the technologies/IPs generated to 222 companies with a total income of \$147.1 million from April 2006 to March 2010. Details of the commercialisation and the results so far for these projects are provided in the respective Centre reports at Annexes A to E. With another 124 projects targeted to be completed in 2010-11, the Centres will step up their efforts to pursue commercialisation and expect to generate an income of about \$60 million in the current financial year.

REVIEW OF INSTITUTIONAL SETUP

12. In response to the concerns expressed by LegCo members (see paragraph 3(a) above), we have started a comprehensive review of the R&D Centres. For details please refer to the paper on Comprehensive Review of R&D Centres.

ADVICE SOUGHT

13. Members are invited to note the work and progress of the R&D Centres in 2009-10.

**Automotive Parts and Accessory Systems (APAS)
Progress Report for the period from April 2009 to March 2010**

A. Highlights for 2009-10

1. APAS undertook a total of 30 ITF-funded R&D projects under the technology areas of Electronics & Software; Hybrids, Electric Drives & Environment; New Materials & Processes and Safety Systems in 2009-10. During the period, the APAS commercialization committee and EV focus group were formed. One collaborative project – “Development of Automobile Advanced Front Light System” was completed and three collaborative projects pursued were endorsed by APAS during the reporting period.
2. During 2009-10, APAS actively liaised with the local APAS industry as well as companies that have interests in getting into the automotive industry. APAS had also actively participated in the progressive out-reach programme and attended various local and regional exhibitions, workshops and forums to promote its services.
3. The details of the report concerning R&D Programmes, Centre Operation and plans in 2010-11 are given below:

B. R&D Programmes and Technology Roadmap

Projects

4. During 2009-10, APAS undertook a total of 30 ITF-funded R&D projects. The 30 projects included 13 newly approved projects which will continue in 2010-11, 4 projects approved and completed in 2009-10, 7 projects carried over from 2008-09 or before and completed in 2009-10 and 6 projects carried over from 2008-09 or before and which will continue in 2010-11.
5. Since establishment in April 2006, APAS has undertaken 43 projects. The total project cost for these 43 projects is HK\$162,474,753, and the ITF funding approved to support the projects is HK\$140,710,384. Industry has provided a sponsorship of HK\$21,764,369, which accounts for 13.4%

of the total project cost. A list of all R&D projects undertaken/completed with cost and industry contributions is at Appendix 1.

Commercialization Programme

6. The APAS Commercialization Committee was formed in May 2009.
7. Regarding technology licensing, a series of field activities were done, including monitoring the adoption/production of project outcomes by project sponsors, new customer calls and marketing promotion. The general feedback was that the format of the technology IPs generated from the projects should be closer to the end product, or they need further customization.
8. The field activities have helped to raise industry interest in collaboration with APAS. Three collaborative projects pursued were endorsed in principle in March 2010. They are:
 - Integrated Smart Electric Vehicle Charging Station with Professional E-payment System
 - Development and Industrialization of the Novel Tire Sealant
 - Development of a Vacuum Assisted Low Injection Speed High Pressure Casting Technology for Magnesium Motorcycle Wheels
9. Another collaborative project – “Development of Automobile Advanced Front Light System” was completed in 2009. The project sponsor has begun the promotion activities. They are introducing the project results to auto OEMs in the Mainland. They expect that it will take at least one more year before mass production will be commissioned. However, the project sponsor is preparing their factory facility for future production.

Intellectual Property (IP)

10. Five patent applications were submitted while 2 patents had been registered during 2009-10. Details are as follows:
 - (I) Patent applications submitted
 - a. Hong Kong short-term patent application No. 09110127.6 “A Method and apparatus for producing a light weight metal alloy” - ITP/014/07AP

- b. United State patent application No. 12/508,693 “Non-Convention Converter Circuit” - ITP/013/07AP
- c. Hong Kong short-term patent application No.09104902.0 “Vehicle Headlamp and Method for Controlling Deflection of The Illumination” - ITP/029/07AP
- d. People’s Republic of China patent application No 200810169476.2 “Vehicle Headlamp and Method for Controlling Deflection of The Illumination” - ITP/029/07AP.
- e. People’s Republic of China utility model patent application No 200920007930.4 “塑膠注塑機械 – 共注塑分流裝置” - ITP/015/07AP .

(II) Patents registered

- a. Hong Kong short-term patent No.HK1127252 “Vehicle Headlamp and Method for Controlling Deflection of The Illumination” - ITP/029/07AP.
- b. People’s Republic of China utility model patent No ZL 2009 2 0007930.4 “塑膠注塑機械 – 共注塑分流裝置”- ITP/015/07AP .

R&D Development

- a. Core competency development
 - 11. APAS initiated and continued the core competency development in automotive electronic control (AEC) through project engagement and leveraging on external resources. By engaging in the ‘Charging Station’ & ‘Electric Power Steering’ seed projects and with help from external partners, APAS has acquired basic knowledge in AEC techniques. Also, another project on ‘Energy Management System’ provided a solid AEC development platform for APAS to apply and further improve its AEC knowledge. With a similar strategy, the engagement in the “EV Power Pack” and the ‘Plug-in Electric Bus’ projects will help APAS establish a solid foundation in another core competence area – system integration technology.
- b. EV/HEV and environmental technology
 - 12. In response to the government initiative to develop a greener Hong Kong, an EV Focus Group consisting of experts from academia, industry and research institutes has been set up to guide the development direction in EV. The group has identified charging infrastructure development as the area which APAS should focus on.

During the year, APAS also initiated a new project associated with environmental vehicles after the successful completion of related seed projects. Up to 31 March 2010, APAS has kicked off two EV related projects and initiated three new projects as outlined below:

| <i>No</i> | <i>Kick-off in the year</i> | <i>Initiated</i> |
|-----------|--|--|
| 1 | Plug-in HEV for 16 seat mini bus | 50kw charger station |
| 2 | ECU for power management platform for EV | Electric assist power steering (platform) |
| 3 | | Charger Station (collaborative) |

c. Technology roadmap & overall development in other focus areas

13. With dynamic change of the external environment and technology, the center had reviewed the technology roadmap to ensure that suitable support could be provided to the industry. The future R&D direction along the four technology focus areas have been re-defined as:

- (i) Electronics and Software – focus on body electronics and infotainment
- (ii) Safety Systems – focus on vehicle active safety features such as ‘Lane assist warning’ and ABS development
- (iii) Environmental and Electric Vehicle – working on infrastructure development and associated EV technologies
- (iv) New Materials & Processes – technology and process development based on well defined industry needs from market studies

C. Centre Operation and General Administration

Human Resources

14. During the reporting period, APAS recruited 21 new staff members, of whom 5 were project staff under ITF projects. In addition, 2 assistant engineers were recruited under the internship programme of the ITF.

Senior Staff

15. During the year, the vacant CEO post was filled and an Associate Director (Technology) was recruited. APAS plans to fill 5 senior positions in 2010-11: Director (Business Development & Commercialization); Director (Research); Associate Director (Programmes Office) and two Associate Directors (Technology).

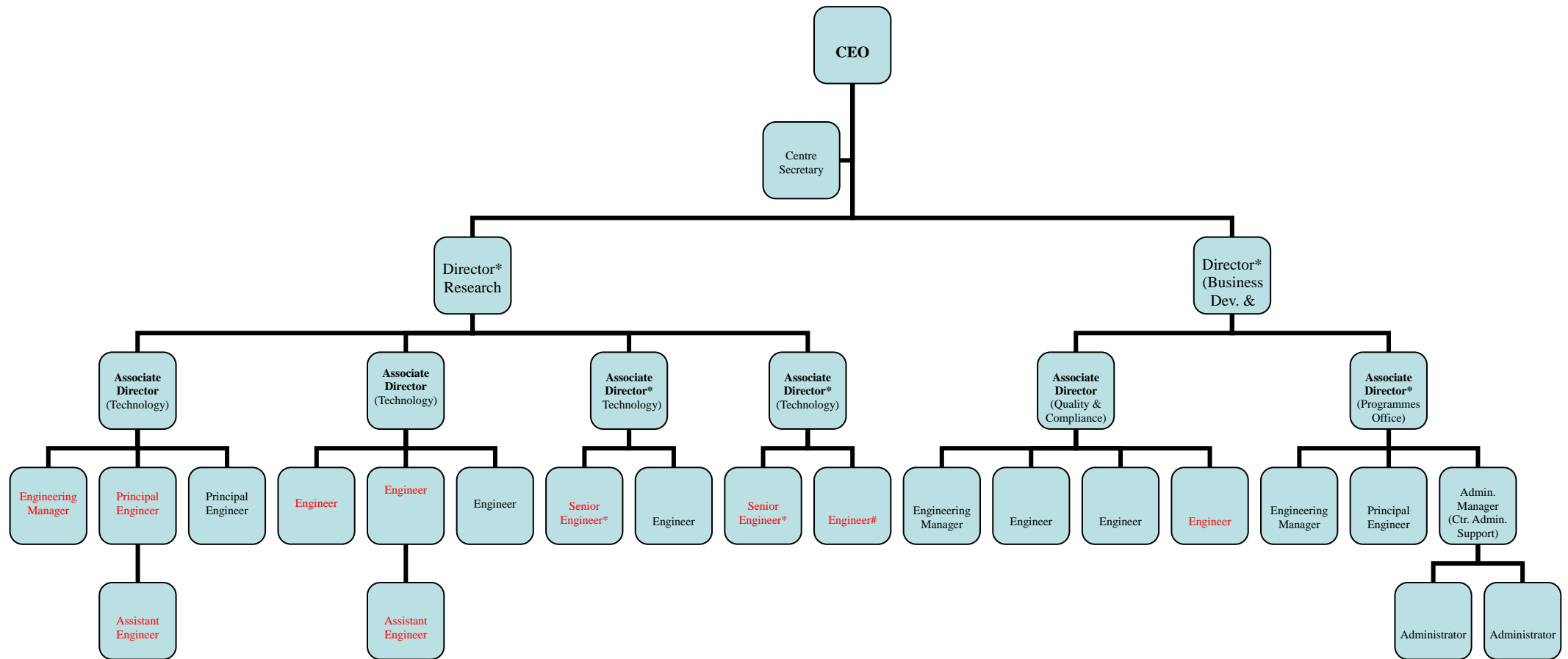
Operation Staff

16. Currently, the administrative support team of APAS comprises 5 positions: one Associate Director (Programmes Office), one Administrative Manager, one Centre Secretary and two Administrators. When the Associate Director (Programmes Office) is in place in 2010, all administrative posts will be filled and the administrative team of APAS will be strengthened.

R&D Project Staff

17. In 2009-10, 2 Engineers supported by the operation budget were recruited to strengthen APAS' capability to develop new project proposals. Upon approval of new projects, more project-based Engineers will be recruited with project funding in 2010-11.

The up-to-date organization chart of APAS is given below.



* Recruitment in Progress

Recruitment to start upon project approval

Color in Red => Project Staff under project funding

Industry Liaison and Marketing Activities

18. Through the R&D projects, APAS has developed a long term collaborative relationship with R&D partners. Such relationships are formalized with either MOUs (Memorandum of Understanding) or NDAs (Non-Disclosure Agreement). A total of 36 MOUs and NDAs have been signed is shown since 2007.
19. Maintaining a close relationship with the industry is important for APAS to keep abreast of customer needs and the latest technological trends. In the year of 2009-10, extensive effort has been deployed to strengthen the relationship with local automotive parts companies and selective automotive OEMs. Delegation visits were arranged to electric vehicle OEMs, including BYD, EuAuto and Zhuzhou CSR Times. In addition, APAS actively participated in events organized by industrial associations including the Hong Kong Auto Parts Industry Association, Federation of Hong Kong Industries and Hong Kong Electronics & Technologies Association. Participation in these events has helped to strengthen the connection of APAS with local auto parts companies and auto OEMs in Mainland China. APAS also hosted and participated in 16 organization visits and 16 seminars to network, facilitate and exchange cooperation ideas with partners. The R&D results and services of APAS were successfully disseminated to the market players in the industry. Major activities held are shown as follows:

2009-10 R&D Activities

| Event | Role |
|--|--------------|
| BYD Delegation Visit | Organizer |
| Delegation Visit to Automotive Parts and Electric Vehicle OEMs at Zhuzhou | Organizer |
| APAS Electric Vehicle Project Results Demonstration Roadshow | Organizer |
| 3 rd International Conference on Power Electronics Systems and Applications | Co-organizer |
| China Hi-Tech Fair 2009 at Shenzhen | Exhibitor |
| Inno Design and Technology Expo 2009 | Exhibitor |
| InnoCarnival 2009 | Exhibitor |
| Hong Kong Auto Parts Partnership Mission to Guangdong Zengcheng and Conghua | Visitor |

| | |
|--|---------|
| 廣州花都汽車產業城及華南理工訪問團 | Visitor |
| 深圳－香港－澳門國際汽車博覽會 | Visitor |
| 台北國際汽車零配件展 | Visitor |
| Shanghai Auto Show 2009 | Visitor |
| 中國(廣州)國際汽車零部件展 2009 | Visitor |
| Hong Kong International Electronic Fair – Spring and Autumn Sessions | Visitor |

| Official Visits | |
|---|--|
| <ul style="list-style-type: none"> • 渝港汽车零部件研发合作及项目对接会 – 重庆 • 海峡两岸汽车电子产业(含车载资通讯)项目对接会 –福州 • Innovation and Technology Development in HEIs” Forum and the Annual General Meeting of International Strategic Technology Alliance (ISTA) at Wuhan • 江門市領導和經貿交流團到訪 • 中國汽車零部件產業基考察團到訪 APAS • 吉林省通化市隋中誠市長代表團到訪 APAS • 吉林省吉林市委書記周化辰先生代表團到訪 APAS • 河北省邢台市橋西區委書記任樹堂先生暨代表團到訪 APAS • IEEE GOLD delegation visit APAS • SAE delegation visit APAS • 廣東省經貿委市場建設處交流會 • 廣東省高新區管理幹部 與 香港相關研發中心交流會 • 深港汽車電子產業研討與技術配對會 • Permanent Secretary for Environment / Director of Environmental Protection Bureau visited APAS • Commissioner of Innovation and Technology visited APAS • Under Secretary for Commerce and Economic Development visited APAS | |

| Seminars/Media events |
|---|
| <ul style="list-style-type: none"> • Media Partnership with NowTV – Introduction of Success of APAS R&D Centre • 星島日報報導 – 零部件中心研電動車充電 • 大公報報導 – 港發展汽車零部件技術中心 • Breakfast Seminar on Plug-in Conversion of Toyota Prius HEV System • Workshop on “Making the EV Transformation in Hong Kong” by Civic Exchange • Seminar on “China Automotive and Automotive Parts & Accessories |

Industry and EV Market & APAS Project Results for Commercialization” by APAS

- Breakfast Seminar on “Basics of Environmental Testing” by APAS
- Seminar on “Overview of Automotive Development Testing” by APAS
- Seminar on “Vehicle Lab / Workshop Safety” by APAS
- Seminar on “Introduction to Technology IP Patent Process” by APAS
- Seminar on “Trends and Development of Electric Vehicle Industry in HK and China” by Enviropower Limited
- Luncheon seminar on “KMB’s Success in Environmental Protection” by Federation of Hong Kong Industries
- Seminar on “瞭解電動車最新發展” by Federation of Hong Kong Industries
- Workshop on “Development of Electric Vehicles in Hong Kong” by Power and Energy Section of IET Hong Kong
- Seminar on “EV Charging Station Development in Hong Kong” by Hong Kong Science Technology Park
- InnoAsia Conference by Hong Kong Science Technology Park

20. In addition to events and seminars, APAS formulated new industry communication channels during the year to promote its project portfolio and latest news:

- New APAS company portal website
- APAS corporate video.

D. Major Activities in 2010-11

21. In year 2010-11, 19 projects commenced in previous years will continue to be undertaken as on-going projects. Among these projects, 12 of them will be completed in 2010-11. In addition to these on-going projects, APAS plans to launch 16 new projects in year 2010-11.

22. Further to the centre operation, APAS will focus on the recruitment of 5 other senior staff and few more project based engineers with project funding in 2010-11.

23. With regards to the major activities in the current financial year, APAS will launch a number of commercialization activities, continue to conduct an Open House to introduce its services and equipment support to the APAS industry. Trade associations and manufacturers other than the APAS trade

will also be invited to join the event.

24. In addition, APAS will continue drive more collaborative projects with potential parties; create a strong linkage with the local and Mainland China automotive industry, actively participate in different exhibitions, such as the Innovation Design Expo, China Hi Tech Fair etc. to promote its R&D projects to the public. APAS will also strengthen its publicity through various means, such as deploying new e-newsletters, filming videos for selective completed R&D projects, updating product booklets, posters, company brochure, souvenirs etc.

A list of planned major public events for 2010-11 is shown below.

| Item No. | Name of event | Date | Location | Work to be done for R&D Centre |
|----------|-------------------------------------|------------|---|--------------------------------|
| 1 | SAE 2010 World Congress | 13-15 Apr | Cobo Center, Detroit, MI, US | Attend Exhibition |
| 2 | TAIPEI AMPA 2010 | 12-15 Apr | Taipei World Trade Center Nangang Exhibition Hall | Attend Exhibition |
| 3 | Auto China Beijing | 23-28 Apr | Beijing International Convention Center | Attend Exhibition |
| 4 | Auto Chongqing 2010 | 10-14 June | 重庆国际会议展览中心 | Attend Exhibition |
| 5 | Auto Components Shanghai 2010 | 21-23 June | 上海国际展览中心 | Attend Exhibition |
| 6 | China International Auto Parts Expo | 23-25 Sept | Beijing China International Exhibition Center | Attend Exhibition |
| 7 | Innovation Festival2010 | Sept- Dec | TBC | Booth |

| Item No. | Name of event | Date | Location | Work to be done for R&D Centre |
|----------|---|-------------|---|--------------------------------|
| 8 | China (Guangzhou) International Automobile Exhibition | Nov | TBC | Attend Exhibition |
| 9 | China Hi-Tech Fair 2010 | Nov | Shenzhen Convention and Exhibition Centre | Booth |
| 10 | Automechanika 2010, Shanghai | Dec | Shanghai, China | Attend Exhibition |
| 11 | Innovation & Design Expo | Nov/ Dec 10 | HKCEC | Booth |

Automotive Parts and Accessory Systems R&D Centre
June 2010

Automotive Parts and Accessory Systems R&D Centre Limited
汽車零部件研究及發展中心有限公司
R&D Projects as at end May 2010
研發項目(截至2010年5月)

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (\$) | Percentage of industry contribution 業界贊助百分比 | Participating Organization | 參與機構 |
|------------------------|--|------------------------------------|--------------|--|--|--|--------------------------------------|
| | | | | | | R&D Organization 研發機構 | Industry Partner 業界夥伴 |
| Platform Research 平台研究 | | | | | | | |
| 1 | To Develop a Mg semi-solid Slurry Maker for Rheo-diecasting in Production of High Strength Low Weight Mg Automotive Parts 開發鎂合金半固態混合漿設備作流變壓鑄高強度及輕巧之汽車零部件 | 21 | Completed | 3,106,410 | 20% | Hong Kong Productivity Council (HKPC) 香港生產力促進局 | Seven private companies 七家私營公司 |
| 2 | Intelligent Omni-directional Hybrid Electric Vehicle (IOHEV) 一種新型的環保汽車：混合動力，全方位及智能化 | 31 | Completed | 12,825,652 | 11% | The Chinese University of Hong Kong (CUHK) 香港中文大學 | Seven private companies 七家私營公司 |
| 3 | Design and Fabrication of HID and LED Lighting System for Automotive Illumination 用於汽車照明的HID和LED照明系統的設計和製造 | 30 | Completed | 8,800,000 | 13% | The Hong Kong Polytechnic University (PolyU) 香港理工大學 | Six private companies 六家私營公司 |
| 4 | To Establish Automotive Components Quality Management Support Services for Enhancing the Capabilities and Reputation of Auto Parts Suppliers 建立優質汽車零部件製造管理系統以提昇汽車零件供應商能力及聲譽 | 24 | Completed | 2,398,410 | 16% | HKPC 香港生產力促進局 | Six private companies 六家私營公司 |
| 5 | A Total Solution for Manufacturing of High Strength Mg Automotive Parts – Mg Thixoforming, Scraps Recycling and Billet (Feedstock) Production 高強度鎂合金汽車零部件方案－半固態成型，廢料循環及棒料生產 | 26 | Completed | 9,072,910 | 12% | HKPC 香港生產力促進局 | Fifteen private companies 十五家私營公司 |

| | | | | | | | |
|----|--|----|------------|-----------|-----|--|-----------------------------------|
| 6 | Optical CAE Technology for Automotive Lighting and Illumination Parts Development 應用先進光學電腦輔助設計技術來開發用於汽車之發光及照明部件 | 20 | Completed | 2,135,750 | 7% | HKPC 香港生產力促進局 | Seven private companies 七家私營公司 |
| 7 | Battery-less Tire Pressure Monitoring System 無電池輪胎壓力監測系統 | 25 | Terminated | 1,830,010 | 11% | CUHK 香港中文大學 | Three private companies 三家私營公司 |
| 8 | Powder Metal Forming Technology for High Temperature Light Weight Aluminum-Titanium Alloys 高溫金屬粉末成形技術用於製造輕鋁鈦合金 | 25 | Completed | 2,476,702 | 27% | City University of Hong Kong (CityU) 香港城市大學 Automotive Parts and Accessory Systems R&D Centre Limited (APAS R&D Centre) 汽車零部件研究及發展中心有限公司 (汽車零部件研發中心) | Three private companies 三家私營公司 |
| 9 | Development of Microcellular Foam Injection Moulding Technology Incorporated with Co-injection Technology for Producing High Quality and Value-added Plastic Automotive Parts 開發微發泡注塑與共注塑結合技術於生產高質量及高增值塑料汽車部件 | 23 | Completed | 3,699,420 | 11% | Hong Kong Productivity Council (HKPC) 香港生產力促進局 APAS R&D Centre 汽車零部件研發中心 Hong Kong Plastic Machinery Association Limited 香港塑膠機械協會 | Four private companies 四家私營公司 |
| 10 | Low Cost Direct Drive for Electric Vehicles 發展電動車的低成本直接驅動器 | 21 | Completed | 4,570,900 | 10% | The Hong Kong Polytechnic University (PolyU) 香港理工大學 APAS R&D Centre 汽車零部件研發中心 | Three private companies 三家私營公司 |

| | | | | | | | |
|----|--|----|------------------|-----------|-----|---|-----------------------------------|
| 11 | Development of Advanced Tube Hydroforming Technology for Making Complicated-Shaped Metallic Tubular Automotive Parts 開發應用於複雜金屬管狀汽車零部件製造之管件液壓成型技術 | 25 | Completed 已完成 | 3,655,000 | 12% | HKPC 香港生產力促進局 APAS R&D Centre 汽車零部件研發中心 Hong Kong Auto Parts Industry Association Limited 香港汽車零部件工業協會有限公司 Society of Automotive Engineers - Hong Kong Limited 國際汽車工程師學會－香港區域分會 | Nine private companies 九家私營公司 |
| 12 | A New Generation of Electric Vehicle Power Pack Platform 新一代電動汽車動力平台 | 23 | On-going 進行中 | 4,450,000 | 7% | Sun Yat-sen University 中山大學 HKPC 香港生產力促進局 APAS R&D Centre 汽車零部件研發中心 | Three private companies 三家私營公司 |
| 13 | Integrated Battery Charger And Motor Drive Systems 混合型電池充電及電機驅動系統 | 21 | Completed 已完成 | 4,400,000 | 10% | PolyU 香港理工大學 Vocational Training Council 職業訓練局 APAS R&D Centre 汽車零部件研發中心 | Seven private companies 七家私營公司 |
| 14 | To Develop a Versatile Hydraulic Control Unit (HCU) for an Integrated Chassis Electronic Stability Control (ESC) System 發展一套全面的液壓裝置(HCU)予綜合汽車電子穩定系統 (ESC) | 18 | On-going 進行中 | 3,986,378 | 15% | South China University of Technology 華南理工大學 HKPC 香港生產力促進局 | Three private companies 三家私營公司 |
| 15 | Development of Electronic Control Unit (ECU) for Vehicle Anti-lock Braking System (ABS) and Electronic Stability Control (ESC) System 汽車防鎖死制動系統及電子穩定系統電子控制單元的開發 | 21 | On-going 進行中 | 5,598,072 | 10% | Texas A&M University 美國德克薩斯州大學 APAS R&D Centre 汽車零部件研發中心 | Three private companies 三家私營公司 |

| | | | | | | | |
|----|--|----|-----------|-----------|-----|--|-----------------------------------|
| 16 | Development of An Automobile Hybrid Air Conditioning System Technology 開發汽車混合動力空調系統科技 | 16 | Completed | 2,781,178 | 10% | PolyU 香港理工大學 Vocational Training Council 職業訓練局 APAS R&D Centre 汽車零部件研發中心 | Seven private companies 七家私營公司 |
| 17 | Development of Automotive Headlamp System for LED Light Source 開發以LED為光源的汽車頭燈系統 | 24 | On-going | 4,241,410 | 15% | Hong Kong Applied Science and Technology Research Institute Company Limited 香港應用科技研究院 HKPC 香港生產力促進局 | Three private companies 三家私營公司 |
| 18 | Development of Software and Hardware Platform and Methodology for integrated Configurable Dashboard Design 集成的可配置儀錶板設計平臺的研發項目 | 24 | On-going | 7,996,022 | 12% | HKPC 香港生產力促進局 APAS R&D Centre 汽車零部件研發中心 | Four private companies 四家私營公司 |
| 19 | Development of 14V Idling Stop/Start System 14V怠速啓停系統的開發 | 24 | On-going | 3,390,572 | 10% | Chinese University of Hong Kong (CUHK) 香港中文大學 APAS R&D Centre 汽車零部件研發中心 Shenzhen GreenWheel Electric Vehicle Company Limited 深圳市陸地方舟電動車有限公司 | Two private companies 兩家私營公司 |
| 20 | An Advanced Safety System for passenger/goods vehicles 客貨車的先進安全系統 | 17 | On-going | 3,468,250 | 29% | CityU 香港城市大學 APAS R&D Centre 汽車零部件研發中心 Guangdong Key Laboratory of Intelligent Transportation 廣東省重點智能交通實驗室 | Two private companies 兩家私營公司 |

| | | | | | | | |
|----|--|----|----------|-----------|-----|--|------------------------------------|
| 21 | Infotainment System for Mass Transportation Vehicles 針對集體運輸車輛的娛樂資訊系統 | 20 | On-going | 5,995,844 | 10% | HKPC 香港生產力促進局 APAS R&D Centre 汽車零部件研發中心 China Kong Auto Body Building Company Limited 中港車身製造廠有限公司 | Two private companies 兩家私營公司 |
| 22 | Vehicle Safety Enhancement System Based on Wireless Communication 基于無線通訊的車輛安全增強系統 | 20 | On-going | 2,234,968 | 10% | APAS R&D Centre 汽車零部件研發中心 CUHK 香港中文大學 Unihub China Information Technology Company Limited 中盈優創資訊科技有限公司 | Two private companies 兩家私營公司 |
| 23 | Scalable AUTOSAR Integrated Automotive Body Electronics Controller 兼容 AUTOSAR 標準的可變規模汽車車 身電子控制器 | 16 | On-going | 3,919,240 | 11% | HKPC 香港生產力促進局 APAS R&D Centre 汽車零部件研發中心 | Two private companies 兩家私營公司 |
| 24 | Pedestrian Warning and Protection System 汽車用行人識別預警及保護系統 | 20 | On-going | 4,440,160 | 12% | HKPC 香港生產力促進局 APAS R&D Centre 汽車零部件研發中心 Peking University Shenzhen Graduate School 北京大學深圳研究生院 | Two private companies 兩家私營公司 |
| 25 | Development of Advanced Collision Avoidance System 開發先進汽車防撞系統 | 18 | On-going | 3,660,620 | 12% | HKPC 香港生產力促進局 APAS R&D Centre 汽車零部件研發中心 Nanjing University of Science and Technology 南京理工大學 | Two private companies 兩家私營公司 |

| | | | | | | | |
|----|---|----|----------|------------|-----|---|--------------------------------------|
| 26 | Development of Integrated Lane Assist System 行車道檢測及切綫輔助系統 | 18 | On-going | 3,649,556 | 12% | HKPC 香港生產力促進局 APAS R&D Centre 汽車零部件研發中心 Automobile Research Institute of Guangzhou Automobile Group Company Limited 廣州汽車集團股份有限公司汽車 製造研究院 | Two private companies 兩家私營公司 |
| 27 | Intelligent Transportation System - mobile vehicle technology applications 智能交通系統-流動車技術應用 | 17 | On-going | 3,352,529 | 15% | CityU 香港城市大學 APAS R&D Centre 汽車零部件研發中心 Guangdong Key Laboratory of Intelligent Transportation 廣東省重點智能交通實驗室 Chinese Academy of Sciences, Institute of Automation 中國科學院自動化研究所 Guangdong University of Science and Technology 廣東科技大學 | Two private companies 兩家私營公司 |
| 28 | Direct -drive Linear Switched Reluctance Actuator for Automobile Active Suspension Systems 開發用於汽車懸掛系統的直線開關磁阻 直接驅動器 | 24 | On-going | 6,000,000 | 10% | PolyU 香港理工大學 APAS R&D Centre 汽車零部件研發中心 | Three private companies 三家私營公司 |
| 29 | 3G Automobile Infotainment System with Voice Interface 3G 車載語音控制娛樂資訊系統 | 17 | On-going | 3,830,000 | 12% | HKUST 香港科技大學 APAS R&D Centre 汽車零部件研發中心 | Two private companies 兩家私營公司 |
| 30 | Development of Advanced Vehicle Management and Drive System for Plug-in Hybrid Electric Vehicle 插電式混合動力汽車上先進車輛管理和 傳動系統的開發工作 | 24 | On-going | 10,840,029 | 14% | HKPC 香港生產力促進局 APAS R&D Centre 汽車零部件研發中心 Hong Kong Institute of Vocational Education 香港專業教育學院 Tsinghua University 清華大學 | Four private companies 四家私營公司 |

| | | | | | | | |
|------------------------------------|--|----|-----------|-----------|-----|--|-------------------------------|
| 31 | Development of Port HEV and its Key Technology 混合動力碼頭車及其關鍵技術的開發 | 14 | On-going | 449,800 | 0% | Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences 中國科學院深圳先進技術研究院 APAS R&D Centre 汽車零部件研發中心 | Nil |
| 32 | Core Technology Platform of Image Processing and Recognition for Driver Assistance Systems 用於輔助駕駛系統的圖像處理及辨認技術核心平台 | 18 | On-going | 2,669,754 | 0% | APAS R&D Centre 汽車零部件研發中心 HKPC 香港生產力促進局 | Nil |
| Collaborative Research 合作研究 | | | | | | | |
| 33 | Development of Automobile Advanced Frontlight System 開發汽車先進前大燈系統 | 18 | Completed | 7,058,644 | 51% | HKPC 香港生產力促進局 APAS R&D Centre 汽車零部件研發中心 Norstar Automotive Industrial Holding Limited 北泰汽車工業股份有限公司 Hainan Automobile Group Company Limited 海南汽車集團有限公司 | One private company 一家私營公司 |
| Seed Research 種子研究 | | | | | | | |
| 34 | Battery Management Control Strategy 混合能源及電動車用電池管理方略 | 15 | Completed | 997,760 | 0% | PolyU 香港理工大學 APAS R&D Centre 汽車零部件研發中心 | Nil |
| 35 | Development of I.C. Engine Control Strategies 研發內燃機控制策略 | 7 | Completed | 999,590 | 0% | Michigan State University 密其根州立大學 APAS R&D Centre 汽車零部件研發中心 | Nil |
| 36 | Long Vehicle Wireless Backup Monitor System 長身車輛無線倒車監察系統 | 12 | Completed | 959,471 | 0% | HKPC 香港生產力促進局 APAS R&D Centre 汽車零部件研發中心 | Nil |

| | | | | | | | |
|----|--|-----|-----------|---------|----|---|-----|
| 37 | Automotive Electronic Sub-system Design Guideline 汽車電子組件設計指引 | 7 | Completed | 999,993 | 0% | PolyU 香港理工大學 APAS R&D Centre 汽車零部件研發中心 | Nil |
| 38 | Development of AMT Controls and Systems 研發手自一体變速的控制與系統 | 9.5 | Completed | 999,363 | 0% | APAS R&D Centre 汽車零部件研發中心 University of Minnesota 明尼蘇達大學 Michigan State University 密其根州立大學 | Nil |
| 39 | Development of Immobilizer System 發動機防盜系統研發 | 7.5 | Completed | 909,112 | 0% | APAS R&D Centre 汽車零部件研發中心 Shanghai Jiao Tong University 上海交通大學 | Nil |
| 40 | Electrical Power Assisted Steering for EV and HEV 適用於電動車和混合動力車的電動助力 轉向系統 | 6 | Completed | 985,362 | 0% | APAS R&D Centre 汽車零部件研發中心 Jilin University 吉林大學 | Nil |
| 41 | Development of Novel Thermal Debinding Mechanism for Oxidation-Sensitive Powder Alloy 氧化敏感粉末合金的創新熱力脫脂工藝 開發 | 7.5 | Completed | 700,265 | 0% | APAS R&D Centre 汽車零部件研發中心 HKPC 香港生產力促進局 | Nil |
| 42 | Development of ECU for Power Management Platform of EV 電動汽車能量管理平台ECU開發 | 10 | Completed | 998,018 | 0% | APAS R&D Centre 汽車零部件研發中心 | Nil |
| 43 | Development of Smart Charging Station for EV and PHEV 針對純電動及插電式混合動力汽車的智 能充電站開發與研究 | 5 | Completed | 911,609 | 0% | APAS R&D Centre 汽車零部件研發中心 Sun Yat-sen University 中山大學 | Nil |

**The Hong Kong Research Institute of Textiles and Apparel (HKRITA)
Progress Report for the period 1 April 2009 to 31 March 2010**

A summary on HKRITA's R&D programmes, centre operation and general administration, extension services for industries, promotional and marketing activities during 1 April 2009 to 31 March 2010 and the planned activities for 2010-11 are set out in the following paragraphs.

1. R&D Programme

(a) Project Summary

1.1 During the reporting period, HKRITA undertook 33 ITF-funded R&D projects with a total approved project cost of \$112.2 million. ITF funding approved amounted to \$98.5 million. 27 of them were under four main technology areas, namely (1) New Materials and Textiles and Apparel Products, (2) Advanced Textiles and Clothing Production Technology, (3) Innovative Design and Evaluation Technologies, and (4) Enhanced Industrial Systems and Infrastructure; and 6 of them are under specific topics of the Guangdong-Hong Kong Technology Cooperation Funding Scheme 2007, 2008 and 2009. 9 projects completed during the period and 24 projects were on-going as at 31 March 2010.

1.2 Since its establishment, the Centre has undertaken 41 ITF-funded projects consisting of 40 platform projects and 1 collaborative project. The total project cost and ITF funding approved were \$140.8 million and \$123.3 million respectively. The total industry contribution was 12.4%. The list of projects is at Appendix I. Separately the Centre also undertook two consultancy projects with the total project cost of \$96,000 paid by the industry partners.

(b) Technology Roadmap

1.3 HKRITA's four technology focus areas remain unchanged:

- i. New Materials and Textiles and Apparel Products;
- ii. Advanced Textiles and Clothing Production Technologies;
- iii. Innovative Design and Evaluation Technologies; and
- iv. Enhanced Industrial Systems and Infrastructure

(c) Commercialisation

1.4 With the completion of a number of ITF projects, work had been started to commercialize the R&D results generated and transfer the technology to the industry. Commercialisation panels have been or will be set up for seven projects to advise on how best to commercialize the project deliverables. These selected projects are as follows:-

- i. Development of an Innovative Finishing System for Wet Processing of Garments and Accessories
- ii. Finer Nu-Torque Cotton Yarn Production
- iii. Development of a Problem Solving Model for the Hong Kong Textiles and Clothing Industries
- iv. Imaging Colour Measurement (ICM) System for Textile and Garment Industry
- v. The Second-Phase Research and Development of Imaging Colour Measurement (ICM) System for Textile and Garment Industry
- vi. Development of Shape Memory Knitted Fabrics/Garments
- vii. Development of an Innovative Manufacturing Solution for energy-saving and Environmental-friendly Production of Brassiere Cup

1.5 Commercialisation was still in early stage. During the period, the Centre received an income of \$55,000 for granting a license to a company on the technology generated in a completed project.

(d) Intellectual Property(IP)

1.6 To protect the intellectual property rights of project achievements from our ITF funded R&D projects, project coordinators have been encouraged to apply for patents, trademarks or copyrights. 26 patents and 1 trademark were filed during the year. Since April 2006, 37 patents and 1 trademark have been filed in different countries (i.e. USA, China and PCT).

2. Centre Operation and General Administration

(a) Human Resources

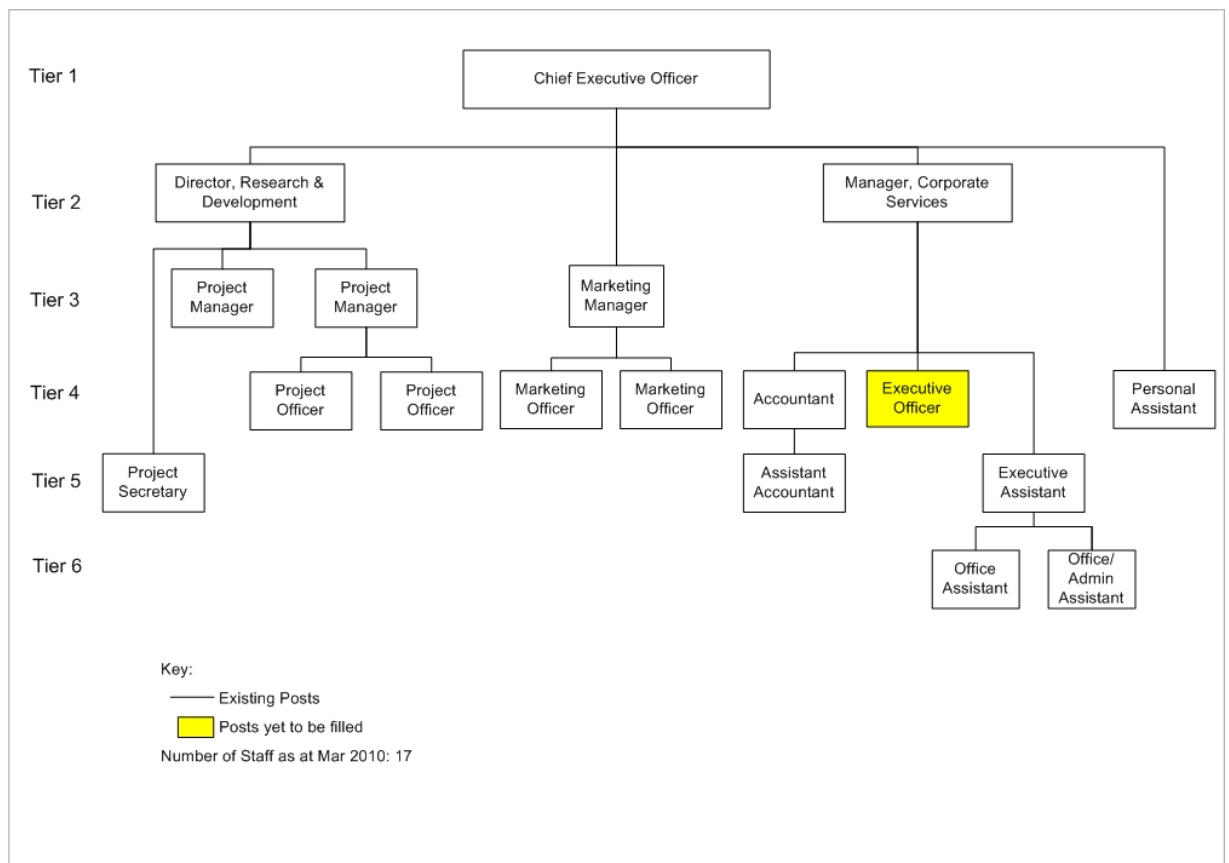
2.1 Recruitment of Staff

There was no recruitment for senior staff (tier 1 and tier 2) in 2009-10. Number of staff as at 31 March 2010 was 17.

2.2 Major HR initiatives for HKRITA in 2009-10 are as follows:

- (i) Review on HKRITA human resources policies and procedures completed.
- (ii) Renewal of medical insurance scheme – A review and renewal of HKRITA's medical insurance policy was carried out in June 2009 to ensure the policy subscribed is justifiable and competitive in the market.

2.3 The organisation chart as at end-March 2010 is as below:



(b) Operating Expenditure

2.4 The operating expenditure in 2009-10 was \$10.2 million, increased by 8.5% from the last period.

(c) Internal Audit

2.5 A 3-year internal audit exercise was launched to assess the overall performance of internal controls of relevant processes of HKRITA. The first round of the exercise was completed in 2009-10.

3. Extension Services for Industry

3.1 HKRITA has provided extension services including technical consultancy, project matching and R&D courses/seminars to assist the textiles and apparel industry:

Technical Consultancy

- 3.2 HKRITA responded to enquires from the industry relating to:
1. Problem solving;
 2. Technology upgrading;
 3. New product/process/service development;
 4. Brand development in relation to design, quality and technology; and
 5. Establishment of in-house R & D operations.

The subjects discussed with organisations/companies from 1 April 2009 to 31 March 2010:

| | Date | Subject | Company |
|---|-------------|---|----------------------|
| 1 | 21 Apr 2009 | Colour Management System | CITA |
| 2 | 22 Apr 2009 | Product Code System | GS1 Hong Kong |
| 3 | 8 Apr 2009 | New Textile Material Development | Jockey International |
| 4 | 10 Jun 2009 | New Textile Material Development | Nicca Chemical Ltd |
| 5 | 15 Jul 2009 | Smart Process Flow Management System | iGarment |
| 6 | 11 Sep 2009 | The adoption of innovative wet finishing system | L Plus H Fashion Ltd |
| 7 | 19 Oct 2009 | Development of garment component pattern database | Sterling Garment Ltd |

| | Date | Subject | Company |
|---|-------------|--|---------------------------|
| | | for speed-up fitting process in garment production | |
| 8 | 19 Oct 2009 | Research and development of solar thread | American & Efird (HK) Ltd |
| 9 | 28 Jan 2010 | Technical issues on garment design and development | PolyU |

Project Matching

3.3 HKRITA also provided “project matching service” to local research institutions/organisations on the feasibility and marketability of new/innovative project ideas and to ascertain whether such proposals would assist in solving practical problems faced by the industry. We have provided the “project matching service” by identifying industry partners who would support such research.

Workshop/Seminars/Training/Professional Development

3.4 As a knowledge dissemination channel for the industry, HKRITA had participated and organised seminars/workshops on various issues. Most of these events received very good attendance and satisfactory comments according to the feedback of the participants. They would help to keep practitioners abreast of the latest developments in the industry.

3.5 Major event held/participated from 1 April 2009 to 31 March 2010 to highlight were as follows:

| | Date | Subject |
|---|-------------|---|
| 1 | 7 May 2009 | 2009 International Conference on Nanotechnology & Advanced Materials by HKPC |
| 2 | 15 May 2009 | Seminar on “Long Term Solution for Textiles and Clothing Industry Facing Financial Tsunami : Systematic Approach for Problem Solving” by CITA |
| 3 | 4 Jun 2009 | Presentation in GDSTC Delegation |
| 4 | 28 Aug 2009 | Presentation on Clean Technologies for Textiles and Clothing Industry by HKPC |
| 5 | 24 Sep 2009 | Presentation on Environmental Protection Projects by HKPC |
| 6 | 28 Oct 2009 | Deliver a opening speech on the Seminar on IT Advancement for Garment Manufacturers |
| 7 | 24 Nov 2009 | Deliver a talk on “Clean Technologies for Textiles and Clothing“ on the Xiqiao Textile Exhibition |
| 8 | 3 Dec 2009 | Participation in the HKTDC Inno Tech Design Expo 2009 |

| | Date | Subject |
|----|-------------|--|
| 9 | 8 Dec 2009 | Participation in the Environmentally Friendly Washing & Wet Processing in Denim Exhibition |
| 10 | 9 Dec 2009 | Presentation on the seminar organised by Knitwear Innovation and Design Society (KIDS) |
| 11 | 29 Jan 2010 | Deliver a talk on “The New Development of Wet Finishing for Sweater” on the Seminar for Advanced Functional Apparel Technology by HKRITA |
| 12 | 8 Feb 2010 | Participation on the Seminar on Patent Law Fundamentals for Scientist organised by PolyU |
| 13 | 22 Mar 2010 | Presentation on Technology Advancement for Knitwear Manufacturing |
| 14 | 23 Mar 2010 | Deliver a talk on “The New Development of Wet Finishing for Sweater” on the Seminar for Advanced Functional Apparel Technology by HKRITA |
| 15 | 29 Mar 2010 | Deliver a talk on “Clean Technologies for Textiles and Clothing” on the 11th China (Dongguan) International Textile & Clothing Industry Fair |
| 16 | 30 Mar 2010 | Participation on the Prime Source Forum by APLF Ltd |

4 Promotion and Marketing Activities

Media Exposure

4.1 Media interviews and press covering have been lined up to promote the research projects. Major media reports included “時事全方位” by Now TV broadcasted on 22 July 2009 and “未來新視野- 編織新天地” by Hong Kong Broadband on 6 (老紗廠科技求變再覓春天), 7(高性能運動服 開闢新路) and 11(本地研製運動服助健兒爭標) November 2009. Besides, ATV news channel covered news of HKRITA’s project High-performance Sportswear and broadcasted it on 7 November 2009 and TVB Pearl’s Money Magazine covered news of Shape Memory Fabrics/Garments and broadcasted the story on 20 November 2009.

4.2 Advertisements/advertorials of different research projects have been placed in different textiles and apparel publications and magazines for promoting HKRITA activities and research projects. News reports of HKRITA’s projects and functions were also covered in printed and electronic media. These newspaper, magazine, textile and apparel publications and journals include Hong Kong Economic Times, Singtao Daily, E-Zone, Textiles and Clothing (HKPC), 紡織報 (大公報) Journal for Asia on Textile & Apparel, China Textile & Apparel and other electronic publications.

4.3 Interviews with media from April 2009 – March 2010

| Media | Subject | Interview/Publish / broadcast |
|---|--------------------|--------------------------------------|
| Singtao Daily | 多用途滾筒式濕整理機研研 | 20 Apr 2009 |
| Now TV | “時事全方位” | 22 Jul 2009 |
| Hong Kong Broadband “未來新視野- 編織新 天地” | (老紗廠科技求變再覓春天) | 6 Nov 2009 |
| Hong Kong Broadband “未來新視野 | (高性能運動服 開闢新路) | 7 Nov 2009 |
| Hong Kong Broadband “未來新視野 | (本地研製運動服助健兒爭 標) | 11 Nov 2009 |

Advertisements/ advertorials in apparel publications and magazines from April 2009 – March 2010

| Newspapers/ publications | Subject | Publish |
|--|------------------------------|------------------------------|
| Hong Kong: The Fashion Maker 香港 - 時裝名家 | 研發新領域 | Vol. 9 2009 |
| Textile & Clothing, HKPC | 為香港紡織及製衣業提供解決 生產問題方案 | Vol. 21 Issue 2, Apr 2009 |
| Textile & Clothing, HKPC | 香港紡織及成衣研發中心會員 計劃 | Vol. 21 Issue 3, Jun 2009 |
| China Textile & Apparel, Adsale | 2009 紡織及服裝技術論壇 | Jun/Jul 2009 |
| China Textile & Apparel, Adsale | 多用途滾筒式濕整理機 | Jun/Jul 2009 |
| 紡織報 | 創新裳飾 II | 13 Jul 2009 |
| China Textile & Apparel, Adsale | 多用途滾筒式濕整理機簡介活 動 | Aug/Sep 2009 |
| 香港經濟日報 | 多用途滾筒式濕整理機研研發 特刊 | 7 Sep 2009 |
| 紡織報 | 資訊科技提升服裝製造業發展 | 12 Oct 2009 |
| Textile & Clothing, HKPC | 多用途滾筒式濕整理機:為業界 提供可負擔的智能系統 | Vol. 21 Issue 5, Oct 2009 |
| Hong Kong: The Fashion Maker 香港 - 時裝名家 | 毛衫生產新技術 | Vol. 10 2010 |

Corporate Website

4.4 The HKRITA website was updated regularly with up-to-date news of HKRITA activities and R&D projects. More than 505,000 visitors had browsed the website since it established in 2006.

E-Newsletter

4.5 HKRITA had published e-Newsletters quarterly every April, July, October and January since September 2006. They mainly covered R&D project updates, reports of HKRITA events and introduction of latest technology development. The newsletters were disseminated to HKRITA members and business contacts by email and also available on the website for public access.

Other Major Initiatives / Activities

4.6 HKRITA had held/ participated in different exhibitions to publicise HKRITA research deliverables and R&D programmes. Major events included exhibitions in Hong Kong Fashion Week and 2009 China International Functional Fabrics and High-performance Fibers (Shanghai) Exhibition.

Publicity and marketing events from April 2009 – March 2010 are tabled as below:

| Date | Events | Venue |
|----------------|--|-----------------|
| 15 May 2009 | Seminar on "Long Term Solution for Textiles and Clothing Industry Facing Financial Tsunami: Systematic Approach for Problem Solving" | Hong Kong |
| 6-9 Jul 2009 | Hong Kong Fashion Week for Spring/Summer 2010 | Hong Kong |
| 24 Jul 2009 | Innovation and Technology on Textile Trims and Detailing I | Hong Kong |
| 31 Jul 2009 | Innovation and Technology on Textile Trims and Detailing II | Hong Kong |
| 21 Aug 2009 | Seminar on Innovative Finishing System for Wet Processing | Hong Kong |
| 29 Aug 2009 | Six-Sigma Productivity and Quality Enhancement Program | Hong Kong |
| 23-25 Sep 2009 | 2009 China International Functional Fabrics and High-performance Fibers (Shanghai) Exhibition 2009 中國國際功能性面料及高性能纖維（上海）展覽會 | Shanghai, China |

| Date | Events | Venue |
|----------------|--|------------------|
| 7-9 Oct 2009 | Interstoff Asia Essential - Autumn 2009 | Hong Kong |
| 27 Oct 2009 | Seminar on Development of an Innovative Manufacturing Solution for Energy-saving and Environmental-friendly Production of Brassiere Cup | Hong Kong |
| 28 Oct 2009 | IT advancement for Garment Manufacturers | Hong Kong |
| 25-26 Nov 2009 | 2009 China (Xiqiao) Textile Science and Technology Achievements Fair & Forum on Industrialization of the Achievements 2009 中國(西樵)紡織科技成果展示交易會暨全國紡織科技成果產業化研討會 | Xiqiao, China |
| 3-5 Dec 2009 | Inno Design Tech Expo | Hong Kong |
| 15 Jan 2010 | New Generation Warehouse and Inventory Management System: A 2D Barcode and RFID-enabled Mobile System for Textiles and Garment Industries | Hong Kong |
| 18-21 Jan 2010 | Hong Kong Fashion Week for Fall/Winter 2010 | Hong Kong |
| 29 Jan 2010 | Seminar on Technology Advancement for Knitwear Manufacturing | Hong Kong |
| 17-19 Mar 2010 | Interstoff Asia Essential - Spring 2010 | Hong Kong |
| 22 Mar 2010 | Seminar on Technology Advancement for Knitwear Manufacturing (Re-run) | Hong Kong |
| 29 Mar 2010 | The 11th China (Dongguan) Int'l Textile & Clothing Industry Fair (DTC 2010) 第十一屆中國(東莞)國際紡織製衣工業技術展 | Guangdong, China |

4.7 In addition, HKRITA supported and sponsored over 25 marketing and publicity events relevant to textiles and clothing technology from April 2009 to March 2010 to sustain a good connection with various industrial sectors and to maintain regular exposure in the industry.

4.8 HKRITA received eight delegations from academia and industry last year. List of delegation visits to HKRITA from April 2009 to March 2010 is listed as below:

| Date | Delegations/ Visitors | No. of visitors |
|-------------|---|------------------------|
| 1 Apr 2009 | Prof Kanji Kajiwara from Shinshu University Prof Clare Johnston from Royal College of Art | 2 |
| 3 Apr 2009 | Mr Han Bekke, Secretary General of International Apparel Federation (IAF) | 1 |
| 23 Apr 2009 | Delegation of WuYi University (五邑大學) | 10 |
| 27 May 2009 | Delegate from Industrial Economics & Knowledge Center, Industrial Technology Research Institute(台灣工業技術研究院產業經濟與趨勢研究中心) | 1 |
| 3 Jun 2009 | Delegation of Sichuan University (四川大學) | 5 |
| 8 Jun 2009 | Delegation of JOCKEY International, Inc. | 3 |
| 6 Aug 2009 | Delegation of VF Asia Procurement Division | 7 |
| 19 Jan 2010 | Delegation of SGS Hong Kong Ltd. | 3 |

5. Major Planned Activities in 2010-11

5.1 On R&D programme, HKRITA plans to launch 12 new projects in 2010-11. HKRITA will increase its capacity and effort in commercialization by recruiting a senior staff on commercialization.

5.2 In line with the commercialization plan for research projects, HKRITA will organise or participate in the following publicity events to promote the project deliverables and our R&D programmes:

| Date | Events | Venue |
|----------------|---|--------------|
| <u>Local</u> | | |
| Jul 2010 | Hong Kong Fashion Week S/S | HK |
| Jun – Aug 2010 | Briefing Workshops for Associations in Textiles and Clothing Industry | HK |
| Oct 2010 | Interstoff Asia Essential – Autumn 2010 | HK |
| Oct 2010 | 26th IAF World Apparel Convention | HK |
| Oct/ Nov 2010 | Innovation Festival 2010 | HK |
| Nov/ Dec 2010 | Inno Design Tech Expo | HK |

| Date | Events | Venue |
|-----------------------------|---|-----------------|
| Jan 2011 | Hong Kong Fashion Week F/W | HK |
| Mar 2011 | Interstoff Asia Essential – Spring 2011 | HK |
| Mar 2011 | HKRITA Technology Symposium | HK |
| In line with project status | Commercialisation activities such as seminars, workshops and tour visit | HK |
| On regular basis | Technical Seminars/ Workshops | HK/ Pan PRD |
| <u>China/ Overseas</u> | | |
| Jun 2010 | ITMA Asia + CITMA 2010 | Shanghai, China |
| Sep 2010 | 2010 China International Functional Fabrics and High-performance Fibers (Shanghai) Exhibition | Shanghai, China |
| Oct/ Nov 2010 | China Hi-Tech Fair 2010 | Shenzhen, China |
| Mar-2011 | Seminar in The 12th China (Dongguan) Int'l Textile & Clothing Industry Fair 2010 | Dongguan, China |

5.3 Media interviews and press covering will be lined up to promote the research projects. Press releases will be issued to publicise particular marketing activities. Advertisements or advertorials will be placed in popular industry oriented publications such as Textile and Clothing, China Textile & Apparel, Hong Kong Textiles Post (香港紡織報), or in mass media to promote HKRITA's work to the industry and the public.

HKRITA
June 2010

Appendix I
附錄一

The Hong Kong Research Institute of Textile and Apparel (HKRITA)
香港紡織及成衣研發中心
R&D Projects as at end March 2010
研發項目(截至 2010 年 3 月)

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|------------------------|---|------------------------------------|------------------|--|--|--|-----------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| Platform Research 平台研究 | | | | | | | |
| 1. | Biofunctional Materials and Applications 生物功能材料研究與應用 | 18* | Completed 已完成 | 4,469,800 | 14% | The Hong Kong Polytechnic University 香港理工大學 | Six private companies 六家私營公司 |
| 2. | Advanced Clothing Functional Design CAD Technologies 先進服裝功能設計 CAD 技術 | 18* | Completed 已完成 | 4,082,800 | 12% | The Hong Kong Polytechnic University 香港理工大學 | Four private companies 四家私營公司 |
| 3. | Advanced Textile and Garment Manufacturing Process Technology 先進紡織品及服裝製造流程技術 | 24* | Completed 已完成 | 3,908,984 | 12% | The Hong Kong Polytechnic University 香港理工大學 | Six private companies 六家私營公司 |
| 4. | Advanced Functional Surface Treatment Technology for Textile Materials 先進紡織材料功能性處理技術 | 25* | Completed 已完成 | 4,752,000 | 13% | The Hong Kong Polytechnic University 香港理工大學 | Three private companies 三家私營公司 |
| 5. | Imaging Colour Measurement (ICM) System for Textile and Garment Industry | 32* | Completed 已完成 | 4,372,050 | 11% | The Hong Kong Polytechnic University 香港理工大學 | Four private companies 四家私營公司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|---|------------------------------------|------------------|--|--|---|-----------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | 用於紡織及服裝工業的成像 顏色測量系統 | | | | | | |
| 6. | Development of a Problem Solving Model for the Hong Kong Textiles and Clothing Industries 為香港紡織及製衣業提供解 決生產問題方案 | 18 | Completed 已完成 | 3,049,200 | 10% | Clothing Industry Training Authority 製衣業訓練局 | Six private companies 六家私營公司 |
| 7. | Development of a Fashion Sales Forecasting Decision Support System Using Artificial Intelligence Techniques 利用人工智能技術開發時裝 銷售預測支援系統 | 30* | On-going 進行中 | 2,799,995 | 10% | The Hong Kong Polytechnic University 香港理工大學 | Four private companies 四家私營公司 |
| 8. | Functional and Decorative Textile Products through Sputtering Technology 功能性與裝飾性的濺射鍍紡 織產品 | 20* | Completed 已完成 | 793,000 | 10% | The Hong Kong Polytechnic University 香港理工大學 | Four private companies 四家私營公司 |
| 9. | Novel Quick Testing Sensors of Formaldehyde in Textile Fabrics and Clothing Products 快速檢測紡織品殘留甲醛可 攜式感測器 | 30* | On-going 進行中 | 4,343,900 | 10% | The Hong Kong Polytechnic University 香港理工大學 | Five private companies 五家私營公司 |
| 10. | Novel Finishing Treatment for Knitwear Using Low Temperature Rapid Evaporation | 24 | On-going 進行中 | 2,854,270 | 10% | The Hong Kong Polytechnic University 香港理工大學 | Three private companies 三家私營公司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|------------------------------------|-----------------|--|--|--|-----------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | 低溫快速蒸發針織衣物的嶄新處理技術 | | | | | | |
| 11. | Application of Foam Dyeing Technology for Developing Colour Wash-out Effect on Cotton Knitted Fabric 應用泡沫染色技術開發純棉針織布創新水洗面料 | 12 | On-going 進行中 | 999,990 | 10% | The Hong Kong Polytechnic University 香港理工大學 | Three private companies 三家私營公司 |
| 12. | An Empirical Study of Laser-based Finishing for Textile Materials 探討以激光作紡織材料整理的可行性 | 14* | On-going 進行中 | 499,995 | 10% | The Hong Kong Polytechnic University 香港理工大學 | Five private companies 五家私營公司 |
| 13. | Conversion of Lab-scale to industrial scale production technology of (4in1) finishing agents and its application system 4 合 1 整理劑的從實驗室到工業化的轉變及其應用 | 12 | On-going 進行中 | 1,049,989 | 10% | The Hong Kong Polytechnic University 香港理工大學 | Three private companies 三家私營公司 |
| 14. | The Second-Phase Research and Development of Imaging Colour Measurement (ICM) System for Textile and Garment Industry 紡織及服裝成像顏色測量系統的二期研究與開發 | 30 | On-going 進行中 | 8,826,450 | 15% | The Hong Kong Polytechnic University 香港理工大學 | Four private companies 四家私營公司 |
| 15. | Development of an | 22.5* | Completed | 1,689,450 | 14% | Hong Kong Productivity | Five private companies |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|------------------------------------|------------------|--|--|---|-----------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | Innovative Finishing System for Wet Processing of Garments and Accessories 開發一台創新設計可作成衣 和輔料後整的濕整理系統 | | 已完成 | | | Council 香港生產力促進局 | 五家私營公司 |
| 16. | Development of a Laboratory-Scale Electrochemical Mercerization and Bleaching System for Technological Evaluation 發展一套實驗室規模的電化 學絲光漂白工藝用於技術的 評估 | 18* | Completed 已完成 | 997,620 | 2% | Hong Kong Productivity Council 香港生產力促進局 | Two private companies 兩家私營公司 |
| 17. | Finer Nu-Torque Cotton Yarn Production 高支扭妥棉紗生產技術 | 21* | Completed 已完成 | 2,380,950 | 11% | The Hong Kong Polytechnic University 香港理工大學 | Two private companies 兩家私營公司 |
| 18. | Development of Fabric Structure Analysis and Appearance Evaluation System 織物結構分析和外觀評估系 統的開發 | 25* | Completed 已完成 | 2,864,250 | 10% | The Hong Kong Polytechnic University 香港理工大學 | Three private companies 三家私營公司 |
| 19. | Development of Shape Memory Knitted Fabrics/Garments 形狀記憶針織服裝及其紡織 品的開發 | 34* | Completed 已完成 | 11,000,000 | 9% | The Hong Kong Polytechnic University 香港理工大學 | Six private companies 六家私營公司 |
| 20. | Development of an Integrated Solution for Minimizing Pilling Problem of Cashmere Knitwear | 28* | Completed 已完成 | 2,779,500 | 11% | Hong Kong Productivity Council 香港生產力促進局 | Five private companies 五家私營公司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|---|------------------------------------|------------------|--|--|--|-----------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | 開發減低羊絨衫起毛球的綜合方案 | | | | | | |
| 21. | Fabric Sensors for Three Dimensional Surface Pressure Mapping 分佈式三維表面壓力織物傳感器 | 30* | On-going 進行中 | 8,025,400 | 11% | The Hong Kong Polytechnic University 香港理工大學 | Three private companies 三家私營公司 |
| 22. | Development of Smart Interactive Functional Clothing 智優互動功能服裝的研發 | 24 | On-going 進行中 | 3,147,590 | 12% | The Hong Kong Polytechnic University 香港理工大學 | Three private companies 三家私營公司 |
| 23. | High-Performance Sportswear and Devices 高性能運動服與裝置 | 22* | On-going 進行中 | 5,422,890 | 16% | The Hong Kong Polytechnic University 香港理工大學 | Nine private companies 九家私營公司 |
| 24. | Small Sized Fiber Sensors 微小型纖維傳感器 | 29* | On-going 進行中 | 5,963,600 | 10% | The Hong Kong Polytechnic University 香港理工大學 | Three private companies 三家私營公司 |
| 25. | Development of an Innovative Manufacturing Solution for Energy-saving and Environmental-friendly Production of Brassiere Cup 開發一套新穎的環保、節能及低消耗的胸杯生產技術 | 18 | Completed 已完成 | 2,696,050 | 10% | Hong Kong Productivity Council 香港生產力促進局 | Eight private companies 八家私營公司 |
| 26. | Remote Assessment System for Physical Prototypes under an e-clustering Environment (EPAS – e-clustered Prototype Assessment System) | 14* | Completed 已完成 | 1,559,015 | 11% | The Hong Kong Polytechnic University 香港理工大學 | Three private companies 三家私營公司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|------------------------------------|------------------|--|--|--|-----------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | e-群體樣辦遙測系統 | | | | | | |
| 27. | An Intelligent Fabric Sample Resources Management System (FRMS) for Fashion Product Development 智能布料樣辦資源管理系統以支援新產品開發 | 12 | Completed 已完成 | 992,293 | 13% | The Hong Kong Polytechnic University 香港理工大學 | Three private companies 三家私營公司 |
| 28. | Biofunctional Materials and Applications (II) 生物功能材料研究與應用 (II) | 24 | On-going 進行中 | 5,216,100 | 12% | The Hong Kong Polytechnic University 香港理工大學 | Six private companies 六家私營公司 |
| 29. | Advanced Clothing Functional Design CAD Technologies (II) 先進服裝功能設計 CAD 技術 (II) | 24 | On-going 進行中 | 6,790,850 | 10% | The Hong Kong Polytechnic University 香港理工大學 | Four private companies 四家私營公司 |
| 30. | Conversion to an Industrial Scalable Technology – “Advanced Textile and Garment Manufacturing Process Technology” 轉化成一個可升級的工業技術- 先進紡織品及服裝製造流程技術 | 16* | On-going 進行中 | 992,260 | 15% | The Hong Kong Polytechnic University 香港理工大學 | Two private companies 二家私營公司 |
| 31. | Innovative Energy and Utility Management System in Textile Processing 用於紡織生產處理過程的創新能源管理系統 | 24 | On-going 進行中 | 4,899,790 | 10% | The Hong Kong Polytechnic University 香港理工大學 | Five private companies 五家私營公司 |
| 32. | Feasibility Study on Low Pressure Plasma Assisted Dyeing Process with Both | 12 | Completed 已完成 | 999,066 | 10% | Hong Kong Productivity Council 香港生產力促進局 | Three private companies 三家私營公司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|------------------------------------|-----------------|--|--|--|------------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | Inorganic and Organic Dyestuff for Textile Products 紡織品中的無機和有機染料 用低壓等離子助理染色的可 行性研究 | | | | | | |
| 33. | Development of a Novel Electrolytic Ozone Spray Process to Achieve Aged- look Effect for Denim Wear 發展一種新型的電解臭氧噴 霧過程用於牛仔服裝的仿舊 效果處理 | 18 | On-going 進行中 | 1,995,840 | 10% | Hong Kong Productivity Council 香港生產力促進局 | Four private companies 四家私營公司 |
| 34. | Development of a Lab-Dip System for CO2 Waterless Dyeing 為無水染色技術發展一套打 色樣系統 | 24 | On-going 進行中 | 2,300,000 | 10% | Hong Kong Productivity Council 香港生產力促進局 | Four private companies 四家私營公司 |
| 35. | Textiles Needs of Paraplegic and Quadriplegic Patients in Paediatric Hospitals 紡織品對兒科醫院截癱和四 肢癱瘓患者的需要 | 15* | On-going 進行中 | 799,900 | 10% | The Hong Kong Polytechnic University 香港理工大學 | Three private companies 三家私營公司 |
| 36. | Development of Custom Shoe-Last from Foot Scan Data 數字化度身定制鞋楦系統 | 12 | On-going 進行中 | 1,068,400 | 10% | The Hong Kong Polytechnic University (PolyU) 香港理工大學 | Two private companies 兩家私營公司 |
| 37. | Development of Durable Adult Bibs for Healthcare 研發應用在健康護理上的耐 用成人圍裙 | 12 | On-going 進行中 | 499,650 | 10% | The Hong Kong Polytechnic University (PolyU) 香港理工大學 | Two private companies 兩家私營公司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|------------------------------------|--|------------------------------------|------------------|--|--|---|----------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 38. | Using the lateral stretch length to enhance the design capacity, production quality and marketing competitiveness of knitwear industry 利用字碼改善針織業的生產品質、營銷績效及設計能力 | 12 | On-going 進行中 | 930,400 | 11% | Clothing Industry Training Authority (CITA) 香港製衣業訓練局 | Five private companies 五家私營公司 |
| 39. | Development of Shape Memory Fiber by Melt Spinning Method 應用熔融紡絲法開發形狀記憶纖維 | 24 | On-going 進行中 | 9,961,695 | 11% | The Hong Kong Polytechnic University (PolyU) 香港理工大學 | Four private companies 四家私營公司 |
| 40. | Development of Intelligent Impact Protectors Based on 3D Auxetic Fabrics 基於三維負泊松比織物的智慧防沖材料的研發 | 24 | On-going 進行中 | 4,881,500 | 10% | The Hong Kong Polytechnic University (PolyU) 香港理工大學 | Two private companies 兩家私營公司 |
| Collaborative Research 合作研究 | | | | | | | |
| 41. | Development of 100% Cotton Super Comfort & Easy Care Fabrics and Garments 全棉超舒適免燙面料與服裝研發 | 24 | On-going 進行中 | 3,208,500 | 50% | The Hong Kong Polytechnic University (PolyU) 香港理工大學 | One private company 一家私營公司 |
| Contract Research 合同研究 | | | | | | | |
| 42. | Energy Audit 能源審核 | 10 | Completed 已完成 | 52,000 | 100% | HKPC 香港生產力促進局 | One private company 一家私營公司 |
| 43. | Providing technical | 6 | Completed | 44,000 | 100% | HKPC | One private |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|------------------------------------|--------------|--|--|------------------------------------|--------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | consultancy services for Competence Enhancement Programme 提供技術顧問服務給技能提 升計劃 | | 已完成 | | | 香港生產力促進局 | company 一家私營公司 |

* Revised Project Duration

**Hong Kong R&D Centre for
Logistics and Supply Chain Management Enabling Technologies**

Progress Report for the period from April 2009 to March 2010

Highlights for 2009-10

1. During 2009-10, Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies (LSCM) undertook a total of 21 ITF projects of which 9 were new projects. With the completion of 3 projects during the period, the total number of completed projects was 7. In 2009, the Centre had completed formulating its procedures on licensing the R&D results of the completed projects.
2. The Centre continued to strengthen its effort in industry liaison and marketing, including hosting the 2nd LSCM Annual Conference on 26 March 2010 attracting over 470 attendees from the industry to attend the event.
3. The details of the R&D programme, Centre Operation and plan for 2010-11 are set out in the following paragraphs.

A R&D Programme

R&D Project Solicitation

4. LSCM conducted three rounds of (project solicitations) from April 2009 to March 2010. The first round was done in April 2009 with proposal submission deadline on 23 June 2009. The second round was on 2009 Guangdong-Hong Kong Technology Co-operation Funding Scheme (TCFS) project solicitation, done in May 2009 with proposal submission deadline on 3 July 2009. The last round was done in January 2010 with proposal submission deadline on 9 April 2010.

Projects Undertaken

5. Up to end March 2010, there were 26 R&D projects undertaken by the Centre. 8 projects were in area of RFID Hardware and Systems; 6 were in the area of Networking and Infrastructure Technologies; and 7 were in the area of Application and Decision Support Technologies. The total approved project cost amounted to \$193.1 million. Industry contribution

received amounted to 23.8 million or 12.3% of the project cost.

6. During the period, the Centre launched 9 new projects with the total project cost of \$61.5 million. Two of them were collaborative projects. The centre also provided a consultancy project of \$6,500 to a company on training of staff.
7. The list of all R&D projects undertaken/completed with cost and industry contributions from April 2006 to Mar 2010 is in Appendix I.

Commercialisation and Technology Transfer of ITF Projects

8. More than 126 private companies and R&D organizations participated in the projects undertaken by the Centre. It is expected that the research outputs from these projects would benefit the competitiveness of local logistics and supply chain management industries, in particular, to enhance their technology advancement
9. In 2009, the Centre had completed formulating procedures on licensing matters for R&D projects. Finance & Administration Committee (FAC) had approved procedures on IP licensing arrangement with university partners and methods to determine proposed license fee of project deliverables. FAC also recommended that projects shall define licensable technologies and licensing fees, and seek their approval before commercialization.
10. A technology transfer group was formed to carry out duties of technology transfer. They will be responsible for:
 - Sales of FAC approved licensable deliverables, mainly in Hong Kong and PRD area
 - Technologies (licensable deliverables) marketing
 - Acquire and manage licensable deliverables' knowledge from various R&D team. And liaise with individual R&D team for pre-sales and post-sales activities.
 - Review the licensable deliverables, such as price structure, target market segment, life-time, etc.
 - Administration of all transactions for both LSCM and universities (accounting, # of licenses, invoice, benefit sharing, etc.)
11. The Centre anticipates 11 projects to be completed by March 2011. To promote the technologies to potential users, the Centre will further increase its effort in organizing industry activities, such as Annual Conference, Technology Transfer Forums and Membership's e-News, etc.,

to expand our industry network and technology transfer opportunities. To facilitate potential clients in obtaining Centre's technologies, online information will be available in Centre's website, where clients can get firsthand product specifications and pricing information. LSCM's Technology Show Room is under renovation and will be ready in July 2010 to let potential clients review and experience the R&D results.

12. Following the FAC approved procedures, licensable technologies and license fee for the following projects had been ascertained, reviewed and approved by FAC:
 - RFID Enabling Technologies for Retail & Logistics Industry
 - An eLogistics Appliance with Data Exchange and Conversion Technologies for Infrastructure Connectivity RFID Benchmarking: Methodology and Practice
 - RFID-based Interoperable Gateway for Logistics Service Platforms
 - Study the Design Challenges of 90nm Technology UHF RFID Tag IC

B Centre Operation

Industry liaison and marketing activities

13. The operating expenditure in 2009-10 was \$16.3 million, increased by 8.6% from the last period.
14. The Centre has been promoting its membership scheme through various events and activities. Apart from business matching and project collaboration activities, members also actively participated in other Centre's events like Industry and Technology Forum, exhibitions, conferences, delegations as well as networking opportunities.
15. During 2009-10, the Centre participated in a total of (1) 14 exhibitions and road shows; (2) 21 conferences/seminars/workshops; (3) 21 publicity activities (including delegation / media interviews / networking activities). Moreover, our website attracted over 120,000 visitors during the reporting year.
16. On 26 March, 2010, LSCM hosted its 2nd year Annual Conference. This year we have expanded exhibitions areas with three major themes, namely: "Food Safety and Supply Chain", "Retail Technologies" and "Logistics Applications". The Conference has attracted over 200 and 470 attendees to our technical conference and exhibitions respectively.
17. During the year, the Centre conducted over 10 joint promotion activities with different associations all over the world such as GDRC from Guangzhou; China RFID Alliance from Beijing; Shanghai Base of National RFID Industrialization from Shanghai; Ministry of Knowledge

Economy from Korea; Taipei Computer Association from Taiwan, etc. These events allowed the Centre and its members to have the opportunities to reach out globally.

18. The following table shows a summary of major industry activities in 2009-10:

| Date | Activities |
|-------------|---|
| May-2009 | Logistics Awards Hong Kong 2009 |
| Jun-2009 | China 2009 International Smart Cards and RFID Exhibition & Conference (Beijing) |
| Jun-2009 | Retail Asia Expo & Congress 2009 |
| Aug-2009 | Joint Technology Seminar with The Chinese Manufacturers' Association of Hong Kong (HK) |
| Sep-2009 | 2009 Guangdong-Hong Kong RFID Technology Application Summit (GZ) |
| Oct-2009 | RFID/USN Korea 2009 International Exhibition & Conference (Korea) |
| Oct-2009 | LSCM Research Forum |
| Nov-2009 | The 4th China RFID Technology Development International Conference & Exhibition in 2009 |
| Nov-2009 | GS1 Hong Kong Supply Chain Management Excellence Conference 2009/Hong Kong RFID Awards (HK) |
| Nov-2009 | China Hi-Tech Fair 2009 - Hong Kong Pavilion (SZ) |
| Nov-2009 | Cyberport Venture Capital Forum 2009 (HK) |
| Dec-2009 | Inno Design Tech Expo 2009 (HK) |
| Dec-2009 | Taiwan 2009 RFID Week (Taipei) |
| Jan-2010 | Seminar for the Hong Kong Air Freight Forwarding |

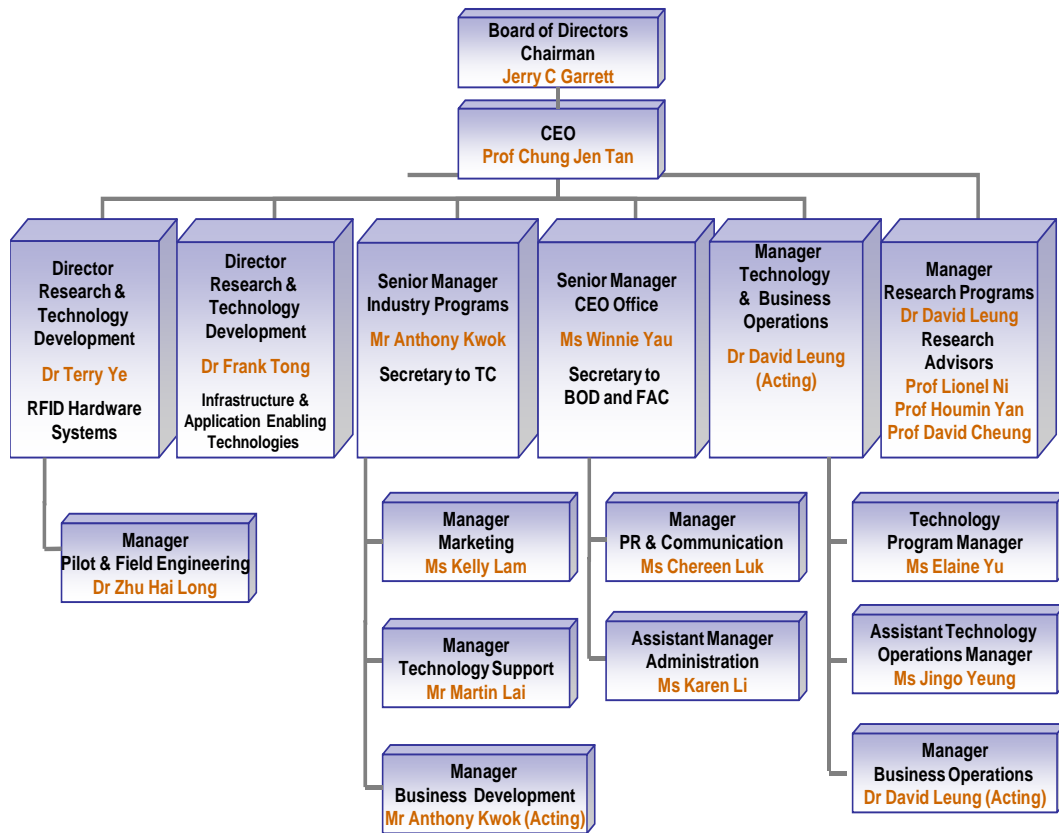
| | |
|----------|---|
| | Industry (HK) |
| Mar-2010 | LSCM Annual Conference & Exhibition 2010 (HK) |

19. Up to 31 March 2010, the Centre has recruited over 500 Individual members, 180 Company/Institutes members, and 100 Technology/Solution Provider members, making the total number of members to be 794. The following table shows the summary of the membership status by membership year.
20. To continue the momentum of membership recruitment, and support the various implementation activities of technology transfer strategy, LSCM has decided to drop the membership fee for all members.

Centre Operation and Administration

21. The organisation chart of the Centre is shown below. The number of staff was 42 as at end-March 2010. The Centre had additionally employed a number of new staff during the last year who mainly serving the technology transfer activities as well as the R&D projects.

LSCM Organization Chart



Corporate governance

22. The Centre has employed an external auditor to conduct operational audit at corporate level according to the corporate governance and tripartite agreement from mid 2009.

C Plan for 2010-11

R&D Roadmap Update

23. With an aim to continuously develop the R&D pipelines, LSCM had conducted an exercise for the reviewing the R&D Roadmap in July 2009 to further strengthen technology development that enhances industries' competitiveness.
24. LSCM has called upon industry, academia and experts to combine their knowledge and experience to formulate the comprehensive R&D Roadmap. With the industry-led R&D Roadmap, industry, academic and research groups are encouraged to lead R&D which aims to fulfil the following objectives:
 - Creating and delivering commercial values through innovation and technology;
 - Creating values that arouse public awareness and interest.
25. In the upcoming year, the R&D Roadmap will continue to focus on three major areas:
 - RFID Hardware and Systems
 - Networking and Infrastructure Technologies
 - Applications and Decision Support Technologies
26. The Centre will continue its work on project solicitation. It is expected that 10 new projects will be undertaken with the estimated R&D cost of \$60.5M.
27. Highlight of major planned activities in 2010-11

| Date | Type | Event Name | Organizer |
|-------------|----------------------|--|--|
| May | | | |
| May 16 | Workshop | Green ICT & Logistics Training | Hong Kong Productivity Council |
| May 19 | Delegation | Visit from Global Coalition for Efficient Logistics | LSCM |
| May 27 | Delegation | Visit from HKU IMBA (National Kaohsiung First University of Science and Technology) | LSCM |
| Jun | | | |
| Jun 7-9 | Exhibition / Seminar | 12th China International Smart Cards and RFID Exhibition & Conference 2010 8th China (Beijing) RFID & IOT Summits | RFID China Alliance |
| Jun 10 | Delegation | Visit from Hong Kong Economic and Trade Office (Canada) | LSCM |
| Mid - Jun | Seminar | LSCM Technology Transfer Seminar - 1 | LSCM |
| Jun 22 - 24 | Exhibition | Retail Asia Expo & Congress 2010 | Diversified Events Hong Kong Ltd |
| Jun 23 | Delegation | Visit from Hong Kong General Chamber of Commerce | LSCM |
| Jul | | | |
| Jul 1-3 | Exhibition | 2010 Shenzhen International Internet of Things Technologies and Application Exhibition | Shenzhen Ulink Media Ltd. (RFID World China) |
| Jul | Ceremony | LSCM Showroom Opening | LSCM |
| Aug | | | |
| Aug | Seminar | 2010 Guangdong-Hong Kong | GDRC/LSCM |

| Date | Type | Event Name | Organizer |
|----------------|---------------------------|---|---|
| | | RFID Technology Application Summit (Guangzhou) | |
| Oct | | | |
| Oct 6 - 7 | Exhibition/ Seminar | Printed Electronics Asia 2010 | IDTechEx |
| Oct 6 - 7 | Exhibition/ Seminar | Wireless Sensor Networks, Energy Harvasting & RFID 2010 | IDTechEx |
| Oct | Seminar | 2010 海峽兩岸 RFID 與物聯網 應用展 (Taipei) | 台灣區電機電子工業 同業公會 (Taiwan Electrical and Electronic Manufacturers' Association)及外貿協 會 |
| Nov | | | |
| Nov 5 | Conference | GS1 Hong Kong Supply Chain Management Excellence Summit 2010 | GS1 Hong Kong |
| Nov 8 - 9 | Seminar | Knowledge Transfer Conference | The Hong Kong Polytechnic University |
| Nov 16 - 21 | Exhibition | China Hi-Tech Fair (Shenzhen) | ITC/TDC |
| Nov 18 - 20 | Exhibition/ Conference | RFID/ USN Korea 2010 International Exhibition & Conference (Seoul) | Korea Association of RFID / USN |
| Early-Nov | Exhibition/ Roadshow | Innovation Festival 2010 | ITC/TDC |
| Nov | Conference | The 5th China RFID Technology Development International Conference & Exhibition in 2010 | 國家科技部高新技術 發展及產業化司 及 上海市科學技術委員 會 |
| Nov | Forum | Cyberport Venture Capital Forum 2010 | Cyberport |
| Dec | | | |

| Date | Type | Event Name | Organizer |
|------------|---------------------------|---|-----------|
| Dec 2 - 4 | Exhibition | Inno Design Tech Expo 2010 | ITC/TDC |
| Dec | Seminar | LSCM Technology Transfer Seminar - 2 | LSCM |
| Mar | | | |
| Mar | Exhibition/ Conference | The 3rd LSCM Annual Conference and Exhibition | LSCM |

LSCM
June 2010

Appendix I**附錄一****Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies Limited**

香港物流及供應鏈管理應用技術研發中心有限公司

R&D Projects as at end March 2010

研發項目(截至 2010 年 3 月)

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|------------------------|---|---------------------------------|------------------|---|---|---|-------------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| Platform Research 平台研究 | | | | | | | |
| 1 | Study the Design Challenges of 90nm Technology UHF RFID Tag IC 90nm 工藝 UHF RFID 標籤 IC 之設 | 29 | Completed 已完成 | 2,249,970 | 11% | - The Chinese University of Hong Kong - 香港中文大學 | - Two private companies - 兩家私營公司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|-----------|---|---------------------------------|------------------|---|---|--|--------------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | 計研究 | | | | | | |
| 2 | An eLogistics Appliance with Data Exchange and Conversion Technologies for Infrastructure Connectivity 電子物流設備 – 連接電子物流基礎建設的數據轉換及交換技術 | 21 | Completed 已完成 | 6,649,600 | 10% | - The University of Hong Kong - 香港大學 | - Five private companies - 五家私營公司 |
| 3 | RFID Benchmarking: Methodology and Practice 無線射頻識別基準測 | 21 | Completed 已完成 | 1,988,465 | 12% | - The Hong Kong University of Science and Technology | - Five private companies - 五家私營公司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|-----------|---|---------------------------------|------------------|---|---|--|---|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | 試的關鍵技術之方法及應用 | | | | | - 香港科技大學 | |
| 4 | RFID Enabling Technologies for Retail & Logistics Industry 支援零售及物流應用射頻識別技術之軟件平臺 | 15 | Completed 已完成 | 6,615,500 | 23% | - The University of Hong Kong - 香港大學 | - Airport Authority Hong Kong - 香港機場管理局 - Ten private companies - 十家私營公司 |
| 5 | RFID-based Interoperable Gateway for Logistics Service Platforms (RIG) 用於物流服務平臺互 | 21 | Completed 已完成 | 10,025,500 | 13% | - Hong Kong R&D Centre for Logistics and Supply Chain Management | - Seven private companies - 七家私營公司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|-----------|---|---------------------------------|------------------|---|---|--|---|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | 聯互通射頻識別交換 閘(RIG) | | | | | Enabling Technologies Limited - 香港物流及供 應鏈管理應用 技術研發中心 | |
| 6 | Integrated Passive UHF RFID Tags and Readers 集成無源 UHF 射頻 識別讀取器和卷標 | 24 | Completed 已完成 | 6,823,000 | 11% | - The Hong Kong University of Science and Technology - 香港科技大學 | - Four private companies - 四家私營公 司 |
| 7 | Privacy Protection and Communication Security in RFID Systems RFID 系統的通訊安 | 9 | Completed 已完成 | 1,714,000 | 0% | - Hong Kong R&D Centre for Logistics and Supply Chain Management | - N/A |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|-----------|--|---------------------------------|------------------|---|---|---|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | 全和私人信息保護 | | | | | Enabling Technologies Limited - 香港物流及供 應鏈管理應用 技術研發中心 | |
| 8 | A Market Intelligence Study on Enabling Technologies for Industries related to Logistics & Supply Chain Management 物流及供應鏈管理相 關行業應用技術的市 場情報資訊研究 | 24 | Completed 已完成 | 8,814,600 | 0% | - Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies Limited - 香港物流及供 應鏈管理應用 | - N/A |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|-----------|---|---------------------------------|----------------|---|---|---|---|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | | | | | | 技術研發中心 | |
| 9 | RFID-Enabled Real-Time Manufacturing Shop-floor Information Infrastructure for PRD Processing Trade Enterprises 珠三角加工貿易企業 基於 RFID 的實時製 造信息平臺核心技術 的研發 | 24 | Ongoing 進行中 | 6,628,000 | 17% | - The University of Hong Kong - 香港大學 | - Four private companies - 四家私營公 司 |
| 10 | Trustworthy RFID Technologies: Methodology and | 27 | Ongoing 進行中 | 3,953,500 | 15% | - The Hong Kong University of Science and | - Two private companies - 兩家私營公 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|-----------|---|---------------------------------|----------------|---|---|---|--|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | Practice 可信無線射頻識別的 關鍵技術之方法及應 用 | | | | | Technology - 香港科技大學 | 司 |
| 11 | Package-specific RFID Tagging and Embedding Technology 適用於產品包裝的 RFID 標籤及嵌入技 術 | 24 | Ongoing 進行中 | 12,744,000 | 12% | - Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies Limited - 香港物流及供 應鏈管理應用 技術研發中心 | - Seven private companies - 七家私營公 司 |
| 12 | RFID-enabled | 24 | Ongoing | 9,999,990 | 10% | - The University | - Eight private |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|-----------|---|---------------------------------|----------------|---|---|---|---------------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | Platform Technology for the Integrated Shenzhen-Hong Kong Food Safety and Supply Chain Management Public Information Platform 深港一體化食品安全及供應鏈管理公共訊息平臺及 RFID 關鍵技術 | | 進行中 | | | of Hong Kong - 香港大學 - The Chinese University of Hong Kong - 香港中文大學 | companies - 八家私營公司 |
| 13 | Interoperability Technology and Applications for Container RFID and e-seal | 24 | Ongoing 進行中 | 9,591,250 | 11% | - Hong Kong R&D Centre for Logistics and Supply Chain Management | - Eight private companies - 八家私營公司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|-----------|---|---------------------------------|----------------|---|---|--|---------------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | 集裝箱電子標籤與電子封條互聯互通技術及試點應用 | | | | | Enabling Technologies Limited - 香港物流及供應鏈管理應用技術研發中心 | |
| 14 | RFID Benchmarking Methodology, Report and Tool Support 無線射頻識別基準測試的關鍵技術之方法及應用 | 24 | Ongoing 進行中 | 10,699,720 | 15% | - The Hong Kong University of Science and Technology - 香港科技大學 | - Eight private companies - 八家私營公司 |
| 15 | RF-based Technologies for Asset/Personnel Tracking | 24 | Ongoing 進行中 | 5,729,000 | 11% | - The Hong Kong University of Science and Technology | - Two private companies - 兩家私營公司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|-----------|--|---------------------------------|----------------|---|---|--|--------------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | 基於射頻技術的資產 /人員跟蹤方法 | | | | | - 香港科技大學 | |
| 16 | Enhancing the Competitiveness of the Hong Kong Air Freight Forwarding Industry Using RFID and Software Agent Technologies 運用射頻識別和軟件代理技術增強香港貨物空運工業的競爭力 | 24 | Ongoing 進行中 | 4,522,640 | 12% | - The Hong Kong Polytechnic University - 香港理工大學 | - Five private companies - 五家私營公司 |
| 17 | Lightweight RFID Reader Chip for NFC and Mobile | 18 | Ongoing 進行中 | 2,928,330 | 58% | - Hong Kong R&D Centre for Logistics and | - Seven private companies - 七家私營公 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|-----------|--|---------------------------------|----------------|---|---|---|--|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | Applications 用於近場通訊(NFC) 和移動應用的輕量級 RFID 閱讀器芯片 | | | | | Supply Chain Management Enabling Technologies Limited - 香港物流及供 應鏈管理應用 技術研發中心 | 司 |
| 18 | RFID Application Service Technology in Guangdong-Hongkong Import/Export Supervision and Management 粵港進出口監管及管 理的 RFID 應用服務 | 24 | Ongoing 進行中 | 4,589,990 | 10% | - Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies Limited | - Three private companies - 三家私營公 司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|-----------|---|---------------------------------|----------------|---|---|--|-------------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | 技術 | | | | | - 香港物流及供應鏈管理應用技術研發中心 | |
| 19 | RFID Tagging and Packaging Technology for Food Products 適用於食品的 RFID 標籤和封裝技術研究與應用 | 18 | Ongoing 進行中 | 10,937,140 | 11% | - Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies Limited - 香港物流及供應鏈管理應用技術研發中心 | - Six private companies - 六家私營公司 |
| 20 | Use-IT-Easy: A Low Cost, High | 24 | Ongoing 進行中 | 6,375,630 | 10% | - City University of Hong Kong | - Three private companies |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|-----------|---|---------------------------------|----------------|---|---|--|---|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | Performance Mobile RFID Platform 簡易高性能射頻識別 技術移動平台 | | | | | - 香港城市大學 | - 三家私營公 司 |
| 21 | Service Platform for PRD Waterway Logistics Operators 珠三角水路貨運物流 服務平臺 | 18 | Ongoing 進行中 | 7,779,990 | 10% | - The University of Hong Kong - 香港大學 | - Nine private companies - 九家私營公 司 |
| 22 | Low-cost Versatile Tracking Device and Technology for Logistic Applications 應用於物流的低成本 多用途追蹤設備與技 術 | 18 | Ongoing 進行中 | 5,482,300 | 10% | - The University of Hong Kong - 香港大學 | - Six private companies - 六家私營公 司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|------------------------------------|--|---------------------------------|----------------|---|---|---|--|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 23 | RFID Traceability for Risk Management in Hospital 應用射頻識別溯源性 能於醫院內的風險管 理 | 24 | Ongoing 進行中 | 11,285,700 | 13% | - The Chinese University of Hong Kong g - 香港中文大學 | - Five private companies - 五家私營公 司 |
| 24 | Real Time Food Quality Management Service System 實時食品質量管理服 務系統 | 18 | Ongoing 進行中 | 11,069,840 | 11% | - The University of Hong Kong - 香港大學 | - Eight private companies - 八家私營公 司 |
| Collaborative Research 合作研究 | | | | | | | |
| 25 | RFID-based Enabling Technology for On-Target Visibility in Garment Supply | 12 | Ongoing 進行中 | 2,928,330 | 49% | - The Chinese University of Hong Kong - 香港中文大學 | - One private companies - 一家私營公 司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|-------------------------------|--|---------------------------------|----------------|---|---|--|---|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | Chains 促成製衣業供應鏈 「恰到好處」透明度的射頻識別技術 | | | | | | |
| 26 | Development of a Printable RFID Antenna on Packages with Polymer and Paper Substrate 開發在聚合物及紙底 材包裝上之印刷射頻 識別標籤天線 | 12 | Ongoing 進行中 | 830,860 | 48% | <ul style="list-style-type: none"> - Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies Limited - 香港物流及供應鏈管理應用技術研發中心 | <ul style="list-style-type: none"> - One private companies - 一家私營公司 |
| Contract Research 合同研究 | | | | | | | |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|-----------|---|---------------------------------|------------------|---|---|--|---|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 27 | Professional Services for RFID Tag Evaluation for Baggage Handling | 0.5 | Completed 已完成 | 30,000 | 100% | <ul style="list-style-type: none"> - Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies Limited - 香港物流及供應鏈管理應用技術研發中心 | <ul style="list-style-type: none"> - One private companies - 一家私營公司 |
| 28 | Evaluation of Intel Reader Chip | 0.5 | Completed 已完成 | 39,000 | 100% | <ul style="list-style-type: none"> - Hong Kong R&D Centre for Logistics and Supply Chain Management | <ul style="list-style-type: none"> - One private companies - 一家私營公司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|-----------|--|---------------------------------|------------------|---|---|---|--|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | | | | | | Enabling Technologies Limited - 香港物流及供 應鏈管理應用 技術研發中心 | |
| 29 | In-company Training on RFID & Smartcards Technology and Its Applications | 3 hours | Completed 已完成 | 6,500 | 100% | - Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies Limited - 香港物流及供 應鏈管理應用 | - One private companies - 一家私營公 司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助百 分比 (%) | Participating Organisation 參與機構 | |
|-----------|-----------------------|---------------------------------|--------------|---|---|------------------------------------|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | | | | | | 技術研發中心 | |

**Nano and Advanced Materials Institute (NAMI)
Progress Report for the period 1 April 2009 to 31 March 2010**

A. Highlights for 2009-10

NAMI has made tremendous progress from its beginning in 2006 to a new stage of growth in the year of 2009-10. In the financial year 2009-10, the number of ITF-funded R&D projects had increased twofold compared to around 15 projects undertaken in the previous financial year of 2008-09.

In the reporting period, the Centre also launched 13 new platform and 5 collaborative ITF projects and completed 6 ITF projects. The number of on-going projects at 31 March 2010 was 24.

Starting with a total of 163 consortium members, NAMI recruited 310 new members in 2009-10. The total number of consortium members in mid-January 2010 stood at 449. The geographical reach of membership had also been extended to new locations such as Canada, Hungary, Spain, UK and USA.

In addition, two Affiliate Groups were formed, one on Photovoltaic technologies and another on building materials and applications. Other affiliates would continue to be established to form core clusters to help NAMI develop its different market sectors.

Details are given in the ensuing paragraphs.

B. R&D Programme and Technology Roadmap

B1. Summary of R&D programme/work

Since its inception, NAMI undertook 32 ITF-funded R&D projects and 7 non ITF-funded R&D projects which bred ample training opportunity for legions of technological talents. The total approved project cost of ITF projects was \$129.9 million with industry contributions of \$32.9 million. A list of all R&D projects undertaken/completed with cost and industry contributions is at Appendix I.

The technical section and R&D section were built up to actively engage in technology research and development as well as large-scale projects. New office and laboratory facilities at Hong Kong Science Park were launched in early 2010 to meet the expansion plan.

In order to develop innovative technologies to aid in the upgrade of the technology level of local industries and those in the Pearl River Delta region, and enhance their

competitiveness, NAMI continued to regularly solicit and evaluate new proposal and monitor and review on-going funded projects.

NAMI had worked with private sectors to exploit commercialization opportunities emerging from the deliverables of R&D projects and enhanced its visibility through various means such as participating in and organising conferences/symposiums regularly with international associations, professional/public bodies and universities.

B2. Analysis of technology roadmap against IPs generated and projects under planning

A technology roadmap had been established for NAMI since its inception in 2006 and had guided NAMI's technical direction through the last fiscal year of 2009-2010. The five technical areas identified in the roadmap are:

- Nanomaterials: functionalization and applications
- Nanotechnology enabled nano opto-electronics
- Nano-structured/ textured material applications
- Advanced materials for electronic packaging and other applications
- Forming of advanced materials

IP generated in terms of patents granted or pending was also guided by the roadmap. The following table summarizes the number of patents granted or pending in each technical areas of the roadmap:

| Technology Areas in Roadmap | # of Patents granted or pending |
|--|---------------------------------|
| Nanomaterials: functionalization and applications | 4 |
| Nanotechnology enabled nano opto-electronics | 5 |
| Nano-structured/ textured material applications | 3 |
| Advanced materials for electronic packaging and other applications | 3 |
| Forming of advanced materials | 4 |

In the current year's NAMI Annual Plan, NAMI has identified 3 focused market segments:

- Sustainable energy
- Energy saving products – solid state lighting and others
- Construction/building materials

Planned projects including large scale projects and also the ones identified as focused projects are generated mostly in these areas.

B3. Highlight of commercialization in selected projects and plans for completed projects

There are two different courses of action in commercialization depending on the maturity of the R&D project deliverables. If the R&D project deliverables are sufficiently mature, the business development team and the R&D project team will work together towards product launch. If the project deliverables require further work before commercialization, a plan will be formulated to identify the required additional work, resources and time. This might result in a commercialization programme to conduct further work to bring the project closer to commercialization.

Another major aspect of commercialization in 2010-11 is to have the NAMI business team to actively participate in the review of ongoing projects so as to realize their full market potential as soon as possible instead of waiting until the end of the projects.

A recent review of these projects shows that substantial resources in terms of technical development, market analysis and product development need to be committed in 2010-11 in order to convert the deliverables of these existing projects into commercially viable products. With limited resources, our strategy is to focus most of our energy on projects with high potential and then work our way to projects that demand much more work.

C. Centre Operation and General Operation

C1. Operating Expenditure

The operating expenditure of the Centre for 2009-10 was 27.1 million, increased by 146% than that of 2008/09. The increase was mainly due to expansion of the R&D team to cope with the increase in Centre's R&D work in particular projects on photovoltaic technologies.

C2. Staff

As at 31 March 2010, the staff strength of NAMI was 39 against an establishment of 50. The senior management comprises the Chief Executive Officer, the Chief Technology Officer, the Director of Research and Development, the Director of Business Development and the Director of Operations.

The operations of NAMI are executed by three sections: Technical Section, Business

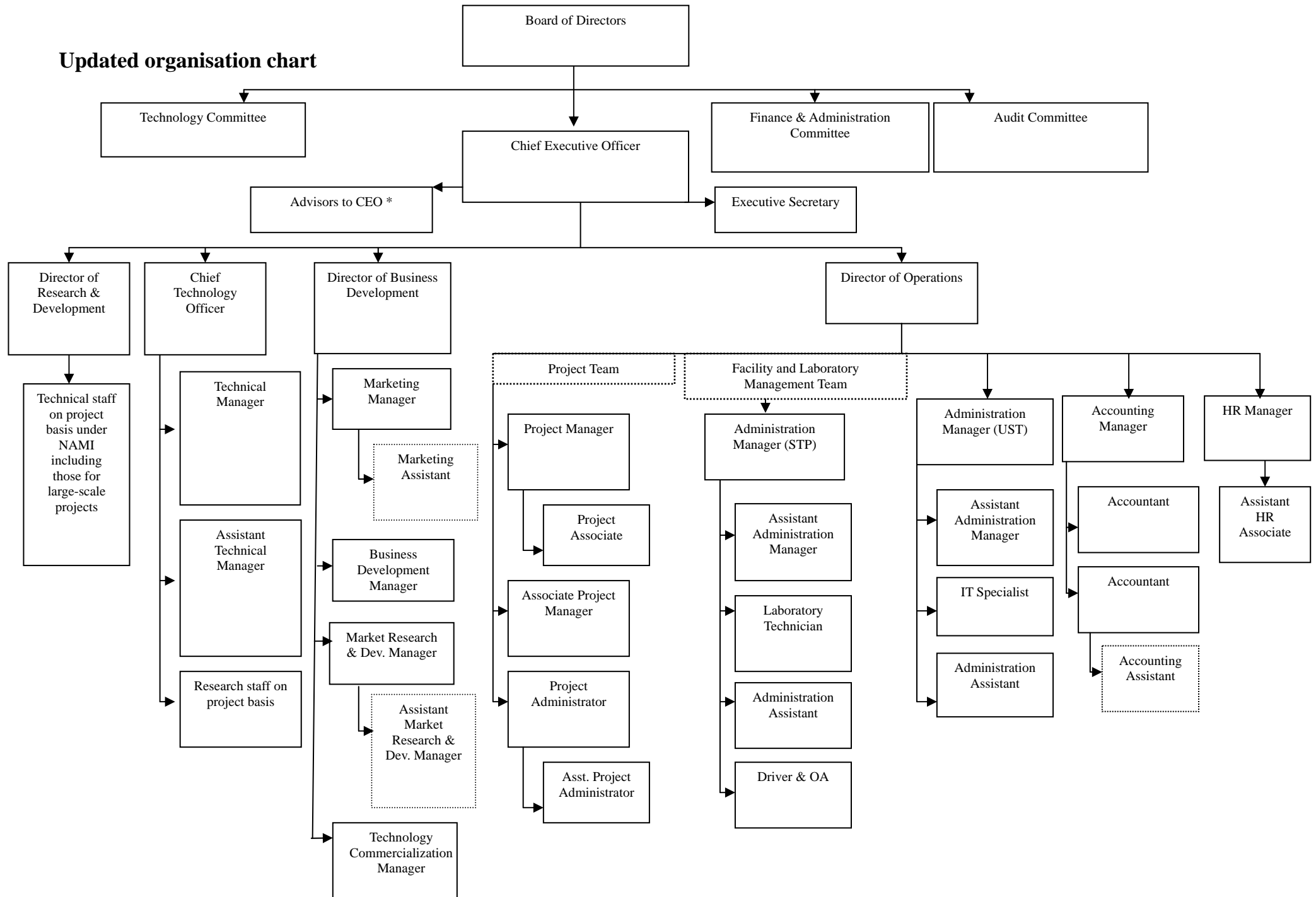
Development Section and Operations Section.

C3. Internal Audit

An internal audit was performed from February to June 2009 by an external consultant focusing on areas of NAMI's Corporate Governance Manual, non-project procurement and expenditure and custody of operation fund. Audit findings and suggestions were presented in the first meeting of NAMI's Audit Committee in July 2009 and the management had agreed to follow up on recommended improvements. Initial audit plan for 2010-11 has been proposed in the meeting and selection process of internal auditor is in progress.

C4. An updated Organization Chart is below.

Updated organisation chart



C5. Industry liaison and marketing activities (and list of activities conducted)

e-Communications

The Centre's new website came into play in April 2009. It served as an e-platform for sharing information on NAMI and promoting nanotechnology and advanced materials. It is planned that NAMI's website will be further revamped to enhance information access and exchange for consortium members. Information on NAMI's affiliates will also be posted.

NAMI's e-newsletters, in addition to providing event updates and news, positioned along the line of a technical magazine and contained substantial technical contents for those consortium members and readers interested in new technologies and industrial trends. Four issues covering each of our main areas of focus are planned for 2010-11.

Membership Drive

Starting with a total of 163 consortium members, NAMI recruited 310 new members in 2009-10. The total number of consortium members in mid-January 2010 therefore stood at 449. The geographical reach of membership had also been extended to new locations such as Canada, Hungary, Spain, UK and USA.

Since NAMI serves as the focal point for R&D in nanotechnology and advanced materials in Hong Kong, promotion of collaboration with researchers in all local universities and research institutions is an integral part of the overall marketing campaign. Two groups of NAMI affiliates have been formed. One group focuses on photovoltaic technologies and the other on building materials and applications. The next priority is to deepen the working relationships with these affiliates by forming R&D project teams and by holding more informal discussions and formal events with them.

In addition, there is a plan to form an affiliate group covering the solid state lighting market sector in 2010-11. Other potential affiliate groups will focus on environmental technologies and healthcare products.

These groups will form the core clusters to help NAMI to develop its different market sectors. With the added dimension of a solution-oriented approach towards user requirements in project formulation, it is anticipated that more projects will involve a multi-disciplinary team rather than individuals with only a single area of expertise.

The Marketing activities undertaken during the financial year 2009-10 are as follows:

| <u>Date</u> | <u>Activity</u> | <u>Role</u> |
|---------------------|--|--------------------|
| 26 March 2010 | Visit by Professor Rutledge Ellis-Behnke from The University of Hong Kong | Host |
| 19 March 2010 | Nanotechnology Forum – Unity in Diversity – Innovative Applications of Nano and Advanced Materials | Organiser |
| 10-12 March 2010 | International Symposium on Advance Metal Structure and Building Envelope | Speaker |
| 12 March 2010 | Nanotechnology Forum – Indoor Air Quality Improvement | Organiser |
| 12 March 2010 | Visit by Danish Delegation from University of Copenhagen, Technical University of Denmark, Aarhus University and Aarhus University Hospital | Host |
| 11 March 2010 | Hong Kong Denmark Joint Conference on Nanomedicine and Synthetic Biology | Speaker |
| 10-12 February 2010 | Strategies in Light Conference (LED) 2010 | Participant |
| 10 February 2010 | The Opening University of Hong Kong’s interview with Technical Advisor to CEO and Technical Managers for its TV Program “Exploring Science”. | Interviewee |
| 29 January 2010 | Nanotechnology Forum – Solid Waste & Wastewater Treatment | Organiser |
| 23 January 2010 | Solar Energy Winter School | Organiser |
| 15 January 2010 | Opening Ceremony of NAMI’s Office and Laboratories at Hong Kong Science Park | Organiser |
| 11 December 2009 | Nanotechnology Forum – Metal Processing & Treatment | Organiser |
| 3-6 December | Inno Design Tech Expo | Participant and |

| <u>Date</u> | <u>Activity</u> | <u>Role</u> |
|---------------------|---|---------------------------|
| 2009 | | Exhibitor |
| 1-2 December 2009 | InnoAsia09 – “Sustainable City, Transportation and Energy” | Supporting Organisation |
| 24 November 2009 | The Symposium of Metal Structures and Applied Technology, Macau. | Speaker and Participant |
| 19-21 November 2009 | China Hi-Tech Fair 2009 | Participant and Exhibitor |
| 12 November 2009 | Visit by K.S Rangasamy College of Technology, India | Host |
| 5 November 2009 | InnoCarnival Opening Ceremony | Participant |
| 2 November 2009 | International Symposium on Advances in Corrosion Protection to Steel Members in Building Construction | Co-organiser |
| 29 October 2009 | Visit by Miss Janet Wong, Commissioner for Innovation and Technology, HKSAR | Host |
| 29 October 2009 | Visit by Professor Lars Montelius, Director of Oresund University and Oresund Science Region | Host |
| 21 October 2009 | Roundtable on Entrepreneurship Education (REE Asia 2009) | Supporting Organisation |
| 15 October 2009 | Media Partnership with HK Broadband TV | Interviewee |
| 14-15 October 2009 | World of Photovoltaic's Conference | Participant |
| 28 September 2009 | Nanotechnology Forum – Solar Energy | Organiser |
| 9 September 2009 | Visit by Mr Gregory So, Undersecretary for Commerce and Economic Development, HKSAR | Host |

| <u>Date</u> | <u>Activity</u> | <u>Role</u> |
|--------------------|--|-------------------------|
| 21 August 2009 | Nanotechnology Forum – Building Materials | Organiser |
| 5 August 2009 | NOW TV News Channel’s live interview with Technical Manger | Interviewee |
| 3 July 2009 | Visit by Department of Health, HKSAR | Host |
| 29 June 2009 | Hong Kong Productivity Council’s interview with Technical Director | Interviewee |
| 22 June 2009 | Italian Delegation on Biotechnology and Nano-technology | Host |
| 22 June 2009 | Sino-Italian TechX, Exchange Forum between Italy and China on Biotechnology and Nanotechnology | Co-organiser |
| 4 June 2009 | Visit by a delegation from Yunnan Provincial Science and Technology Department | Host |
| 4 June 2009 | Meeting with the delegation from Division of High and New Technology Development and Industrialization, Guangdong Provincial Science and Technology Department | Speaker and Participant |
| 15 May 2009 | Science Lecture on Nano Technology | Speaker |
| 14 May 2009 | Meeting with Ms Odile Quintin, Director General for Education, Training, Culture and Youth, European Commission. | Host |
| 12 May 2009 | InvestHK’s Evening Reception for Investors from IT, Communications & Electronics Sectors | Participant |
| 12 May 2009 | Visit by GD-HK Cooperation & Development in Technology Support Services | Host |

| <u>Date</u> | <u>Activity</u> | <u>Role</u> |
|---------------|---|--------------|
| 8 May 2009 | Symposium on Sustainability Driven Innovative Technologies | Participant |
| 6-8 May 2009 | International Conference on Nanotech & Advanced Materials 2009 (ICNAM 2009) | Co-organizer |
| 14 April 2009 | Conference - "Promote the Technology and Industry of Photovoltaic" | Speaker |
| 3 April 2009 | Nanotechnology Forum - Solid State Lighting | Organizer |

D. Major Activities in 2010-11

D1. Target number of new projects, estimated R&D cost and operating cost

For 2010-11, around 29 new projects are being planned with the majority of NAMI's new projects designed around a few market sectors and a slightly broadened Technology Roadmap in order to foster a synergistic cluster effect.

D2. Highlight of major activities in the current financial year

In addition to the current activities in marketing such as e-newsletters, organization of conferences, consortium membership recruitment, building up working relationships with industrial companies, and the technical symposia at the Hong Kong Convention and Exhibition Centre in collaboration with the Trade Development Council, the key initiatives for 2010-11 include:

- Branding and image building
- At least one winter school, covering specific area of focus
- Enhancement of consortium membership networking and marketing database management
- A product launch ceremony

D3. Market research and development

The key initiatives for 2010-11 include a number of activities. We will:

- Conduct market analysis to establish the value chain, to identify the major players and industry trend for each of the market sector focus area
- Identify and encourage the support of companies as anchoring sponsors or collaborating partners in each of the market sector focus areas
- Manage IP commercialization
- Revamp agreement precedence
- Proactively incubate new projects that are solution-oriented towards end user needs

One of the objectives of market research is to help to determine high priority R&D projects. This would involve thorough studies of the entire value-chain across the industry and the result is a development roadmap for that industry. We will also formulate the strategy for patent commercialization.

D4. Business development

The key initiatives for 2010-11 include a number of activities. We will:

- Target products for technology transfer and licensing
- Develop NAMI's material characterization and testing facilities

NAMI will seek opportunities to get involved in the marketing of material characterization and testing facilities. This function will play a major role in building up business volume and promoting the use of such facilities to a wide range of industries and other research institutions.

D5. Educational activities

NAMI will actively promote the educational aspects of nanotechnology and advanced materials in Hong Kong in 2010-11. An e-knowledge exchange platform will be developed. The educational materials – general and specific information of advanced materials, nanotechnology and applications – will be available on NAMI's website. Materials for renewable energy education will be emphasized. This includes research problems related to energy use, new technologies and applications. Some of the online teaching materials for students will be formulated in collaboration with universities and international research centres. In addition, a one-day meeting for high-school teachers will be arranged.

D6. e-Knowledge exchange platform

- Providing links to the global network of nanotechnology education and research
- Integrating and displaying the achievements of all education centres worldwide, e.g. Taiwan, Singapore, etc.
- Providing online teaching materials on nanotechnology

- Nanotechnology Education and Materials for High-School Teachers
- Training junior school science teachers by offering a one-day workshop with optional laboratory tours
- Promoting international academic collaboration on junior school nanotechnology education
- Collaborating with the Hong Kong Science and Technology Parks Corporation to promote nanotechnology education
- Adopting interactive multimedia and / or animated teaching materials

D7. Development of technology and its management

With a significant expansion of the technical team, new laboratories at the Hong Kong Science Park, a broadened technology roadmap and the initiation of additional large-scale R&D projects, it is crucial that we review and strengthen the management of technology development at NAMI.

The key technologies in each of the focused market sectors and the potential products and manufacturing processes will be identified. A roadmap will be developed taking into account the availability of human and monetary resources. The management of the researchers in the technical team will be streamlined to improve efficiency. Record keeping of research results, laboratory security and safety will be reinforced.

NAMI
June 2010

A list of all R&D projects undertaken/completed with cost and industry contributions

R&D Projects as at end March 2010
研發項目(截至 2010 年 3 月)

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助 百分比 | Participating Organisation 參與機構 | |
|------------------------|---|------------------------------------|-----------------|--|--|--|-----------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| Platform Research 平台研究 | | | | | | | |
| 1 | Precision polishing method for complex-curved-profile parts and polishing slurry used for the method 複雜形狀工件的精密拋光方法及拋光液的開發 | 30 | On-going 進行中 | 1,150,000 | 10% | NAMI 納米及先進材料研發院 | Three private companies 三家私營公司 |
| 2 | Nanotechnology-enabled organic light emitting devices for illumination and decorative and special-effect lighting purposes 應用納米技術的有機發光器件的研究及在照明、裝飾及特殊發光的應用 | 24 | On-going 進行中 | 3,517,900 | 10% | City University of Hong Kong 香港城市大學 | Three private companies 三家私營公司 |
| 3 | Research & development of new materials for printable electronics 印刷電子學新材料的研究與發展 | 29 | On-going 進行中 | 12,542,212 | 10% | The University of Hong Kong 香港大學 | Six private companies 六家私營公司 |
| 4 | Development of the layered nanostructured metallic sheet/plate | 24 | On-going 進行中 | 5,277,540 | 10% | The Hong Kong Polytechnic | Two private companies 兩家私營公司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助 百分比 | Participating Organisation 參與機構 | |
|-----------|--|------------------------------------|-----------------|--|--|--|-----------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | for structural applications 應用於工程結構的多層的納米結構金屬片／板的研發 | | | | | University 香港理工大學 | |
| 5 | Production of carbon nanotube and CNT application as catalyst support and advanced material for energy storage 碳納米管制備及其作為催化劑載體和能量貯存先進材料上的應用 | 24 | On-going 進行中 | 5,641,000 | 29% | HKUST 香港科技大學 | Three private companies 三家私營公司 |
| 6 | Developing and manufacturing nano-structured oral dosage forms of Isoflavone and Insulin with improved bioavailability 研制具有高生物利用度的大豆異黃酮和胰島素納米結構口服制劑 | 24 | On-going 進行中 | 4,190,000 | 29% | HKUST 香港科技大學 | Two private companies 兩家私營公司 |
| 7 | Development of a “green” and low-cost process for synthesizing nanoparticles for advanced ceramic applications 開發“綠色”低成本的合成方法以製備應用於先進陶瓷的納米顆粒 | 24 | On-going 進行中 | 1,189,500 | 10% | The Hong Kong Polytechnic University 香港理工大學 | Two private companies 兩家私營公司 |
| 8 | Development of advanced composite pellets and a novel supercritical fluid extraction process for micro-powder injection moulding technology 發展應用於微型粉末注射成型之「先進複合材料」及有關的「超臨 | 24 | On-going 進行中 | 3,221,890 | 11% | Hong Kong Productivity Council 香港生產力促進局 | Five private companies 五家私營公司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助 百分比 | Participating Organisation 參與機構 | |
|-----------|---|------------------------------------|-----------------|--|--|------------------------------------|---------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | 界液體萃取技術」 | | | | | | |
| 9 | Development of Functional Nanomaterials with Aggregation-Induced Emission (AIE) Characteristics for Biotechnological Applications 具有聚集誘導發光特性的納米功能材料的生物應用開發 | 24 | On-going 進行中 | 1,996,300 | 10% | HKUST 香港科技大學 | Two private companies 兩家私營公司 |
| 10 | High-speed III-V Transistors on a Silicon Platform 矽襯底平臺上高速 III-V 電晶體 | 30 | On-going 進行中 | 14,885,970 | 10% | HKUST 香港科技大學 | Two private companies 兩家私營公司 |
| 11 | White Anodized Aluminum Oxide Products 白色陽極氧化鋁製品 | 12 | On-going 進行中 | 1,171,850 | 0% | NAMI 納米及先進材料研發院 | Nil |
| 12 | Development and Production of Novel Polymer Based Functional Materials and Products 新型聚合物基功能材料及產品的開發與生產 | 12 | On-going 進行中 | 1,150,000 | 0% | NAMI 納米及先進材料研發院 | Nil |
| 13 | High coupling efficiency PV cells with optical elements and photonic crystal integration 光學元件和光子晶體集成的高耦合效率太陽能光伏電池 | 12 | On-going 進行中 | 1,643,400 | 0% | NAMI 納米及先進材料研發院 | Nil |
| 14 | Development of advanced | 12 | On-going | 960,020 | 0% | NAMI | Nil |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助 百分比 | Participating Organisation 參與機構 | |
|-----------|---|------------------------------------|-----------------|--|--|--|---------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | multi-functional coating technologies for environmental and health industries 多功能光催化薄膜技術的研發及其於環境與健康工業的應用 | | 進行中 | | | 納米及先進材料研發院 | |
| 15 | Research on nanostructured, graded-index antireflective coating for optoelectronic application 納米結構, 階段折射率的防反光薄膜之研究及其在光電子的研究 | 12 | On-going 進行中 | 1,239,000 | 0% | NAMI 納米及先進材料研發院 | Nil |
| 16 | Development of photonic-band gap-based microwave multilayer chip antennas 具有帶隙結構特徵的多層片式天綫的研製 | 18 | On-going 進行中 | 3,981,100 | 10% | The Hong Kong Polytechnic University 香港理工大學 | Two private companies 兩家私營公司 |
| 17 | Synthesis of Polyhydroxyalkanoate (PHA) Nanocapsules as Protein Drug Carriers 聚羥基烷酸酯(PHA)納米膠囊劑的製備及其作為蛋白藥物載體的研究 | 12 | On-going 進行中 | 485,850 | 10% | The Hong Kong Polytechnic University 香港理工大學 | Two private companies 兩家私營公司 |
| 18 | LED Arrays on Silicon Substrates by | 24 | Completed | 4,005,100 | 17% | HKUST | Two private companies |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助 百分比 | Participating Organisation 參與機構 | |
|------------------------------------|--|------------------------------------|-----------------|--|--|------------------------------------|-----------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | Flip-chip Technology 矽基底上倒封裝 LED 陣列 | | 完成 | | | 香港科技大學 | 兩家私營公司 |
| 19 | Development and Production of Novel Passive Negative Air Ion Materials and Products 新型無源空氣負離子材料及產品 的開發與生產 | 15 | Completed 完成 | 968,300 | 0% | NAMI 納米及先進材 料研發院 | Nil |
| 20 | Next Generation Display Technology 新一代顯示技術 | 18 | Completed 完成 | 8,474,500 | 10% | HKUST 香港科技大學 | Three private companies 三家私營公司 |
| <i>Collaborative Research 合作研究</i> | | | | | | | |
| 21 | High performance polymer nanocomposite fibers for electronic applications 用於微電子方向的高強度高分子 納米複合纖維的製備 | 30 | On-going 進行中 | 5,427,150 | (55%) | HKUST 香港科技大學 | one private company 一家私營公司 |
| 22 | To enhance the attachment of cells, proteins and peptides on microplates by surface treatment for enzyme-linked immunosorbent assay (ELISA) applications “利用表面處理技術增強細胞、蛋 白質和肽在微盤上的附著”在“酵素 結合免疫吸附分析”中的應用 | 24 | On-going 進行中 | 2,402,350 | 30% | HKUST 香港科技大學 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助 百分比 | Participating Organisation 參與機構 | |
|-----------|---|------------------------------------|-----------------|--|--|--|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 23 | Research on high efficiency amorphous Si solar cells by introducing new functional materials 高效能非晶硅太陽能電池導入新功能材料之研究 | 18 | On-going 進行中 | 31,941,000 | 51% | NAMI 納米及先進材料研發院 | A private company 一家私營公司 |
| 24 | Process development for batch production of fine-structured magnesium alloy sheets using thermo-mechanical macro-deformation processing system 用於批量生產具有精細結構鎂合金片材的熱力學宏觀變形加工處理系統的研究及開發 | 16 | On-going 進行中 | 1,736,499 | 32% | The Hong Kong Polytechnic University 香港理工大學 | A private company 一家私營公司 |
| 25 | Flexible liquid crystal displays based on nanotechnology 基於納米技術的柔性顯示器 | 12 | On-going 進行中 | 525,970 | 30% | HKUST 香港科技大學 | A private company 一家私營公司 |
| 26 | Development of photocatalytic condensate-recovery air-conditioning system for high energy efficiency and good indoor air quality 發展光催化冷凝水回收空調系統為提高能源效益和室內空氣質素 | 18 | On-going 進行中 | 888,950 | 31% | The University of Hong Kong 香港大學 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助 百分比 | Participating Organisation 參與機構 | |
|-----------|---|------------------------------------|-----------------|--|--|---|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 27 | Development of reactive hybridization SOL-GEL technology on extra hard and non-stick silicon coating as an alternative to Teflon coating for cookware. 開發雜化溶膠-凝膠技術製成用於廚具之超硬不黏硅塗層作為鐵弗龍替代品 | 18 | On-going 進行中 | 1,500,000 | 30% | Hong Kong Productivity Council 香港生產力促進局 | A private company 一家私營公司 |
| 28 | Industrial scale sonochemical fabrication of mesoporous photocatalysts 中孔光催化劑的聲化學工業化製備 | 27 | Completed 完成 | 1,000,000 | 30% | The Chinese University of Hong Kong 香港中文大學 | A private company 一家私營公司 |
| 29 | Nano-enhanced hot-dip galvanizing process 納米熱浸鍍鋅技術 | 30 | Completed 完成 | 2,500,000 | 30% | NAMI 納米及先進材料研發院 | A private company 一家私營公司 |
| 30 | Development of blue OLED | 18 | Completed | 599,600 | 33% | Hong Kong | A private company |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助 百分比 | Participating Organisation 參與機構 | |
|-------------------------------|--|------------------------------------|------------------|--|--|--|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | materials and devices 藍光 OLED 材料和器件研發 | | 完成 | | | Baptist University 香港浸會大學 | 一家私營公司 |
| 31 | Demonstration line for the production of low-cost humidity sensor 低成本濕度探測器示範生產線 | 18 | Completed 完成 | 583,332 | 30% | HKUST 香港科技大學 | A private company 一家私營公司 |
| 32 | Industrialization of Liquid TiO2 Hydrosol Production and Extensive Applications for Indoor Air Purification 二氧化鈦溶膠產業化及其應用於 室內空氣淨化示範研究 | 12 | Terminated 終止 | 1,995,150 | 30% | The Hong Kong Polytechnic University 香港理工大學 | A private company 一家私營公司 |
| <i>Contract Research 合同研究</i> | | | | | | | |
| 33 | Development of High Strength Composite Fibres 高强度複合纖維 的研製 | 18 | Completed 完成 | 158,700 | 100% | NAMI 納米及先進材 料研發院 | A private company 一家私營公司 |
| 34 | Formulation of Nano Creams and Pastes 納米乳脂配方的研製 | 24 | Completed 完成 | 579,600 | 100% | NAMI 納米及先進材 料研發院 | A private company 一家私營公司 |
| 35 | Development of Products from Fruit Rind 水果果皮的產品開發 | 18 | Completed 完成 | 405,600 | 100% | NAMI 納米及先進材 料研發院 | A private company 一家私營公司 |
| 36 | Mold Compound and Die Attach | 36 | On-going | 1,121,250 | 100% | NAMI | A private company |

| No. 編號 | Project Title 項目名稱 | Duration (Month) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HK\$) | Percentage of Industry contribution 業界贊助 百分比 | Participating Organisation 參與機構 | |
|-----------|---|------------------------------------|-----------------|--|--|------------------------------------|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | Compatibility Study 模具化合物和模具黏附性及兼容性的研究 | | 進行中 | | | 納米及先進材料研發院 | 一家私營公司 |
| 37 | Development of Products from Aluminium Oxide 氧化鋁的產品開發 | 12 | Completed 完成 | 460,000 | 100% | NAMI 納米及先進材料研發院 | A private company 一家私營公司 |
| 38 | Functional Mirror-like Nanocoating of Low Cost on Metal and Plastic Products Respectively 金屬及塑膠表面的納米鏡面多功能塗層 | 16 | Completed 完成 | 293,250 | 100% | NAMI 納米及先進材料研發院 | A private company 一家私營公司 |
| 39 | Performance test of anti-scratch coating on ABS 用於 ABS 的抗刮塗層性能測試 | 2 | Completed 完成 | 30,000 | 100% | NAMI 納米及先進材料研發院 | A private company 一家私營公司 |

**Hong Kong Applied Science and Technology
Research Institute Company (“ASTRI”)
Progress Report for the Period 1 April 2009 to 31 March 2010**

PURPOSE

1. This report sets out the progress, development and performance of the Hong Kong Applied Science and Technology Research Institute Company (“ASTRI”) for 2009-10.

HIGHLIGHTS FOR 2009-10

2. The year under review was a highly successful one for ASTRI as it continued to expand and develop its core activities.

3. During 2009-10, ASTRI has achieved or exceeded most of its key performance targets. Indeed, records were set on different fronts including the number of ITF-funded platform, seed and collaborative projects as well as the contract research projects undertaken, the number of license agreements signed and the level of industry contributions achieved.

4. ASTRI also filed 108 patents and was granted a total of 46 patents in the U.S. and the Mainland during the same period.

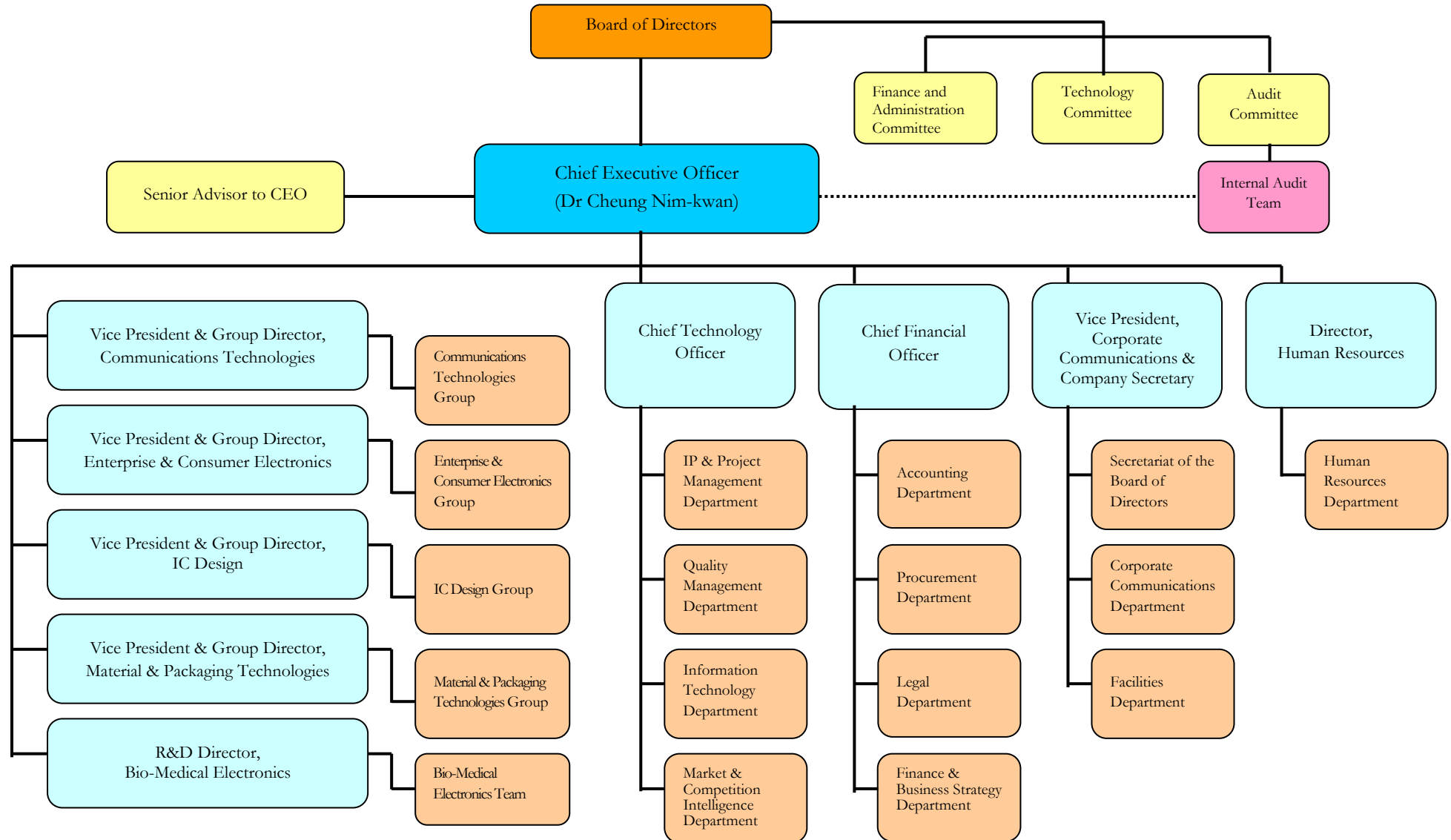
5. In terms of headcounts, it grew from 475 in 2008-09 to 567 in 2009-10, representing an increase of 19.4%. Among them, R&D staff grew from 405 to 491 while administration staff increased from 70 to 76.

ORGANISATION

6. As at end of March 2010, ASTRI has a total of 567 research and administrative staff. Below is the current organisation chart of ASTRI by functions:

Hong Kong Applied Science and Technology Research Institute

Organisational Chart



OPERATING COST

7. The operating expenditure of ASTRI in 2009-10 was HK\$116.3 million, increased by 28% than that of 2008-09. This increase was mainly due to the additional rental incurred on the additional office space leased to accommodate new staff members and the increased R&D administrative costs not absorbed by ITF funding. Measures were taken during the year by the Management to achieve further savings in ASTRI's operation. It is worth noting that the actual expenditure of 2008-09 was HK\$20 million lower than the planned figure and it had substantially deviated from the normal expenditure trend. During 2008-09, there was substantial staff restructuring at the senior level and hence most of the planned activities were either called off or deferred to 2009-10.

ACHIEVEMENTS

8. During the year under review, ASTRI has achieved impressive progress in all its major performance indicators. List of all R&D projects undertaken / completed with cost and industry contributions from April 2006 to March 2010 is at **Appendix I**. During 2009-10, ASTRI undertook 93 ITF-funded R&D projects with a total approved project cost of HK\$771 million.

Technology Transfers

9. The number of technology transfers to industry has continued to grow. Started with only two in FY2003-04, a total of 100 transfers were completed during the year. The breakdown of technology transfers by R&D Groups for the past three years is tabulated below:

| R&D Group | 2007-08 | 2008-09 | 2009-10 |
|---|----------------|----------------|----------------|
| Communications Technologies ("CT") | 14 | 42 | 34 |
| Enterprise & Consumer Electronics ("ECE") | 19 | 15 | 19 |
| IC Design ("ICD") | 7 | 12.5 | 7 |
| Material & Packaging Technologies ("MPT") | 13 | 19.5 | 40 |
| Bio-Medical Electronics ("BME") | N.A. | N.A. | 0 |
| Total no. of technology transfers | 53 | 89 | 100 |

10. The following table illustrates the number of technology transfers to industry during the past three years:

| Performance of the R&D Efforts | 2007-08 | 2008-09 | 2009-10 |
|---|----------------|----------------|----------------|
| No. of technology transfers to industry in the form of: | | | |
| (a) ITF-funded collaborative project agreements signed | 0 | 8 | 1 |
| (b) contract research project agreements signed | 33 | 57 | 69 |
| (c) licensing agreements signed | 20 | 24 | 30 |
| Total no. of technology transfers to industry | 53 | 89 | 100 |

Patents

11. Up to 31 March 2010, a total of 72 patents have been granted to ASTRI. The following table shows the number of patents granted in each of the last three financial years:

| Patents | 2007-08 | 2008-09 | 2009-10 |
|--|----------------|----------------|----------------|
| Patents granted in Mainland China and the U.S. | 7 | 15 | 46 |

12. A total of 108 patents were filed in Mainland China, the U.S. and other countries in 2009-10. During 2007-08 to 2009-10, ASTRI filed more than 320 patents for new inventions (99 in 2007-08, 114 in 2008-09 and 108 in 2009-10). The following table shows the breakdown by R&D Groups:

| R&D Group | 2007-08 | 2008-09 | 2009-10 |
|---|----------------|----------------|----------------|
| Communications Technologies (“CT”) | 21 | 23 | 14 |
| Enterprise & Consumer Electronics (“ECE”) | 10 | 20 | 28 |
| IC Design (“ICD”) | 12 | 8 | 12 |
| Material & Packaging Technologies (“MPT”) | 56 | 63 | 50 |
| Bio-Medical Electronics (“BME”) | N.A. | N.A. | 4 |

| | | | |
|---|-----------|------------|------------|
| Total no. of patents filed in Mainland China, the U.S. and other countries | 99 | 114 | 108 |
|---|-----------|------------|------------|

Industry Contributions

13. During the year under review, industry contributions received for all projects amounted to HK\$46 million, equivalent to 17% of the actual R&D project expenditure. The following table shows the increase in contribution amount and percentage in the last three financial years.

| Fiscal Year | Industry Contributions Received (HK\$M) |
|--------------------|--|
| 2007-08 | 13.77 (+133%) |
| 2008-09 | 39.36 (+186%) |
| 2009-10 | 45.96 (+17%) |

14. The table below compares the industry contributions received by the five R&D Groups in the last three financial years.

| R&D Group | 2007-08 (HK\$M) | 2008-09 (HK\$M) | 2009-10 (HK\$M) |
|--|------------------------|------------------------|------------------------|
| Communications Technologies (“CT”) | 6.68 | 15.72 | 13.86 |
| Enterprise & Consumer Electronics (“ECE”) | 3.09 | 12.26 | 11.79 |
| IC Design (“ICD”) | 1.29 | 2.58 | 8.80 |
| Material & Packaging Technologies (“MPT”) | 2.71 | 8.56 | 9.10 |
| Bio-Medical Electronics (“BME”) | N.A. | N.A. | 2.41 |
| Others | N.A. | 0.24 | N.A. |
| Total industry contributions received | 13.77 | 39.36 | 45.96 |

15. In benchmarking with similar Institutes in the region, we note that the Industrial Technology Research Institute (ITRI) of Taiwan, which has been established for over 40 years and has close to 6,000 staff, has not set its platform projects income target above 7% and its overall income target above 20%. The industry contribution ASTRI has been able to achieve during the past years, therefore, compared favourably with its counterparts in the region.

Technology Roadmap

16. ASTRI's research work focuses on four main technology domains of information and communications technologies:

- (i) Communications Technologies ("CT")
- (ii) Enterprise and Consumer Electronics ("ECE")
- (iii) IC Design ("ICD")
- (iv) Material and Packaging Technologies ("MPT")

17. In addition, ASTRI has started a Bio-Medical Electronics Initiative ("BME") during the latter part of 2008/09.

18. However, the design of end-user products is expected to play an increasing role at ASTRI. Green technologies will also be developed as one of our core competencies. ASTRI is expected to create vertical teams and vertical applications with horizontal team across several domains.

19. In addition to giving substance to the operations of the ICT R&D Centre, ASTRI's ICT R&D programmes are formulated with the intention to bring not only strategic "applications" that are transferable to the industry to enhance their competitiveness, but also to build and continuously strengthen the "technical competencies" or "platform technologies" that would continuously spawn a multitude of future applications. When these combinations are well-planned and well-executed, the competencies and the applications would feed off each other, thus achieving best results.

20. The key technology initiatives – each may have multiple tracks – of the four technology domains and the Bio-Medical Electronics Initiative are summarised as follows:

- Communications Technologies Domain
 - Multimode Multifunction System Technologies
 - Low Power High Efficiency Radio Access Technologies
 - Miniaturisation: Antenna and RFIC
- Enterprise and Consumer Electronics Domain
 - Pervasive Services Technologies
 - Mobile Multimedia Communications Technology
 - Digital Home Technology
 - Multimedia Technology IP
- IC Design Domain
 - Power Management ICs and Technologies
 - Analog, Mixed Signal, and RF ICs and Technologies
 - High Speed Transceiver ICs & Technologies

- Digital ICs, ASICs and Technologies
- System on Chip Technologies
- IC Design Enabling Technologies
- High Performance Computing and Networking
- Material and Packaging Technologies Domain
 - Display Systems
 - Advanced Packaging Technologies
 - LED Lighting
 - Photonic Components
 - Device Fabrications
- Bio-Medical Electronics Key Technology Initiative
 - Brain Training Device
 - Magnetic Resonance Imaging
 - Thermal Therapy Device

Other Major Initiatives / Activities

21. ASTRI has initiated new Industry Collaborative Projects (“ICPs”) and green projects around ASTRI’s green city initiative. There are currently a total of four on-going ICPs at ASTRI and industry contribution valued at HK\$8.45 million was received during the year. Two additional ICPs are expected to be initiated in the IC Design Domain soon.

Successful Cases of Commercialisation

22. In 2009-10 alone, 63 companies were engaged in 100 cases of technology transfer with ASTRI through technology licensing, contract service and other means. There are also many cases of successful commercialisation. For example:

- (a) Technologies generated from a project on LED lighting have been licensed to a local company. Subsequently two new products have been launched onto the world market. These products are more efficient than the traditional incandescent lights, and they fit right in the green industry growth worldwide.
- (b) A local manufacturer of cable television and communications products has made use of ASTRI's technologies to develop improved set-top boxes for commercialisation. The product was welcomed by the market and chosen by readers of a popular local AV magazine as the winner of the set-top box category in 2009.

- (c) A local company has commissioned ASTRI to develop low-cost MRI machines. By making MRI technology more affordable, healthcare in developing countries can be enhanced.
- (d) A leading Mainland provider of network testing solutions has adopted ASTRI's multi-channel voice module for developing a massive automatic call testing system for 2G and 3G mobile networks.
- (e) RF jammers, one of the deliverables of another ASTRI Projects have been installed at the Lion Rock Tunnel to eliminate the chance that drivers are charged twice for their road toll. The jammers confine the RF just to the Autotoll lanes and ensure that only drivers in those lanes have charges deducted.
- (f) Researchers of ASTRI are working tirelessly with Mainland partners to demonstrate 4G technology at the Shanghai World Expo next.

Management Quality Assurance

23. To assure management quality, ASTRI has compiled a Board-approved Corporate Governance Manual. Its operational procedures were also clearly spelt out in the Business Processes Manual that was certified with ISO 9001:2000 standards. These processes are expected to undergo further review and audit by the ISO agency in 2010-11. On the whole, the four key objectives of ASTRI's management system are Transparency, Speed, User-friendliness and Governance.

24. During the past year, sections of the Corporate Governance Manual were updated and modified to take into account necessary changes and developments required to improve ASTRI's operation modes, and to respond flexibly to and reflect on the changing terms and conditions of the business environment in which ASTRI operates.

25. The Internal Audit Department during the year carried out annual audits to review the internal control system and reported the efficiency and effectiveness of such system to the Board via the Audit Committee.

26. Furthermore, the Board of Directors has also appointed the Head of Internal Audit as the Compliance Officer to assist its governance function by providing timely information to the Audit Committee on the compliance status of ASTRI regarding policy and procedures of project management, finance, human resources, and administrative management.

27. To ensure continuous compliance with the Guide to Information and Technology Support Programme (“ITSP”), ASTRI’s corporate governance policy, operational procedures and other relevant guidelines, the Compliance Officer also submitted quarterly reports to the Audit Committee.

Review of Promotional and Networking Activities for 2009-10

| No. | Promotional and Networking Activities | Date |
|--|--|---------------|
| A. No. of Conferences / Seminars / Workshops/ Exhibitions / Roadshows Participated or Organised | | |
| i/ Conferences / Seminars / Workshops | | |
| 1. | LEDs Asia 2009 Conference: Dr Enboa Wu, Vice President and Group Director of MPT Group presented on “Recent LED Technology Advances in ASTRI” (HK) | 1 Apr, 09 |
| 2. | IT Entrepreneurship: Dr Shu Yuan, Director, LED Devices Division, LED Program of MPT Group gave a guest lecture during the event (HK) | 2 Apr, 09 |
| 3. | ASTRI Seminar on “Development of China DTV – Digital Terrestrial Multimedia Broadcasting (DTMB)” by Prof Jian Song, Vice Dean of the Research Institute of Information Technology, Tsinghua University (HK) | 2 Apr, 09 |
| 4. | Seminar on “A New Perspective on Electronic Product Reliability”: Advanced Packaging Technologies Consortium of MPT Group was the supporting organization (HK) | 3 Apr, 09 |
| 5. | 2009海峽兩岸光電論壇: Mr Lu Ming, Senior Manager, General Lighting Division, LED Program of MPT Group introduced the latest development of ASTRI (Xiamen) | 8-9 Apr, 09 |
| 6. | HKEIC Seminar on “Mobile TV Technology and Market Trend” in HK Electronic Fair: Mr Bill Zhang, Senior Manager of CT Group presented on “Research & Development in Mobile TV” (HK) | 14 Apr, 09 |
| 7. | The 3 rd China International Forum on Novel Light & Energy Sources: Dr Enboa Wu, Vice President and Group Director and Mr Lu Ming, Senior Manager of MPT Group delivered presentations during the event. (Shanghai) | 21-23 Apr, 09 |
| 8. | Advanced Packaging Technologies Consortium Workshop on “3D Packaging Technologies: New Developments, Challenges and Solutions”: Dr Tom Chung, Vice President and R&D Director of MPT Group was the session chair of the panel discussion on “Key Challenges and Solutions for 3D Packaging” (Shanghai) | 24 Apr, 09 |
| 9. | ASTRI Seminar on “A Mobile Social Networking Framework” by Dr Edward Lor, Deputy R&D Director of ECE Group (HK) | 24 Apr, 09 |

| | | |
|-----|---|---------------|
| 10. | ASTRI Seminar on “Frontier of Optical Communications in the 21 st Century” by Dr Winston Way (HK) | 30 Apr, 09 |
| 11. | ASTRI Seminar on “Random motion energy harvesting - From human body movements to ocean waves” by Dr Jeffrey T. Cheung | 7 May, 09 |
| 12. | Symposium on Sustainability Driven Innovative Technologies: Mr Kwan Wah Ng, Manger, Display System Division of MPT Group presented during the event. (HK) | 7-8 May, 09 |
| 13. | Forum on “Latest EU Standard and LED Technology in Lighting Industry”: Dr Shu Yuan, Director, LED Devices Division of MPT Group presented during the event. (HK) | 8 May, 09 |
| 14. | Roundtable meeting of Guangdong and Hong Kong IT Research Collaboration: Dr Cheung Nim-kwan, CEO and other senior management discussed with Guangdong government officials on IT research (HK) | 12 May, 09 |
| 15. | HKPC Training Course on “Digital TV & Mobile TV Technologies” co-organised by Communications Technologies Group (HK) | 12-13 May, 09 |
| 16. | Workshop of Advanced Packaging Technologies Consortium – 3D Packaging: Dr Tom Chung, Vice President and R&D Director and Dr Daniel Shi, Director of MPT Group delivered presentations during the workshop. (HK) | 19 May, 09 |
| 17. | Mobile Communications Symposium of The Greater China Mobile Communications Industry Consortium: Dr I Chi-lin, Vice President and Group Director of CT Group presented on “Challenges and Opportunities of Wireless and Mobile Communications Technology” (Fuzhou) | 19 May, 09 |
| 18. | Workshop of “An introduction to Prognostics and Health Management” which was organized by MPT Group (HK) | 20 May, 09 |
| 19. | Shenzhen Hong Kong Knowledge Services Forum by ASTRI and Nanshan Industry Consortium: Dr CJ Tsai, Director, Dr Shu Yuan, Director, Dr Lu Ming, Senior Manager of MPT Group delivered presentations. (Shenzhen) | 22 May, 09 |
| 20. | The 2 nd LED Industry Symposium: Dr CJ Tsai, Director of MPT Group delivered a presentation (Shenzhen) | 23 May, 09 |
| 21. | The 4 th Asia-Pacific Workshop on Widegap Semiconductors: Dr Shu Yuan, Director of MPT Group delivered presentation (Hunan) | 24 May, 09 |
| 22. | IEEE international symposium on circuit and systems: Mr William Wong from IC Group delivered presentation (Taiwan) | 24-27 May, 09 |
| 23. | ASTRI Seminar on “ESD Design and Modeling for Integrated Circuits” by Dr Yan Beiping, Director of IC | 29 May, 09 |

| | | |
|-----|--|---------------|
| | Group (HK) | |
| 24. | ASTRI Seminar on “United State Patents: Are recent changes making them harder to obtain and enforce” by Mr Rutherford Ross Viguet, Partner, Fulbright & Jaworski L.L.P. (HK) | 2 Jun, 09 |
| 25. | IDTechEx Technology Conference: Energy Harvesting and Storage Europe: Dr Ivan Sham, Manager of MPT Group delivered presentation (United Kingdom) | 3 Jun, 09 |
| 26. | Guangdong Provincial Science and Technology Department exchange meeting: Dr I Chi-lin, Vice President and Group Director of CT Group, Dr CJ Tsai, Director and Mr Lu Ming, Senior Manager of MPT Group delivered presentations. (HK) | 4 Jun, 09 |
| 27. | BLUE 2009, The leading Asia-based LED Materials & Technology Conference: Dr Shu Yuan, Director of MPT Group delivered presentation. (Taiwan) | 8-9 Jun, 09 |
| 28. | The 7 th China Semiconductor Packaging & Testing Technology Conference: Dr Daniel Shi, Director of MPT Group delivered presentation (Wuxi) | 10-12 Jun, 09 |
| 29. | ASTRI Seminar on “From Amber to Sand: A History of Human Mastering of Electrons” by Dr Derek Cheung, Institute for Technology Advancement of UCLA (HK) | 11 Jun 09 |
| 30. | ASTRI Seminar on “China towards a low carbon economy” by Ms Changhua Wu, Director of Climate Group (HK) | 12 Jun, 09 |
| 31. | ASTRI Seminar on “Challenges and opportunities in medical imaging fields” by Dr LH Cheung (HK) | 12 Jun, 09 |
| 32. | 小欖鎮“中山市LED產業技術聯盟”成立儀式及交流會: Dr Enboa Wu, Vice President and Group Director of MPT Group delivered presentation on “The latest development trend of China’s LED industry” (Zhongshan) | 16 Jun, 09 |
| 33. | Roundtable meeting on “2009滬港科技資源共享及技術合作交流會: Prof Edward Yang, Senior Advisor and Dr Li Geng, R&D Director participated in the meeting (HK) | 17 Jun, 09 |
| 34. | HKPC Training Course on “Future Development on TD-SCDMA Technologies” by Dr Elva Wang, Senior Engineer, Dr Billy Chan, Senior System Engineer, Dr Zhengang Pan, Project Manager of CT Group were the speakers of the courses. (HK) | 18-19 Jun, 09 |
| 35. | Seminar on “Viewpoints on Solar Photovoltaic Development” (HK) | 22 Jun, 09 |
| 36. | ASTRI Technology Forum on “Sensor Network – Technology and Applications” by Dr Lydia Leung, Manager of MPT presented on “Sensor Technologies and its Applications” (HK) | 23 Jun, 09 |
| 37. | 2009 the 7 th Pan-Pearl River Delta Fraternity IC Industry | 25-26 Jun, 09 |

| | | |
|-----|---|---------------|
| | Conference and Market Innovative Application Seminar (SZ) | |
| 38. | ASTRI Seminar on “Overview of In-house Microelectronics Packaging Design, Assembly and Testing Related Capabilities” by Mr Antonio Z. Mangente, Manager of MPT Group (HK) | 26 Jun 09 |
| 39. | Workshop – HKUST Asialics Conference, CEO delivered presentation on “Research and Technology Organizations in HK” (HK) | 7 Jul 09 |
| 40. | HKPC Training Course – “WiMAX Technology Fundamentals” (HK) | 9-10 Jul, 09 |
| 41. | 2009 中國通訊集成電路技術應用研討會, Dr I Chi-lin, VPGD from CT Group delivered keynote presentation on “Wireless IC: Challenges and Opportunities” (SH) | 15-16 Jul, 09 |
| 42. | Seminar – MRI guided Bio-molecular Interventions (HK) | 17 Jul, 09 |
| 43. | Seminar – Rapid Analog Mixed Signal Process Migration with OSIRIS (HK) | 17 Jul, 09 |
| 44. | The 14 th Optoelectronic and Communications Conference, Dr Enboa Wu, VPGD of MPT Group deliver presentation during the event (HK) | 17 Jul, 09 |
| 45. | ASTRI Seminar – Overview of In-house Microelectronics Packaging Design (HK) | 24 Jul, 09 |
| 46. | Seminar – Six Sigma of total quality product development (HK) | 31 Jul, 09 |
| 47. | Sino-US Technology & Cooperation Forum, Dr Enboa Wu, VPGD of MPT Group delivered a presentation (SZ) | 31 Jul, 09 |
| 48. | LED lighting Technology Training Course by MPT Group (SZ) | 2 Aug, 09 |
| 49. | Seminar – Challenges in Radio SoC’s for Low Power and Adaptive Applications | 7 Aug, 09 |
| 50. | AOTC Workshop: Updated & Discussion of 3D Packaging Technologies (SZ) | 10 Aug, 09 |
| 51. | Joint International Conference on Electronic Packaging Technology and High Density Packaging (BJ) | 10-13 Aug, 09 |
| 52. | HKPC Training Course – LTE and MIMO Technology (HK) | 13-14 Aug, 09 |
| 53. | Seminar on Internet Traffic – The Return of the Bell-heads (HK) | 21 Aug, 09 |
| 54. | Seminar on IEEE Journal Library Plus (HK) | 24 Aug, 09 |
| 55. | Seminar on Effective methodology for retrieving research information (HK) | 25 Aug, 09 |

| | | |
|-----|---|---------------|
| 56. | ASTRI Seminar – Product Differentiation by Audio Enhancement (HK) | 28 Aug, 09 |
| 57. | Seminar – Biomedical Applications of High Resolution Ultrasound Imaging and High Intensity Focused Ultrasound Therapy (HK) | 4 Sep, 09 |
| 58. | Seminar – Narrowband PLC and Broadband PLC SOC design for Green City Smart Grid and Green Building / Home / Car Micro Grid (HK) | 4 Sep, 09 |
| 59. | 2009 LED Lighting Technology and Development Forum (SZ) | 6 Sep, 09 |
| 60. | Seminar – 4G Wireless Broadband Evolution (HK) | 7 Sep, 09 |
| 61. | LTE Asia 2009 by CT Group (HK) | 8-9 Sep, 09 |
| 62. | 2009 Industry and University Consultation Forum (HK) | 9 Sep, 09 |
| 63. | 綠色光電新趨向論壇 (XA) | 16-18 Sep, 09 |
| 64. | 2009 Industry and University Consultation Forum (SZ) | 23 Sep, 09 |
| 65. | Coded Wireless Video Broadcast/Multicast – A Framework to Harvest the true potential of 4G Access Networks (HK) | 7 Oct, 09 |
| 66. | Introduction to User-Centred Design & Usability Workshop (HK) | 9 Oct, 09 |
| 67. | CDN Strategies Summit (UK London) | 13-14 Oct, 09 |
| 68. | LTE Seminar – An effective convergence of fixed and wireless network (HK) | 9 Oct, 09 |
| 69. | APEC Workshop for the development of LED Lighting Standards and Testing Technology (Taipei) | 9 Oct, 09 |
| 70. | HKPC Training Course – Digital TV and Mobile TV Technologies (HK) | 15-16 Oct, 09 |
| 71. | Roundtable on Entrepreneurship Education (REE) Asia 2009 (HK) | 21 Oct, 09 |
| 72. | Colloquium on “An overview of GaN-related Materials and Devices and Work on Power LED Chips at ASTRI” (HK) | 22 Oct, 09 |
| 73. | ASTRI Seminar – Common Platform for IP Qualification (HK) | 30 Oct, 09 |
| 74. | Seminar on “History of OFDM” (HK) | 2 Nov, 09 |
| 75. | Seminar on “PAPR Reduction Methods and their Problems in the OFDM System” (HK) | 2 Nov, 09 |
| 76. | Seminar on “Recent Advances in MRI – Creating Solutions for Better Healthcare” (HK) | 3 Nov, 09 |
| 77. | Seminar on “IEEE Standardization Initiatives and Smart | 3 Nov, 09 |

| | | |
|-----|--|---------------|
| | Grid Related Communications Technologies” (HK) | |
| 78. | 2009 Asia Communications and Photonics Conference and Exhibition (ACP) (Shanghai) | 4 Nov, 09 |
| 79. | Seminar on “Mobile TV” (HK) | 13 Nov, 09 |
| 80. | ASTRI DLC Technology Forum – “Emerging Technologies and Trends in Video Processing” (HK) | 26 Nov, 09 |
| 81. | ASTRI Seminar – “Hot LED becomes cool” – ASTRI’s Green Lighting Technology (HK) | 27 Nov, 09 |
| 82. | ASTRI DLC Tech Forum – e-Book for e-Learning (HK) | 10 Dec, 09 |
| 83. | Workshop co-organized with IEEE-CPMT Hong Kong Chapter (HK) | 15 Dec, 09 |
| 84. | Seminar on Cyber-Physical Systems & Medical Device Plug-and Play (HK) | 17 Dec, 09 |
| 85. | ASTRI Seminar – Mobile Phone Antennas (HK) | 18 Dec, 09 |
| 86. | The 5th IEEE International Conference on Nano/Micro Engineered and Molecular Systems (IEEE-NEMS 2010) (Xiamen) | 20-23 Jan, 10 |
| 87. | The Hong Kong-Taiwan Economic and Cultural Cooperation Seminar (HK) | 21 Jan, 10 |
| 88. | APTC Workshop: Solutions for IC/Module Packaging Design (Shenzhen) | 22 Jan, 10 |
| 89. | The 23rd IEEE International Conference on Micro Electro Mechanical Systems (MEMS 2010) (HK) | 26 Jan, 10 |
| 90. | Hong Kong IT Mission to Thailand organized by HKTDC (Thailand) | 27 Jan, 10 |
| 91. | Chengdu Seminar on Electronics organized by InvestHK (Chengdu) | 28 Jan, 10 |
| 92. | ASTRI Seminar – Characterization of Digital TV (DVB-T) Signal Receiver’s Performance (HK) | 29 Jan, 10 |
| 93. | Fujian Information Technology Professionals Committee Conference 2010 (Fuzhou) | 2 Feb, 10 |
| 94. | Seminar on Fundraising – Options and Expectations (HK) | 24 Feb, 10 |
| 95. | ASTRI Seminar – LED Driver IC Developments in ASTRI (HK) | 26 Feb, 10 |
| 96. | Seminar – Professor C. C. Chan, Honorary Professor of The University of Hong Kong (HK) | 12 Mar, 10 |
| 97. | Seminar – Hong Kong’s Advanced Technology Development and Challenges (HK) | 17 Mar, 10 |

| | | |
|--|---|---------------|
| 98. | ASTRI Seminar – The Next Step in Compact Camera Revolution: Chip Scale Camera Module (HK) | 26 Mar, 10 |
| ii/ Exhibitions/ Roadshows | | |
| 1. | The 13 th China Xiamen Machinery & Electronics Exhibition (Xiamen) | 8-9 Apr, 09 |
| 2. | International ICT Expo (Hong Kong) | 13-16 Apr, 09 |
| 3. | Computex Taipei (Taiwan) | 2-6 Jun, 09 |
| 4. | OPTO Taiwan 2009, The 18th International Optoelectronics Expo (Taiwan) | 10-12 Jun, 09 |
| 5. | 2009 China (Shenzhen) International Investment and Trade Fair (Shenzhen) | 26-27 Jun, 09 |
| 6. | ITU Telecom World 2009 | 6-9 Oct, 09 |
| 7. | The 6 th China International Exhibition and Forum on Solid State Lighting (Shenzhen) | 14-16 Oct, 09 |
| 8. | 2009 Changsha Technology Exchange Trade Fair (Changsha) | 17-19 Oct, 09 |
| 9. | HKTDC – Hong Kong International Medical Devices and Supplier Fair (HK) | 4-6 Nov, 09 |
| 10. | China Hi-tech Fair (Shenzhen) | 16-21 Nov, 09 |
| 11. | IEEE Globecom Expo 2009 (Hawaii) | 1-4 Dec, 09 |
| 12. | IC Design Summit 2009 (Xiamen) | 2-4 Dec, 09 |
| 13. | Inno Design Tech Expo (Hong Kong) | 3-5 Dec, 09 |
| B. No. of media/ publicity activities | | |
| i/ Publicity Activities | | |
| 1. | ASTRI Career Day 2009 | 28 Mar, 09 |
| 2. | The Faculty Research Day of CUHK: Dr Enboa Wu, Vice President and Group Director of MPT Group introduced ASTRI latest development | 17 Jun, 09 |
| 3. | Ubiquitous City – HK Fun Fair: Dr I Chi-lin, Vice President and Group Director of CT Group was invited as Guest of Honor | 27 Jun, 09 |
| 4. | Sponsorship of the 42 nd Joint School Science Exhibition | 20 Aug, 09 |
| 5. | Environmental Protection & Friendly business Award Presentation | 22 Aug, 09 |
| 6. | Shenzhen Hong Kong Knowledge Service Industry Forum and Innovation Circle Achievement Announcement | 15 Dec, 09 |

| | | |
|-----------------------------------|--|-------------|
| 7. | Contract Signing Ceremony of LED-based street lamps project between Shenzhen BER Lighting | 18 Dec, 09 |
| 8. | Testimonial Presentation on book donation | 21 Dec, 09 |
| 9. | Hong Kong Electronics & Technologies Association Annual Dinner | 17 Jan, 10 |
| 10. | 2009 Hong Kong Awards for Industries Awards Presentation Ceremony | 18 Jan, 10 |
| 11. | Hong Kong ICT Awards 2009 Presentation Ceremony | 19 Jan, 10 |
| 12. | 10 th Anniversary Celebrations Commencement Ceremony & Open Day | 23 April 10 |
| ii/ Press Conferences Held | | |
| 1. | e-Book and e-Learning Press Preview Conference: ECE Group held a press conference with My-IT School on myID Technology and e-learning. Dr Edward Lor, Deputy R&D Director of ECE Group introduced the application of myID by ASTRI. | 23 Apr, 09 |
| 2. | Press Briefing of signing ceremony of ASTRI and Credo Semiconductor on co-developing high speed data communication IC products. The agreement was signed by Dr Cheung Nim-kwan, CEO and Mr Job Lam, CEO and Co-founder of Credo | 7 May, 09 |

THE WAY FORWARD

28. While ASTRI will continue to concentrate on its core R&D focus in information and communications technology, it will also increasingly apply its efforts to areas where they are most likely to improve people's quality of life.

29. ASTRI, with its current portfolio mix of: (i) short-term product development projects (one to two-year horizon); (ii) medium-term advanced development projects (two to three-year horizon); and (iii) longer-term projects (three to five-year horizon), has already built a solid foundation of both sustainable and disruptive technologies that can support its long-term growth. In the coming years, ASTRI's focus will be on seeding new applied research that can create economic impact for its customers, commercialising its new technologies, expanding its industry partnerships, and strengthening the collaboration with its R&D counterparts in Hong Kong, the Mainland and overseas.

The Hong Kong Applied Science and Technology Research Institute Company Ltd.

香港應用科技研究院有限公司

R&D Projects as at end March 2010

研發項目(截至 2010 年 3 月)

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|------------------------|--|-------------------------------------|-----------------------|--|--|---|--------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| Platform Research 平台研究 | | | | | | | |
| 1 | Advanced Broadband Wireless Technologies Platform 先進無線寬帶技術平台 | 17 | Project Closed 已完成 | 14.43 | 10% | ASTRI 應科院 HKUST 香港科技大學 | One private company 一家私營公司 |
| 2 | Customizable Element Management System (EMS) for Wireless Networks: CWMS 無線網絡網元管理系統 | 17 | Project Closed 已完成 | 9.80 | 13% | ASTRI 應科院 | Five private companies 五家私營公司 |
| 3 | LED for General Lighting - Area Light Source (Phase 1 & Phase 2) LED 於一般照明之面光源應用 (第一及二階段) | 24 | Project Closed 已完成 | 14.85 | 10% | ASTRI 應科院 HKUST 香港科技大學 HKBU 香港浸會大學 Hong Kong Standards and Testing Centre 香港標準及檢定中心 | Three private companies 三家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分 比 | Participating Organisation 參與機構 | |
|-----------|---|-------------------------------------|-----------------------|--|--|---|--------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 4 | Wireless Personal Area Networking and Streaming Media Access Control WPAN 多媒體資訊流的協議處理器之開發和應用 | 18 | Project Closed 已完成 | 16.11 | 5% | ASTRI 應科院 Intelligent Grouping & Resource Sharing (IGRS) 閃聯聯盟 | Four private companies 四家私營公司 |
| 5 | High Definition TV Technologies Applied Research Platform 高清電視技術應用研究平臺 | 24 | Project Closed 已完成 | 13.87 | 0% | ASTRI 應科院 Peking University 北京大學 Tsinghua University 清華大學 CUHK 香港中文大學 HKUST 香港科技大學 PolyU 香港理工大學 | Nil |
| 6 | Portable Dual Mode Wireless and Broadcast Multimedia Platform (Phase 1 & Phase 2) 數位廣播及無線網路多模移動多媒體平臺 (第一及二階段) | 21 | Project Closed 已完成 | 16.26 | 8% | ASTRI 應科院 City University of Hong Kong 香港城市大學 | Five private companies 五家私營公司 |
| 7 | Smart Optical Sensors 智能光學傳感器 | 18 | Project Closed 已完成 | 12.06 | 10% | ASTRI 應科院 | Three private companies 三家私營公司 |
| 8 | Advanced Indoor MIMO Platform 先進室內多輸入多輸出平台 | 18 | Project Closed 已完成 | 14.82 | 11% | ASTRI 應科院 HKUST R&D Corporation Limited 香港科大研究開發有限公司 | Three private companies 三家私營公司 |
| 9 | Multi-Media Platform for Algorithm & Application Development (MMP-EMU) (Phase-1 & 2) 開發多媒體應用系統平台 | 15 | Project Closed 已完成 | 15.00 | 3% | ASTRI 應科院 | Three private companies 三家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|---|-----------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 10 | Application Specific AMS IC Design Platform for Integrated CCD Image Sensor Processing 用於 CCD 圖像傳感處理的混合信號專用集成電路設計平臺 | 22 | Project Closed 已完成 | 11.94 | 9% | ASTRI 應科院 | A private company 一家私營公司 |
| 11 | Power Management Integrated Circuits for Portable consumer Electronics 用於攜帶型消費電子產品的電源管理積體電路 | 12 | Project Closed 已完成 | 8.76 | 13% | ASTRI 應科院 | Two private companies 兩家私營公司 |
| 12 | Digital Living Platform Full Project 數碼生活科技平台 | 12 | Project Closed 已完成 | 4.87 | 11% | ASTRI 應科院 Intelligent Grouping & Resource Sharing (IGRS) 閃聯聯盟 | Six private companies 六家私營公司 |
| 13 | Client-based wireless Hotspot Access Technology 客戶機無線上網據點接入技術 | 12 | Project Closed 已完成 | 9.64 | 7% | ASTRI 應科院 | Six private companies 六家私營公司 |
| 14 | High Dynamic Range (HDR) Display System - Using Active-Dynamic LED Backlight 主動式動態 LED 背光在高動態範圍顯示系統的應用 | 17 | Project Closed 已完成 | 15.41 | 7% | ASTRI 應科院 | Three private companies 三家私營公司 |
| 15 | Low-Cost Solution for High Performance and High-Density Packaging 高功能與高密度電子構裝之低成本方案 | 22 | Project Closed 已完成 | 12.00 | 10% | ASTRI 應科院 | Six private companies 六家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分 比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|---|---------------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 16 | OFDM Core for Digital TV Applications OFDM 核數字電視應用 | 18 | Project Closed 已完成 | 16.34 | 10% | ASTRI 應科院 Digital Television Technology R&D Center of Tsinghua University 清華大學數字 電視技術研究中心 | Three private companies 三家私營 公司 |
| 17 | Joint Lab Foundation Platform Technologies 聯合實驗室基礎平台技術 | 36 | On-going 進行 中 | 8.51 | 0% | ASTRI 應科院 Digital Television Technology R&D Center of Tsinghua University 清華大學數字 電視技術研究中心 | |
| 18 | DTMB Instrumentation and Testing Platform DTMB 測試技術 | 12 | Project Closed 已完成 | 3.14 | 10% | ASTRI 應科院 Digital Television Technology R&D Center of Tsinghua University 清華大學數字 電視技術研究中心 Hong Kong Science and Technology Parks Corporation 香港科技園公司 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分 比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|---|-----------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 19 | DTMB SFN Technology Adaptors and Systems DTMB 單頻網技術 | 12 | Project Closed 已完成 | 3.96 | 10% | ASTRI 應科院 Digital Television Technology R&D Center of Tsinghua University 清華大學數字電視技術研究中心 Hong Kong Science and Technology Parks Corporation 香港科技園公司 | A private company 一家私營公司 |
| 20 | AVS FPGA Video/Audio Decoder on Emulation Platform AVS FPGA 視頻/音頻解碼器開發平台 | 15 | Project Closed 已完成 | 15.88 | 0% | ASTRI 應科院 AVS Working Group | Nil |
| 21 | Thermal Energy Management with Advanced Materials and Structures 使用先進散熱材料及結構設計的熱管理方案 | 24 | Project Closed 已完成 | 13.01 | 12% | ASTRI 應科院 | Three private companies 三家私營公司 |
| 22 | Advanced Wireless Super-Physical Layer for Wireless Personal Area Networking Core Technology Platform 用於無線個人區域網絡核心技術平台的先進無線超寬帶物理層技術 | 18 | Project Closed 已完成 | 14.58 | 13% | ASTRI 應科院 OFTA 電訊管理局 CUHK 香港中文大學 HKUST 香港科技大學 Intelligent Grouping & Resource Sharing (IGRS) 閃聯聯盟 South China University of Technolog 華南理工大學 | Three private companies 三家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|---|-------------------------------------|-----------------------|--|--|---|----------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 23 | Interactive TV Technologies Platform 互動電視技術平台 | 16 | Project Closed 已完成 | 9.18 | 17% | ASTRI 應科院 Fudan University 復旦大學 Hong Kong Cyberport Management Company Limited 香港數碼港管理有限公司 | Six private companies 六家私營公司 |
| 24 | iShare Media Sharing Platform iShare 媒體傳輸共用平臺 | 12 | Project Closed 已完成 | 8.94 | 13% | ASTRI 應科院 HKUST 香港科技大學 CUHK 香港中文大學 | Eleven private companies 十一家私營公司 |
| 25 | Next Generation Antenna Sub-Assemblies 下一代天線組裝配件 | 18 | Project Closed 已完成 | 8.46 | 10% | ASTRI 應科院 | Nine private companies 九家私營公司 |
| 26 | Dualmode CWPAN/ZigBee RFIC Transceiver 雙模 CWPAN/ZigBee 射頻收發器晶片 | 16 | Project Closed 已完成 | 10.89 | 11% | ASTRI 應科院 City University of Hong Kong 香港城市大學 | A private company 一家私營公司 |
| 27 | A Novel method of removing sapphire for solid-state lighting power GaN LEDs 用於固態照明大功率 GaN 發光二極體的藍寶石剝離新方法 | 20 | Project Closed 已完成 | 14.45 | 10% | ASTRI 應科院 HKUST 香港科技大學 CUHK 香港中文大學 HKU 香港大學 City University of Hong Kong 香港城市大學 National Chiao Tung University, Taiwan 台灣國立交通大學 | Two private companies 兩家私營公司 |
| 28 | Mixed Signal System-On-Chip (AMS SoC) Design Platform 混合信號片上系統 (AMS SoC) 設計平臺 | 18 | Project Closed 已完成 | 9.22 | 10% | ASTRI 應科院 | Three private companies 三家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|---|-------------------------------------|-----------------------|--|--|--|--------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 29 | Integrated Driver Solution for LED Solid State Lighting (SSL) 集成 LED 半導體照明驅動解決方案 | 15 | Project Closed 已完成 | 9.24 | 11% | ASTRI 應科院 | Four private companies 四家私營公司 |
| 30 | Advanced Compact Camera Module (ACCM) for Cellular Phone Applications 照相手機用的先進微數碼相機模組 (ACCM) | 20 | Project Closed 已完成 | 13.27 | 10% | ASTRI 應科院 | Four private companies 四家私營公司 |
| 31 | MMP AVS/H.264 Si-Proven Test Chip Development (MMP-SiP) 開發測試用晶片用以驗證 MMP AVS/H.264 IP | 19 | Project Closed 已完成 | 13.08 | 0% | ASTRI 應科院 | Nil |
| 32 | Future Multimedia Standards (FMS) 下一代多媒體標準研究 | 24 | On-going 進行中 | 13.01 | 0% | ASTRI 應科院 CityU 香港城市大學 CUHK 香港中文大學 PolyU 香港理工大學 HKUST 香港科技大學 | Nil |
| 33 | Mobile WiMAX Basestation Technology Platform 移動 WiMAX (全球微波存取互通) 基站技術平台 | 17 | Project Closed 已完成 | 16.64 | 10% | ASTRI 應科院 | A private company 一家私營公司 |
| 34 | LED Based Intelligent Outdoor Lighting System 智慧型的 LED 戶外照明系統 | 17 | Project Closed 已完成 | 10.50 | 10% | ASTRI 應科院 | Three private companies 三家私營公司 |
| 35 | Flexible and Adaptive - Active Dynamic LED Backlight Control ASIC Development (FA-ADBC) 靈活及自適應主動式動態 LED 背光控制晶片開發 | 14 | Project Closed 已完成 | 10.97 | 13% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分 比 | Participating Organisation 參與機構 | |
|-----------|---|-------------------------------------|-----------------------|--|--|--|--------------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 36 | Practical MIMO for WiMAX/LTE Device WiMAX/LTE 裝置上的實用多輸入多輸出技術 | 18 | Project Closed 已完成 | 17.01 | 18% | ASTRI 應科院 HKUST R&D Corporation Limited 香港科大研究開發有限公司 | A private company 一家私營公司 |
| 37 | WIMAXA Access Service Network Gateway (ASN-GW) Platform 移動無線接入網網關 | 18 | Project Closed 已完成 | 14.71 | 10% | ASTRI 應科院 | Two private companies 兩家私營公司 |
| 38 | Multi-Mode Mobile TV Baseband Demodulator 多標準移動數字電視解調器 | 22 | On-going 進行中 | 14.75 | 3% | ASTRI 應科院 | A private company 一家私營公司 |
| 39 | Near-Field Antenna Sub-Assemblies 近場天線線圈 | 18 | Project Closed 已完成 | 8.75 | 20% | ASTRI 應科院 | A private company 一家私營公司 |
| 40 | Social Networking Internet Tablet 人際互聯網隨身機 | 12 | Project Closed 已完成 | 6.93 | 10% | ASTRI 應科院 CUHK 香港中文大學 | Three private companies 三家私營公司 |
| 41 | Next generation Anode material for Lithium Ion batteries (NALI) 新一代鋰電池陽極材料 | 24 | On-going 進行中 | 10.00 | 10% | ASTRI 應科院 HKUST R&D Corporation Limited 香港科大研究開發有限公司, South China Normal University 華南師範大學 | A private company 一家私營公司 |
| 42 | Reliability Engineering for 3D Packaging (REF3D) 三維封裝的可靠性工程 | 21 | On-going 進行中 | 15.14 | 13% | ASTRI 應科院 HKUST 香港科技大學 Hong Kong Science and Technology Parks Corporation 香港科技園公司 | Sixteen private companies 十六家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|--|---------------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 43 | Mobile Peer Group Service Platform 移動對等網路服務平台 | 12 | Project Closed 已完成 | 6.45 | 10% | ASTRI 應科院 | Three private companies 三家私營 公司 |
| 44 | Micro-Display Personal Miniature Projection System 微顯示器個人用微型投影機系統 | 15 | On-going 進行 中 | 11.95 | 10% | ASTRI 應科院 Hong Kong Science and Technology Parks Corporation 香港科技園公司 | Five private companies 五家私營 公司 |
| 45 | Configurable Multi-Standard Video Encoder with Embedded DSP Core and Hardware Accelerators (ENC-CMSD) 基于可配置 DSP 處理器和硬件加速 模块的多標準視頻編碼器 | 16 | On-going 進行 中 | 12.50 | 10% | ASTRI 應科院 HKUST 香港科技大 學 PolyU 香港理工大學 | Nil |
| 46 | BE-DRM for Embedded P2P IPTV over Internet 基於嵌入式點對點 IP 電視的廣播加 密數位版權管理方案 | 15 | On-going 進行 中 | 10.40 | 15% | ASTRI 應科院 Huazhong University of Science and Technology 華中科 技大學 | Five private companies 五家私營 公司 |
| 47 | Reconfigurable Multimode Digital TV RF Tuner 可配置多模數字電視射頻調諧器 | 18 | On-going 進行 中 | 13.66 | 10% | ASTRI 應科院 | A private company 一家私營公司 |
| 48 | Nanometer SoC Design Technology (NSDT) 納米系統級芯片設計技術 | 18 | On-going 進行 中 | 14.20 | 13% | ASTRI 應科院 CUHK 香港中文大 學 | A private company 一家私營公司 |
| 49 | High Performance Storage Controller Platform (HPSC)) 高性能存儲控制器平台 | 17 | On-going 進行 中 | 12.67 | 11% | ASTRI 應科院 | Two private companies 兩家私營 公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分 比 | Participating Organisation 參與機構 | |
|-----------|---|-------------------------------------|--------------|--|--|--|--------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 50 | Multi-Standards H.264/AVS/MPEG2 Low Cost High Performance Full HD Video Decoder SoC (Bare-Bone-SoC) 低成本多標準(H.264/AVS/MPEG2)高性能, 全高清解碼器核 SoC | 18 | On-going 進行中 | 18.48 | 11% | ASTRI 應科院 | Nil |
| 51 | Next generation MMI for Digital Home 數字家庭新一代人機互動技術 | 15 | On-going 進行中 | 7.56 | 13% | ASTRI 應科院 CUHK 香港中文大學 | Three private companies 三家私營公司 |
| 52 | Interactive TV technologies and Standard - Hong Kong Profile 互動電視技術及香港標準 | 15 | On-going 進行中 | 5.26 | 10% | ASTRI 應科院 PolyU 香港理工大學 Digital Home Interactive Application (DHIA) 中國電子工業標準化技術協會數字家庭互動應用標準 | Four private companies 四家私營公司 |
| 53 | TD-LTE Femto BTS Baseband Core TD-LTE 家庭基站基帶核心 | 18 | On-going 進行中 | 16.64 | 22% | ASTRI 應科院 HKUST 香港科技大學 | A private company 一家私營公司 |
| 54 | Dual Mode Digital TV Receiver Chip and Reference Design 雙模數字電視接收芯片及參考設計 | 18 | On-going 進行中 | 16.43 | 10% | ASTRI 應科院 | A private company 一家私營公司 |
| 55 | Innovative MMI for mobile 移動設備的創新人機介面 | 15 | On-going 進行中 | 9.84 | 10% | ASTRI 應科院 CUHK 香港中文大學 | Six private companies 六家私營公司 |
| 56 | High Voltage Motor Driver Silicon IP Platform 高壓電動機驅動器矽 IP 平台 | 18 | On-going 進行中 | 9.40 | 13% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分 比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|------------------|--|--|--|--------------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 57 | ESD design and device modeling ESD 設計與器件模型 | 18 | On-going 進行 中 | 11.00 | 10% | ASTRI 應科院 Hong Kong Science and Technology Parks Corporation 香港科技園公司 | Two private companies 兩家私營 公司 |
| 58 | RF Assemblies 先進的射頻技術 | 18 | On-going 進行 中 | 15.11 | 13% | ASTRI 應科院 HKU 香港大學 CUHK 香港中文大學 HKUST 香港 科技大學 | Nine private companies 九家私營 公司 |
| 59 | Design and Fabrication Methodology of Production-Ready MEMS Devices: (1) A “Fabrication-able” MEMS Scanning Mirror Device 可生產的微機電器件的設計與製作方法: (1)一個可製造的微機電掃描鏡片 | 18 | On-going 進行 中 | 7.97 | 10% | ASTRI 應科院 Hong Kong Science and Technology Parks Corporation 香港科技園公司 HKUST R&D Corporation Limited 香港科大研究 開發有限公司 | Two private companies 兩家私營 公司 |
| 60 | Common Platform for Intellectual Property Qualification 知識產權質量驗證通用平台 | 15 | On-going 進行 中 | 4.93 | 18% | ASTRI 應科院 HKUST 香港科技大 學, IEEE Design Automation Standards Committee (DASC), China IP Standard Working Group | Two private companies 兩家私營 公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|------------------|--|--|---|--------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 61 | Integrated Vertical LED Technology 垂直結構 LED 技術集成 | 18 | On-going 進行 中 | 14.00 | 10% | ASTRI 應科院 HKUST 香港科技大學 CUHK 香港中文大學 National Chiao Tung University, Taiwan 台灣 國立交通大學 | Two private companies 兩家私營公司 |
| 62 | TD-LTE Terminal Baseband Core TD-LTE 終端基帶核心 | 18 | On-going 進行 中 | 17.85 | 16% | ASTRI 應科院 | Two private companies 兩家私營公司 |
| 63 | Wafer Level LED System-in-Package Platform Development 晶圓級 LED 系統構裝平台開發 | 18 | On-going 進行 中 | 11.00 | 10% | ASTRI 應科院 HKUST 香港科技大學 | Eight private companies 六家私營公司 |
| 64 | Interactive Display – Touch & Multi-Touch Sensing Technology 互動式顯示器 – 觸控與多重觸控系統技術 | 18 | On-going 進行 中 | 12.47 | 10% | ASTRI 應科院 HKUST 香港科技大學 Hong Kong Science and Technology Parks Corporation 香港科技園公司 | Four private companies 四家私營公司 |
| 65 | Energy Harvesting (EH) Solutions for Electronic Products 適用電子產品的能源採集方案 | 18 | On-going 進行 中 | 13.00 | 10% | ASTRI 應科院 | Three private companies 三家私營公司 |
| 66 | Wireless Network Edge Platform (WNEP) 無線網絡接入平台 | 15 | On-going 進行 中 | 11.65 | 10% | ASTRI 應科院 | Two private companies 兩家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分 比 | Participating Organisation 參與機構 | |
|-----------------------------|---|-------------------------------------|------------------|--|--|--|--------------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 67 | Wafer Level Chip Scale Camera Actuator 晶圓級相機傳動器 | 17 | On-going 進行 中 | 12.96 | 11% | ASTRI 應科院 University of Science and Technology of China 中 國科學技術大學 Institute of Physics, Chinese Academy of Sciences 中國科學院物理研究所 | Two private companies 兩家私營 公司 |
| 68 | Ultra Low Energy Analog-to-Digital Converter Technologieis 超低功耗模數轉換器 | 18 | On-going 進行 中 | 8.85 | 10% | ASTRI 應科院 | A private company 一家私營公司 |
| 69 | Integrated LCoS Imager IP Development For Pico-projectors 應用於微型投影儀的矽基液晶 (LCoS) 集成影像晶片的 IP 開發 | 18 | On-going 進行 中 | 17.23 | 25% | ASTRI 應科院 | A private company 一家私營公司 |
| 70 | P2P IPTV Quality of Experience 針對 P2P IPTV 的質量體驗系統 | 15 | On-going 進行 中 | 11.94 | 15% | ASTRI 應科院 CityU 香港城市大 學 CUHK 香港中文大學 | Five private companies 五家私營 公司 |
| 71 | Core technology for multimedia signal processing and productization, intelligent embedded multimedia information processing platform 多媒體處理核心技術及產業化，嵌入 式智慧多媒體資訊處理平臺 | 18 | On-going 進行 中 | 5.71 | 15% | ASTRI 應科院 HKU 香港大學 | Two private companies 兩家私營 公司 |
| Subtotal 小計 | | | | 841.49 | 10% | | |
| Collaborative Research 合作研究 | | | | | | | |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-------------|---|-------------------------------------|-----------------------|--|--|---|---------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 1 | Development and Commercialization of Key IC Packaging Technologies for Tire Pressure Monitoring System 胎壓監測系統中的關鍵芯片封裝技術的開發及產業化 | 32 | On-going 進行中 | 9.32 | 50% | CUHK 香港中文大學 HKUST 香港科技大學 Hong Kong Science and Technology Parks Corporation 香港科技園公司 | A private company 一家私營公司 |
| 2 | Advanced & Affordable MRI 先進和負擔得起的磁共振成像 | 18 | On-going 進行中 | 4.62 | 71% | ASTRI 應科院 | A private company 一家私營公司 |
| 3 | Optek Multimedia SoC Development (OMM-SoC) 歐思多媒體晶片開發 | 16 | Project Closed 已完成 | 4.25 | 50% | ASTRI 應科院 | A private company 一家私營公司 |
| 4 | Recordable Electrical Memory (REME) ³ 可錄式電子記憶器 | 24 | Project Closed 已完成 | 7.50 | 65% | ASTRI 應科院 | Two private companies 兩家私營公司 |
| 5 | High definition single/4 channels streaming player 單通道/4 通道嵌入式高清晰度流媒體播放器 | 14 | Project Closed 已完成 | 2.30 | 50% | ASTRI 應科院 | A private company 一家私營公司 |
| 6 | Thermal Therapy Apparatus & Devices (TTAD) for Surgical Applications 外科手術用熱療儀器設備 | 17 | Project Closed 已完成 | 1.71 | 50% | ASTRI 應科院 | A private company 一家私營公司 |
| 7 | 10 Gigabit Ethernet Silicon IP Platform 10 千兆位數據率以太網矽 IP 平臺 | 24 | On-going 進行中 | 19.50 | 30% | ASTRI 應科院 | A private company 一家私營公司 |
| 8 | 90nm CMOS High-End High Definition Multimedia SoC ASIC Chip - HT5001 - Updated Version 90 納米 CMOS 高端高清多媒體 SoC 芯片 - HT5001 | 18 | On-going 進行中 | 28.40 | 50% | ASTRI 應科院 | A private company 一家私營公司 |
| Subtotal 小計 | | | | 77.60 | 48% | | |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|---------------------------------|--|-------------------------------------|-----------------------|--|--|------------------------------------|--------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| Seed projects 種子項目 ¹ | | | | | | | |
| 1 | Digital Living Platform 數碼生活科技平台 | 6 | Project Closed 已完成 | 1.68 | 0% | ASTRI 應科院 | Nil |
| 2 | Low-Cost Solution for High- Performance and High-Density Packaging 高功能與高密度電子構裝之低成本方案 | 6 | Project Closed 已完成 | 1.83 | 0% | ASTRI 應科院 | Nil |
| 3 | Digital Multimedia Broadcast Terrestrial (DMB-T) Television Baseband Demodulator Development 地面數字多媒體廣播(DMB-T)電視基帶解調開發 | 6 | Project Closed 已完成 | 2.02 | 0% | ASTRI 應科院 | Nil |
| 4 | Digital Multimedia Broadcast Terrestrial (DMB-T) Television RF Tuner Development 地面數字多媒體廣播(DMB-T)電視射頻接收開發 | 6 | Project Closed 已完成 | 2.00 | 0% | ASTRI 應科院 | Nil |
| 5 | Embedded Peer-to-Peer Media Distribution Technology 嵌入式點對點多媒體傳送技術 | 6 | Project Closed 已完成 | 1.98 | 0% | ASTRI 應科院 | Nil |
| 6 | Next Generation Anode Material for Lithium Ion Batteries (LIB) (carbon matrix embedded metal phorsphide nano-composite) 新一代鋰電池陽極材料 (碳材包覆金屬磷化物奈米複合材料) | 6 | Project Closed 已完成 | 1.88 | 0% | ASTRI 應科院 | Nil |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|------------------------------------|--------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 7 | Networked TV Usability and Interoperability Technology 網絡電視優使性和互連性技術 | 6 | Project Closed 已完成 | 1.85 | 0% | ASTRI 應科院 | Nil |
| 8 | Cost-effective packaging Solutions for Automotive Electronics 具經濟效益的汽車電子封裝技術 | 6 | Project Closed 已完成 | 1.96 | 0% | ASTRI 應科院 | Nil |
| 9 | Feasibility Study of New GaN Thin Film LED Technology 氮化鎵薄膜發光二極管技術開發之可行性研究 | 6 | Project Closed 已完成 | 1.81 | 0% | ASTRI 應科院 | Nil |
| 10 | Recordable Electrical Memory / Single Address with Multiple data storage (REME/SAM) 具有多重記錄狀態之一次性電子記憶器 | 10 | Project Closed 已完成 | 1.88 | 0% | ASTRI 應科院 | Nil |
| 11 | Cost Effective Fabrication for Antenna-and RF Module (CEFA) 高效益無線通訊模組製備 | 6 | Project Closed 已完成 | 1.83 | 0% | ASTRI 應科院 | Nil |
| 12 | Cache-Facilitated Media Delivery Technology 緩衝貯存促進的媒體傳送技術 | 5.5 | Project Closed 已完成 | 1.86 | 0% | ASTRI 應科院 | Nil |
| 13 | Surface Mount RF Switches for Reconfigurable Antennas (AntS) 可重構天線用表面貼裝的射頻開關 | 6 | Project Closed 已完成 | 1.83 | 0% | ASTRI 應科院 | Nil |
| 14 | Anti-shaking Compact Camera Module for Cellular Phone Applications 防震動手機用微型照相機模組 | 6 | Project Closed 已完成 | 1.81 | 0% | ASTRI 應科院 | Nil |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|------------------------------------|--------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 15 | Nanometer IC Design Technology (NIDT) 納米集成電路設計技術 | 5 | Project Closed 已完成 | 1.66 | 0% | ASTRI 應科院 | Nil |
| 16 | Ultra Low Complexity Speech Coding 超低音雜性的語音編碼技術 | 6 | Project Closed 已完成 | 1.08 | 0% | ASTRI 應科院 | Nil |
| 17 | Application of ASTRI Technologies for China UWB Standards ASTRI 超寬帶技術應用於中國無線超寬帶標準 | 6 | Project Closed 已完成 | 1.93 | 0% | ASTRI 應科院 | Nil |
| 18 | DTMB STB Reference Design 符合中國地面數字電視廣播標準的基本型機頂盒參考設計 | 6 | Project Closed 已完成 | 1.89 | 0% | ASTRI 應科院 | Nil |
| 19 | Active Dynamic Backlight Control (ADBC) ASIC Firm IP for High Contrast LCD Display 高對比度 LCD 顯示器中的主動式動態背光控制 ASIC Firm IP | 6 | Project Closed 已完成 | 1.90 | 0% | ASTRI 應科院 | Nil |
| 20 | LED Based Street Lamp LED 路燈 | 6 | Project Closed 已完成 | 1.99 | 0% | ASTRI 應科院 | Nil |
| 21 | T-DMB Digital TV/Audio Baseband Demodulator T-DMB 地面數字電視/電台廣播解調器 | 6 | Project Closed 已完成 | 1.90 | 0% | ASTRI 應科院 | Nil |
| 22 | DVB-H Core for Multimode Mobile TV 多制式移動數碼電視 DVB-H 核心 | 6 | Project Closed 已完成 | 1.90 | 0% | ASTRI 應科院 | Nil |
| 23 | Feasibility Study of Personal Miniature Projector 個人用微型投影機之可行性研究 | 6 | Project Closed 已完成 | 2.00 | 0% | ASTRI 應科院 | Nil |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|------------------------------------|--------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 24 | H.264 Video Encoding Accelerator on PC-driven FPGA Development Platform 基于電腦驅動 FPGA 開發平台的 H.264 視像編碼加速器 | 6 | Project Closed 已完成 | 1.95 | 0% | ASTRI 應科院 | Nil |
| 25 | Advanced & Affordable MRI Systems 先進和付得起的磁共振圖象系統 | 6 | Project Closed 已完成 | 1.98 | 0% | ASTRI 應科院 | Nil |
| 26 | Reliability Engineering for 3D Packaging 三維封裝的可靠性工程 | 6 | Project Closed 已完成 | 1.92 | 0% | ASTRI 應科院 | Nil |
| 27 | Peer-to-Peer Session Initiation Protocol 點對點會話發起協議 | 6 | Project Closed 已完成 | 1.96 | 0% | ASTRI 應科院 | Nil |
| 28 | Intellectual Property Quality Infrastructure -- Quality Index (IPQI-QI) 知識產權質量基礎--質量指數 | 6 | Project Closed 已完成 | 1.90 | 0% | ASTRI 應科院 | Nil |
| 29 | NFC Anti-Counterfeiting Wireless Platform 近場通信反假冒無線平台 | 6 | Project Closed 已完成 | 1.69 | 0% | ASTRI 應科院 HKU 香港大學 | Nil |
| 30 | Cost-Effective and Reliable Packaging Platform Technologies for Wearable Electroincs 具經濟效益及可靠的穿戴式電子封裝技術平台 | 6 | Project Closed 已完成 | 1.93 | 0% | ASTRI 應科院 | Nil |
| 31 | Technology Development of DMX Embedded Wireless Lighting Control System DMX 嵌入式無線照明控制系統開發 | 6 | Project Closed 已完成 | 1.87 | 0% | ASTRI 應科院 | Nil |
| 32 | Feasibility of Piezoelectric MRE Driver Array | 6 | Project Closed 已完成 | 1.95 | 0% | ASTRI 應科院 | Nil |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分 比 | Participating Organisation 參與機構 | |
|-----------|---|-------------------------------------|-----------------------|--|--|------------------------------------|--------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | 用壓電驅動器陣列的磁力共振彈性成像之可行性 | | | | | | |
| 33 | Access Service Network Gateway (ASN-GW) Platform 移動無線接入網網關 | 5 | Project Closed 已完成 | 2.00 | 0% | ASTRI 應科院 | Nil |
| 34 | Intelligent Home (In conjunction with Digital Living Consortium Continued Operations) 智能家居(及數碼生活聯盟的延續運作) | 6 | Project Closed 已完成 | 1.99 | 0% | ASTRI 應科院 | Nil |
| 35 | Internet Tablet Service Kit 便攜網絡服務開發包 | 6 | Project Closed 已完成 | 1.69 | 0% | ASTRI 應科院 | Nil |
| 36 | Mobile Peer Group Service Platform - Peer Clustering as a Technology Enabler 移動節點組服務平台之一促能技術 - 節點聚類 | 6 | Project Closed 已完成 | 1.98 | 0% | ASTRI 應科院 | Nil |
| 37 | Feasibility Study of Embedded Personal Miniature Projection Module 嵌入式個人用微型投影模組之可行性研究 | 6 | Project Closed 已完成 | 1.99 | 0% | ASTRI 應科院 | Nil |
| 38 | Motion Sensor MMI (Man Machine Interface) Technology 基于動作感應器的人机界面技術 | 6 | Project Closed 已完成 | 1.88 | 0% | ASTRI 應科院 | Nil |
| 39 | ESD simulation-design methodology for Deep Submicon ICs 深亞微米積體電路 ESD 仿真設計方法 | 6 | Project Closed 已完成 | 1.89 | 0% | ASTRI 應科院 | Nil |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分 比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|---|--------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 40 | High Efficiency III-V Compounds on Si(111) Multi-junction Solar Cells (for Concentrating Photovoltaics) 高效率三五族化合物半導體(Si(111) 硅襯底)多結太陽能電池(聚光光伏) | 6 | Project Closed 已完成 | 1.82 | 0% | ASTRI 應科院 CUHK 香港中文大學 HKUST 香港科技大學 | Nil |
| 41 | AVS Video Encoder on PC-driven and FPGA Building Blocks evolving to Tensilica Core Development Platform 基于 PC 和 FPGA 開發平台及 Tensilica Core 开发平台的 AVS 视频編碼器 | 6 | Project Closed 已完成 | 1.87 | 0% | ASTRI 應科院 CityU 香港城市大學 | Nil |
| 42 | Broadcast Encryption for P2P Streaming 用於點對點 IP 流媒體的廣播加密方案 | 6 | Project Closed 已完成 | 1.50 | 0% | ASTRI 應科院 | Nil |
| 43 | Cost-Effective and Reliable Packaging Technologies for Wearable Healthcare Electronics 具經濟效益及可靠的穿戴式保健電子封裝技術平台 | 6 | Project Closed 已完成 | 1.99 | 0% | ASTRI 應科院 CUHK 香港中文大學 | Nil |
| 44 | Feasibility Study of MOEMS Design Platform 微光機電系統設計平臺可行性研究 | 6 | Project Closed 已完成 | 1.98 | 0% | ASTRI 應科院 Hong Kong Science and Technology Parks Corporation 香港科技園公司 HKUST R&D Corporation Limited 香港科大研究開發有限公司 | Nil |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|---|-------------------------------------|-----------------------|--|--|---|--------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 45 | Second Generation Double-Data-Rate (DDR2) Digital Controller and PHY 第二代加倍數碼數字控制器及其物理層 | 6 | Project Closed 已完成 | 1.96 | 0% | ASTRI 應科院 | Nil |
| 46 | Ultra Low Energy Analog-to-Digital Converter Technologies for Wireless Sensors 可應用於無線傳感器的超低功耗模數轉換器 | 6 | Project Closed 已完成 | 1.89 | 0% | ASTRI 應科院 HKUST 香港科技大學 | Nil |
| 47 | Wafer Level Chip Scale Camera Actuator 晶圓級相機傳動器 | 6 | Project Closed 已完成 | 1.86 | 0% | ASTRI 應科院 University of Science and Technology of China 中國科學技術大學 Institute of Physics, Chinese Academy of Sciences 中國科學院物理研究所 | Nil |
| 48 | Feasibility Study of An Amblyopia Treatment System (ATS) : Training Equipment and Procedure 弱視治療系統：訓練儀器及程序的可行性研究 | 6 | Project Closed 已完成 | 2.00 | 0% | ASTRI 應科院 | Nil |
| 49 | Intelligent Sound Detection and Scene Analysis Algorithm Research 智能声音检测和场景分析算法研究 | 6 | Project Closed 已完成 | 1.55 | 0% | ASTRI 應科院 CityU 香港城市大學 CUHK 香港中文大學 | Nil |
| 50 | Energy Harvesting Solutions for Electronic Products 適用於電子產品的能源採集方案 | 6 | Project Closed 已完成 | 1.95 | 0% | ASTRI 應科院 PolyU 香港理工大學 | Nil |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分 比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|--|--------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 51 | Ubiquitous Sensor Network Management Platform 無所不在的感測網絡管理平台 | 6 | Project Closed 已完成 | 1.82 | 0% | ASTRI 應科院 CUHK 香港中文大 學 HKUST 香港科技大學 | Nil |
| 52 | Intelligent Wireless CMOS Based Light Sensing Module 智能無線 CMOS 光感應模塊 | 6 | Project Closed 已完成 | 1.88 | 0% | ASTRI 應科院 | Nil |
| 53 | Feasibility of Piezoelectric MRE Driver System 用壓電驅動器的磁力共振彈性成像系 統之可行性 | 6 | Project Closed 已完成 | 1.99 | 0% | ASTRI 應科院 HKU 香港大學 | Nil |
| 54 | Hardware Optimized Motion-frame Interpolatin (HOMI) 硬件優化的運動畫面插值 | 6 | Project Closed 已完成 | 1.89 | 0% | ASTRI 應科院 HKUST 香港科技大 學 | Nil |
| 55 | LED Lamps Trial Deployment and Research Performance Evaluation in HKSTP | 12 | On-going 進行 中 | 1.92 | 0% | ASTRI 應科院 CityU 香港城市大 學 Hong Kong Science and Technology Parks Corporation 香港 科技園公司 | Nil |
| 56 | Core-IP R&D for LTE Plus 下一代流動通信標準 LTE Plus 的核 心技術研究 | 6 | Project Closed 已完成 | 1.91 | 0% | ASTRI 應科院 HKUST 香港科技大 學 | Nil |
| 57 | MEMS Ink Jet Head for Wide-Format Printing 應用於寬幅列印之微機電系統噴墨頭 | 6 | Project Closed 已完成 | 1.97 | 0% | ASTRI 應科院 | Nil |
| 58 | Integrated AMS Driver Platform for Pico Projectors 微型投影機混合信號集成電路驅平臺 | 6 | Project Closed 已完成 | 1.88 | 0% | ASTRI 應科院 | Nil |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|--|--------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 59 | Mobile Social Networking Framework - Searching in a Personal Content Web 移動社交網絡框架 - 搜尋個人內容網絡 | 4.5 | Project Closed 已完成 | 1.14 | 0% | ASTRI 應科院 | Nil |
| 60 | Therapeutic Temperature Regulation Mattress (TTRM) 溫度調節治療床墊 | 4 | Project Closed 已完成 | 1.00 | 0% | ASTRI 應科院 | Nil |
| 61 | Water Purification System Management Platform 純水系統管理平台 | 6 | Project Closed 已完成 | 1.81 | 0% | ASTRI 應科院 | Nil |
| 62 | 3D Integrated Concentrating Photovoltaic Module (CPV module) 三维集成的聚光式光电伏模组 (CPV 模组) | 6 | Project Closed 已完成 | 1.95 | 0% | ASTRI 應科院 Fudan University 復 旦大學 | Nil |
| 63 | Computation and Information Management with Green Multi- Computer Systems 以低能耗高速計算機群技術增進計算 及資訊管理 | 9 | On-going 進行 中 | 2.00 | 0% | ASTRI 應科院 Hong Kong Observatory 香港天文台 | Nil |
| 64 | E-Book for Edcation in Hong Kong 適當於香港教育的電子書 | 6 | On-going 進行 中 | 1.98 | 0% | ASTRI 應科院 CUHK 香港中文大 學 PolyU 香港理工大學 | Nil |
| 65 | Core-IP R&D for 802.16m 802.16m 標準核心技術研發 | 6 | On-going 進行 中 | 1.95 | 0% | ASTRI 應科院 HKUST 香港科技大 學 | Nil |
| 66 | Feasibility Study of Brain-Vision Training Device (BTD) 視覺通路訓練儀器之可行性研究 | 6 | On-going 進行 中 | 1.99 | 0% | ASTRI 應科院 | Nil |
| 67 | Feasibility Study of MRI Incubator (MRII) | 6 | On-going 進行 中 | 1.95 | 0% | ASTRI 應科院 | Nil |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|------------------------------------|---|-------------------------------------|--------------------|--|--|---|--------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | 磁共振成像培养箱的可行性研究 | | | | | | |
| 68 | Power Qulaity Measurement & Analysis in Smart Meters 智能電錶的電能質量測量及分析 | 6 | On-going 進行中 | 2.00 | 0% | ASTRI 應科院 CityU 香港城市大學 | Nil |
| 69 | Database for Word Spotting Research 用於關鍵字識別研究的資料庫 | 6 | On-going 進行中 | 1.23 | 0% | ASTRI 應科院 ShenZhen University 深圳大学 CUHK 香港中文大學 | Nil |
| 70 | Optical Signal Encoded LED Illumination System 具備訊號傳輸功能的 LED 照明系統 | 6 | On-going 進行中 | 2.00 | 0% | ASTRI 應科院 | Nil |
| 71 | AC-lined LED Driver Lighting Solutions 交流電發光二極管照明电源控制器 | 6 | On-going 進行中 | 1.99 | 0% | ASTRI 應科院 | Nil |
| 72 | High Speed Integrated Circuits for Optical Fiber Communication 光纖通訊適用的高速集成電路 | 6 | On-going 進行中 | 2.00 | 0% | ASTRI 應科院 | Nil |
| 73 | Evaluation Platform for DTMB Deployment 中國地面數位電視部署：傳輸網路覆蓋評估平臺 | 6 | On-going 進行中 | 2.00 | 0% | ASTRI 應科院 | Nil |
| Subtotal 小計 | | | | 135.66 | | | |
| Contract Service 合約服務 ² | | | | | | | |
| 1 | to provide service on UWB product samples to MII for testing UWB 測試服務 | 1 | Project Closed 已完成 | 0.09 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 2 | Antenna design 天線設計 | 4 | Project Closed 已完成 | 0.07 | 100% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|---|-------------------------------------|-----------------------|--|--|------------------------------------|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 3 | Extension of Training support (CWMS) 延長培訓支持(CWMS) | 12 | Project Closed 已完成 | 0.16 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 4 | To design a high-end Digital Pre-distortion (DPD) platform board. 高端 數字預失真平台設計 | 6 | Project Closed 已完成 | 0.15 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 5 | To design a high-end Digital Pre-distortion (DPD) platform board. 高端 數字預失真平台設計 | 4 | Project Closed 已完成 | 0.12 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 6 | Contract Research: Wireless Video Adapter – a new product for DVD player and TV connection for the wireless and mobile entertainment market UWB 無線影像連接器 | 12 | Project Closed 已完成 | 0.78 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 7 | Custermorization of MIMO USB dongle for the client 為客戶設計多天線 USB 加密狗 | 6 | Project Closed 已完成 | 0.08 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 8 | Work Order to setup RF Station; perform optimisation, and preparing report 射頻干擾設備設計 | 3.75 | Project Closed 已完成 | 0.13 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 9 | To provide a consultancy service on UWB strategy and product development 超寬帶戰略和產品開發的諮詢服務 | 2.5 | Project Closed 已完成 | 0.10 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 10 | To provide antenna measurement service (1 day) 天線輻射測量 | 6 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 11 | To provide consultancy services on CMOS PA backend design to CityU 為城市大學提供 CMOS PA 後端設計的諮詢服務 | 7 | Project Closed 已完成 | 0.10 | 100% | ASTRI 應科院 | A local university 一家本地大學 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|---|-------------------------------------|-----------------------|--|--|------------------------------------|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 12 | To provide antenna measurement (1 day) and technical consultation service (1 day) 無線裝置輻射定制設計及測量 | 6 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 13 | To provide antenna measurement and technical consultation service (1 day) 無線裝置輻射定制設計及測量 | 6 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 14 | To provide antenna measurement and technical consultation service (2.5 days) 無線裝置輻射定制設計及測量 | 6 | Project Closed 已完成 | 0.04 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 15 | To provide antenna measurement and technical consultation service (2 days) 無線裝置輻射定制設計及測量 | 6 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 16 | To provide antenna measurement and technical consultation service (1 day) 無線裝置輻射定制設計及測量 | 6 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 17 | To provide antenna measurement and technical consultation service (2.5 day) 無線裝置輻射定制設計及測量 | 6 | Project Closed 已完成 | 0.04 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 18 | To provide antenna measurement and technical consultation service (2 days) 無線裝置輻射定制設計及測量 | 6 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 19 | To provide antenna measurement and technical consultation service (2 days) 無線裝置輻射定制設計及測量 | 6 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 20 | To provide antenna measurement and technical consultation service (2 days) 無線裝置輻射定制設計及測量 | 6 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 21 | To provide antenna measurement and technical consultation service (2 days) | 6 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分 比 | Participating Organisation 參與機構 | |
|-----------|---|-------------------------------------|-----------------------|--|--|------------------------------------|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | 無線裝置輻射定制設計及測量 | | | | | | |
| 22 | To provide antenna measurement and technical consultation service (2 days) 無線裝置輻射定制設計及測量 | 6 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 23 | To provide antenna measurement and technical consultation service (2 days) 無線裝置輻射定制設計及測量 | 6 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 24 | To provide antenna measurement and technical consultation service (2 days) 無線裝置輻射定制設計及測量 | 6 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 25 | To provide antenna measurement and technical consultation service (1 days) 無線裝置輻射定制設計及測量 | 6 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 26 | To provide antenna measurement and technical consultation service (2 days and 2 hours) 無線裝置輻射定制設計及測量 | 6 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 27 | To provide antenna measurement and technical consultation service (half day) 無線裝置輻射定制設計及測量 | 6 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 28 | To provide antenna measurement and technical consultation service (half day) 無線裝置輻射定制設計及測量 | 6 | On-going 進行中 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 29 | To provide antenna measurement and technical consultation service (3 days) 無線裝置輻射定制設計及測量 | 6 | On-going 進行中 | 0.04 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 30 | To provide antenna measurement service (1 day) 無線裝置輻射定制設計及測量 | 6 | On-going 進行中 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|------------------------------------|--------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 31 | Antenna design and measurement service 天線設計及輻射測量 | 12 | Project Closed 已完成 | 0.15 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 32 | To provide two designs of LMR Multiband Antenna 天線設計 | 6 | Project Closed 已完成 | 0.05 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 33 | Collaborate with HKPC to provide training courses 與香港生產力促進局合作，提供培訓課程 | 12 | Project Closed 已完成 | 0.02 | 100% | ASTRI 應科院 | A local organization 一家本地機構 |
| 34 | To provide a training on wireless technologies. 提供無線技術培訓 | 0.5 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A local organization 一家本地機構 |
| 35 | Technical consultancy on wireless module design and a report on system performnace testing and verification. 無線模塊設計和測試 | 6 | Project Closed 已完成 | 0.12 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 36 | IGRS-UWB Adapter Technology 中國閃聯 UWB 轉接器 | 9 | Project Closed 已完成 | 1.08 | 100% | ASTRI 應科院 | A PRC organization 一家內地機構 |
| 37 | Work order in Antenna pattern measurement 無線裝置輻射定制設計及測量 | 1 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 38 | Work order in Antenna pattern measurement service and one-day technical consultation 無線裝置輻射定制設計及測量 | 1 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 39 | Work order in 3-day Antenna pattern measurement service 無線裝置輻射定制設計及測量 | 1 | Project Closed 已完成 | 0.02 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 40 | Work order in Antenna pattern measurement service (2-day work) 無線裝置輻射定制設計及測量 | 1 | Project Closed 已完成 | 0.02 | 100% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|------------------------------------|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 41 | Work order in Antenna pattern measurement service (5-day work) 無線裝置輻射定制設計及測量 | 1 | Project Closed 已完成 | 0.04 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 42 | Work order in Antenna pattern measurement service (5-day work) 無線裝置輻射定制設計及測量 | 1 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 43 | Work order in Antenna pattern measurement service (20-day work) 無線裝置輻射定制設計及測量 | 4 | Project Closed 已完成 | 0.14 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 44 | Work order in Antenna pattern measurement service (20-day work) 無線裝置輻射定制設計及測量 | 4.5 | Project Closed 已完成 | 0.14 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 45 | To design a Digital Pre-Distortion (DPD) of digital repeater hardware. 數字中繼器的數字預失真設計 | 6 | On-going 進行中 | 0.16 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 46 | MB86391 Evaluation Board MB86391 評估板 | 0.5 | Project Closed 已完成 | 0.00 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 47 | To provide two-day antenna design, measurement and consultancy service 天線輻射測量 | 6 | On-going 進行中 | 0.02 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 48 | To implement TD-LTE femto BTS reference design based on PicoChip's hardware platform, and license for 20 years 在 PicoChip 的硬件平台上實現 TD-LTE 家庭基站參考設計 | 240 | On-going 進行中 | 1.80 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 49 | To implement FDD-LTE femto BTS reference design based on PicoChip's hardware platform, and license for 20 years. 在 PicoChip 的硬件平台上實現 | 240 | On-going 進行中 | 1.00 | 100% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|---|-------------------------------------|-----------------------|--|--|------------------------------------|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | FDD-LTE 家庭基站參考設計 | | | | | | |
| 50 | 1. Simulation platform of customized smart antenna algorithm 2. customized smart antenna algorithm in FPGA binary software format 3. Test report and technical manual 定制智能天線算法及仿真平台設計 | 6 | On-going 進行中 | 0.25 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 51 | To make a TD-LTE emulator for inter-operability functionality test. 為實現互操作性功能測試而設計的 TD - LTE 的模擬器 | 6 | On-going 進行中 | 0.20 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 52 | Contract service: Voice recorder reference platform 合同服務：語音記錄器參考平台 | 5.5 | Project Closed 已完成 | 0.24 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 53 | To develop a wireless UWB MAC Protocol development and test tools platform for the University and grant a licence to the University 無線 UWB MAC 開發及測試平台 | 6 | Project Closed 已完成 | 0.78 | 100% | ASTRI 應科院 | A PRC university 一家內地大學 |
| 54 | Contract Research: To provide consultation for Smart antenna and miniature antenna design 智能天線 開發及設計 | 1 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 55 | MPLS NMS Demo Software MPLS NMS 演示軟件 | 6 | On-going 進行中 | 0.13 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 56 | Consultancy services. 諮詢服務 | 16 | Project Closed 已完成 | 0.25 | 100% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|------------------------------------|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 57 | Provide consultancy services on thermal management, and fabricate prototypes 提供顧問服務的散熱管理，並製作原型 | 15 | Project Closed 已完成 | 0.38 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 58 | Work order in Antenna pattern measurement 天線輻射測量 | 1 | Project Closed 已完成 | 0.00 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 59 | Work order in Antenna pattern measurement 天線輻射測量 | 1 | Project Closed 已完成 | 0.00 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 60 | Work order in Antenna pattern measurement 天線輻射測量 | 1 | Project Closed 已完成 | 0.00 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 61 | Work order in Antenna pattern measurement 天線輻射測量 | 1 | Project Closed 已完成 | 0.00 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 62 | Work order in Antenna pattern measurement 天線輻射測量 | 1 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 63 | Work order in Antenna pattern measurement 天線輻射測量 | 1 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 64 | Work order in Antenna pattern measurement 天線輻射測量 | 1 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 65 | Work order in Antenna pattern measurement (in Aug) 天線輻射測量 | 1 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 66 | Work order in Antenna pattern measurement (in Sep) 天線輻射測量 | 1 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 67 | To provide antenna measurement service (half day) 天線輻射測量 | 6 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 68 | To provide antenna measurement service (half day) 天線輻射測量 | 6 | On-going 進行中 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 69 | Antenna Pattern Measurement (one-day work) 天線輻射測量 | 1 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|---|-------------------------------------|-----------------------|--|--|------------------------------------|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 70 | Contract service to provide a bridge solution between UWB MII and 1394 interface with UWB module UWB 無線 1394, MII 轉接器 | 12 | Project Closed 已完成 | 0.75 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 71 | Work order of an indoor antenna design at 2.4GHz 天線設計 | 1.5 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 72 | IP Phone IP 电话开发项目 | 1 | Project Closed 已完成 | 0.08 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 73 | IP phone service IP 电话开发项目 | 1 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 74 | WiFi phone reference design WiFi 电话开发项目 | 0.25 | Project Closed 已完成 | 0.10 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 75 | WiFi phone samples WiFi 电话机 | 0.25 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 76 | WiFi phone committed royalty WiFi 电话 royalty | 24 | Project Closed 已完成 | 0.78 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 77 | Chiming BEDRM Project 持名广播加密 DRM 项目 | 6 | Project Closed 已完成 | 0.20 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 78 | Digisat Video Streaming and Access System Project Digisat 视频流媒体接入传输系统项目 | 4 | Project Closed 已完成 | 0.12 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 79 | Dingli Multi-Channel Voice Record/playback module project 鼎利多通道语音录/播模块项目 | 3 | Project Closed 已完成 | 0.19 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 80 | Social Networking tablet 社會網絡平板电脑 | 24 | On-going 進行中 | 0.55 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 81 | WiFi phone customization WiFi 电话开发项目 | 3 | Project Closed 已完成 | 0.08 | 100% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|---|-------------------------------------|-----------------------|--|--|------------------------------------|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 82 | AVS Format Video Decoder Design Training AVS 格式视频解码器设计培训 | 12 | Project Closed 已完成 | 0.78 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 83 | Snaap! Revamp 翻新,改進 Snaap!互聯網服務外觀 | 12 | On-going 進行中 | 0.71 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 84 | IPMA API development project IPMA 借口开发项目 | 12 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 85 | Auto focus camera capability implemented on DM320 於 DM320 晶片實現具備自動對焦功能的相機 | 24 | Project Closed 已完成 | 0.57 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 86 | IP camera units 網絡相機 | 2 | Project Closed 已完成 | 0.11 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 87 | KCS streamer HMC Prototype over Mobilygen MG1264 Project KCS 基于 Mobilygen 1264 的 HMC 项目 | 1 | Project Closed 已完成 | 0.06 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 88 | KCS Demo Setup Project KCS 现实搭建项目 | 2 | Project Closed 已完成 | 0.02 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 89 | KCS HMC server enhancement Project KCS HMC 服务器改进项目 | 2 | Project Closed 已完成 | 0.08 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 90 | KCS Digizon Platform Enhancement Service Project KCS Digizon 平台改进服务项目 | 6 | Project Closed 已完成 | 0.20 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 91 | KCS iDNS Server Enhancement Project KCS iDNS 服务器提升项目 | 6 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 92 | Kingstate RTS Recorder Software Customization Project Kingstate RTS 录制软件开发项目 | 1 | Project Closed 已完成 | 0.05 | 100% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|------------------------------------|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 93 | IP Phone customization IP 电话开发项目 | 3 | Project Closed 已完成 | 0.16 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 94 | IP Phone customization IP 电话开发项目 | 1.5 | Project Closed 已完成 | 0.27 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 95 | IP Phone customization IP 电话开发项目 | 40 | Project Closed 已完成 | 0.23 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 96 | IP Phone customization IP 电话开发项目 | 12 | Project Closed 已完成 | 0.12 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 97 | IP Phone customization IP 电话开发项目 | 1 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 98 | LcT Multimedia communication centre (MCC) PCB Project LcT 多媒体通信中心系统 PCB 设计项目 | 12 | Project Closed 已完成 | 0.20 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 99 | LcT "4-wire to I2C" module development project LcT 4 线到 I2C 模块开发项目 | 3 | Project Closed 已完成 | 0.08 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 100 | MID reference design and committed royalty MID 开发项目, royalty | 36 | On-going 進行中 | 0.51 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 101 | Optek Audio Codec with Post Processing 歐思多媒體晶片開發 (OMM-SoC) 带音效后处理功能的音频编解码器芯片 | 6 | Project Closed 已完成 | 0.05 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 102 | WebSuite for Chaat Chaat 互聯網服務应用程序系統軟件 | 12 | Project Closed 已完成 | 5.77 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 103 | VoIP on PXA310 using Maemo platform 基於 Meamo 平台的 PXA310 晶片網絡電話 | 24 | On-going 進行中 | 0.43 | 100% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|---|-------------------------------------|-----------------------|--|--|------------------------------------|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 104 | Trans-coder and handset streaming player 轉碼器和手機流媒體播放器 | 12 | On-going 進行中 | 0.10 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 105 | H.264 codec on Siemens platform 西门子平台 H.264 编解码器项目 | 1 | Project Closed 已完成 | 0.08 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 106 | Porting S&T MHEG5 engine to HD STB MHEG5 在高清机顶盒的实现 | 3 | Project Closed 已完成 | 0.25 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 107 | Android OS embedded platform Android 嵌入式系統平臺 | 24 | On-going 進行中 | 1.80 | 100% | ASTRI 應科院 | A local university 一家本地大學 |
| 108 | Weeksung H.264 video codec multi-slice project Weeksung H.264 视频编解码器多分片功能开发项目 | 2 | Project Closed 已完成 | 0.16 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 109 | Video de-noising algorithm porting 視頻降噪算法移植 | 4 | On-going 進行中 | 0.24 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 110 | 8 bit MCU platform technology for design of noise cancellation IC 應用於消噪芯片之八位微控器設計平台 | 36 | On-going 進行中 | 0.30 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 111 | 8 bit MCU platform technology for design of wireless Audio transceiver IC 應用於無線音頻收發芯片之八位微控器設計平台 | 36 | On-going 進行中 | 0.40 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 112 | ESD protection solutions for 0.35 um CMOS logic and 0.5 um HV BCD process 0.35 微米 CMOS 及 0.5 微米高壓 BCD 工藝 ESD 保護解決方案 | 13 | On-going 進行中 | 0.60 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 113 | Develop Nand Flash Controller based on Intel 4t-8051 microprocessor 基於 8051 微控器之閃存控制器 | 5 | On-going 進行中 | 0.10 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 114 | Physical Implamentation of LED Backlight HDTV Video Processor IC | 0.5 | Project Closed 已完成 | 0.15 | 100% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分 比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|------------------------------------|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | LED 背光高清電視視頻處理器之物理實現 | | | | | | |
| 115 | Physical Implamentation of a 8051-Based Video Processor 基於 8051 視頻處理器之物理實現 | 3 | Project Closed 已完成 | 0.12 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 116 | SSD Controller Development Platform 固態硬盤控制器開發平台 | 12 | On-going 進行中 | 0.40 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 117 | Development of 8-bit MCU Platform 八位微控器設計平台之開發 | 12 | Project Closed 已完成 | 0.29 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 118 | ESD protection solutions and device model parameter extraction ESD 保護解決方案與器件模型參數提取 | 12 | Project Closed 已完成 | 0.50 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 119 | Customization of IP qualification software for soft IP Soft IP 質量驗證軟件之客制化服務 | 6 | On-going 進行中 | 0.18 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 120 | Development of structured ASIC platform 架構 ASIC 平臺的發展 | 12 | Project Closed 已完成 | 0.53 | 100% | ASTRI 應科院 | A local university 一家本地大學 |
| 121 | Design and Implementation services on a system-on-chip 片上系統器件的設計和實現 | 12 | Project Closed 已完成 | 1.00 | 100% | ASTRI 應科院 | A local university 一家本地大學 |
| 122 | Development kit in a structured ASIC development platform 架構 ASIC 研發平臺的發展套件 | 6 | On-going 進行中 | 0.47 | 100% | ASTRI 應科院 | A local university 一家本地大學 |
| 123 | AS3406 Step Down Converter AS3406 直流直流降壓器 | 4 | Project Closed 已完成 | 0.22 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 124 | 46" HD active-dynamic LED backlight control module 應用於 46" 高清電視之動態 LED 背光控制組件 | 10 | Project Closed 已完成 | 1.00 | 100% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|---|-------------------------------------|-----------------------|--|--|------------------------------------|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 125 | SiP-based DAB module design & prototype 系統級構裝數碼音頻廣播模塊設計及原型樣品 | 4 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 126 | Manufacturability study, sourcing, assembly and characterization of power amplifier board/module. 功率放大器之可製造性研究,採購,裝配及測試 | 2.5 | Project Closed 已完成 | 0.09 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 127 | Substrate layout design 基板線路設計 | 0.5 | Project Closed 已完成 | 0.04 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 128 | Package design for optical transmitter & receiver and DGP die 基於 DGP 晶片光學發射器與接收器構裝設計 | 3 | Project Closed 已完成 | 0.18 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 129 | REBL module structural design including manufacturing process flow, ceramic substrate and PCB board REBL 模塊結構設計, 包括生產流程、陶瓷與有機基板設計 | 3 | Project Closed 已完成 | 0.23 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 130 | Quick Reliability Test 快速可靠性測試 | 0.5 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 131 | Quick Reliability Test 快速可靠性測試 | 0.5 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 132 | Temperature cycling and reflow profiling 溫度循環測試及回流焊溫度曲線 | 0.5 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 133 | Reliability Test 可靠性測試 | 0.5 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 134 | LED Indoor Lighting Application Consultation LED 室內照明應用諮詢 | 1 | Project Closed 已完成 | 0.00 | 100% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|------------------------------------|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 135 | Smart Camera Development 智能相機開發 | 120 | On-going 進行中 | 0.30 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 136 | 17 pieces of Smart Camera Prototypes for testing 17 組用於測試的智能相機樣板 | 1 | Project Closed 已完成 | 0.07 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 137 | Smart Camera II Development 智能相機 II 開發 | 120 | On-going 進行中 | 0.35 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 138 | 4 pieces of Smart Camera Prototypes for testing 4 組用於測試的智能相機樣板 | 1 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 139 | 25 pieces of Smart Camera prototypes for API Qualification 25 組用於品質驗證的智能相機樣板 | 5 | Project Closed 已完成 | 0.09 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 140 | LED backlight for LCD TV LED 背光在 LCD TV 上的應用 | 60 | On-going 進行中 | 0.30 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 141 | Si Wafer Fabrication 硅晶圓組裝 | 1 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 142 | fab 4"/200um ceramic submount with TiW/Au coating 4"/200μm、TiW/Au 陶瓷熱沉 (submount) 組裝 | 0.5 | Project Closed 已完成 | 0.04 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 143 | Assembly of VCSEL chips on TO-headers VCSEL-To-headers 裝配 | 4 | Project Closed 已完成 | 0.05 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 144 | Design Tire Pressure Monitoring System 胎壓監測系統參考設計開發 | 12 | On-going 進行中 | 0.10 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 145 | LED Indoor Lighting Application LED 室內照明應用 | 6 | On-going 進行中 | 0.15 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 146 | LED Outdoor Lighting Application Consultation LED 戶外照明應用諮詢 | 3 | Project Closed 已完成 | 0.05 | 100% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|------------------------------------|--------------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 147 | LED Automotive Lighting Application Consultation LED 汽車照明應用諮詢 | 4 | Project Closed 已完成 | 0.18 | 100% | ASTRI 應科院 | A local organization 一家本地機構 |
| 148 | LED Automotive Lighting Application Consultation LED 汽車照明應用諮詢 | 4 | Project Closed 已完成 | 0.18 | 100% | ASTRI 應科院 | A local organization 一家本地機構 |
| 149 | Wire-bonding design layout and assembly process for 80 pieces of dies 焊線設計及 80 片晶片構裝 | 6 | On-going 進行中 | 0.03 | 100% | ASTRI 應科院 | A local organization 一家本地機構 |
| 150 | To develop and demonstrate cost-effective chip-to-wafer (C2W) bonding technologies for TSV based 3D packaging applications 三維構裝應用之低成本晶片與晶圓鍵合技術開發 | 27 | On-going 進行中 | 0.57 | 100% | ASTRI 應科院 | A PRC university 一家內地大學 |
| 151 | Japan market evaluation on LCD TV with LED backlight 對應用 LED 背光的 LCD TV 在日本市場研究 | 1 | Project Closed 已完成 | 0.10 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 152 | Contract services to provide Silicon-Via-Interconnect Technolgy 閃存晶片上的硅通孔互聯技術開發 | 12 | Project Closed 已完成 | 0.23 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 153 | Providing service on the process of Through-Silicon-Via Through-Silicon-Via (TSV) Process Development for HUST MEMS Application 1 矽通孔互聯在硅微感測器襯底上的應用 1 | 6 | On-going 進行中 | 0.06 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 154 | Providing service on the process of Through-Silicon-Via Through-Silicon-Via (TSV) Process Development for HUST MEMS Application 2 | 6 | On-going 進行中 | 0.09 | 100% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|--|-------------------------------------|-----------------------|--|--|------------------------------------|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| | 矽通孔互聯在硅微感測器襯底上的應用 2 | | | | | | |
| 155 | LED Indoor Lighting Application Consultation LED 室內照明應用諮詢 | 1 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 156 | LED Indoor Lighting Application Consultation LED 室內照明應用諮詢 | 6 | On-going 進行中 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 157 | LED Indoor Lighting Application Consultation LED 室內照明應用諮詢 | 1 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 158 | LED Indoor Lighting Application Consultation LED 室內照明應用諮詢 | 1 | Project Closed 已完成 | 0.00 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 159 | Power IC packaging design and analysis 功率晶片之構裝設計及分析 | 3 | Project Closed 已完成 | 0.15 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 160 | LED Indoor Lighting Application Consultation LED 室內照明應用諮詢 | 3 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 161 | LED Indoor Lighting Application Consultation LED 室內照明應用諮詢 | 0.5 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 162 | Analysis of Hilti Distance Measuring Device 喜利得距離測量設備分析 | 1.5 | Project Closed 已完成 | 0.12 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 163 | DIP-8 Packing Thermal Simulation, IC-package co-design consultancy, design and prototype manufacturing DIP-8 構裝熱管理模擬, IC 構裝協同設計顧問, 原型產品設計與開發 | 6 | Project Closed 已完成 | 0.03 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 164 | Laminate substrate based SiP 有機機板之系統級構裝 | 18 | Project Closed 已完成 | 0.78 | 100% | ASTRI 應科院 | A private company 一家私營公司 |

| No. 編號 | Project Title 項目說明 | Duration (Months) 項目需時 (月) | Status 現狀 | Approved Project Cost 開支總額 (HKD'M | Percentage of industry contribution 業界贊助百分比 | Participating Organisation 參與機構 | |
|-----------|---|-------------------------------------|-----------------------|--|--|------------------------------------|-----------------------------|
| | | | | | | R&D Organisation 研發機構 | Industry Partner 業界夥伴 |
| 165 | Status, Market & Trends of Integrated Passive Devices (IPDs) in RF-related Applications 供射頻應用之內藏被動器件 (IPD) 現況、市場與趨勢 | 0.25 | Project Closed 已完成 | 0.10 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 166 | Mini LCoS projector 微型 LCoS 投影機 | 60 | On-going 進行中 | 1.20 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 167 | Silicon-substrate LED for the backlight of large size LCD TV 硅基板封装 LED 在大尺寸液晶电视背光中的应用及产业化 | 48 | On-going 進行中 | 0.40 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 168 | High brightness public information display using LED backlight 採用 LED 背光的高亮度公共顯示屏 | 14 | Project Closed 已完成 | 1.50 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 169 | Assembly Design Rules 裝配設計守則 | 4 | Project Closed 已完成 | 0.09 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 170 | LED Indoor Lighting Application Consultation LED 室內照明應用諮詢 | 4 | Project Closed 已完成 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 171 | LED Indoor Lighting Application Consultation LED 室內照明應用諮詢 | 4 | On-going 進行中 | 0.01 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 172 | Large size LCD backlight 大尺寸 LCD 背光源 | 15 | Project Closed 已完成 | 0.88 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 173 | Product-oriented advanced IC packaging technologies and market analysis 產品主導的先進電路構裝技術與市場分析 | 1.5 | Project Closed 已完成 | 0.02 | 100% | ASTRI 應科院 | A private company 一家私營公司 |
| 174 | Report of Mechanical Analysis of Leadframe Performance during Molding 評估模注塑封時引線框性能的機械模擬報告 | 2.5 | Project Closed 已完成 | 0.02 | 100% | ASTRI 應科院 | A private company 一家私營公司 |

