



Innovation and Technology Commission

Innovation and Technology Fund Guangdong-Hong Kong Technology Cooperation Funding Scheme

Guide to Filling in the Application Form

This Guide explains how to complete the application form of the Guangdong-Hong Kong Technology Cooperation Funding Scheme (TCFS) under the Innovation and Technology Fund (ITF).

2. Details of the ITF and the TCFS are available at <http://www.itf.gov.hk>. Details on the categories of projects under TCFS and the themes/topics for the 2019 TCFS to be launched on 29 July 2019 are at the Appendix. In addition to the information in this Guide and the application form, the Innovation and Technology Commission (ITC) may issue supplementary information and guidelines from time to time. Please check the above website to see if there is any update before submission.

3. ***The application period of TCFS projects funded by ITF will be from 29 July 2019 to 13 September 2019. Please note that the application deadlines set by Guangdong authorities on Category C(1) and Shenzhen authorities on Category C(2) both fall on 13 September 2019.***

4. If you have any question on this Guide and the application form, please contact -

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ITF Secretariat
Innovation and Technology Commission
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General

1. *The TCFS aims to enhance the level of collaboration on research and development (R&D) between organisations in Hong Kong and Guangdong/Shenzhen. Details on the categories of projects under TCFS and the themes/topics for the 2019 TCFS are at the Appendix.*
2. The TCFS provides funding support for two major types of applied R&D projects -

(a) Platform Projects

All platform projects require industry sponsorship from at least one private company to cover at least 10% of the total project cost within the project period. The company should not be related to the lead applicant (except where the lead applicant is a local university) in terms of ownership or management. For platform projects undertaken by local universities, sponsorship from a related company may be accepted subject to the conditions set out under Part B.I(D)1. The sponsorship can either be in cash or in-kind or a combination of both. However, to encourage more projects in the public sector, ITC may consider waiving the industry sponsorship requirement for projects initiated by bureaux/departments of the Government of the Hong Kong Special Administrative Region (the Government) and statutory bodies. Please refer to the details under Part B.I(D)5.

As a general rule, intellectual property (IP) rights generated from the project should be vested with the lead applicant which can be an R&D Centre¹ or a designated local public research institute². However, in the case of an R&D Centre project in which the majority of the R&D work is carried out by a local university, the R&D Centre has the flexibility to negotiate with the university and decide on the appropriate IP ownership and commercialisation arrangements.

¹ R&D Centres refer to –

- (a) Automotive Parts and Accessory Systems R&D Centre (www.apas.hk);
- (b) Hong Kong Research Institute of Textiles and Apparel (www.hkrita.com);
- (c) Hong Kong Applied Science and Technology Research Institute, designated as the R&D Centre for Information and Communications Technologies (www.astri.org);
- (d) Logistics and Supply Chain MultiTech R&D Centre (www.lscm.hk); and
- (e) Nano and Advanced Materials Institute (www.nami.org.hk).

² Designated local public research institute refers to local universities (including all University Grants Committee (UGC)-funded institutions), self-financing degree-awarding institutions registered under the Post-Secondary Colleges Ordinance (Cap. 320), the Hong Kong Productivity Council, the Vocational Training Council, the Clothing Industry Training Authority and the Hong Kong Institute of Biotechnology.

(b) Collaborative Projects

For collaborative projects, the industry co-applicant should contribute, in the form of industry sponsorship (excluding other sources of financial contribution), at least 50% of the total project cost within the project period. For projects undertaken by an R&D Centre, exceptional approval needs to be sought from ITC if the contribution from the industry co-applicant amounts to 30%-50% of the total project cost.

The industry co-applicant should generally not be owned more than 50% by the lead applicant except for project where the lead applicant is a local university. Also, the directors/shareholders/management team members/staff of the industry co-applicant should neither be employed as the project team members nor serve as the project steering committee members representing the lead applicant.

The IP rights generated may be owned by the industry co-applicant if it has contributed, in the form of industry sponsorship (excluding other sources of financial contribution), at least 50% of the total project cost within the project period. The IP rights should be vested with the lead applicant otherwise. As regards IP benefit sharing and related arrangements, it will be subject to negotiation among the parties concerned and must be agreed before the commencement of the project and set out in the project agreement.

3. Where the ITF funding for a project exceeds HK\$30 million, approval from the Finance Committee of the Legislative Council is required.
4. Please use ITF Form 4.4 for applications under the TCFS.
5. ***For Category C projects, the application should be completed in Chinese. The lead applicant should also enclose the application from its Mainland partner which should be submitted concurrently to the Guangdong/Shenzhen authorities. Unilateral submission will not be accepted.***
6. Applications must be submitted to the ITF Secretariat either -
 - (a) electronically through the Innovation and Technology Commission Funding Administrative System II (<https://itcfas.itf.gov.hk/>); or
 - (b) in hard copy in triplicate (one original plus two duplicate copies) and a soft copy (preferably in MS Word 2010 or above) in person or by post. Please also provide a soft copy (preferably in MS Word 2010 or above), together with an application datasheet (available with the application form).

7. ITC reserves the right to require the lead applicant to produce the originals of the supporting documents for verification and seek additional information where necessary. Unless on request of the ITF Secretariat, supplementary information provided after submission of application will NOT be accepted and will NOT form part of the application. Supplementary information which is not specifically referred to in the application form will NOT be considered and will NOT form part of the application.
8. Upon receipt of an application, the ITF Secretariat will conduct a preliminary screening and may seek clarification or supplementary information from the lead applicant. If the lead applicant fails to respond/submit the revised project proposal as appropriate within 3 months, the proposal will be considered as withdrawn with immediate effect. Where necessary, individual application may be subject to external review. The ITF Secretariat's assessment, together with the views of external reviewers (if any), will be submitted to the Innovation and Technology Fund Research Projects Assessment Panel for examination.
9. The lead applicant will be notified of the result of its application in writing. Withdrawal of an application should be made by the lead applicant in writing to the ITF Secretariat before the project agreement is signed.

Part A The Applicant

I. Information on Lead Applicant

1. The lead applicant must be an organisation and be either -
 - (a) an R&D Centre¹; or
 - (b) a designated local public research institute².
2. The lead applicant should obtain prior consent of parties concerned if they are referred to in the application form.
3. Where an application is successful, the lead applicant (and industry co-applicant for collaborative projects) will enter into a project agreement with the Government and is required to comply with the terms and conditions therein, including monitoring project progress and expenditure, submission of reports and audited accounts, etc.

II. Information on Industry Co-Applicant

1. For platform projects, there is no need for an industry co-applicant.
2. An industry co-applicant is only applicable to collaborative projects, which can be either
 - (a) a private company incorporated in Hong Kong under the Companies Ordinance (Cap. 622) and unless the lead applicant is a local university, should generally not be owned more than 50% by the lead applicant; or
 - (b) an industry support organisation, a trade and industry association or professional body which has the legal capacity to enter into contracts.
3. In general, the industry co-applicant should be the users of the deliverables.

III. Information on Sponsor(s)/Supporting Party(ies)

1. There is no limit on the number of sponsors (only applicable to platform projects) and supporting parties. It is necessary that supporting documents are enclosed in the application with the company/organisation chop(s).

Part B The Project

I. Key Project Details

(A) Total Project Cost

1. The total project cost is the sum of all estimated expenditure to be incurred (including items to be covered by in-kind contribution, if any) and the administrative overheads as appropriate. Applicants are required to provide details of the project cost items under the 'Financial Considerations' section in Part C of the application form.

(B) Payment Schedule

Platform projects

1. Applicants should obtain industry sponsorship of at least 10% of the total project cost from at least one private company to demonstrate reasonable market interest.
2. As a general rule, at least 50% of the pledged industry sponsorship should be paid before the project commences and the remaining sponsorship should be received before the 'mid-point' of the project period. Payment of more than 50% of industry sponsorship upfront is welcomed.
3. For other sources of financial contribution, consideration will be given to allowing greater flexibility on the payment schedule but all contribution must be received by the 'mid-point' of the project period.
4. ITF funding will normally be disbursed on an annual basis, subject to satisfactory project progress against agreed milestones and due payment of the industry sponsorship and other sources of financial contribution.

Collaborative projects

5. The industry co-applicant should contribute, in the form of industry sponsorship (excluding other sources of financial contribution), at least 50% of the total project cost (or 30%-50% in the case of R&D Centre projects with exceptional approval from ITC) within the project period. The ITF funding is released on a matching basis, i.e. the contribution from the industry co-applicant should be made first and the disbursement from ITF will follow.

(C) Schedule of the Project Period

1. The duration of the project period should not exceed 24 months in general. There is however no minimum time requirement.

(D) Industry Sponsorship and Other Sources of Financial Contribution

1. For platform projects, industry sponsorship refers to sponsorship from private companies which are not related to the lead applicant in terms of ownership or management (except where the lead applicant in a platform project is a local university) and should in general be the users of the project deliverables. For platform projects undertaken by local universities, sponsorship from a company which may be related to the university or its staff (e.g. a subsidiary of the university set up to commercialise the R&D outcome, a company owned/managed by the project coordinator or a member of the project team) is acceptable, as long as such arrangement has the support of the university concerned and does not violate the relevant rules and regulations of the university.

For collaborative projects, industry sponsorship refers to sponsorship from the industry co-applicant. The directors/shareholders/management team members/staff of the industry co-applicant should neither be employed as the project team members nor serve as the project steering committee members representing the lead applicant.

Moreover, to avoid conflict of interests, sponsor/industry co-applicant should not be the equipment/service suppliers of the project.

2. Other sources of financial contribution refer to contribution to the project obtained from various parties, including contribution in cash or in-kind from the lead applicant, industry co-applicant and supporting parties, e.g. charitable organisations, individuals, etc. It can also include personal contribution by project team members. They shall exclude industry sponsorship as mentioned above and project income.
3. Total financial contribution refers to the summation of industry sponsorship and other sources of financial contribution.
4. Industry sponsorship and other sources of financial contribution can either be in cash or in-kind or a combination of both. In-kind sponsorship/contribution in the form of equipment or consumables would only be accepted if:

- (a) the in-kind sponsorship/contribution is essential to the project and is contributed specifically for the project; and
- (b) documentary proof of the value of sponsorship/contribution has been provided to facilitate a fair assessment of the value of contribution, e.g. details of the valuation for new and used equipment and consumables. In general, the lead applicant should provide two independent quotations for each item of in-kind sponsorship/contribution. Under special circumstances such as the sponsor/contributor being the sole supplier of the item or the item is unique in terms of IP ownership or technology, in which case there is genuine difficulties in obtaining a second independent quotation, other form of documentary evidence from the sponsor/contributor may be accepted.

Manpower contribution from industry sponsor and industry co-applicant will be counted as other sources of financial contribution but not industry sponsorship.

- 5. For platform projects initiated by Government bureaux/departments and statutory bodies of Hong Kong: ITC may consider waiving the sponsorship requirement if such applications have clear support from Government bureaux/departments and/or statutory bodies, have demonstrated clear community interests, and have difficulties in seeking industry sponsorship in the prevailing circumstances. The lead applicant should indicate clearly in the application form that it wishes to seek the waiver of industry sponsorship requirement, and provide detailed justifications and supporting information, together with a letter of support from the relevant bureau/department or statutory body.

(E) Related Information

- 1. The provision of information on previous research work done (including ITF-funded projects and earlier applications for funding support from sources other than ITF) is to enable us to have a comprehensive understanding of the project proposal, especially where the relevant work was funded by UGC/Research Grants Council (RGC) (e.g. Areas of Excellence Scheme, Theme-based Research Scheme and Collaborative Research Fund, etc.).

II. Brief Description of Project Proposal

(A) Location of R&D Work

1. The majority of the R&D work funded under TCFS projects should be conducted within the territory of Hong Kong. However, given the close ties between Hong Kong and the Mainland, up to 50% of the R&D work of an ITF project can be conducted (and relevant expenditure incurred) in the Mainland.
2. Where certain R&D tasks need to be conducted outside Hong Kong (other than the Mainland), prior approval from ITC must be sought with justifications (e.g. countries/provinces/cities/overseas research institutes which have entered into technology collaboration agreements/Memorandum of Understanding with the Government or local universities/R&D Centres).

(B) Project Milestones

1. The project will be monitored against the agreed project milestones. The lead applicant is required to submit progress report(s)/final report until project completion.
2. *For Category C projects, the lead applicant should also set out the relevant milestones of the projects to be carried out by the Mainland partner, where appropriate.*

Part C Assessments

1. The assessment framework comprises 7 components. Their weightings are as follows -
 - (i) Innovation and Technology Component (20%);
 - (ii) Technical Capability (20%);
 - (iii) Financial Considerations (16%);
 - (iv) Existence of a Holistic Plan to Realisation/Commercialisation (16%);
 - (v) Relevance with Government Policies or in Overall Interest of the Community (12%);
 - (vi) IP Rights and Benefit Sharing (8%); and
 - (vii) Management Capability (8%).

2. In general, the framework aims to achieve the following -
 - (a) encouraging and selecting projects with greater prospect of realisation/commercialisation;
 - (b) facilitating the trial of R&D outcomes (especially in the public sector), so that researchers and industry can gain actual experience to fine-tune the outcomes, build up 'reference' for subsequent marketing, and bring about wider economic and social benefits to the community;
 - (c) motivating the private sector to invest more in R&D activities in Hong Kong; and
 - (d) enhancing cooperation among Government, industry, academia and research institutes (官產學研).

3. The scope of funding of ITF also covers more downstream activities, including development engineering/system integration, large scale process optimisation, compliance testing and clinical trials, licensing of third-party IP and industrial design, etc. In assessing such projects, the following considerations will also be taken into account -
 - (a) Reasonableness – downstream activities should be justified based on their individual merits, including innovation and technology content and/or potential impact to the community. Mass production activities would generally not be supported;
 - (b) Proportionality – the project is expected to comprise a balanced mix of midstream and downstream R&D activities; and
 - (c) Relevance – the project activities should be relevant to the industry or its potential market and/or bring upon positive impact to the community and supported by detailed plans for realisation and commercialisation.

4. The Innovation and Technology Fund Research Projects Assessment Panel, comprising members from different sectors including academia, industry and the Government, will provide advice during the assessment and monitoring process. Project team members may be required to attend assessment meetings to present their projects to and answer queries from the Assessment Panel/ITF Secretariat where necessary. The membership list of the Assessment Panel is available at http://www.itf.gov.hk/1-eng/ITSP_COM.asp.

I. Innovation and Technology Component

1. The ITF is set up to finance primarily applied R&D projects that contribute to innovation or technology upgrading in industry. The innovation and technology component is hence crucial. The project should focus primarily on deliverables having a reasonable chance for application in due course.
2. Upstream or theoretical research will not be accorded priority since it is primarily within the ambit of RGC funding. However, if funding by the RGC has taken a project from the stage of foundation research to the stage of applied research, for instance in the Areas of Excellence Scheme, consideration may be given for further funding under the ITF. This will provide continued support to the R&D activity as well as establishing better interface between the two key funding sources. The lead applicant should provide supporting documents from the UGC/RGC Secretariat as appropriate.

(A) Nature of the project

1. On whether a project will give rise to new technologies or projects, consideration will be given in the overall sense if the R&D can bring benefits to Hong Kong. While ITF funding is primarily for the benefit of Hong Kong, and hence a Hong Kong angle would be of the greatest importance, due regard will also be taken in terms of benefits to a wider community (e.g. agricultural research to address the problem of food shortage).
2. On whether a project will enhance the quality of existing products (e.g. capacity, reliability, speed, etc.), the lead applicant should set out the type and extent of such improvements.
3. On whether a project will render production or application cost more competitive, the lead applicant should explain the basis of such improvements and provide an estimate on the percentage in terms of cost savings.
4. ***The lead applicant should highlight the element of Guangdong/Hong Kong or Shenzhen/Hong Kong cooperation in the project proposal (e.g. collaboration amongst research institutes or enterprises in Guangdong/Shenzhen and Hong Kong).***

II. Technical Capability

(A) Viability and quality of technical proposal

1. The viability of the technical proposal refers to whether, at the current point in time, the technical proposal is reasonably achievable.
2. While the majority of research work should be done locally, there will be some flexibility and it is acceptable that the R&D team obtains a reasonable proportion of component(s) of technology/product through collaboration with non-local universities or research institutions, or contracts out certain component(s) of the research work. It is imperative on the lead applicant and the project coordinator to ensure that all necessary IP licensing and authorisation arrangements are in order before the relevant external IPs are used in their R&D work. Whilst there is no need to ‘re-invent the wheel’, one must consider the nature and extent of any proposed technical improvement and whether such improvement merits IP protection.
3. In assessing the quality of the funding application, factors such as technical approach to the problem, accuracy of technical data, reasonableness of assumptions, etc. will be considered.

(B) Competence of technical team

1. This refers to the technical ability of the project coordinator and the research team to deliver the proposed project fully (e.g. background and experience of the research team and feasibility of the R&D work plan).
2. In assessing the research team, apart from studying the qualifications and experience of individual members, ITC will consider whether the overall size of the team, the mix of staff at various levels, role of key members/involving parties in implementing the project, etc. are appropriate. Proven track record in applied R&D work will be favourably considered.
3. The lead applicant is welcome to provide all relevant information (including that of the industry co-applicant) to support the application, e.g. industry and academic awards won in the past, endorsement of outstanding experts in the field, etc.

III. Financial Considerations

The lead applicant should ensure that all the necessary financial information has been provided in this section and the basis of calculation is reasonable.

(A) Project Expenditure

1. The lead applicant should provide a breakdown of the estimated project expenditure to be incurred during the project period.

(a) Manpower

- (i) Project funding can generally be used to cover the salary of project staff, including employer's mandatory contribution to the Mandatory Provident Fund (MPF), contract gratuities, annual salary adjustment (excluding increments and promotion) and general fringe benefits (e.g. medical) in accordance with the established mechanism of the relevant R&D Centres and designated local public research institutes.
- (ii) Unless ITC's prior approval has been obtained, ITF will not fund the emolument to a person who is on the payroll of the lead applicant (e.g. existing teaching staff of local university) or the industry co-applicant. However, administrative overheads will be provided to the lead applicant undertaking the project (see part (d) below).
- (iii) The lead applicant is required to seek prior consent from ITC for any change in key project staff, e.g. the project coordinator.

(b) Equipment

- (i) The applicants should critically examine how the equipment required for the project can be obtained in the most economical manner -
 - the applicants should first make use of existing equipment;
 - the applicants should proceed to rent if it is more economical than to purchase; or
 - new equipment can be procured if it is genuinely necessary, but

the applicants should supply information on the expected usage rate of the equipment, e.g. usage time vs. down time and the plan or alternative use after project completion or disposal.

ITC will take into account expected usage rate, mode of acquisition (purchase vs. rental), future use/divestment (e.g. for teaching/research purposes at one or more university) to ensure the greatest possible cost-effectiveness. Where necessary, ITC will require the lead applicant to transfer the equipment whose acquisition cost is HK\$500,000 or above to the Government or another party (e.g. the Hong Kong Science and Technology Parks Corporation) within a period of two years after project completion.

- (ii) The lead applicant and the industry co-applicant are encouraged to share the use of existing equipment within their organisations or with other organisations where possible (e.g. local universities and the Hong Kong Science and Technology Parks Corporation).
- (iii) Individual equipment or parts that will eventually form part of the project deliverables (e.g. the prototype) are regarded as consumables and the relevant cost should be grouped under 'other direct costs'.
- (iv) The lead applicant is required to seek prior consent from ITC for any subsequent change in any equipment with an estimated cost of HK\$500,000 or above per item.
- (v) Project funding cannot be used to cover –
 - 1. charges/time cost for use of existing equipment already owned by the lead applicant or industry co-applicant;
 - 2. depreciation/amortisation or provisions not representing actual expenses incurred; and
 - 3. general office and IT equipment.
- (vi) The lead applicant should ensure that all procurement for goods and services is carried out in an unbiased and fair manner and should generally comply with the following procedures –

| Aggregated value of each procurement | Requirement |
|--------------------------------------|---|
| HK\$50,000 and below | Quotations from at least two suppliers |
| Above HK\$50,000 to HK\$1,400,000 | Quotations from at least five suppliers |
| Above HK\$1,400,000 | Open tender |

In case the lead applicant intends to procure goods or services from one company/organisation/individual, it has to provide details, justifications and its relationship with the company/organisation/individual in the application form for not following the procurement process set out above. If the application is approved, subsequent approval from ITC will not be required.

(c) Other Direct Costs

(i) Project funding can be used to cover –

1. external consultancy;
2. purchase of consumables and technology licences;
3. promotion and marketing activities for disseminating project deliverables and technology transfer (not applicable to collaborative projects);
4. patent registration fee up to HK\$250,000 per project; and
5. external audit fees as required by the ITF project agreement. (The maximum provision allowed for an annual/final audited account of a project costing less than HK\$1 million, between HK\$1 million and HK\$5 million and more than HK\$5 million should not exceed HK\$8,000, HK\$14,000 and HK\$20,000 respectively.)

- (ii) Project funding cannot be used to cover other costs like –
1. building facilities (including office, laboratory, accommodation) – rates, rental, renovation, and operation, repair and maintenance expenses;
 2. costs of setting up office or forming association/consortium;
 3. utilities – charges for electricity, gas, water, telephone and fax;
 4. transport – shuttle bus services and home to workplace travelling expenses;
 5. general administration and office expenses;
 6. staff-related costs – provident fund handling charges, staff training and development costs and staff facilities;
 7. entertainment expenses, and any prizes, either in the form of cash or other types of souvenirs;
 8. advertisement (except for disseminating project deliverables, or staff recruitment);
 9. organisation of trade missions and participation fees at study/trade missions for individuals/companies;
 10. charges for non-R&D services (e.g. accounting, personnel, procurement, library, security, cleansing, legal, and central and departmental administrative support) provided by the lead applicant/industry co-applicant or their contractors/agents; and
 11. capital financing expenses (e.g. mortgage and interest on loans/overdrafts).

(d) Administrative Overheads

- (i) For platform projects, administrative overheads up to 15% of the ITF funding requested (i.e. net of overheads) can be included in the project budget; while for collaborative projects, administrative overheads up to 15% of the approved project cost (net of overheads) can be included. The industry co-applicant is required to pay its

share of administrative overheads (in the form of cash) proportional to its contribution to the project. For example, if the industry co-applicant contributes 50% of the project cost, it will be required to contribute 50% of the administrative overheads while ITF contributes the remaining.

- (ii) The administrative overheads should be included as part of the project expenditure in the financial information to be provided by the lead applicant.

(B) Industry Sponsorship/Other Sources of Financial Contribution

1. Except for projects initiated by Government bureaux/departments and statutory bodies of Hong Kong (please refer to Part B.I(D)5), the minimum industry sponsorship is 10% of the total project cost for platform projects and 50% of the total project cost for collaborative projects (30%-50% of the total project cost in case of R&D Centre projects with exceptional approval from ITC). As a general observation, it is noted that the higher the degree of contribution, the stronger the industry has demonstrated its interest in the project and hence the greater the potential for commercialisation. Therefore a project with a larger number of sponsors (for platform projects only) or a higher level of industry sponsorship will be considered more favorably in the process of vetting.
2. Apart from sponsorship by the industry, we also accept other sources of financial contribution provided by the lead applicant or supporting parties including charitable organisations, or even private individuals such as project team members.
3. The lead applicant is required to provide details and supporting documents on industry sponsorship and other sources of financial contribution (if any).
4. Under the Research & Development Cash Rebate Scheme (CRS), industry sponsorship contributed by a private company towards an ITF project is eligible for cash rebate. Further information on the CRS is available at <http://www.itf.gov.hk/l-eng/crs.asp>.

(C) Project Income and Residual Funds

1. All ITF funding, industry sponsorship, other sources of financial contribution and project income received during the project period should be credited to the project account and ought to be used for offsetting project expenditure.

After completion (or termination, as the case may be) of the project or its earlier termination, the lead applicant shall return to the Government all residual project income and interest income in the project account, and any other income under IP rights benefit sharing (if any) as set out in the project agreement.

IV. Existence of a Holistic Plan to Realisation/Commercialisation

1. In the context of TCFS, ‘realisation’ includes cases where the R&D product(s) is(are) being used in the public sector as there may not be a ‘commercial’ market (e.g. specialist equipment for law enforcement agencies); whereas ‘commercialisation’ refers to the R&D product(s) being launched/sold commercially. It may not always be necessary to ‘prove’ that the product will reach the consumer market. Facilitating the process of commercialisation may also be acceptable.
2. To enhance the chance of realisation/commercialisation, the lead applicant should provide information such as -
 - (a) the stage at which the R&D project is positioned (e.g. concept, optimisation for scaling, commercialisation, etc.);
 - (b) future positioning of the technology/product in the market vis-a-vis existing products;
 - (c) the exact deliverables/milestones (both qualitative and quantitative) and the expected time frame;
 - (d) whether ITF funding will be required for a further phase of research work;
 - (e) whether there are associated/complementary technology development projects which will add to the chance of realisation, e.g. through the clustered-projects³ approach; and
 - (f) to provide an analysis of the strengths/weaknesses/opportunities/threats of competing products (i.e. SWOT analysis).
3. The lead applicant should where appropriate supply supporting document(s) -
 - (a) from company(ies) interested in taking out a licence of the project deliverables for further development;
 - (b) from manufacturer(s) interested in manufacturing the product in a commercial scale; or
 - (c) from Government departments or public bodies supporting the project.

³ In general, ITF projects are approved on an ‘individual’ basis. Clustered-projects refer to applications that address different technological challenges but share a common theme or purpose. To engender synergy, collaboration and greater impact of individual projects, ITC takes a more holistic consideration under the ‘clustered-projects approach’.

V. Relevance with Government Policies or in Overall Interest of the Community

1. Apart from serving the industry, ITC encourages R&D in technologies that will dovetail with relevant Government policies, or bring benefit to the community at large, for example -
 - (a) support important Government initiatives, e.g. environmental protection and healthcare;
 - (b) bring significant social benefit, e.g. creating devices to help track unattended Alzheimer patients to minimise accidents;
 - (c) contribute to the upgrading of the industry, e.g. a cleaner method of production;
 - (d) provide opportunities for training of local engineering and scientific personnel;
 - (e) foster closer collaboration among key stakeholders (官產學研); and
 - (f) enhance the image of Hong Kong internationally.
2. For projects that will involve activities/expenditure outside Hong Kong, the lead applicant should provide details to demonstrate the ‘Hong Kong angle’, namely benefits that will be enjoyed by the Hong Kong community.
3. The Government is keen to train up local engineering and scientific personnel. While the R&D team should mainly comprise local staff, non-local expertise could be engaged, provided that it is within a reasonable limit.

VI. IP Rights and Benefit Sharing

While seeking a reasonable financial return from commercialisation, ITC allows for the necessary flexibility to motivate various stakeholders. In fact, it should be stressed that the ITF is set up to fulfill the public mission of promoting innovation and technology and monetary return from the R&D projects it supported is not the only consideration. For details on the general policy and arrangements pertaining to IP rights and related matters for R&D projects funded under the TCFS, please refer to the ‘Guide on IP Arrangements for R&D Projects Funded Under the ITF’ as promulgated by ITC (<http://www.itf.gov.hk/1-eng/IPGuide.asp>). The key points are summarised below –

1. The lead applicant will be required to provide information on –
 - (a) whether, and if so the plan to have the R&D result patented or protected by other means;
 - (b) whether there are any plans for spin-offs in due course and if so, the details;
 - (c) the proposed formula of benefit sharing among all parties concerned (e.g. licence fees and royalties); and
 - (d) whether unrestricted use of the technology would be allowed for relevant Government departments/public bodies.
2. *For Category C projects, the lead applicant should set out the ownership of the IP/research results to be generated from the project and IP benefits sharing among all parties concerned, including Mainland partners.*

Platform Projects

3. As a general rule, the IP generated from a project should be vested with the lead applicant, namely an R&D Centre or a designated local public research institute. This will allow the institutions to assume a proactive role in disseminating the R&D results and promoting commercialisation. However, in the case of R&D Centre projects in which the majority of the R&D work is carried out by a local university, the R&D Centre has the flexibility to negotiate with the concerned university and decide on the appropriate IP ownership and commercialisation arrangements.

4. The lead applicant and/or the relevant designated local public research institute are required to disseminate the project deliverables and promote technology transfer to the industry through workshops, seminars, licensing or consultancy, etc.
5. The lead applicant is expected to generate income where appropriate by charging fees for project deliverables so as to recoup at least part of the project cost.
6. Platform projects are intended for the benefit of the industry as a whole and hence the usual licensing arrangement should be non-exclusive. The guiding principle is to enable the use of technology and R&D results by interested parties in an open, transparent and non-exclusive manner.
7. Where there are exceptional circumstances which require some elements of exclusivity in order to encourage industry interest, the lead applicant should seek prior approval from ITC with full justifications. ITC will consider such proposed arrangement on a case-by-case basis having regard to factors such as whether the arrangement would increase the chance of commercialisation of the R&D results, and the overall benefits to the community.

Collaborative Projects

8. As a general rule, an industry co-applicant having contributed at least 50% of the project cost (excluding other sources of financial contribution) will be entitled to the ownership of the project IP under a collaborative project unless otherwise agreed between the lead applicant and the industry co-applicant. The industry co-applicant may indicate whether consent will be given for unrestricted use of the R&D results under the project in the public sector (including Government and public bodies) in Hong Kong or for promulgating or publishing the R&D result for non-commercial purposes (e.g. academic journals) in future.
9. For R&D Centre projects in which the industry co-applicant's contribution is less than 50% of the total project cost, the IP generated should be vested with the R&D Centre. For such projects, if the majority of the R&D work is carried out by a local university, the R&D Centre has the flexibility to negotiate with the latter to decide on the appropriate IP ownership and commercialisation arrangements.

Benefit Sharing

10. The arrangements for benefit sharing (including financial income from the project) should, as far as possible, be agreed among parties concerned in writing before the commencement of the project. For collaborative projects, such arrangements must be agreed among parties concerned (e.g. R&D Centres/research institutes and industry co-applicants) in writing before the commencement of the project. In general, supporting parties making other sources of financial contribution are not entitled to benefit sharing.

Indemnity

11. If the project involves using background IPs of a third party, the lead applicant should indicate in the application form whether the consent/licence for use of such IPs has been obtained. The applicants shall indemnify and keep indemnified the Government against any and all claims, actions, investigations, demands and all liabilities arising from the use of such IPs on the term set out in the project agreement.

VII. Management Capability

1. Management capability is more than technical capability. It pertains to whether the applicants and their R&D teams and other supporting members have demonstrated and can demonstrate the ability to bring the project to fruition. For example, apart from the research team, whether there are other facilities such as a technology transfer office of a university which will devote the effort to bring the project to realisation, or whether the R&D team has the support of companies already well-established in the market.
2. The capacity of the project team(s) will be considered having regard to its commitments in other areas including on-going ITF projects.
3. Where appropriate, the track record of the lead applicant and the project team in previous ITF projects (including management of project schedule and compliance with reporting/monitoring requirements) will also be reviewed. In particular, project teams with a poor track record of complying with reporting requirements (e.g. timeliness and quality) may be considered as lacking the necessary management capability to carry out ITF projects. Accordingly, project coordinators must have all outstanding reports and audited accounts under their purview submitted before they could commence new projects.

**2019 Guangdong-Hong Kong
Technology Cooperation Funding Scheme**

Introduction

To strengthen technology development in Hong Kong and Guangdong, the Government of the Hong Kong Special Administrative Region (HKSAR) joined hands with Guangdong Province and launched the Guangdong-Hong Kong Technology Cooperation Funding Scheme (TCFS) in 2004 as a key cooperation initiative to encourage collaboration among universities, research institutes and technology enterprises in the two places. The Shenzhen Municipal Government joined the TCFS in 2005.

2. Under the 2019 TCFS, the Governments of HKSAR and Guangdong/Shenzhen invite R&D project proposals under the specific themes/topics in technology areas of common interest at **Annex** and provide funding support to approved projects.

Categories of Projects

3. There are three categories of projects under the TCFS, namely -
- (a) **Category A** – projects to be solicited, vetted and funded solely by Hong Kong:
 - (i) **Category A(1)** – projects to be solicited, vetted and monitored by the R&D Centres¹; and

¹ Projects will be solicited, vetted and monitored by the following Centres –

- (a) Hong Kong Applied Science and Technology Research Institute, designated as the R&D Centre for Information and Communications Technologies (ASTRI);
- (b) Logistics and Supply Chain MultiTech R&D Centre (LSCM);
- (c) Hong Kong Research Institute of Textiles and Apparel (HKRITA); and
- (d) Nano and Advanced Materials Institute (NAMI).

For projects falling under the Automotive Parts and Accessory Systems R&D Centre (APAS), they will be solicited by APAS, processed by the Innovation and Technology Commission (ITC), vetted by the Innovation and Technology Fund Research Projects Assessment Panel, and monitored by APAS.

- (ii) **Category A(2)** – projects to be solicited, vetted and monitored by the ITC.

- (b) **Category B** – projects to be solicited, vetted and funded solely by Guangdong or Shenzhen.

- (c) **Category C** – projects to be jointly solicited, vetted and funded by Guangdong and Hong Kong:
 - (i) **Category C(1)** – projects jointly funded by Guangdong and Hong Kong; and

 - (ii) **Category C(2)** – projects jointly funded by Shenzhen and Hong Kong.

Category C – Joint Funding

4. An application of the same project under Category C should be submitted simultaneously by the participating organisations to the respective authorities in Hong Kong and Guangdong/Shenzhen. The processing and preliminary vetting will be conducted separately by the two sides. The results of the preliminary vetting of the two sides will then be submitted to a joint vetting committee comprising officials from both sides for a final decision on the projects for joint funding support. The approved projects will be monitored by authorities of the two sides respectively according to their own requirements, and may also be subject to joint monitoring by the authorities of the two sides.

5. Please note that deadlines for submission of project proposals set by Guangdong authority on Category C(1) and Shenzhen authority on Category C(2) both fall on **13 September 2019**.

Enquiries

6. For enquiries about applications under Category A(1), please contact the R&D Centres direct –

| R&D Centres | Contact Persons |
|---|--|
| Automotive Parts and Accessory Systems R&D Centre | Mr Franco Chu Tel : 2788 5311 Fax : 2788 5406 E-mail : francochu@hkpc.org Website : www.apas.hk |
| Hong Kong Applied Science and Technology Research Institute | Dr KC Sum Tel : 3406 2456 Fax : 3406 2801 E-mail : kcsun@astri.org Website : www.astri.org |
| Logistics and Supply Chain MultiTech R&D Centre | (1) Mr Alvin Wai Tel : 2299 0587 Fax : 2299 0552 E-mail : awai@lscm.hk (2) Mr Kevin Tse Tel : 2299 0146 Fax : 2299 0552 E-mail : ktse@lscm.hk Website : www.lscm.hk |
| Hong Kong Research Institute of Textiles and Apparel | (1) Dr Ray Cheung Tel : 2627 8188 Fax : 2364 2727 E-mail : raycheung@hkrita.com (2) Dr Gloria Yao Tel : 3628 3208 Fax : 3425 4505 E-mail : gloria@hkrita.com Website : www.hkrita.com |

| R&D Centres | Contact Persons |
|---------------------------------------|--|
| Nano and Advanced Materials Institute | Dr Harry Chan Tel : 3511 3487 Fax : 3543 1005 E-mail : harrychan@nami.org.hk Website : www.nami.org.hk |

7. For enquiries about applications under Category A(2) and Category C, please contact ITC:

Contact persons:

For technical matters

- Miss M K Yuen (Tel : 3422 3571, Fax : 2377 0730, E-mail : mk.yuen@itc.gov.hk); or

For administrative matters

- Mr Vincent Li (Tel : 3841 4723, Fax : 2957 8726, E-mail : vincent.li@itc.gov.hk)

8. The contact details of the Guangdong and Shenzhen authorities are as follows -

(1) Guangdong

Ms Huiqian Wan
Department of Science and Technology of Guangdong Province
Website : <http://gdstc.gd.gov.cn/>
Tel : 86 20-8356 2716

(2) Shenzhen

Mr Xiangming Zhong
Science, Technology and Innovation Commission of Shenzhen Municipality
Website : <http://stic.sz.gov.cn/>
Tel : 86 755-8810 3764

**2019 Guangdong-Hong Kong
Technology Cooperation Funding Scheme**

Specific Themes/Topics

Category A(1) – Applications should be sent to the respective R&D Centres shown in brackets under the themes/topics.

| Themes/Topics | Code Number |
|---|--------------------|
| (a1) Green Transportation Technology Development (i) Vehicle electrification & integration technology development, especially in commercial vehicle platform (ii) Electric vehicle charging technology including both super-fast, semi-fast as well as wireless charging technology (iii) New energy vehicle powertrain system, advance motor control development and energy storage management and application (iv) Fuel saving and energy saving application in automotive area | 1 |
| (a2) Smart Mobility Development (i) Vehicle intelligent management, Internet of Vehicles (IOV) application and smart devices for automotive application (ii) Advanced Vehicle to X technology (iii) Autonomous driving technology development and smart control technology in controlled setting (iv) Connectivity in vehicle by 5G and big data analysis (v) EV battery safety and recycling | 2 |
| (a3) Material & Manufacture Technology (i) Application of advanced coating technology (ii) Lightweight material application for vehicle body and components | 3 |

| Themes/Topics | Code Number |
|---|-------------|
| <p>(iii) New manufacturing process or methodology for automakers and suppliers</p> <p>(Hong Kong Automotive Parts and Accessory Systems R&D Centre)</p> | |
| <p>(b1) Sustainable Textile Technologies:</p> <ul style="list-style-type: none"> (i) Upcycling/recycling technologies (ii) Waterless dyeing (iii) Finishing technologies | 4 |
| <p>(b2) Smart Textile/Apparel Manufacturing Technologies:</p> <ul style="list-style-type: none"> (i) Automation (ii) Artificial intelligence (iii) Machine learning technologies | 5 |
| <p>(b3) High Value-added Textile/Apparel Products and their Design:</p> <ul style="list-style-type: none"> (i) Eco-friendly and functional textile fiber (ii) Yarn and fabric development (iii) Performance textile/apparel design | 6 |
| <p>(b4) Health Care Products and their Design:</p> <ul style="list-style-type: none"> (i) Functional textile products (ii) Smart textiles (iii) Wearable technology <p>(Hong Kong Research Institute of Textiles and Apparel)</p> | 7 |
| <p>(c1) Internet of Things (IoT) technologies and applications for Guangdong-Hong Kong logistics and supply chain industries</p> | 8 |
| <p>(c2) Key enabling technologies for Guangdong-Hong Kong's logistics automation and robotics applications</p> | 9 |
| <p>(c3) Key logistics and supply chain management technologies and applications for "Smart City" in Guangdong-Hong Kong area (e.g. sensing, navigation, positioning, tracking, etc.)</p> | 10 |

| Themes/Topics | Code Number |
|--|-------------|
| (c4) Enabling logistics and supply chain management/block chain technologies for upgrading servicing industries in Guangdong-Hong Kong area (e.g. retail, e-commerce, tourism, hotel & convention, etc.) | 11 |
| (c5) Key technologies and applications to enhance supply chain security in Guangdong-Hong Kong area (e.g. cargo shipment security and verification, food safety, product authentication, etc.) | 12 |
| (c6) Big data applications and AI technologies for Guangdong-Hong Kong logistics and supply chain management industries | 13 |
| (Logistics and Supply Chain MultiTech R&D Centre) | |
| (d1) 5G + AI applications in vertical networks, such as but not limited to: (i) Industry control such as robotic arm control and automatic guided vehicle (AGV) (ii) eHealth applications with ultra-reliable and low latency communications | 14 |
| (d2) Smart mobility related technologies, such as but not limited to: (i) Sensor solution (lidar, radar, camera, etc.) for smart mobility (ii) High accuracy positioning solution | 15 |
| (d3) Calibration technology of millimeter wave Massive Multi-input Multi-output (MIMO) array for improving calibration efficiency, reducing the complexity of calibration circuits and algorithms, and scale commercial use of Massive MIMO | 16 |
| (d4) Robotic solution for public area (shopping mall or park) | 17 |
| (Hong Kong Applied Science and Technology Research Institute) | |

| Themes/Topics | Code Number |
|--|-------------|
| <p>(e1) Nano/advanced materials, structures and processing technologies for sustainable energy:</p> <ul style="list-style-type: none"> (i) Energy efficiency technologies for novel materials and advanced manufacturing, such as thermal insulation and regulation materials, energy efficiency enhancement of processing, and weight reducing materials (ii) Energy absorption technologies for smart protection material (SPM) to offer more robust protections to devices, equipment, and human beings, such as impact protection, anti-cutting, anti-puncture and anti-explosive materials (iii) Energy generation technologies for flexible nanogenerator to generate sufficient electricity to power up LED, smartwatch, sensors, Bluetooth communication and GPS, such as piezoelectric, triboelectric, thermal-electric, and electromagnetic | 18 |
| <p>(e2) Nano/advanced materials and technologies for electronics (including display, solid-state lighting, and printable electronics):</p> <ul style="list-style-type: none"> (i) Battery technologies (ii) Flexible sensors (iii) Thermal management materials (iv) Display materials (v) Temperature sensitive auto-fitting materials | 19 |
| <p>(e3) Construction/building nano and advanced materials for applications:</p> <ul style="list-style-type: none"> (i) Insulation (ii) Fire resistance (iii) Corrosion resistance (iv) Strength/ductility enhancement | 20 |

| Themes/Topics | Code Number |
|--|--------------------|
| <p>(e4) Nano/advanced materials and technologies for environmental applications:</p> <ul style="list-style-type: none">(i) Anti-bacterial coatings and materials(ii) Environmentally-friendly functional protective coatings and surface treatment processes(iii) Wastewater treatments(iv) Air remediation | 21 |
| <p>(e5) Nano/advanced materials and technologies for bio and healthcare applications:</p> <ul style="list-style-type: none">(i) New functional materials: biocide-free germ-repellent materials and coatings for various substrates; environmental-friendly foamed materials; breathable materials for food packaging and consumer products(ii) Nanofiber applications: effective filtration barriers for air and liquid purification; wound dressing materials with minimal rewet property; waterproof yet breathable laminated materials(iii) Surface treatment to medical devices: surface modifications that improve peptide, protein and cell adhesion in, e.g. Enzyme-linked immune assays(iv) Diagnostic devices and Lab-on-Chips: rapid screening for food safety and infectious diseases(v) Health food and beverage: encapsulated probiotics for various food matrices; nanomized herbal ingredients for capsule drinks(vi) Advanced delivery system: improve permeability, bioavailability and stability of active ingredients by means of formulations and/or nanotechnology for different routes of administration | 22 |
| (Nano and Advanced Materials Institute) | |

Category A(2) – Applications should be sent to the Innovation and Technology Commission.

| Themes/Topics | Code Number |
|--|--------------------|
| (a) Advanced internet applied technologies | 23 |
| (b) Advanced information and communications applied technologies | 24 |
| (c) Advanced intelligent multimedia applied technologies | 25 |
| (d) Advanced manufacturing equipment and key technologies | 26 |
| (e) Applied information security technologies | 27 |
| (f) Biotechnology | 28 |
| (g) Chinese medicines | 29 |
| (h) Environmental technology | 30 |
| (i) Electronics: Innovative electronics technologies and products for medical and health-care, manufacturing automation and green energy, including but not restricted to biosensors, telemedicine systems, helpful devices and facilities for the aged and the disabled, man-machine interface, energy management, solid-state lighting, etc. | 31 |
| (j) New materials applied technologies | 32 |
| (k) Testing and certification | 33 |

Categories C(1) and C(2) – Applications should be sent to the Innovation and Technology Commission.

| Themes/Topics | Code Number |
|--|--------------------|
| Category C(1) | |
| (a) Mobile internet | 34 |
| (b) Big data technology | 35 |
| (c) Advanced manufacturing equipment | 36 |
| (d) Intelligent robotics | 37 |
| (e) New materials | 38 |
| (f) New energy | 39 |
| (g) Energy conservation and environmental protection (air and water pollution control) | 40 |
| (h) Biotechnology | 41 |
| (i) Food safety | 42 |

| Themes/Topics | Code Number |
|-----------------------------|--------------------|
| Category C(2) | |
| (a) Internet of Things | 43 |
| (b) Big data | 44 |
| (c) Cloud computing | 45 |
| (d) Artificial intelligence | 46 |
| (e) Integrated circuits | 47 |
| (f) New display | 48 |
| (g) Information security | 49 |
| (h) 5G | 50 |

| Themes/Topics | Code Number |
|---|--------------------|
| Category C(2) | |
| (i) Quantum information | 51 |
| (j) Third generation semiconductor | 52 |
| (k) Medical biotechnology | 53 |
| (l) Population health technologies | 54 |
| (m) Water environment treatment and ecosystem restoration | 55 |
| (n) Agricultural biotechnology breeding | 56 |
| (o) Graphene materials | 57 |
| (p) Advanced electronic information materials | 58 |
| (q) Display materials | 59 |
| (r) New energy materials | 60 |
| (s) High performance polymer materials | 61 |
| (t) Hydrogen energy and fuel cell | 62 |
| (u) Robotics and intelligent devices | 63 |
| (v) Intelligent unmanned systems | 64 |
| (w) Additive manufacturing and laser manufacturing | 65 |