

# Construction Innovation and Technology Fund 建造業創新及科技基金

WEINIOWATE WEBUILD 融匯科技創建香港









# 目錄



02	INTRODUCTION	簡介
04	CATEGORIES OF FUNDING	資助範圍
06	ELIGIBILITY	申請資格
08	ASSESSMENT CRITERIA	評審準則
10	VETTING PROCEDURES	審批程序
11	FUNDING ARRANGEMENT	撥款安排
12	APPLICATION	申請基金



# トイスのうじょうべ筒介

Innovation and technology is transforming the construction sector worldwide. The Construction Innovation and Technology Fund (CITF), with an approved allocation of HK\$1 billion, is established by the Development Bureau of the Government of Hong Kong Special Administrative Region (DEVB) in October 2018. The CITF aims to provide the impetus to transform the local construction industry through automation, industrialisation and digitisation (hereinafter referred to as "Technology Adoption"); and to enhance the capability of existing and prospective practitioners to harness technology for the continuous improvement in Hong Kong's construction industry (hereinafter referred to as "Manpower Development").

Steering Committee on CITF is set up by the DEVB to oversee and monitor the implementation of the CITF and comprises members from industry stakeholders and major government departments. This Committee will meet regularly to monitor usage of the CITF and, where necessary, make adjustments to the key parameters and operational arrangements to cater for the latest industry developments.

As the implementation partner of the CITF, the Construction Industry Council (CIC) is responsible for application processing, monitoring fund reimbursement, and CITF promotion.

創新及科技加快全球建造業轉型。香港特别行政區政府發展局(下稱「發展局」) 獲批撥款港幣10億元,在2018年10月 成立建造業創新及科技基金(下稱「基金」)。 基金鼓勵採用自動化、工業化和數碼 化的技術,推動本地建造業轉型(下稱 「科技應用」);同時,為提升從業員掌握 科技的能力,藉以持續提升本港建造業 質素(下稱「人力發展」)。

發展局成立基金督導委員會,由業內持 分者及主要政府部門代表組成,負責 監察及落實基金的運作。督導委員會 會定期舉行會議,監督基金的運用, 並在有需要時優化基金的運作安排, 配合業界的最新發展。

建造業議會(下稱「議會」)作為基金的 執行伙伴,負責處理申請、監察獲批 項目的進度、發放資助、以及有關的 推廣工作。 The CITF covers two aspects – Technology Adoption and Manpower Development 基金涵蓋科技應用及人力發展兩個範疇



Modular Integrated Construction (MiC) 「組裝合成」建築法



International Conferences in Hong Kong 在香港舉辦國際會議



Building Information Modelling (BIM) 建築信息模擬



Local Collaborative Courses and Workshops 本地合辦課程及工作坊



Prefabricated Steel Rebar 預製鋼筋



Technology Enrichment Courses for Students 為學生提供科技進修課程



Advanced Construction Technologies 創新建築科技



Non-local Training / Visits for Practitioners 為從業員提供本港以外的 科技培訓或考察活動



#### Technology Adoption 科技應用

#### (i) Building Information Modelling (BIM)

BIM digitalises the construction process. It can minimise clashes and abortive work and reduce the risks of project delivery failure through better coordination, hence achieving clearer programme and costs at all project stages. The CITF is open for procurement of BIM software and hardware for experiential use and project adoption as well as costs for eligible companies to arrange BIM training for their staff.

#### (ii) Modular Integrated Construction (MiC)

MiC transfers labour-intensive processes and site-bound wet works (such as concreting, screeding, plastering and most building services installations) to off-site manufacturing yards through standardisation, thus enhancing productivity, site safety, environmental performance and cost effectiveness. The use of MiC will likely shorten construction time, in particular for interior finishes, fixtures and fittings on-site, and allow better quality control. Projects adopting MiC can apply for the CITF.

#### (iii) Prefabricated Steel Rebar

The use of prefabricated steel rebar can reduce laborious bar-bending work in construction sites, improve productivity and reduce material wastage. The use of prefabricated steel rebar from the approved local prefabrication yards is entitled to the CITF.

#### (iv) Advanced Construction Technologies

The adoption of advanced technologies such as machines and robots under the supervision of skilled and knowledgeable construction personnel can enhance construction productivity and improve safety of operations. Some examples of machines and robots include automated wall plastering machines, robotic arms for lifting heavy construction materials, automated traffic cone placement and retrieving vehicles etc.

#### (i) 建築信息模擬

建築信息模擬令施工過程數碼化,通過更有效的協調,盡量減少施工期間的不協調情況及浪費,以及減低項目風險,從而更能明確掌握項目各個階段的進度及成本。基金涵蓋建築信息模擬硬件或軟件的試用及項目應用,以及合資格公司為其員工提供的相關培訓費用。

#### (ii)「組裝合成」建築法

「組裝合成」建築法是採用標準化的措施, 把勞工密集的工序及必須在工地進行的泥水 工程(鋪設混凝土、砂漿、批盪,以及大部分 的屋宇裝備安裝工程等),轉移至工地外的 預製場完成,從而提升生產力、工地安全、 環保及成本效益。採用「組裝合成」建築法 可縮短施工時間,特別是縮短在工地上進 行內部裝修、加設裝置及設備等工程的施 工時間,並能更有效控制品質。項目若採用 「組裝合成」建築法便可申請基金。

#### (iii) 預製鋼筋

使用預製鋼筋可減少在建築工地進行耗時費力的紮鐵工作,提升生產力及減少物料浪費。使用認可鋼筋預製工場的預製鋼筋組件亦可向基金提出申請。

#### (iv) 創新建築科技

在有豐富技術和知識的建築人員監督下, 以機器和機械人進行建築工序,可提升 建造的生產力及改善工地安全。例子 包括:批盪牆壁的自動批盪機、提起重 型建築物料的機械臂、自動放置和收回 交通圓筒的車輛等。



Categories	Funding Scope	類別	資助範圍
Technology Enrichment Courses for Students	Support applicants (local higher education institutions) to nominate students to attend construction technology courses. It will cover training fees, accommodation for the duration of training, air passage and administration fees.	為學生提 供科技進 修課程	資助申請者(本地高等教育院校)推薦學生參與建築技術課程。課程費用、課程其間的住宿費、旅費及行政費用均會獲得資助。
Non-local Training / Visits for Practitioners	Cover training or visits on application of automation, industrialisation and digitisation in construction to upgrade the industry. It will cover training fees and administration fees only.	為從業員提供本港以外的科技培訓或考察活動	資助與自動化、工業化和 數碼化相關的科技培訓或 考察活動。基金只會資助 培訓費用及行政開支。
International Conferences in Hong Kong	Support applicants to organise international conferences in adopting innovation and technology in construction processes. It will cover venue fees, costs of engaging speakers, and administration fees for organising the event.	在香港舉辦國際會議	資助申請者舉辦與建造業 創新及科技相關的國際 會議。籌辦活動所涉及的 開支,包括場地租用、邀請 講者之費用,以及行政費 用,均會獲得資助。
Local Collaborative Courses and Workshops	Support applicants to organise courses and workshops in construction technologies. It will cover venue fees, costs of engaging speakers, and administration fees for organising the courses and workshops.	本地合辦課程及工作坊	資助申請者舉辦與建造業 科技相關的課程及工作坊, 所涉及的開支包括場地 租用、邀請講者之費用, 以及行政費用,均會獲得 資助。

Please refer to the CITF website https://www.citf.cic.hk for details of funding mode and ceiling. 有關資助模式及上限詳情<sup>,</sup>請瀏覽基金網站 https://www.citf.cic.hk



The CITF supports various parties which are engaged in the construction process. Eligible applicants are as follows—

基金會資助各項建造過程中的參與者,合資格申請者包括:

#### Technology Adoption 科技應用

Eligible Applicants <sup>2</sup>	Requirements	合資格 申請者²	要求
Construction Levy-paying Contractors	Contractors who have paid construction industry levy¹ to the CIC in the past 24 months at the time of CITF application	繳付徵款 的承建商	申請基金前24個月內曾向 議會繳付建造業徵款1的 承建商
Registered Subcontractors	Subcontractors who are registered under the Subcontractor Registration Scheme (SRS) operated by the CIC	註冊分包商	在議會「分包商註冊制度」的認可註冊分包商
Consultants	Consultants listed on:  (a) the directory maintained by the Engineering and Associated Consultants Selection Board  (b) the list maintained by Architectural and Associated Consultants Selection Board  (c) the Band 3 Architectural Consultants maintained by The Hong Kong Institute of Architects and The Association of Architectural Practices Ltd  (d) a member company of the Association of Consultant Quantity Surveyors, The Hong Kong Institute of Surveyors, or the Association of Consultant Gonsulting Engineers of Hong Kong	顧問	列入以下名冊的顧問公司: (a)「工程及有關顧問公司」 司遴選委員會」名問公司 司遴選委員會」名問公司 司遴選委員會」名問 (b)「建築及有關顧問名冊 (c) 香港建築師學會會及建 築師事務三組建築師 問公司名單 (d) 香港專業工料測量顧問 公會、香港顧問工程師 協會轄下的會員公司
Other players in the construction process	To be considered on a case-by-case basis	其他在建造 過程的參與者	申請作個别考慮

Note 1: Pursuant to the Construction Industry Council Ordinance (Cap. 587)

註 1: 根據《建造業議會條例》(第587章)

### Manpower Development 人力發展

Categories	Eligible Applicants <sup>2</sup>	Target beneficiaries <sup>3</sup>	類別	合資格 申請者 <sup>2</sup>	受惠 對象 <sup>3</sup>
Technology Enrichment Courses for Students	Local higher education institutions	Full time undergraduates / postgraduates of construction related disciplines in tertiary institutions	為學生 提供科技 進修課程	本地高等教育院校	本教轄業科制/高院建關全科究高院建關全科究
Non-local Training / Visits for Practitioners	Professional institutions (e.g. HKIE, HKIA, HKIS and HKICM) and Trade associations	Professionals, Technicians	為從業員 提供本港 以外的科 技培訓或 考察活動	專業團體(例如:香港工程師學會、香港建築師學會、香港測量師學會及香港營造師學會)以及商會	專業人士、 技術員
International Conferences in Hong Kong	Local higher education institutions, Professional institutions (e.g. HKIE, HKIA, HKIS and HKICM) and Trade associations		在香港舉辦國際會議	本地高等教育院校、 專業團體(例如: 香港工程師學會。 香港建築師學會會 香港測量師學會會 香港營造師學會) 以及商會	專業人士、 技術員及 高等院校 學生
Local Collaborative Courses and Workshops	Local higher education institutions, Professional institutions (e.g. HKIE, HKIA and HKIS), Trade associations, and Labour unions	Professionals, Technicians, Registered Skilled Workers and tertiary students	本地合辦課程及工作坊	本地高等教育院校、 專業團體(例如: 香港工程師學會、 香港建築師學會及 香港測量師學會) 、商會以及工會	專業人士、 技術員、註 冊熟練 五及學生 院校學生

Note 2: For related enterprises, i.e. enterprises with different business registration certificates but having the same individual(s) holding 30% or more ownership, they would be treated as one single enterprise in counting the funding ceiling per company 註 2:「相關企業」,即不同商業登記的企業,但由相同持有人持有30%或以上的擁有權,將會被視為同一間企業,以計算資助上限

Note 3: Only Hong Kong permanent residents are eligible for funding support for courses or training outside Hong Kong 註 3: 只有香港永久性居民符合本港以外的課程或培訓資助資格

The CITF will be used to support innovation and new technologies which are effective in boosting productivity, uplifting built quality, improving site safety or enhancing environmental performance, through leveraging automation, industrialisation and digitisation rather than sheer innovative management practices.

In considering applications on technology adoption, due consideration will be given to the following factors -



- Promote labour productivity
- Achieve project time savings
- Enhance buildability and minimise unworkable designs
- Enhance cost effectiveness



- Enhance workplace safety and health for workers
- Reduce safety risks to workers in construction operations through design management or provision of safety equipment



- Reduce unnecessary rework and defects
- Improve design and construction quality by minimising on-site changes



- Reduce material wastage and / or pollutants during construction
- Abate environmental nuisance to surroundings during construction



基金會用以支援業界採用經證實能促進生產力、提高建造質素、改善工地安全或提升環保效益的科技 (包括機械、設備及軟件),這些科技必須是利用自動化、工業化和數碼化的技術,而並非單純是創新的 管理方式。

科技應用的申請會根據下列的準則審批:



- 促進工人生產力
- 節省工程所需時間
- 提高可建性及減少不可行的設計
- 提高成本效益



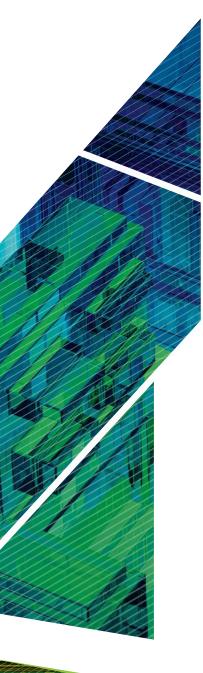
- 改善工地安全及工人健康
- 透過設計管理或提供安全設備,減 低工人在建造操作上的安全風險



- 減少不必要的修改及執修工作
- 減少施工期間的修改,從而改善善設計及建造質素



- 減少施工期間的物料浪費及/ 或污染
- 緩和施工期間對工地周邊造成的環境 滋擾



# VETTING PROCEDURES

## 審批程序

To ensure prudent use of the CITF, Vetting Sub-committees on CITF, comprising professionals or representatives from various stakeholders, will be in place to scrutinise, select and approve applications. The decision on the overall application and the funding amount granted is final.

為確保基金用得其所,基金評審 小組委員會由專業人士或業界持 分者組成,負責審查、遴選和批 核申請。上述委員會會對獲批核 的申請及發放款項之金額作最終 決定。



## 撥款安排

Funding will be provided on reimbursement basis and disbursed by installment. Successful applicants will be required to provide supporting documents as proof of purchase to facilitate funding disbursement.

The arrangement for the disbursement of funds will normally be based on the deliverables of the project. The CITF Secretariat has the discretion to refrain from making any interim payment or final payment where any of the conditions specified in the Application Guide are not fulfilled.

All CITF applications will be subject to inspection by the CITF Secretariat from time to time with an aim to share successful stories with the industry at large as well as to verify the use of fund according to the CITF policies and requirements.

基金將會以實報實銷的形式資助, 並以分期方式撥款。成功的申請者 需要提供證明文件以獲取撥款。

基金之撥款通常會根據項目的成果 釐定。若申請者無法達到申請指南 所載之任何規定,基金秘書處有權 暫緩向其發放任何中期撥款或終期 撥款。

基金秘書處會定時審查各項基金 申請,並按照基金之政策及要求, 確保資金運用恰當,以及向業界分享 成功之個案。



## 申請基金

The CITF is open for application now. Please apply online via https://www.citf.cic.hk.

Should you require assistance, please contact the CITF Secretariat.

The CITF Secretariat may seek supplementary information and documents from the applicants where required to enable processing of applications. Failure to provide such information within the required time frame will deem the application to be unsuccessful without further notice.

The applications and all information submitted by applicants will be retained by the CITF Secretariat for record and audit purposes, and will not be returned to the applicants.

基金現正接受申請,請透過https://www.citf.cic.hk網站申請。

如需協助,歡迎聯絡基金秘書處。

基金秘書處有權按個別情況要求申請者提供 附加資料及文件,以便處理基金申請。如申 請者未能在指定時間內遞交所需文件,申請 會被視為不成功,而不作另行通知。

基金秘書處將保留申請者向基金所提交的全部資料,用作紀錄及審計用途。所有資料均不會退還予申請者。





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https://www.citf.cic.hk

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The CIC may at its absolute discretion without notice at anytime and under any circumstances withdraw or modify the provisions of any goods or services. 議會可在任何時候及任何情況下使用其絕對酌情決定權撤回或修改任何產品或服務的供應,而毋須事先通知。





