



CONSTRUCTION INDUSTRY COUNCIL  
建造業議會

# Construction Site Supervisory Personnel, Technicians and Professionals Forecast

建造業工地監督人員、技術員及專業人員人力預測

2017 December  
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# Contents 內容



# 1. Background 背景

- ◆ Due to changing market demand, it is important to assess the demand and supply, both quantitatively and qualitatively of construction workforce for **effective manpower planning**.

因應市場需求的變化，預測建造業人力供求的數字及技能要求，以制訂有效的人力資源計劃是相當重要。

- ◆ The first set of manpower forecasts of site supervisory personnel (SSP), technicians, and professionals was released in 2014.

建造業議會於2014年第一次發佈建造業工地監督人員、技術員及專業人員的供求預測。

- ◆ CIC engaged HKU in 2016 to forecast the supply of and demand for SSP, technicians, and professionals in the HK construction industry.

議會於2016年委託香港大學進行一項對於建造業工地監督人員、技術員及專業人員供求預測的研究。



## 2. Aim & Scope 目標和範圍

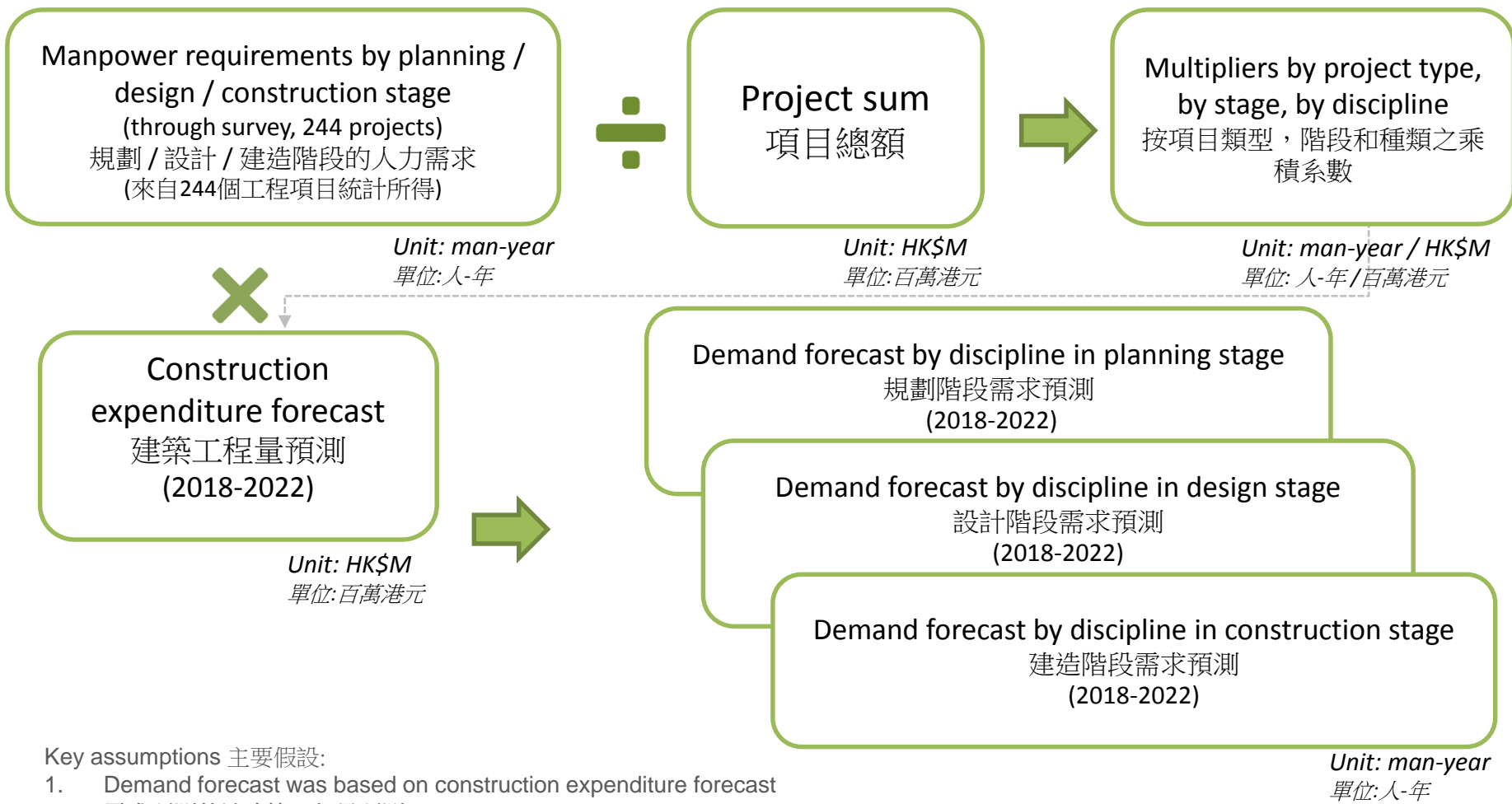
- ◆ To identify the potential mismatch in terms of the **number** and **skill requirements** of SSP, technicians and professionals in the Hong Kong construction industry over a span of five years.

評估於未來五年，工地監督人員、技術員及專業人員，在**數字及技能要求**上可能的供求相差。

## 2. Aim & Scope (cont.) 目標和範圍[續]

Professionals 專業人員	Technicians 技術員	Site Supervisory Personnel 工地監督人員
1. Architect 建築師	1. Draftsman 繪圖員	1. Manager 營造師
2. Landscape Architect 園境師	2. Quantity Surveying Technician 工料測量員	2. Engineer 工程師
3. Civil Engineer 土木工程師	3. E&M Engineering Technician 機電工程技術員	3. Technical Officer 技術主任
4. Structural Engineer 結構工程師	4. Civil/Structural/Geotechnical Engineering Technician 土木/結構/土力工程技術員	4. Supervisor 工程監督
5. Geotechnical Engineer 土力工程師		5. Clerk of Works 監工
6. Environmental Engineer 環境工程師		6. Inspector 檢測員
7. Building Service Engineer 屋宇設備工程師		7. Agent 總管
8. Electrical Engineer 電機工程師		8. Foreman 管工
9. Mechanical Engineer 機械工程師		9. Coordinator 統籌
10. Building Engineer 建造工程師		10. Safety Officer 安全主任
11. Building Surveyor 屋宇測量師		
12. Land Surveyor 土地測量師		
13. Quantity Surveyor 工料測量師		
14. Town Planner 城市設計師		

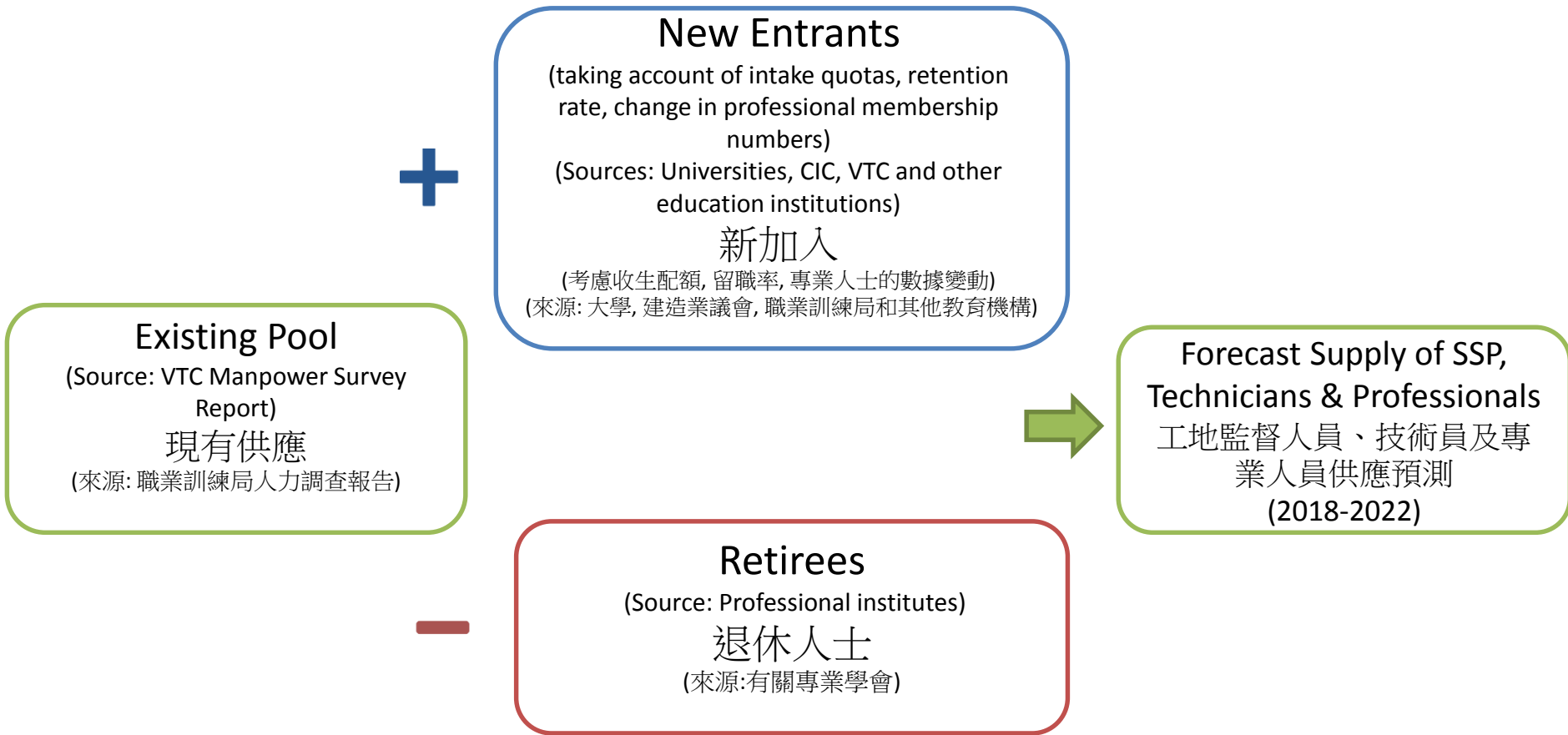
# 3. Methodology – Demand 需求預測方法



## Key assumptions 主要假設:

1. Demand forecast was based on construction expenditure forecast  
需求預測基於建築工程量預測
2. Demand in the design and feasibility/planning phases was back-calculated of the construction expenditure  
設計和可行性需求預測是基於建築工程支出反算得出
3. Short-term effects such as filibustering not initially reflected in quantitative forecast – judgement based on industry feedback was applied for fine-tuning  
由拉布等事件引起的短期影響並不反映於量性預測中，但基於業界代表的意見作出微調
4. According to survey findings, Architects and Landscape architects: a 75% HK to 25% non-HK ratio was applied  
根據問卷調查所得的資料，假設75%的建築師與園境師為本地，25%為非本地。

# 3. Methodology – Supply 供應預測方法



## Key assumptions 主要假設:

1. The retirement age is assumed to be age 65  
退休年齡為65歲
2. Age profile of professionals is applied to technicians and SSPs in the absence of such data  
由於缺乏工地監督人員和技術員的年齡數據，其年齡分佈以專業人士的有關數據取代之

# 3. Methodology – Stakeholder Engagement

## 預測方法 - 持分者的參與

### ◆ Expert Interviews (Aug 2016)

專訪 (2016年8月)

- **Focus: methodology, disciplines, overall approach**  
焦點: 預測方法、覆蓋範圍、整體方向
- **6 interviews conducted**  
進行了6個訪問

### ◆ Task Force meeting (Nov 2016)

專責小組會議 (2016年11月)

- **Focus: methodology, disciplines, overall approach**  
焦點: 預測方法、覆蓋範圍、整體方向

### ◆ Focus Group Meetings and Interviews (Jul – Aug 2017)

焦點小組會議及專訪 (2017年7至8月)

- **Focus: Initial forecast results, skill requirement**  
焦點: 初步預測結果, 技能要求
- **3 FGMs, 2 interviews**  
3次焦點小組會議和 2次專訪
- **Received comments from stakeholders on forecasts and skill requirements**  
聽取持分者對預測和技能要求的意見

### Consulted Parties

已諮詢的機構

TF-Chair	HKIA
AAP	HKILA
ACEHK	HKIE
HKCA	HKIS
HKFEMC	HKIP
HKCSA	HKICM
VTC	C&SD



# 4. Forecast – Professionals 專業人員人力預測

Relatively Low  
相對較低

Relatively High  
相對較高

Shortage 人力短缺



Professionals 專業人士	2018	2019	2020	2021	2022
Architect 建築師	Light Yellow	Light Yellow	Orange	Orange	Light Yellow
Landscape Architect 園境師	Orange	Light Yellow	Light Yellow	Light Yellow	Light Yellow
Civil Engineer 土木工程師	Orange	Orange	Orange	Orange	Orange
Structural Engineer 結構工程師	Light Yellow	Light Yellow	Light Yellow	Light Yellow	Light Yellow
Geotechnical Engineer 土力工程師	Light Yellow	Orange	Orange	Orange	Orange
Environmental Engineer 環境工程師	Light Yellow	Orange	Orange	Orange	Orange
Building Services Engineer 屋宇設備工程師	Light Yellow	Light Yellow	Light Yellow	Light Yellow	Orange
Electrical Engineer 電機工程師	Light Yellow	Light Yellow	Light Yellow	Orange	Orange
Mechanical Engineer 機械工程師	Light Yellow	Light Yellow	Light Yellow	Light Yellow	Orange
Building Engineer 建造工程師	Light Yellow	Light Yellow	Light Yellow	Orange	Orange
Building Surveyor 屋宇測量師	Light Yellow	Light Yellow	Light Yellow	Light Yellow	Light Yellow
Land Surveyor 土地測量師	Orange	Dark Brown	Dark Brown	Dark Brown	Dark Brown
Quantity Surveyor 工料測量師	Light Yellow	Light Yellow	Light Yellow	Light Yellow	Light Yellow
Town Planner 城市設計師	Light Yellow	Light Yellow	Light Yellow	Light Yellow	Orange

# 4. Forecast - Technicians & SSPs

## 技術員及工地監督人員人力預測

Relatively Low  
相對較低

Relatively High  
相對較高

Shortage 人力短缺



Technicians 技術員	2018	2019	2020	2021	2022
Draftsman 繪圖員					
Surveying Technician (Quantity) 工料測量員					
E&M Engineering Technician 機電工程技術員					
Civil / Structural / Geotechnical Engineering Technician 土木/結構/土力工程技術員					

SSPs 工地監督人員	2018	2019	2020	2021	2022
Manager 營造師					
Engineer 工程師					
Technical Officer 技術主任					
Supervisor 工程監督					
Clerk of works 監工					
Inspector 檢測員					
Agent 總管					
Foreman 管工					
Coordinator 統籌					
Safety Officer 安全主任					

# 4. Feedbacks from FGMs and Interviews

## 焦點小組會議和專訪概要

- **General shortage** of construction professionals, technicians and SSPs in the coming years, in view of the anticipated construction volume.  
按工程量預測估算，未來數年建造業的專業人員、技術員及工地監督人員均有短缺的情況。
- Regarding the impact of LegCo filibuster, they advised HKU to **suitably lower the scale of shortage in short-term** (i.e. in the coming 1-2 years).  
受拉布影響，小組建議研究團隊適度調低未來一至二年短缺程度的預測。
- They anticipated that there would have a **high demand on BIM modellers** in coming years.  
小組預計在未來數年建築資訊模型的建模者的需求頗大。

# 4. Forecasts - Skill Requirements 技能要求預測

Themes 主題	Aspects 範圍	Relevant Disciplines 相關專業
<b>BIM</b> 建築資訊模型	<ul style="list-style-type: none"> <li>BIM for civil works and asset management 基建工程和資產向管理的建築資訊模型</li> </ul>	Architects, Civil Engineers, Structural Engineers, QS, Building Engineers, BS Engineers, Electrical Engineers, Mechanical Engineers, Construction Managers, Site Engineers, Civil/Structural Engineering Technicians, QS Technicians 建築師, 土木工程師, 結構工程師, 工料測量師, 建造工程師, 屋宇設備工程師, 電機工程師, 機械工程師, 營造師, 工地工程師, 土木/結構工程技術員, 工料測量員
<b>Productivity</b> 生產力	<ul style="list-style-type: none"> <li>GPS, GIS systems for track and trace (e.g. worker and equipment movement, site safety, JIT logistics) 使用全球衛星定位系統, 地理信息系統作出追蹤和跟進 (例如: 工人和設備動向, 工地安全, 即時制物流)</li> </ul>	Construction Managers, Site Engineers, Supervisors, Foreman, Safety Officers 營造師, 工地工程師, 工程監督, 管工, 安全主任
	<ul style="list-style-type: none"> <li>Modular prefinished volumetric construction 模組化建築預製技術</li> </ul>	All disciplines except Landscape Architects, Geotechnical Engineers, Land Surveyors, Planners 除園景師, 土力工程師, 土地測量師和城市設計師外所有專業
<b>Safety</b> 安全	<ul style="list-style-type: none"> <li>Application of virtual reality and augmented reality for safety training 在安全訓練中使用擴張實境和虛擬實境</li> </ul>	All disciplines 所有專業
	<ul style="list-style-type: none"> <li>Adoption of new site safety technologies 採用最新的工地安全科技</li> </ul>	All disciplines 所有專業
<b>Environment</b> 環境	<ul style="list-style-type: none"> <li>Launch of BEAM Plus Existing Buildings Assessment Tool v2.0 (Sep 2015) – registration of new projects (Mar 2016) 採用BEAM Plus 第二代現存建築評估工具 (九月 2015) – 註冊新工程項目 (三月 2016)</li> </ul>	All professionals, Site Engineers, Construction Managers 所有專業人士, 工地工程師, 營造師
	<ul style="list-style-type: none"> <li>Code of practice for energy efficiency of building services installation (2015) 屋宇裝備裝置能源效益實務守則(2015)</li> </ul>	Electrical Engineers, Mechanical Engineers, Building Services Engineers, E&M Technicians 電機工程師, 機械工程師, 屋宇設備工程師, 電機及機械工程技術員
<b>Procurement</b> 採購	<ul style="list-style-type: none"> <li>Launch of the New Engineering Contract (NEC4) 使用新工程合約</li> </ul>	All Professionals, Site Engineers, Construction Managers, Site Supervisors, Safety Officers, Inspectors 所有專業人士, 工地工程師, 營造師, 工地工程監督, 安全主任, 檢測員
<b>Other soft skills</b> 其他技能	<ul style="list-style-type: none"> <li>Language (English and Mandarin) and communication skills 語言(英文和普通話)和溝通技巧</li> </ul>	All Professionals 所有專業人士
	<ul style="list-style-type: none"> <li>Understanding of history, culture and heritage 理解歷史和文化</li> </ul>	Architects, Landscape Architects, Planners 建築師, 園景師, 城市設計師

# Way Forward 未來路向

## Future enhancements 未來的改善方向

- Explore means to obtain age profile of SSP and Technicians  
尋求方法得到工地監督人員和技術員的年齡數據
- Enhance data collection from private sector  
加強收集私營界別的數據

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# Definition of Professional

## 專業人員的定義

### Architect 建築師

Plans, designs and supervises the erection of all types of building in compliance with building ordinance, regulations and requirements of public utilities. He is responsible for all stages and facets of a building project including advice on the brief, feasibility and sketch-planning, estimates, specifications, contract drawings and documents, tender action, contract supervision, and financial control. He also co-ordinates the work of allied disciplines engaged in building projects.

根據建築條例、規則及各公用事業公司的規定，策劃、設計及監督各類建築物的興建。負責每一建築計劃各階段及層面的工作，包括就以下事項提供意見：建築概要、可行性及簡圖策劃、預算、章程、承建圖則及文件、投標步驟、工程監督及經費控制。統籌與建築工程有關的工作。

### Landscape Architect 園境師

Identifies and advises on construction projects requiring landscaping and other major landscaping projects; designs landscaping; organizes and supervises landscaping work; and liaises with relevant authorities and other professionals.

確定需要美化環境的建造工程與其他美化環境主要工程，並提供意見；設計美化環境；組織及督導環境美化工作；以及與有關當局及其他專業人士聯絡。

Remarks: Unless otherwise specified, definitions are made reference to the Manpower Survey Report Building and Civil Engineering Industry, Building and Civil Engineering Training Board, Vocational Training Council

備註：除特別註明，所有定義均參考土木工程及建築業人力調查報告，職業訓練局土木工程及建築業訓練委員會



# Definition of Professional

## 專業人員的定義

### Civil Engineer 土木工程師

Plans, designs, constructs and supervises the construction of all civil engineering works required for the health, welfare, safety, employment and pleasure of mankind, and for development of natural resources and environmental control. Usually specializes in one or more of the following: (1) structural engineering (2) geotechnical engineering (3) hydraulic engineering (4) highway engineering (5) material engineering (6) traffic and transportation engineering (7) railway engineering (8) maritime engineering (9) airport engineering (10) other civil engineering fields

策劃、設計、建造及監督所有為人類衛生、福利、安全、就業與娛樂而進行的土木工程，與為天然資源發展及環境控制而設的其他建設。通常專於下列一種或多種工作：(1)結構工程 (2)土力工程 (3)水力工程 (4)公路工程 (5)材料工程 (6)交通及運輸工程 (7)鐵路工程 (8)海事工程 (9)機場工程 (10)其他土木工程

### Structural Engineer 結構工程師

Engages in one or more of the following activities (this job title does not refer to a civil engineer engaged in structural engineering work):

從事下列一項或多項工作 (從事結構工程的土木工程師並不包括在此工作類別內):

- (1) investigates structural engineering problems, 研究結構工程問題，
- (2) designs and advises on structures of industrial, commercial, public and residential buildings, 設計工業、商業、政府及住宅樓宇的結構，並提供專業意見
- (3) plans and supervises their erection, maintenance and repair 計劃和監督此等樓宇的建造與維修

# Definition of Professional

## 專業人員的定義

### Geotechnical Engineer 土力工程師

Plans, designs and supervises the construction and maintenance of slopes and geotechnical aspects of site formation, tunnel and foundation works, and the development of natural resources for the construction industry. (*Remarks: Engineering Geologist is included in this category*)

策劃、設計及監督土力工程及地基工程土力項目的建造與保養，以及為建造業開發天然資源。(備註: 包括工程地質學家)

### Environmental Engineer 環境工程師

Conceives, designs, appraises, directs, manages and supervises the construction of engineering works for the protection and promotion of public health and for the improvement of human's environments; investigates, improves and rectifies engineering works and other projects that are capable of injuring public health by being faulty in conception, design, direction or management.

構想、設計、評估、指導、管理及監督各種工程，以保護及促進公眾衛生與改善人類環境；調查、改良及糾正在構想、設計、指導或管理方面出錯以致損害公眾衛生的各種工程及其他計劃。

Remarks: Unless otherwise specified, definitions are made reference to the VTC Report

備註: 除特別註明, 所有定義均參考職業訓練局報告

# Definition of Professional

## 專業人員的定義

### Building Engineer 建造工程師

Designs, constructs, appraises and/or maintains buildings whose work includes technical, financial and management processes by which buildings are designed, constructed, maintained and renewed.

設計，構造，評估和/或維護建築物，以技術，財務和管理過程使建築物得到設計，建造，維護和更新。

\*Please also refer to the definition of Builder/Construction Manager: Directs and assumes responsibilities for all aspects of building engineering works in accordance with the agreed method, procedures, budget and specification; co-ordinates work of main contractor, sub-contractors, specialist contractors and suppliers; liaises with architects, engineers, surveyors, specialist consultants, contractors, and government departments; reviews, inspects, evaluates and reports on the quality, progress and cost of works and adjusts schedule as necessary.

\*請參閱營造師的定義:按照議定方法、程序、預算及章程，管理建築工程各項工作；協調總承建商、各分包商、專門承造商及供應商負責的工作；與建築師、工程師、測量師、專業顧問、承建商及各政府部門聯絡；對工程的質素、進度及成本進行檢討、視察、評估及提交報告，並在需要時修訂工程進度計劃。

### Building Services Engineer 屋宇設備工程師\*

Designs and advises on building services facilities in buildings. Plans, supervises and coordinates their installation, testing, maintenance and repair. (*Remarks: Fire Engineer is included in this category*)

設計屋宇內的屋宇設備、策劃、監督及協調其裝設、測試、保養和修理。(備註: 包括消防工程師)

\*Taken comments from practitioners in the construction industry, it is difficult to have a clear cut on the duties of Building Services, Electrical and Mechanical Engineers in actual work situation. The 3 types of Professionals are grouped into 1 category for calculation in the Model.

\*業界意見反映,難以清楚界定屋宇設備工程師,電機工程師和機械工程師的工作. 因此在此模型中,這三個專業會組合成一個。

# Definition of Professional

## 專業人員的定義

### Electrical Engineer 電機工程師\*

Researches into electrical engineering problems; designs and advises on electrical systems and equipment; and plans and supervises their development, construction, manufacture, installation, operation, maintenance and repair.

研究電機工程問題；設計電機系統及設備，並就該方面提供意見；策劃及管理其發展、建造、製造、安裝、操作、保養及修理。

### Mechanical Engineer 機械工程師\*

Researches into mechanical engineering problems; designs and advises on mechanical plant and equipment; plans and supervises their development, manufacture, construction, installation, operation, maintenance and repair. (*Remarks: Lift/ Escalator Engineer is included in this category*)

研究機械工程問題；設計機械裝置及設備，並就該方面提供意見；策劃及管理其發展、製造、建造、安裝、操作、保養及修理。

### Building Surveyor 屋宇測量師

Deals with the planning, administration and co-ordination of all types of works (including maintenance) to buildings and land with particular cognizance of requirements, by relevant public health, planning and building regulations.

策劃、管理及協調各類屋宇及土地工程（包括保養工程），並須注意公共衛生、規劃及建築條例的規定。

\*Taken comments from practitioners in the construction industry, it is difficult to have a clear cut on the duties of Building Services, Electrical and Mechanical Engineers in actual work situation. The 3 types of Professionals are grouped into 1 category for calculation in the Model.

\*業界意見反映,難以清楚界定屋宇設備工程師,電機工程師和機械工程師的工作. 因此在此模型中,這三個專業會組合成一個。

# Definition of Professional

## 專業人員的定義

### Land Surveyor 土地測量師

Undertakes the physical measurement of land and collates data for the preparation of plans and maps including cadastral surveying for land registration, topographical surveying, geodetic surveying and hydrographic surveying.

從事土地的實體測量及整理資料以編製圖則及地圖，其工作包括地籍測量、地形測量、大地測量及水文測量。

### Quantity Surveyor 工料測量師

Deals with the following aspects of building and civil engineering design and construction administration:處理下列各方面的屋宇及土木工程設計與建造管理工作：

- (1) design cost and cost planning,設計成本及成本策劃
- (2) pre-contract documentation including bills of quantities and/or contract specifications, 訂定合約前的文件，包括工程數量單及／或合約章程
- (3) tendering procedures, contractual agreements and advice on selection of tenders, 投標手續，合約協定，並就選取投標提供意見，
- (4) post-contract services including measurement of work, preparation of interim and final payment certificates and settlement of other contractual claims. 訂定合約後的服務，包括估量工程、編製中期與末期承建費證書，以及解決其他與合約有關的索償。

# Definition of Professional

## 專業人員的定義

### Town Planner 城市設計師

Prepares and implements town plans at various levels, in the form of maps and planning reports; and undertakes planning studies, for the provision of a satisfactory physical environment in the urban and rural areas with a view to promoting the health, safety, convenience and general welfare of the community.

以地圖及設計報告方式製備及實行各階段的城市設計計劃；從事設計研究，為市區及郊區提供良好自然環境，以促進社會的公眾衛生、安全、利便及福利。

# Definition of Technician

## 技術員的定義

### Draftsman 繪圖員

Interprets the Architect's initial design concepts and sketches into a practical building solution, and translates this information into submission/contract drawings, taking due account of the constraints imposed by economic, environmental, technological and legislative requirements; involves in Building Information Modeling (BIM) works, coordinates information and works of other disciplines involved including statutory bodies; assists in the checking of shop drawings and prepares site sketches for projects at the construction stage; from sketch designs prepares general and detailed drawing under the supervision of architects, engineers, surveyors or contractors.

考慮到經濟、環境、技術及法例的限制，將建築師的初步設計概念及草圖製成工程繪圖；參與建築資訊模型（BIM）工作；協調其他行業，包括法定機構的工作；協助查核裝配圖，以及為建築階段工程預備工地草圖；在建築師、工程師、測量師及承建商的監督下根據設計概要繪製一般及明細圖則。

### Quantity Surveying Technician 工料測量員

Assists the quantity surveyor in preparing bills of quantities by performing taking-off, working-up and abstracting, and measuring and valuating completed works or variations.

協助工料測量師編製工程數量單，量度各項完成工程或更改工程，及計算其價值。

# Definition of Technician

## 技術員的定義

### E&M Engineering Technician 機電工程技術員

Performs technical tasks, either independently or under the direction of a qualified engineer, contributory to design, installation, operation, maintenance and repair of electrical engineering, mechanical engineering or building services systems and equipment. Assists to plan, coordinate and supervise their projects.

單獨或在有資歷工程師的指導下，擔任技術性工作，從事設計、安裝、操作、保養及修理電機及機械裝置及設備，並協助工程師策劃、協調及管理有關計劃。

### Civil/Structural/Geotechnical Engineering Technician 土木/結構/土力工程技術員

Carries out civil/structural/geotechnical engineering work under the supervision of a civil/structural/geotechnical engineer.

在土木/結構/土力工程師督導下，從事土木/結構/土力工程工作。



# Definition of SSP

## 工地監督人員的定義

### Construction Manager 營造師

Plans, directs and assumes responsibilities for all aspects of construction on site in accordance with the agreed method, procedures, budget and specification; coordinates work of main contractor, sub-contractors, specialist contractors, and suppliers; liaises with architects, engineers, surveyors, specialist consultants, contractors, and government departments; reviews, inspects, evaluates, and reports on the quality, progress and cost of works and adjusts schedule as necessary. (*Remarks: construction managers, contracts managers, project managers and site managers are included in this category*)

按照議定方法、程序、預算及章程，管理建築工程各項工作；協調總承建商、各分包商、專門承造商及供應商負責的工作；與建築師、工程師、測量師、專業顧問、承建商及各政府部門聯絡；對工程的質素、進度及成本進行檢討、視察、評估及提交報告，並在需要時修訂工程進度計劃。(備註：包括營造師，合約管理人，項目管理人和工地管理人)

*Note: Most of construction managers are professionals, including Architects, Civil Engineers, Structural Engineers, Building Services Engineers, Building Surveyors and Quantity Surveyors*

*注意：大部份營造師同時為專業人士如建築師，土木工程師，結構工程師，屋宇設備工程師，屋宇測量師和工料測量師*

### Engineer 工程師\*

Plans, designs and supervises the construction and maintenance of all engineering works on site required for the health, welfare, safety, employment and benefit of mankind, and for development of natural resources and environmental control. Investigates and reports on engineering problems on site, devises solutions and manages their implementation including development, manufacture, construction, installation, testing, operation, maintenance and repair.

*Note: Engineers are part of those in the relevant professional disciplines covered in the section of Professional.*

為人類的健康，福利，安全，就業和福利，以及開發自然資源和環境控制，負責規劃，設計和監督現場所有工程施工和維護。現場調查和報告工程問題，設計解決方案，管理實施，同時包括開發，製造，施工，安裝，檢測，運行，維護和維修。

*注意：工程師包括在專業人士分類中*

*\* Except E&M Engineer\* 除電機及機械工程師外*

# Definition of SSP

## 工地監督人員的定義

### Technical Officer 技術主任

Supervises the work of the technician/ artisan in the daily construction, maintenance and testing work on site. Provides general assistance to professional staff in all technical aspects of civil engineering work on site. Carries out minor design work, prepares drawings, charts and schedules and maintains civil engineering records on site.

在現場的日常施工，維護和檢測工作中監督技師/工匠的工作。在現場土木工程工作的所有技術方面向專業人員提供一般協助。進行小型設計工作，準備圖紙，圖表和時間表，並在現場維護土木工程記錄。

### Supervisor 工程監督

Inspects building and civil engineering construction works (including maintenance works) to ensure conformity with contracts, drawings, specifications, workmanship standards and relevant legislation.

規劃，管理，指導和指揮員工和建造工人進行建築和土木工程（包括所有保養工程），以確保符合合同，圖紙，規格，工藝標準和相關法規。

### Clerk of work 監工

Acts as the representative of the client on site, inspects building construction works (including maintenance works) to ensure conformity with contracts, drawings, specifications, workmanship standards and relevant legislation.

代表業主視察建築及土木工程（包括所有保養工程）以確保符合合約、圖則、章程、規格及有關法例。

### Inspector 檢測員

Acts as the representative of the client on site, inspects civil engineering construction works (including all maintenance works) to ensure conformity with contracts, drawings, specifications, workmanship standards and relevant legislation.

作為客戶代表，檢視建築及土木工程（包括所有保養工程）以確保符合合約、圖則、章程、規格及有關法例。

# Definition of SSP

## 工地監督人員的定義

### Agent 總管

Plans, organizes, directs, and coordinates all activities and resources on the construction site through foremen in accordance with the agreed method, procedure, budget and specifications. Mainly hired by the contractor and is subordinate to the Manager.

按照議定方法、程序、預算與章程，並在副手及總管工協助下，策劃、組織、管理及協調地盤的全部工作及資源。

### Foreman 管工

Supervises, directs, and coordinates normally under the general control of the site agent, the activities of workers engaged in construction works and requisitions.

通常在地盤總管的管轄下，監督、指揮及協調建造工程工人的工作，並負責申領、接收及檢查材料與供應品。

### Coordinator 統籌

Supervises labour and plant on site, liaises between clients, designers and subcontractors and manages interfaces between disciplines on site. Prepares programmes, monitors progress and resources, resolves problems, keeps records and provides reports on project progress.

監督現場勞工和工廠，作為客戶，設計師和分包商之間的聯絡，並作為現場的不同專業人士之間的接口。準備方案，監測進度和資源，解決問題，保存記錄並提交項目進展情況報告。

# Definition of SSP

## 工地監督人員的定義

### Safety Officer 安全主任

Assists the employer of a workplace or a construction site in promoting the safety and health of persons employed therein, including the inspection of workplace, plants, equipment or works processes to identify any risks and to advise on preventive measures; investigates accidents and dangerous occurrences and makes recommendations to prevent similar accidents

協助工作場所或建築地盤的東主從事促進僱員安全及健康的工作，包括視察廠房、設備或一般鑒別工作危險的程序，並就預防措施提供意見；調查意外及危險事故的成因，並就如何避免發生同類意外提供意見。