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## 1. Background

## **Background**

Construction Industry Council (CIC) is established under the Construction Industry Council Ordinance (Cap. 587).

The main functions of CIC are to forge consensus on longterm strategic issues, convey the industry's needs and aspirations to Government, as well as provide a communication channel for Government to solicit advice on all construction-related matters.

CIC has been regularly updating the construction expenditure and manpower forecast. Having regard to the latest update of construction expenditure forecast released in May 2022, CIC updated its construction manpower forecast and publish them in this documentation in February 2023.



## 2. Objective

## **Objective**

The objective of the Manpower Forecast is to provide forecast results including the following information:

- (a) the trends of manpower demand and supply in the HK construction industry; and
- (b) the gap between the demand and supply of the construction manpower

with a view to supporting policy makers to formulate shortterm actions and long-term strategies for meeting the future construction manpower demand.

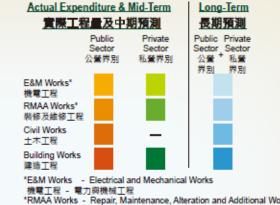


## 3. Forecast Methodology

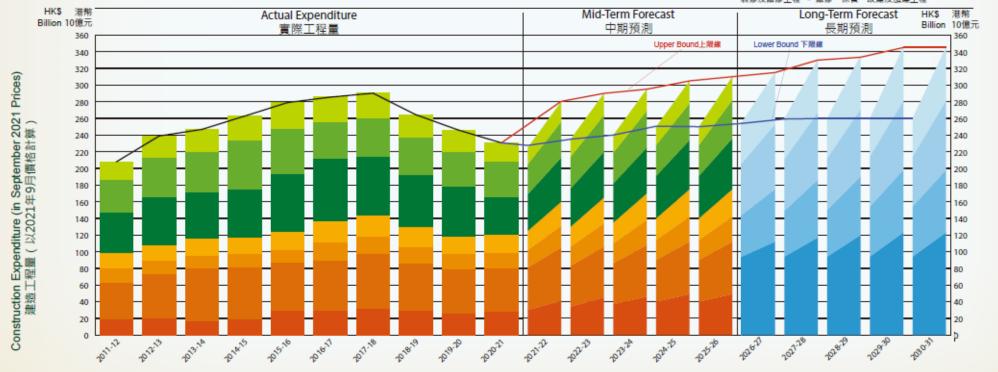
### **Construction expenditure forecast** (as published in May 2022 and recapped below)

CONSTRUCTION EXPENDITURE FORECAST FOR PUBLIC AND PRIVATE SECTORS\* (2021/22 TO 2030/31)

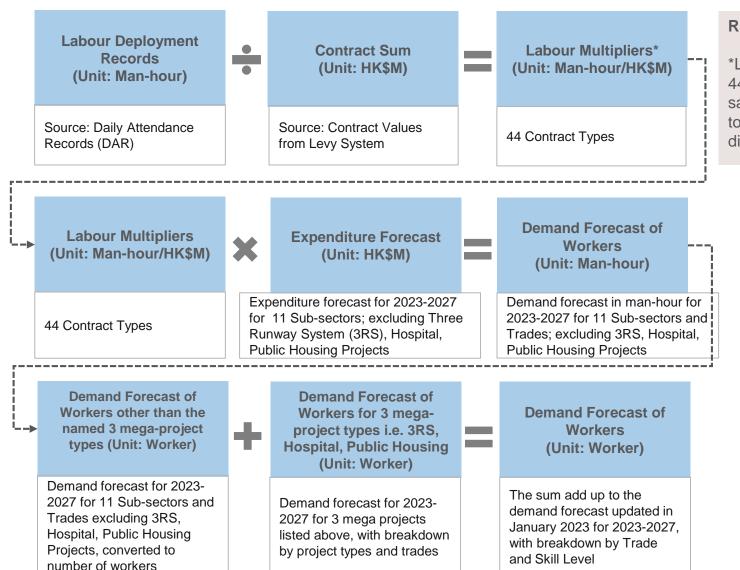
公營界別及私營界別 建造工程量預測\* (2021/22 至 2030/31)



\*RMAA Works - Repair, Maintenance, Alteration and Additional Works 裝修及維修工程 - 維修·保養·改建及加建工程



#### Construction Workers – Methodology for forecasting demand



#### Remarks:

\*Labour multipliers are derived for 44 contract types (based on a sample size of about 800 contracts) to reflect the manpower needs of different types of projects

#### **Construction Workers – Methodology for forecasting supply**



New Entrants
(taking account of existing Training and Productivity Proficiency)

**Existing Pool of Registered Workers** 

Source: Attendance Records in all Construction Sites provided to CIC as required under the Construction Workers Registration Ordinance (CWRO) Sources: Workers' Registration System and Training Records of CIC



(taking account of retiring workers, workers in Macau, Workers no longer engaged in the industry based on attendance records)

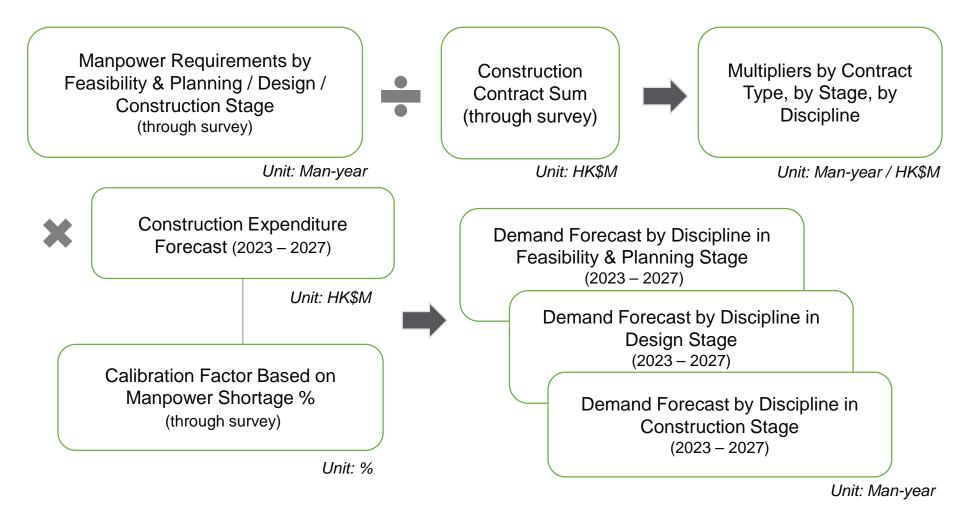
Sources: Workers' Registration System, Macau Statistics and Census Service, Telephone Survey Results on Manpower Situation



Forecast Supply of Active Workers

Supply forecast for 2023 – 2027 with breakdown by trade and skill levels

# Professionals, Technicians and Site Supervisory Personnel – Methodology for forecasting demand



## Professionals, Technicians and Site Supervisory Personnel

#### Methodology for forecasting supply



New Entrants
(taking account of existing Intake
Quotas, Graduate Employment
Rate, Change in Professional
Membership Numbers)

Sources: UGC, CIC, VTC and Other Educational Institutions

#### **Existing Pool**

Source: VTC Manpower Survey Report



Forecast Supply of Professionals, Technicians and Site Supervisory Personnel (2023-2027)

Retirees
(taking account of Age Profiles of Professional Members)

Source: Professional Institutions

#### **Industry consultation**

Consultation with relevant industry associations:

#### (1) For professional, technician and Site Supervisory Personnel

- Construction Industry Training Board
- Clients
- Professional Institutions
- Contractors/Sub-contractors Association

#### (2) For skilled/semi-skilled workers

- Construction Industry Training Board
- Task Force on CIC Manpower Forecasting Model Updating and Enhancement Study
- Contractors/Sub-contractors Association
- Labour Union



## 4. Forecast Results

#### Part A: Overall Forecasted Mismatch (demand less supply)

|                              | 2023     | 2024     | 2025     | 2026     | 2027     |
|------------------------------|----------|----------|----------|----------|----------|
| Skilled/Semi-Skilled Workers | 10,000 — | 15,000 — | 15,000 — | 20,000 - | 35,000 - |
|                              | 15,000   | 20,000   | 20,000   | 25,000   | 40,000   |
| Technicians                  | 2,500 –  | 4,000 —  | 4,000 -  | 5,000 -  | 5,500 –  |
|                              | 3,000    | 4,500    | 4,500    | 5,500    | 6,000    |
| Site Supervisory Personnel   | 1,000 –  | 1,500 –  | 1,500 –  | 1,500 –  | 2,000 -  |
|                              | 1,500    | 2,000    | 2,000    | 2,000    | 2,500    |
| Professionals                | 4,000 -  | 5,500 -  | 5,500 -  | 5,500 -  | 6,000 –  |
|                              | 4,500    | 6,000    | 6,000    | 6,000    | 6,500    |

| Stable trend, no shortage expected | Considerable shortage (16% to 25%) |
|------------------------------------|------------------------------------|
| Mild shortage (5% and less)        | Serious shortage (25% and more)    |
| Moderate shortage (6% to 15%)      |                                    |

Note: Forecast numbers have been rounded to the nearest 100. Figures shown are the difference of supply and demand in that year. Percentage range shows the percentage of the projected mismatch for an individual year as compared to the supply in the same year. Comparison with the supply could reflect how far we need to enhance the supply to catch up with the projected demand, serving the purpose of manpower planning.

#### Part B: Forecasted Mismatch - Skilled/semi-skilled Workers

| Major Trade  | 2023 | 2024 | 2025 | 2026 | 2027 |
|--|------|------|------|------|------|
| Bar Bender and Fixer                                   |      |      |      |      |      |
| Cement Sand Mortar Worker                              |      |      |      |      |      |
| Concrete and Grouting Worker                           |      |      |      |      |      |
| Curtain Wall and Glass Panels Installer                |      |      |      |      |      |
| Drain and Pipe Layer                                   |      |      |      |      |      |
| Electrician  |      |      |      |      |      |
| False Ceiling Installer                                |      |      |      |      |      |
| Fire Service Mechanic                                  |      |      |      |      |      |
| Leveller   |      |      |      |      |      |
| Lift and Escalator Mechanic                            |      |      |      |      |      |
| Metal-steel Worker                                     |      |      |      |      |      |
| Painter and Decorator                                  |      |      |      |      |      |
| Paving Block Layer                                     |      |      |      |      |      |
| Plant and Equipment Mechanic (Construction Work)       |      |      |      |      |      |
| Plant and Equipment Operator                           |      |      |      |      |      |
| Refrigeration/ Air- conditioning/ Ventilation Mechanic |      |      |      |      |      |
| Rigger/Metal Formwork Erector                          |      |      |      |      |      |
| Scaffolder   |      |      |      |      |      |
| Welder   |      |      |      |      |      |
| Woodworker   |      |      |      |      |      |

Stable trend, no shortage expected

Mild shortage (5% and less)

Moderate shortage (6% to 15%)

Considerable shortage (16% to 25%)

Serious shortage (25% and more)

#### Part B: Forecasted Mismatch – Technicians and SSPs

| Discipline   | 2023 | 2024 | 2025 | 2026 | 2027 |
|--|------|------|------|------|------|
| BIM Coordinator  |      |      |      |      |      |
| BIM Modeller   |      |      |      |      |      |
| Civil/ Structural/ Geotechnical Engineering Technician |      |      |      |      |      |
| Clerk of Works / Inspector                             |      |      |      |      |      |
| Draftsman  |      |      |      |      |      |
| Environmental Technician                               |      |      |      |      |      |
| E&M Engineering Technician                             |      |      |      |      |      |
| Fire Services Technician                               |      |      |      |      |      |
| Landscape Technician                                   |      |      |      |      |      |
| Lift/Escalator Technician                              |      |      |      |      |      |
| Project Coordinator                                    |      |      |      |      |      |
| Refrigeration/Air-conditioning/Ventilation Technician  |      |      |      |      |      |
| Safety Officer   |      |      |      |      |      |
| Site Agent   |      |      |      |      |      |
| Site Foreman   |      |      |      |      |      |
| Supervisor   |      |      |      |      |      |
| Surveying Technician (Building)                        |      |      |      |      |      |
| Surveying Technician (Land)                            |      |      |      |      |      |
| Surveying Technician (Town Planning)                   |      |      |      |      |      |
| Surveying Technician (Quantity)                        |      |      |      |      |      |
| Technical Officer                                      |      |      |      |      |      |

Stable trend, no shortage expected
Mild shortage (5% and less)
Moderate shortage (6% to 15%)

Considerable shortage (16% to 25%) Serious shortage (25% and more)

#### **Part B: Forecasted Mismatch – Professionals**

| Discipline                           | 2023 | 2024 | 2025 | 2026 | 2027 |
|--------------------------------------|------|------|------|------|------|
| Architect                            |      |      |      |      |      |
| BIM Manager                          |      |      |      |      |      |
| Building Surveyor                    |      |      |      |      |      |
| Civil Engineer                       |      |      |      |      |      |
| Construction Manager / Site Engineer |      |      |      |      |      |
| Electrical / Mechanical Engineer     |      |      |      |      |      |
| Environmental Engineer               |      |      |      |      |      |
| Geotechnical Engineer                |      |      |      |      |      |
| Land Surveyor                        |      |      |      |      |      |
| Landscape Architect                  |      |      |      |      |      |
| Structural Engineer                  |      |      |      |      |      |
| Town Planner                         |      |      |      |      |      |
| Quantity Surveyor                    |      |      |      |      |      |



# 5. Way Forward

## **Way Forward**

- 1. To submit the forecast results to Development Bureau for its consideration and provide input to the Bureau for its formulation of the necessary manpower measures to address the manpower needs of the industry.
- 2. To continue the regular update on the manpower forecast for workers, technicians & site supervisory personnel and professionals.



## 6. Disclaimer

#### **Disclaimer**

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