

「持續推動建築設計安全」網上研討會

WEBINAR ON CONTINUOUS PROMOTION ON DESIGN FOR SAFETY

《閉幕辭》 Closing Remarks

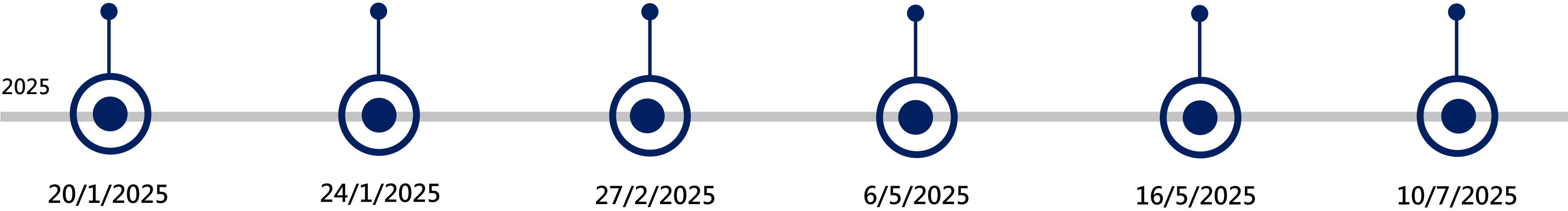
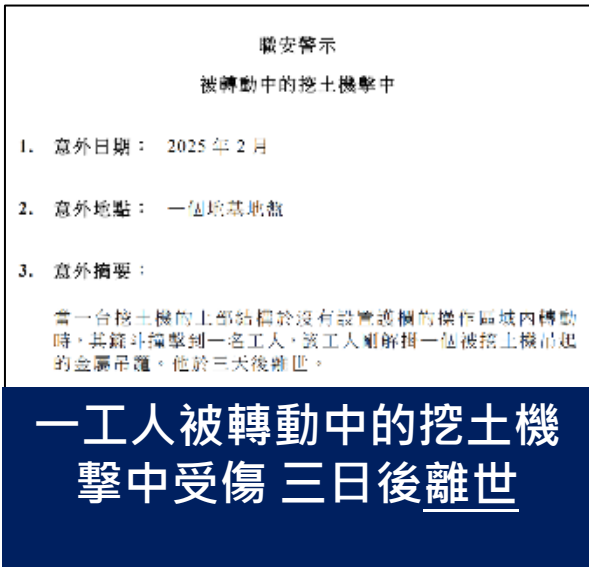
建造業議會主席何安誠教授工程師
Ir Prof. Thomas HO, Chairman, CIC

16.07.2025



2025年建造業致命意外 (截至2025年7月10日)

Fatal Accidents in Construction Industry in 2025 (As of 10 July 2025)







建造業安全意識問卷調查2024

Survey on Safety Awareness 2024

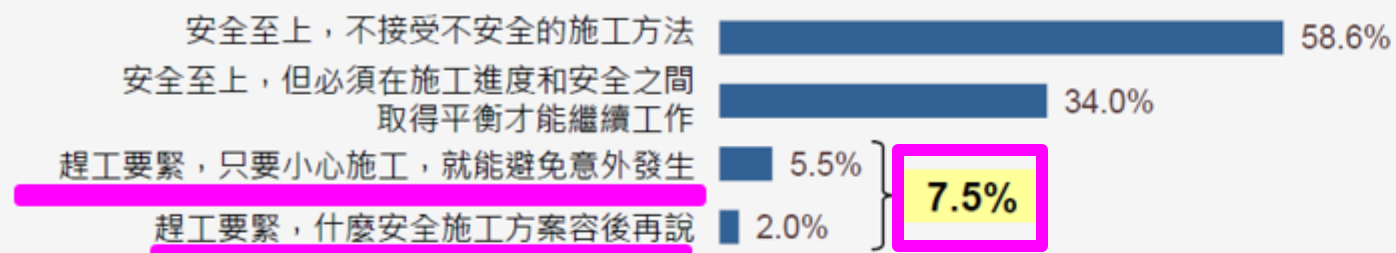
主題: 工友情景題

Topic: Scenario-based Questions for Workers

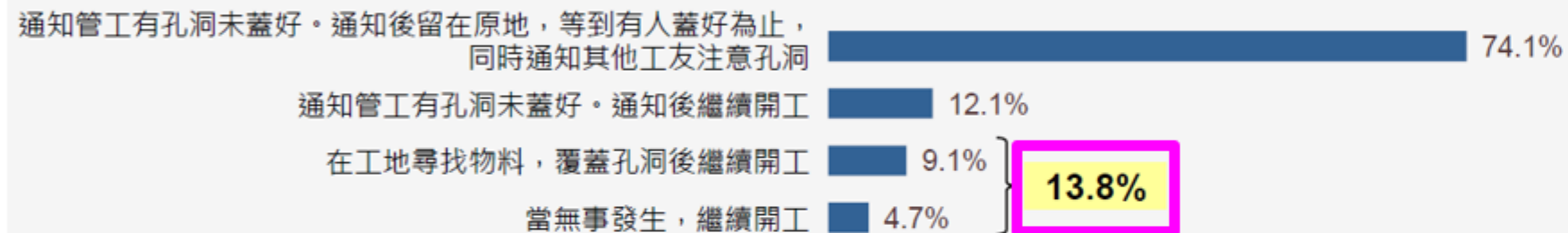
有7.5%到13.8%的工友選擇了明顯錯誤的答案，顯示安全意識仍需加強。

Between 7.5% and 13.8% of the workers selected apparently incorrect answers, indicating that safety awareness still needs to be strengthened.

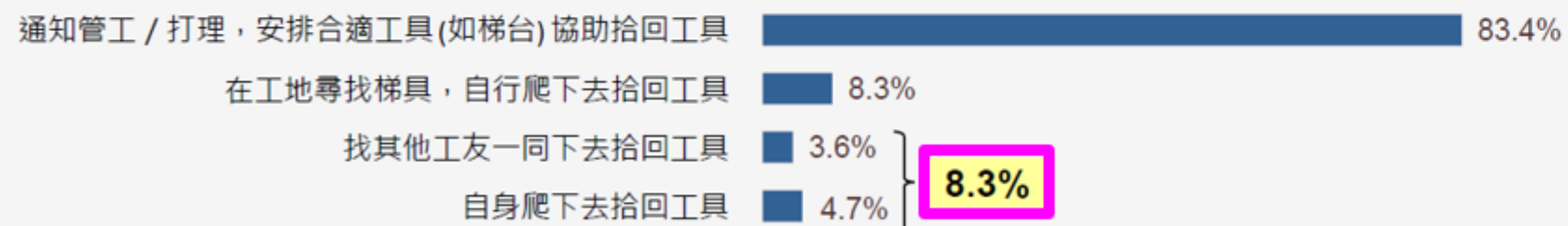
假設地盤趕工，您會選擇哪種態度？



如果發現有孔洞，您會怎樣處理？



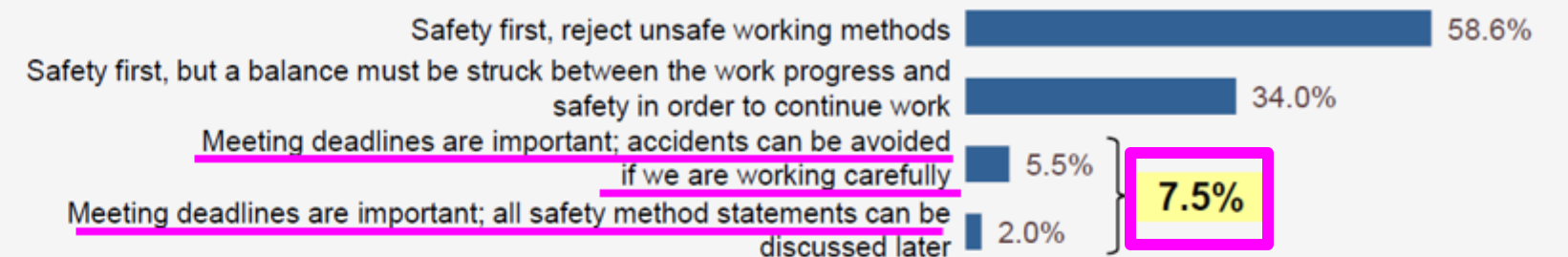
如果工作的工具跌入孔洞內，您會怎樣處理？



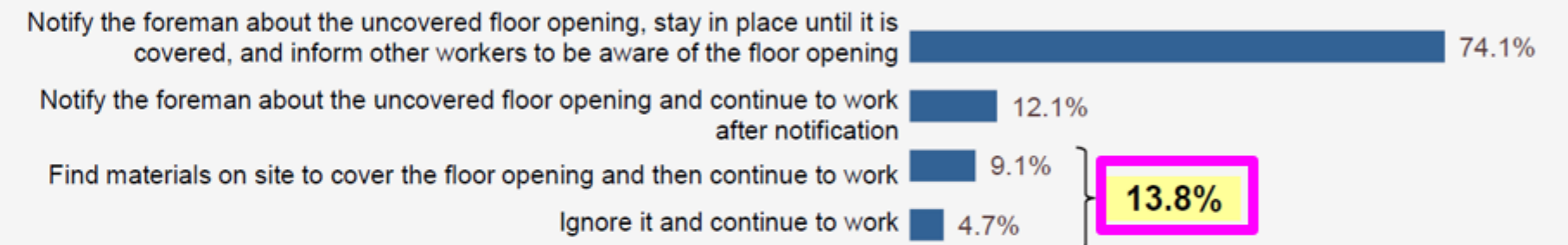
(N = 1,384)

0% 20% 40% 60% 80%

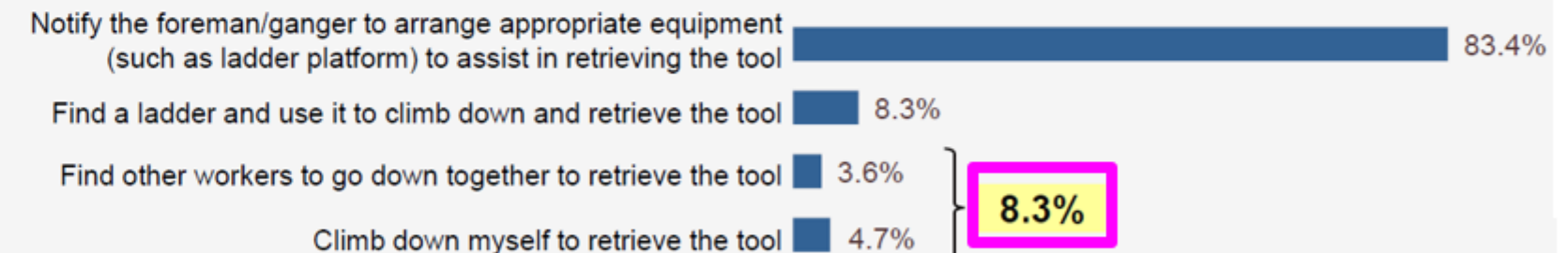
What attitude would you choose if the site is rushing to meet deadlines?



What would you do if you found a floor opening?



If a tool falls into an opening, how would you handle it?



(N = 1,384)

0% 20% 40% 60% 80%



建造業安全意識問卷調查2024

Survey on Safety Awareness 2024

主題: 工友開工習慣

Topic: Workers' Work Habits

問題: 請選擇你開工前的習慣(可選擇多於一項)?

Q: Select your Habits Before Starting the Works (May select more than one)?

Choices of habits before starting the works

- ☐ Observe the conditions of the workplace and confirm that it is safe before starting work
- ☐ Ensure there is a safe working procedure before starting work
- ☐ Ensure the use of appropriate personal protective equipment (PPE) before starting work
- ☐ Ensure safety training has been completed before starting work

☒ Only Selected this Habit (4.7%)
Follow the order arranged by the foreman/ganger

☒ Only Selected this Habit (3.3%)
Proceed the work based on working experience

開工前的習慣的選項

- ☐ 觀察工作地點情況，安全才開工
- ☐ 確保有安全施工程序才開工
- ☐ 確保使用合適個人防護裝備才開工
- ☐ 確保開工前接受安全培訓

☒ 單選這一個習慣 (4.7%)
聽從管工 / 打理安排

☒ 單選這一個習慣 (3.3%)
按工作經驗正常施工

推算Calculation

*註冊建造業工人數目(2024年高參與水平工友): 大約160,000人
Registered Construction Workers (Heavily Engaged Workers in 2024): about 160,000

若果問卷數據代表整體建造業界工人:

If the survey data represents all construction workers in the industry:

$$160,000 \times 4.7\% = 7,520 \text{ 人}$$

◆ 大約有7,520位工人只「聽從管工 / 打理安排」
Around 7,520 workers only "Listen to Foreman / Gangers"

$$160,000 \times 3.3\% = 5,280 \text{ 人}$$

◆ 大約有5,280位工人只「按工作經驗正常施工」
Around 5,280 workers only "Based on Working Experience"

- 工頭/揸Fit人/座頭/區長非常重要
Roles of Ganger/ Block Foreman/ Area Foreman are critical
- 工友的意識非常重要
Workers' awareness is vital
- 推己及人，延伸關愛文化
Cascade caring culture
- 行孖咗
Work in pairs



建造業安全意識問卷調查2024

Survey on Safety Awareness 2024

主題: 建造安全文化 – 自身義務
Topic: Construction Safety Culture - Obligation

約 14% 工友認為沒有義務執行「動態風險評估」

About 14% of workers think they are not obliged to "Implement Dynamic Risk Assessments"

約 6% 前線管理人員認為沒有義務帶領工友執行「動態風險評估」

About 6% of frontline supervisors think they are not obliged to "Leading to Implement Dynamic Risk Assessments"

你認為自身在推動安全文化中是否需要承擔以下義務？ (回答：是)
Do you agree you are responsible for the followings in promoting safety culture? (Answer: Yes)

Obligation	義務	工友 Workers	前線管理人員 Frontline Supervisors	持份者 Stakeholders
Ensuring that you wear appropriate personal protective equipment	確保自己佩戴合適的個人防護安全裝備	95.7%	98.1%	98.6%
Being vigilant about risky behaviors and potential danger zones on the site	對危險工地行為和潛在危險區域加以警惕	94.5%	96.5%	98.2%
Understanding the safety measures and response methods for safety incidents	了解及認識工地安全措施和發生安全事故的應對方法	94.5%	96.5%	98.1%
Recognising potential safety risks on the site	認識工地潛在的安全風險	93.9%	96.9%	97.3%
Reminding other workers about unsafe behaviors	對其他工友的不安全行為加以提醒	93.9%	96.1%	97.3%
Clearly understanding the consequences of safety incidents	清楚認識安全事故所引致的後果	93.9%	96.5%	98.8%
Ensuring the compliance with laws, codes of practice, and guidelines	確保符合法例、安全守則及指引	93.2%	95.4%	98.1%
Proactively reporting potential safety hazards on construction sites	主動匯報工地潛在的安全風險	92.6%	N/A	N/A
Conduct dynamic risk assessments	執行動態風險評估	86.1%	N/A	N/A
Leading workers to implement dynamic risk assessments	帶領工友執行動態風險評估	N/A	93.8%	N/A
Supervising the workers to carry out the construction works safely	應監督工友安全地施工	N/A	96.1%	N/A



建造業安全意識問卷調查2024

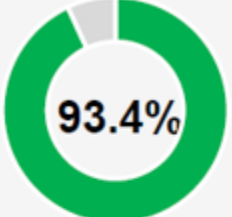
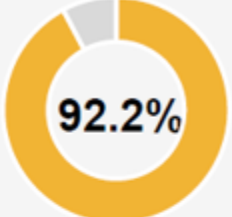
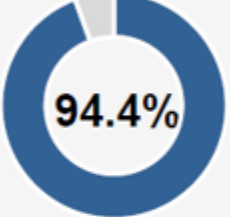
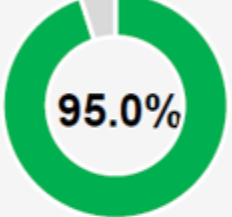
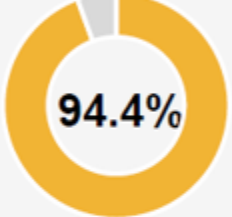
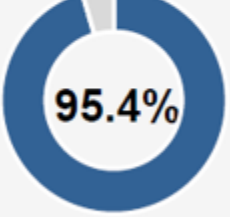
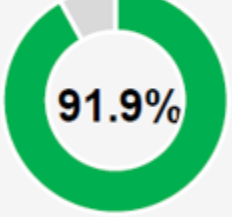
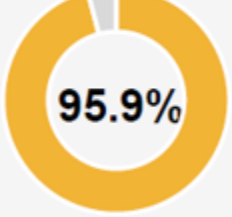
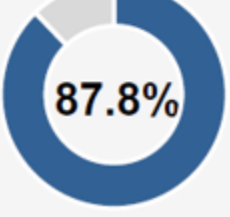
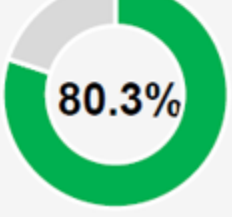
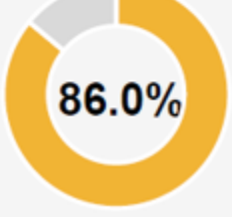
Survey on Safety Awareness 2024

主題: 提升安全文化的誘因

Topic: Enhancement of the Safety Culture Factors

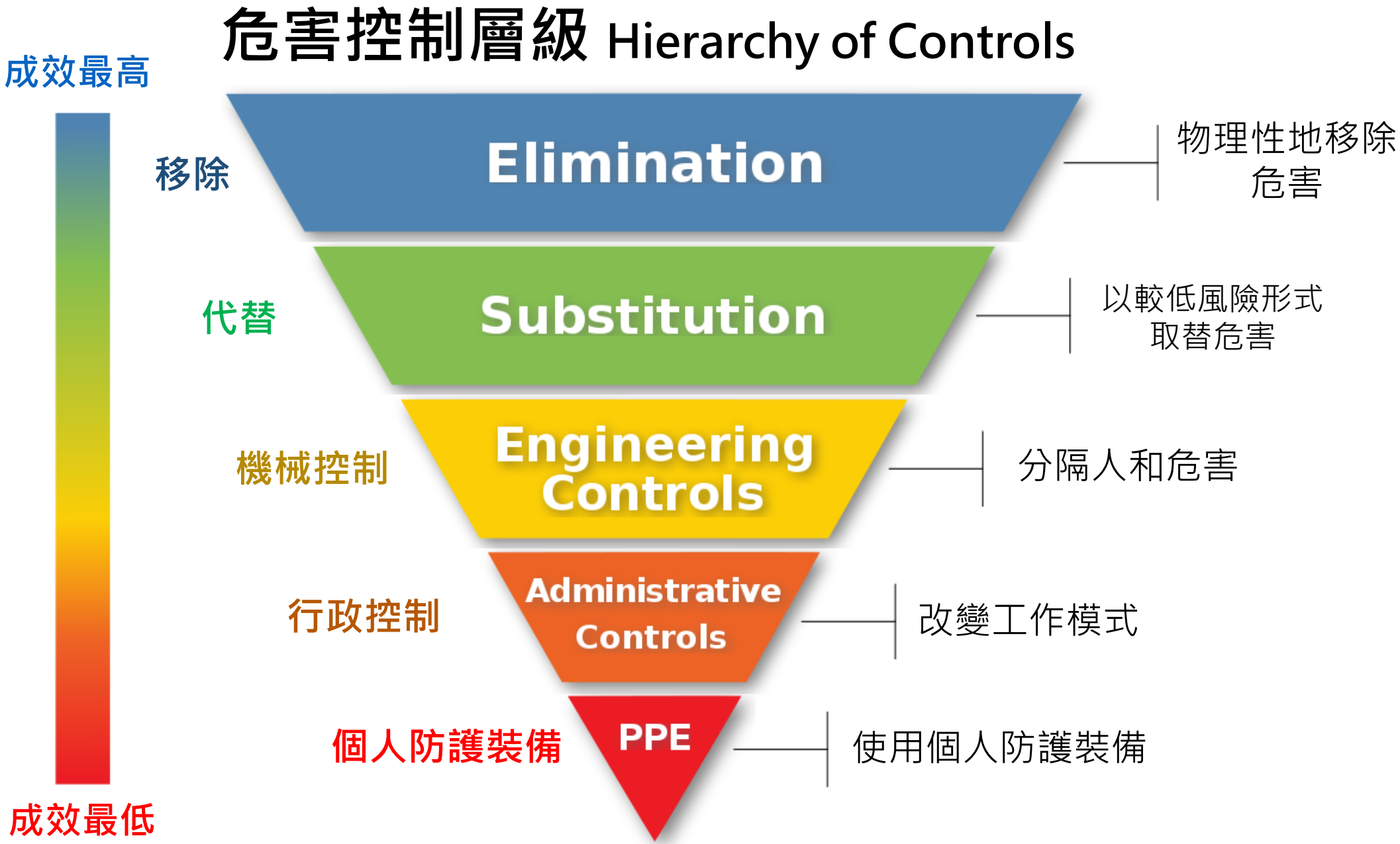
超過9成前線管理人員及持份者均認為
「引入建築設計安全可提升本地建造業安全文化」
Over 90% Frontline Supervisors and Stakeholders believe that
incorporating Design for Safety ("DfS") can enhance the safety culture

- 絕大部分受訪者同意引入**建築設計安全**、**建立鼓勵及表揚制度**，及**提供安全培訓**可提升本地建造業安全文化，工務或公私營工程之間的分別並不明顯。
Most respondents concurred that incorporating **Design for Safety (DfS)**, **encouragement and praise**, as well as the **provision of safety training**, could enhance the safety culture within the local construction industry. Results suggested that the distinction between public and private projects was minimal.

Questions	問題	工友 (N = 1,384)	前線管理人員 (N = 259)	持份者 (N = 514)
Do you believe that incorporating Design for Safety (DfS) can enhance the safety culture? (Answer: Yes)	你認為 引入建築設計安全 可提升安全文化嗎? (回答: 是)		 93.4%	 92.2%
Do you believe that recording good safety performance of frontline personnel in the construction industry can enhance site safety culture through encouragement and praise ? (Answer: Yes)	你認為 記錄良好安全表現的建造業前線人員 ，以 鼓勵及表揚方式 以提升工地安全文化嗎? (回答: 是)	 94.4%	 95.0%	 94.4%
Do you believe that providing safety training to frontline personnel can improve their safety performance? (Answer: Yes)	你認為 提供安全培訓 ，可提升工地前線人員安全表現嗎? (回答: 是)	 95.4%	 91.9%	 95.9%
Do you believe that adopting a Smart Site Safety System (4S) can enhance safety culture on site? (Answer: Yes)	你認為採用 安全智慧工地系統 (4S) ，可提升工地安全文化嗎? (回答: 是)	 87.8%	 80.3%	 86.0%

建築設計安全 - 風險防範及管理

Design for Safety - Risk Prevention and Management



從源頭消除或降底風險

👍 Eliminate or reduce risks from the sources



個人防護裝備
只係最後防線!!
Personal Protective Equipment
("PPE") is the last resort!!

建築設計安全先導計劃

Design for Safety Pilot Run Scheme

參與機構包括 (按字母順序排列)

- 機場管理局 Airport Authority
- 其士 (建築) 有限公司 Chevalier (Construction) Company Limited
- 土木工程拓展署 Civil Engineering and Development Department
- 機電工程署 Electrical and Mechanical Services Department
- 恒基兆業地產有限公司 Henderson Land Development Company Limited
- 香港房屋協會 Hong Kong Housing Society
- 香港置地集團公司 Hongkong Land Limited
- 香港電燈有限公司 The Hongkong Electric Co., Ltd.
- 市區重建局 Urban Renewal Authority

第一期 Phase 1
2024年7月26日開始

共10個
工程項目

參與機構包括 (按字母順序排列)

- 建築署 Architectural Services Department
- 嘉福機電工程有限公司 BYME Engineering (Hong Kong) Ltd.
- 土木工程拓展署 Civil Engineering and Development Department
- 香港房屋委員會 Hong Kong Housing Authority
- 新輝建築有限公司 Sanfield Building Contractors Limited
- 太古地產有限公司 Swire Properties Limited
- 香港電燈有限公司 The Hongkong Electric Co., Ltd.
- 特納唐遜有限公司 Turner & Townsend Limited
- 華聯建築有限公司 Union Contractors Limited
- 水務署 Water Supplies Department

第二期 Phase 2
2025年5月15日開始

共10個
工程項目



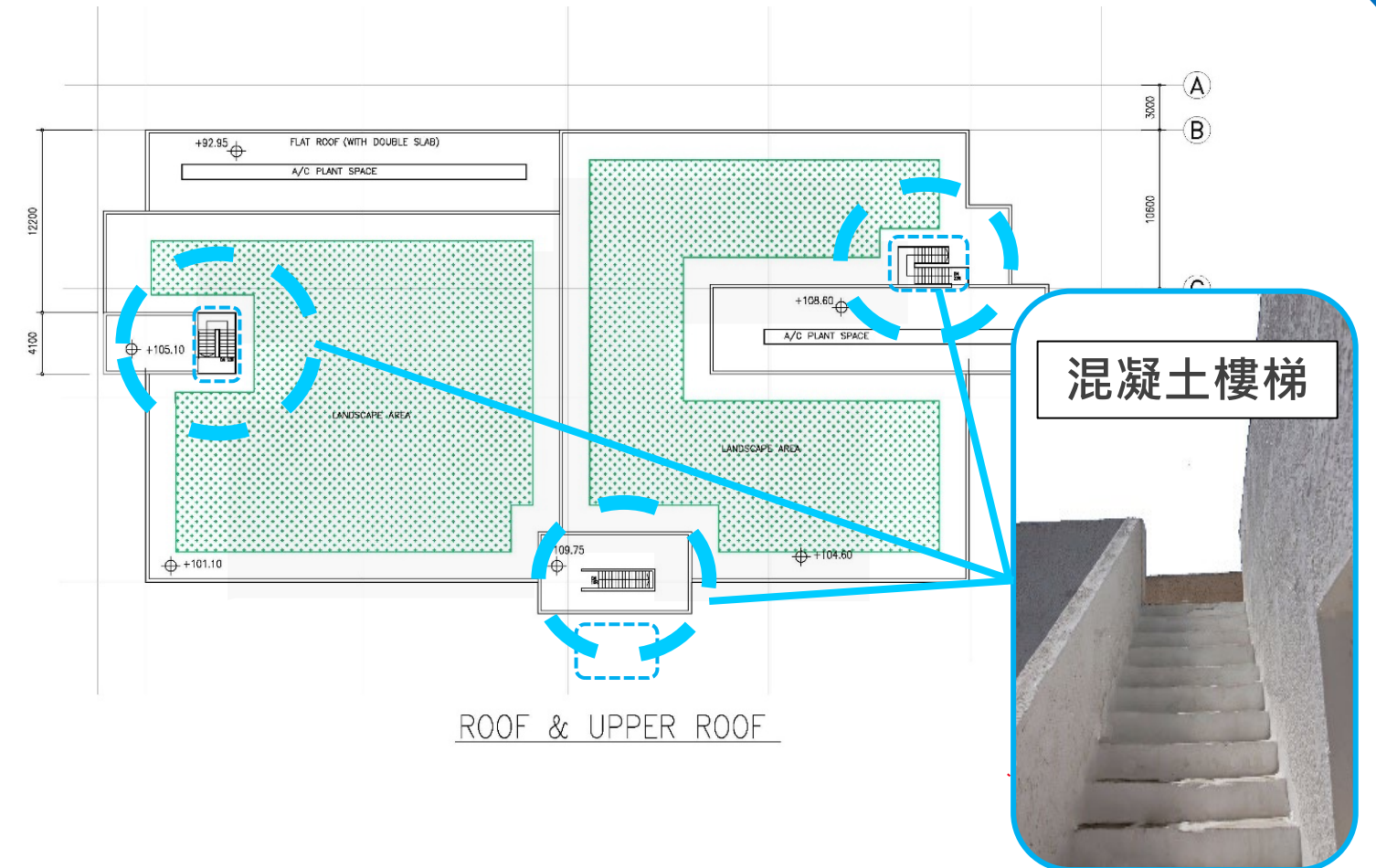
建築設計安全先導計劃（第一期）分享

Sharing on Design for Safety (Phase 1)



傳統方案 Traditional Method

- 採用固定攀梯作通道
- 到達天面進行定期檢查、清潔和維修排水系統或機電設備
- 增加人體從高處下墮的風險



改善方案 Optimised Method

- 提供混凝土樓梯作通道

建築設計安全先導計劃（第一期）分享

Sharing on Design for Safety (Phase 1)

原本埋碼點



更改埋碼點以消除高空工作

更改後的埋碼點



傳統方案 Traditional Method

- 埋碼點位於「風機」的頂部
- 倚賴使用個人防護裝備 ("PPE")
- 增加人體從高處下墮的風險

改善方案 Optimised Method

- 檢討並更改埋碼點
- 高空工作已消除

MiMEP



Smart Site Safety System (“4S”)



UTBM



BIM

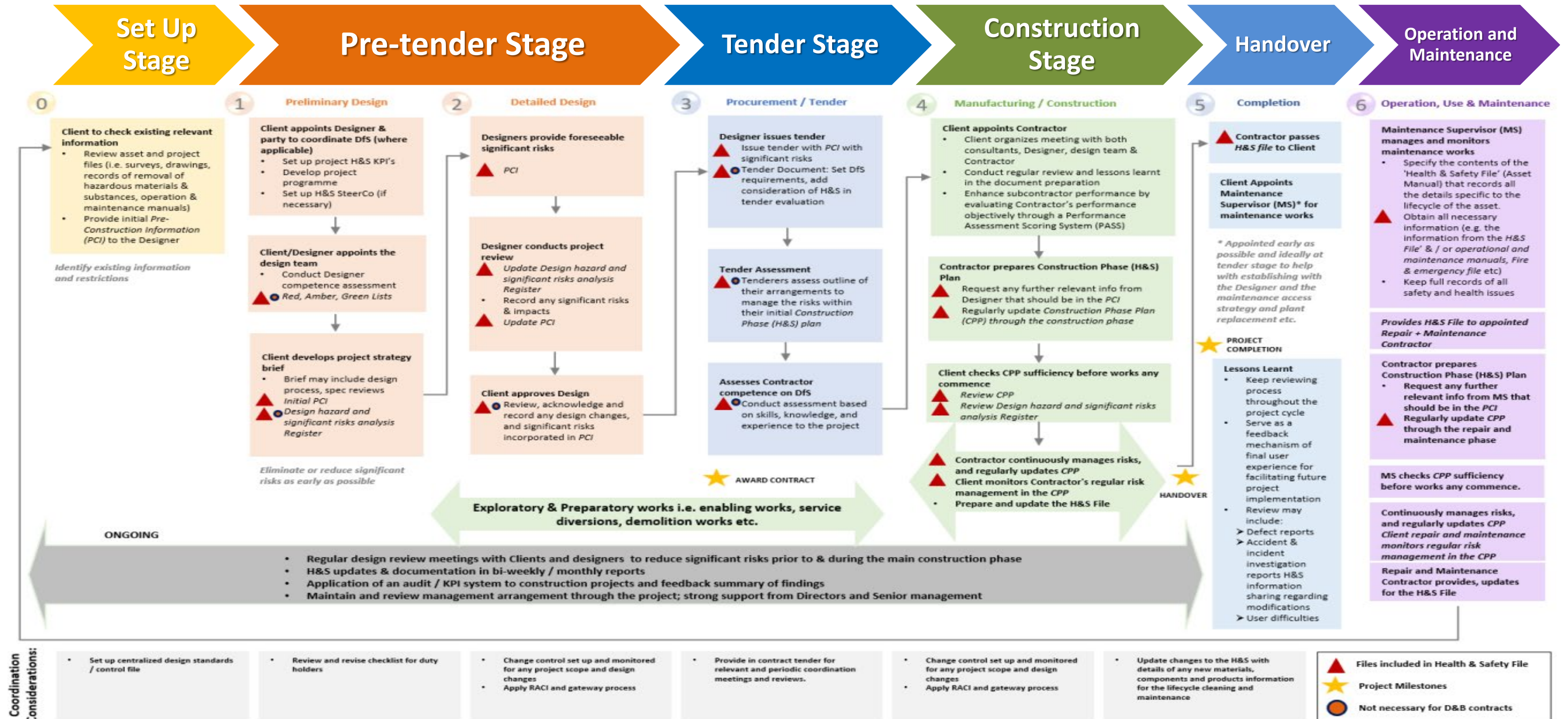


MiC



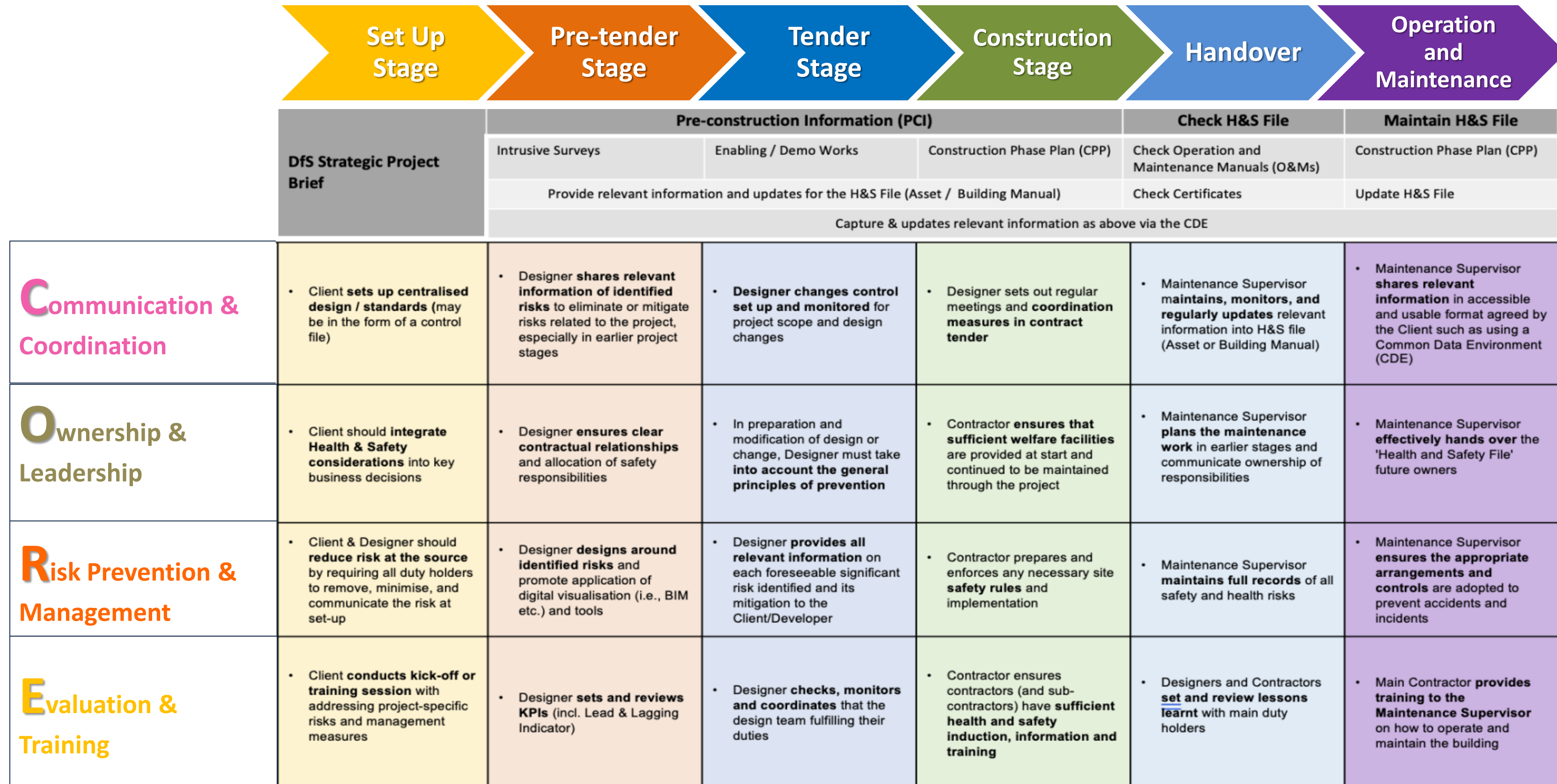
建築設計安全管理系統

Design for Safety Management System



『CORE』原則在安全管理系統設計中的整合

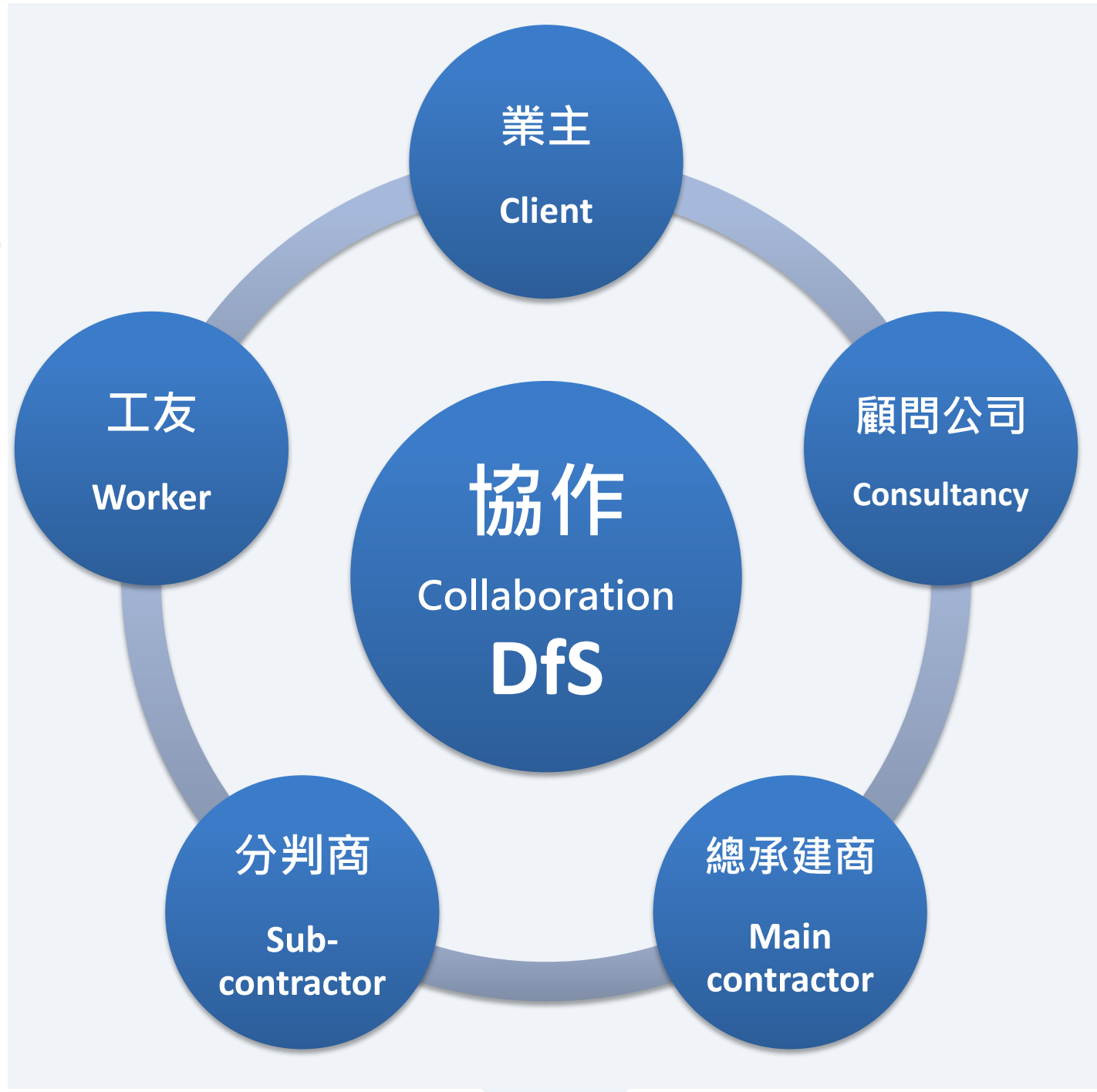
Integration of CORE Principles in the DfS Management System



成功的建築設計安全

Success of DfS

“Collaboration and Integration into the whole process”



“協作與整合”
於全個流程之中



設計危害與重大風險分析登記冊

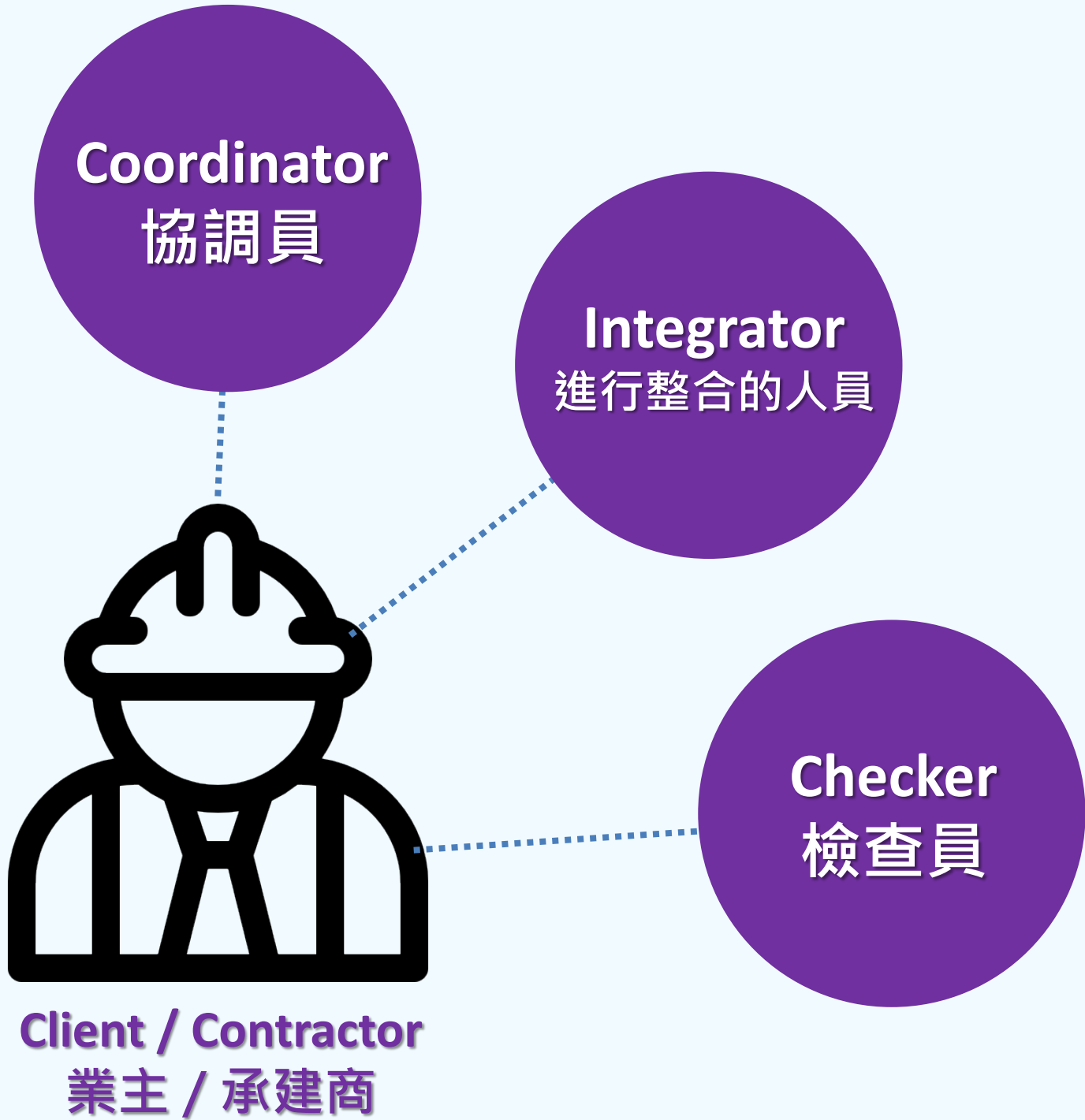
Design Hazard & Significant Risks Analysis Register (“Risk Register”)

Design Risk Register (Sample)											
IDENTIFY SAFE DESIGN RISK				ANALYSE SAFE DESIGN RISK - CURRENT EXPOSURE				IMPLEMENT SAFE DESIGN RISK TREATMENT			
ID	Risk Title	Event / Cause / Consequence	Persons Affected	Applicable Phases	Applicable Disciplines	Inherent Consequence	(Risk Treatment) Current Controls	Consequence Likelihood	Risk Level	Risk Owner Evaluation	(Risk Treatment) Action Summary
1	Pier Collapse during Demolition	Partial collapse of the existing pier due to structural instability or inadequate demolition planning. Could result in worker injuries or fatalities and damage to nearby structures.	Demolition workers, nearby pedestrians, staff	Demolition	Civil, Structure	B - Major	1. The risk has been controlled to the current level by providing a detailed demolition plan and sequencing. 2. Pre-demolition structural assessments conducted.	A - Catastrophic 1 - Rare	High	Demolition Contractor Tolerable	The risk will be actioned to an acceptable level by: - Assigning on-site structural engineers during demolition.
2	Temporary Pier Stability during Construction	Temporary pier becomes unstable due to improper installation or material failure, leading to worker/public injury or damage to equipment.	Workers, public, maintenance staff	Construction	Civil, Structure	A - Catastrophic	1. The risk has been controlled by ensuring proper installation and using certified materials. 2. Regular monitoring during construction phases.	A - Catastrophic 4 - Likely	Critical	Demolition Contractor Intolerable	The risk will be actioned to an acceptable level by: - Enhancing inspections and adding real-time structural monitoring.
3											
4											
5											

Keep a **“LIVE”** Risks Register
持續更新設計危害與重大風險分析登記冊

任命建築設計安全的關鍵人員

Appoint Key Personnels of DfS





“工匠精神” 四個維度

**Four Dimensions of
Craftsmanship**

持之以恆
追求卓越
關顧仁愛

匠心

敬業樂業
高尚操守
處事嚴謹

匠魂

精益求精
守正創新
持續進修

匠技

誠信正直
責任擔當
心懷家園

匠行

工
匠
精
神

心
魂
技
行



謝謝
Thank you

