

● 以BIM人才邁向淨零永續

2050淨零排放限時賽·人居環境智慧布局研討會

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目前職位:

- 英國標準協會, 全球員工論壇首屆代表/亞太區BIM稽核資格審查委員
- 英國標準協會台灣分公司, 人居環境產品經理/BIM產品經理/ISO 9001主導稽核員
- 台灣建築資訊模型協會, 秘書長
- 上海同濟大學 X BSI BIM經理高級研修班, 課程講師
- 香港建造業議會認證建築信息模擬經理課程, 合格講師

學經歷:

- 臺灣大學土木工程所 電腦輔助工程組 博士
- 倫敦帝國理工學院 訪問學人 暨 BIM社群發起人



-BSI 永續小教室-

ESG
V.S.
SDGs

bsi.

聯合國17項永續發展目標



E 環境保護

- 氣候變遷
- 永續環境
- 碳排放量
- 汙染處理
- 能源效率

S 社會責任

- 員工福利
- 勞資權利
- 人權多樣
- 社區計畫
- 資訊安全

G 公司治理

- 資訊透明
- 職業道德
- 董事制度
- 股東權利
- 薪酬制度

- UK government published Construction Strategy mentioned BIM in 2011 with economic targets.
- It is mandated to apply BIM requirements (BIM Level 2) in public procurement project after 2016.
- The development of BIM transferred in defining requirement-driven process and standards.

Lower costs

33%

Reduction in the initial cost of construction and the whole life cost of built assets

Faster delivery

50%

Reduction in the overall time, from inception to completion, for newbuild and refurbished assets

Lower emissions

50%

Reduction in greenhouse gas emissions in the built environment

Improvement in exports

50%

Reduction in the trade gap between total exports total imports for construction products and material



London Declaration

A game changing moment for international standards



- 新倫敦宣言(New London Declaration)將氣候因素納入所有標準的考量內容，以加速實現氣候目標。
- 由 BSI (英國標準協會) 領頭代表國際標準化組織 (ISO) 做出承諾。

To reduce the sector's carbon emissions, changes are needed to the design, construction, operation and decommissioning of structures, along with retrofitting to improve the performance of existing building stock. Across the built environment, there are a number of standards that can help to provide you with the necessary best practice framework for success. Discover some of the key standards which can help your organization manage its carbon emissions.



Construction products and materials

BS EN 15804:2012+A1:2013
Sustainability of construction works. Environmental product declarations. Core rules for the product category of construction products.

BS EN 15942:2021
Sustainability of construction works. Environmental product declarations. Communication format business-to-business.

PD CEN/TR 16970:2016
Sustainability of construction works. Guidance for the implementation of EN 15804.

PAS 8820:2016
Construction materials. Alkali-activated cementitious material and concrete.

PD CEN/TR 15941:2010
Sustainability of construction works. Environmental product declarations. Methodology for selection and use of generic data.



Construction works

BS EN 15643:2021
Sustainability of construction works. Framework for assessment of buildings and civil engineering works.

BS EN 16309:2014+A1:2014
Sustainability of construction works. Assessment of social performance of buildings. Calculation methodology.

BS EN 16627:2015
Sustainability of construction works. Assessment of economic performance of buildings. Calculation methods.

BS ISO 15392:2019
Sustainability in buildings and civil engineering works. General principles.

BS ISO 20887:2020
Sustainability in buildings and civil engineering works. Design for disassembly and adaptability. Principles, requirements and guidance.

BS ISO 21678:2020
Sustainability in buildings and civil engineering works. Indicators and benchmarks. Principles, requirements and guidelines.



Infrastructure

PAS 2080:2016
Carbon management in infrastructure.



Building efficiency

PAS 2035/2030:2019
Retrofitting dwellings for improved energy efficiency.

PAS 2038:2021
Retrofitting non-domestic buildings for improved energy efficiency.

BS EN 16798 series
EPBD Energy Performance in Buildings Directive.

BS 5250:2021
Management of moisture in buildings. Code of practice.

BS ISO 16745-1:2017
Sustainability in buildings and civil engineering works. Carbon metric of an existing building during use stage. Calculation, reporting and communication.

BS ISO 16745-2:2017
Sustainability in buildings and civil engineering works. Carbon metric of an existing building during use stage. Verification.

BS 8895 series
Design for material efficiency in building projects.

BS 40101:2022
Building performance evaluation of occupied and operational buildings. Specification.

BS 8536:2022
Design, manufacture and construction for operability. Code of practice.

BS ISO 21931-2:2019
Sustainability in buildings and civil engineering works. Framework for methods of assessment of the environmental, social and economic performance of construction works as a basis for sustainability assessment. Civil engineering works.

PD CEN/TR 17005:2016
Sustainability of construction works. Additional environmental impact categories and indicators. Background information and possibilities. Evaluation of the possibility of adding environmental impact categories and related indicators and calculation methods for the assessment of the environmental performance of buildings.

PD ISO/TS 12720:2014
Sustainability in buildings and civil engineering works. Guidelines on the application of the general principles in ISO 15392.

PD ISO/TS 21929-2:2015
Sustainability in building construction. Sustainability indicators. Framework for the development of indicators for civil engineering works.

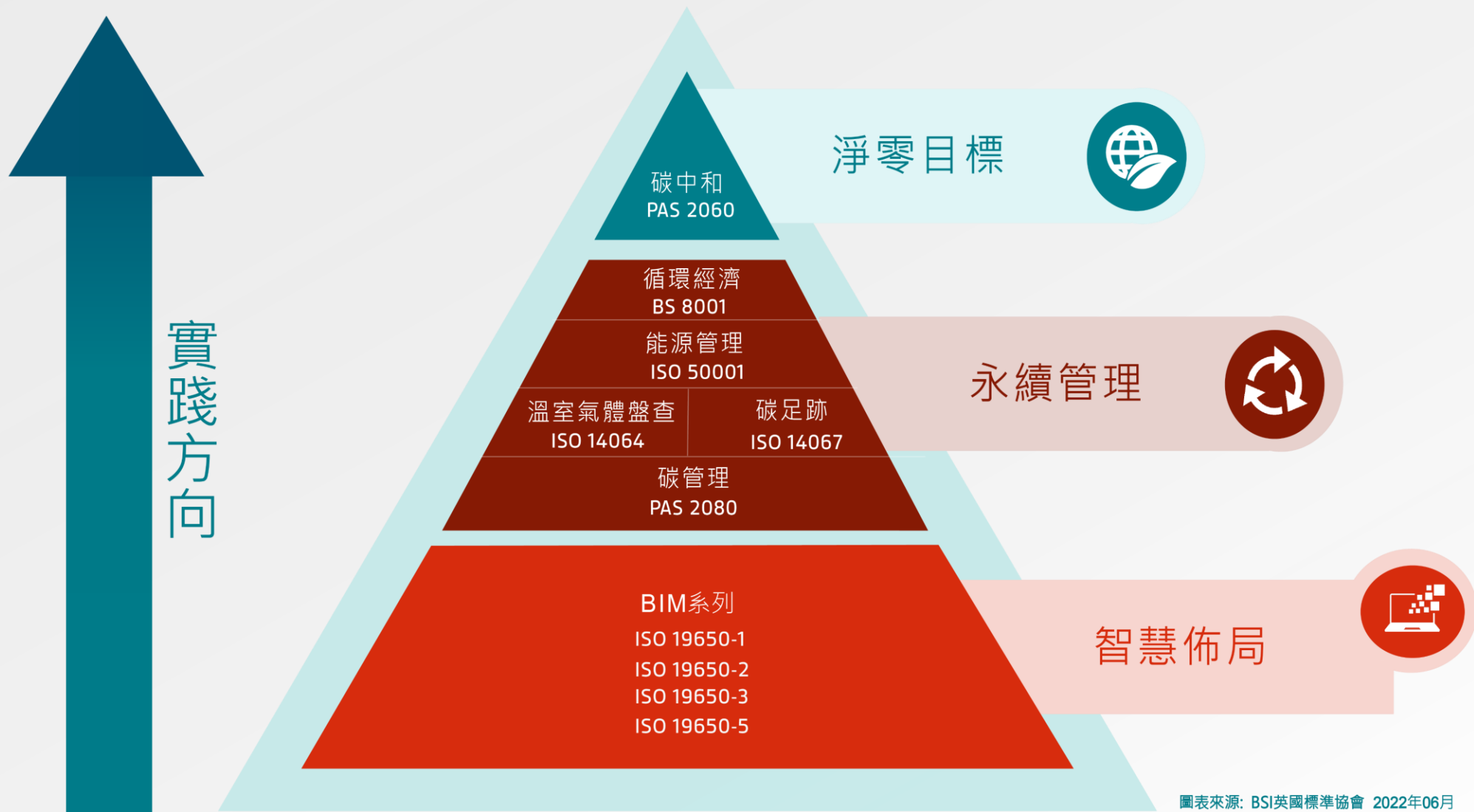
BS 9228:2021
Recycling of roads and other paved areas using bitumen emulsion, foamed bitumen or hydraulic material. Materials, production, installation and product type testing. Specification.

PD ISO/TR 21932:2013
Sustainability in buildings and civil engineering works. A review of terminology.

PAS 4444:2020
Hydrogen-fired gas appliances.

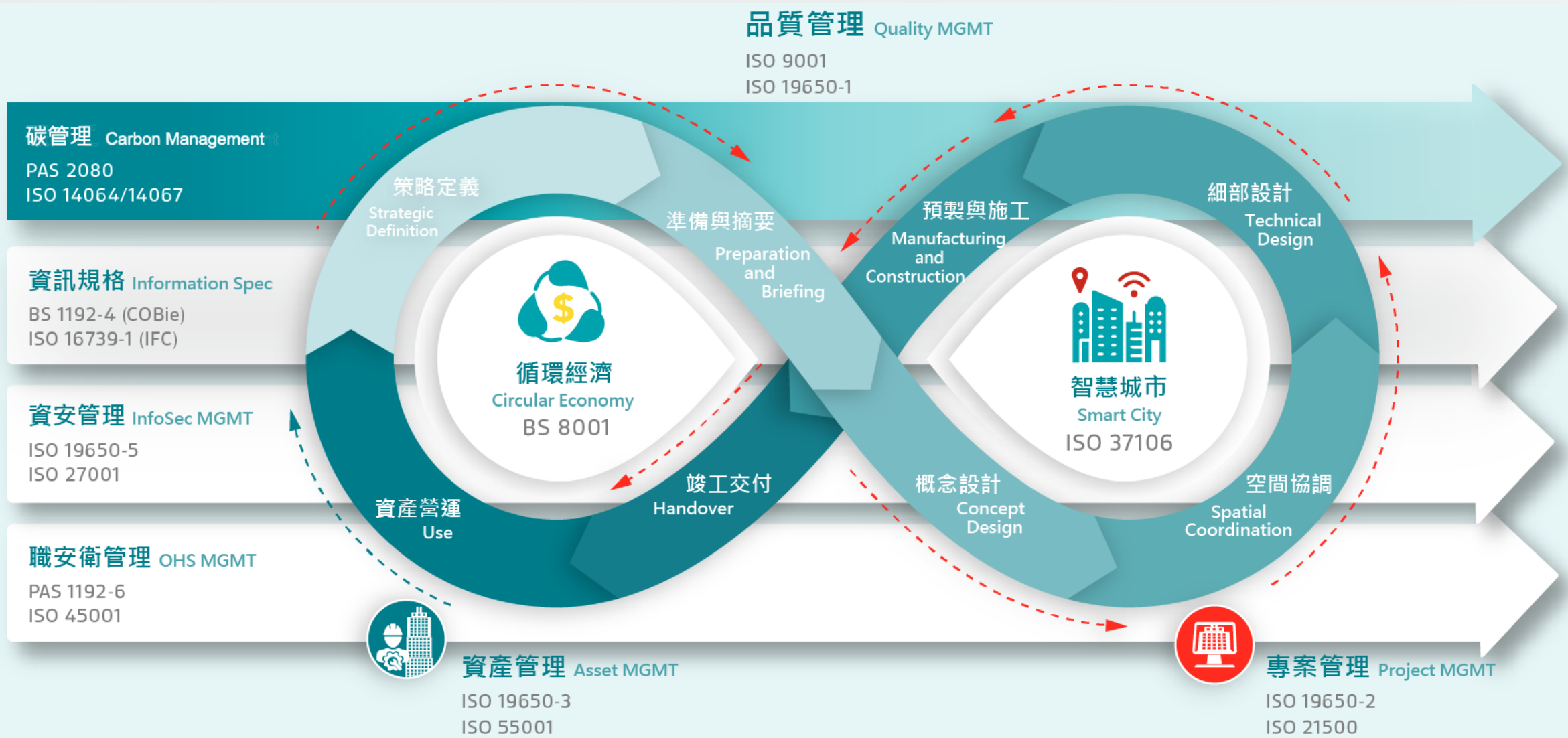



BSI營建產業淨零排放解決方案



永續與智慧人居環境 – BIM實踐路徑圖

Roadmap for BIM-enabled Digital and Sustainable Transformation in Built Environment





BIM人才是推動人居環境
智慧永續轉型的核心關鍵!

● 新課程預告: BIM與永續人居環境訓練課程 Building Information Modelling (BIM) and Sustainable Built Environment Training Course

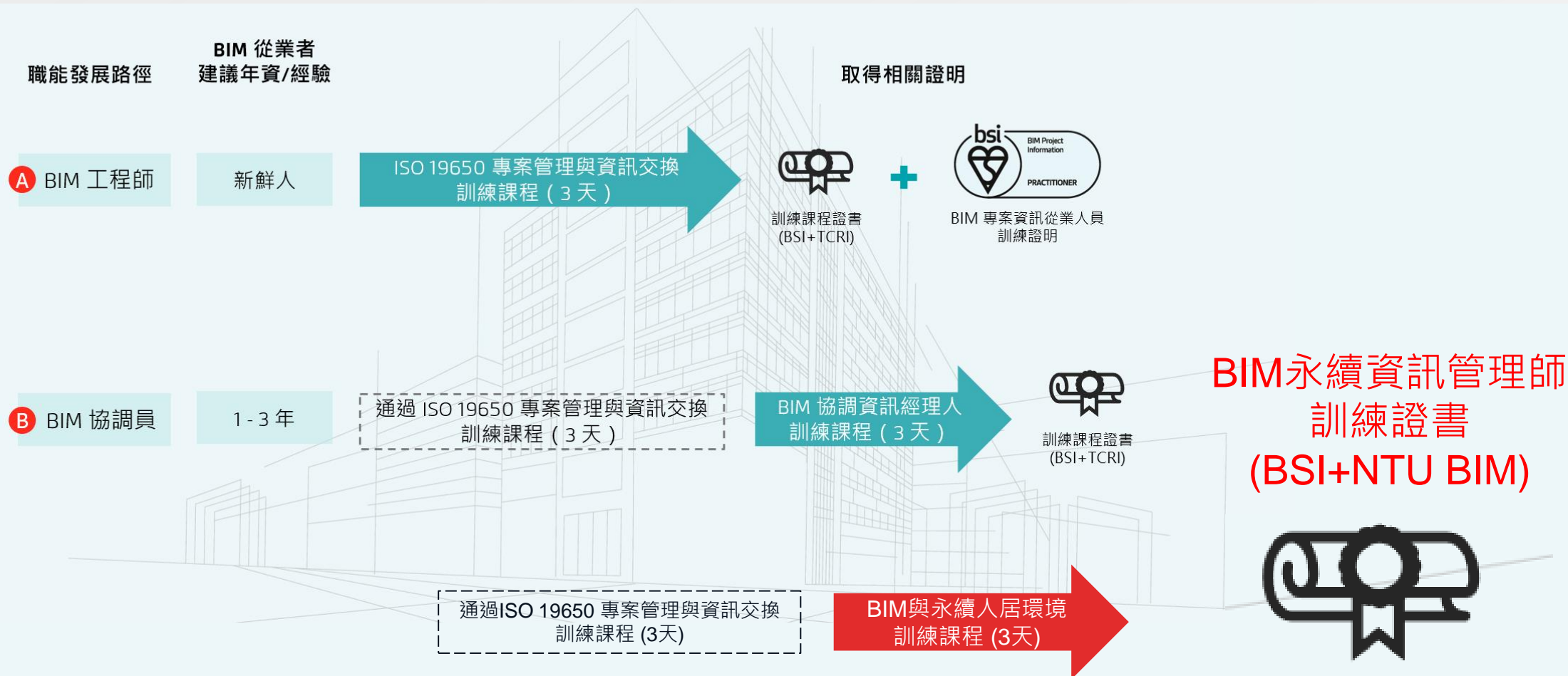
台大BIM中心與BSI聯合開課

首梯日期地點為2022/08/02-04於台大土木研究大樓舉辦

● BIM與永續人居環境訓練課程

	Morning	Afternoon
Day 1	聯合國SDGs永續發展目標於人居環境之意義 <ul style="list-style-type: none"> □ SDGs介紹 □ 人居環境相關之指標 	以BIM國際標準ISO 19650轉型面對ESG之管理趨勢 <ul style="list-style-type: none"> □ 從營建產業角度考慮ESG □ ISO 19650 國際標準精華
Day 2	永續建築與Green BIM <ul style="list-style-type: none"> □ 永續建築之發展趨勢 □ Green BIM之案例 	永續人居環境 - 循環經濟 BS 8001 <ul style="list-style-type: none"> □ BS 8001 六大原則 □ 從BIM資訊管理面向切入循環經濟於營建產業
Day 3	永續人居環境 - 基礎建設碳管理 PAS 2080 <ul style="list-style-type: none"> □ PAS 2080 七大工作階段剖析 □ 碳排量化之準則與價值鍊之流程權責 	永續人居環境工作坊





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