高雄車站設計變遷

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壹、原設計方案

在麥肯諾團隊參與之前，原版基本設計由美國建築師事務所 SOM（Skidmore, Owings & Merrill LLP）與中興顧問公司共同完成，後續由泰興工程顧問公司與在地宗邁建築師事務所延續發展。原規劃方案將現車專區地塊以站北路一分為二，北側留作未來開發素地，初步量體規劃為兩棟高層商業辦公大樓。南側地塊，則以原帝冠式車站為軸心，東西兩側各設有兩棟四層樓高玻璃帷幕大樓，臨南側為辦公大樓，北側為百貨餐飲空間。

橫跨於站北路上的是全長 385 公尺，最高點為 76.5 公尺高的玻璃天棚，旨在為站北路南側三處下沉式廣場及其上方高架人行步道提供遮蔽，並期以其大跨距玻璃帷幕的鋼構造型打造城市中心的新意象。與大頂棚對應的是設有噴泉水景與綠意的中央廣場，提

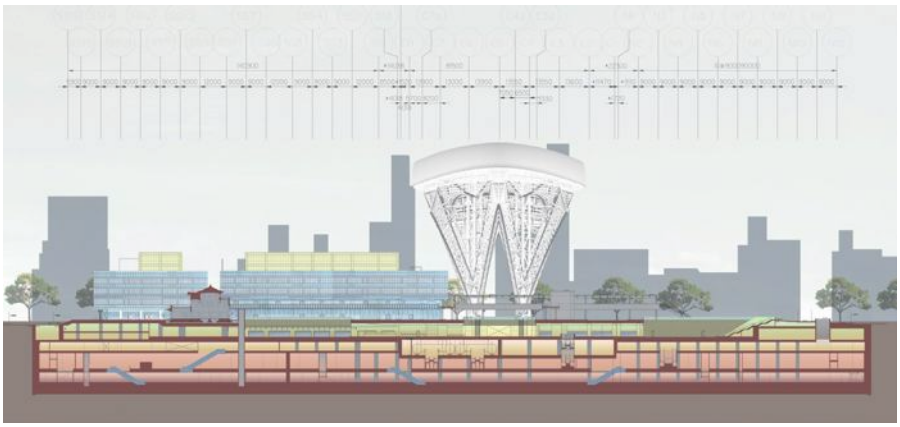

圖 1　泰興版細部設計階段圖面
圖片來源：麥肯諾建築師事務所提供。

本篇為特約邀稿。

供都市中心缺乏的公園綠地空間。整體規劃配置方正規整，軸線分明。

即便設計用意良善，然本方案卻無法滿足在地民眾對新車站的想像。絕大多數批評指向新舊建築間缺乏對話，且大頂棚的建築語言過於機械化。於是自 2011 至 2013 年間，泰興續而委託臺灣在地團隊宗邁建築師事務所，基於 SOM 原設計方案進行調整，以求達成與在地民眾與市府間的共識。

圖 2　泰興版細部設計階段圖面
圖片來源：麥肯諾建築師事務所提供。

宗邁建築師事務所參與後，陸續提出修正方案，調整重點放在頂棚設計的優化。頂棚量體縮小，高度降低，源自於高雄港都意象的桅桿型、龍骨型結構形式是新版設計的新亮點。然而，即便已將原四棟開發大樓整合為二，建築師亦試圖以設計手法縮減臨舊車車站側建築量體，然而高樓地板開發面積的期待，仍在整體量體配置上對舊車站產生極大的壓力。

貳、麥肯諾團隊加入

2014 年間，於各方意見僵持不下之際，泰興團隊與麥肯諾接觸，希望能將於衛武營國家藝術文化中心一案中累積的高雄經驗，運用於本案中。此時，鐵路地下化工程早已進行多年，地下軌道工程如火如荼進行中，同時地面軌道維持通行。臨時車站分為前後兩處，中以跨站天橋連接各月臺及南北兩側。帝冠式車站移置於東側，與臨時站間以中博高架橋相隔。臨時站前方先是計程車排班區，跨過排班動線後則是市區公車候車亭。此景，便是麥肯諾團隊於 2014 年現地考察時，所見之景況。

結合此行所見之觀察與過去八年於衛武營的工作經驗，設計團隊提出兩項關鍵性的設計調整。

一是原站北路的取消。原規劃方案中在車站中央設置了一條 15 米寬的東西向「站

北路」，作為市區公車與自小客車的臨停接送區。此規劃不僅將完整地車站專區一分為二，且將車流高度集中於單一道路，於尖峰時段，特別容易產生壅塞與公私車輛爭道問題。此外，成排的公車巴士宛如移動中的高牆，列於站北路上，恐成為旅客由地下車站空間抵達地面後的第一印象。

二是頂棚高度與範圍的大幅變更。SOM 原版頂棚高度介於 41 米至 76.5 米之間，全長達到 385 公尺，以東西軸線橫於站北路南側，是為二層通廊與下沉廣場的上方遮蔽物。宗邁版本頂棚高度降低為四層樓高，僅設於下沉廣場上方。麥肯諾於 2014 年基地現場考察後，提出的天棚高度降至兩層樓高，覆蓋範圍於三規劃方案中各異，但核心價值統一為「天棚應為行人遮風避雨」。行人動線所及之處，亦是天棚所及之處。

圖 3　高雄臨時站於 2014 年現況照片──轉運中心
圖片來源：麥肯諾建築師事務所提供。

圖 4　高雄臨時站於 2014 年現況照片──計程車載客區
圖片來源：麥肯諾建築師事務所提供。

圖 5　麥肯諾團隊到臺灣參與會議
圖片來源：麥肯諾建築師事務所提供。

參、動線梳理

基於日治時期都市規劃配置，火車軌道將城市切分為南北兩側。因此，談起鐵路地下化工程的，絕大多數焦點均放在城市紋理的縫合，期望軌道下地後，南北高雄能有更多穿越性的車流，平衡南北兩側的城市發展差異。地面層東西向原軌道位置，則有機會形成公園綠廊。

SOM 初版規劃承襲此邏輯，車站東西兩側均為主要幹道，導入大量穿越行車流，站北路沿著新闢鐵路綠廊連通東西兩側，並在進入車站腹地後成為公車停靠站及汽車接駁區，乘客下車後可即刻自地面層搭乘手扶梯抵達車站所在的下沉廣場。若以汽車使用組群為切入觀點，此規劃無疑十分便捷。但亦因如此，與車站使用無關的車流亦將匯入站區交通動線中，而具有流動性且帶來城市活力的人行動線則十分集中、簡短。

經過多年的醞釀與溝通，在 2014 年麥肯諾團隊加入之際，高雄市政府作為建築所在主管機關，對車站專區已有更加明確的城市願景：以人為主，車行為輔。因此，當麥肯諾將高雄車站視為整合城市中心交通節點的都市更新規劃，更勝於單體建築設計工作時，由行人角度出發的交通轉乘動線盤點成為設計工作的第一步。

在新方案中，我們將市區公車與客運月臺分別設置於車站兩側，使各自擁有獨立的轉乘空間，可分別由地面層及地下層抵達，降低交錯動線、分散人潮壓力。車站東側的「車專二」設置為長途客運站，設有 24 個客運月臺，西側的「車專三」則規劃為 12 個市區公車月臺。明確的轉乘動線分流，有助於乘客辨識方向，自地下月臺層抵達後，可清晰引導轉乘旅客分別向東西兩側分流。

此外，自小客車、計程車與機車的臨停與轉乘區，則透過站東、站西路中段的環繞型（耳朵型）配置進行優化，接駁區域位置仍接近原規劃站北路轉乘區，但此調整確保直行貫通車流與臨停車流分道，提升車道流暢度，並避免線型車流回堵。

過去車站專區的區劃使廣場開放空間分配失衡，影響歷史車站的視覺延展性。「車專三」地塊缺乏明確定位，東西兩側的空間屬性也較不明顯。透過敷地條件的調整，強化車專二與三的功能對稱性，突顯南北向的歷史軸線，使舊車站的核心地位更加明確。新車站不僅提升交通連結，更透過高品質的公共空間向外延展，成為帶動城市發展的重要節點。

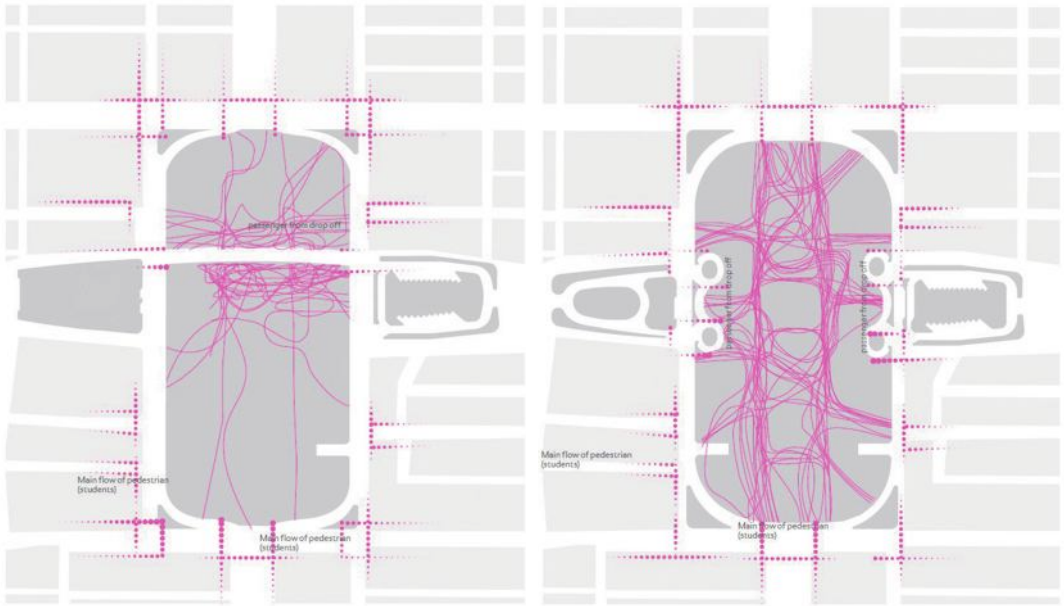

圖 6　動線模擬（左：原案，右：取消站北路案）
圖片來源：麥肯諾建築師事務所提供。

圖 7　設計提案階段（左：站北路設計模擬，右：取消站北路設計模擬）
圖片來源：麥肯諾建築師事務所提供。

肆、旅人視角

雖然鐵路地下化工程對城市規劃而言是一帖重新梳理都市紋理的良藥，但就建築設計及旅客體驗而言卻是充滿挑戰。人類始終是趨光性的生物。光線始終是引領人類

前進，辨識方向、尋路的重要依據。大面積的低樓層高度，且缺乏日光引導的地下化空間，常使地下化車站與迷宮畫上等號。這無疑與車站作為複雜交通節點，必需能提供快速明確的轉乘指引的基本要求大相牴觸。

不僅如此，車站常是旅人抵達城市的第一站，是城市意象的展現。過去，當軌道尚行於地面時，旅人可透過車窗外地景地標的轉換，辨識是否已抵達目的地。鐵路地下化後，旅人僅能靠月臺上寫著站名的標示，確認自身位置。似乎少了一些，於地面層旅行時，逐步慢慢接近目的地的浪漫、興奮與期待感。

麥肯諾希望能將此期待感呈現在高雄新車站的設計上。當旅客緩緩由手扶梯自地下月臺層抵達地面時，抬頭視線所及的第一眼「天花板」，成為了展現城市魅力的關鍵之處。同樣由麥肯諾於 2006 年設計的台夫特新車站（Delft Station），展現了同樣的設計理念。考量旅客自地下移動至地面的動線移動上帶來的視覺焦點變換，設計團隊將台夫特地圖翻轉印刷在立體曲面的天花鋁格柵上。當旅客搭乘手扶梯進入站內，迎面而來的是徐徐展開的城市印象，營造出強烈的地域認同感，並同時兼具空間定位，標示引導的作用。

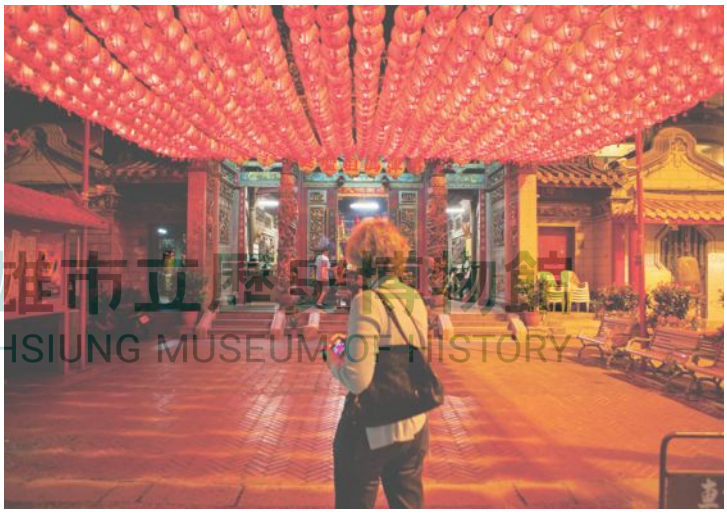

圖 8　法蘭馨．侯班於旗津天后宮前
圖片來源：麥肯諾建築師事務所提供。

高雄車站的天花設計亦延續此概念，靈感來自高雄的傳統市集與旗津媽祖廟前廣場——當地居民習慣於廟埕聚集、交流，使此空間不僅具宗教意涵，更是社區生活的重要場域。我們將這份觀察轉化為現代建築語彙，將高雄車站塑造成「現代廟埕廣場」，串聯人群、城市與文化。進入車站，映入眼簾的是一片片懸掛於天花的白色鋁片，形態各異、如雲朵般輕盈漂浮於空間之上。鋁片與掛燈象徵傳統燈籠，既與現代車站設計融合，又營造出獨特的視覺效果。

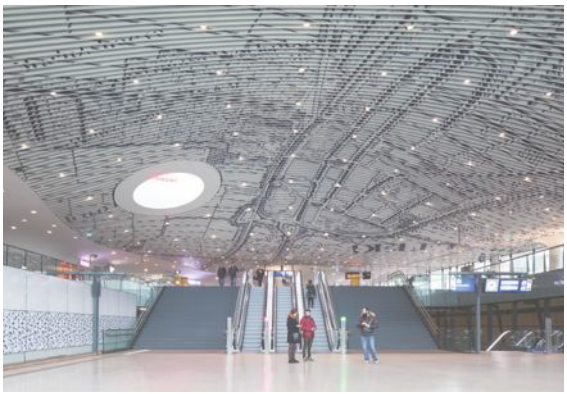


圖 9　荷蘭台夫特車站（Delft Station）
圖片來源：麥肯諾建築師事務所提供。

圖 10　採光天井引入自然光線
圖片來源：麥肯諾建築師事務所提供。

伍、綠色天棚

就覆蓋範圍而言，有別於初始兩方案集中型設置的建築平面，新規劃天棚型態更為有機與延展。鑒於自參與衛武營國家藝術文化中心一案起，深刻體驗到的高雄熱帶氣候條件：豔陽與瞬間極大降雨量。麥肯諾眼中的天棚不僅應隨人行動線延伸，為遊人提供最大程度遮陽避雨的半戶外環境，與此同時，天棚下的自然通風及採光等微氣候條件的檢核，亦是造型規劃上的重要依據。

天棚高度的重新調整，是各方面向綜合考量的結果。空間尺度感的修正，由機械化、科技感設計語言調整為親人尺度是其一原因。另一原因，在為提供東西向複層的交通連結，原始規劃中的天棚僅作為雨遮使用，調整後的天棚高度降低，東西兩側以斜坡向下輕觸地面層，人行與自行車車道自此與鐵路綠廊相連，達到全長 15 公里的友善步行空間串聯。

如此將建築與地景相容的設計方式，一直是麥肯諾作品的特色。其中代表性的台夫特理工大學圖書館（Delft University of Technology）一案，為 1998 年完成的地景建築先驅作品。當時，業主希望更新圖書館設計以符合現代需求，卻又需與校園內原有的粗獷主義禮堂相協調。設計團隊透過景觀建築手法，將圖書館屋頂化為緩坡，覆蓋綠草皮，使主要館藏與空間隱藏於地下，而地面則成為學生可休憩與活動的公共空間。醒目的圓錐形採光天窗，不僅成為圖書館標誌，亦巧妙引入自然光線，使館內明亮舒

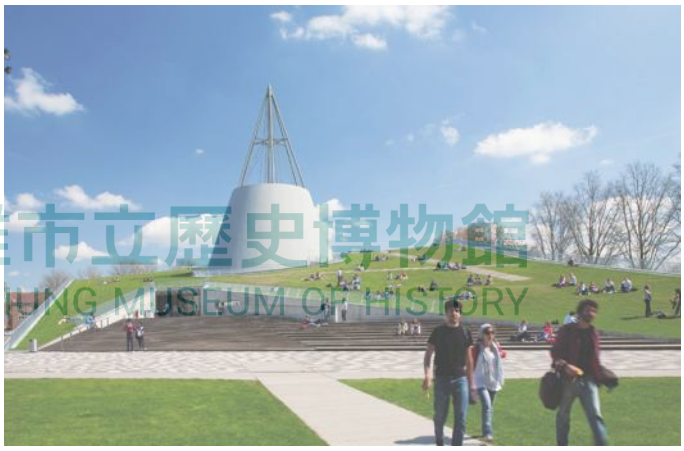

圖 11　台夫特理工大學圖書館
圖片來源：麥肯諾建築師事務所提供。

圖 12　全區配置模型
圖片來源：麥肯諾建築師事務所提供。

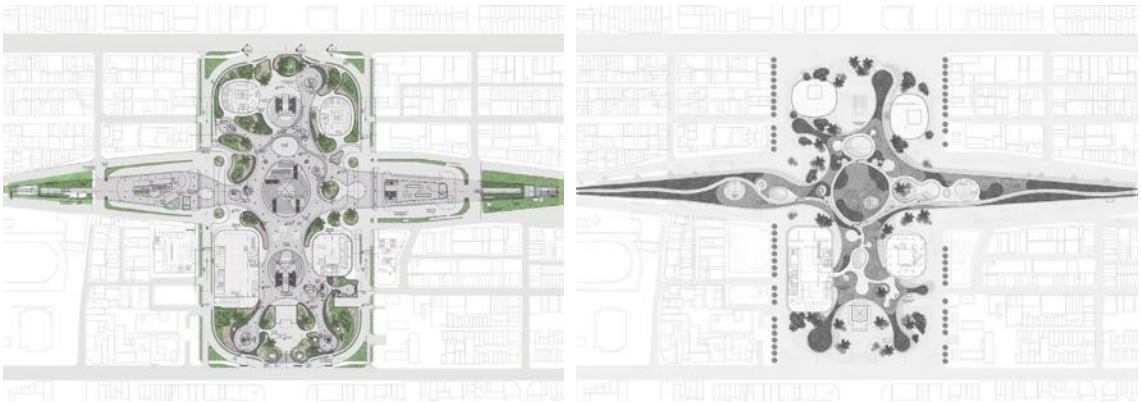

圖 13　高雄站地面層平面圖（上）及高雄站天棚層平面圖（下）
圖片來源：麥肯諾建築師事務所提供。

圖 14　與城市紋理相容的天棚設計
圖片來源：麥肯諾建築師事務所提供。

適。設計不僅成功融合不同建築風格，亦開創了一種將建築與環境相結合的創新手法，而這樣的設計理念也延續至高雄車站的天棚與綠化屋頂。

結合了衛武營與台夫特大學圖書館的設計經驗，透過天棚定義半戶外空間，引導微風

流動，降低都市熱島效應。天棚不僅賦予車站鮮明的城市地標，其上方更鋪設 17,500 平方公尺的綠化屋頂，宛如一座「城市之肺」，為高雄帶來更多綠意與涼爽微氣候，使得即便在盛夏，在天棚下依然能感受到得利於天棚綠化帶來的降溫效果。地下一層空調區的區劃範圍得以最小化，達到建築節約建築空調耗能之效。最終，高雄車站不再僅是一座交通設施，而是市中心難得的一片開放綠地，更成為當地居民日常生活的一部分，一座城市空中公園。

圖 15　高雄車站天棚頂自行車道
圖片來源：麥肯諾建築師事務所提供。

陸、結構整合

屆此，整體站區空間規劃願景已然成形。但隨著設計工作的推展，困難與挑戰隨之而來。如前言所及，麥肯諾於 2014 年參與設計之際，地下工程早已開始施工。設計團隊宛如「宛如跳上已在行駛中的火車」，前述所有的創新規劃都需面對一個共同的課題「如何在既有原本設計規劃的構造系統上疊合上新的設計方案」。

其中最具挑戰性的莫過於結構系統的整合。天棚覆蓋面積大範圍的增加，但地下層原設計結構基礎及承載量條件有限，如何將原結構設計調整為可服務於新天棚設計的方案，考驗著結構技師的專業能力。

但也因此，誕生出了高雄車站如今引人注目的另一特色：79 根型態各異的花型鋼柱。現今完工後，若站在南北兩側地面層眺望下沉廣場，便可清楚看見柱頭的巧妙轉換。於地下一層，結構柱位為規矩式的標準網格系統，平均分擔地面層樓板載重。隨著高度來到地面層，原為一體的方柱，分岔成如傘骨狀的結構鋼柱，向外延展而出，承載著上層有機型態的天棚曲面桁架。

圖 16　天棚剖面模型
圖片來源：麥肯諾建築師事務所提供。

圖 17　傘骨型結構與地下結構相接
圖片來源：麥肯諾建築師事務所提供。

圖 18　整合結構與美學設計的天棚線條
圖片來源：麥肯諾建築師事務所提供。

圖 19　整合結構與美學設計的天棚線條
圖片來源：麥肯諾建築師事務所提供。

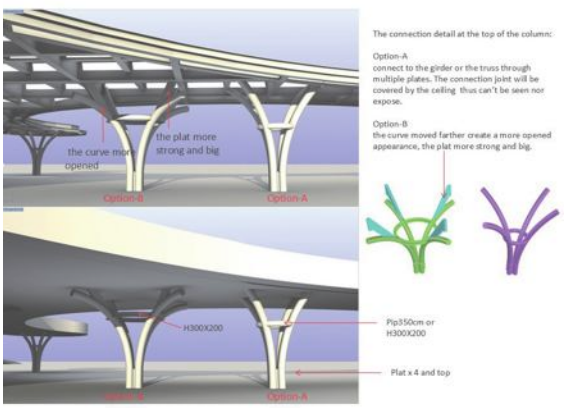

圖 20　結構設計討論過程圖面圖
圖片來源：麥肯諾建築師事務所提供。

圖 21　傘骨型結構系統支撐天棚
圖片來源：麥肯諾建築師事務所提供。

柒、系統化

若說花柱的出現是化一為眾的結構設計，卵石狀天花設計的模矩化設計就是化眾為一的系統化規整過程。如今現場看來十分隨興散落不相重複的天花鋁板，為求營建施工過程的精簡化，降低預算與難度，在設計上巧妙運用了六邊形蜂巢狀模矩系統作為分割單元。每個單元內配置有 11 片形狀各異的卵石天花片，每個單元均是重複相同的 11 片天花，但透過旋轉整體六角形單元，即可達到乍看下不相重複的拼花效果。

此種系統化的天花單元分割，不僅有助於在立體曲面的天花線條上獨立定位各單片鋁板的高層角度定位，降低工程難度，更重要的是提供模矩化的系統，為宛如廟埕燈籠的特色燈具提供定位點。

由於中央天棚土丘隆起，下方天花隨之形成立體曲面，考慮照度的平均分布及為達到廟埕前廣場燈籠天棚定義公共空間的意象，燈具的有效分布與燈具本身作為造型物如何與天棚天花融於一體，兩者間的平衡在設計初期一直是設計團隊一再斟酌考量的難點。但在蜂巢模矩化系統成形後，此課題隨之迎刃而解。如今，所有燈具接配置在蜂巢模矩的六處頂點上，既達到照度的均衡，亦避免了肉眼可見的線型格狀光源，與活潑充滿變化的卵石鋁板巧妙結合。

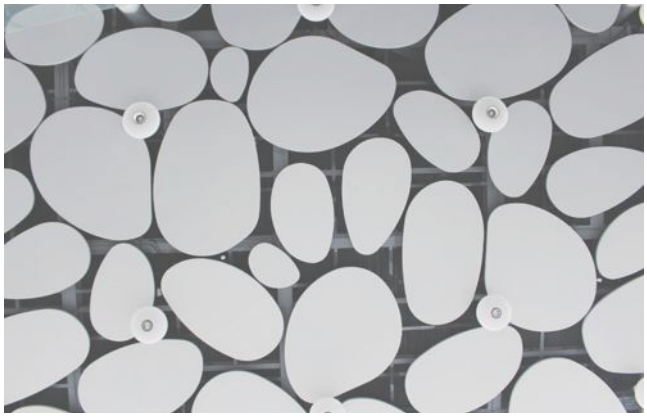

圖 22　燈具打樣過程（上）與六角形模組單元（下）
圖片來源：麥肯諾建築師事務所提供。

捌、People, Place, Purpose, and Poetry

《*People, Place, Purpose, and Poetry*》是麥肯諾於 2023 年發表的四十週年紀念專刊。四十年來，麥肯諾始終關注建築如何回應人與環境的關係，從地方紋理出發，尋找機能與詩性之間的平衡。設計不只是形塑空間，更是一種對話——回應歷史、尊重當下、擁抱未來。在這樣的思考框架下，人（People）、場所（Place）、機能（Purpose）與詩性（Poetry）形成了麥肯諾設計哲學的核心價值，每個項目皆在這四個面向中尋找最適切的解答。

當我們以此架構反思高雄車站一案，了解到其設計不僅是對基礎建設的回應，更是一場關於城市記憶、公共生活與未來願景的對話。在這場對話中，人、場所、機能與詩性交織成設計的核心，構築出一座承載歷史與未來的城市門戶。

為誰設計？

空間的價值源於人的使用。每日穿梭於站體的通勤者、拖著行李的旅人、牽著孩子回憶過往的長者，皆在此留下足跡。他們的需求、期待與情感，決定了空間該如何被塑造。

何以為地？

港都的開闊視野、歷史車站的身影，以及南方城市的日光，共同形塑了這片土地獨特的紋理。新舊交融之間，過去與未來得以共存，使車站不只是交通樞紐，更成為城市肌理的一部分。

如何賦能？

建築的價值不止於形式，而在於如何影響生活方式。透過重新調整交通流線、釋放公共空間，打造步行友善的環境，讓這裡不僅是旅人的短暫歇息之所，更是市民日常活動的延伸場域。

如何詩意？

理性與機能之外，詩性賦予空間更深層的情感聯繫。天棚篩落的柔和光影、舊車站前流轉的回憶片刻，腳步與微風交錯於綠意之間——這些細微而動人的瞬間，讓建築不只是物理場域，更成為一座與人對話的場景。

高雄車站的規劃與設計，平衡了歷史延續、城市發展與現代交通需求，透過理性且綜合的考量，構築出具有適應性與永續性的公共空間。「人、場所、機能與詩性」的設計原則，在此得到了具體的體現，也將持續影響未來的城市建設思維。

圖 23　麥肯諾四十週年紀念專刊
圖片來源：麥肯諾建築師事務所提供。

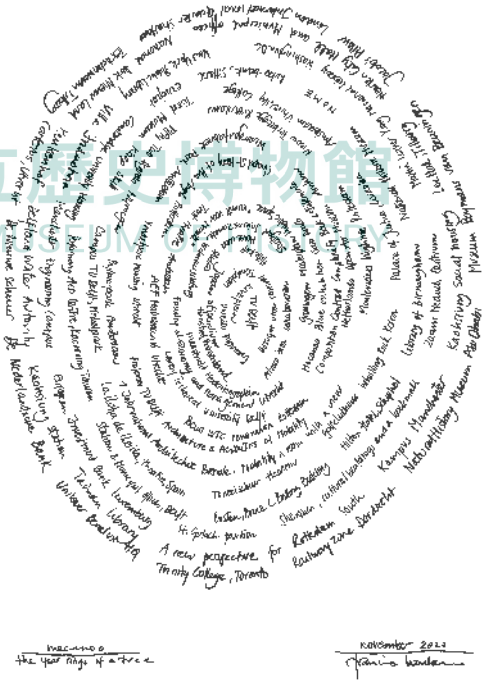

圖 24　麥肯諾作品年輪
圖片來源：麥肯諾建築師事務所提供。

附錄／英文版

Evolution of the Kaohsiung Station Design

Original Design Proposal

Before Mecanoo's involvement, the original design for Kaohsiung Station was developed by the American architecture firm SOM in collaboration with Pacifica Engineers & Constructors (PECL). The initial plan split the existing station zone into two sections, with Zhanbei Road serving as the boundary. The northern section was reserved for future development, with a preliminary proposal for two high-rise commercial office buildings. On the southern section, the old station building served as the central axis, flanked by two four-storey glazed buildings. The southernmost towers were designated for office use, while the northern ones were planned for retail and restaurant.

Spanning across Station North Road was a massive glass canopy, measuring 385 meters in length and reaching a maximum height of 76.5 meters. The canopy was designed to provide shelter for three sunken linear plazas and the elevated pedestrian walkways above them. The large-span steel structure of the glass canopy aimed to create a new landmark of the city. Complementing the canopy was a central plaza featuring fountains and lush greenery, offering much-needed public park space in the heart of the city. The overall layout was thoughtfully designed, with a symmetrical arrangement and clearly defined axial alignments.

Although the design was well-intentioned, it did not fully align with residents' expectations. The most common criticism was the lack of dialogue between the new and old buildings, and the overly technical architectural character of the grand canopy. Consequently, between 2011 and 2013, PECL commissioned the Taiwan-based firm, Fei & Cheng Associates, revise SOM's original design and try to establish a consensus with both residents and the city government.

As Fei & Cheng Associates took over, they introduced a series of modifications primarily focused on optimizing the canopy design. The canopy was reduced in size and lowered in height. The canopy was reduced in size and lowered in height. Inspired by Kaohsiung's identity as a port city, the new design featured mast-like and keel-shaped structural forms, becoming the highlight of the revised proposal. Although the original four buildings were consolidated into two, and a new building envelope was introduced to reduce their visual impact, the demand for high floor area development resulted in a massive building volume that overwhelmed the historic station building.

Mecanoo's Involvement

In 2014, as discussions remained at an impasse, PECL approached Mecanoo, hoping to incorporate

insights gained from the Weiwuying National Kaohsiung Center for the Arts into the Kaohsiung Station project. By this time, the railway undergrounding project had been underway for several years, with underground track construction progressing rapidly while ground-level rail operations continued. The temporary station was divided into two sections—connected by an overhead pedestrian bridge spanning the platforms and linking the north and south sides. The historic station had been temporarily located to the east, separated from the temporary station by the Zhongbo Overpass. In front of the temporary station was a taxi queuing zone, followed by a city bus station. This was the scene encountered by Mecanoo's team during their on-site study in 2014.

Combining these first-hand observations with eight years of experience working in Kaohsiung on the Weiwuying project, the design team proposed two critical design adjustments.

One significant adjustment was the removal of Zhanbei Road, a 15-meter-wide east-west thoroughfare originally planned at the center of the station. Intended for city buses and private vehicle drop-offs. This road would have divided the station area into two separate sections, funnelled all traffic into a single corridor, and increased the risk of congestion and vehicle conflicts, particularly during peak hours. Additionally, the long lines of buses along the road would have formed a visual barrier, diminishing the arrival experience for passengers emerging from the underground station.

The second major adjustment focused on the canopy's height and coverage. The original SOM-designed canopy ranged from 41 to 76.5 meters in height and extended 385 meters across the southern section of Zhanbei Road, primarily serving as a shelter for the two-story elevated walkway and sunken plazas below. In a later revision, Fei & Cheng Associates reduced its height to four stories, limiting coverage to the sunken plaza area.

Following their site assessment in 2014, Mecanoo proposed further refinements, lowering the canopy height to two storeys to create a more human-scaled and inviting environment. While the coverage varied across the three proposed design schemes, they all shared a common guiding principle: "The canopy should protect pedestrians from the sun and rain." Wherever pedestrian circulation extended, so too would the canopy, ensuring a continuous and sheltered public space that harmonized harmonised with the surrounding urban fabric.

Circulation Planning

The railway infrastructure, originally established during the Japanese colonial period, bisected Kaohsiung into northern and southern sections. As discussions on the railway undergrounding project progressed, much of the focus shifted to restitching the city's urban fabric, with the expectation that relocating the tracks underground would enhance connectivity, ease traffic flow, and promote more balanced urban development. Furthermore, the newly vacated railway corridor at ground level presented a valuable opportunity to be repurposed as a green corridor and urban parkland, enriching the city's public space.

The initial SOM plan followed this approach by designating major thoroughfares on both the eastern and western sides of the station, directing a substantial flow of cross-city traffic through these roadways. Zhanbei Road, running parallel to the newly established railway green corridor, was intended to connect both sides of the city while serving as a bus terminal and drop-off zone within the station precinct. Passengers arriving by car or bus could seamlessly transfer to the underground station via escalators leading to the sunken plaza. While this design prioritized vehicular accessibility and provided a convenient transfer experience, it also introduced through-traffic into the station area, intertwining private vehicles with public transport circulation. This approach, while practical in some aspects, created challenges for pedestrian movement, making walkability less intuitive and slightly limiting the potential for a more dynamic public realm.

By 2014, after years of discussions and refinements, the Kaohsiung City Government had solidified its vision for the station precinct: a pedestrian-oriented system, where people take precedence and vehicular access plays a secondary role. From Mecanoo's perspective, the station was not just a building design assignment, but rather a master plan opportunity to act as a catalyst for urban renewal. The approach focused on seamlessly integrating the station into the city's fabric, enhancing connectivity, and reinforcing its role as Kaohsiung's central mobility hub. By prioritizing a pedestrian-oriented system and redefining circulation patterns, the design aimed to create a station that was not only a transit point but also a vibrant and accessible urban space.

In the revised plan, city buses and intercity coaches were strategically relocated to opposite sides of the station, each assigned to be a dedicated transfer zone. These zones, accessible from both the ground level and underground concourse, help minimize crossflow conflicts and better distribute passenger movement. The eastern section of the station, designated as Zoning Area 2, accommodates the intercity coach terminal with 24 bays, while the western section, Zoning Area 3, is planned for city buses with 12 dedicated bays. This clear functional separation enhances wayfinding, ensuring that passengers arriving from the underground level can intuitively navigate toward their respective transit connections.

To enhance circulation, designated drop-off and pick-up zones for private vehicles, taxis, and motorcycles were reconfigured into a looped system along East and West Station Roads. While these areas remain near the originally planned Zhanbei Road transfer zone, the revised layout creates a clearer distinction between through-traffic and temporary stops, allowing for a more organized and accessible station environment.

The previous zoning of the station precinct resulted in an uneven distribution of open space, diminishing the visual prominence of the historic station. Zoning Area 3 lacked a clear function, while the spatial identity of the eastern and western sections remained indistinct. Through site adjustments, the functional balance between Zoning Areas 2 and 3 was strengthened, reinforcing the north-south historical axis and further defining the historic station as a central landmark. More than just improving connectivity, the new station—with its high-quality public spaces—serves as a catalyst for urban

development, extending its influence beyond transportation.

Through the Traveler's Eyes

While railway undergrounding has been a transformative urban intervention, seamlessly restitching the city's fabric, it also introduces architectural and experiential challenges for travelers. Humans, as beings naturally drawn to light, rely on daylight for spatial orientation and wayfinding. However, underground stations, with their low ceilings and limited natural light, often create a maze-like environment, making navigation less intuitive contradicting the fundamental need for clarity and smooth movement in a major transport hub.

A station is often a traveler's first encounter with a city, shaping their sense of arrival and setting the tone for their journey. In the past, when railway tracks ran above ground, passengers could gauge their approach by observing familiar city landmarks through the train windows, gradually immersing in the urban landscape before arrival. However, with railway undergrounding, travelers now depend solely on platform signage to confirm their location, losing the gradual sense of anticipation and connection that once accompanied the journey into a new place.

Mecanoo aimed to reignite the sense of arrival at the new Kaohsiung Station. As passengers ascend from the underground platform to the main concourse, the ceiling becomes their first visual encounter—a defining architectural element that captures the city's essence and identity. This design approach builds upon Mecanoo's earlier work on Delft Station (2006), where the ceiling played a pivotal role in shaping the traveler's experience. At Delft, an inverted historical city map, printed onto three-dimensional aluminum grilles, gradually unfolds as passengers ascend on escalators, creating a dynamic interplay between movement and discovery. More than just an aesthetic feature, this integrated design enhances wayfinding, strengthens local identity, and transforms the act of arrival into a memorable spatial experience.

The ceiling design of Kaohsiung Station embraces a similar philosophy, drawing inspiration from the city's traditional markets and temple plazas—most notably, the forecourt of Cijin Mazu Temple, where locals gather, interact, and engage in daily life. This cultural essence was reinterpreted through a contemporary architectural lens, shaping the station's interior into a "modern temple plaza"—a vibrant, communal space that connects people, the city, and its heritage.

Suspended above, a composition of delicately arranged white aluminum panels—each uniquely shaped—drifts like clouds across the ceiling, creating a sense of movement and lightness. These panels, combined with hanging luminaires, evoke the glow of traditional lanterns, blending tradition with modernity. More than a visual statement, this poetic interplay of form and light transforms the station into a memorable spatial experience, offering every traveler a welcoming and culturally resonant arrival.

Green Canopy

While the initial two proposals defined the canopy within a fixed architectural boundary, the final design adopts a more organic and expansive form, creating a meaningful connection with its surroundings. Inspired by years of working in Kaohsiung—particularly on the Weiwuying National Kaohsiung Center for the Arts—Mecanoo recognized the city's tropical climate challenges, including intense sun exposure and sudden torrential rainfall. In response, the canopy was conceived not just as a shelter but as an extension of pedestrian movement, providing a continuous semi-outdoor space that maximizes shade, natural ventilation, and daylighting. These microclimatic considerations shaped both the station's form and function, ensuring a comfortable public environment throughout the year.

Adjusting the canopy height became a pivotal design refinement, addressing urban and architectural considerations. Lowering the canopy not only introduced a more human-scaled environment, moving away from a rigid, high-tech aesthetic, but also facilitated seamless east-west connectivity. This adjustment linked the railway green corridor with pedestrian and cycling routes, enhancing accessibility and walkability. While the original design primarily positioned the canopy as a rain cover, the reimagined structure extends downward s on both sides, meeting the ground at key points to create a fully integrated, 15-kilometer pedestrian-friendly corridor on top.

This seamless integration of architecture and landscape has long been a hallmark of Mecanoo's design philosophy. A notable example is the Delft University of Technology Library (1998), an early exploration of landscape architecture. Given the challenge of modernizing the library while maintaining harmony with the adjacent brutalist auditorium, Mecanoo took an innovative approach—concealing the primary program beneath a gently sloping, grass-covered roof that functioned as an architectural feature and a public park. At its center, a striking conical skylight not only introduced natural daylight into the interiors but also became a recognizable landmark, reinforcing the library's identity while blurring the boundaries between built and natural environments. This principle of integrating green infrastructure into architecture carries through to Kaohsiung Station, where the canopy and green rooftop embody a similar vision—one that enhances functionality and urban livability.

Drawing from the design philosophy of Weiwuying and the Delft University of Technology Library, the canopy at Kaohsiung Station extends goes beyond a functional shelter, shaping a semi-outdoor environment that interacts with the city's climate. Its sweeping form channels natural airflow, mitigating the urban heat island effect, while the 17,500-square-meter green roof above serves as a vital "lung of the city." This verdant layer not only enhances the station's identity but also creates a cooler, more comfortable microclimate, offering respite even during Kaohsiung's intense summers. By reducing the reliance on mechanical cooling in underground spaces, the station also contributes to long-term energy efficiency. More than a transport hub, Kaohsiung Station has evolved into a generous green space—an urban park in the sky that integrates into the rhythm of daily life.

Structural Integration

By this point, the vision for the station precinct had come into focus, but with further design development came new layers of complexity and challenge. When Mecanoo joined the project in 2014, underground construction was already in full swing, requiring the design team to integrate their vision within an ongoing, fast-moving process. Working within the constraints of an existing structural system while introducing new design innovations posed a significant challenge.

The biggest challenge was integrating the expanded canopy within the constraints of the existing underground structure. With the station's foundations and load-bearing capacities already in place, the design had to be meticulously adapted to ensure structural stability while effortlessly integrating the new canopy.

This process led to one of Kaohsiung Station's most distinctive architectural elements—79 uniquely sculpted, tree-like steel columns. From ground level, whether on the northern or southern side of the station, their transformation is strikingly visible. Below, at the underground concourse, the columns follow a rigid, grid-like structure, evenly distributing the weight of the floors above. As they ascend to ground level, these once-solid rectangular columns elegantly fan out, resembling the ribs of an umbrella, supporting the sweeping curves of the canopy's steel framework.

Systematization

While the branching steel columns symbolise a transition from singular to multiple, the canopy's pebble-shaped ceiling panels represent the opposite—an intricately organised system that unites diverse elements in perfect harmony. While the panels may appear to be scattered in a random, free-flowing arrangement, their design is rooted in a highly organized modular framework aimed at optimising construction efficiency, reducing costs, and simplifying installation. This system is based on a hexagonal honeycomb module, where each unit comprises eleven uniquely contoured aluminum panels. While these eleven shapes are systematically repeated across the ceiling, slight rotations of the hexagonal modules generate the illusion of organic variation, lending the canopy a dynamic and naturally fluid aesthetic.

This modular approach not only facilitated precise alignment of individual panels along the canopy's curved surface but also simplified the engineering process. More importantly, it provided a systematic framework for integrating the station's signature lighting elements—suspended lantern-like fixtures that evoke the atmosphere of temple forecourts.

As the central canopy rises into a gently sloping hill, the ceiling below naturally takes on a three-dimensional, undulating form. Ensuring evenly distributed lighting and integrating fixtures within this complex geometry posed a significant design challenge. The solution lay in the honeycomb system, which enabled precise placement of each lighting fixture at the six vertices of every module.

This approach achieved a balanced, harmonious illumination while avoiding rigid, grid-like lighting patterns. The result is a ceiling that feels organic, and fluid yet is meticulously designed—blending soft ambient lighting with the playful rhythm of the floating aluminum panels.

People, Place, Purpose, and Poetry

"People, Place, Purpose, and Poetry" is Mecanoo's 40th-anniversary publication, released in 2023. For forty years, Mecanoo has explored how architecture responds to people and their environment, drawing from local context while balancing function and poetic expression. Design is not merely about shaping space; it is a dialogue—one that acknowledges history, respects the present, and anticipates the future.

Within this framework, People, Place, Purpose, and Poetry define Mecanoo's core design philosophy, guiding each project toward the most fitting response to its context. Applying this perspective to Kaohsiung Station, its design is not only a response to infrastructure needs but also a conversation about urban memory, public life, and future aspirations. In this dialogue, these four principles intertwine to shape a station that serves as both a historical landmark and a gateway to Kaohsiung's evolving urban identity.

Who Is It Designed For?

The essence of a space lies in the people who use it. Each day, commuters weaving through the station, travelers pulling their luggage, and elders sharing memories with their children leave their mark. Their needs, expectations, and experiences shape how the space is envisioned and brought to life.

What Defines This Place?

Kaohsiung's expansive harbor views, the silhouette of its historic station, and the distinctive light of the southern city all contribute to its unique identity. Here, past and future converge, allowing old and new to coexist. The station is not just a transportation hub—it is an extension of the city's fabric, integrated into its urban life.

How Does It Serve Its Purpose?

Architecture is more than form; its true significance lies in how it enhances daily life. By refining circulation, expanding public space, and prioritizing pedestrian movement, the station evolves beyond a transit point into an active and accessible urban environment—one that invites people to linger,

connect, and engage.

How Does It Capture Poetry?

Beyond function, architecture holds the power to evoke emotion and memory. The soft interplay of light through the canopy, the quiet moments of reflection in front of the old station, the rhythm of footsteps carried by the breeze through green corridors—these subtle yet profound details transform the station into a place that resonates with its people.

The design of Kaohsiung Station balances historical continuity, urban development, and modern transportation needs. Through a thoughtful and comprehensive approach, it establishes a public space that is both adaptable and sustainable. The principles of People, Place, Purpose, and Poetry are embodied in this project, offering a foundation for future urban spaces centered on human experience. As the station integrates into daily life, its true impact will emerge in the evolving ways people interact with it, deepening over time.