

D·NEWS

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DRAGAGES HONG KONG 香港寶嘉

2017 Nov · 十一月

Shared innovation



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SAFETY AND INNOVATION – OUR CORE VALUES

職安健及創新科技 — 公司的核心價值

For more than 60 years we have been delivering innovative solutions for our clients, supported by a strong determination to ensure the safety of our people with a collaborative and caring culture.

Today, the Group's mottos of **"Shared Innovation"** and **"Health and Safety, a Shared Commitment"** form the fundamentals of Dragages Hong Kong's strategic direction and priorities. The first consideration of every decision we take is for the safety of our people, and it is our primary objective to ensure that all our people go home safely every day to their families and loved ones.

I see Safety Leadership, the Anticipation and Elimination of Risks during our design and methods preparation, Simplified Safety Processes, and the right Competencies for each and every task, as the four pillars to achieve our safety objectives.

Safety Leadership is an attribute that must be displayed at all levels of our organisation. We started Safety Leadership training programmes this year for our senior staff, and will continue into the new year for all operational staff.

In April and June this year, we stopped production activities across all our sites to engage and share with all employees our Safety Objectives and Strategies. I took the opportunity during these Safety Stand Downs to assure everyone that they will always have my full support for making safety their top priority.

Our commitment to Innovation can be seen every day on our ongoing projects. In 2017, our project teams continued to deliver remarkable technical breakthroughs and a number of "firsts" in Hong Kong. An update of the extraordinary achievements of our people and an overview of some of our latest innovations are included in this newsletter.

Drawing on our rich combination of local knowledge and international experience of some 3,000 employees, we will continue to deliver innovative solutions for our clients, with a genuine commitment to make safety our top priority.

過去超過 60 年，香港寶嘉秉持關愛文化及精益求精的堅定信念，公司上下員工在職安健方面群策群力，締造安全的工作環境及致力為客戶提供創新的解決方案。

時至今日，「創意共享」及「職安健，人人有責」不單是母公司及我們的座右銘，更是香港寶嘉的業務策略發展方向。我們做每項決策前，必先以員工的安全及健康為首要考慮。確保所有項目團隊成員每天都能絲毫無損地回家與家人團聚，向來都是公司的首要目標。

凡事重視安全領導，以預知及消弭風險的態度設計和籌劃每個項目，致力把安全程序化繁為簡，並以適切的技能應付各項任務，一直是我們賴以實踐安全目標的四大支柱。

為確保安全領導的概念深入滲透公司每個層面，我們自去年起推行安全領導培訓計劃，並會於明年持續舉行，務求讓全體前線工作人員均可接受相關培訓。

今年 4 月和 6 月，公司兩度暫停旗下所有工地的運作，向全體員工再次重申我們的安全目標和策略。我們把握機會，透過反思會活動加強員工對公司安全宗旨和預期的理解，確保每位員工清楚明白，管理層全力支持大家以守護工地安全為首要任務。

香港寶嘉勇於創新的精神，也見諸於正在施工的項目。年內，工程團隊繼續取得多項重大的技術突破，創下香港多個第一，成績驕人。透過今期通訊，我們和大家分享多項工程人員的非凡成就和創新點子。

集結 3,000 名員工的地方智慧和國際經驗，秉承以安全為先的堅實承諾，我們會在安全的工作環境下，繼續為業界及客戶帶來創意無限的嶄新解決方案。

**Wes Jones**

鍾偉賢

Managing Director
董事總經理

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PROJECT SPOTLIGHT
重點工程

MTR SHATIN TO CENTRAL LINK

CAUSEWAY BAY TYPHOON SHELTER
TO ADMIRALTY TUNNELS – CONTRACT NO. 1128

港鐵沙田至中環綫—銅鑼灣避風塘至金鐘站
鐵路隧道建造工程—合約編號 1128



One of Hong Kong’s most technically challenging tunnel projects, this is part of the 6km extension of the ongoing Shatin to Central Link (SCL) from Kowloon to the city hub on Hong Kong Island.

After a successful journey beneath the city’s busiest districts, including the navigation of underground obstructions such as abandoned and existing piles, the Shatin to Central Link (SCL) Island Section’s first Tunnel Boring Machine (TBM), Athena, started her final journey in mid-September. It is anticipated that she will complete her excavation of the city’s busiest districts, including crossing the existing MTR Tsuen Wan Line, before the year ends.

innovativeness was well recognised and we received the Gold Award of “Temporary Works Excellence Award 2017” during the Construction Safety Week - co-organised by the Development Bureau and the Construction Industry Council.

Since Athena’s launch in March 2016, TBM operations have been running smoothly. To date, she has completed two tunnel drives. Meanwhile, the project’s Variable Density TBM, which is designed for thin- to high-density slurry under shallow ground conditions, completed its second tunnel drive (675m) last year ahead of schedule.

In parallel with these works, construction of the cut and cover tunnel near the Cross Harbour Tunnel was completed in the third quarter of this year, paving the way for the removal of temporary reclamation. Excavation works and tunnelling works are also progressing well at work sites of the future South Ventilation Building and the Fenwick Ferry Pier.

To cope with space constraints in the West Launch Shaft, a pre-stressed TBM Launching structure – believed to be Hong Kong’s FIRST – was developed to facilitate the TBM launch and enable safe transmission of TBM thrust force to the surroundings. The adoption of a starwheel with pre-stressed bars minimises the risks of temporary work. It also requires much lighter steelwork and is a safer structure as TBM thrust force can be transferred uniformly around the circumference of the starwheel by the pre-stressed bars. This innovation has not only provided much-needed working space for TBM assembly works, but also created a safer work environment. Our

The project is not only being delivered through innovative solutions, but also in accordance with the highest safety standards. During the Construction Safety Week, we were honoured to be selected as one of the nine work sites in the Site Visit Programme to share site-safety good practices with industry practitioners.

Client	MTR Corporation
Project	Construction of the Eastern Tunnels and Western Tunnels
Eastern Tunnels	680m x 2 tunnels
Western Tunnels	480m x 2 tunnels



承建香港建造史上其中一項最具技術挑戰性的隧道項目——全長 6 公里，從沙田貫通九龍直達港島心臟地帶的沙田至中環綫（沙中綫）的其中一段延綫。

沙中綫首台隧道鑽挖機雅典娜已避開眾多廢置及現有管道等地下設施，成功穿越銅鑼灣鬧市地底，並於 9 月中旬展開最後一段旅程。我們預計在年底前雅典娜將可以越過運行中的港鐵荃灣綫，完成所有在鬧市中的鑽挖工程。

雅典娜自 2016 年 3 月開始鑽挖工程後一直運作暢順，至今已鑽挖兩條隧道。同時，另一台可在淺埋環境中按泥漿和土質鬆軟度作出調節的可變密度的混合隧道鑽挖機織女亦已於去年完成開挖第二條全長 675 米的隧道，進度勝於預期。

由於西面進口豎井空間所限，工程團隊特別開發了一部相信是全港首台的預應力隧道鑽挖機啟動支架，加快鑽挖機工作之餘，同時確保鑽挖機在運作時能安全地將推力傳遞至四周。鑽挖機採用裝配了預應力鋼筋的星形輪，以減少臨時工程。由於星形輪所使用的鋼材較輕，鑽挖機運作時產生的推力可透過預應力鋼筋平均分散到星形輪的表面，令啟動架更加安全。有關設計不但能突破組裝鑽挖機空間不足的局限，而且能為給工友帶來更安全的工作環境。除此以外，寶嘉憑着創新技術，於發展局及建造業議會合辦的「建造業安全周 2017」中取得「2017 臨時工程卓越大獎」金獎殊榮。

與此同時，採用「明挖回填」方法建造的過海隧道段已於今年第三季完工，意味著臨時填海工地的移除工程可於稍後正式開展。另外，未來南通風大樓及分域碼頭段的挖掘及隧道工程進度同樣理想。

本項目不只在技術方案上屢創先河，在施工安全方面亦達至最高水平。「建造業安全周 2017」中，本項目更獲選為工地參觀活動中九個示範工地之一，與業界分享安全的工地安全運作模式。

- 1: Tunnel Boring Machine (TBM), Athena, launched in September 2017 to commence her final journey
隧道鑽挖機雅典娜於 2017 年 9 月展開最後一段旅程
- 2: A 40m deep peanut shaft at Fenwick Pier to facilitate TBM launching
隧道鑽挖機通過位於分域碼頭旁的 40 米深環形豎井進入隧道



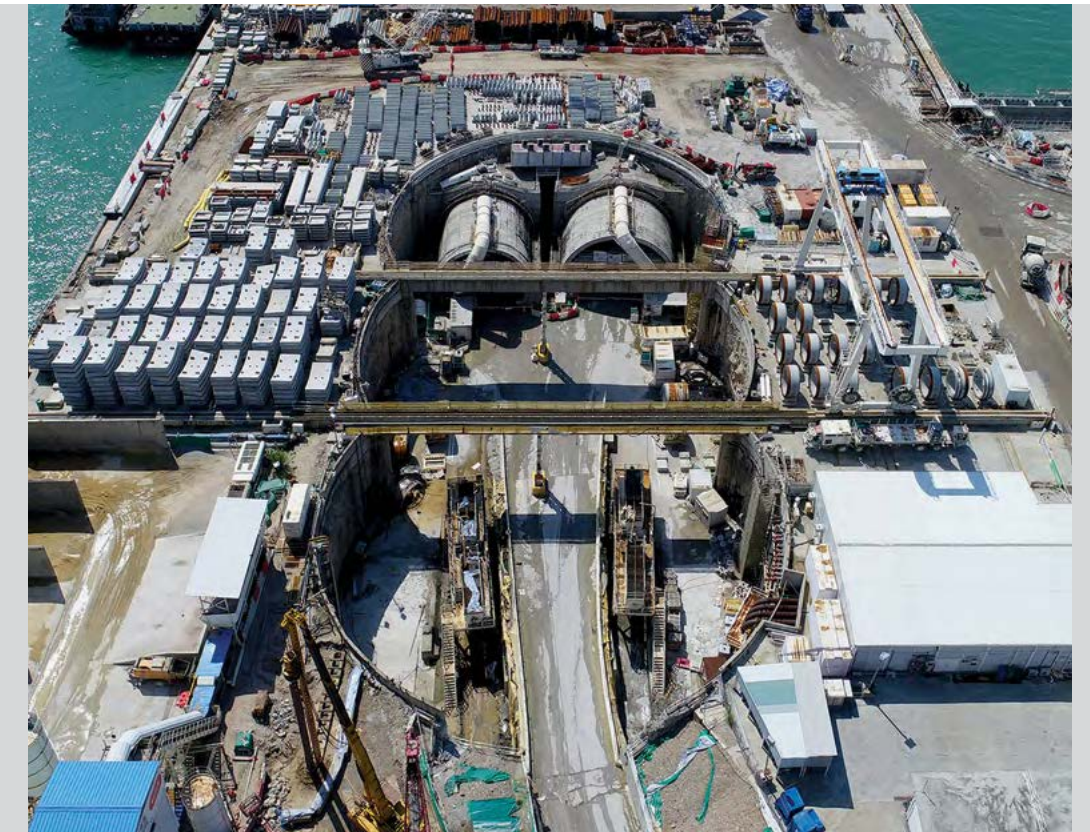
客戶	港鐵公司
項目	建造東面及西面隧道
東面隧道	兩條各長 680 米的隧道
西面隧道	兩條各長 480 米的隧道

TUEN MUN – CHEK LAP KOK LINK

NORTHERN CONNECTION SUB-SEA TUNNEL SECTION

屯門至赤鱸角連接路—
北面連接路海底隧道段

Client	Highways Department, Hong Kong Government
Project	Design and construction of a dual two-lane sub-sea tunnel of about 5km and reclamation of about 16.5 hectares of land
World's largest TBM	17.6m in diameter
HK's deepest sub-sea road tunnels	50m below sea level
HK's longest sub-sea road tunnels	Approximately 5km long × 2 tubes
HK's greatest no. of cross passages for road tunnels	52



This is Hong Kong's deepest, longest, and largest sub-sea road tunnel forming part of the Tuen Mun-Chek Lap Kok Link (TMCLKL). Upon its completion, the TMCLKL will strengthen both the local and regional transportation network by serving as an alternative route to the airport, and will further enhance the cross-boundary network between Hong Kong, Macao, Shenzhen and Zhuhai.

Since the start of this project, team members have undertaken some of Hong Kong's most technically-demanding challenges, and achieved a number of technical breakthroughs. Working under a compressed environment was one of the project's key challenges. In 2016, 973 cutter discs were changed through 18 saturation cycles, and 240 shuttle runs were completed by 30 divers. This year, we continued hyperbaric works under saturation mode to maintain cutter heads of two tunnel boring machines at high pressure of up to 5.8 bar. Despite the complex challenges, the operation has a flawless safety record with zero accidents.

In April 2017, the project team completed Phase 2 reclamation works in the Northern Landfall. The team faced yet further challenges in terms of both logistical arrangements and work programming, with team members required to perform multiple tasks simultaneously within a limited workspace, and to work around marine traffic constraints. With only one marine traffic entrance for barge transportation, the team needed to work closely with nearby neighbourhoods to achieve smooth logistical arrangements. Through meticulous

planning and seamless coordination, the project team completed the reclamation of some 28,800 square metres of land in just four months. Tunnelling works in the sub-sea section were also completed by mid-2017.

A number of technical **FIRSTS** have been introduced in this project which are exemplary in the tunnelling industry. A number of industry practitioners, including government officials, visited our work site to learn more about these best practices. In June 2017, Financial Secretary, Mr. Paul Chan, also visited the work site. He was particularly impressed by the saturation diving operation, and the construction of cross passages by mini-TBMs. These are all part of our innovations which have enhanced the health and safety of workers while also maximising efficiency.



作為本地最大、最長、最深的海底行車隧道，項目竣工後將為市民提供前往機場的另一道路選擇，並改善香港、澳門、深圳及珠海的跨界交通，有效強化本地及區內運輸網絡。

自項目開展以來，施工小組面對本地工程界最艱巨的挑戰，最後成功克服重重障礙，取得多項技術突破。而在高壓環境下施工是本項目的其中一個重大挑戰。於 2016 年，30 名潛水員經加壓艙進行 240 次帶壓運送，在 18 個飽和高壓工作周期內，成功更換了 973 套滾動刀頭。今年，工程團隊繼續採用飽和潛水方式，在高達 5.8 個大氣壓力環境下，維修隧道鑽挖機的鑽頭。儘管工程艱巨，飽和高壓工作施工期內創下零意外的安全紀錄，實踐無瑕運作。

於 2017 年 4 月，本項目完成北面出入口的第二期填海工程。然而，工程團隊仍需面對物流安排及工序規劃兩大挑戰。團隊需要在有限的空間及嚴格的海上交通管制下，同時進行多項工程。鑑於現場只容許施工躉船在單一出入口進出，工程人員需與鄰近的單位緊密合作，確保後勤安排運作暢順。在工程人員精心策劃和協調下，團隊在短短四個月內完成 28,800 平方米填海工程，而相關的海底隧道工程亦已於 2017 年中竣工。

本項目採用多個首次引入香港的技術，成為今後開挖隧道工程的典範。自項目開展以來，多名業界代表與政府官員先後到場參觀，借鑑寶嘉的良好作業模式。2017 年 6 月，財政司司長陳茂波到訪工地，對項目創業界之先，起用飽和高壓潛水方式施工，及採用多組小型鑽挖機建造連接通道的技術留下深刻印象。繼往開來，香港寶嘉將繼續引入嶄新的建造方法，保障團隊安全和職業健康之餘，進一步提高施工效率。

1: Northern landfall: north ventilation building
北面出入口 - 北面通風大樓

2: Northern landfall: north ventilation shaft
北面出入口 - 北面通風豎井

3: Southern landfall: excavation works carrying out
at the south ventilation shaft
南面出入口 - 南面通風豎井挖掘工程進行中

客戶	香港政府 路政署
項目	設計及建造一條長約 5 公里的雙線雙層海底隧道，以及填海約 16.5 公頃土地
世上最大的隧道鑽挖機	直徑 17.6 米
香港最深的海底行車隧道	水深超過 50 米
香港最長的海底行車隧道	雙管道，各長約 5 公里
香港最多相連通道的隧道	52 條

MORPHEUS

沐梵世



Construction of this unique hotel represents the realisation of a “dream” building. Featuring a series of three voids carved through the centre of the tower, this building is set to become an iconic landmark in Cotai and Macao.

Morpheus is probably the world's first free-form exoskeleton high-rise building, the successful completion of which has required strong technical know-how, ground-breaking innovation and seamless coordination. The complex architectural structures represent a composition of fragmented geometry, demanding absolute precision in terms of work sequence.

Over the last four years, Dragages' Macau project team has worked closely with the client, designers and related production team to realise this masterpiece building, with remarkable results. In total, we completed over 28,000 tonnes of permanent structural steel works, spanning from nodes to fabricated member beams in complex geometry shapes. In the course of the construction of the free-form voids, we also managed to complete three major de-propping* processes precisely and safely, which set a new benchmark in building technology. We likewise leveraged the latest technology to achieve the highest levels of accuracy, employing 3D software, namely Rhino and Tekla, to perform steel fabrication works.

Site safety has always been at the top of our agenda. The successful implementation of work site safety measures brought us six awards in the 5th Macao Construction Safety Award Scheme, including four of the highest-ranking Gold Prizes.

Project team members were complimented by the judges for their strong team spirit and commitment to innovation, which has set a high standard for all industry players. These awards are affirmation of our commitment to safety management and our tireless drive to enhance safety standards through innovation.

In the third quarter of 2017, Dragages Macau completed all exterior structural and façade works. The premises were handed over to the client's contractor to perform interior fittings and decorations in end 2016.

* De-propping refers to the removal of temporary supports in a planned and controlled sequence, which allows the structure to settle in its permanent geometry.

Client	Melco Crown Entertainment Limited
Project	Construction of two 39-storey towers
Total floor area	150,927sqm
Number of rooms	Approximately 780 guest rooms along with suites, sky villas and duplex villas
Architect	Zaha Hadid Architects



新濠天地酒店大樓建造獨特，包括由三個中央空隙形成的多維點陣式彎曲鋼結構。項目落成後勢必成為路氹城及澳門的重要地標，堪稱建造界的夢之大樓。

沐梵世大概是世界上首個採用自由曲面外框幕牆的高樓。由碎形幾何組合而成的複雜建築結構，講求絕對精準的工序規劃。要順利完工，工程團隊必須具有豐富的技術知識，以創新突破的方法施工，並確保各個工序均無縫協調。

過去四年，澳門寶嘉的工程團隊與客戶、設計師及相關的製作隊伍緊密合作，共同構建這個大師級建築項目，成績斐然。項目團隊已完成 28,000 噸永久鋼結構工程，包括節點和各種複雜幾何形狀的鋼樑構件。在建造自由曲面中央空隙時，工程人員經過精密計算，安全地拆卸了三組主要臨時架構 (de-propping)*，寫下了建造技術的新標準。團隊更採用 Rhino 及 Tekla 3D 系統進行鋼構件裝嵌工程，以先進技術達至最精準的裝嵌水平。

公司一直以工地安全為上，而澳門寶嘉憑藉出色的安全表現，於第五屆「建築業安全施工獎勵計劃」獲取 6 個獎項，當中包括 4 個為獎勵計劃中最高級別的金獎。評審團尤為讚賞澳門寶嘉的團隊精神及敢於創新的熱情，實屬業界的典範。以上殊榮再次肯定寶嘉致力實踐安全管理的承諾，敢於以創新思維提高安全水平。

2017 年第三季，澳門寶嘉順利完成本項目所有外部結構及幕牆裝置工程，並於 2016 年尾將場地移交客戶的合約承造商展開內部建造及裝修工程。

* 拆卸臨時架構時按照計劃，按部就班移除大樓內的臨時支撐物，讓建築物的幾何結構固定下來。

- 1: Hotel's roof top
酒店大樓頂層
- 2: Morpheus – probably the world's first free-form exoskeleton high-rise building
沐梵世大概是世界上首個採用自由曲面外框幕牆的高樓



客戶	新濠博亞娛樂有限公司
項目	建造兩棟 39 層高的大樓
總樓面面積	150,927 平方米
房間數目	約 780 間客房、套房、空中別墅及複式別墅
建築師	札哈·哈蒂建築事務所

LIANTANG / HEUNG YUEN WAI BOUNDARY CONTROL POINT

SITE FORMATION & INFRASTRUCTURE WORKS
CONTRACT 2

蓮塘 / 香園圍口岸土地平整及基礎建設工程一
工程合約 2

Client	Civil Engineering and Development Department, Hong Kong Government
Project	Design and construction of a dual two-lane trunk road; three ventilation buildings; one administration building
Tunnels	2 x 4.8km long
EPB TBM	14m in diameter



The design and construction of these complex soft ground tunnels have required Hong Kong's largest dual-mode Earth Pressure Balanced (EPB) Tunnel Boring Machine (TBM). This project is also an exemplar of concurrent TBM and drill and blast operations.

The first eight months of 2017 were an important time for this project. A number of major milestones were reached safely and successfully, demonstrating the team's strong technical know-how, dedication and team spirit – both among Dragages and our client (the Civil Engineering and Development Department), supervising officer (AECOM), and working partners.

Within half a year, we achieved the record-breaking success of three tunnel breakthroughs. After a 16-month underground journey, Hong Kong's largest dual mode EPB TBM broke through the Southbound Tunnel on 1 March 2017, marking the project's first tunnel breakthrough. It took the team only three months to recondition the machine and complete a complex U-turn operation within one of the city's largest caverns – 23 metres high, 27 metres wide and 40 metres long. Dragages' Hong Kong team worked together with our long-term partner, VSL, to make this first-ever 180-degree U-turn operation a success.

To achieve the highest production efficiency, tunnels were excavated concurrently by tunnel boring and drill and blast methods. The two 1.5km-long tunnels in the South Portal were excavated by drill and blast, with some 780,000 tonnes of rock excavated using 630 tonnes of explosives in 21 months. To cope with extensive water ingress,

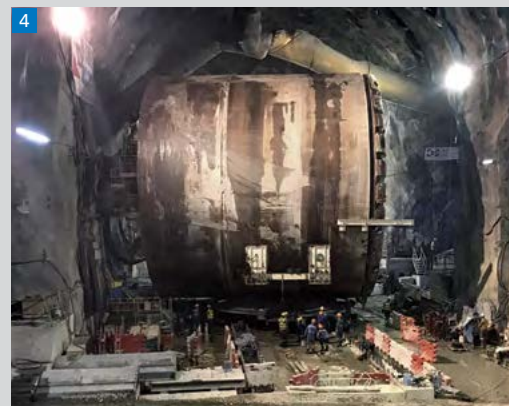
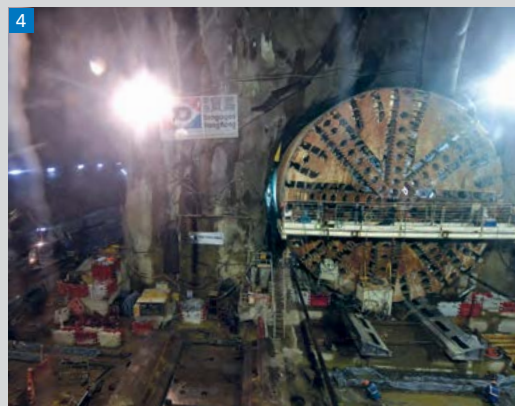
frequent grouting operations were also conducted. Thanks to the hard work and dedication of the whole team, these two tunnels broke through on 24 July and 15 August.

In the North Portal, the innovative enlargement excavations inside the curved section of the Princess Hill tunnel were completed in August. Despite the excavation's complex interfaces, works were carried out safely with no accidents. In parallel, superstructure works on the three ventilation buildings are now in full swing, targeted for completion before the end of the year.

Looking ahead, there is still a wide array of activities that need to be completed – both in terms of building and tunnelling works. The team will keep up the momentum to overcome all remaining challenges and continue to adhere to the highest safety standards.

1: North portal
北隧出入口

2: Mid-vent
中段出風口



項目為了設計及建造複雜的軟土隧道，需起用本地最大型雙模式土壓平衡隧道鑽挖機。本項目更被視為同步以隧道鑽挖機、鑽挖及爆破方法施工的典範。

2017 年的首八個月是本項目的關鍵施工期，工程團隊安全及順利地跨越多個主要里程碑，充分展現寶嘉、作為客戶的土木工程拓展處、工程監督艾亦康及各合作夥伴之間的豐富技術知識、堅毅意志及出色的團隊精神。

團隊在短短半年內完成了 3 段隧道的貫通工作，為業界刷新紀錄。2017 年 3 月 1 日，經過 16 個月的地下開挖工作，全港最大型的雙模式土壓平衡隧道鑽挖機成功貫穿北口南行隧道，標誌著項目首段隧道正式貫通。期後，工程人員在長期合作夥伴威勝利的通力配合下，以短短 3 個月的時間在香港其中一個最大的地下洞穴（高 23 米、闊 27 米、長 40 米）內，完成鑽挖機的調道工序，順利將鑽挖機調轉 180 度至另一北行管道方向。

為達至最高的施工效率，本項目同時以隧道鑽挖機、鑽挖和爆破方法開鑿隧道。當中兩段位於南口，各長 1.5 公里的隧道採用鑽挖及爆破方式挖掘。工作人員起用了 630 噸炸藥，在 21 個月內挖掘出 780,000 噸碎石。為應付大量地下水滲入，工程團隊需不時在管道內灌漿。在全力的技術支援及團隊的努力下，這兩段隧道分別在 7 月 24 日及 8 月 15 日貫通。

位於北口，公主山曲線段部分，嶄新的擴大隧道空間挖掘工程亦於 8 月竣工。儘管工程複雜，工程團隊仍能在零意外的情況下安全完成工作。此外，三棟通風大樓的建造工程正進行得如火如荼，施工小組朝著年底竣工的目標全速進發。

展望未來，本項目尚餘各類有關建造及隧道的工程。工程團隊將繼續迎難而上，攜手跨越各項挑戰，務求以最高的安全標準，順利完成項目。

3: South portal
南隧道入口

4: Technical FIRST: Tunnel Boring Machine (TBM)
180-degree U-turn operation completed within 3 months' time
香港隧道史上的第一次：工程團隊成功在 3 個月內於隧道內完成鑽挖機 180 度轉向



客戶	香港政府 土木工程拓展署
項目	設計及建造一條雙程雙線分屬主幹路，興建三座通風大樓和一座行政大樓
隧道	長 4.8 公里的雙程隧道
土壓平衡隧道鑽挖機	直徑 14 米

HONG KONG- ZHUHAI-MACAO BRIDGE

HONG KONG LINK ROAD

港珠澳大橋香港接線

Client	Highways Department, Hong Kong Government
Joint-venture project	Design and construction of a 9.4km-long viaduct section supporting dual three-lane carriageways over deep waters
World's largest span for a pre-cast segmental bridge	180m
Number of piles	725



The design and construction of this 9.4km-long viaduct section will support dual three-lane carriageways over deep waters. When completed, it will be part of the world's longest sea bridge, providing a vital link to enhance connectivity between Hong Kong, Macao and the Mainland.

Construction works on the Hong Kong Link Road started in May 2012. From the outset, the project posed a wide range of critical challenges, including complex geologies, stringent airport height restrictions, a difficult marine working environment, and unpredictable weather conditions.

Hand in hand with our client (the Highways Department), the Supervising Officer (Arup) and other stakeholders, this project is now heading towards completion after some five years' hard work. Indeed, 23 January 2017 was a significant milestone, with both the Mainland and Hong Kong viaduct structures finally connected at the HKSAR Boundary. The Highways Department, Arup and the whole project team came together to celebrate this hard-earned achievement!

The turnaround facility is a complex structure which required not only precast elements but also complicated in-situ concrete works. Through strong technical know-how coupled with good team spirit, we managed to complete all structural precast works with 5,714 precast deck viaduct segments installed, the last segment was also erected at the turnaround facility. Deck activities such as parapets, road barriers, road pavements, drainage, sign gantries, lighting and E&M works are now in full swing on multiple work fronts along the bridge.

On 1 July 2017, as part of the Hong Kong Government's programme for Establishment Day, President Xi Jinping, accompanied by the Chief Executive, Mrs. Carrie Lam, visited some of Hong Kong's major infrastructure projects, including the Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road. It is anticipated that the enhanced connections within the Guangdong-Hong Kong-Macao Bay Area, as well as with the rest of the Mainland, will further reinforce Hong Kong's position as an international and regional logistics hub.

1: 23rd January 2017 : a historic moment when the Hong Kong Link Road connected to the Main Bridge on the Mainland side

港珠澳大橋香港接線與內地的主橋於 2017 年 1 月 23 日接駁完成，標誌著項目的歷史性一刻



項目涵蓋設計及建造一條 9.4 公里長的雙程三線高架橋。這不但會成為全世界最長的跨海橋樑的重要部份，更會是香港、澳門和大陸的重要接駁點。

自 2012 年 5 月施工以來，港珠澳大橋香港接線工程涉及多項重大挑戰，包括複雜的地質環境、嚴格的機場高度限制、海上施工環境規限及變化莫測的天氣狀況等等。

在客戶路政署、項目監督與雅納及一眾相關團隊的通力合作下，經過五年多的努力，本項目已接近完成。2017 年 1 月 23 日，項目團隊迎來重要的一刻——港珠澳大橋香港接線與內地主橋接駁成功。團隊成員與客戶和項目監督更在這天聚首一堂，慶祝這個來之不易的成果。

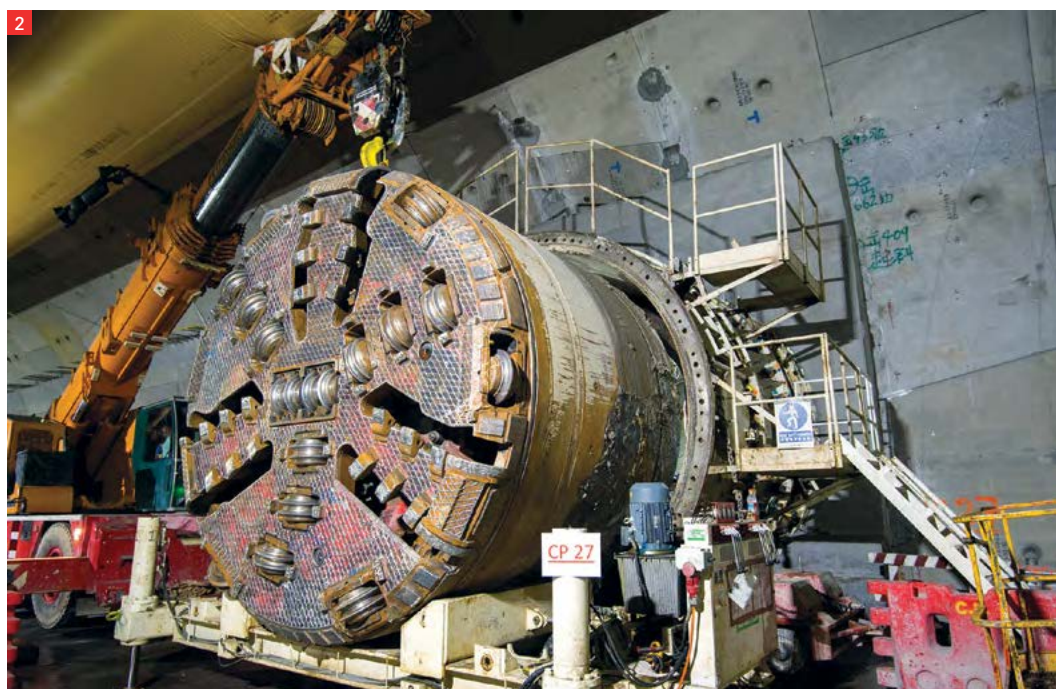
本項目的車輛掉頭設施結構及建造複雜，當中涉及同時起用預製組件及現場混凝土。憑藉卓越的建橋技術及團隊精神，工程人員已成功完成安裝合共 5,714 件預製高架橋組件及掉頭設施。現時，工程人員正如火如荼地在主橋不同段落進行各種橋面工程，包括護欄及屏障建造、路面及排水渠鋪設、路標塔架豎立、照明系統設置，以及其他機電工程。

2017 年 7 月 1 日，作為特區回歸紀念日的官方活動之一，國家主席習近平在行政長官林鄭月娥的陪同下，參觀包括港珠澳大橋香港接線等多項大型基建工程。隨著港珠澳大橋落成，粵港澳大灣區與中國大陸的聯繫將更加緊密，有助進一步鞏固香港作為國際和區域航運樞紐的地位。

- 2: The bridge boasts the world's LARGEST span of a pre-cast segmental bridge at 180m
大橋採用了長 180 米，全球最大的預製橋樑組件
- 3: Turnaround facility – one of most complex bridge structures in the region
車輛掉頭設施堪稱為區域中最複雜的大橋結構之一



客戶	香港政府 路政署
聯營項目	設計及建造一條約 9.4 公里長的三線雙程跨海高架橋
全球最長跨距，以預製組件建成的高架橋	180 米
橋柱數目	725 條



Shared Innovation 創意不斷 屢獻新猷

Our parent company, Bouygues Construction, has recently launched its new tagline "Shared Innovation". Here at Dragages Hong Kong, we are always looking for innovative new ways to enhance safety and efficiency, spanning from design to construction. A number of visionary new solutions have been incorporated in our ongoing projects, some of which are FIRSTS in Hong Kong or even around the globe.

香港寶嘉母公司 Bouygues Construction 近日推出新口號：創意共享 (Shared Innovation)。與母公司步伐一致，香港寶嘉一直力求以嶄新方式，從設計至建造的各個工序中，全面提高安全水平和工作效率，在現有項目中引進多項具前瞻性的方案，成為香港以至全球第一。

1 MTR Shatin to Central Link – Causeway Bay Typhoon Shelter to Admiralty Tunnels – Contract No. 1128 港鐵沙田至中環綫 — 銅鑼灣避風塘至金鐘站鐵路隧道建造工程 — 合約編號 1128

In the space of just three months, Hong Kong's FIRST **Variable Density Tunnel Boring Machine (TBM)** completed its 680m underground journey safely and smoothly in December 2016. This TBM was designed to adapt to the face density of the slurry to tackle challenges in relation to heterogeneity and shallow ground conditions.

In 2017, we developed a pre-stressed TBM launching structure – a "**starwheel with pre-stressed bars**" – believed to be Hong Kong's FIRST. This innovation not only provided much needed working space for TBM assembly works, it also minimised the risks of temporary work and created a safer work environment. This innovation, together with the 40m-deep **strut-free peanut shaft**, brought us the "Gold Award – Temporary Works Excellence Award 2017 – Civil Engineering Works".

作為香港首個採用**可變密度隧道鑽挖機**的項目，工程團隊在短短三個月內完成全長 680 米的地底隧道鑽挖工作，令工程安全及順利地於 2016 年 12 月完工。可變密度隧道鑽挖機可在淺埋環境中因應泥漿和土質鬆軟度作出調節，克服不同施工環境的挑戰。

2017 年，香港寶嘉開發出相信是全港首台的「**先張預應力星形輪鋼架**」，為隧道鑽挖機的開挖提供所需之後座力，再創業界先河。這項創新技術不單為組裝鑽挖機提供更充裕的空間，同時減少臨時施工的風險，為工程人員締造更安全的施工環境。寶嘉更憑着這台運用了先張預應力技術的嶄新星形輪鋼架，及深 40 米的**無橫向支撐環形豎井**，於「2017 臨時工程卓越大獎」土木工程組別中取得金獎殊榮。

2 Tuen Mun Chek Lap Kok Link – Northern Connection Sub-sea Tunnel Section 屯門至赤鱗角連接路 — 北面連接路海底隧道段

The two main tunnels are connected by 52 cross passages (each 12m long and 3.6m in diameter). Dragages-Bouygues Joint Venture developed new tunnelling solutions for the excavation of these cross passages under variable geological ground conditions and some 4.5 bar hydrostatic pressure. In less than 24 months, the project team completed the excavation of 48 cross passages using **mini TBMs** – a FIRST in Hong Kong's tunnelling projects.

兩條主隧道內有 52 條通道，各長 12 米及直徑 3.6 米。寶嘉 – 布依格聯營團隊以嶄新的隧道方案鑽挖連接通道，讓隧道工程得以在複雜的地質情況及於 4.5 個大氣壓力環境下順利進行。工程人員以**小型隧道鑽挖機**挖出 48 條連接通道，並在少於 24 個月內完成全部通道鑽挖工程，為全港隧道項目創下先河。

3 City of Dreams – Morpheus 新濠天地 — 沐梵世

This FIRST-of-its-kind building was constructed with more than 10,100 pieces of **exoskeleton cladding** and 8,000 pieces of **freeform façade glazing**.

In the course of the construction of the **free form voids**, we precisely and safely completed three major de-propping processes, which set a new benchmark in building technology.

作為全球獨一無二的建造項目，工程採用超過 10,100 件**外露式承重鋼材**及 8,000 件**自由曲面弧形玻璃幕牆**。

在構築**自由曲面空隙**時，工程團隊以精準的技術及安全規劃，完成拆卸三組主要臨時架構的工序，樹立建造技術的新典範。

4 Liantang / Heung Yuen Wai Boundary Control Point – Site Formation and Infrastructure Works – Contract 2 蓮塘 / 香園圍口岸土地平整及基礎建設工程 — 工程合約 2

The first tunnel broke through in March 2017 using Hong Kong's LARGEST **dual-mode Earth Pressure Balanced TBM**. In only three months' time, our project team completed the city's FIRST 180-degree **TBM U-turn operation** to facilitate the TBM's second 2,400m journey.

ROBY 850, a semi-automatic drilling robot, also commenced work in the second half of 2017. This is another in-house innovation and a FIRST-time adoption in Hong Kong. The robot is used to drill holes, and install anchors for brackets. With **ROBY 850**, we have managed to reduce arduous manual tasks, which benefits our colleagues, while improving productivity and the quality of finishing.

2017 年 3 月，本項目以全港最大型**雙模式土壓平衡隧道鑽挖機**貫通首條隧道。工程團隊只需短短三個月時間，完成香港隧道史上，**鑽挖機首次於隧道內作 180 度轉向**，為開始第二段 2,400 米的隧道鑽挖旅程做好準備。

ROBY 850 半自動鑽挖機械人是公司自行研發的創新設計，於 2017 年下半年首度在港投入服務。鑽挖機械人能鑽孔，裝置錨栓及角托架，讓工程人員可藉此減少在嚴峻環境下施工的需要，亦有助提升生產力及施工質量。

5 Hong Kong-Zhuhai-Macao Bridge – Hong Kong Link Road 港珠澳大橋香港接線

The bridge boasts the world's LARGEST span of a **pre-cast segmental bridge** at 180m. In total, 5,714 precast segments in 250 different types were used. The project team also achieved a RECORD HIGH in Hong Kong by achieving the erection of 18 segments in a single day using just one launching gantry.

大橋採用了長 180 米，全球最大的**預製橋樑組件**。就整個項目而言，施工小組採用了 5,714 件涉及 250 種不同形狀的預製組件。團隊更創下在一日內，僅以一部吊機安裝 18 件預製組件的佳績，刷新香港建造史的紀錄。



6 Where Innovation Comes to Life 實現創新方案

To align with the Group's innovation initiative, the Company formed the Dragages Innovation Network Champions in late 2016. The team is led by Wes Jones, our Managing Director, with 11 members coming from different departments and work sites. Through brainstorming and the exchange of opinions in monthly meetings, the team has created the Dragages Innovation Roadmap 2017 featuring key directives to promote safe, efficient and cost-effective construction methods, as well as robotic engineering solutions, and a paperless environment.

In May 2017, we launched the Prefabricated Prefinished Volumetric Construction (PPVC) Site Office Competition, which was open to all our Hong Kong entities, namely BYME, Dragages Hong Kong, and VSL-Intrafor. PPVC is relatively new in Hong Kong, but it is no stranger to the Group and Dragages Singapore. Crowne Plaza Changi Airport Hotel Extension, opened in 2016, is Singapore's first private sector commercial project to use PPVC techniques, successfully delivered by Dragages Singapore. The keys to winning the Competition are sustainability and innovation. The three finalists presented their innovative ideas in October at a Knowledge Sharing session, and the winners will be announced in November.

In recognition of the importance of Building Information Modeling (BIM), we will expand the adoption of BIM in all phases of our future projects. Training will likewise be provided to our colleagues to equip them with the latest techniques. Driven by our desire to create the safest and most efficient work sites, we continue to explore opportunities for the development of new robotic engineering solutions.

配合母公司的創新理念，香港寶嘉於2016年底成立創意專責小組，在公司的不同範疇推動改革創新。小組由董事總經理鍾偉賢先生領導，並以11位來自不同部門及工地的代表所組成。透過每月舉行的集思會，小組就推廣安全且符合效益的建造方法、引進機械工程方案及實踐無紙工作間等方面，制定出香港寶嘉2017創意策略。

2017年5月，寶嘉推出工廠預製體積建設（PPVC）工地辦公室建造比賽，邀請香港所有員工——包括嘉福機電工程、香港寶嘉建築及威勝利一盈發地基一同參與。要在比賽中獲勝，參賽作品須兼備可持續發展及創意兩項重要元素。獲選的最後三強於今年10月舉行的知識分享會上陳述其工程規劃，而結果將會在11月的2017訊息發佈會（Information Meeting）上公佈。對於集團及新加坡寶嘉的工程人員來說，PPVC並不陌生，於去年開幕的樟宜機場皇冠假日酒店正是新加坡寶嘉以PPVC方法建造的首個私人商業大樓項目。對於香港來說，此技術則屬於較新的建造概念。

公司深知建築資訊模型（Building Information Modeling - BIM）對建造業的重要性，並將進一步擴展應用於未來的工程項目，涵蓋設計及建造工序。我們將為員工提供相關培訓，幫助他們掌握最新的技術發展，並繼續研發創新的機械施工方案，提高施工效率及營造更安全的工作環境。

7 The LEAN Secret to Success 透過精益管理系統 開拓成功之路

LEAN management is all about adding value to our works and maximising our clients' satisfaction. Within our Group, we have branded LEAN management as "PERFORM TP" (for our civil works division) and "BLean" (for our building works division), each featuring tailor-made principles tailored to the specific work types. Through a detailed review of both construction methods and sequencing, we eradicate quality problems and eliminate double handling and waste, which in turn improves our productivity and cost efficiency.

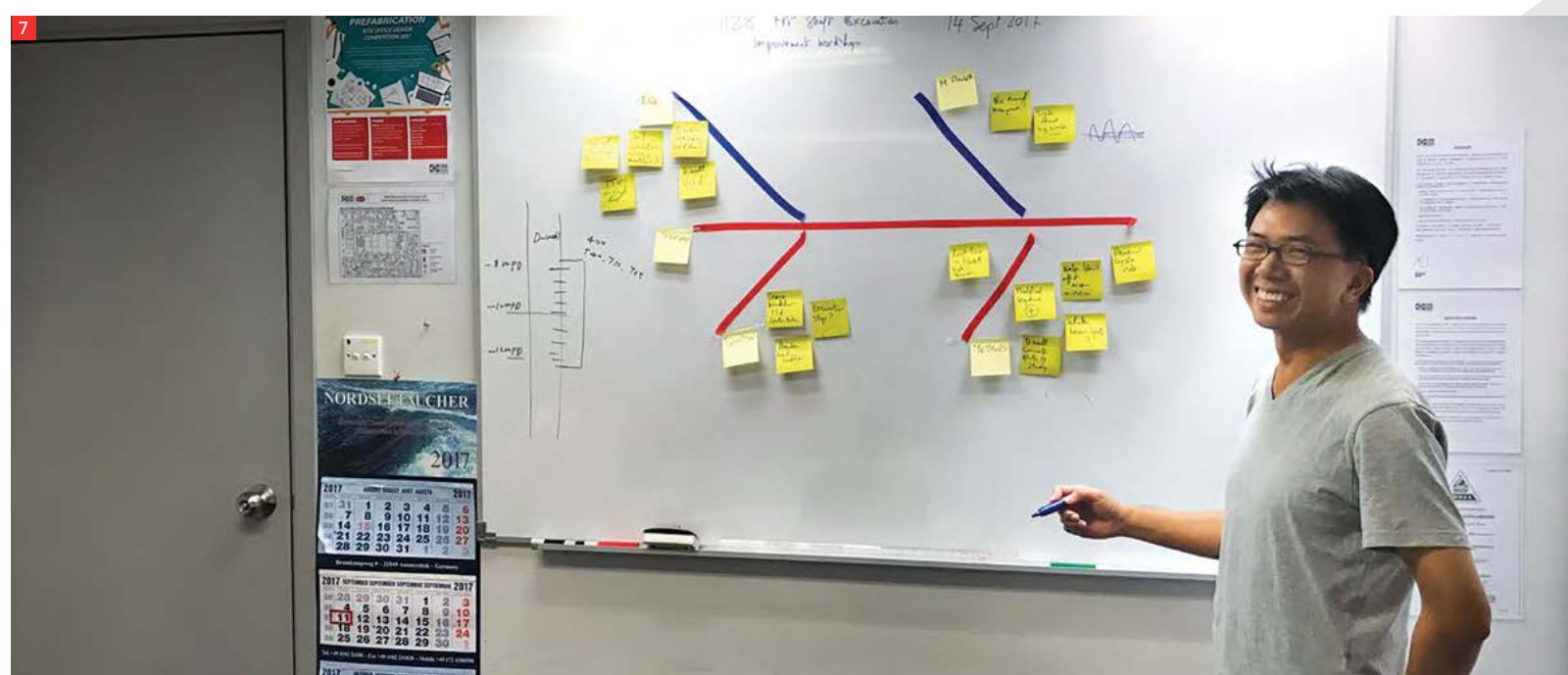
To date, LEAN management has been implemented on all of our ongoing civil work projects. Through regular monitoring of site activities and workshops with project team members, we have managed to attain significantly higher production efficiency. At our Tuen Mun-Chek Lap Kok project, the production cycle of sub-sea cross passages has been reduced from 40 days to 18 days on average, with a record high of just 13 days. At our Liantang project, tunnel enlargement works were completed one month ahead of schedule. Meanwhile, at our Shatin to Central Link project, the production efficiency of shaft excavation works was also enhanced.

Overall, the result of implementing PERFORM TP has been very encouraging, with some HK\$37 million saved in 2016 alone. Looking ahead, we are optimistic that we can attain even better results in the coming years through the further implementation of PERFORM TP and BLean!

透過精益（LEAN）管理系統，我們相信可為日常工作增值，有助提高客戶滿意度。母公司以“PERFORM TP”和“BLean”的精益管理系統，分別管理土木工程及屋宇工程，因應各類工程的特性，制訂出不同的實踐原則。香港寶嘉透過詳細審視建造方法和工序，杜絕不良品質及浪費資源問題，以及避免重複工序，從而提升生產力及成本效益。

時至今日，香港寶嘉所有進行中的土木工程項目已實行精益管理。透過定期監察工地上的各項活動，以及為工程團隊成員安排研討會，大大提高生產效率。其中，屯門至赤鱸角連接路項目海底隧道段的建造周期便由40天下降至平均18天，最高紀錄更曾縮短至13天；蓮塘項目的隧道拓闊工程較原定提早一個月完成，而沙田至中環綫的豎井挖掘工程效率亦有所提高。

總括而言，單在2016年，推行PERFORM TP管理系統便為公司節省了約港幣3,700萬元，效果令人鼓舞。展望未來，香港寶嘉對進一步執行PERFORM TP和BLean以取得更佳成果感到樂觀。



SAFETY
安全至上

S



1 Putting Safety First 安全第一

SAFETY has always been the top priority for Dragages Hong Kong. We take pride in committing to the safety of our colleagues, clients and the community. Indeed the most important aspect of what we do is safety.

We believe that safety and efficiency are not mutually exclusive. On the contrary, the better our safety, the more efficient and productive our projects will be!

In April and June, Dragages Hong Kong held two company-wide safety campaigns to reaffirm our commitment to safety. Both were full-day events which involved all company staff, some 3,000 people in total.

On 12 April, Wes Jones, our Managing Director, together with Michel Bonnet, Director of Operations – Civil Works, and our Safety Director visited all work sites to reinforce the Company's safety objectives and expectations. This was followed by detailed reviews with frontline colleagues, including method statements, risk assessments and temporary works designs hosted by project directors and supervisors.

In June, we likewise joined hands with our parent company, Bouygues Construction, to celebrate the global World Health & Safety Day, which this year featured the theme "We Love Life, We Protect It". The event was held on the same day at construction sites in all 80 countries where the Group is active, involving some 100,000 people globally. We were honoured to have representatives from our major clients to join us, namely the Civil Engineering and Development Department, the Highways Department, and the Mass Transit Railway Corporation.

The occasion also marked the launch of the Group's "12 Health & Safety Basics", which will be implemented by all Group entities worldwide. These important new directives will serve as the backbone for us to achieve the goal of zero accidents.

Jean-Philippe Trin, Deputy CEO of Bouygues Construction (joined the event in Hong Kong)
"Safety is our priority. It is the responsibility of all individuals."

Wes Jones, Managing Director of Dragages Hong Kong

"I am personally very determined to improve our safety performance. You will always be supported by the Company for genuinely making safety your priority."

事事以安全為先是香港寶嘉對員工、客戶和社會的重要承諾。職業安全一直是我們工作上最重要的一環。

我們深信完善的安全制度和工程進度並不會互相抵觸。相反，完善的安全制度可進一步提高工程效率。

香港寶嘉在今年4月和6月舉辦了兩場全日職業安全運動，全公司上下共3,000多名員工一同參與，重申我們的安全承諾及藉此機會仔細檢視各項工序。

4月12日，董事總經理鍾偉賢聯同項目總監（土木工程）Michel Bonnet及安全總監到訪全部工地，加強員工對公司安全宗旨和預期的理解。之後，項目董事及各部門監督亦領導項目團隊仔細地檢討各施工方案、風險評估及臨時工程設計。

6月，香港寶嘉與母公司Bouygues Construction合力舉辦全球世界安全及健康日。今年的主題是「珍愛生命，保衛生命」。當日，在Bouygues Construction於全球80多個國家的所有工地內，約10萬多名員工參與，一同承諾實踐「零意外」的目標。香港寶嘉很榮幸得到客戶的全力支持，土木工程拓展署、路政署及港鐵公司等多個主要客戶派員一同參與是次活動。

香港寶嘉更在會上公佈了母公司於全球所有工地執行的「12個健康和基礎知識」守則。我們將以這12項守則，作為實踐「零意外」目標的框架。

**Bouygues Construction 副行政總裁
Jean-Philippe Trin**

（於香港參與這全球世界安全及健康日）
「工地安全為我們的首要考慮，也是我們每一位的責任。」

香港寶嘉董事總經理鍾偉賢

「我個人決心要改善公司的安全表現。公司亦全力支持你們每一位員工，事事以安全為先。」

2 Safety Leadership 安全領導

June 2017 saw the launch of Bouygues Construction's "Leading Safety" training programme in Asia. Initial events took place on 5 to 9 June 2017 in Singapore and Hong Kong. In total, 35 regional Group managers attended the launch. The training, which will be delivered across the Company, adopts a values- and behaviour-driven approach, focusing on:

- Management's role in leading SAFETY
- The reality of our current SAFETY performance
- Leading through a demonstrable, visible commitment to SAFETY
- Providing support to those who deliver our projects through SAFETY initiatives
- Delivering consistent, key SAFETY messages to all staff
- Developing and committing to Personal SAFETY Action Plans that drive performance improvements

The second Safety Leadership course was held in October in Hong Kong. The full programme will commence for Dragages Hong Kong in the first quarter of 2018, and training will be compulsory for all managers and supervisors with leadership roles.

2017年6月，Bouygues Construction「領導安全(Leading Safety)」培訓計劃正式在亞洲展開。首階段活動在6月5至9日於新加坡及香港舉行，共有35位集團區域經理參與。是次培訓以價值及行為主導方式推行，重點包括：

- 管理層在領導安全活動中擔當的角色
- 目前安全表現的實際情況
- 透過顯而易見的方式展現對安全的承諾
- 支援推廣安全概念的項目團隊成員
- 向全體員工傳遞一致的重點安全訊息
- 策劃及落實個人安全行動計劃，推動改善表現

第二次安全領導訓練課程於2017年10月在香港舉行。香港寶嘉將於2018年第一季舉辦全面的安全培訓計劃，涵蓋全體擔當領導職務的主任及管理級員工。





3 Construction Safety Week 建造業安全周

Sharing the same vision as the Government to attain "Zero Accidents", Dragages Hong Kong was proud to once again offer its support to the annual Construction Safety Week co-organised by the Development Bureau and the Construction Industry Council in September this year. The main theme of this year's event was "Workers' Behaviour", which echoes with our safety motto "Health and Safety, a Shared Commitment".

During the event, we participated in the Construction Safety Week Carnival, the Relay Competition and the management of a game booth. Eight young engineers formed the relay team, while the game booth was manned by our safety officers who helped promote preventive measures for avoiding heat stroke.

We are also honoured to report that our Shatin to Central Link project was selected as one of the model work sites of the Site Visit Programme to share our good safety practices with industry practitioners.

香港寶嘉與政府擁有相同的願景，全力實踐地盤「零意外」的目標。公司今年9月再次支持一年一度由發展局及建造業議會合辦的「建造業安全周」。大會今年的主題是「工人行為」，正與香港寶嘉的安全座右銘「職安健——人人有責」互相呼應。

在建造業安全周嘉年華中，寶嘉不但派出8位年青工程師組隊參與接力比賽，安全主任亦在場內設立遊戲攤位，介紹預防中暑的適當措施。

沙田至中環綫項目更獲選為工地參觀計劃的其中一個模範工地，與業界人士分享寶嘉的良好安全措施。

4 Transparency in Safety Investigations 提高安全調查透明度

TOPSET is a methodology which standardises and simplifies incident investigations. Our parent company, Bouygues Construction, already uses this methodology and Dragages Hong Kong is now taking the lead to provide training to the Group's entities in Hong Kong.

Our Safety Training Centre commenced delivery of TOPSET Training in May 2017. Over a period of some four months, 120 colleagues attended, starting with our QSE staff, followed by Project & Engineering personnel. The strategic objective of the programme is that all projects have the capability and competence to lead and undertake incident investigations, with support from our Safety Team.

The TOPSET Methodology is simple, flexible and highly effective in providing a proven method for identifying the immediate, underlying and root causes of incidents and accidents. Once these have been identified, an illustration of the incident's causation – Root Cause Analysis (RCA) – can be produced, which is then linked to recommendations and corrective actions to prevent any future recurrence.

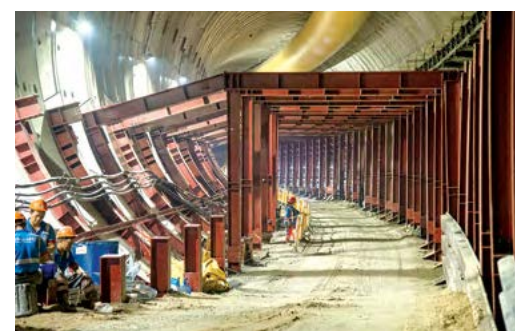
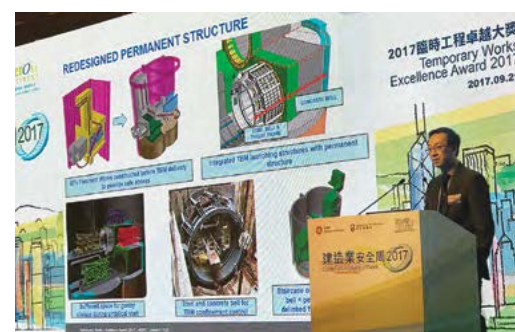
The use of TOPSET RCA is now being applied to review any serious potential or actual incidents. As part of the process, a Review Panel comprising people independent from both the project and initial investigation team also undertake a positive critique of the investigation, consider the recommendations already made, and determine if any further actions may be required to strengthen or revise existing safety systems.

母公司 Bouygues Construction 早前已落實推行 TOPSET，將事故調查標準化和簡單化。而香港寶嘉現正為集團旗下所有位於香港的機構提供相關的 TOPSET 培訓。

安全訓練中心在2017年5月起開辦 TOPSET 訓練課程。公司在短短的四個月內已培訓 120 位同事，學員涵蓋品質、職安健管理人員、項目管理及工程部同事。香港寶嘉希望學員透過是次課程，掌握主導及執行事故調查的能力，有助他們日後能夠在安全小組的支援下調查各項事故。

TOPSET 的好處是簡單、靈活，能有效地幫助調查人員識辨出導致事故和意外的即時及潛在原因，找出問題根本。在確認原因後，調查人員可利用根本原因分析法 (Root Cause Analysis - RCA) 描述事故的因果關係，從而定出改善建議和措施，避免事故再次發生。

TOPSET RCA 現時已應用於評估嚴重的潛在事故或已發生的事故。審議小組由獨立於涉事項目及初步調查團隊的人員組成。小組人員會就調查作正面評核，及審視相關人員提出的建議，並裁定是否需要採取進一步行動，以加強及修訂現有的安全系統。



5 Recognitions and Accolades 榮譽及讚賞

MTR Shatin to Central Link – Causeway Bay Typhoon Shelter to Admiralty Tunnels Contract No. 1128

- 2016 Hong Kong Awards for Environmental Excellence - Construction Industry - Certificate of Merit
- Construction Safety Promotional Campaign 2017 - Best Method Statement Award - Gold Award
- Temporary Works Excellence Award 2017 - Civil Engineering Works - Gold Award
- 23rd Considerate Contractors Site Award Scheme
 - Considerate Contractors Site Award - Non-Public Works - New Works - Group A - Bronze Award
 - Outstanding Environmental Management & Performance Award - Non-Public Works - New Works - Group A - Silver Award
 - Model Subcontractor Award - Non-Public Works - Tapbo Civil Engineering Co., Ltd. - Merit Award
 - Model Frontline Supervisor Award - Mr. CHAN Chi Ping
 - Model Worker Award - Mr. WIDJAJA Riva
- Lighthouse Club - Safe Project Team Award 2017 "Recognizing Excellence in Safety" - Certificate of Commendation

Tuen Mun-Chek Lap Kok Link – Northern Connection Sub-sea Tunnel Section

- Construction Industry Safety Award Scheme 2016/2017
 - Civil Engineering Sites Category - Gold Award
 - Safety Teams Category - Merit Award
 - Outstanding Performance in Work-at-height Safety Prize
- 2016 Hong Kong Awards for Environmental Excellence - Construction Industry - Certificate of Merit

Liantang / Heung Yuen Wai Boundary Control Point – Site Formation & Infrastructure Works Contract 2

- Construction Industry Safety Award Scheme 2016/2017 - Civil Engineering Sites Category - Certificate of Appreciation
- 2016 Hong Kong Awards for Environmental Excellence - Construction Industry - Certificate of Merit
- Civil Engineering and Development Department (CEDD) Innovation Award for Site Safety 2016 - Merit Prize
- Hong Kong Green Organisation Certificate - Energywise
- Temporary Works Excellence Award 2017 - Civil Engineering Works - Merit Award
- Lighthouse Club - Safe Project Team Award 2017 "Recognizing Excellence in Safety" - Certificate of Merit
- Lighthouse Club - International Design For Safety Award 2017 - Runner up - Mr. CHOI Yam Ming
- Lighthouse Club - Site Safety Practitioner Award 2017 "Recognizing Excellence in Safety" - Silver Award - Mr. KWOK Yung Tai

Hong Kong – Zhuhai – Macao Bridge Hong Kong Link Road

- 2016 Hong Kong Awards for Environmental Excellence - Construction Industry - Certificate of Merit
- Hong Kong Green Organisation

Trade and Industry Tower

- RICS Awards - Hong Kong 2017 - Sustainability Achievement of the Year

港鐵沙田至中環綫 銅鑼灣避風塘至金鐘站鐵路隧道建造工程 合約編號 1128

- 2016 香港環境卓越大獎 – 建造業 – 優異獎
- 建造業安全推廣活動 2017 最佳施工方案 – 金獎
- 2017 臨時工程卓越大獎 – 土木工程 – 金獎
- 第 23 屆公德地盤嘉許計劃
 - 公德地盤獎 – 非工務工程 – 新建工程 – A 組 – 銅獎
 - 傑出環境管理獎 – 非工務工程 – 新建工程 – A 組 – 銀獎
 - 模範分包商獎 – 非工務工程 – 德保土木工程有限公司 – 優異獎
 - 模範前線工地監工獎 – 陳志平先生
 - 模範工友獎 – 曹志高先生
- 香港明建會 – 安全工程項目團隊獎 2017 「卓越安全表彰」 – 嘉許狀

屯門至赤鱗角連接路—北面連接路海底隧道段

- 建造業安全獎勵計劃 2016/2017
 - 土木工程建造地盤組別 – 金獎
 - 安全隊伍 – 優異獎
 - 最佳高處工作安全表現獎
- 2016 香港環境卓越大獎 – 建造業 – 優異獎

蓮塘 / 香園圍口岸土地平整及基礎建設工程 工程合約 2

- 建造業安全獎勵計劃 2016/2017 – 土木工程建造地盤組別 – 良好表現證書
- 2016 香港環境卓越大獎 – 建造業 – 優異獎
- 第八屆「土木工程拓展署工地安全大獎」 – 「工地安全創意獎」優異獎
- 香港綠色機構認證 – 節能證書
- 2017 臨時工程卓越大獎 – 土木工程 – 優異獎
- 香港明建會 – 安全工程項目團隊獎 2017 「卓越安全表彰」優良狀
- 香港明建會 – International Design For Safety Award 2017 – 得獎者 – 蔡任明
- 香港明建會 – 工地安全專業人員獎 2017 「卓越安全表彰」 – 銀獎 – 郭容帶

港珠澳大橋香港接線

- 2016 香港環境卓越大獎 – 建造業 – 優異獎
- 香港綠色機構

工業貿易大樓

- 皇家特許測量師學會 (RICS) 香港年度大獎 2017 – 可持續發展成就團隊獎



1 Hand in Hand with Hong Kong 心繫香港

Dragages Hong Kong is committed to giving back to the local community and to helping build a harmonious society by engaging in a wide range of Corporate Social Responsibility (CSR) activities. Our enthusiastic CSR Committee and volunteer team enjoy the full support of our associated companies in Hong Kong, with committee members now including colleagues from BYME, Dragages Hong Kong and VSL-Intrafor.

In 2016/2017, more than 200 colleagues participated at least once in volunteer activities, contributing some 3,000 hours of service at 27 charitable occasions. We're proud to report that our involvement in voluntary services continues to expand. As of September 2017, we had already participated in 25 voluntary services this year, raising some HK\$408,077.20, in addition to donations in kind. We are honoured that our commitment to good corporate citizenship has been well recognised in the community, with Dragages Hong Kong receiving the Caring Company award for five consecutive years.

香港寶嘉致力回饋社區，透過舉辦不同的企業社會責任活動，協助建設和諧社會。公司的企業社會責任委員會和義工團隊，一直獲得公司各級員工及集團旗下不同企業的大力支持。義工團隊來自集團旗下不同的企業，包括嘉福機電工程、香港寶嘉和威勝利－盈發地基。

2016/2017 年度，公司上下超過 200 位員工參與一項或以上的義工活動，涉及 27 個慈善項目，總服務時數達 3,000 小時。同事們投入義務工作的熱情有增無減，截至 9 月，香港寶嘉今年先後參加 25 項義工活動，除了捐贈物資，也籌得港幣 \$408,077.20。香港寶嘉作為良好企業公民的一分子，成功獲得社會認同，連續五年獲頒「商界展關懷」標誌。

2 Construction Charity Fund 建造業關懷基金

The Construction Charity Fund is a compassionate charity fund which provides immediate financial assistance and support to families of workers who are injured or lose their lives in industrial accidents. Co-organised by the Development Bureau and the Construction Industry Council, the Construction Industry Charity Concert is one of the Fund's major fundraising activities. Sharing the same commitment as the Government and industrial associations to show its care for the local community, Dragages Hong Kong continued to support the event in 2017 by donating HK\$500,000.

In March, the Construction Industry Council also held the "Construction Industry 2017 Happy Run cum Carnival" with over 1,000 runners participating. All registration fees from the event were donated to the Construction Charity Fund. Some 25 runners – a mix of Dragages Hong Kong colleagues, their family members and friends – participated in the Happy Run.

建造業關懷基金為因工業意外傷亡的建造業從業員的家屬提供援助和慰問金，以應燃眉之急。發展局與建造業議會再次合辦「建造業慈善演唱會」為基金籌款。香港寶嘉堅守與政府和業界相同的理念，關顧社群，並於今年捐出港幣 500,000 元，繼續支持建造業慈善基金。

3 月，建造業議會舉辦「建造業 2017 開心長跑暨嘉年華」，吸引逾 1,000 人參加，報名費全部撥捐建造業關懷基金。活動當天，香港寶嘉派出包括員工、家屬及親友共 25 位跑手參加，共襄善舉。

3 Promoting Sustainability in Indonesia 於印尼推廣可持續發展

Regionally, we provided a HK\$25,000 equipment sponsorship for a group of French International School students visiting Sulawesi, Indonesia, to help promote environmentally-friendly practices to local communities in May. The students collaborated with the "Masarang" NGO and local farmers to promote the cultivation of palm sugar instead of palm oil trees, which are harmful to the environment. In addition, the students helped to share news regarding the development of local nurseries for turtles and other endangered species.

縱觀亞太地區，香港寶嘉於今年 5 月資助價值港幣 \$25,000 的器材，讓法國國際學校的學生前往印尼蘇拉威西島，在當地社區宣揚環保訊息。學生不但聯同非牟利組織 Masarang 和當地農民，推廣以種植椰糖代替有害環境的棕櫚油樹，還與居民分享在當地發展海龜及其他瀕危物種護養場的有關資訊，宣傳保育生態的訊息。



4 Sensory Garden 感官花園

Over the last three years, Dragages Hong Kong has been honoured to leverage its rich construction expertise to design and build a Sensory Garden for Hong Chi Winifred Mary Cheung Morninghope School, which serves children with mild to moderate intellectual disabilities. By stimulating all five senses in four zones, the Sensory Garden serves as an innovative learning therapy facility.

We are delighted to announce that, after some three years of hard work by our volunteers, the Sensory Garden is now finished! We offer our heartfelt thanks to everyone who contributed to this important project, including our office and work site colleagues, various working partners, and our school partners who provided valuable advice about the children's needs.

過去三年，香港寶嘉有機會以其建造專業支援匡智張玉瓊晨輝學校內感官花園的設計及建造工作，希望透過這項結合教學及治療的嶄新設施，刺激校內輕度至中度智障兒童的五感。

經過義工團隊三年來的努力，感官花園已圓滿竣工。香港寶嘉衷心感謝曾經參與本項目的每個單位，包括辦公室及工地同事、各合作夥伴，以及就學童需要為我們提供寶貴意見的學界人士。

5 Life Buddies 友·導向

"Life Buddies" is a youth mentoring scheme launched in 2015 by the Commission on Poverty. The programme aims to reduce inter-generational poverty by helping youths from disadvantaged backgrounds move up in society. Dragages Hong Kong, BYME and VSL-Intrafor have all joined hands to participate in this scheme, with 16 mentors offering guidance to 32 students. Visits covered both offices and work sites, which provided an eye-opening opportunity for students to gain first-hand experience of a real-life work setting. At the invitation of the Commission on Poverty, we also shared our mentoring experience with other participating companies, which will be used as a reference for enhancements to future programmes.

「友·導向」是由扶貧委員會於2015年推出的師友輔導計劃，促進青年人向上流動的能力，從而減低跨代貧窮。香港寶嘉、嘉福機電工程及威勝利-盈發地基共派出16位導師為32位學生提供指導，並安排學生到公司和工地參觀，讓他們親身體驗實際工作環境，拓展視野。我們亦應扶貧委員會邀請，向其他參與企業分享擔任導師心得，以進一步完善「友·導向」計劃。

6 Planting Seeds of Hope 播下希望種子

Our Liantang project team members, together with representatives of Mission to New Arrivals Limited*, visited Creation Farm in Fanling in August. Established by Mission to New Arrivals Limited in 2006, Creation Farm promotes organic farming and serves seniors living in remote communities. Through experimental activities organised by Creation Farm, participants are taught to plant vegetables and fruits using organic farming methods. The Farm not only offers a unique environment for retreats, training and workshops, and youth and nature appreciation programmes, it also provides valuable employment opportunities for the newly-arrived female immigrants who run the programmes. In addition to improving workers' self-esteem, the facility provides a valuable platform for them to serve the community while supporting their families financially.

* Mission to New Arrivals Limited is a non-profit entity. It provides support to both impoverished new arrivals and the needy, helping them to integrate into the local community.

蓮塘項目團隊在新福事工協會*代表帶領之下，於8月到訪粉嶺創姿園。該園由新福事工協會於2006年成立，推廣有機種植，服務居住在偏遠地區的長者，並讓參加者透過園內的實驗活動，學習以有機方法種植蔬果。創姿園不單提供一個獨特的環境，讓人靜修、舉辦培訓和工作坊，鼓勵年青人欣賞大自然外，還為新來港婦女提供就業機會，協助管理園區。除了協助增強員工的自信心，創姿園在服務社區，以及支援經濟有困難的家庭上擔當著重要的角色。

* 新福事工協會為非牟利組織，支援貧窮的新來港及有需要人士，協助他們融入本地社區。



PEOPLE
以人為本

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1 Young Talent Management 培育明日菁英

People are the greatest asset at Dragages Hong Kong, and young people are the foundation of our future success. That's why we're committed to providing our young colleagues with a full development programme and equipping them with knowledge of various disciplines. The wide range of graduate training schemes now available at Dragages Hong Kong include Engineering, Quantity Surveying, Finance and Accounts, and Human Resources. All trainees are coached by senior executives, and a comprehensive array of training programmes are used to further support each individual's development. Examples include a one-day sailing programme to encourage team-building and problem-solving, or finance training for non-finance colleagues to widen and diversify their knowledge. Young graduates and students are also invited to visit our job sites and the Head Office, which provides them with opportunities to understand the operations of a real work place and talk to people who have been in the business for many years.

To attract and retain young talents, both our senior management and Training Scheme candidates are actively involved which enable fresh graduates to gain a clear understanding of their career prospects and training opportunities. Leveraging the global footprint of the Group, we also provide our talents opportunities to work outside Hong Kong to enhance their international exposures.

In the first half of 2017, 802 colleagues participated in 78 training courses – an affirmation that Dragages Hong Kong is committed to the continual training and empowerment of its staff at every stage of their careers.

人才是香港寶嘉最重要的資產，年青人更是公司未來成功的基石，因此寶嘉致力為年輕員工制定全面發展計劃，好讓他們掌握不同範疇的知識。現時寶嘉的畢業生培訓計劃涵蓋工程、工料測量、財務及會計，以及人力資源多個範疇。在資深員工的指導下，學員參加不同類型的培訓活動，促進個人發展。我們的培訓形式多樣化，包括訓練團隊精神和解難能力，例如航海活動，以及為非財務專業員工提供財務課程簡介等，務求拓展他們在不同領域的知識。畢業生和年輕學員更會獲邀參觀工地和公司總部，讓他們了解實際工作環境的運作，並有機會和業內資深從業員交流。

為吸引和挽留年青人才，寶嘉管理層和相關同事積極參與培訓計劃，協助剛畢業的同學更清楚了解公司所

提供的就業前景和培訓機會。憑藉母公司於世界各地的龐大網絡，寶嘉員工可獲在香港以外地方工作的機會，加強國際工作經驗。

2017年上半年，公司共為802位同事提供78項培訓課程，印證寶嘉致力為同事提供持續培訓機會，幫助他們在事業發展的不同階段增值。

2 Tunnel Boring Machine (TBM) Mentoring Scheme Training 隧道鑽挖機導師培訓計劃

This training programme aims to equip our TBM Pilots with mentoring skills so they can pass on their knowledge to junior pilots and the next generation. The training consists of two parts: Part 1 is a full-day classroom training, while Part 2 is a half-day session inside a TBM, involving both mentors, mentees and two trainers. This set-up provides an opportunity for the trainer to demonstrate his or her mentoring skills in front of another trainer. The entire programme seeks to engage and inspire participants by emphasising interaction and instant feedback.

香港寶嘉為大型隧道鑽挖機操作手提供導師培訓，協助他們將相關知識傳授予年青操作手和下一代，達至技術傳承。計劃分為兩部份，第一部份屬課堂教授，為期一天；第二部份的半天培訓則在鑽挖機作業現場內進行，參加者包括導師、學員和兩名訓練員。課程旨在為訓練員提供機會，向在場的另一位訓練員示範其導師技巧，從而鼓勵及啟發參加者在培訓新血時應更著重與學員的互動，即時給予意見。

3 Building Bridges for Future Success 模擬大橋規劃 接通成功未來

Dragages Hong Kong was the key sponsor of the 14th Infrastructure Building Competition for Secondary Schools, jointly organised by IVE and the Hong Kong Construction Association. This annual competition aims to arouse students' interest in bridge construction, and nurture their understanding of the latest construction techniques. We were represented on the judging panel by Chan Man, Executive Director of Dragages Hong Kong, who oversees our Hong Kong-Zhuhai-Macao Bridge project. The event provided an excellent opportunity for him to share his rich experience in bridge construction with the students.

4 Girls on the Move 推動性別多元化

In early 2017, Dragages Hong Kong joined hands with VSL to organise a networking event for 20 female secondary and university students. Senior female executives from the Company shared insights on their careers and everyday lives in a male-dominated industry. This experience sharing took an all-round perspective, from daily work life and career development to work-life balance and the importance of clear communication skills. The event was part of the global "GIRLS ON THE MOVE" campaign organised by our parent company, Bouygues Construction, to promote gender diversity in the industry.

2017年初，香港寶嘉與威勝利一同邀請20名來自不同中學和大學的女學生參與交流活動。公司的資深女同事在活動中分享如何在男性主導的建造業內工作，並與同學一起探討日常生活、個人事業發展、工作與生活之間的平衡，以及清晰溝通的重要性等一系列問題。是次活動為母公司Bouygues Construction在全球推動"GIRLS ON THE MOVE"活動的一部份，旨在推動建造業的性別多元化。



5 Leading the Way in Work and Play 樂在工作間

We hold a wide array of staff activities all year round to promote a healthy work-life balance. This year's calendar of events started with our Annual Dinner in January 2017, with more than 2,600 Dragages staff coming together to enjoy a night of fun-filled games, performances, an inter-site competition, long service award presentation, and lucky draws. The "Voice of Dragages" singing competition was a particular highlight, with six contestants selected from an audition process that was open to all staff. After receiving four singing lessons and personal image styling, the six finalists were transformed into stars on stage!

The arrival of Spring offered a great opportunity for outdoor fun. Some 900 colleagues and their families from Dragages Hong Kong, AsiaWorld-Expo, BYME, and VSL-Intrafor joined a BBQ party cum carnival.

To promote fun and team building, the Company has organised cooking classes on a number of occasions. This year, we held the "Master Chef Challenge", which brought together colleagues of many different nationalities. Working in teams, participants were required to cooperate with physically challenged external trainers from Dialogue Experience to prepare a full three-course meal using designated ingredients within a fixed time limit.

香港寶嘉每年舉辦各類型的員工活動，推廣保持工作和生活平衡的健康生活態度。2017年的員工活動由1月舉行的周年晚宴掀開序幕，超過2,600名寶嘉員工參與當晚的遊戲、台上表演和部門比賽。公司還在宴會上舉行長期服務獎頒獎儀式及大抽獎，當然少不了重頭戲「寶嘉之聲 (Voice of Dragages)」歌唱比賽。經過初步遴選後，成功晉級的6位參賽同事先後接受四堂歌唱訓練及個人形象指導，於晚宴當天化身成「大明星」，躍登寶嘉舞台獻藝。

春天是戶外活動的好時節，約900位來自香港寶嘉、亞洲國際博覽館、嘉福機電工程及威勝利-盈發地基的同事和家屬今年一同參加燒烤派對暨嘉年華。

為推廣健康快樂及團隊精神，寶嘉先後在不同場合舉辦烹飪課程。今年，我們特別舉辦「廚師挑戰賽」，讓不同國籍的同事與來自「對話體驗」，肢體有障礙的導師組成一隊，於限時內以指定食材烹調出包括三道菜的美味大餐。

6 A Family-friendly Place to Work 成為家庭友善僱主

Dragages' commitment to providing a family-friendly workplace has been officially recognised by the "2015/16 Family-Friendly Employers Award Scheme" organised by the Family Council. Our inaugural participation in the scheme saw us take home three awards.

Among the 2,800 participating companies, we were in the top 4% to win the "Distinguished Family-Friendly Employer Award", which is only for companies with the most impressive practices and results. At Dragages Hong Kong, our benefits and HR policies are not only above standard, we also organise regular fun-filled activities to promote a healthy work-life balance, such as our annual Fun Day, BBQ Family Day and Hiking Day, to name just a few.

Building on our reputation for constantly injecting innovation into all of our work, Dragages received the "Innovation Award" for formulating new ideas in family-friendly policies and practices, and for promoting family values. This corporate culture is reflected in "Success in Diversity", which is one of our core corporate objectives. To further support employees and their families, we established a Solidarity Fund in 2010 to provide financial assistance to employees or their family members in times of financial hardship due to sickness, injury, or sudden death.

Our third award – the "Breastfeeding Support Award" – recognises our support for breastfeeding employees by providing suitable facilities in the workplace.

香港寶嘉一直致力為員工提供家庭友善的工作環境，而我們的努力亦於家庭議會主辦的「2015/16年度家庭友善僱主獎勵計劃」中獲得表揚。首次參與計劃便榮獲三個獎項。

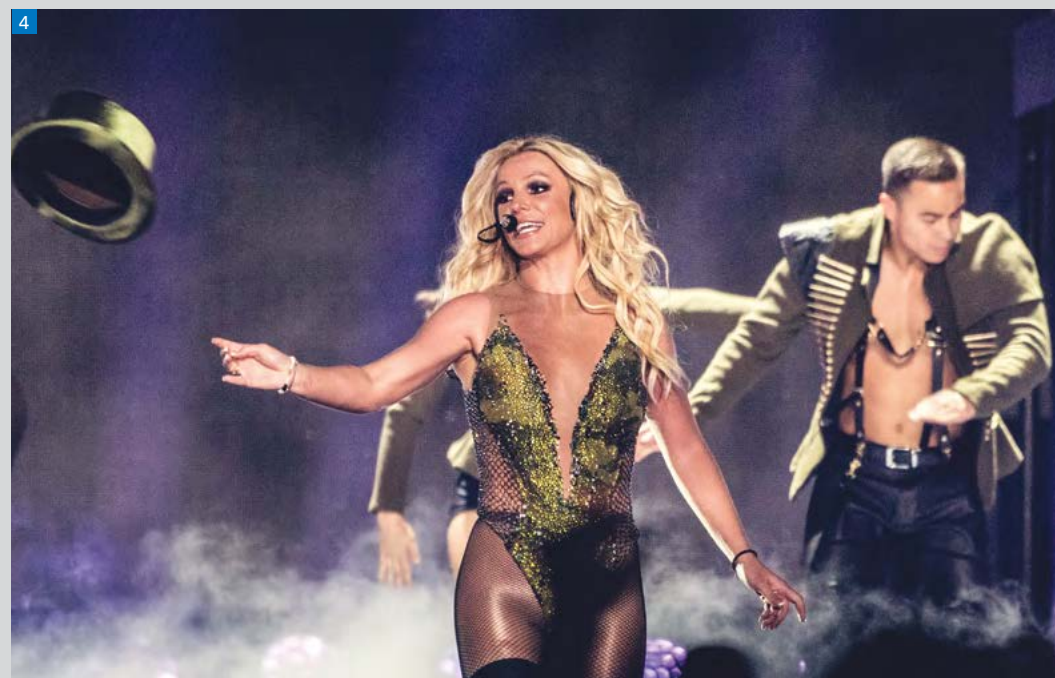
公司的員工福利、人力資源政策和措施出類拔萃，於2,800間參與計劃的公司和機構中獲評選為位列首4%，成為表現出眾的「傑出家庭友善僱主」。公司定期舉辦不同的員工活動，如周年同樂日、家庭燒烤同樂日和遠足活動等，鼓勵同事作息均衡。

我們精益求精，不斷為家庭友善政策及措施注入新意。我們以創新思維，推廣家庭核心價值的表現備受肯定，獲家庭議會授予「家庭友善創意獎」。當中不少創意點子應用於「多元文化 成就共享」(Success in Diversity) 的企業目標上，積極推動多元共融文化。公司於2010年更成立基金，為旗下員工或其直系親屬提供經濟支援，協助他們渡過面對疾病、受傷或猝逝而構成的經濟困境。

香港寶嘉第三個獎項——「支持母乳餵哺獎」反映我們對剛為人母的同事的支持。特設的母乳護理室，設有梳化和專用雪櫃，為她們提供一個衛生及舒適的環境。

ASIAWORLD-EXPO

亞洲國際博覽館



Together We Make Hong Kong Shine 同心協力 為香港發亮發光

AsiaWorld-Expo (AWE) has been crowned the “Best International Venue” at the coveted Exhibition News (EN) Awards 2017. Organised by Mash Media, a leading UK media for MICE, in partnership with UFI, the global association for the exhibition industry, the award winner was nominated by the organiser and selected by a judging panel of independent professionals in recognition of its innovation, outstanding planning and business performance.

AWE beat stiff competition from other finalists, including world-class venues in Germany, the Netherlands, Singapore, Shanghai and Abu Dhabi. This was the first time that a Hong Kong venue has won this top global industry award, given in recognition of AWE's outstanding performance in the global event community. With support and encouragement from the Government and many stakeholders, this ground-breaking achievement also acknowledges that the fast-growing AWE plays an important role in strengthening Hong Kong as an international hub of EXPOtainment events. In addition to the prestigious global EN Awards, AWE also came first in the APAC region as the “Best Convention Venue” at the Event Marketing Awards 2017 organised by Haymarket Media Limited.

Concurrent with these high-profile awards, Mr Allen Ha, Chief Executive Officer of AWE, has been awarded the Medal of Honour by the HKSAR Government in recognition of his dedicated public and community service, particularly his contributions to promoting sustainable development on Lantau.

AWE is determined to keep showcasing Hong Kong's MICE capabilities via its multi-industry alliances, and to maximise the huge opportunities arising from the Aero-bridgehead Economy Zone and Guangdong-Hong Kong-Macao Bay Area Development.

亞洲國際博覽館勇奪由 Mash Media EN Award 2017 頒發的「最佳國際場館」大獎 (Best International Venue)，創下香港紀錄。此獎項由英國會議、展覽及獎勵旅遊業權威媒體 Mash Media 與全球展覽業協會 UFI 創辦，候選機構均由主辦單位提名，經獨立評判團就場館的創新性、規劃和業務表現進行評審，表揚有傑出表現者。

亞博館在決賽階段擊敗了來自德國、荷蘭、新加坡、上海、阿布札比等多個世界級展覽中心，脫穎而出，成為香港首個榮膺此國際博覽業權威獎項的博覽場館，印證亞博館的傑出表現深得環球活動及展覽業界推崇。亞博館在政府及業界的支持下發展迅速，今次取得突破性佳績，進一步反映其在鞏固香港作為博覽業樞紐中的重要地位。除了獲頒「最佳國際場館」大獎，亞博館亦奪得亞太區權威獎項，在 Haymarket Media Limited 舉辦的「卓越成就大獎 2017 (Event Marketing Awards 2017)」中獲選為「最佳會議場地」。

除了以上榮譽，亞博館行政總裁哈永安亦獲特區政府頒發榮譽勳章，表揚其積極服務市民和社會，尤其在推動大嶼山可持續發展的貢獻。

亞博館致力促進不同行業的聯盟和合作，向世界展示香港發展會議、展覽及獎勵旅遊業務的實力，協助香港捉緊來自「航空橋頭經濟區」和大灣區發展的龐大機遇。

1. AWE won the “Best International Venue” EN Awards
2. Hong Kong's first Asian Fencing Championships
3. Hong Kong's biggest-ever 360-table banquet sets a new record
4. Debut concert of Britney Spears in Hong Kong
5. Dragages World Club site visit to AWE on 13 Sep
6. Korea Brand & Entertainment Expo, a perfect showcase of EXPOtainment

1. 亞博館榮膺 EN Award「最佳國際場館」大獎
2. 亞洲劍擊錦標賽首次假香港舉行
3. AsiaWorld-Summit 設宴 360 席 創香港新紀錄
4. 國際巨星 Britney Spears 首個香港演唱會
5. 寶嘉 World Club 於 9 月 13 日參觀亞博館
6. 韓流商品博覽會 商貿娛樂新體驗



Continued Success and Double-Digit Growth

續創驕人成績 錄雙位數增長

Both the business outlook and performance of BYME remain strong, with double-digit growth in 2017. The Company's strategic focus on safety, production efficiency and quality have all been contributing factors to its continued success.

In the first six months of 2017, the Company worked on an average of three to four tenders a week, focusing on existing clients. Its status as a trusted partner is reflected in projects being awarded from the Hong Kong Jockey Club (HKJC), HKR International (HKRI), Hong Kong International Airport (HKIA), Hongkong Shanghai and Banking Corporation (HSBC) and Mass Transit Railway Corporation (MTRC). The scope of these projects spans from partial discharge and fire services to upgrade of air-conditioning systems and drainage works.

The Company's Electrical & Mechanical (E&M) works are also in full swing on two mega-sized infrastructure projects, namely the Hong Kong-Zhuhai-Macao Bridge, and the Liantang / Heung Yuen Wai BCP project.

In Macao, the company successfully completed all works at the Parisian by the third quarter of 2017. In the months since, all installed E&M systems have remained fault-free and fully operational even during a strong typhoon.

In line with the Group's strategy to share resources and optimise the synergy of its efforts, BYME continues to extend its support to Group projects in Myanmar, Thailand, Singapore, Australia and the Philippines.

嘉福機電工程於過去一年的表現理想，業務前景甚佳，2017年取得雙位數增長。安全、施工效率和質量是公司的策略重點，三者均屬未來持續發展成功的關鍵因素。

2017年首六個月，嘉福機電將業務重點集中於現有客戶之上，每周平均參與三至四份標書競投。公司先後獲香港賽馬會、香港興業國際、香港國際機場、匯豐銀行及港鐵公司批出合約，負責包括局部拆卸工作、消防工程、提升空調系統工程及渠務工程等不同項目，彰顯其作為可靠合作夥伴的地位。

公司的機電團隊亦正全速進行港珠澳大橋及蓮塘至香園圍口岸土地平整及基建工程兩個大型基建項目的相關工程。

澳門方面，當中巴黎人項目的全部機電工程已於2017年第三季竣工，由工程團隊裝置的機電系統經歷過去的強勁颱風，確證在惡劣天氣下絲毫無損，全部如常運作。

為配合集團共享資源與加強協作的政策，嘉福機電繼續支援總公司在緬甸、泰國、新加坡、澳洲和菲律賓等地的多個項目。

1. Hong Kong-Zhuhai-Macao Bridge
Hong Kong Link Road
2. Liantang / Heung Yuen Wai Boundary Control Point
Site Formation & Infrastructure Works - Contract 2
3. The Parisian Macao
4. The Hong Kong Jockey Club - Happy Valley Racecourse
5. The Hong Kong Jockey Club - Sha Tin Racecourse
6. Schneider Electric office

1. 港珠澳大橋香港接線
2. 蓮塘 / 香園圍口岸土地平整及基礎建設工程 - 工程合約 2
3. 澳門巴黎人酒店
4. 香港賽馬會跑馬地馬場
5. 香港賽馬會沙田馬場
6. 施耐德電氣辦公室



Bouygues Construction

parent company of Dragages Hong Kong

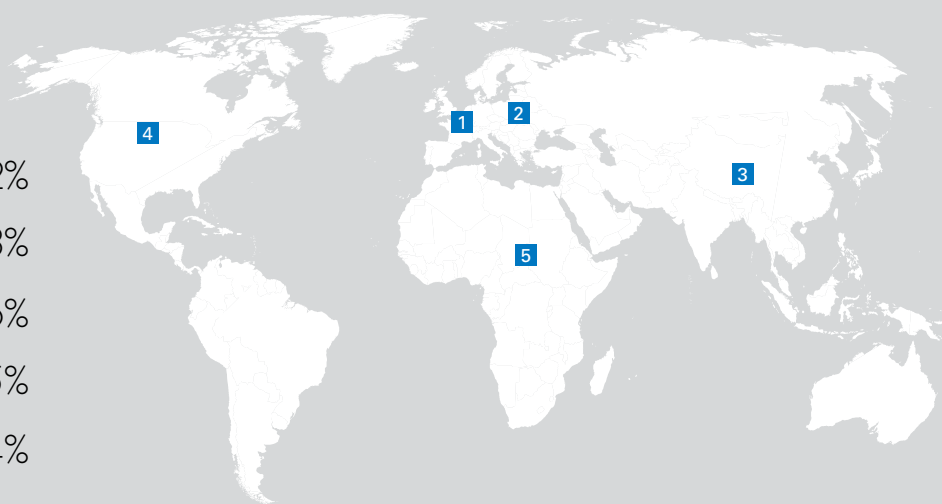
香港寶嘉建築母公司

Order book 合約金額

20.2

billion euros
十億歐元

1. France 法國	42%
2. Europe (excl. France) 歐洲 (法國除外)	33%
3. Asia and Middle East 亞洲和中東	16%
4. Americas 美洲	5%
5. Africa 非洲	4%



11,815

million euros sales
百萬歐元營業額

50,132

employees
員工

www.bouygues-construction.com

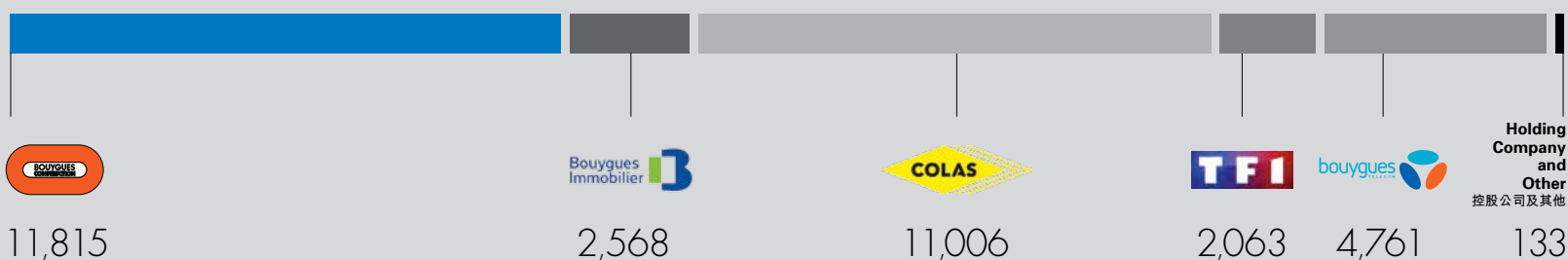
Bouygues

parent company of Bouygues Construction

Bouygues Construction 母公司

2016 sales by business area 營業額分佈

(million euros 百萬歐元)



31,768

million euros sales*
百萬歐元營業額*

117,997

employees
員工

www.bouygues.com

* Intra-Group Elimination 集團內部對銷 : 578

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