
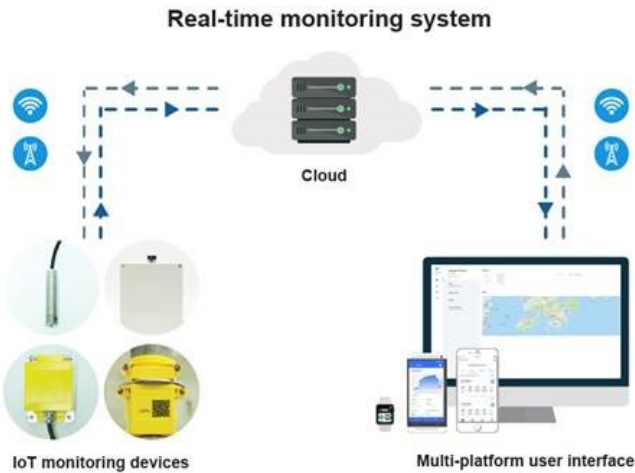

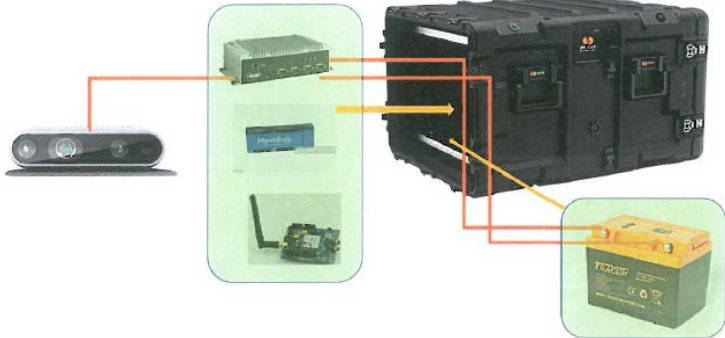
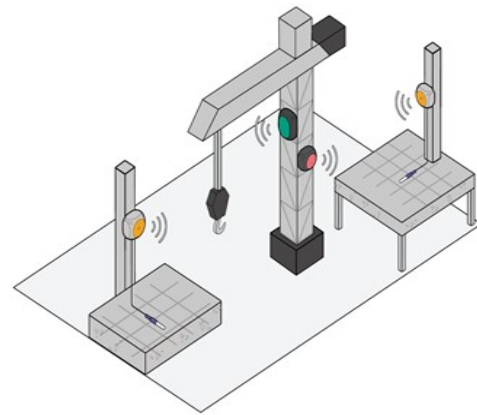



## Pre-approved List – Technologies



### 預先批核名單 - 科技產品

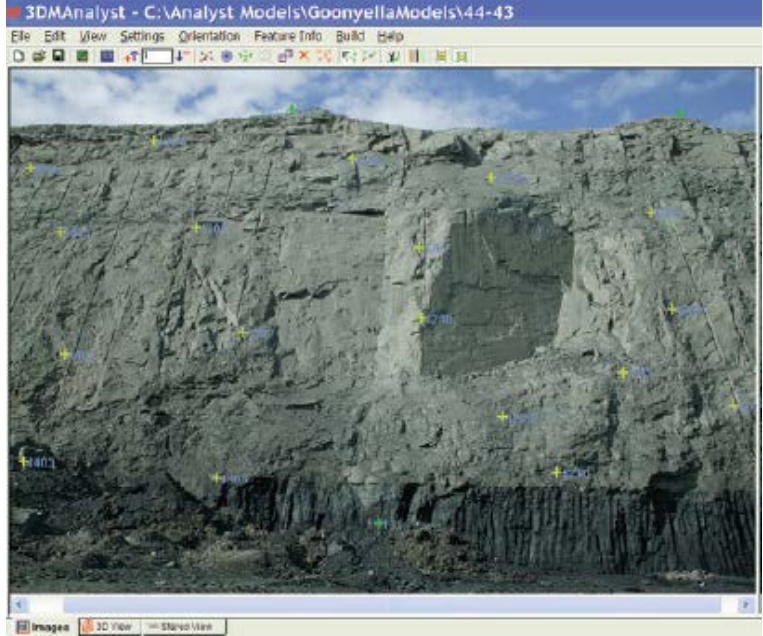
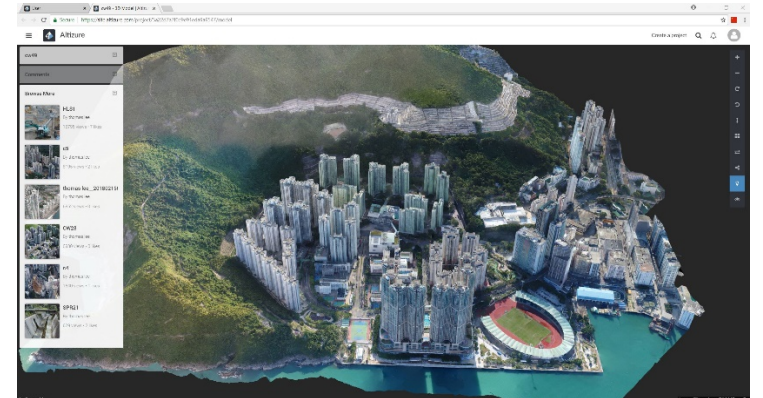
Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo
PA18-001	Automated wireless sensors  自動無線感測器	Enhance productivity and safety for conducting monitoring and measurements  提高生產力及改善監測和測量工作安全	i)	Wuxi Wisen Innovation Co. Ltd  WISENMESHNET® System	In comparison with traditional wired measurement, the design of system is principled as (a) ultra low powered; (b) completely wireless mesh communication system; (c) minimum in size; (d) broadly compatible with different type of sensors, i.e, turn traditional sensors into self powered, wireless, automated wireless sensor network. It replaces traditional wired measurement in the midst of complicated excavation works which could be vulnerable and the repair for damaged cables are dangerous and the cost of the loss of real-time monitoring data is huge.  相比於傳統的有線測量，這系統的設計原則為（a）超低用電量；（b）無線網狀通信系統；（c）體積細；（d）廣泛與不同類型的感測器兼容，即轉化傳統感測器至自我供電、無線及自動化無線感測器網絡。由於維修損壞電纜危險及容易受傷，而實時數據監察損失的成本巨大，因此它能取代複雜挖掘工程中的傳統有線測量模式。	
PA19-004	Automated wireless sensors  自動無線感測器	Enhance productivity and safety for conducting monitoring and measurements  提高生產力及改善監測和測量工作安全	ii)	LR Construction Technologies Ltd  Automated Internet of Things (IoT) Construction Monitoring Devices and Monitoring System	IoT monitoring devices measure force, underground water level, inclination, and also environmental quantities such as temperature, humidity, barometric pressure, and air pollutant concentrations. Readings can be automatically measured at 1-minute intervals round-the-clock regardless of weather conditions, and are stored on the cloud. The monitoring system's multi-platform user interface allows users to view readings in real time. Instantaneous risk analysis can also be carried out and warnings can be instantly issued according to user-configured safety thresholds.  物聯網監測傳感器能實時監測支架支撐力及傾角度、地下水位、空氣污染物及一些環境因素如溫度、濕度及氣壓等。在任何的天氣狀況下，系統都可提供間隔最短為一分鐘的數據，並自動上傳至雲端，而用戶可即時透過系統所提供的多平台介面獲得數據。另一方面，當數據數值超出用戶預設的安全界限值，監測系統會自動發出警告。	

Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo
PA18-007	Automated wireless sensors  自動無線感測器	Enhance productivity and site safety  提高生產力和改善工地安全	iii)	ATAL Technologies Limited  Construction Stage Tunnel Access Control System (TACS)	Incorporated RFID Technology, 3G telecommunication, custom-designed software for real-time monitoring of on-site human resources and incident management.  使用了無線射頻識別技術和第三代行動通訊技術的專門軟件，用於實時監察人力資源及意外管理的系統。	
PA18-032	Automated wireless sensors  自動無線感測器	Improve site safety  改善工地安全	iv)	VHSoft Technologies Co. Ltd  Visual Intelligence Safety Compliance Monitor system	The Visual Intelligence Safety Compliance Monitor system comprises with the sensor and sensing technologies, couple with artificial intelligence technologies, together with the latest telecommunication technologies to provide a solution to meet the needs on safety.  Specialized cameras are used to monitor a work area similar to those in CCTV systems. The cameras monitor workers and check if the required safety standards are met. The system checks for the required safety gears is not observed. At the same time, a message will be sent to site safety officer via telecommunication network.  Visual Intelligence Safety Compliance Monitor system 由感應器及感應技術組成，再配合人工智能技術及最新的電訊科技，提供解決方案以符合安全的需要。  系統利用特製鏡頭如閉路電視般監測工地。鏡頭可監測工人是否符合安全準則，而該系統亦會檢查所需的安全設備是否齊全，同時透過電訊網絡傳送訊息予地盤安全主任。	

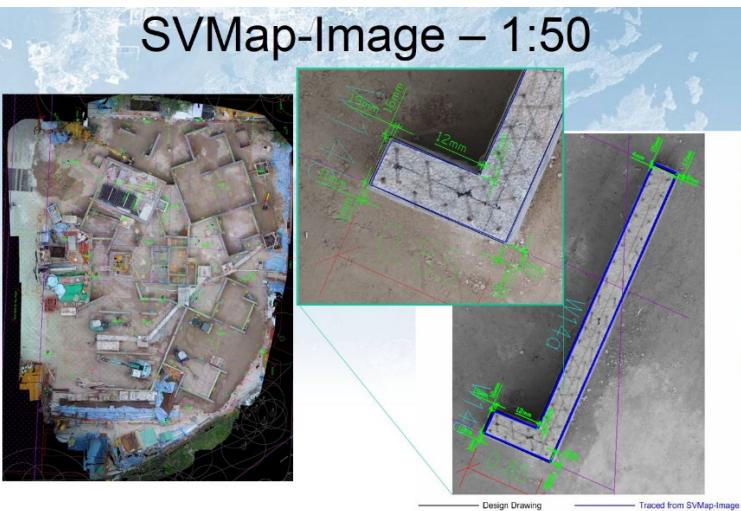

Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo
PA18-036	Automated wireless sensors  自動無線感測器	Enhance productivity and built quality  提高生產力及提升建造質素	v)	Octagon I/O Ltd.  Converge System (Concrete Strength)	<p>The Converge System (the “System”) is a hardware and software product that enables wireless monitoring of concrete temperature and compressive strength (when the correct calibration data is provided for a particular mix design). The System is made up of five parts: 1. a temperature Sensor; 2. the “Node” to transmit sensor data; 3. the “Repeater”, extends range; 4. the “Hub”, a 3G cellular gateway sends data to the Converge Platform; and 5. The Converge Platform</p> <p>此系統結合硬件及軟件，以無線方式監測混凝土溫度及強度(需配合混凝土設計校正數據)。系統包含共五個部件：1. 溫度感測器；2. 感測數據傳送器；3. 數據增距裝置；4. 3G 流動數據集成轉發器，傳送至雲端平台；5. 雲端平台</p>	
PA19-006	Automated wireless sensors  自動無線感測器	Enhance productivity and site safety  提高生產力及改善工地安全	vi)	Global Sensing Solutions Ltd  GSS 3G and Vibration Sensor (3GV), GSS Wireless Mesh Dongle (WMD), GSS Wireless Mesh Manager with 3G Gateway (WMM3G), GSS Wireless Tilt & Vibration Sensor (T&V)	<p>GSS wireless sensors offer a complete vibration and/or tilting monitoring solution that has been designed to deploy on construction and blast sites. It can reduce labour cost, save time and cost on installation and maintenance, ensure staff safety and provide real-time alerts.</p> <p>這款無線感應器專為建築及爆破工地提供完整的震動及/或傾斜監測方案。它能夠減省人手、節省安裝和保養的時間及金錢，同時可確保員工安全及提供實時警報。</p>	

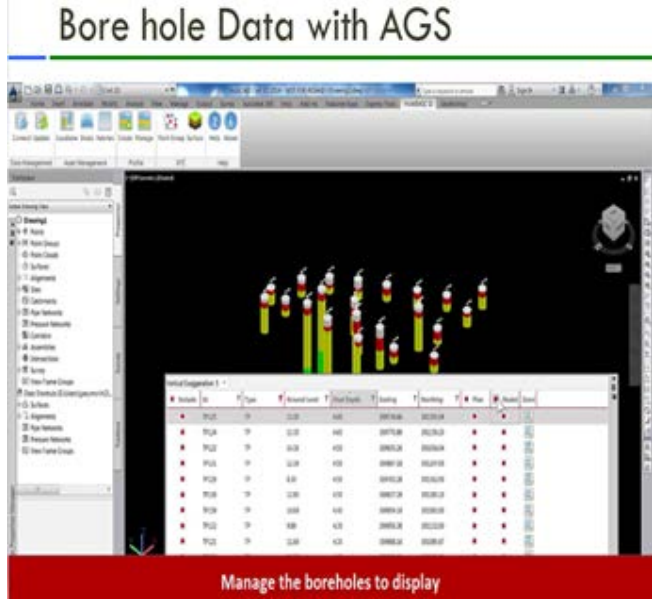
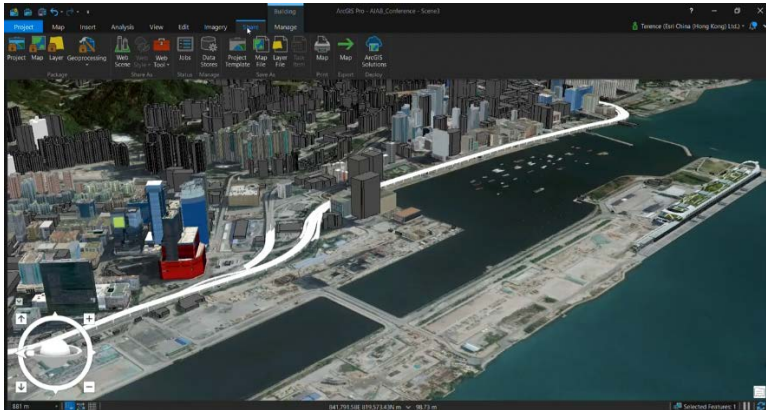



Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo
PA19-013	Automated wireless sensors  自動無線感測器	Enhance productivity and site safety  提高生產力及改善工地安全	vii)	UtterBerry  UtterBerry	<p>UtterBerry is a wireless sensor used for displacement monitoring on construction sites with high accuracy and autonomy. A group of sensors can form a mesh network and relay data between each other which are supported by a base station providing connectivity to the internet or a local network in order to get real-time access to the sensor data.</p> <p>It can reduce manpower for manual measurement and surveying which improves productivity and safety risk exposure.</p> <p>此產品是一個無線感應器，在工地裡能準確監測移位情況。一組感應器能夠組成網狀網絡及透過網絡互相傳送數據，實時取得感應器內的數據。</p> <p>它能減少使用人手量度及測量的工作，從而改善生產力及減低安全風險。</p>	
PA18-002	3D reality simulation / Data management  三維實況模擬 / 數據管理	Enhance productivity, built quality and site safety  提高生產力、提升建造質素和改善工地安全	i)	Geosys Hong Kong Ltd  Geosys VR3D	<p>Geosys VR3D data management system support the visualisation of 3D GIS and BIM data in one integrated viewer for users with 2D and 3D measurement and analysis functions. Web based 3D Measurement tools such as distance, path, angle, height, Volume, Section are provided.</p> <p>Cloud and server-based system allows users to open the application without software installation and maintenance for different end-user's PCs.</p> <p>Geosys VR3D 數據系統是一個綜合平台，能支援用戶瀏覽地理資訊系統和建築信息模擬等三維設計和測繪數據，並附有分析功能。此外，更設有以互聯網瀏覽器為本的三維測量工具，包括測量距離、路徑長度、角度、高度、體積及橫斷面。</p> <p>雲端及伺服器系統可支援用戶在不需要安裝任何軟件及保養電腦的情況下打開應用程式。</p>	





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PA18-008	3D reality simulation / Data management  三維實況模擬 / 數據管理	Improving site safety  改善工地安全	ii)	Advanced Design and Manufacturing Pty Ltd  3DM Analyst Mine Mapping Suite	<p>The product is a non-contact remote sensing tool, which allows structural mapping for geotechnical analysis of a rock mass using an automatically-generated, detailed and accurate 3D model. It could see multiple surfaces at once and map structures that may be too large to see. Users could stay away from hazardous areas, hence reducing their risk.</p> <p>產品採用了非接觸遙距感測裝置，能自動產生詳細和準確的三維模型，可用於岩土工程/地質分析。它能夠同時瀏覽多個表層以及標示一些巨大的結構。使用者可遠離危險的區域，從而減低風險。</p>	
PA18-009	3D reality simulation / Data management  三維實況模擬 / 數據管理	Enhance productivity and built quality  提高生產力及提升建造質素	iii)	Everest Innovation Technology Limited  Altizure.com (3D mapping, Modelling and publishing cloud system platform)	<p>This product enables reconstruction and transformation of 3D model with automated photo captures by different means e.g. cell phones, drones etc., enhancing off-site construction process monitoring, easy sharing of models for project redevelopment. Geo-referenced applications add value to BIM, GIS and AEC applications.</p> <p>產品能夠自動利用不同方法（例如手機和航拍機）擷取的相片重新塑造，並轉化為三維模型，因此有助加強遠端建築流程監控和方便於重建項目的模型資訊分享。地理參考的應用能夠增值於建築信息模擬、地理信息系統和建築、工程及建造的應用。</p>	




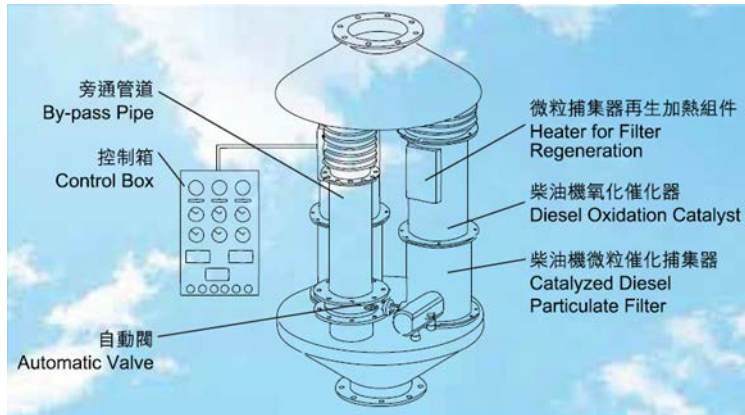

Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo
PA18-029	3D reality simulation / Data management  三維實況模擬 / 數據管理	Enhance productivity and built quality  提高生產力及提升建造質素	iv)	Star Vision Ltd  SV Map	<p>SVMap – Image is generated with the integration of LiDAR and photogrammetry (UAV &amp; close range) technology and can be used to establish as-built BIM (existing BIM) for construction monitoring. Application includes but not limited to as-built footing/wall location checking, grid line checking, excavation volume checking, construction progress monitoring, environmental monitoring, life-cycle monitoring and maintenance, etc.</p> <p>Compared with as-built checking using traditional land surveying method, the new technology is tested 5 times faster. The product is in 3D big data format, which contains at least 100,000 times more data amount as compared to traditional data collection method.</p> <p>SVMap – 產品結合 LiDAR 和攝影測量技術（無人機和近景攝影測量）製作而成，可用於製作竣工 BIM 模型，並利用於建造過程中的監測。此產品可用於地基，牆身位置檢查，網格線檢查，挖掘體積檢查，建造過程監測，環境監測，建築生命週期監測和維護等。</p> <p>新技術比傳統土地測量方法檢測竣工可快 5 倍。此產品又以 3D 大數據格式運作，比傳統收集數據方法可包含最少 100,000 倍數據。</p>	
PA18-030	3D reality simulation / Data management  三維實況模擬 / 數據管理	Enhance productivity and built quality  提高生產力及提升建造質素	v)	Intelligent CAD/CAM Technology Ltd  Solidworks	<p>SOLIDWORKS is a CAD package which enables the creation of complex designs with the parametric capabilities to facilitate design changes at any stage of the design process.</p> <p>SOLIDWORKS comes with a complete suite of tools to develop accurate designs that can be leveraged across planning, equipment design, layout, fabrication, and construction. Also quickly create photorealistic renderings and fully-detailed fabrication drawings for structural designs, mechanical equipment designs, mechanical system HVAC, electrical cable layouts, and piping systems. Test and explore design alternatives using SOLIDWORKS Simulation to optimize the designs against project specifications and customer requirements.</p> <p>SOLIDWORKS 是 CAD 軟件，用戶可透過此軟件輸入各項參數，創作複雜的設計，令設計過程中任何階段更改更簡易。</p> <p>SOLIDWORKS 提供了一整套工具來開發精確的設計，可以在規劃，設備設計，佈局，製造和構造中使用。同時可以快速為結構設計，機械設備設計，機械系統(HVAC)，電纜佈局和管道系統創建逼真的渲染圖和完整詳細的圖紙。使用 SOLIDWORKS Simulation 測試和探索設計方案，根據項目規範和客戶要求優化設計。</p>	


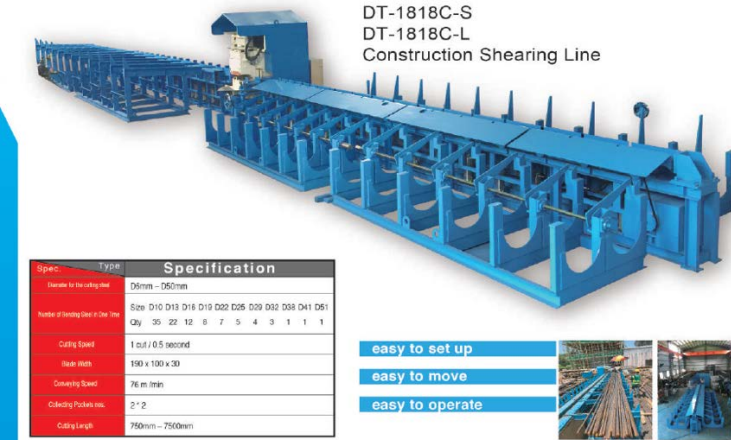
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PA18-038	3D reality simulation / Data management  三維實況模擬 / 數據管理	Enhance productivity  提高生產力	vi)	Spatial Technology Ltd.  HoleBASE SI	HoleBASE SI Professional can convert ground investigation AGS raw data into BIM model, which was a unique geo-technology management system integrated with GIS, geo-sections, data triggers and would be able to couple with Microsoft Excel. These additional features extend the system as a planning and analysis tool, which would be useful for geo-engineering project management.  此產品能將地質勘察的原始數據直接輸入建築信息模擬系統，另透過與微軟 Excel 等软件的支援，此產品能作為土力工程項目管理、策劃及分析軟件。	
PA19-010	3D reality simulation / Data management  三維實況模擬 / 數據管理	Enhance productivity and built quality  提高生產力及提升建造質素	vii)	Esri China (Hong Kong) Limited  ArcGIS Desktop Standard	ArcGIS Desktop Standard provides the tools and environment for map creation and interactive visualisation, multiuser editing, and advanced data management capabilities. It integrates GIS information with BIM models to enhance productivity, collaboration with different trades, improve decision making and design quality.  此軟件提供工具及平台繪製地圖，將地圖互動化和形象化、讓多個用戶可在軟件中進行編輯及數據管理。它結合地理信息系統和建築信息模擬，能夠提高生產力，便利不同持份者之間合作，改善決策及設計質素。	
PA18-003	Laser scanning  激光掃描	Enhance productivity and built quality  提高生產力及提升建造質素	i)	Yau Lee Construction Co. Ltd / Global Virtual Design and Construction Ltd  Trimble Tx5 3D Laser Scanner	The laser scanning and BIM modelling enables collection of large quantity of 3-dimensional measurements in a quick and accurate way. It can speed up the site measurement and save time. It also facilitate designers to carry out design. It helps to carry out the offsite fabrication based on BIM modelling data.  鐳射掃描和建築信息模擬讓收集大量三維測量數據的過程更快更準確。它亦可以加快工地測量進度及節省時間。此外，更能夠協助設計人員進行設計。	




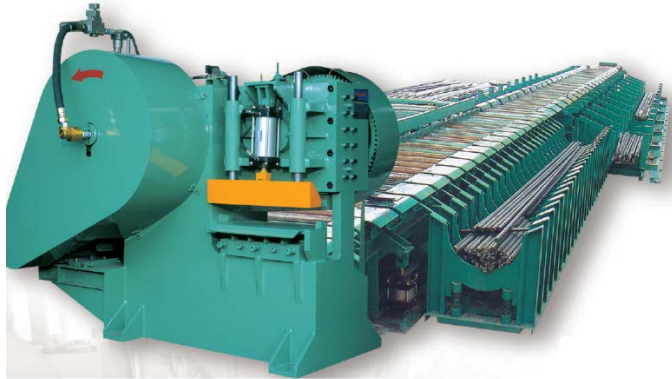
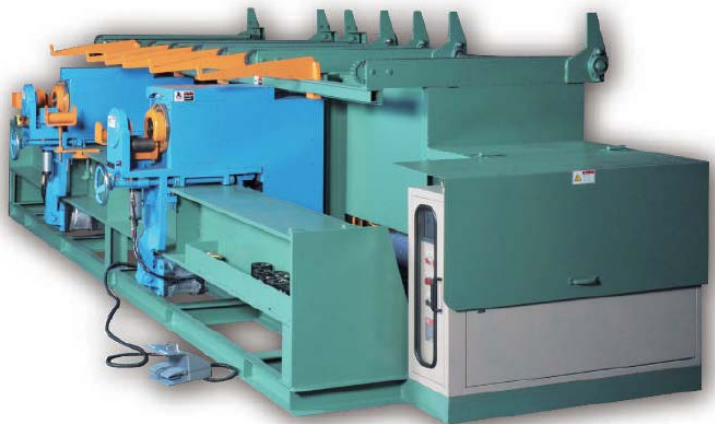
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PA19-005	Laser scanning 激光掃描	Enhance productivity and built quality  提高生產力及提升建造質素	ii)	Sigma Mascot (HK) Limited  FARO Focus S350 3D Laser Scanner	<p>The laser scanning and BIM modelling enables collection of large quantity of 3-dimensional measurements in a quick and accurate way. It can speed up the site measurement and save time. It also facilitate designers to carry out design. It helps to carry out the offsite fabrication based on BIM modelling data.</p> <p>鐳射掃描和建築信息模擬讓收集大量三維測量數據的過程更快更準確。它亦可以加快工地測量進度及節省時間。此外，更能夠協助設計人員進行設計。</p>	
PA19-018	Laser scanning 激光掃描	Enhance productivity and built quality  提高生產力及提升建造質素	iii)	Sigma Mascot (HK) Limited  FARO Focus S150 3D Laser Scanner		
PA19-019	Laser scanning 激光掃描	Enhance productivity and built quality  提高生產力及提升建造質素	iv)	Sigma Mascot (HK) Limited  FARO Focus S70 3D Laser Scanner		
PA19-020	Laser scanning 激光掃描	Enhance productivity and built quality  提高生產力及提升建造質素	v)	Sigma Mascot (HK) Limited  FARO Focus M70 3D Laser Scanner		



Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo
PA19-014	Laser scanning 激光掃描	Enhance productivity and built quality  提高生產力及提升建造質素	vi)	MYBIM Limited  Paracosm PX-80 3D Laser Scanner	PX-80 is a hand-held laser scanner capable of full 6-DoF positional tracking. It uses proprietary SLAM technology which is a fusion of LiDAR, colour imagery and Inertial Measurement Unit (IMU) data. It enhances BIM modelling in collecting large quantity of 3-dimensional measurements which facilitates designers to carry out design, and surveyors to conduct 3D digital survey.  此產品是手提型鐳射掃描器，能夠進行完全的 6-DoF 位置跟蹤。它使用專有 SLAM 技術，融合 LiDAR、彩色圖像及慣性測量單元 (IMU) 資料。鐳射掃描可收集大量三維測量數據以提升建築信息模擬，更能夠協助設計人員進行設計及測量人員進行三維數碼測量。	
PA18-004	Advanced pollutants treatment  先進污染物處理	Enhance environmental performance  提升環保效益	Hong Kong Productivity Council  AFT Exhaust After Treatment System for Non-road Mobile Machinery		The intelligent control system enables effective regeneration control and reduces energy consumption.  The operating cost is low by using the silicon carbide ceramic wall flow filter.  System operation is fully automatic and simple.  智能控制系統能有效管理再生控制並減低能源消耗。  通過使用碳化矽陶瓷壁過濾器等降低營運成本。  操作系統是全自動化並且操作簡單。	
PA18-005	Automation and Robotics  自動化及機械	Improve site safety  改善工地安全	i)	D-Reality Consultancy Limited  ELIOS	The product is a safe drones for inaccessible places. It is designed for remote inspection and exploration of the hazardous places. Its wireless communication system offers a robust digital, bi-directional, long range signal transmission, including video and data. It can avoid sending people to dangerous and confined space to conduct site inspection.  產品用於一些難以抵達的地方，適用於遙距勘察及探查危險區域。其無線傳輸系統提供了一個耐用的數碼、全方位及遠端數據和影像傳輸。它能夠避免將人員送往危險及限制區域進行勘察。	

Code	Technology	Benefits	Make and Model	Product Descriptions	Reference Photo
PA18-006	Automation and Robotics  自動化及機械	Improve site safety  改善工地安全	ii)  Shun Hing Systems Integration Co. Ltd. / ATOUN Inc.  Powered Wear MODEL-A & MODEL-Y	The product is a wearable robot that alleviates burden to the waist when lifting heavy objects. When a worker is about to pick up a heavy object, the product, controlled by motion sensors, provides assistance to the worker and helps reduce strain.  產品是一個可配戴機械裝置，可以在重物提舉時舒緩腰部負擔。當工人提舉重物時，移動感應器能協助工人減輕重力。	
PA18-012	Automation and Robotics  自動化及機械	Enhance productivity, built quality and site safety  促進生產力，建造質素及改善工地安全	iii)  Hung Tat Innovation & Construction Equipments Co. Ltd.  Construction Cutting Line - Short	The traditional manual rebar cutting and bending method has been used for more than 40 years. It required intensive skilled labour force performing repeat working sequences and incurred high physical injury accident rate.  The proposed automatic machinery is an innovative positive move of the cutting and bending procedures. The automatic machineries can shear, cut, segregate and bend different kinds of rebar in a systematic and sequential order. Advantages of the product over traditional way includes: (i) Redundant works are done automatically; (ii) Heavy rebars are placed automatically in place; (iii) Simple Operation. (Less skills required); (iv) Accuracy and quality standard are improved; (v) Accidental injury significantly reduced; (vi) Less dependent on skilled labour  傳統的人手鋼筋裁剪及屈曲方法已沿用超過 40 年。它需要密集的熟練人才進行重複工序，引致工人意外率一直高企。  此自動化機器能為建造業鋼筋裁剪及屈曲工序帶來創新方法。此機器可有系統及順序地裁剪、切割、分開及屈曲不同種類的鋼筋。此機器比傳統方法的優勝之處如下： (i) 冗長的工序可自動完成； (ii) 自動將沉重的鋼鐵放在所需位置； (iii) 簡易操作 (只需簡單技術)； (iv) 改善精準度及質量； (v) 大幅減少意外受傷機會； (vi) 減少依賴技術工人。	





Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo																								
PA18-013	Automation and Robotics  自動化及機械	Enhance productivity, built quality and site safety  促進生產力，建造質素及改善工地安全	iv)	Hung Tat Innovation & Construction Equipments Co. Ltd.  Construction Cutting Line - Long	<p>The traditional manual rebar cutting and bending method has been used for more than 40 years. It required intensive skilled labour force performing repeat working sequences and incurred high physical injury accident rate.</p> <p>The proposed automatic machinery is an innovative positive move of the cutting and bending procedures. The automatic machineries can shear, cut, segregate and bend different kinds of rebar in a systematic and sequential order. Advantages of the product over traditional way includes:</p> <p>(vii) Redundant works are done automatically;</p> <p>(viii) Heavy rebars are placed automatically in place;</p> <p>(ix) Simple Operation. (Less skills required);</p> <p>(x) Accuracy and quality standard are improved;</p> <p>(xi) Accidental injury significantly reduced;</p> <p>(xii) Less dependent on skilled labour</p>	 <p>DT-1818C-S DT-1818C-L Construction Shearing Line</p> <table border="1"><thead><tr><th>Specs</th><th>Type</th><th>Specification</th></tr></thead><tbody><tr><td>Rebar to be cut/bent</td><td></td><td>50mm - 250mm</td></tr><tr><td>Rebar of bending size in the line</td><td></td><td>6mm, 8mm, 10mm, 12mm, 14mm, 16mm, 18mm, 20mm, 22mm, 25mm, 28mm, 32mm, 36mm, 40mm, 45mm, 50mm</td></tr><tr><td>Cutting Speed</td><td></td><td>1.00 / 0.5 second</td></tr><tr><td>Rebar width</td><td></td><td>100 x 100 x 30</td></tr><tr><td>Covering Steel</td><td></td><td>18 mm thick</td></tr><tr><td>Cutting Position</td><td></td><td>2 * 2</td></tr><tr><td>Cutting length</td><td></td><td>100mm - 7000mm</td></tr></tbody></table> <p>easy to set up easy to move easy to operate</p>	Specs	Type	Specification	Rebar to be cut/bent		50mm - 250mm	Rebar of bending size in the line		6mm, 8mm, 10mm, 12mm, 14mm, 16mm, 18mm, 20mm, 22mm, 25mm, 28mm, 32mm, 36mm, 40mm, 45mm, 50mm	Cutting Speed		1.00 / 0.5 second	Rebar width		100 x 100 x 30	Covering Steel		18 mm thick	Cutting Position		2 * 2	Cutting length		100mm - 7000mm
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PA18-014			v)	Hung Tat Innovation & Construction Equipments Co. Ltd.  150T Shear Line	<p>傳統的人手鋼筋裁剪及屈曲方法已沿用超過 40 年。它需要密集的熟練人才進行重複工序，引致工人意外率一直高企。</p> <p>此自動化機器能為建造業鋼筋裁剪及屈曲工序帶來創新方法。此機器可有系統及順序地裁剪、切割、分開及屈曲不同種類的鋼筋。此機器比傳統方法的優勝之處如下：</p>																									
PA18-015		vi)	Hung Tat Innovation & Construction Equipments Co. Ltd.  300T Shear Line	<p>(i) 冗長的工序可自動完成;</p> <p>(ii) 自動將沉重的鋼鐵放在所需位置;</p> <p>(iii) 簡易操作 (只需簡單技術);</p> <p>(iv) 改善精準度及質量;</p> <p>(v) 大幅減少意外受傷機會;</p> <p>(vi) 減少依賴技術工人。</p>																										
PA18-016		vii)	Hung Tat Innovation & Construction Equipments Co. Ltd.  Y25 Bending Machine (2 Benders)																											
PA18-017			viii)	Hung Tat Innovation & Construction Equipments Co. Ltd.  Y32 Bending Machine (2 Benders)																										

Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo
PA18-018	Automation and Robotics 自動化及機械	Enhance productivity, built quality and site safety  促進生產力，建造質素及改善工地安全	ix)	Hung Tat Innovation & Construction Equipments Co. Ltd.  Y25 Auto Bending Machine (5 Benders)	<p>The traditional manual rebar cutting and bending method has been used for more than 40 years. It required intensive skilled labour force performing repeat working sequences and incurred high physical injury accident rate.</p> <p>The proposed automatic machinery is an innovative positive move of the cutting and bending procedures. The automatic machineries can shear, cut, segregate and bend different kinds of rebar in a systematic and sequential order. Advantages of the product over traditional way includes:</p> <ul style="list-style-type: none"> <li>(i) Redundant works are done automatically;</li> <li>(ii) Heavy rebars are placed automatically in place;</li> <li>(iii) Simple Operation. (Less skills required);</li> <li>(iv) Accuracy and quality standard are improved;</li> <li>(v) Accidental injury significantly reduced;</li> <li>(vi) Less dependent on skilled labour</li> </ul> <p>傳統的人手鋼筋裁剪及屈曲方法已沿用超過 40 年。它需要密集的熟練人才進行重複工序，引致工人意外率一直高企。</p> <p>此自動化機器能為建造業鋼筋裁剪及屈曲工序帶來創新方法。此機器可有系統及順序地裁剪、切割、分開及屈曲不同種類的鋼筋。此機器比傳統方法的優勝之處如下：</p> <ul style="list-style-type: none"> <li>(i) 冗長的工序可自動完成;</li> <li>(ii) 自動將沉重的鋼鐵放在所需位置;</li> <li>(iii) 簡易操作 (只需簡單技術);</li> <li>(iv) 改善精準度及質量;</li> <li>(v) 大幅減少意外受傷機會;</li> <li>(vi) 減少依賴技術工人。</li> </ul>	
PA18-019			x)	Hung Tat Innovation & Construction Equipments Co. Ltd.  Y16 Auto Bending Equipment (2 Benders)		
PA18-020			xi)	Hung Tat Innovation & Construction Equipments Co. Ltd.  Y16 Auto Stirrup Machine		
PA18-021			xii)	Brosafich Innovation & Construction Equipments Company Limited  Automatic Stirrup Bender, Model Number: GWZ12B, WGZ16, WGZ16F		



Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo
PA18-022	Automation and Robotics 自動化及機械	Enhance productivity, built quality and site safety  促進生產力，建造質素及改善工地安全	xiii)	Brosafich Innovation & Construction Equipments Company Limited  Bending Center, Model Number: Robot 60	<p>The traditional manual rebar cutting and bending method has been used for more than 40 years. It required intensive skilled labour force performing repeat working sequences and incurred high physical injury accident rate.</p> <p>The proposed automatic machinery is an innovative positive move of the cutting and bending procedures. The automatic machineries can shear, cut, segregate and bend different kinds of rebar in a systematic and sequential order. Advantages of the product over traditional way includes:</p> <ul style="list-style-type: none"> <li>(vii) Redundant works are done automatically;</li> <li>(viii) Heavy rebars are placed automatically in place;</li> <li>(ix) Simple Operation. (Less skills required);</li> <li>(x) Accuracy and quality standard are improved;</li> <li>(xi) Accidental injury significantly reduced;</li> <li>(xii) Less dependent on skilled labour</li> </ul> <p>傳統的人手鋼筋裁剪及屈曲方法已沿用超過 40 年。它需要密集的熟練人才進行重複工序，引致工人意外率一直高企。</p> <p>此自動化機器能為建造業鋼筋裁剪及屈曲工序帶來創新方法。此機器可有系統及順序地裁剪、切割、分開及屈曲不同種類的鋼筋。此機器比傳統方法的優勝之處如下：</p> <ul style="list-style-type: none"> <li>(i) 冗長的工序可自動完成;</li> <li>(ii) 自動將沉重的鋼鐵放在所需位置;</li> <li>(iii) 簡易操作 (只需簡單技術);</li> <li>(iv) 改善精準度及質量;</li> <li>(v) 大幅減少意外受傷機會;</li> <li>(vi) 減少依賴技術工人。</li> </ul>	
PA18-023			xiv)	Brosafich Innovation & Construction Equipments Company Limited  Shear Line, Model Number: XQ120, GJW1240, GJW150B		
PA18-024			xv)	Brosafich Innovation & Construction Equipments Company Limited  Bending Center, Model Number: G2L32, G2W50		
PA19-003			xvi)	Brosafich Innovation & Construction Equipments Company Limited  Bending Centre - G5L25		
PA18-028	Automation and Robotics 自動化及機械	Enhance productivity, built quality and site safety  提高生產力及提升建造質素	xvii)	Chun Chin Engineering Co. Ltd  "自動剪裁建築鋼筋鐵料機" (Chinese Only)	<p>The product uses automatic machine for sawn cutting of rebar. It would help the industry to improve efficiency.</p> <p>The automatic steel bar cutting machine can reduce accident rate, when comparing with cutting steel bar manually.</p> <p>此機器可自動裁剪鋼筋，有助業界改善工作效率。</p> <p>此自動鋼筋剪裁鐵料機，相較傳統人手剪裁鋼筋更有效減少意外發生。</p>	





Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo
PA18-025	Automation and Robotics 自動化及機械	Enhance productivity, built quality and site safety  促進生產力，建造質素及改善工地安全	xviii)	Golik Metal Manufacturing Co. Ltd  Pilemaster III	<p>Pilemaster III pile cage machine will weld automatically not only round pile cages, but the welding of square, rectangular and triangular cages. The welding is precise by a flexible welding head and through an integrated bar support, which follows the curve of the polygonal cage easily.</p> <p>This new generation of machine comes with the new ring discs system to allow the production of individual cage diameters.</p> <p>The control unit will check the quality of the actual welding and in case of failure.</p> <p>Pilemaster III 預製鋼筋籠不但可自動焊接圓形的鋼筋籠，還可焊接成正方形、長方形及三角形的鋼筋籠。透過活動式的焊接頭及一體化支架，可輕易地造出多邊形的鋼筋籠。</p> <p>這新一代的機器，隨附新的環盤系統，可製作不同直徑的鋼筋籠。</p> <p>監控版面可檢查實際的焊接質素及出現失誤時作出即時跟進。</p>	
PA18-026	Automation and Robotics 自動化及機械	Enhance productivity, built quality and site safety  促進生產力，建造質素及改善工地安全	xix)	Golik Metal Manufacturing Co. Ltd  PBX - Polybend	<p>The feed system of the Polybend machine features a motorized roller-type straightening unit and a water-cooled electric servo drive, ensures output with a minimum of maintenance and dimensional accuracy of the products.</p> <p>The motorized straightening roll adjustment in the roller-type straightening units, adapted to wire diameter and quality, results in short change over times and easy operation.</p> <p>The automatic stirrup bending machine is controlled by CNC system and can accomplish straighten, bend and cut coil wire and straight bars automatically instead of 20-30 workers. This greatly reduces labor and save cost.</p> <p>這自動鋼筋屈曲機於送料位置，配備了摩打推動的滾軸拉直組件及一個水冷電子訊號放大器，以確保出產的產品尺寸精確，及只需最小幅度的保養。</p> <p>滾軸拉直組件的滾軸調節動作，透過電線的直徑及質素，能夠簡易及短時間內作出改動。</p> <p>自動洛仔屈曲機器是以 CNC 系統控制，可自動造出拉直，屈曲及裁剪圈狀和直身鋼筋，以取代 20 至 30 工人，大大減少工人數目及減低成本。</p>	



Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo
PA18-027	Automation and Robotics 自動化及機械	Enhance productivity, built quality and site safety  提高生產力及提升建造質素	xx)	Power Steel Metal Co. Ltd  Fully Automatic Cutting Machine for Steel Rebar	The automatic cutting machine with computerized control can be easily operated by less staff compare to traditional cutting machine. Also, the machine is equipped with automatic dividing function by magnetic device and divider which will save operators from the fatigue process. With better accuracy in the cutting process, work output can be much improved which resulting a less material usage and time saving.  電腦化控制的鋼筋自動裁剪機器比傳統裁剪機器需要較少員工及容易操作。此機器設有自動分隔功能，透過磁性裝置及分隔器將鋼筋分類，可使操作員避免疲勞的工序。由於鋼筋裁剪過程更精準，因此可改善產量，同時達致減少材料耗損及減省時間。	
PA19-007	Automation and Robotics 自動化及機械	Enhance productivity, built quality and site safety  提高生產力及提升建造質素	xxi)	Power Steel Metal Co. Ltd  Automatic Cutting and Bending Machine for Steel Rebar Model: Smart 13 Coil	The automatic cutting machine with computerized control can be easily operated by less staff compared to traditional cutting machine. The machine can process bar in coil sizes: 6mm to 8mm diameter (double strand) and 6mm to 13mm (single strand). It can also produce accurate in shapes and measurement.  電腦化控制的鋼筋自動裁剪機器比傳統裁剪機器需要較少員工及容易操作。此機器能加工 6 至 8 毫米卷裝鋼筋(雙線直徑)及 6 至 13 毫米鋼筋(單線直徑)。此外，它能製作形狀及尺寸精確的鋼筋。	
PA19-008	Automation and Robotics 自動化及機械	Enhance productivity, built quality and site safety  提高生產力及提升建造質素	xxii)	Power Steel Metal Co. Ltd  Automatic Cutting and Bending Machine for Steel Rebar Model: Smart 13 Bar	The automatic cutting machine with computerized control can be easily operated by less staff compared to traditional cutting machine. The machine can process straight bar sizes: 6mm to 8mm diameter (double strand) and 6mm to 13mm (single strand). It can also produce accurate in shapes especially doing small stirrups.  電腦化控制的鋼筋自動裁剪機器比傳統裁剪機器需要較少員工及容易操作。此機器能加工 6 至 8 毫米直徑鋼筋(雙線直徑)及 6 至 13 毫米鋼筋(單線直徑)。此外，它能製作尺寸精確鋼筋，尤其製作小型洛仔。	
PA19-009	Automation and Robotics 自動化及機械	Enhance productivity, built quality and site safety  提高生產力及提升建造質素	xxiii)	Power Steel Metal Co. Ltd  Automatic Bending Machine for Steel Rebar Model: Robo Smart 45	The automatic bending machine equips with rollers which can move and bend coil easily. It can easily produce accurate “L”, “C” and “double C” shapes. With computerised control, the machine only requires 1 staff for operation.  此自動鋼筋屈曲機設有滾軸，令鋼筋易於移動及屈曲，能輕易製作出“L”型，“C”型和“雙C”型彎曲。由於電腦化控制，只需 1 位員工便能操作此機器。	



Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo
PA19-015	Automation and Robotics 自動化及機械	Enhance productivity, built quality and site safety  提高生產力及提升建造質素	xxiv)	VSC Construction Steel Solutions Ltd.  Bi-directional automatic stirrup bender from coil Model: Prima 13	<p>The automatic bi-directional stirrup bender from coil for the production of stirrups and cut-to-size bars using wires up to 13mm diameter (single strand 12mm diameter and double strand 10mm diameter). With computerised control, the machine only requires 1 staff for operation.</p> <p>此雙向自動卷鐵剪屈機用於切割及屈曲鋼筋，可加工直徑最高達 13 毫米直徑的鋼筋(單線直徑 12 毫米鋼筋及雙線直徑 10 毫米鋼筋)。此電腦化控制機器只需 1 位員工便能操作。</p>	
PA19-016	Automation and Robotics 自動化及機械	Enhance productivity, built quality and site safety  提高生產力及提升建造質素	xxv)	VSC Construction Steel Solutions Ltd.  Bi-directional automatic stirrup bender from coil Model: Coil 16	<p>The automatic bi-directional stirrup bender from coil for the production of stirrups and cut-to-size bars using wires up to 16mm diameter (single strand 6mm diameter and double strand 10mm &amp; 12mm diameter). With computerised control, the machine only requires 1 staff for operation.</p> <p>此雙向自動卷鐵剪屈機用於切割及屈曲鋼筋，可加工直徑最高達 16 毫米直徑的鋼筋(單線直徑 6 毫米鋼筋及雙線直徑 10 及 12 毫米鋼筋)。此電腦化控制機器只需 1 位員工便能操作。</p>	
PA19-021	Automation and Robotics 自動化及機械	Enhance productivity, built quality and site safety  提高生產力及提升建造質素	xxvi)	VSC Construction Steel Solutions Ltd.  High-speed automatic stirrup machine Model: Multibend 16 Bar	<p>The automatic stirrup bending machine is used for high-speed production of all types of polygonal stirrups and hoops utilising stock length bars as feedstock.</p> <p>The machine works one single bar for diameter 10mm, 12mm and 16mm (two bars for diameter 10mm and 12mm). It only requires 1 staff to operate this computerised machine.</p> <p>此自動剪屈機適用於高速生產以直鐵作為原料的所有類型的多邊形鋼筋成品。</p> <p>此機器可以加工 10 毫米，12 毫米及 16 毫米的鋼筋 (直徑 10-12 毫米的鋼筋可以作雙線生產)。只需 1 位員工便能操作此電腦化機器。</p>	


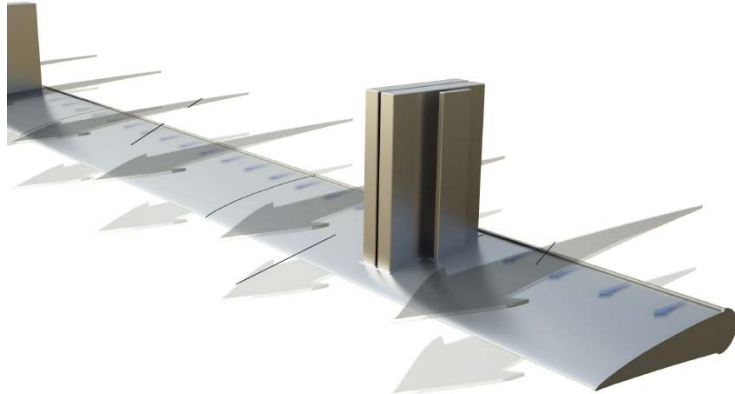


Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo
PA19-002	Automation and Robotics 自動化及機械	Enhance productivity, built quality and site safety  提高生產力、提升建造質素及改善工地安全	xxvii)	C. Crossfield & Co., Ltd  Brokk AB	<p>Brokk is a remote controlled demolition robot which can outperform the existing excavators five times as its size. The weight and size of Brokk facilitates its accessibility in difficult locations like narrow spaces and stairs. By using remote control, Brokk machines can replace manual method of 3 to 5 workers with jackhammers which ensure the safety of the workers as they do not need to work under harmful vibrations and dangerous areas. Moreover, Brokk machines are electric driven and no fumes exhausted like conventional excavators promoting environmental protection.</p> <p>此產品是一遙控拆卸機械，相較傳統挖土機輸出高達五倍。小巧機身能令機械輕鬆進入狹窄空間及跨越梯級。透過遙控裝置，此機械能取代 3-5 人的人手打鑿效率。同時，產品令工人遠離危害區域工人安全得以提升；機械以電力推動，不會排放廢氣，提升工地環保水平。</p>	
PA19-001	Automation and Robotics 自動化及機械	Enhance productivity, built quality and site safety  提高生產力、提升建造質素及改善工地安全	xxviii)	Welbot Technology Ltd.  Welbot Welding Robot (On-site Mobile Welding Robot)	<p>The welding robotic control software could auto generate the weldpath, perform 3D welding weave, complex, non-straight welding path. It can set up the robot task within 2 minutes. The robot can provide standard welding quality to improve the productivity by replacing experienced welder on site.</p> <p>The weight of six-axis robot arm is light (11-28kg) with (0.5-1.3m) reach radius provide flexible mobility requirement for construction industry.</p> <p>此自動焊接機械人能配合軟件，自動產生各種複雜的三維焊接路徑。機械人能以快至 2 分鐘完成設定開始工作。同時，機械人所產生的焊接質素穩定，從而提高建造質素並可取代焊接工。</p> <p>此六軸機械人輕便(11-28kg)、操作範圍廣(0.5-1.3m)，能於建築工地流動使用。</p>	


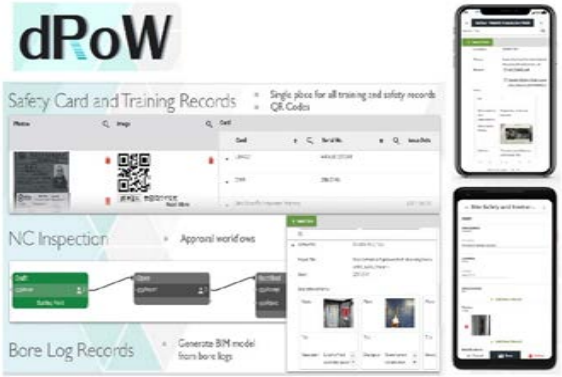

Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo
PA19-011	Automation and Robotics  自動化及機械	Enhance productivity and site safety  提高生產力、提升建造質素及改善工地安全	xxix)	O-Matic Intelligent Robot Ltd.  Transbot	A wireless control battery-operated Universal Service Vehicle capable of carrying construction materials/tools moving around construction sites with different terrain conditions. Transbot can replace manual handling operation in delivery and unloading of heavy items. It can reduce safety hazards of the labour and increase work efficiency.  這是一款無線控制的電動運輸車輛，可以在不同路況的建築工地運送建築物料或工具。此運輸車輛可取替人手處理及搬運重型物件，從而減低工傷機會及提升工作效率。	
PA19-012	Automation and Robotics  自動化及機械	Enhance productivity and site safety  提高生產力、提升建造質素及改善工地安全	xxx)	China Road and Bridge Corporation  Aquajet Aqua Cutter 710H	A diesel driven, wireless controlled ultra-high pressure hydro-demolition robot for concrete demolition. It can accurate remove concrete with steel reinforcement undamaged and it provide excellent bond for repair materials in rough, irregular surface. Moreover, it can eliminate the vibrations to the surrounding structure during operation and significantly reduce transmitted sound through the structure. The robot can reduce manpower and minimise injuries.  這是一款以柴油推動、無線控制超高壓水泵拆卸機械人適用於拆除混凝土。此機械人可準確移除混凝土而不破壞加固鋼筋、並在粗糙、不平的表面為維修物料提供黏合作用。操作期間亦可減低對周遭建築物的震動和顯著減少透過建築物傳送的聲音。此外，機械人可節省人手及較其他拆卸方法減少員工受傷的機會。	
PA19-023	Automation and Robotics  自動化及機械	Enhance productivity, quality, site safety and environmental performance  提高生產力、提升建造質素、改善工地安全及環保效益	xxxi)	Hong Kong Marble & Granite Merchants Association  Informatization Production 3P Solution (Scanner, Planning, Software, Intelligent Bridge Cutting Machine) for Marble & Stone Model: KTS2200-1S	The product has not only the traditional bridge cutting machine, but also new functions such as AI cutter presetting, automatic labelling, moving slab with suckers. By using the built-in software, 3 types of cutting plans namely Automatic Optimization, Picture Planning and Artificial Planning could be made in advance with the maximum-yield principle. The machine will cut the marble / stone slabs according to the cutting plan automatically by one-key operation.  此產品除了具有傳統橋切機的功能外，還增加了智能對刀、自動標貼、吸盤移板等功能。透過內置軟件，能夠以最大產量為原則對板材以自動優化、對紋排版或人工規劃3種切割方案進行預先規劃。將方案輸入機器後只需按一鍵便進行自動切割。	

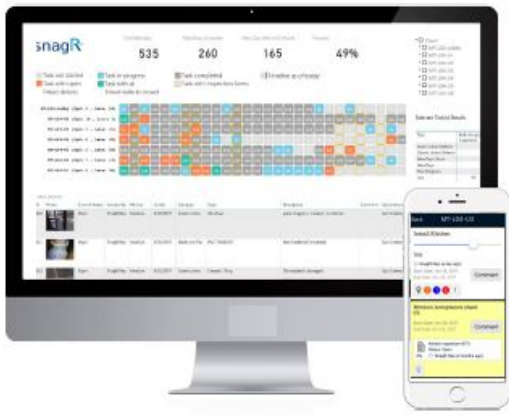



Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo
PA18-010	Material 物料	Uplift built quality 提升建造質素	Growtech Limited  Growseal Nano-brush Coat		<p>This material incorporated the nanoparticles features to enhance the physical properties in order to compete with other materials to suit the real application in buildings under humid weather. Its application on damp surface can save construction time on external area under humid weather in Hong Kong. It extends the service life of coating and reduce the cost of renovation and maintenance of the buildings.</p> <p>這種物料運用了納米粒子特性加強建築物表面與其它物料的相容，從而強化建築物在潮濕天氣下的各種應用。若將其採用於潮濕的外層，會減少建築所需的時間，更可以減低翻新和保養建築物的成本。</p>	
PA18-011	Hardware Product 硬件設備	Improve site safety 改善工地安全	i)	Waste & Environmental Technologies Ltd.  Solar-powered Message Board Trailer (MBT)	<p>Solar-powered signage and message board which allows off-site updating of messages and signage for construction site. This product leads to better management and control of site traffics, reduces the risk of accidents. More durable than standard sign board and can withstand rough weather conditions.</p> <p>太陽能標誌及信息顯示板能夠在遠端進行操作，有助管理和控制工地交通，減少意外風險。即使該產品在惡劣的天氣條件下運作，仍會比一般的顯示板耐用。</p>	

Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo
PA19-022	Hardware Product 硬件設備	Enhance productivity, site safety and Environmental performance  提高生產力、改善工地安全及提升環保效益	ii)	Acoustics Innovation Ltd.  SilentUP Retractable Noise Barrier	<p>SilentUP is a standalone retractable noise barrier for construction noise control upto 7m high. It does not require concrete foundation but water barriers only and the entire structure can be installed by manpower without using any machine. SilentUP employs an Automatic Wind Load Relieving Mechanism which reduces the structure loading requirement significantly.</p> <p>It improves the productivity and safety of work. It can also be reusable and thereby reduce waste.</p> <p>這是一款獨立便攜式隔音屏障，有效阻隔建築噪音達7米高。它只需用木馬代替混凝土作地基及人手可安裝整個隔音屏障。SilentUP 採用自動減輕風荷載機制以顯著減低結構負載要求。</p> <p>它可改善生產力及工地安全。由於屏障可循環再用，故可減少浪費。</p>	
PA18-031	Air Treatment 空氣處理	Enhance environmental performance  提升環保效益	Ove Arup & Partners HK Ltd  Air Induction Unit		<p>The Air Induction Unit (AIU) is a displacement ventilation device used to provide moving air for comfort, particularly in hot and humid transient spaces such as metro platforms or semi-outdoor eating areas in places such as Hong Kong and Singapore. The device has a minimal and aesthetically bladelike design, and works using the principle of induction.</p> <p>In comparison to traditional fans, use of the AIU results in no moving parts in the occupied space. This is therefore safer, simplifies maintenance and cleaning, and minimizes noise.</p> <p>AIU 是一台替換式通風裝置，提供流動舒適的氣流，尤其適合既熱且潮濕又多變的環境如香港及新加坡的地下鐵路月台或半戶外餐飲地方。此裝置使用最少及美學上葉片狀設計，及採用感應原則運作。</p> <p>相比傳統的風扇，AIU 並沒有活動組件外露，亦因此操作更安全、更寧靜、簡易清潔和保養。</p>	

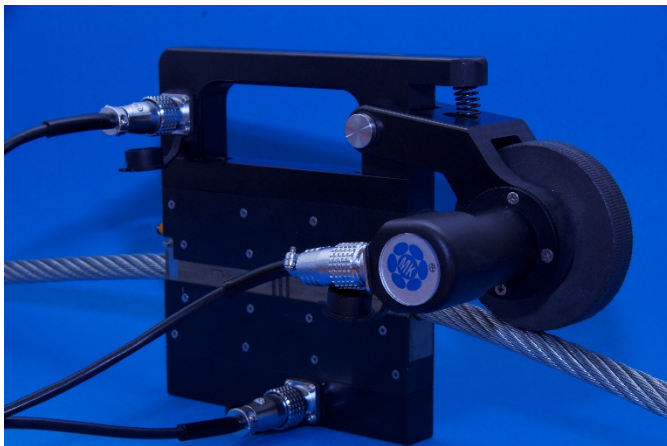



Code	Technology	Benefits	Make and Model	Product Descriptions	Reference Photo
PA18-033	Project Management  工程項目管理	Enhance productivity  提高生產力	i)  VHSoft Technologies Co. Ltd  VHSmart	VHSmart™ is a cloud base field management platform. With the engagement of Cloud Platform and Advance Mobile Technology, VHSmart™ provides an integrated construction life cycle solution which facilitate end-user from access control, field safety management, progress monitoring, quality control, asset management, material tracking & inventory in every stage  VHSmart 雲端建築管理系統，配合人工智能雲端平台及先進流動技術，提供一站式管理平台，能更有效進行進出入管制記錄，施工安全管理，建築品質管理，工地資產管理，物料及倉庫管理等日常工作。	
PA18-034	Project Management  工程項目管理	Enhance productivity and built quality  提高生產力及提升建造質素	ii)  Build I.T. Ltd.  Digital Record of Works (dROW)	Digital Record of Work (dRoW) is a site record information system. Featuring a user-friendly, versatile interface and a flat learning curve, dRoW is the system for construction projects with its compatibility with a wide variety of site records, which includes Document, NEC Contract, Drawing, Design Management Systems, Safety, QMS, tests registry etc.  dRoW 是一個建築工程信息記錄系統。dRoW 具有簡單易用的介面和平坦的學習曲線，是建築項目的理想系統，兼容各種現場記錄。當中包括文件、合同、圖紙、設計管理系統、安全、質量、測試記錄註冊表等。	
PA18-035	Project Management  工程項目管理	Enhance productivity and built quality  提高生產力及提升建造質素	iii)  Spatial Technology Ltd  Novade	Novade is a full range of solutions for your project – Manage Quality, Safety, Logistics, Maintenance, Workforce & Activity. The Mobile-ready Platform Includes Key Functionalities:- - Forms & Checklists - Drawing Mark-ups - Digital Signatures - Map Locations - QR Codes & NFC Tags - Picture Annotations  此產品能提供一站式工程管理服务，以電腦、平板、手機等裝置管理質量安全、物流維修、人力資源等。主要功能包括： - 表格及清單標註圖紙；數碼簽署；地圖；QR CODES/NFC 標籤；圖表標示等。	  The data captured helps streamline site processes, facilitate collaboration and improve productivity

Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo
PA19-024	Project Management  工程項目管理	Enhance productivity and built quality  提高生產力及提升建造質素	iv)	SnagR Ltd.  SnagR	<p>SnagR is a cloud-based quality management system, designed to monitor the progress of complex projects. The system can capture on-site data, automate reporting, visualise the process and analyse data.</p> <p>此產品是一套以監測複雜的項目進展為中心的系統，能有效記錄工地資料、自動化報告、將工程進度形象化及進行數據分析。</p>	
PA19-025	Project Management  工程項目管理	Enhance productivity and built quality  提高生產力及提升建造質素	v)	Hilti (Hong Kong) Ltd.  On!Track	<p>On!Track is a digitalised asset management solution designed for construction industry. It uses cloud-based server for information storage and can be retrieved or updated with two interfaces which are web portal and mobile app.</p> <p>User can attach a robust 2-D barcode /QR code on the asset for unique identification purpose and the information can be retrieved by scanning. Asset information include picture, documents, location, purchase information, warranty expiration date and scheduled services.</p> <p>此產品是一個專為建造業而設的數碼化資產管理解決方案，有關資產資料透過網站和手機應用程式存取在雲端上。</p> <p>用戶可以在資產上附加耐用的二維條碼/二維碼作識別用途，並通過掃描來查閱資料，資料包括圖片、文件、位置、採購資訊、保養到期日及預定服務。</p>	



Code	Technology	Benefits	Make and Model		Product Descriptions	Reference Photo
PA18-037	Construction Material 建築物料	Enhance productivity and built quality 提高生產力及提升建造質素	MDM Group Inc. Ltd.  MatrixDeck Panel Configuration Models A200 to A850		MatrixDeck System is a green technology. It is essentially a structural floor system that provides a 150kg per square meter of carbon emission saving when compared to conventional building system. It is a high performance reinforced concrete floor slab that allows greater column spacing and minimizes the material usage of concrete and steel reinforcement when compared to conventional structural floor system.  此產品是一項綠色科技。以此產品作為樓宇地台，將能減少碳排放達 150kg/平方米。同時，此產品相較傳統鋼筋混凝土結構系統能提高強度，從而優化設計如增加柱子間距。	
PA18-039	Quality Assurance Product 質量設備	Uplift built quality 提升建造質素	i)	Hilti (Hong Kong) Ltd.  Adaptive Torque System (AT system)	Adaptive Torque ready tools are equipped with the sensors and on-board intelligence to confirm if a Hilti anchor has been set according to ETA and ICC-ESR approvals. The tool can be connected to a computer to instantly generate an installation report, offering inspectors and specifiers a higher confidence that the work has been carried out exactly as specified.  此產品配有感測器，以確保螺栓已根據 ETA 及 ICC-ESR 安裝。同時，產品能連上電腦並製作螺栓安裝報告，為每顆螺栓制作全面及可靠的紀錄。	<p><b>ONE TOOL MANY FEATURES</b> Installation. Documentation. Quality assurance.</p> 
PA19-017	Quality Assurance Product 質量設備	Enhance productivity, uplift built quality and site safety  提高生產力、提升建造質素及改善工地安全	ii)	Hilti (Hong Kong) Ltd.  PS1000 Radar Type Concrete Scanning Machine with Display	PS1000 is used for detecting embedded materials (not only rebar) inside concrete before drilling. It utilises radar technology to detect up to depth 300mm of concrete with accuracy +/-10mm to prevent clashing while drilling. PS1000 also includes a table display which can display the scanned image to achieve accurate measurement.  此產品適用於鑽孔前探測嵌入在混凝土內的材料(不限於鋼筋)。它採用雷達技術，能探測混凝土內 300 毫米深及達致+/-10 毫米準確度，避免鑽孔時破壞其他材料。PS1000 亦附有顯示屏，能顯示掃描的影像，準確量度尺寸。	

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PA19-026	Quality Assurance Product  質量設備	Uplift built quality and site safety  提升建造質素及改善工地安全	iii)	Mak Kee International HK Ltd  Non-Destructive Testing Device for Steel Wire Rope	Non-Destructive Testing is a portable device for steel wire rope inspection. It uses magnetic flux leakage examination method to detect and diagnose the deterioration of steel wire rope, including both obvious defects and imperceptible changes. It is suitable for all kinds of wire rope applications.  這是一部便於攜帶且智能化的鋼絲繩檢測儀器。它透過監察磁場內的漏磁狀況來診斷鋼絲繩的明顯和肉眼難以察覺的缺陷，適用於所有鋼絲相關的應用。	
PA19-027	Quality Assurance Product  質量設備	Enhance productivity, uplift built quality and site safety  提高生產力、提升建造質素及改善工地安全	iv)	Hilti (Hong Kong) Ltd.  PLT 300 Advanced Layout	PLT 300 Advanced Layout is a digital layout tools to replace conventional layout process by means of tape measure and chalk line. It virtually eliminates a learning curve as no levelling is required and the Hilti technology allows easy automatic station setup and hence enhances productivity.  這是一套數碼化施工佈局工具，取代傳統使用捲尺及粉筆線的施工佈局方法。它具有自動平水功能，無需手動調平。喜利得的技術有助快速設置有關工具，故能改善生產力。	

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