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# 安全通訊 Safety Bulletin

Mar / Apr 2026

香港職業安全衛生協會  
THE HONG KONG OCCUPATIONAL SAFETY AND HEALTH ASSOCIATION

## HKOSHA 48<sup>th</sup> Annual General Meeting and Safety Seminar - A Night of Reflection and Renewal

Author: Ms. MA Yuen-ting, Julie, Executive Council Member, HKOSHA

The Hong Kong Occupational Safety and Health Association (HKOSHA) successfully held its 48<sup>th</sup> Annual General Meeting (AGM) on 23 April 2026 at the Conference Room of Hip Hing Construction Co., Ltd., Kowloon Bay. The evening brought together long-standing members, new entrants to the Association, and distinguished guests in a spirit of professional camaraderie and shared commitment to occupational safety and health.



### AGM Highlights

The AGM addressed key business matters, including the adoption of the **2025 Annual Report and Annual Accounts**, the appointment of the Auditor, Mr. Anthony LAU Hoi-ho for 2026, and the election of the **President and Executive Council Members for the 2026-2027 term**. Under the capable leadership of **Mr. Edward CHOW, Current President**, the Association continues to strengthen its role as a cornerstone of occupational safety and health practice in Hong Kong.



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We extend our heartfelt gratitude to the outgoing Executive Council Members for their dedicated service:

- **Ms. Yvonne SO Yuk-fung**, Vice President;
- **Dr Arthur LEUNG Ho-hon**, Honorary Secretary;
- **Mr. John LAI Tai-ming**, Honorary Treasurer;
- **Mr. Sam SUM Tak-yin**, Immediate Past President;
- **Mr. Timothy WONG Kin-wai**, Former Honorary Secretary; and
- **Mr. Nicholas YUNG Kin-wing**, Executive Council Member.

Their contributions have been instrumental in advancing HKOSHA's mission and laying a strong foundation for future growth.

At the same time, HKOSHA warmly welcomes new Executive Council Members:

- **Mr. Samuel CHIEN Lim-wai** (Associated Medical Supplies Company Limited, General Manager)
- **Mr. Remus AU YEUNG Chi-ho** (Remus Au Yeung Safety Consultant Company, Founder & Principal Safety Consultant)

Their expertise and fresh perspectives will undoubtedly enrich the Association's leadership team.

## Key Events Hosted During the Reporting Period

President Edward CHOW also highlighted several key events successfully hosted during the reporting period, which underscored HKOSHA's commitment to professional development and international collaboration:

1. Safety Visit to Shenzhen Safety Education Base on 1 March 2025.
2. Seminar on Hazardous Environments Commonly Encountered in Construction Projects on 18 March 2025.
3. 47<sup>th</sup> AGM and Meeting with New Members cum Safety Seminar on Behavioural Safety and Culture of Safety at the Workplace on 28 April 2025.
4. Safety Visit to Design and Construction of Foundation Works Including Basement Excavation and Pile Cap for Subsidized Sale Flats Project at Yuen Lung Street, Yuen Long and a visiting activity "Carrying the wounds and speaking the sorrows of occupational safety education photo Exhibition and a Guided tour "People with stories" on 10 May 2025.
5. Safety Visit to Associated Medical Supplies Company Limited for Heat-stress Management and Occupational Safety and Health (OSH) Workplace Protection Solutions on 24 May 2025.
6. Seminar on Smart Safety and Sustainable Future: Leveraging Generative AI to Drive OSH and ESG Excellence on 11 June 2025.
7. (Guangzhou) International Emergency Safety Expo 2025 Guangzhou International Emergency Security Protection Expo, Guangzhou International Low-altitude Economy and Emergency Rescue Exhibition cum the 14th Guangzhou International Fire Safety Expo and OSH Visit in Guangzhou, PRC on 16-18 June 2025.

8. Safety Visit to Da Chan Bay Terminal One and TZD Science and Technology Development (Shenzhen) Limited in Shenzhen, PRC on 9 August 2025.
9. The 30<sup>th</sup> Cross-Strait, Hong Kong and Macao Occupational Safety and Health Symposium and Visits in Kunming, Yunan, PRC on 25-26 September 2025.
10. Seminar on Case Studies: How Digitalization is Enhancing Work Safety while Achieving Cultural Enrichment on 30 September 2025.
11. Extraordinary General Meeting and Safety Seminar on 6Ws Ergonomics Strategies for Occupational Health and Employee Well-being on 13 October 2025.
12. Safety Visit to Tenghui Technology Unmanned Tower Crane R&D Demonstration Base and TendFine, Guangdong Duozechang Safety Protection Equipment Co., Ltd. And Jiangmen Safety and Emergency Industrial Park on 18 October 2025.
13. Safety Visit to Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau) on 8 November 2025.
14. Safety Seminar on Revolutionizing Construction Safety in Hong Kong: AI, AI Agents, and the Future of Humna-Machine Synergy on 15 November 2025.

## Executive Council Membership (2026–2027 Term)

The newly elected Executive Council is as follows:

- **President:**
  - Mr. Edward CHOW Ting-hing (Ngong Ping 360 Limited, Head of Safety & Quality)
- **Members:**
  - ❖ Mr. AU YEUNG Chi-ho, Remus (Remus Au Yeung Safety Consultant Company, Founder & Principal Safety Consultant)
  - ❖ Mr. CHIEN Lim-wai, Samuel (Associated Medical Supplies Company Limited, General Manager)
  - ❖ Mr. KAM Yiu-kuen (Fast Medical Service Limited, Chief Safety Consultant)
  - ❖ Mr. LAM Kai-wing, Ivan (Ivan Lam Safety Consultancy Company Limited, Director)
  - ❖ Mr. LAM Yau-hing (Retired. Professional Member, Safety of HKOSHA)
  - ❖ Professor Dr LEUNG Wai-kwong, Daron (OSHE Consulting Associate Limited, Principal Consultant)
  - ❖ Ms. MA Yuen-ting, Julie (Hong Kong College of Health Service Executives, Honorary Secretary)
  - ❖ Dr TSE Chun-kuen, Alex (Institute of Ergonomics and Hygiene Limited, Director)
  - ❖ Mr. YEUNG Chung-yuen (Hip Hing Construction Company Limited, General Manager, Safety & Health)
  - ❖ Mr. YUM Ka-wing, Kelvin (MTR Corporation Limited, Senior Occupational Safety and Compliance Manager)

This diverse team of experienced professionals will guide HKOSHA into its next chapter of development.

## Upcoming Events Highlighted by the President

President Edward CHOW concluded the AGM and outlined a series of exciting upcoming events that will continue to advance HKOSHA's mission and advocating ongoing exchange of local and international OSH experiences:

- 廣州國際應急安全博覽會及企業職安健參訪活動 (16 -18 June 2026)
- 參觀茂名科技院及應急安全基地 (3-5 July 2026)
- **Safety Visit to Shenzhen Mikebot Robotic and Ambulanc (Shenzhen) Tech. Co., Ltd** (11 July 2026)
- **Data Center Safety Seminar** by Ms Jonnie LEUNG, BDV Data Center (HK) Limited (scheduled in July 2026)
- 「第三十一屆海峽兩岸及香港、澳門地區職業安全健康學術研討會」 in Macau (9–10 September 2026)
- **APOSHO 40 Conference** in Fremantle, Western Australia (26–30 October 2026)

These events reflect HKOSHA's commitment to continuous learning, international collaboration, and professional development for its members.

## Inspiring Safety Seminar

The evening's seminar was delivered by **Mr. KAM Yiu-kuen**, Past President and current Executive Council Member. His thought-provoking presentation, *"Can the ancient 'Ten Gods' system help occupational safety workers to examine occupational safety management from another perspective?"*, explored the intersection of Eastern esoteric philosophy and modern occupational safety frameworks. Mr. KAM challenged participants to consider whether traditional metaphysical concepts could provide new insights into accident prevention and safety management. His sharing was both **inspiring and intellectually stimulating**, leaving attendees with fresh ideas to reflect upon in their professional practice.



The President presented an appreciation certificate to Mr. KAM Yiu-kuen in recognition of his insightful sharing at the Safety Seminar.

## Celebration and Networking

The AGM was followed by the **Annual Dinner at Heyday Cuisine**, where members - both new and longstanding enjoyed a lively evening of reunion, networking, and celebration. The dinner provided a valuable opportunity for experience sharing, mentorship, and building stronger bonds within the safety and health community. New members were warmly welcomed, reinforcing HKOSHA's tradition of inclusivity and professional support.

The 48<sup>th</sup> AGM and Safety Seminar was not only a formal occasion to conduct Association business but also a meaningful gathering that celebrated continuity, renewal, and the collective pursuit of excellence in occupational safety and health under the guidance of President Edward CHOW and the newly elected Executive Council.



Group Photo: 2026-27 HKOSHA Executive Council Members



All members enjoyed the Annual Dinner for reunion, networking, sharing and celebration

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## AI-Powered Guardian: Enhancing Hong Kong Construction Safety and Health through Generative Artificial Intelligence, Retrieval-Augmented Generation, and Interactive Digital Humans

Author: Dr Fung, Ivan Wing Hong, BSc(Hons), PhD, FISHP, FHKICA, MNSMS, MIEEE

### Executive Summary

The Hong Kong construction industry stands at a critical crossroads in 2026. Following a devastating "cold nightmare" in 2025—marked by 118 work-related fatalities and a 55% surge in accidents—the sector is under immense pressure to modernize its Occupational Safety and Health (OSH) protocols. This report explores the integration of Generative Artificial Intelligence (GenAI), Retrieval-Augmented Generation (RAG), and Interactive Digital Humans as a transformative "AI Guardian" for the industry. By addressing the structural challenges of an aging workforce and the limitations of traditional safety monitoring, these technologies offer a path toward a proactive, zero-accident paradigm.

### 1. The 2025 Crisis: A Wake-Up Call for Hong Kong

The commencement of 2026 serves as a somber reflection on the preceding year. Despite high-level discourse on the metaverse and general AI in financial sectors, the physical reality of Hong Kong's construction sites remained perilously traditional in 2025.

#### 1.1 Statistical Realities

Data from the Association for the Rights of Industrial Accident Victims revealed 118 fatal cases in 2025, with the construction sector accounting for 50 of these deaths. A particularly alarming trend is the "collapsing" or sudden death of workers, reaching a record high of 64 cases. Over one-third of these victims were over the age of 60, highlighting a lethal intersection between physical strain and an aging demographic.

#### 1.2 The Aging Workforce Paradox

Hong Kong faces a unique "structural contradiction." The median age of registered construction workers has climbed steadily, with a significant portion of the "master" class nearing retirement. While their experience is invaluable, their physical vulnerability to heat stress, cardiovascular strain, and fatigue is significantly higher. Traditional OSH measures, often revolving around periodic site inspections and static signage, have failed to protect this demographic from the high-intensity physical risks inherent in modern high-rise development.

### 2. Theoretical Framework: Factors Influencing Safety

To solve the safety crisis, we must understand the Factors Influencing Safety on Construction Projects. These factors are generally categorized into:

- **Human Factors:** Individual behaviors, fatigue levels, and safety awareness.
- **Technical Factors:** Equipment failure, structural integrity, and the adequacy of safety gear.
- **Organizational Factors:** Management commitment, safety culture, and training efficacy.
- **Environmental Factors:** Heat, noise, humidity, and the physical complexity of the site.

In Hong Kong, the 2025 data suggests that "Human" and "Organizational" factors are the primary points of failure. Safety planning is often siloed from the actual communication of risk information to workers on the ground.

### 3. The Technological Solution: The "AI Guardian"

The proposed solution involves a multi-layered AI architecture that moves beyond simple surveillance to active, intelligent intervention.

#### 3.1 From Data-Driven AI to Knowledge-Enabled Agents

Traditional AI (Discriminative AI) is excellent at detecting if a worker is wearing a helmet. However, it lacks "context." The shift toward Knowledge-Enabled Intelligent Agents allows systems to understand why a worker might be removing a helmet (e.g., extreme heat) and suggest organizational shifts in real-time.

#### 3.2 Generative AI (GenAI) and RAG

Generative AI allows for the creation of dynamic, site-specific safety protocols. However, Large Language Models (LLMs) are prone to "hallucinations." This is where **Retrieval-Augmented Generation (RAG)** becomes essential.

- **RAG's Role:** It anchors the AI's output to verified, local safety regulations (CIC, LD, BD, HA, EMSD, etc.) and specific site plans.
- **Application:** When a worker asks, "How do I secure this scaffold in a T3 typhoon warning?", the RAG-enabled system pulls the exact legal requirements and engineering specifications for that specific project, rather than providing a generic answer.

#### 3.3 Interactive Digital Humans

One of the greatest barriers to safety in Hong Kong is the "communication gap." Younger engineers and older site workers often speak different technical dialects. Interactive Digital Humans serve as the interface.

- **Visual Trust:** A Digital Human can be modeled as a respected "Master" figure, speaking in Cantonese or various dialects, making safety advice more accessible and less confrontational.
- **24/7 Availability:** Unlike human safety officers, a Digital Human can provide induction training, conduct "Toolbox Talks," and answer queries at any hour across multiple sites simultaneously. Figure 1 as below shown the interface of the prototype:

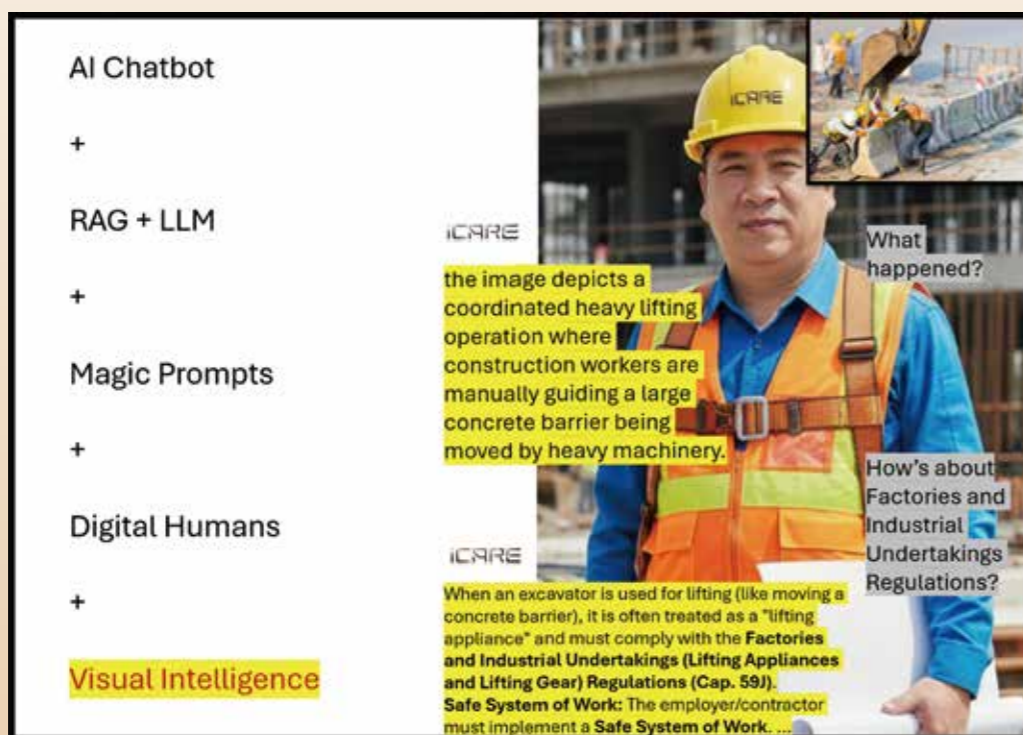


Figure 1: The systematic workflow of the prototype: iCARE AI-powered OSH Guardian

### 4. Operational Integration: Safety Planning and Risk Communication

Research indicates that a primary cause of accidents is the disconnect between safety planning (at the management level) and risk communication (at the worker level).

#### 4.1 Real-time Site Monitoring

Integrating AI with IoT (Internet of Things) devices (wearables) allows for the monitoring of the "64 deaths by collapse" phenomenon. Wearables can track heart rate and skin temperature, feeding data into the AI Guardian. If a 60-year-old worker shows signs of heat stress, the AI can trigger a Digital Human to appear on the worker's mobile device or a site kiosk, instructing them to take a mandatory break in a designated "cool zone."

#### 4.2 Automated Risk Assessment

By processing BIM (Building Information Modeling) data through GenAI, the system can predict "high-risk windows" during the construction schedule. For example, the system can identify that during the pouring of a specific floor, the risk of "falling from height" increases due to narrow walkways, and preemptively deploy targeted safety briefings.

### 5. Global Context and the AI Safety Index

The implementation of AI in construction is not happening in a vacuum. The AI Safety Index Report (Dec 2025) highlights the importance of security and reliability in AI systems.

#### 5.1 AI Security and Ethics

As Hong Kong construction becomes more data-reliant, "AI Security" becomes synonymous with "Physical Safety." A systematic mapping of AI security tools is required to ensure that site monitoring systems cannot be spoofed or disabled. Furthermore, ethical considerations regarding the privacy of workers (tracking their vitals) must be addressed through transparent data governance and ESG (Environmental, Social, and Governance) frameworks.

#### 5.2 ESG Integration

Companies like Trusted Training & Compliance (as seen in their 2023 ESG reports) are already moving toward transparency in OSH reporting. AI systems can automate the collection of ESG data, providing investors and regulators with real-time proof of a company's safety performance, thereby incentivizing the "Zero Accident" goal.

### 6. Challenges to Implementation

Despite the promise of the AI Guardian, several hurdles remain:

1. **Technological Maturity:** While GenAI is advanced, its integration with physical site hardware (cameras, sensors) requires robust 5G infrastructure, which is still being optimized across all remote sites in Hong Kong.
2. **Cultural Resistance:** The "Master" culture on sites can be skeptical of technological oversight. The use of Digital Humans is a strategic attempt to mitigate this, but it requires careful design to avoid being seen as "digital policing."
3. **Cost vs. Benefit:** The initial investment in RAG architectures and Digital Human interfaces is high. However, when weighed against the cost of a single fatality—legal fees, site closures, insurance hikes, and the human cost—the Return On Investment becomes clear.

### 7. Conclusions and Recommendations for 2026

The "cold nightmare" of 2025 must be the catalyst for a digital revolution in Hong Kong construction. The transition from reactive safety monitoring to proactive, AI-driven guardianship is no longer a luxury—it is a necessity.

### 7.1 Key Recommendations:

- **Adopt RAG-based LLMs:** Ensure all site-level AI is grounded in Hong Kong-specific legal and engineering data to prevent hallucinations in high-stakes environments.
- **Invest in Digital Human Interfaces:** Use these "agents" to bridge the generational and linguistic gaps in the workforce, focusing on empathetic and culturally relevant safety communication.
- **Focus on Vital-Sign Monitoring:** Directly address the surge in "sudden deaths" by integrating health wearables with the AI safety loop.
- **Establish an Industry-Wide AI Safety Protocol:** Align with global AI Safety Indices to ensure the tools used to protect workers are themselves secure and ethical.

By embracing the "AI Guardian" concept, Hong Kong can transform its construction industry from one associated with high-risk hazards into a global leader in intelligent, human-centric occupational safety. The technology is no longer a futuristic concept; as of 2026, it is the only viable path to ensuring that every worker who enters a site in the morning returns home safely in the evening.

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## HKOSHA NEWS

### Current Members

As of end April 2026, there are 437 members in HKOSHA.

The following membership applications were approved in March and April 2026

### A. Approval of Membership

Name	Grade of Membership
CHUNG Wing Huen	Member
TSAI Kam Kui	Member
YUEN Wai Kit	Professional Member (Health)
HUI Ka Hei	Professional Member (Safety)
LEONG Kin Lam	Professional Member (Safety)
LEUNG Ning	Professional Member (Safety)
MA Sze Kit	Professional Member (Safety)

### B. Membership Upgraded

Name	Grade of Membership
LAM Moon Lin	Fellow Member



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