

An aerial photograph of the Hong Kong skyline, featuring a dense cluster of skyscrapers and buildings. The Freedom Tower is the most prominent structure in the center. The background shows a hazy view of the city and surrounding hills.

# **Construction Safety in Hong Kong**

**Law Wing Kin  
Occupational Safety & Health  
Council, HKSAR**

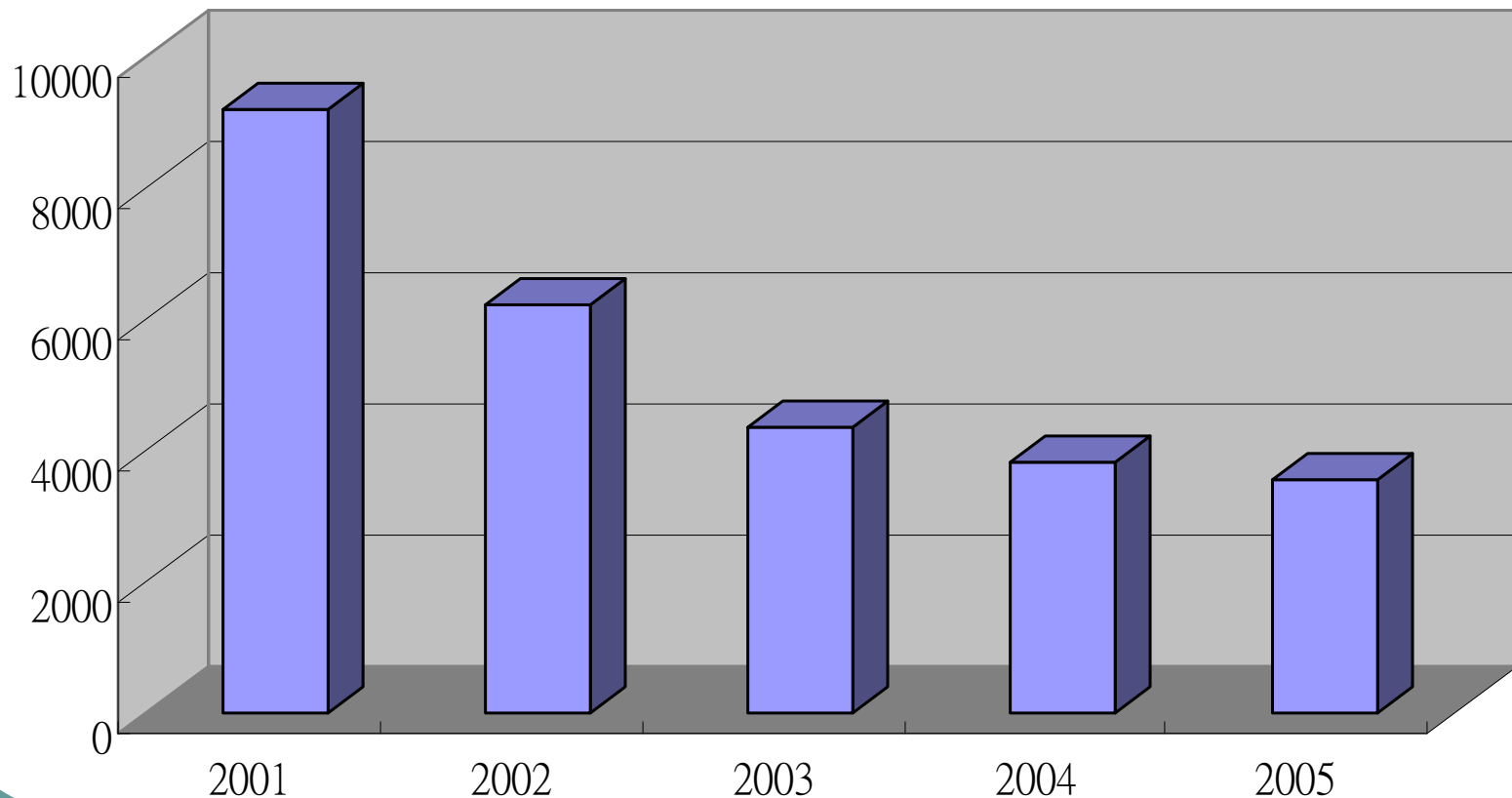
# Facts of HK Construction Industry

- Accounted for 3.2% of HK's GDP (2004)
- Approximate 1,000 construction sites (2006)
- Employed over 52,000 site workers (2006)
  - 10% of total work force in HK's Industries



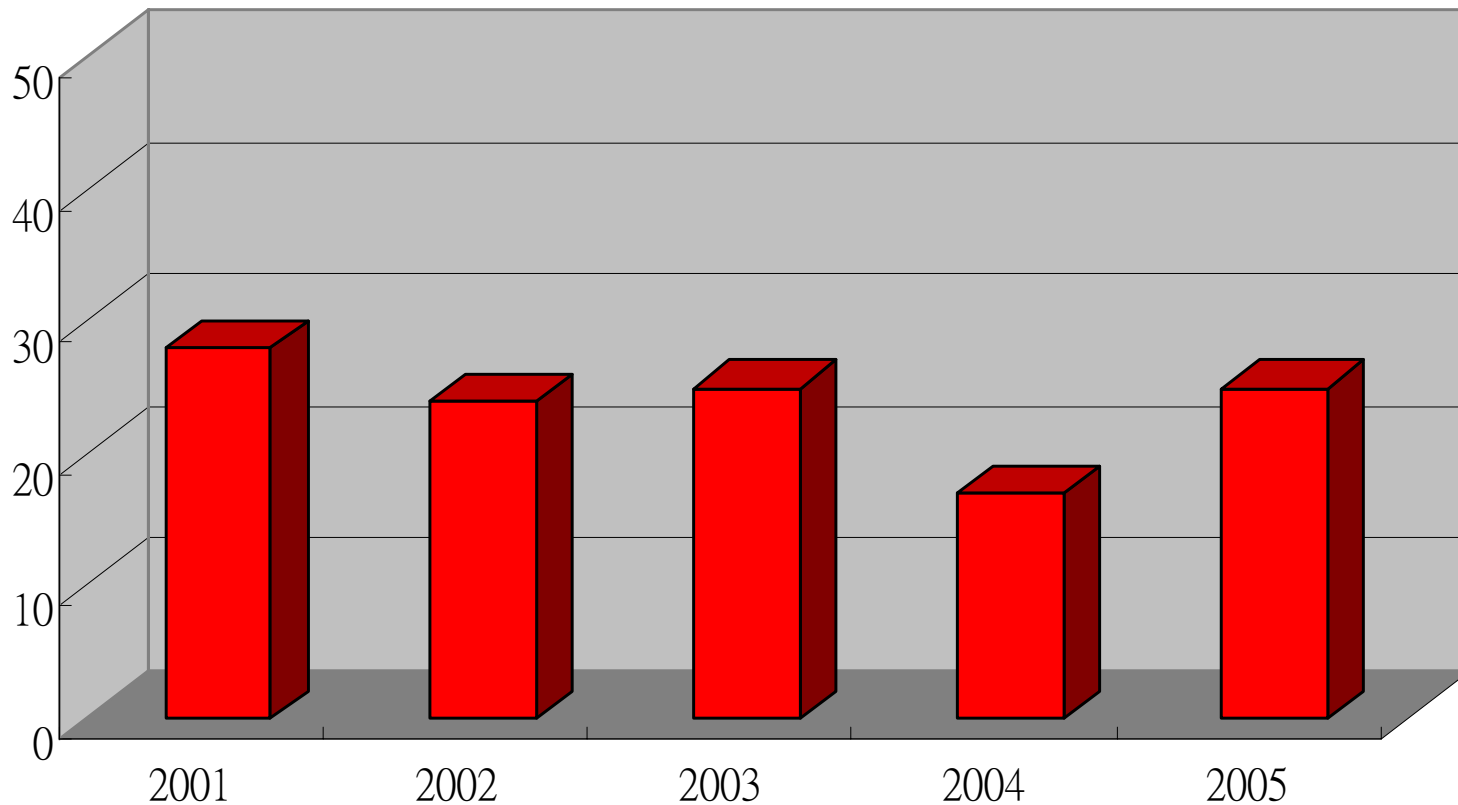
# Accident Statistics (1)

**No. of Industrial Accident in HK Construction Industry**



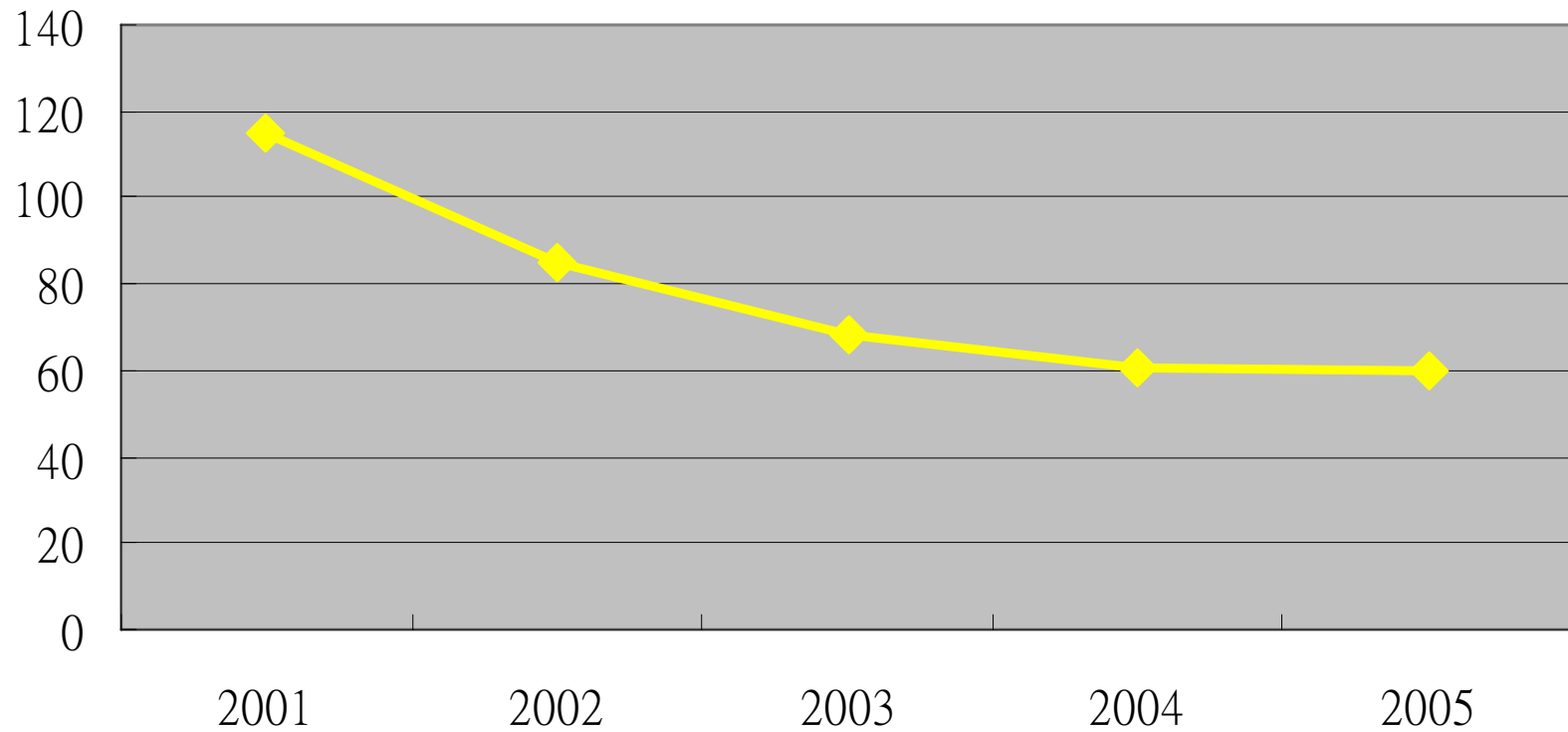
# Accident Statistics (2)

**No. of Fatality in HK Construction Industry**

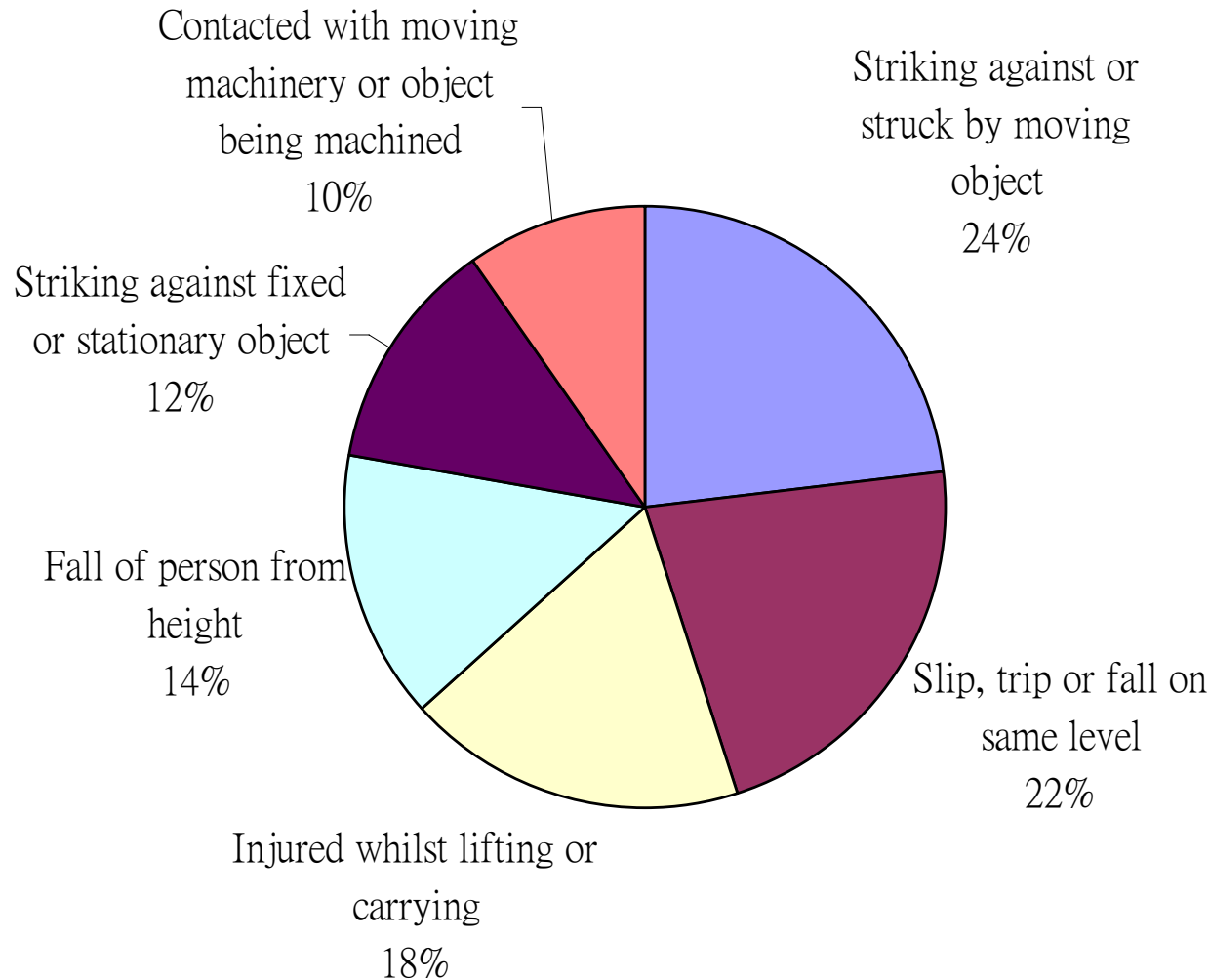


# Accident Statistics (3)

**Accident Rate per 1,000 Employees**



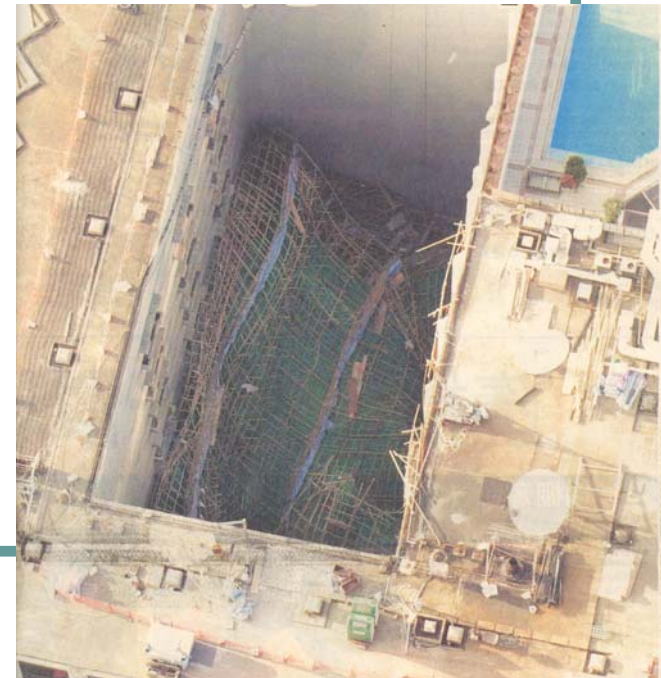
# Accident Statistics (4)



**Construction Industry's Accidents by Type (2005)**

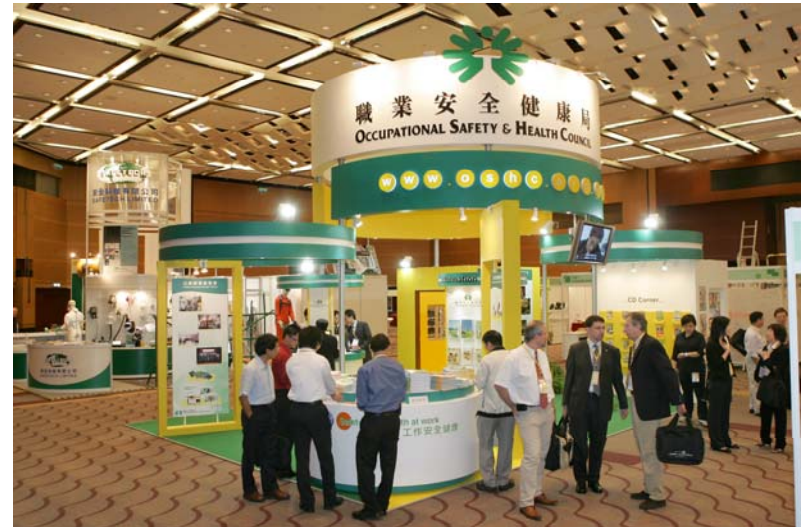
# Facts of Accidents Statistics

- Rank 2nd for No. of Industrial Accidents in HK
  - 1st – Catering Industry
- Rank 1st for No. of Fatality in HK
- Rank 1st for Accident Rate per 1,000 employees in HK



# Statutory Bodies for OSH

- Labour Department
- Occupational Safety and Health Council (OSHC)
  - Promotion
  - Consultancy Services
  - Training
  - Research
  - Information





# Safety Training Requirements (1)

- Mandatory Basic Safety Training (Green Card)



# Safety Training Requirements (2)

- Confined space work
- Use of Equipment
  - Cranes and lifting appliances
  - Load-shifting equipment (Forklift truck, etc.)
  - Suspended working platform
  - Gas welding and flame cutting, etc.



# Site Safety Personnel Requirement

- Registered Safety Officer (RSO)
  - For No. of workers  $\geq 100$
- Safety Supervisor
  - For No. of workers  $\geq 20$



# Safety Management Requirement

- Factories and Industrial Undertakings (Safety Management) Regulation
  - Workers  $\geq 50$  or Contract Sum  $\geq$  \$100M
  - Implement an SMS with 8 or 14 elements
  - Periodic review or audit



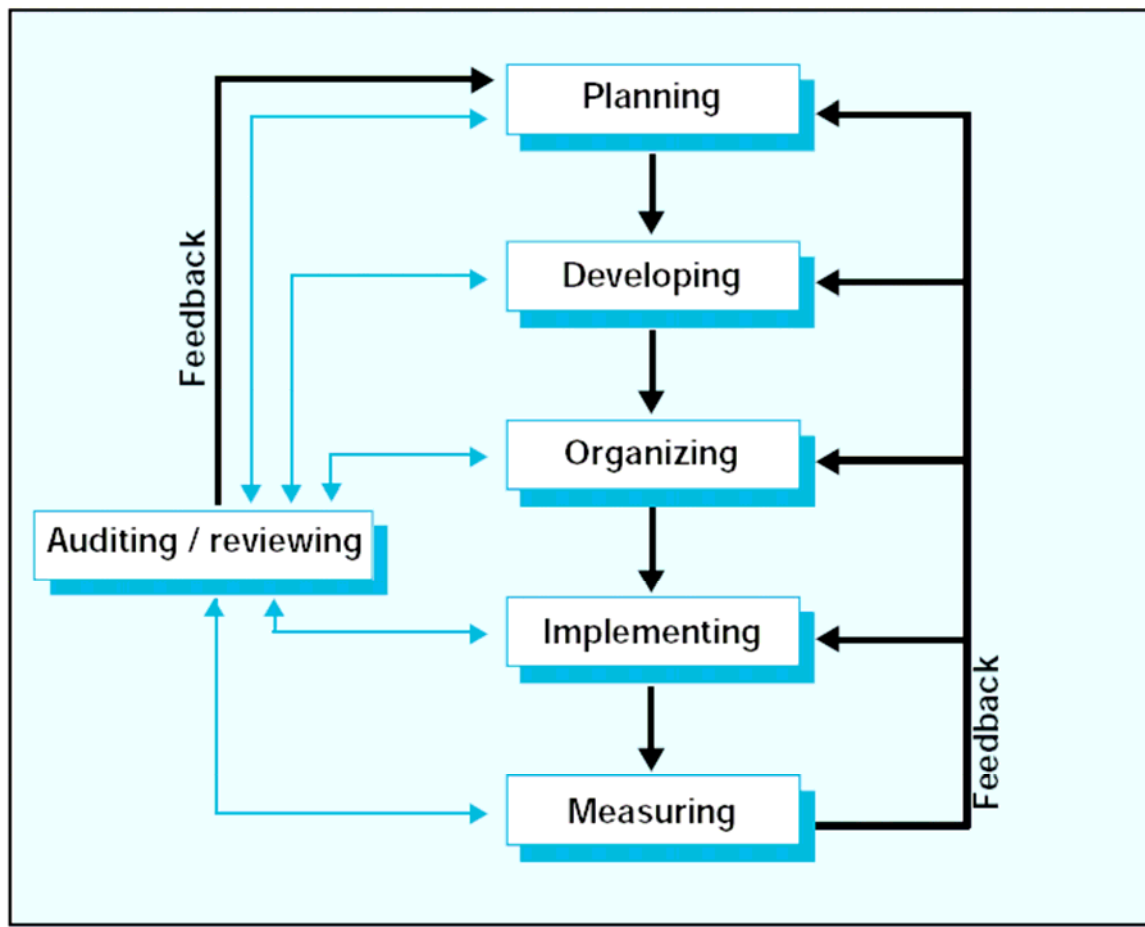
# Safety Management Elements

**$\geq 100$  Workers or  $\geq 100$  M Contract Sum**

## **50 ~ 99 Workers**

- Safety Policy
- Safety Organization
- Safety Training
- Safety Rules
- Safety Inspection
- PPE Program
- Accident Investigation
- Emergency Preparedness
- Safety Committee
- Subcontractor Selection, Evaluation & Control
- Job Hazard Analysis
- Safety Promotion
- Process Control Program
- Health Surveillance

# Safety Management Model



# Legal Requirements for Construction Sites

- **Construction Sites (safety) Regulations**
  - Fall protection, excavation safety, lifting safety, etc.
- **Factories and Industrial Undertakings Ordinance & Regulations**
  - Confined space safety, hearing protection, suspended working platform safety, etc.
- **Occupational Safety and Health Ordinance & Regulations**
  - Hygiene requirement, manual handling operation, etc.

# Promotional Activities

- Construction Safety Award
  - Physical environment of site
  - Safety Management
- Construction Safety Campaign, etc.





# Sponsorship Schemes for SME

- OSH Enhancement Scheme
- Safe Work at Confined Space
- Anchor Device
- Safe Ladder, etc.



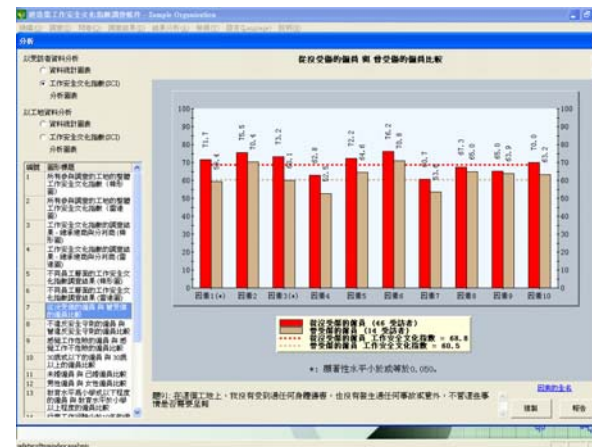
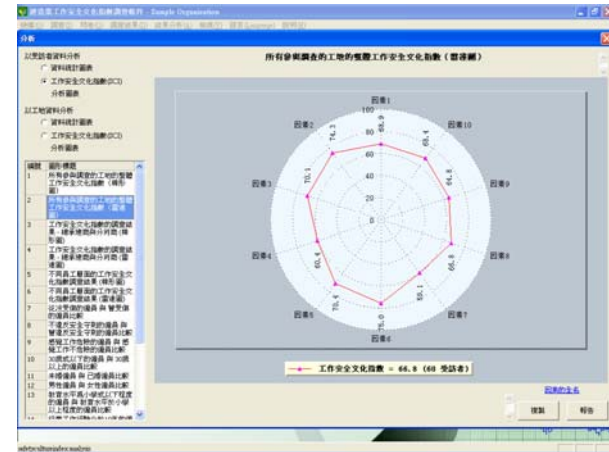
# What's New? (1)

- Behavioral-based Safety



# What's New? (2)

## ● Safety Climate Index



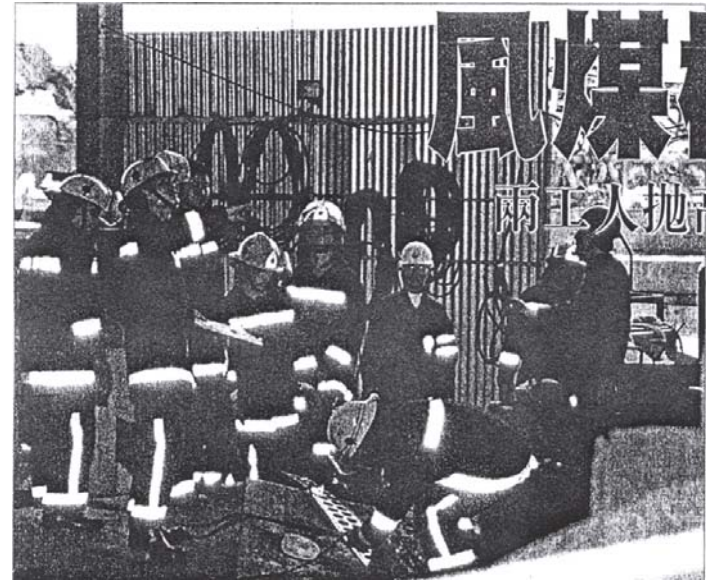
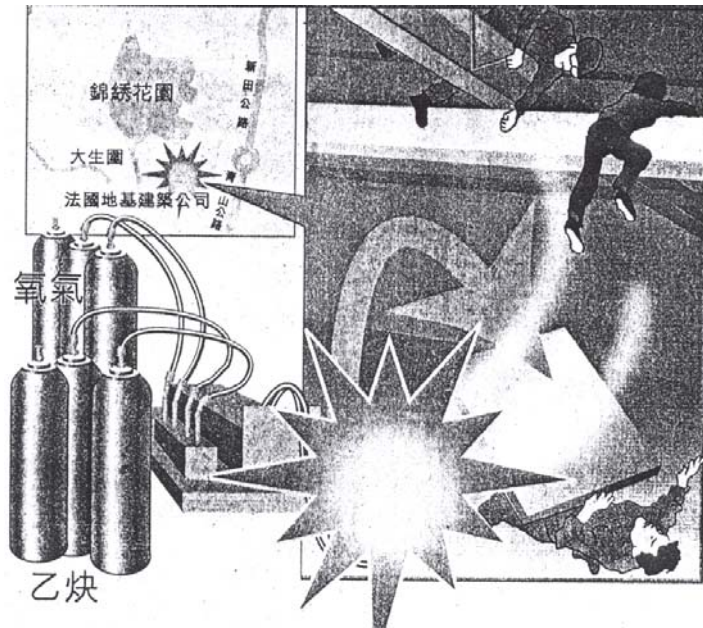
# Major Construction Accident Cases in HK (1)

A passenger hoist in a building construction site fell from height and all 12 workers within the hoist dead (2/6/1993)



# Major Construction Accident Cases in HK (2)

An explosion in gas welding workshop of a foundation project company killed 3 workers (12/2/2000)



# Major Construction Accident Cases in HK (3)

## One worker dead and 16 workers injured in an bamboo scaffold collapse accident in facade maintenance site (9/12/2002)

### One dead, 16 hurt as scaffolding crashes down

Terrified workers clung to bamboo as it collapsed from the side of a hotel

#### Clifford Lo

A worker died and 16 were injured when a 50-metre-high section of scaffolding crashed down from a Tsim Sha Tsui East hotel yesterday.

Some workers clung to bamboo poles as the structure, covering 16 floors, fell away from the InterContinental Grand Stanford.

Hung Chi-mung, 29, a father of a four-year-old girl, was declared dead on arrival at Queen Elizabeth Hospital.

Last night, a 49-year-old worker was listed in a critical condition in Queen Elizabeth Hospital and another two men and a woman were in a serious condition in Kwong Wah Hospital. Five other workers were in stable condition and the others were discharged after treatment.

The drama started about 2pm, just after 36 workers returned to the Mody Road work site after lunch.

Police said the scaffolding on the four walls of the internal courtyard of the hotel stretched from the second to the 16th floor and had been put in place three days ago for renovations.

Some workers said they were unable to clamber away from the collapsing section because they were fastened with safety ropes.

A 34-year-old woman worker who had been removing debris above the 10th floor said: "My mind went blank when the scaffolding collapsed. The only thing I could do was to grab one of the bamboo poles tightly. The whole scaffolding collapsed within two minutes."

The Fire Services Department's Kowloon South Division



commander, Li Hung-sum, said the entire scaffolding had collapsed on to the second-floor podium when firefighters arrived.

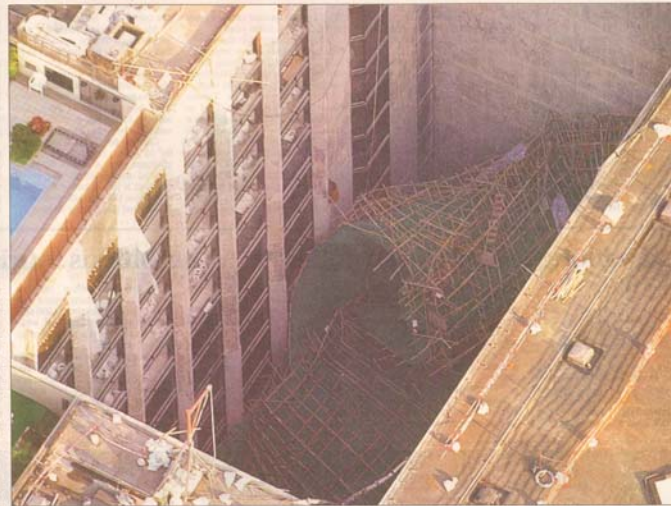
No hotel guests or hotel employees were injured.

Officers of the Labour Department's Occupational Safety Operations Division are investigating the collapse. They promised to prosecute anyone found to have broken safety regulations.

Chan Kam-hong, spokesman of the Association for the Right of Industrial Accident Victims, said he had raised the issue of high construction work with the Labour Department two months ago.

He said there were 23 fatal construction site accidents in the first 10 months of this year - with 14 related to work at height.

"I want to call on the Labour Department to immediately begin its promotion and education campaign, especially pursuing tougher prosecutions against the law-breaking employers," he said.



The remains of the collapsed scaffolding in the courtyard of the InterContinental Grand Stanford in Mody Road in Tsim Sha Tsui East. Photo: SCMP

#### SAFETY FEARS RISE AFTER ACCIDENT

The bamboo scaffolding collapse in Tsim Sha Tsui has sparked fresh concerns about the safety and reliability of the centuries-old construction method used across Hong Kong.

A two-year study conducted by the Hong Kong University of Science and Technology, whose findings were released in September, found the strength and other characteristics of commonly used bamboo varied greatly. It showed bamboo deteriorated in quality as humidity increased, while its strength diminished over time. Between 1994 and 1998, 31 fatal accidents related to bamboo scaffolding were reported. Hong Kong Construction Industries Employees General Union chairman Choi Wai-sang said the government would not have had to be informed about the hotel work. Felix Chan

# Major Construction Accident Cases in HK (4)

A truss-out scaffold collapsed and two workers killed after fell from 6/F to ground (13/7/2005)





End