

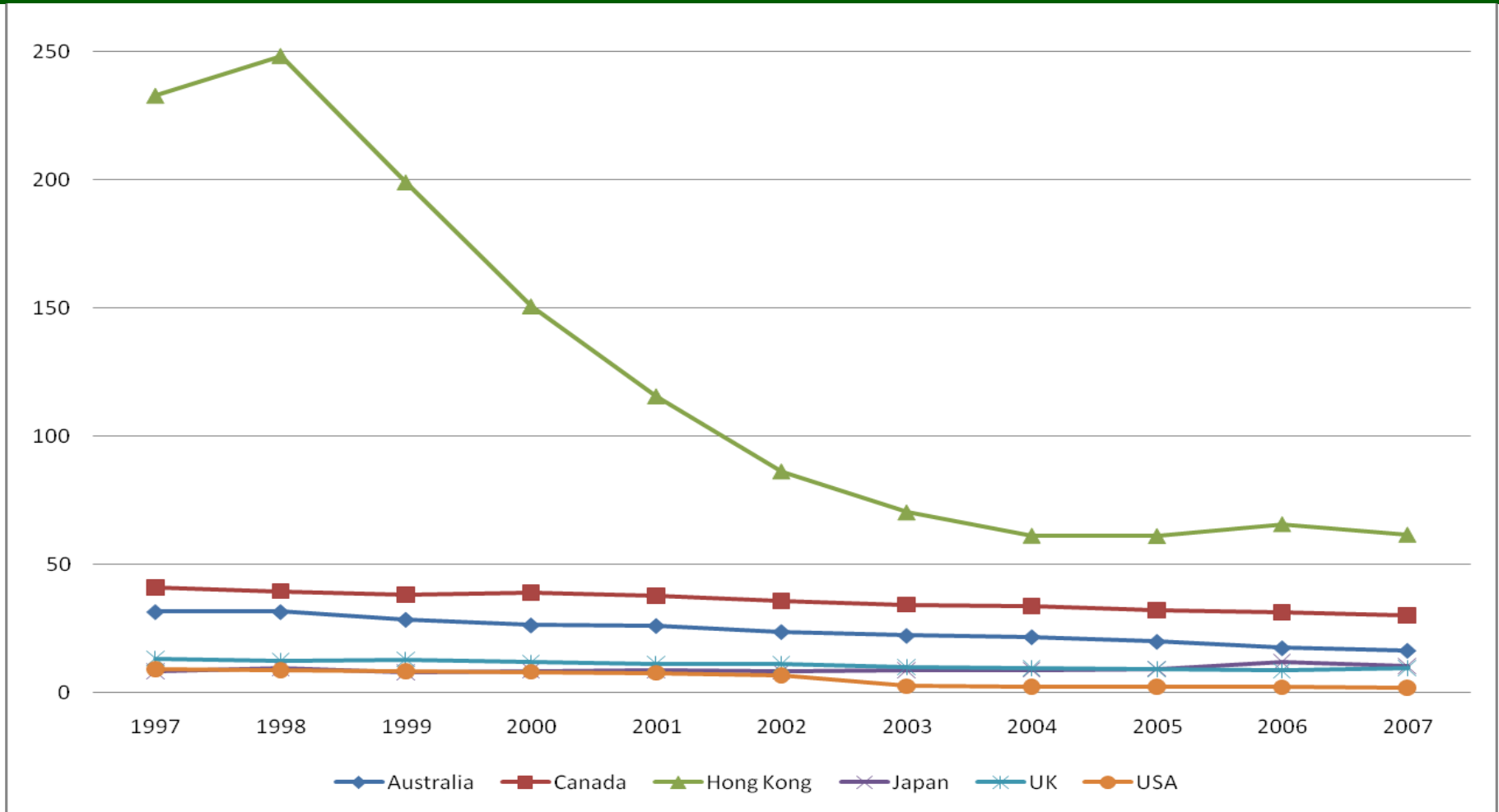
ZERO FATALITIES

ZERO FATALITIES

NOW!

Are we not ashamed?

Accidents per 1,000 Construction Workers

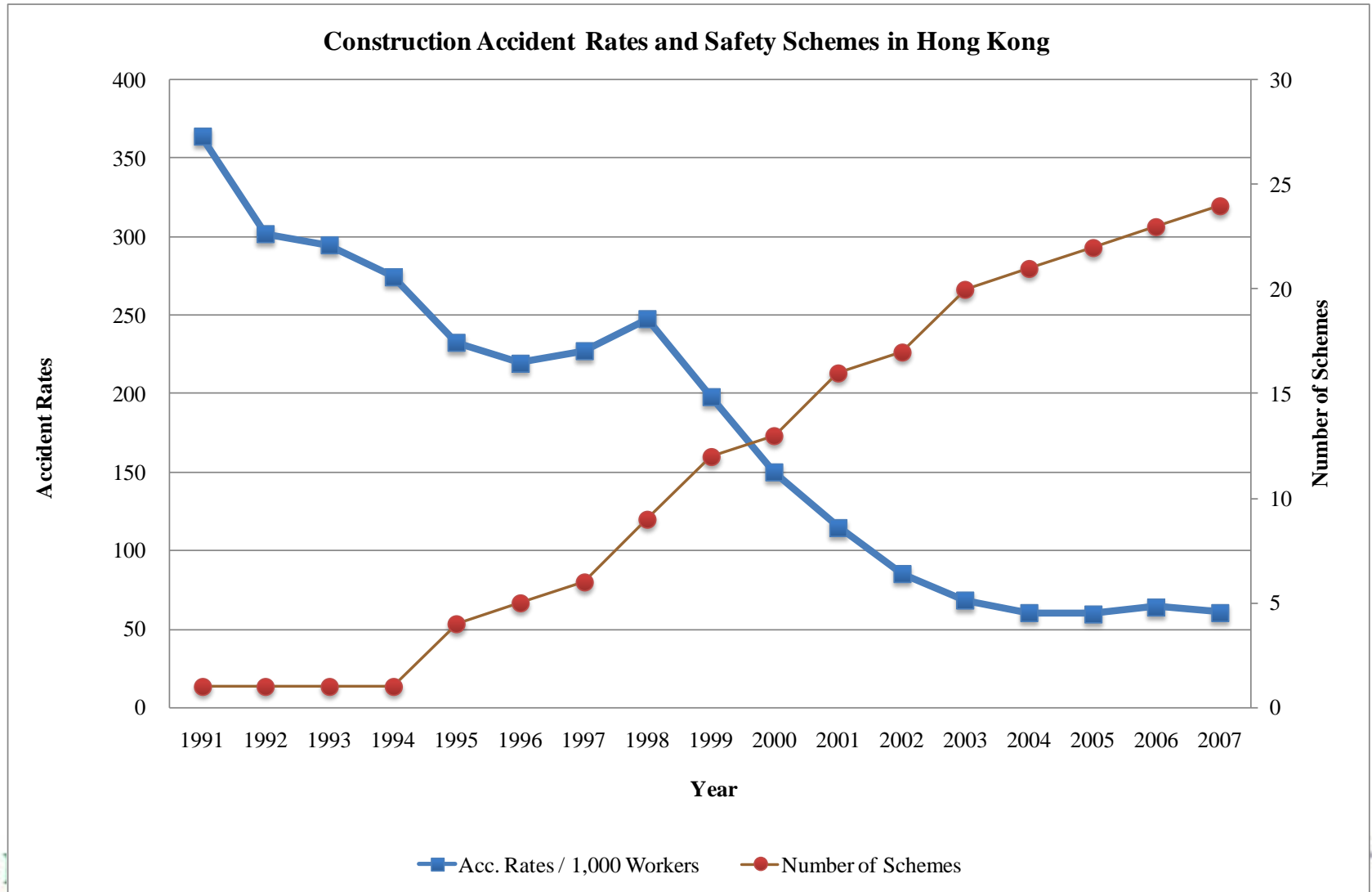


Japan & UK : over 3 day non-fatal injuries

<http://laborsta.ilo.org>



Accidents and Initiatives

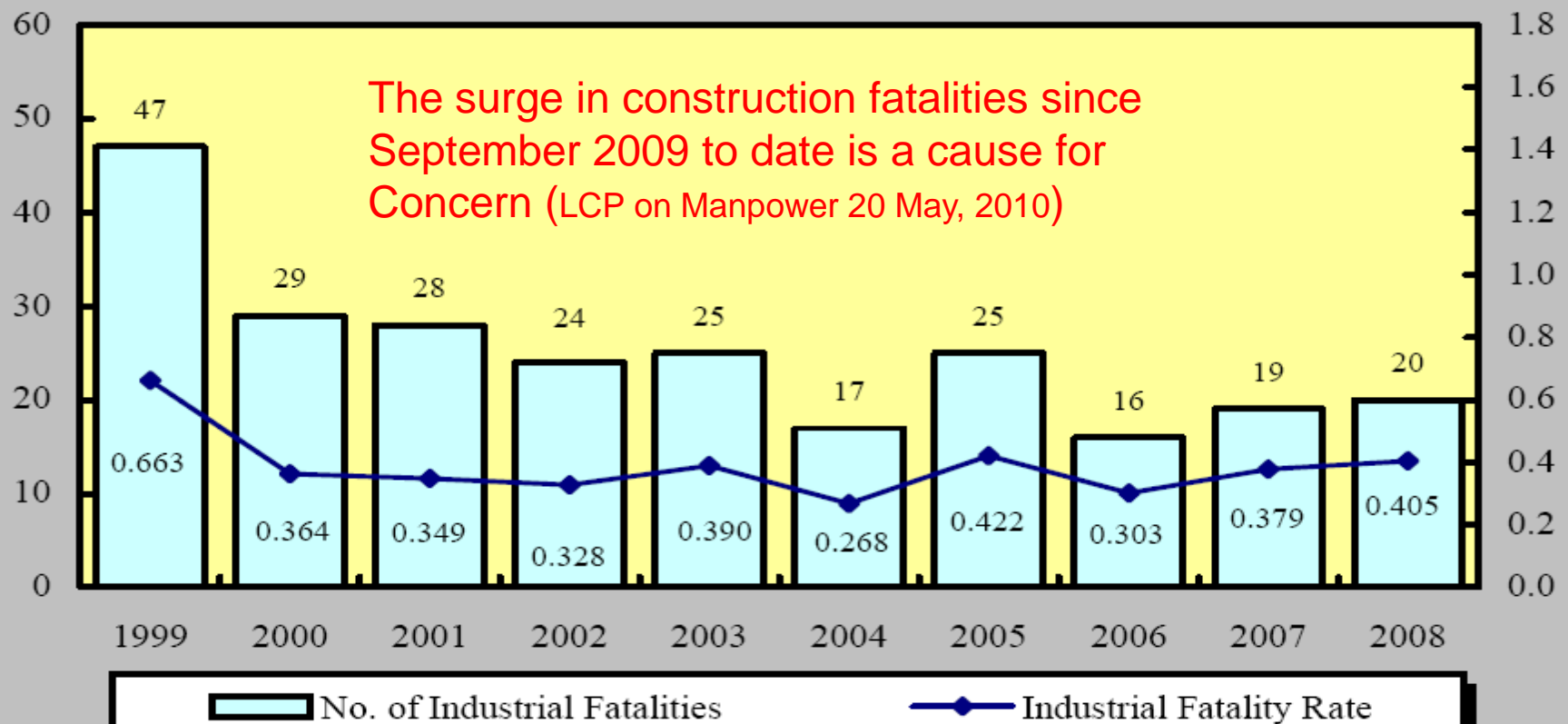


Fatality Rates

**Number of Industrial Fatalities and Fatality Rate
per 1 000 Workers in Construction Industry
1999 to 2008**

No. of Industrial
Fatalities

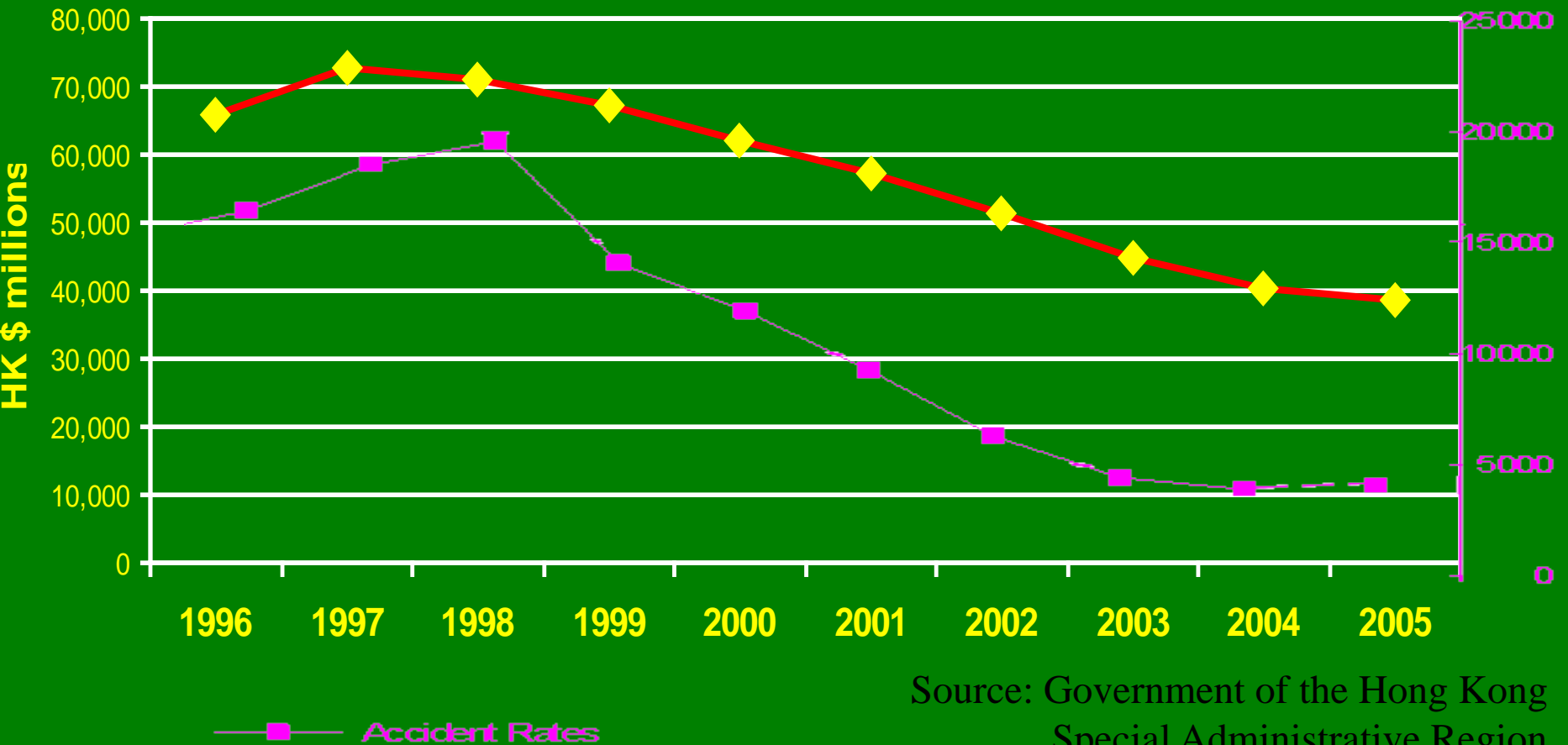
Fatality Rate per
1 000 Workers



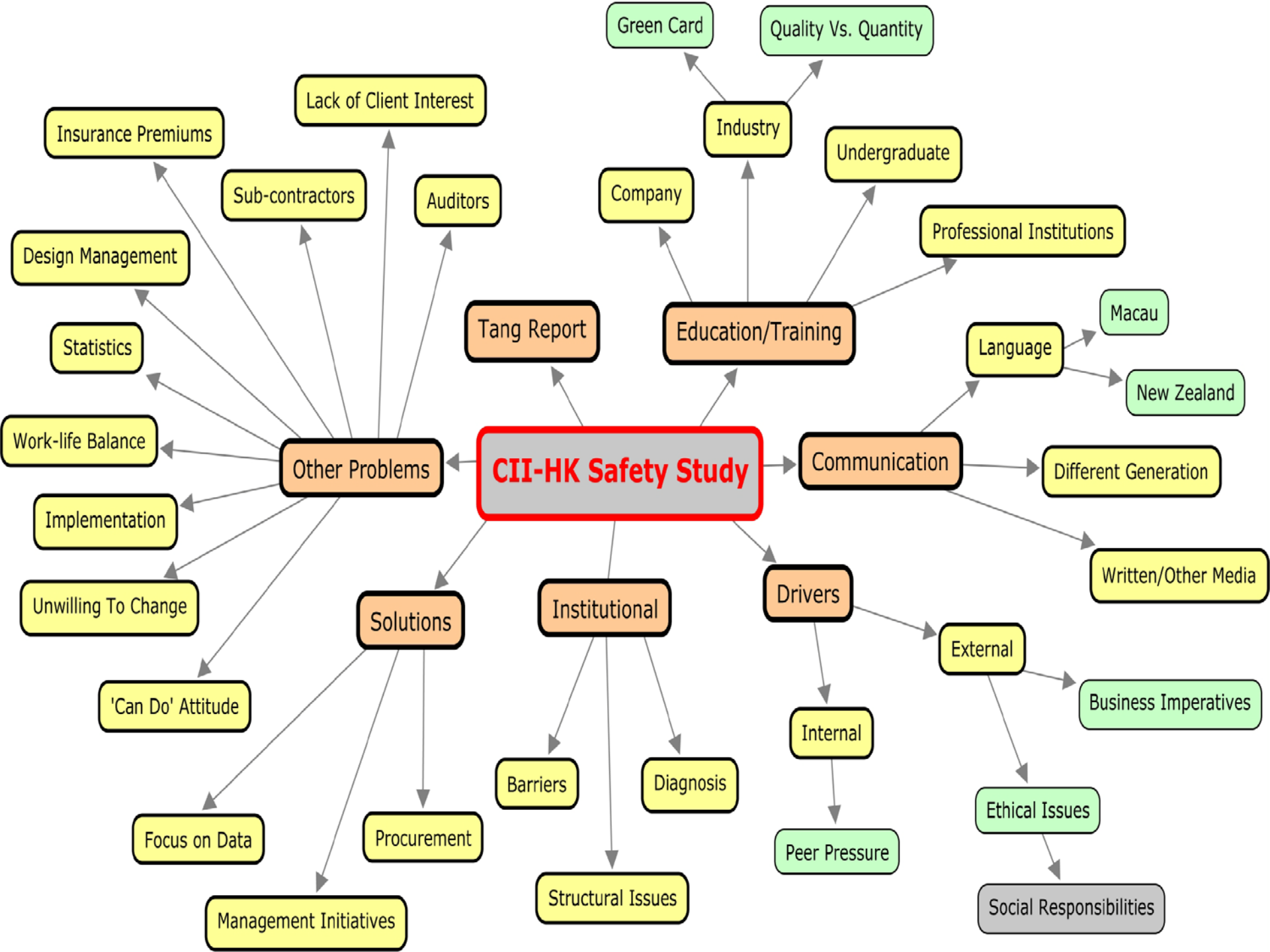


Hong Kong Accident Rate

Hong Kong's GDP from Construction



Source: Government of the Hong Kong
Special Administrative Region



AGENDA

- ZERO FATALITIES by 2020
- Target of 50% reduction by 2015
- To be lead by
 - Government, contractors, clients...



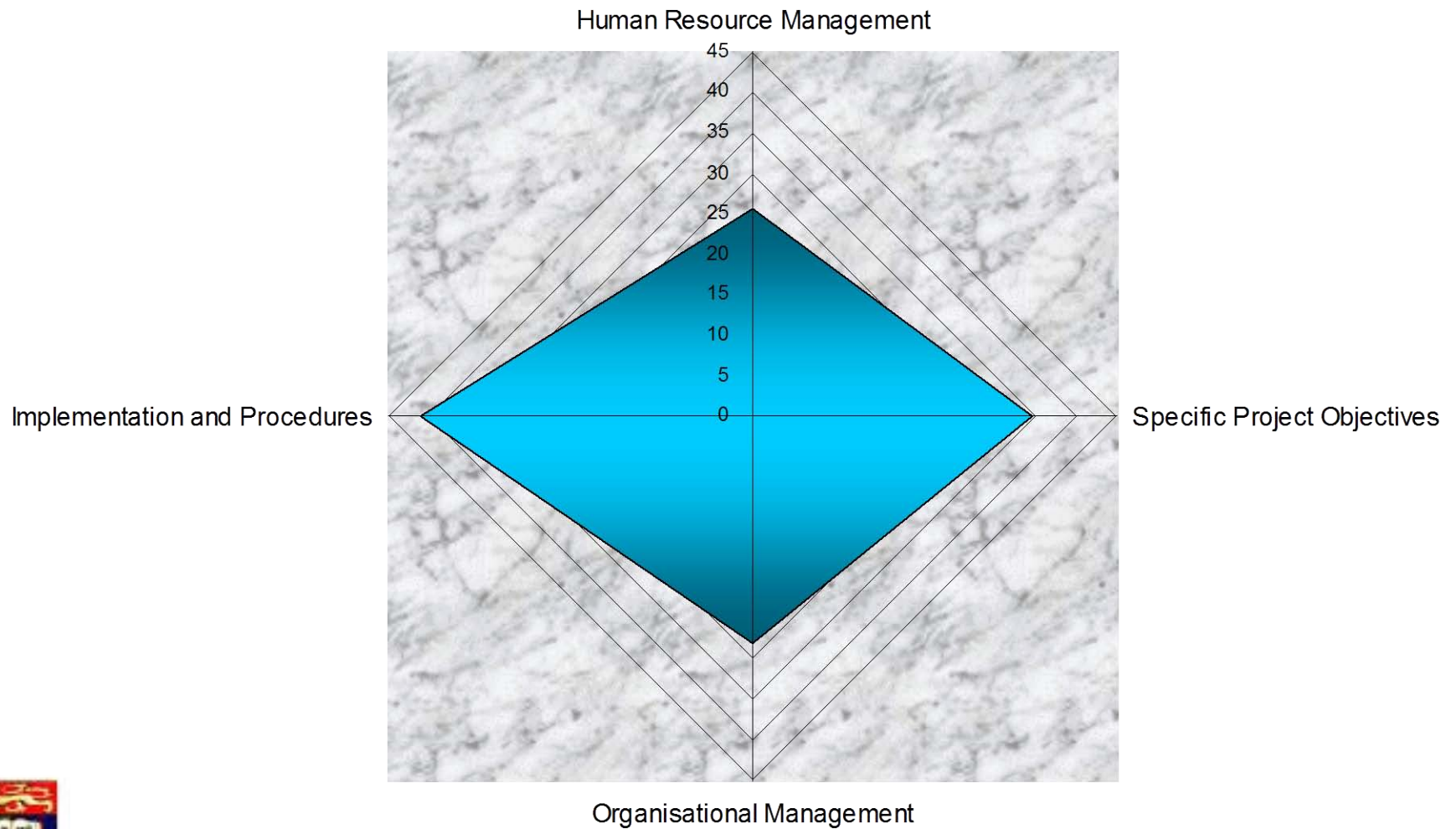
AGENDA...

5 KEY ISSUES to be addressed:

- SiD (safety in design)
- Competence matrix
- Worker engagement
- Safety leadership
- OHS in tertiary education



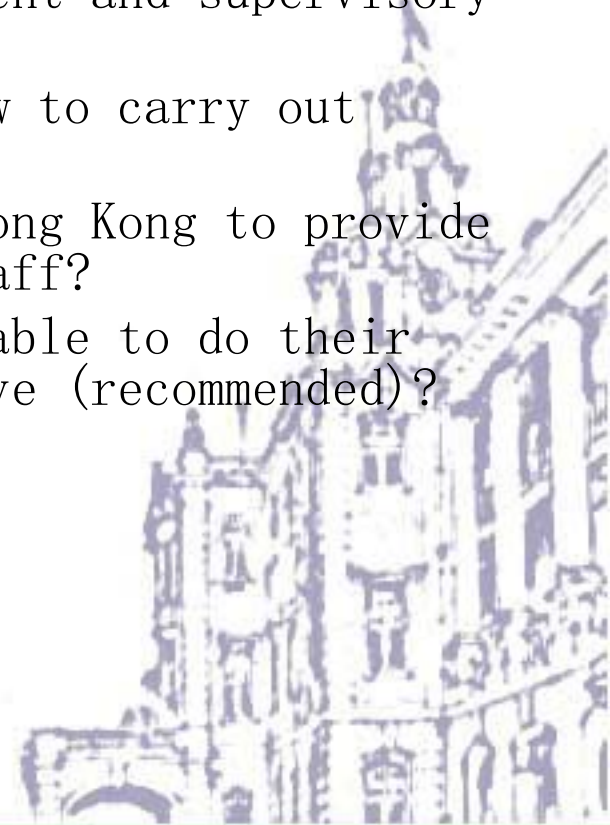
Benchmarking OHS Performance



New Solutions to Old Construction Problems

REVIEW CURRENT SAFETY EDUCATION / TRAINING

- 1) What are the different levels of management and supervisory staff on a construction site
- 2) What do each of these levels need to know to carry out their work safely?
- 3) What training courses are available in Hong Kong to provide the necessary training to educate the staff?
- 4) Which training courses are a must to be able to do their job (mandatory) and which are good to have (recommended)?



New Solutions to Old Construction Problems

TASK AND POSITION COMPETENCY MATRIX

- Controlling OHS Risks
- Communicating OHS Risks
- OHS Effectiveness
- Subcontractor OHS Performance
- Legislative & Statutory Requirements
- Rehabilitation & Compensation
- Leadership of OHS



New Solutions to Old Construction Problems

TASK AND POSITION COMPETENCY MATRIX

工作及職位勝任的矩陣

Task Category - Controlling OHS Risks

工作範疇 - 控制職安健的風險

Safety management tasks 安全管理工作 (1-39)	Safety critical positions 重要的安全職位																		
	Senior Managers 高級經理				Middle Managers 中層經理				Front-line Managers 前線經理				Site Supervisory Staff 工地督導員工				Safety Staff 安全員工		
	Director / CEO 董事/行政總裁	Contracts Manager 合約經理	Construction Manager 建築經理	Senior Project Manager 高級項目經理	Project Manager 項目經理	Assistant Project Manager 助理項目經理	Senior Project Engineer 高級項目工程師	Project Engineer 項目工程師	Senior Engineer 高級工程師	Engineer 工程師	Graduate Engineer 實習工程師	Senior Site Agent 高級工地總管	Site Agent 工地總管	Sub Agent 副總管	Superintendent 工地總監	Senior Construction Supervisor 高級建築監督	Construction Supervisor 建築監督	General Foreman 般料文	Foreman 料文
1 Carry out project risk assessments 進行項目風險評估	2	2	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1
2 Undertake and design safety reviews for constructability, operability and maintenance 從事及設計可建設的、可實行的及維修的安全審核					1														
3 Undertake formal OH&S review of tenders 從事正式的職安健投標的事宜					2													2	2
4 Develop project safety management plans 編寫項目安全管理計劃書		1		1	2		1											1	1
5 Develop OH&S procedures and instructions 編制職安健程序及指示	2	2	2	2	1	2	2	1	1	1	1	1	1	1	2	2	2	2	1
6 Carry out workplace and task hazard identification, risk assessments and control (ISAs/SWMSs) 進行工地及工作危害識別、風險評估及控制	2	2	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1
7 Carry out basic task competency assessments of employees 進行工人基本的工作能力評估											2	2	2	2	2				1

Organisational Competence Maturity Index

Level	Nature	Commitment	Focus
Level 1 - Initial	Immature	Compliance	Compliance
Level 2 - Repeatable [Managed]	Maturing	Continuance	Norm
Level 3 - Defined		Normative	
Level 4 - Quantitatively Managed	Mature	Affective	Continuous Improvement
Level 5 - Optimizing			



Safety In Design

- CDM Learning points from UK
 - Reduce Paperwork;
 - Increase Competence
- Integration is key
 - What are your office procedures: daily; weekly; monthly
 - Simple and clear instructions
- ERIC : Eliminate; Reduce; Inform; Control
- BUM Design: Buildability; Usability; Maintainability
- Tools: Risk Register; Option Evaluation Chart; RAG Lists;

BIM?

What should be in a SiD Management System?

- Competent users (training): who; what; when
- Database: good/bad practice; checklists; etc.
- Hazard ID mechanism
 - Which tools/methods and when to use them
- Audit trail: show decisions made and why
 - How will information be passed on to others
- Change management system (RFI; TQ's)
- Project-end feedback loop (update database)
- **What would you do...BIM!**

Heat Stress

- Rationale
- Need simple, site based measuring technique for triggering "indoors" interventions
- have outdoor index & know effects of heat stress but need same for indoors working;
- need to intervene & assess effectiveness of interventions.
- produce/update guidelines based on actual data

Build Safe Dubai



ADAM PATTERSON

Goals

- Improve current situation
- Raise the current benchmark of **health, safety and welfare practice**
- Spread the message about the importance of safety
- Educate stakeholders about the true benefits of investing in safety from **start to finish** on projects



Chris Doyle, head of environment, health & safety and sustainability, Bovis Lend Lease, explains the Build Safe Dubai initiative.



Dep

al Estate and Construction

- Encourage people's involvement
(Self-regulation:
different levels of
employees in various
sectors of organizations)



Worker Engagement

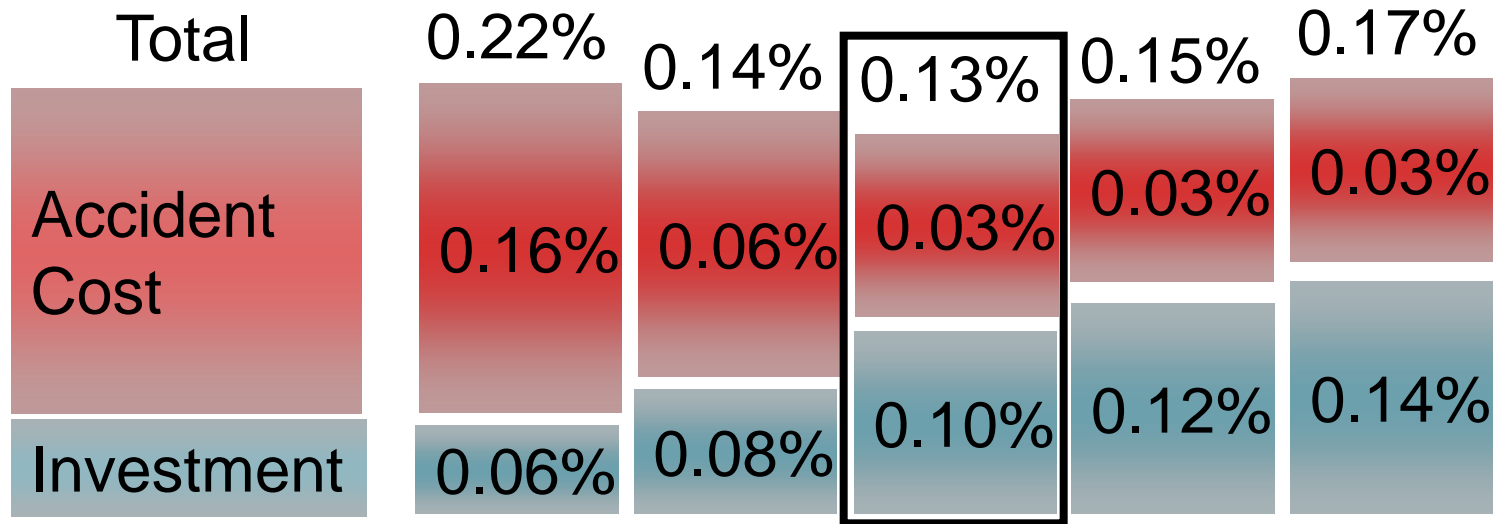
• ***Traditional approaches to behavioural safety***

- Concentrating on front-line workers loses focus on management, systems & policies
- Tendency to assume behaviour is the *only* cause of accidents
- Can only measure what is observable (some problems are not easily measured by observing worker behaviours)

• ***Worker engagement***

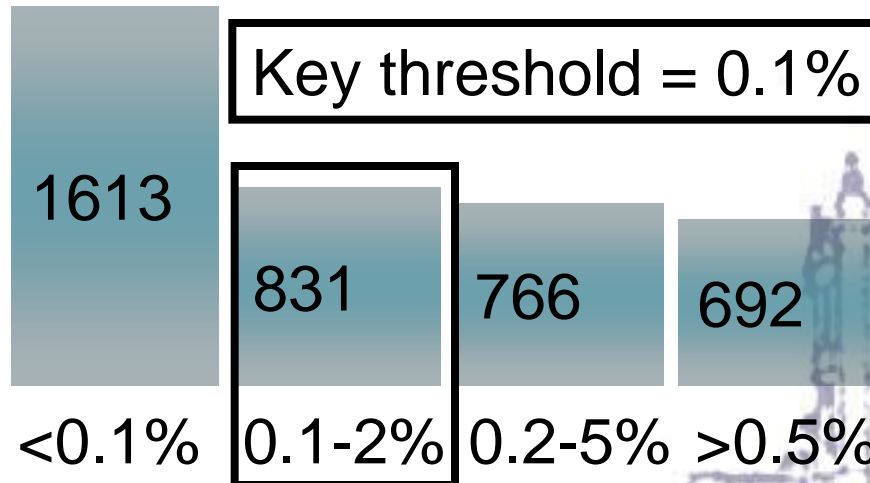
- Starting point acknowledging that workers can contribute to 'organisational learning'
- Report unsafe acts/ conditions, near misses.
- Identify management & system failings
- Contribute to decisions about H&S issues through their knowledge of 'how the work actually gets done'
- Maloney: ***'when you hire the hands, you also get the brain'***

Cost benefit relationship



Key threshold = 0.1%

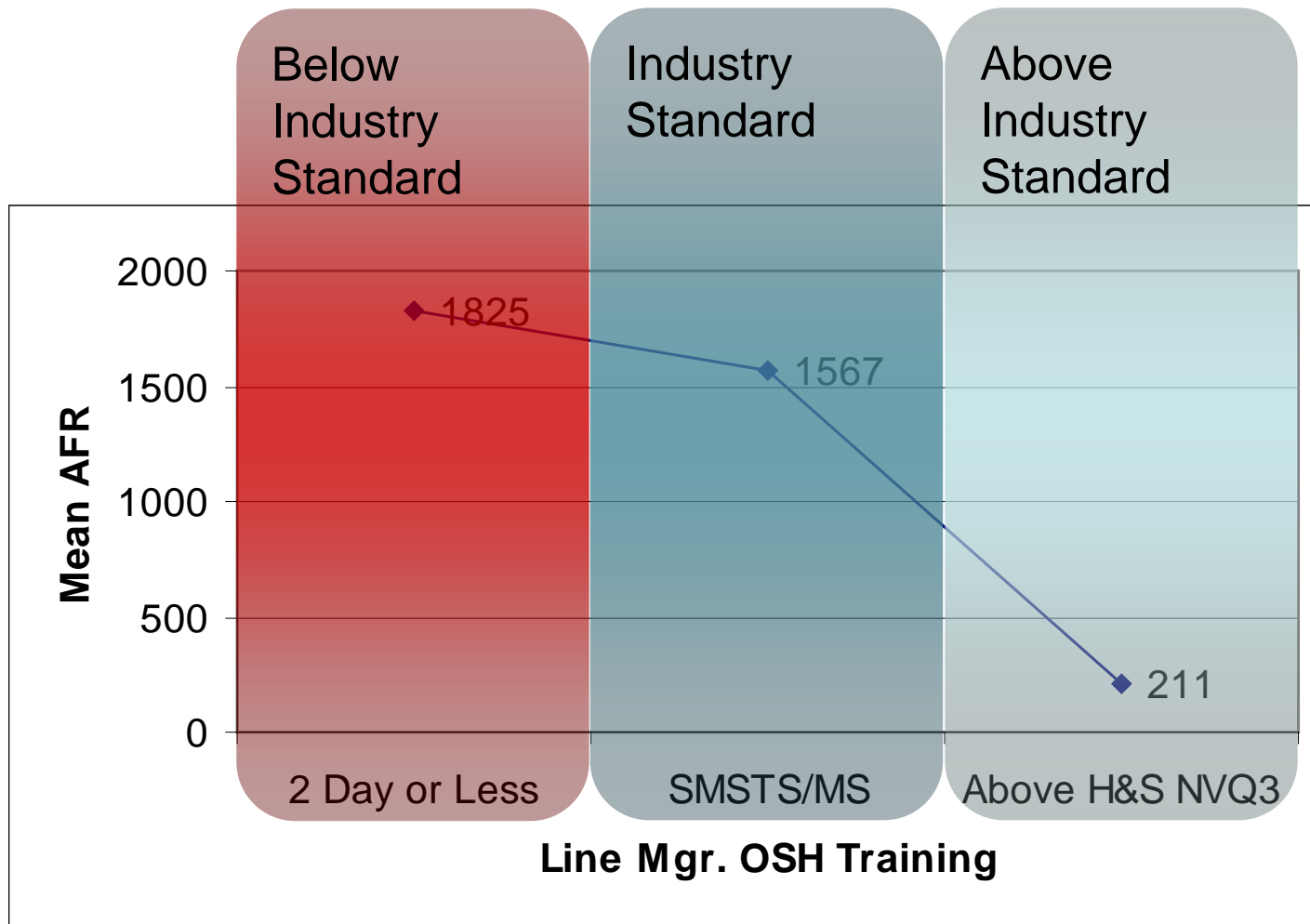
Median
AFR



Investment



Organisational factors: Line Mgt.



An evaluation of client leadership in occupational health and safety in the construction industry

- 1. An **improved understanding** of the potential for clients to influence OHS performance in the construction industry context;
- 2. The validation and testing of a '**safety index**' measure of client OHS practices for use in the construction industry; and
- 3. The development of evidence-based **guidelines** for the implementation of client leadership in OHS in the construction industry.

BLACKLIST

BLACKLIST

- Publish it!

Hong Kong?

Hong Kong?

- No league table for safe contractors
- No league table for safe developers
- No focal point for construction safety
- No focus on safety in design
- No stakeholder competence matrix
- No worker engagement
- No safety leadership
- No OHS in tertiary education

Conference at HKU on:

INNOVATION MANAGEMENT in INFRASTRUCTURE DEVELOPMENT

Monday 31 May 2010, 2:00 pm to 5:30 pm

Speakers

Keynote: Ms Ada Fung - HKHA

Dr. Asanga Gunawansa - National University of Singapore

Dr. Florence Yean Yng Ling - National University of Singapore

STAR Master Study Club on 'Management of Innovation'

- Rotterdam School of Management, Erasmus University, Netherlands

***More Info. + Registration (Free):* http://www.hku.hk/cicid/3_events.htm**

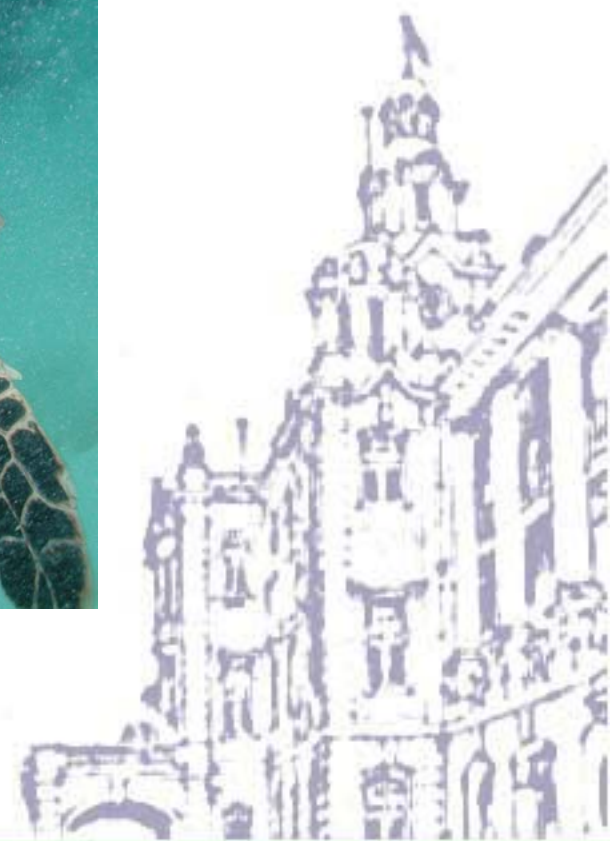
Organiser: HKU **CICID (Centre for Infrastructure & Construction Industry Development)**

Supporter: Hong Kong Housing Authority



Department of Real Estate and Construction

Researcher at work





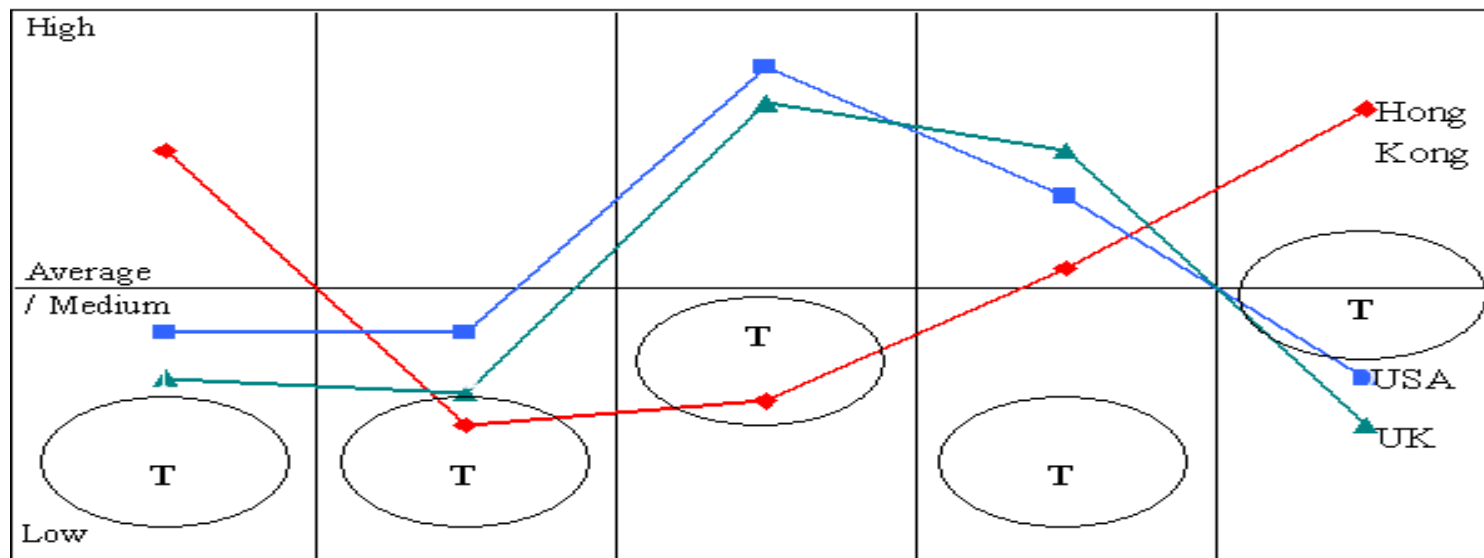


Is culture important?

Conclusion:

Comparison of Scores by HK, USA, UK, and Tao Culture on the Cultural dimensions

Power Distance (High)	Uncertainty Avoidance (High)	Individualism (Individualistic)	Masculinity (Masculine)	Confucian Dynamism (Long-term Orientation)
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Power Distance (Low)	Uncertainty Avoidance (Low)	Individualism (Collectivistic)	Masculinity (Feminine)	Confucian Dynamism (Short-term Orientation)
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