# **Risk Management for Overseas Projects**

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14 Nov 2012







An ARCADIS company

# What is Risk Management?



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**HKARNS** 香港風險管理與安全協會 Hong Kong Association of Risk Management and Safety

source: http://www.freshdv.com



# What is the mouse's objective?

- To get the cheese
- What factors should the mouse take into consideration before attempting to get the cheese?



Source: http://www.freshdv.com

Making sure those who are taking the risks are fully informed.

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# What Makes a Risk?

- What is the mouse's objective?
- What risks could prevent the mouse from achieving his objective?
- What is the likely cause of the risk?
- What would be the consequences of the risk occurring?
- What would be the likelihood and impact of the risk occurring?
- What can the mouse do to minimise, or mitigate the risk to itself?
- What contingency measures could the mouse take if the risk was to occur?







# Introduction

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# **EC Harris - Spread of Overseas Projects**



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# Spread of Overseas Projects



#### 1970s - first Asia commission

1991 - first office in Asia Pacific

Operating across Asia Pacific including Australia, China, Hong Kong, South Korea, Macau, India, Malaysia, Singapore, Taiwan and Vietnam

Over 650 highly-trained professionals based in Asia Pacific

US\$18 billion of construction each year

#### An ARCADIS Company

Through our merger with ARCADIS, the combined company grows to almost 21,000 professionals and USD\$3 billion in revenue and have the scale and expertise to deliver even better outcomes for its clients across the globe. ARCADIS and EC Harris together become a top five global leader in strategic built asset advisory and project delivery services, with a combined total of close to 6,000 staff in this area and particular strengths in Europe, the US and Brazil. EC Harris's well established and rapidly expanding operations in Asia and the Middle East also provide ARCADIS with strong footholds in these markets. Furthermore, the deal brings ARCADIS into the top five consultants in the UK, allowing it to expand its relationships with multinational clients both inside and outside the country.

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# **Spread of Overseas Projects**













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# What is a Risk?

- The ISO 31000 definition (drawing upon ISO Guide 73 Risk Vocabulary) of risk is: 'the effect of uncertainty upon objectives where an effect is a deviation from the expected - positive or negative'
  - The above is used as the worldwide standard for risk description and is also adopted by the Institute of Risk Management
- The key point to note above is at the end of the sentence: 'positive or negative' - very often a risk will also have a positive side, known as an opportunity







**Risk Assessment and Management Process** 

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# Why Risk Management

- To protect the organisation, brand and its resources
- To protect service users and beneficiaries
- To improve decision making, planning and prioritisation
- To reassure funders
- To minimise impact of the event where reasonably practicable
- Because you value people...
- "risk management is not about buying insurance. It is not about avoiding lawsuits. Instead it is about protecting and conserving your organisations resources and providing goods and services reasonably"

(Laird Hunter 1998)







# **Assurance Stages**



**Incident and Problem** Management

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**Business** Continuity Management

# Major Risks for Overseas Projects

### Personal safety on fieldwork

- Workplace injuries e.g. physical hazards such as falls from height, injuries caused by lifting heavy objects, accidental or malicious injury
- Ill-health and inadequate medical support and response
- Lack of immediate back-up in the event of emergency
- Variation in safe use of equipment
- Traffic accidents risk increased by the unfamiliar driving habits and traffic discipline encountered in foreign countries
- Environmental hazards like disasters, disease and high levels of stress
- Violence including sexual violence







# Major Risks for Overseas Projects

- Political unrest
- Terrorist attack
- Criminal bombings, shootings, kidnapping, hostage taking and violent robbery / mugging, potentially incidents against western and western associated personnel, interests and organisations
- Petty crime especially in crowded public places
- Staff acting outside of the scope of their remit and exceeding skills and/or authority in working locations
- Legislative compliance and understanding of local requirements
- Financial hazards caused by acting in a negligent manner giving rise to private and or public prosecution and/or financial penalties, etc.







# **Basic Risk Management Process**



# Step 1: Define objective and scope

- Objective setting Without identifying the organisations objectives it will be difficult to identify risks/hazards that could impact on them and preventing them achieving their objectives. Define also reason for travel.
- Risk management should be considered at all levels of the organisation, there are a wide variety of tools that can be used to identify, assess and manage risks within an organisation.
- Risk Assessments carried out across all of the activities that the organisation undertakes, this can take the form of a generic risk assessment that employees are asked to complete or by way of a risk intervention whereby the senior management team would assess each individual and/or activities on an ad hoc basis. Consider also family members that travel along as part of the package.







# Step 2: Risk Identification

- Questionnaires/surveys of volunteers/employees to gain a better understanding of how risk is perceived within the organisation
- Group LTI records and lessons learnt
- Incident investigation
- Auditing and inspection
- Workshops (e.g. HAZOP, SWIFT, brainstorming or scenario analysis) – gathering together key members of the organisation and brainstorm likely hazards that could impact them.









# Step 3: Risk Evaluation

- Exposure: organisation, people, property, financial, legal, compliance and environment
- Cause: inadequate planning, assessment and training; financial and resources limitations, high temperature, natural disaster (e.g. flood, high wind, earthquake, fire and drought etc), vibration, overload, power outage, toppling of high-piled object, changes in regulation, pollution and deliberate acts
- Likelihood and consequence evaluation
- Control Measures: preventive barriers and recovery/contingency measures







# Likelihood and Consequence Evaluation

Rating		Injuries/Fatalities	Environmental	Media Attention	Legal	Financial/Asset Loss	
INSIGNIFICANT	1	Superficial injuries or less than 10 minor injuries	Trivial environmental impact no response required	Very high reputation, seen as a quality volunteering organisation	Threat of legal action	Up to HKD 10,000	
MINOR	2	1 -10 major injuries or more than 10 minor injuries (i.e. first aid / outpatients medical treatment)	Significant environmental impact - long duration limited response	· · · · ·	Legal action with limited potential for decision	Up to HKD 50,000	
MODERATE	3	1 -10 serious injuries or more than 10 major injuries (require immediate hospitalisation for less than 3 days)	Serious environmental impact - resulting in insignificant fines and resources commitment	Critical article in Press or TV. Public criticism from regulator or industry body. Criticism in internet forums or on-line internet diaries.	Individual lawsuit with probable settlement out of court	Up to HKD 100,000	
MAJOR	4	1-5 fatalities or more than 10 serious injuries (require hospitalisation for more than 3 days)	Serious environmental impact - resulting in major fines and resources commitment	and/or national TV main news over	Individual lawsuit brought against the organisation for major violation with limited opportunity for quick settlement	Up to HKD 500,000	
MASSIVE	5	> 5 fatalities	Toxic release with long-lasting detrimental effect - resulting in extended duration significant resource commitment	political repercussions. Loss of	Class action litigation brought against the organisation for significant violation.	Over HKD 500,000	

Rating		Regulatory Status	Example of Loss event	Frequency		
RARE	1	Negligible - may occur only in exceptional circumstances	No or little change to regulation in recent history/ near future.	30 years or less frequently		
UNLIKELY	2	Might occur at some time	Limited recent or anticipated regulatory changes	Once every 10 years		
OFTEN	3 Should occur at some time		Modest changes to regulation recently or anticipated	Once every 3 years		
LIKELY	IKELY 4 Probably occur at some tin		Significant changes to regulation	Annually		
EXPECTED	EXPECTED 5 Will occur in most circums		Major complex changes to regulations	At least monthly		







# Step 4: Risk Treatment

- Robust and consistent mitigation measures should be identified and assigned to all risks, not just the high ranking ones. The mitigation measures need to measurable and achievable
- Ensure that all mitigation measures are assigned an owner who is responsible for ensuring the mitigation is carried out appropriately and on time
- Based on organisation's appetite for risk







# Risk Control Method – Treat Risk

- Elimination
- Avoidance e.g. abandon the activities if it is not core; suitably selection and screening process; temporarily suspend your activities and travel to a safer location
- Control (reduce likelihood or consequence) e.g. additional resource to finance meet the liability caused by the risks; additional training; clear written appointment and objectives; (Note, insecurity may not allow you to leave a situation then stay put than to evacuate.)
- Isolation e.g. physical segregation;
- Transfer e.g. insurance, workers' compensation, indemnity or exemption from liability clause
- Absorb by business







# **Emergency Response and Contingency Plan**

- Contingency measures will also need to be considered as it is vitally important to know that if the risk do occur what measures are in place to tackle this and therefore lowering the impact to the organisation and people involved
- A good example of a contingency measure for the types of risk that could impact the organisation would be ensuring they have adequate liability cover in place with their insurers in order to counter balance the financial impact of risks impacting







# Step 5: Record Risk

- Risk Register A risk register, the repository used to hold all of the risk information identified, is probably the most important tool you will use. This would include identified risks, the likelihood and impact of them occurring and the mitigation measures put in place to minimise either the likelihood, the impact or both
- Assign ownership making sure control measures are followed, and who will be responsible for ongoing monitoring
- Record coverage, limit and exclusions







# Example: Risk Register

Risk Register Scoring Risk Information					In	Impacts - Inherent ranking - Without controls							
Risk ID	Cause	Hazardous Event	Impact	Risk Owner	Likelihood	Injuries / Fatalities	Environmental	Service Disruption	Financial / Asset Loss	Slips in programme	Media Attention	Legal Action	Original Risk Score
R001/A Mouse/1.1	The mouse not being being quick enough to get to the cheese	The cheese may be taken by another mouse	May have to fight with another mouse the get the cheese	Mouse	5		4						20
R002/A Mouse/1.1	The owner made the cat stand guard over the cheese	A cat may be stood guard by the cheese	The mouse may get spotted and caught by the cat	Mouse	1	1							1
R003/A Mouse/1.1	The mouse leaves the cheese on the trap too long	The cheese may go moldy if left there for too long	The cheese will poison the mouse	Mouse	3	2							6
R004/A Mouse/1.1	The mouse is not delicate enough on the trap to take the cheese	The trap could spring trapping the mouse	The mouse will be trapped	Mouse	2	3							6

Control in Place								
Preventive Barriers	Owner	Target Completion Date	Urgency	Recovery & Contingency Measures				
Start training to be fast to be able to grab the cheese quickly	Mouse	01/10/2011	LATE	Ask the other mice if they can share the cheese				
Set out reasoning with the cat and advantages of this. Develop a plan to sneak in and take the cheese without the cat noticing	Mouse	01/11/2011	LATE	Find a way to distract the cat away from the cheese				
Devise a plan to get the cheese as soon as possible through the use of the mitigation mentioned above	Mouse	01/12/2011	1	Get to the cheese as soon as possible				
Obtain the plans for the mousetrap and devise a way to disable the trap	Mouse	01/01/2012	32	Obtain some protective equipment to prevent injury to the mouse				
HKARMS		管理與安全協 Association of	會 -	International				





Risk Management and Safety

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# Step 5: Prioritisation of Risks and Actions

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Using the example of the mouse trying to get the cheese we can plot the likelihood and impact of the mouse getting the cheese on a risk matrix as shown below:



# Step 6: Monitoring

Essential that identified risks, scoring and mitigation measures are monitored and re-evaluated on a regular basis. Risk Management should be engrained in the organisation from top to bottom to encourage all volunteers/employees to consider risk management in every decision they make



# Advocate the Safety and Risk Culture

### **Early Best Practice Initiatives**

- Adoption & communication of 'TRACK' risk management tool and "Stop Work" Authority.
- Implementation of senior management SHE stewardship assessment program.
- Implementation of behavioural safety observation program.
- Launch of new SHE Intranet area.

Keep health and safety on TRACK. Before every task, STOP and...



## "Stop Work" Authority

Every EC Harris employee has the authority and responsibility to immediately stop their own work, or work which EC Harris controls, when it is believed that the health and safety hazards and risks are not; recognised, understood or being effectively managed and controlled.

- Initiate the "Stop Work" by informing all personnel affected
- Advise your line manager of the "Stop Work"
- Re-apply the **TRACK** process
- Resume work only when you are satisfied the "Stop Work" issues are resolved.



A Real Commitment, A Daily Issue: Safety







# **Business Continuity Planning**







# **Business Impact Analysis**









# **Develop Business Continuity Plan and Drills**

A Business Continuity Plan is developed to define roles and responsibilities for EC Harris Recovery Team and set out actions that should be taken by EC Harris to deal with any undesired interruption to the business.

Conduct regular Business Continuity Drills to test the plan.









# Conclusions

- The principles set out in the previous slides can be applied to any organisation to help them better identify and manage the risks/hazards they are likely to face on not just individual projects but also the day to day running of their operations
- Due consideration should be given to the likely risks that could impact the organisation/agent in all spheres of their work, whether this forms an individual project or the overall structure of the organisation
- Risk considerations should be given in all of the activities that they undertake, not just the physical risks to themselves but also risks to the organisation they are exposing to at various stages.

stages.









# Reference

- ISO 31000 Risk Management Principles and Guidelines
- A Structured Approach to Enterprise Risk Management (ERM) and the Requirements of ISO 31000 by IRM, AIRMIC and Alarm
- Health and Safety Executive, UK
  - <u>http://www.hse.gov.uk/pubns/index.htm</u>







# Questions







