



Japan-ASEAN Cooperation



AFFA

Sustainable Human Resource Development in logistics services for ASEAN Member States

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TOPICS ON RISK MANAGEMENT

- Concepts
- Measurement
- Project Risk Management
- Legal Liability
 - Product Liability
- Safety and The Human Factor
- Fire Risk Control
- Marine Risk Management



Risk Management

Risk management is essentially a multi-disciplinary process where different skills and disciplines are brought together in risk problem solving. Managing risk implies a four-stage approach:

- Risk identification – recognize risk that threaten the assets and earning of company
- Risk Measurement – estimate probability and possible severity



Risk Management

- Risk Control – measure to avoid occurrence, limit its severity and its consequences
- Risk financing – determine likely costs and ensure financial resources are available

Cost of risk which can be measured in terms of cost of 3 variables:

- **risk control measures**
- **uninsured losses**
- **insurance**

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Risk Management





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RISK MANAGEMENT

Elements of Contract

- Offer and Acceptance
- Consideration
- Capacity to contract
- Legality
- Good Faith

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Concept of Risk

Risk is defined as:

- Hazard
- Chance of bad consequence
- Loss
- Exposure to mischance

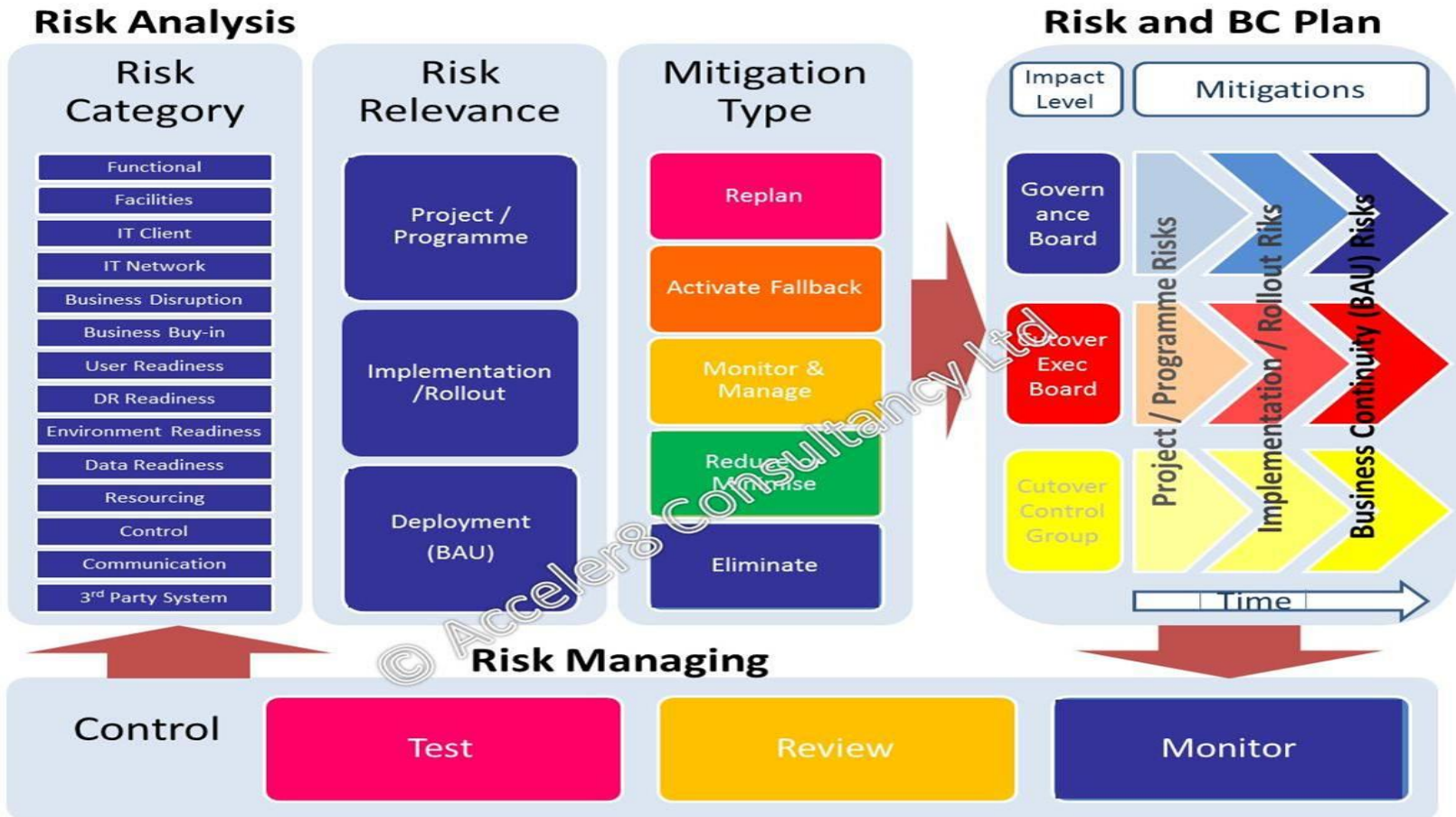


Can cause harm or loss but some risks caused both loss and gain (usually to different people as with extra work that a repairer gains after a bad storm)

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Risk Analysis

Risk Management Framework©



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The most underestimated business risks for 2013

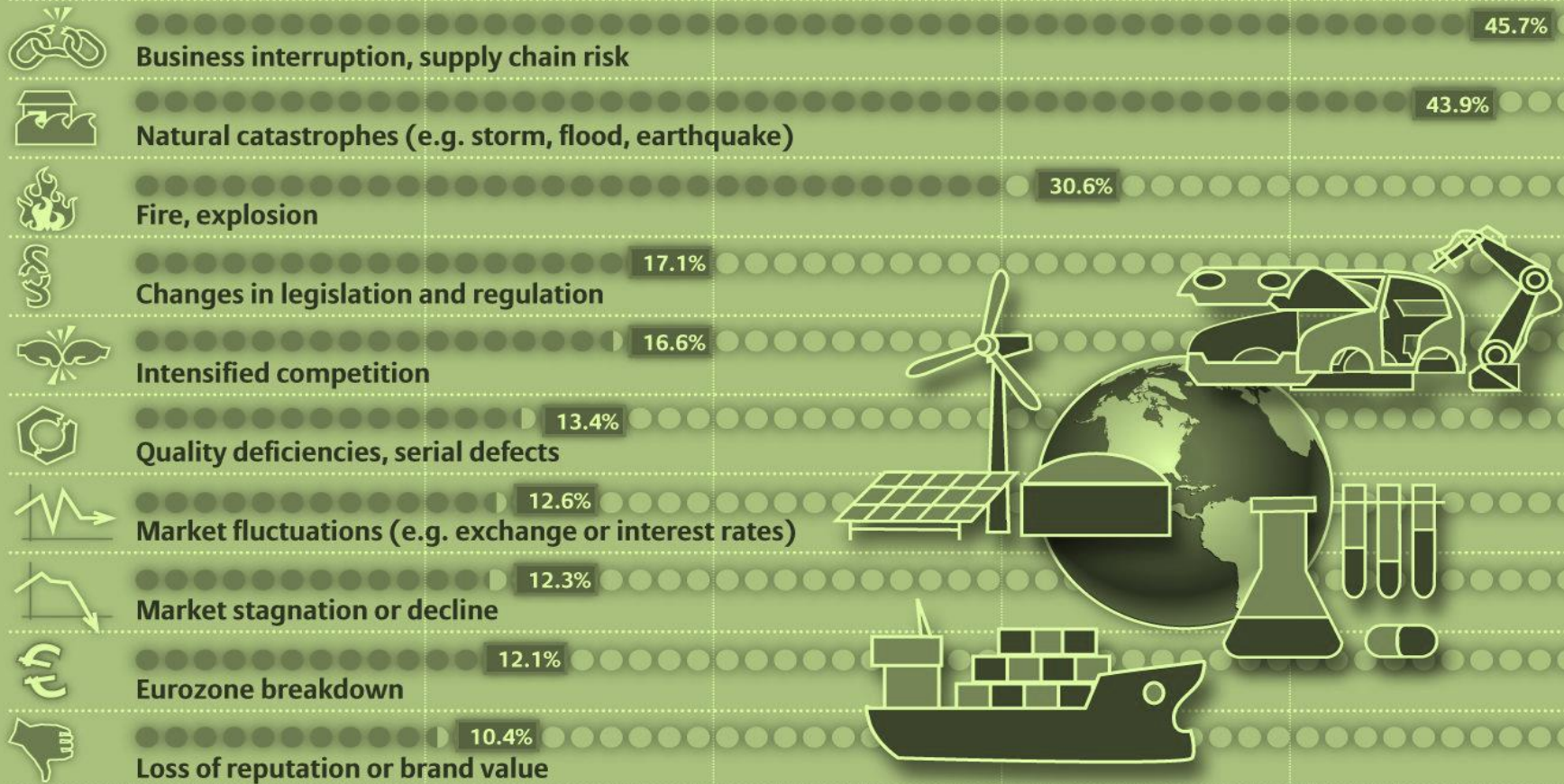


The "hidden" risks shown were identified by Allianz experts as most underestimated by businesses. All of these risks received less than 10 percent or even less than 5 percent of the overall responses (843).

Source: Allianz Global Corporate & Specialty

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Top 10 global business risks for 2013



The Allianz "Risk Barometer" survey was conducted among risk consultants, underwriters, senior managers and claims experts in the corporate insurance segment of both Allianz Global Corporate & Specialty and local Allianz entities. Figures represent the number of responses as a percentage of all survey responses (843).

Source: Allianz Global Corporate & Specialty

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Checklist: identifying Risk

Key management decisions

Management selection	Business Type	Consequence
Risk profile	Equipment	
	Location	Potential
	Mode of operation	Profit or loss
	Uniqueness	



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Checklist: identifying Risk

Key management decisions

Risk management	Business type	Consequence
Relationships	Market total size	
	Competitor activity	
	Price acceptability	
	Government restraint	
	Customers	
Considerations	Suppliers	
	Technical developments	
	Political Social	Inter-relationship
	Physical environment	



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Checklist: identifying risk

Key management decisions

Management selection	Business type	Consequence
Expectations	Achievable volume and price	
	Cost pattern	
	Dependencies	
Structure	Staffing	
	Competence	
	Commitment	

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What to measure?

1. Probability (or frequency)
2. Severity - likely severity
- possible severity



Minor



Moderate



Major



Critical

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What to measure?

There is a relationship between frequency and severity:

1. Small regular loss

- sufficient size of sample needed;
- we can then say: if the world does not change this will probably happen.

To measure the future we need to know:

- size of error if no change;
- areas of possible change;
- extent of possible change.

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What to measure?

2. Medium irregular loss:

- what could happen?
- how often?
- what can we do about it?

3. Large very rare loss:

- what would happen?
- how much could it cost?
- how will we finance it?



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PREPARING AND USING STATISTICS

1. Review available statistics

- Who prepared?
- For what purpose?
- When?
- How were they collected?
- Has there been any change in basis?
- Is there detectable bias in presentation?
- Is there any motivation for bias?





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PREPARING AND USING STATISTICS

2. Preparation of statistics:

- Determine what is needed;
- Review what data is available;
- Build a simple mathematic model of relationship

3. When analysing statistics:

- Take note of any evident trends;
- Try to find realistic explanation for trend
- Consider any current trends that are not yet apparent;
- Don't brush aside any inconsistencies (let doubts nag);



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PREPARING AND USING STATISTICS

4. In presenting statistics:

- Avoid unnecessary detail;
- Limit number of significant figures per numbers to 3 or 4;
- Make sure conditions of presentation are clearly stated;
- Take care to ensure decision makers understand implications;
- If conditions have changed since statistics were prepared, say so.

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PREPARING AND USING STATISTICS

When using different sources, bring them to a common basis and state your assumptions.

3 factors will usually give corrected loss statistics year by year:

- Inflation
- Exposure in Units
- Other Exposure Factors



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CATASTROPHIC LOSSES

The sources of key big losses can be reviewed under:

- Large earnings dependence (20% earnings or more).
- Large values at risk in single location.
- Events outside that could cause loss of earnings, or result in large diminution of asset value or stock market valuation.



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Data Security, Storage: Businesses Struggle With High Costs

Catastrophic Losses

Approximately 37 percent said loss of data would result in decreased revenues and 41 percent worried about increased expenses. The top two results of losing data were brand damage and loss of customers.





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▶ **DEVASTATION FOLLOWS** a magnitude 9.0 earthquake and tsunami that struck 80 miles from Sendai, Japan, on March 11. Thousands are dead and damages could exceed \$35 billion.

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UNDERSTANDING RISK REASONS

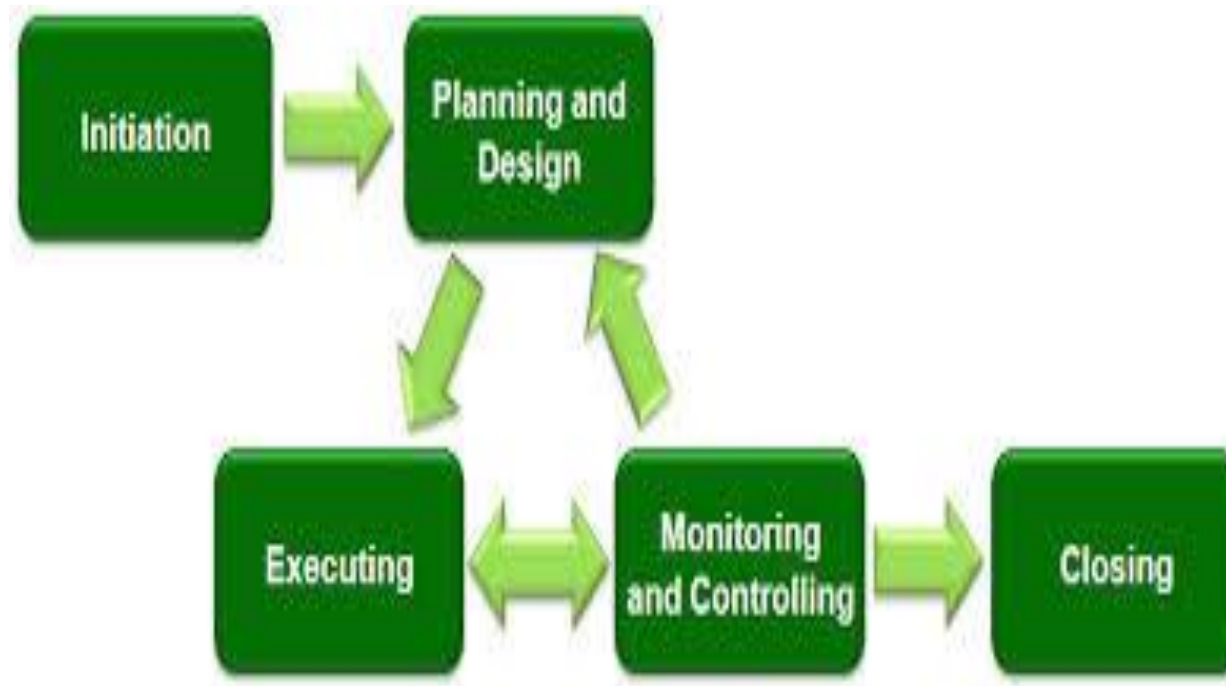
Risks result in injury and loss for a number of reasons:

1. Lack of awareness – failure to recognise either possibility or circumstances of risk.
2. Lack of capability – may result from lack of knowledge, competence, resources or practical training.
3. Lack of motivation – This can vary from indifference to deal with the problem.



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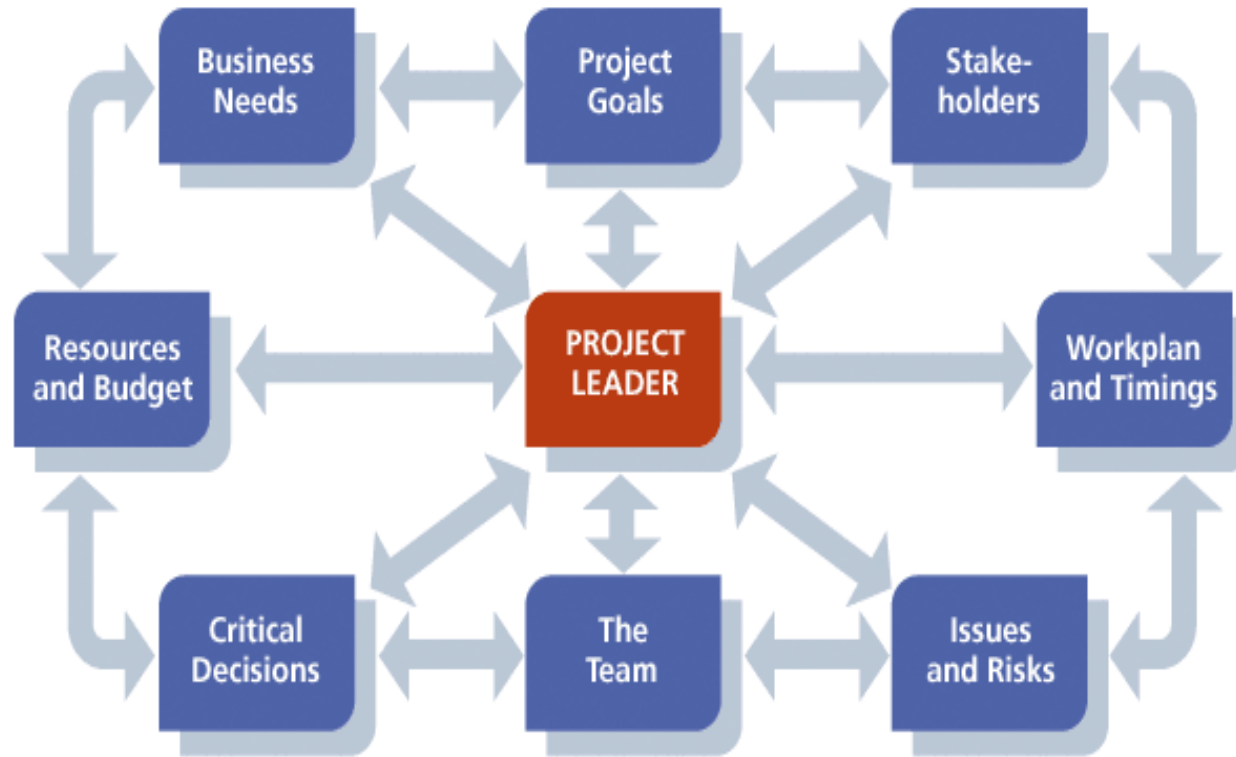
PROJECT MANAGEMENT



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PROJECT MANAGEMENT

INTEGRATED PROJECT MANAGEMENT



COMMUNICATIONS

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PROJECT MANAGEMENT

Critical Path Analysis



- **Critical Path Analysis (CPA)**, is sometimes called Network Analysis
- It is a tool used to plan activities so that a job can be completed in the shortest time
- It breaks a job down into a number of tasks, and looks at the dependency of them
 - For example, list the activities that must be completed in order to make a cup of coffee
- It is used commonly in manufacturing and construction



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PROJECT MANAGEMENT

There are several methods

1. Description of project with plans and diagrams including neighbouring areas and access route.
2. Critical Path Analysis charts, review their accuracy, dependencies data relating to time and pre-conditions check for each step in CPA.
3. Check list to specify all possible problems .
4. Monitoring essential including all environment factors (may also show new techniques for risk control).

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PROJECT MANAGEMENT

5. Hold review conference where:
 - project staff present the project details;
 - sympathetic short critical review from team not associated with project;
 - agreement on problem areas and methods of risk control;
 - establishment of monitoring mechanism



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LEGAL LIABILITY

The contemporary **legal systems of the world** are generally based on one of **three** basic systems: **civil law**, **common law**, and **religious law** – or combinations of these. However, the legal system of each country is shaped by its unique history and so incorporates individual variations.

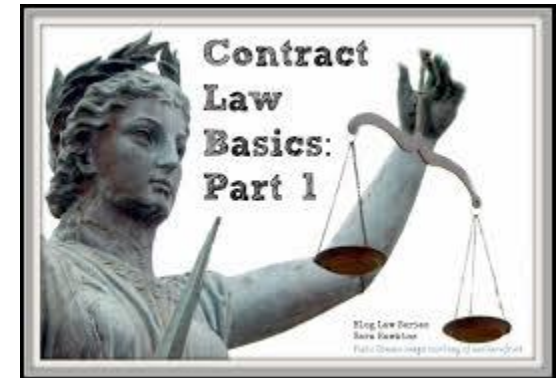


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LEGAL LIABILITY

Contract Law

- company and corporate legal basis
- contract essentials, e.g. Offer and acceptance



Private Law

- rights and responsibilities
- remedies
- relevant to corporate activity



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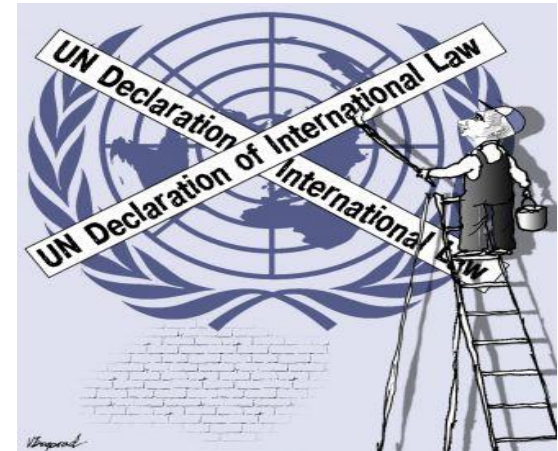
LEGAL LIABILITY

International Law

- character and evolution
- corporate implications
- extra legal situations – political risk

Statutory bodies

- legal basis for existence
- powers
- responsibilities
- extra legal situations



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LEGAL LIABILITY

Some legal responsibilities and situations

- tort
- crimes
- contracts
- some specific legal problems for companies
 - products
 - employees
 - third parties
 - libel and slander
 - patent infringement
 - statutory compliance



Tort Law (civil law)

- Tort – A wrong against an individual



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LEGAL LIABILITIES

B20 | HOME

SATURDAY, AUGUST 3, 2013

THE STRAITS TIMES

Woman and hotel settle lawsuit over wet floor slip

VIP Hotel accepts 50% liability for fall that left her wheelchair-bound

By K.C. VIJAYAN
SENIOR LAW CORRESPONDENT

A FORMER endurance racing driver left using a wheelchair after she slipped on a hotel lobby's wet floor settled her court suit yesterday, with the hotel accepting 50 per cent liability for the accident.

Mrs Pamela Mykytowych, 49, is the only woman in the world to have successfully completed the 15,000km "Peking to Paris" rallies in 2007 and 2010.

But the London-based managing director fell in the VIP Hotel near Newton MRT in May 2011,

twisting her ankle and injuring her left knee and back.

Further complications meant she now suffers from "complex regional pain syndrome" - a condition that leads to bouts of pain in different areas of the body.

She sued the hotel for negligence and is seeking \$5 million in damages for business losses, future earnings and medical costs. If successful, she will get 50 per cent of the amount.

Yesterday's agreement in the High Court has paved the way for both parties to meet and have the damages to be paid assessed by a

court registrar. It is understood that the hotel's insurers were to avoid a lengthy trial and settle for practical reasons.

This pre-empted court proceedings later this month that would have seen Australian specialist materials scientist Richard Gorman provide expert evidence. Mrs Mykytowych on the assistance of wet marble floors. She reviewed CCTV footage which partially showed her accident.

The hotel had prepared a forensic expert, a consulting forensic engineer and an official of the Slip Resistance Group to testify on its behalf.

Mrs Mykytowych said she was staying at the hotel to be with her engineer husband Andrew, who had been deployed here for a



Pamela Mykytowych, 49, now suffers from "complex regional pain syndrome" after her fall in 2011. ST PHOTO: ALPHONSUS CHERN

a successful senior executive in the health and social care sector. She was also the managing director of her own health-care services consultancy.

She even appeared in the 2007 Travel Channel series Peking To Paris in which she won the Coupe de Dames. The show culminated with the announcement of her engagement to her husband - a fellow competitor. But the accident reversed her active lifestyle.

"I now face a lifetime of unremitting pain, limited mobility and eventual deterioration which has already left me using a wheelchair," she said.

The hotel, defended by lawyer Ramesh Appoo, had initially resisted her suit, arguing that she had lost her balance because she was careless, failed to put on proper footwear and did not keep a proper lookout for water on the floor.

Mrs Mykytowych credited her lawyers Salem Ibrahim and Dominique Chua for helping to settle the liability issue and speed up the process after her two-year ordeal.

She said: "The reality is that if I lost, I would have been bankrupted. I can't work the way I was before because I can't concentrate with the pain and everything else.

"This was for me to get the hotel to acknowledge what happened on principle, and secondly to safeguard my future as I know I need to be looked after."

✉ vijayan@sph.com.sg

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LEGAL LIABILITY

home.

THE STRAITS TIMES FRIDAY, MARCH 11 2011 PAGE C10

Invalid sues friend, gets \$250k



Mr Simon Silva, 36, lying in a vegetative state after a fall at his home, which include feeding, cleaning and sucking out phlegm from his mouth. **NAI CHOW**

Friend caused bike crash that led to son's present

By THAM YUEN-C

HE DID not have a driver's licence, and was also drunk. But Mr Thangaraju Subramaniam ended up riding his friend Simon Silva's bike after the two went on a drinking session on Feb 25, 2007.

While travelling along Corporation Road, the bike skidded, flinging Mr Silva into a tree. His spine was fractured in many places and he also sustained head

injuries. On his first two nights in intensive care, doctors said he could die any time.

However, he recovered after spending more than a month in hospital. When Mr Thangaraju - who suffered minor injuries - saw that his friend had returned to work and resumed his diploma studies, he thought the worst was over.

But more than three years later, he found himself suing Mr Thangaraju on her behalf after Mr Silva ended up in a vegetative state mentally un-

sound after the fall.

Her claim was that Mr Thangaraju's recklessness caused the accident that left her son, now 36, with head injuries that were worsened by the fall.

About two weeks ago, the case was settled out of court without going to trial, with Mr Silva awarded about \$250,000, one-quarter of the \$1 million he had claimed. The payout is coming from the insurer of Mr Silva's bike, MSIG Insurance, which is the co-defendant in the lawsuit.

Said Mr Thangaraju, 29, a delivery assistant: "I feel very sorry for him, but I was very angry when they sued me."

"After the accident, he still worked, rode his bike and studied. If he can do these three things, how can it be my fault? If he was in this state after the first accident, then I can understand."

The night they went drinking was the first time they had hung out with each other. Mr Thangaraju is closer to Mr Silva's older brother.

But Mr Silva's lawyer Pritam Singh Gill produced evidence from a neurosurgeon that linked the later injuries to those from the traffic accident.

Ever since her son became bedridden and was forced to live off a feeding tube, Madam Asotha has had to quit her job to tend to his needs. The divorcee feeds and cleans him daily without help, and also sucks out the phlegm in his throat at least six times a day to prevent blockage.

She said Mr Silva's older brother does not help out with the family expenses as he has to take care of his own family.

The monthly cost of adult diapers, catheters and medical supplies is some \$500. In a year, Mr Silva's upkeep can amount to \$12,000.

Madam Asotha has tried to save where she can, by dimming the lights in her three-room Housing Board flat in Jurong West Street 42 and limiting her use of electrical appliances.

She turns on the fan and radio only in Mr Silva's room so he can be comfortable. About two months ago, her electricity supply was almost cut off.

"I have been borrowing from friends. I will leave it to God," she said.

In deciding the amount of the award, Mr Silva's liability in the accident was taken into account, said the insurer's lawyer Cecilia Lee Thomas.

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PRODUCTS LIABILITY

DRUGS	TOYS
EDIBLE PRODUCTS	ELECTRONICS
AUTOMOBILE PRODUCTS	COSMETICS
BABY PRODUCTS	LEISURE TIME GOODS



DEFECTIVE PRODUCTS

When Something



Ruins Everything

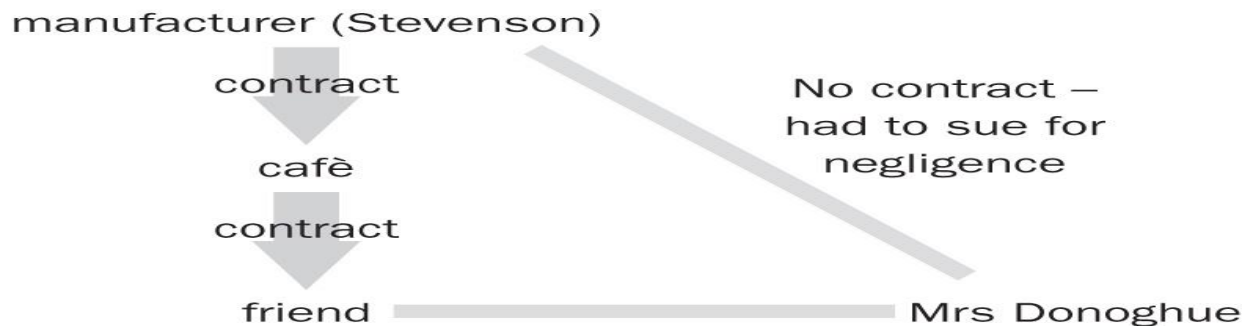


RECALL

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PRODUCT LIABILITY

This is legal liability for injury or loss suffered by a user as a result of defective products or services. ***Donoghue v Stevenson*** [1932] is a foundational case in English tort law by the House of Lords. It created the modern concept of negligence, by setting out general principles whereby one person would owe another person a duty of care.



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PRODUCT LIABILITY

Also known as the "Paisley snail" or "snail in the bottle" case, the facts involved Mrs Donoghue drinking a bottle of ginger beer in a café in Paisley, Renfrewshire. A dead snail was in the bottle. She fell ill, and she sued the ginger beer manufacturer, Mr Stevenson. The House of Lords held that the manufacturer owed a duty of care to her, which was breached, because it was reasonably foreseeable that failure to ensure the product's safety would lead to harm of consumers.



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IMPORTANT FACTORS IN PRODUCT LIABILITY

Understanding the product compare customer expectations and what the *product* does:

- purpose
- use – known – advertised – unknown;
- how could it be misused;
- how safe to use;
- what conditions to ensure safety;
- training, experience, skill;
- maintenance, service.

All above are fundamental in whole operation



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IMPORTANT FACTORS IN PRODUCT LIABILITY

The customer:

- what does customer expect;
- use/serviceability;
- duration/expense
- how does the product reach customer
- does distributor, salesman have same view of product questions above;
- range of customer;
- advertising claims

And many more such as quality control...etc

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SAFETY AND THE HUMAN FACTOR



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SAFETY REQUIREMENTS

Safety needs these 4 components:

1. **Awareness** of a high standard of
2. **Accountability** - individual management and staff;
3. Effective **training** to meet standard of performance;
4. System of **reward** (for good performance) and punishment (penalty for failure).



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CHECKLIST: PROCESS SAFETY

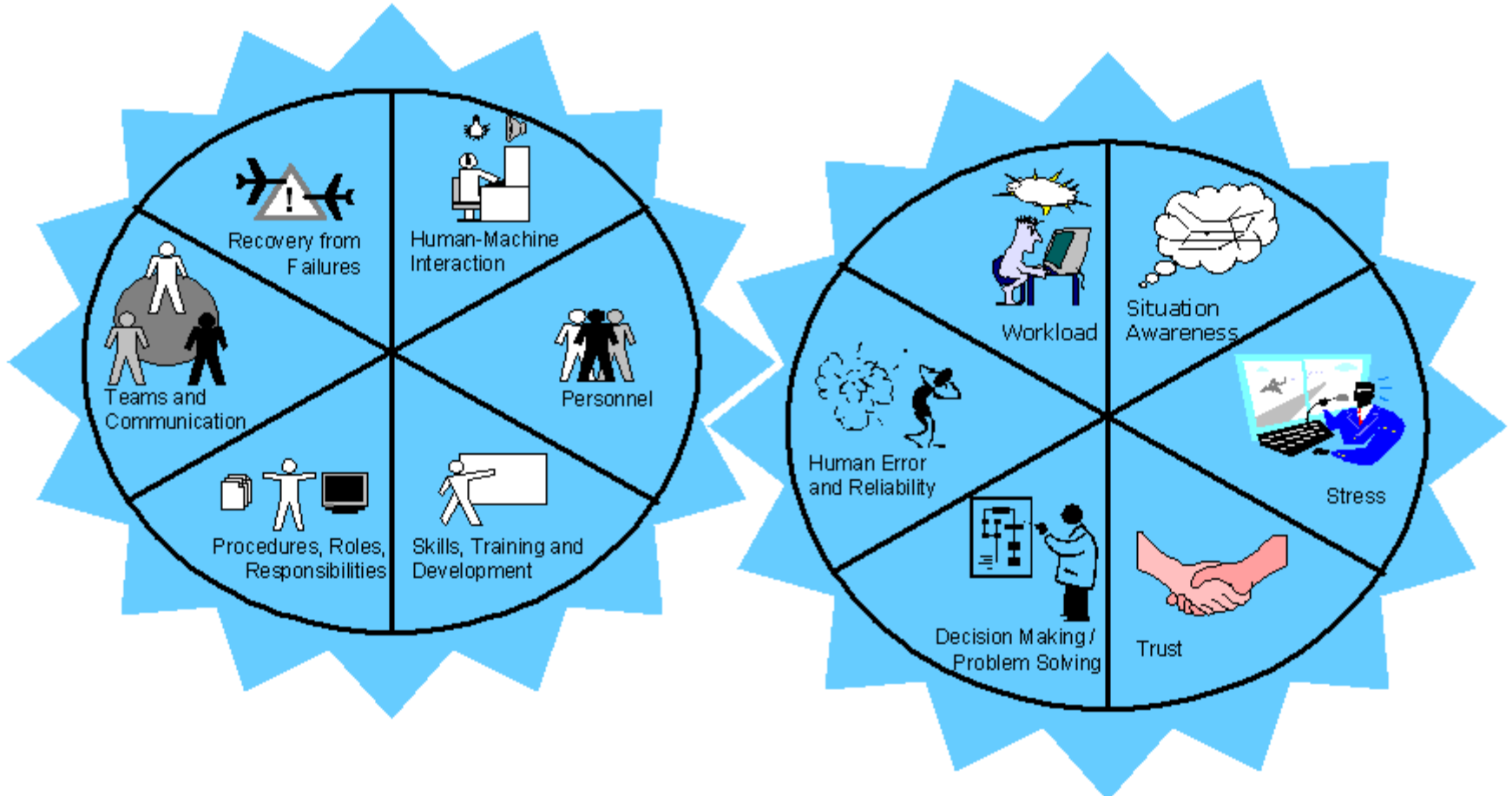
Understand the operation, the equipment and skill required.

1. Keep safety regulations up to date;
2. Gain knowledge of safety technology especially in equipment and problems;
3. Know employers' liability and workers' compensation;
4. Study various methods of effective safety practice;



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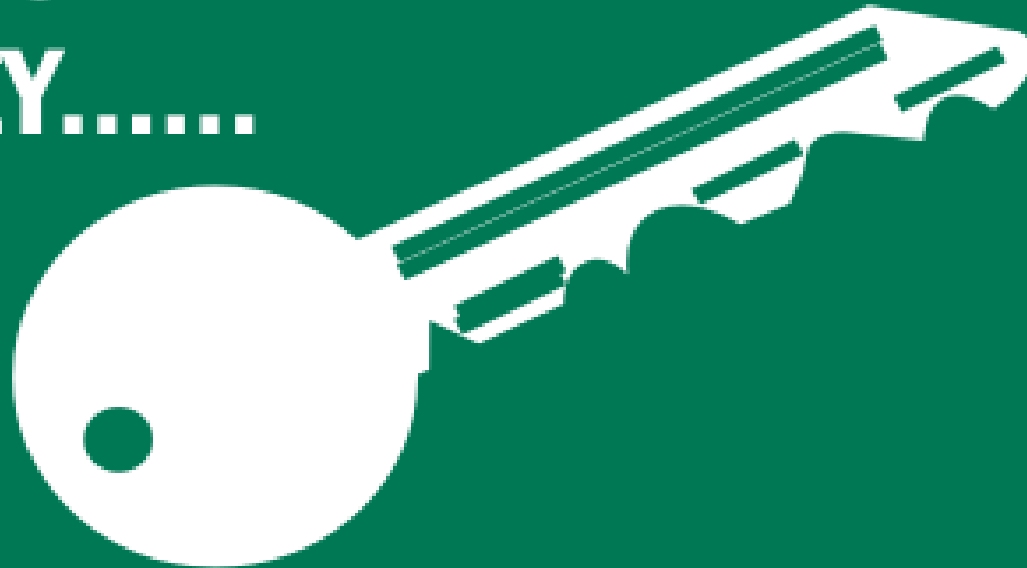
HUMAN FACTORS



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HUMAN FACTORS

**YOU ARE THE
KEY.....**



TO YOUR SAFETY

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HUMAN FACTORS

Factors for safe working practice:

1. Devise safe system of operation – operating condition and environment;
2. Operator personality – selection and motivation;
3. Equipment design to prevent improper operation;
4. Procedures – non standard or unusual conditions to be reported.



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HUMAN FACTORS

Human Factors Funnel Model



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HUMAN FACTORS



Official
Company Account

Alcoa

Alcoa *Joined Jul 06, 2011*

Alcoa is the world's leading integrated aluminum company, providing jobs to 61,000 employees across 30 countries. 75% of all aluminum ever produced is still in use today.

In a study of Alcoa – a company that manufactured everything from the foil that wrap Hershey's Kisses and the metal in Coca Cola cans to the bolts that hold satellites together. In 1987, new CEO Paul O'Neill took over one of the largest, stodgiest, and most potentially dangerous companies into a profit machine and a bastion of safety. At the top of his list he wrote, "SAFETY" goal: Zero injuries.

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HUMAN FACTORS

KAIZEN

(CONTINUOUS
IMPROVEMENT)

IS OUR
WAY
OF LIFE



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HUMAN FACTORS

Manager require creative productivity every day, have more in common with famous innovators than most managers realize. The workday events that ignite their emotions, fuel their motivation, and trigger their perceptions. Need to search out employees' characteristic by:

- progressive principles of creating small wins or catalyst
 - to support everyday progress in their work
 - to help removing obstacle
 - by support through encouragement and recognition

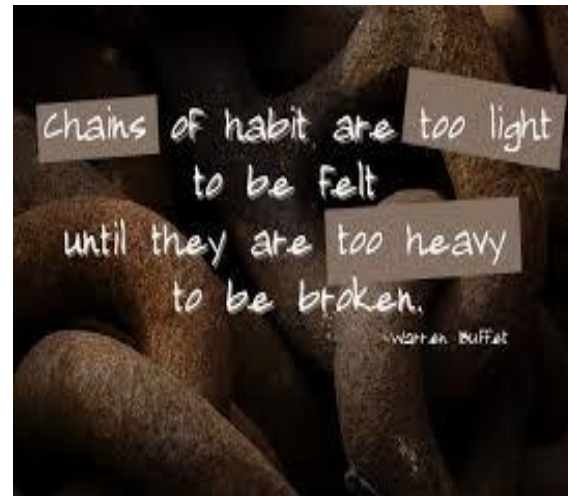


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HUMAN FACTORS

- keystone habits are the ones that, when they start to shift, dislodge and remake other patterns that can influence how people work, eat, play, live, spend, and communicate.

Will achieve 2 goals of superb workers well being and success for Company.



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FIRE RISK CONTROL



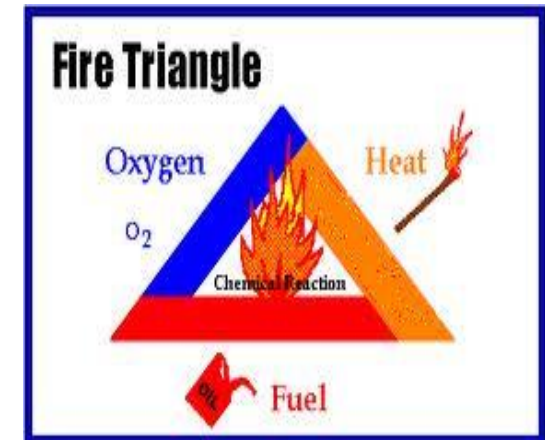
Our ethos is to prevent rather than cure

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FIRE RISK CONTROL

The mechanic of fire consist of 3 components or “fire triangle” as it is known:

1. **Oxygen** (which makes up a fifth of air);
 - Sources of oxygen other than air.
2. **Source of ignition;**
 - The role of heat, fire can start without a flame or spark.
3. **Fuel for the fire;**
 - Flame from material release gases that can increase the temperature





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FIRE RISK CONTROL

Factors that affect fire hazard

- **Inception** – sources of ignition, manage housekeeping clearing waste that can easily be ignited.
- **Load** – assess fuel available and decide how to extinguish
- **Fire spread** – remove combustible and create gaps
- **Extinguishment** – prompt action and know the methods
- **Other Hazards** – smoke and toxic fumes
- **Special Hazards** – arson, vandalism (sprinkler system) dust fire/explosion (shock damage), water damage.

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FIRE RISK CONTROL

Types of fires and extinguishing methods:

Class A

- ordinary materials e.g. Wood/paper/rag.
- water for quenching.
- dry powder – breaks up flames – layer retards further combustion.

Class B

- vapour air over surface of flammable liquids e.g. Gasoline/oil/grease/paint.

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FIRE RISK CONTROL

Class C






- in/near electrical equipment
- dry chemical, CO₂, compressed gas vaporizing liquid.
- do not use foam/water

Class D

- on combustible metals, magnesium, titanium lithium, sodium.
- do not use normal extinguishing agents – possible adverse effects. Special extinguisher required.

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FIRE RISK CONTROL

CLASSES OF FIRES	TYPES OF FIRES	PICTURE SYMBOL
A	Wood, paper, cloth, trash & other ordinary materials.	
B	Gasoline, oil, paint and other flammable liquids.	
C	May be used on fires involving live electrical equipment without danger to the operator.	
D	Combustible metals and combustible metal alloys.	
K	Cooking media (Vegetable or Animal Oils and Fats)	



FIRE RISK CONTROL

SOLIDS

Before solid can be ignited, it must be heated
Sufficiently to give off flammable
vapour/gaseous

LIQUIDS

- vapour produced at surface before it will burn
- vapour evolved related to surface area
- concentration – below min too weak to burn
above max insufficient oxygen.
- if vapour density denser than air (1°C) –
concentrate at ground level.



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FIRE RISK CONTROL

Dust

- very high surface area to volume, ratio
- can spread fire across room, along ledge or roof beam, very quickly
- accumulation of dust can smoulder slowly for long periods – later sudden flare up
- some are explosive when suspended as cloud; after ignition fast flames spread through dust cloud; possible more violent secondary explosions.

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FIRE RISK CONTROL

Gases

- stored industrially under pressure.
- pressure often high enough to liquefy gas – released rapid expansion

Spontaneous Heating/Combustion

- biological or chemical reaction heat is evolved at normal ambient temperatures.
- combination with atmospheric oxygen, e.g. vegetable and animal oils finely dispersed on fabrics.
- micro organism e.g. Hay are killed by temp of 75°C or above oxidation takes place and ignition

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FIRE RISK CONTROL



*red for
water*



*blue for
dry
powder*



*cream
for foam*







*black
for
CO2*

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FIRE RISK CONTROL

Fire Extinguisher Chart

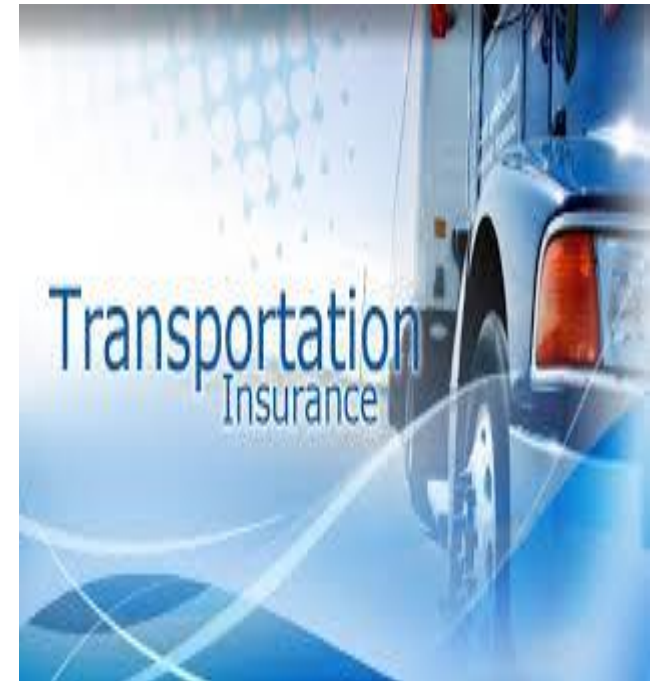
Extinguisher		Type of Fire				
Colour	Type	Solids (wood, paper, cloth, etc)	Flammable Liquids	Flammable Gasses	Electrical Equipment	Cooking Oils & Fats
	Water	✓ Yes	✗ No	✗ No	✗ No	✗ No
	Foam	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes
	Dry Powder	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No
	Carbon Dioxide (CO2)	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes

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MARINE RISK CONTROL

Contracts that concerned water transportation are considered to be ocean marine insurance includes:

1. Hull insurance
2. Cargo insurance
3. Protection and indemnity insurance, a form liability insurance.



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MARINE RISK CONTROL

Shipping operations can be divided to 3 main areas:

1. Liner or break-bulk operations – the carriage of individual shipments on regular or semi-regular services. Container and RO/RO (roll on/roll off ferry) operations have largely replaced traditional break-bulk shipping.



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MARINE RISK CONTROL

2. Bulk cargoes where a whole ship is devoted for a single voyage (or series of voyage) to the carriage of a single bulk cargo such as iron ore, oil, coal or grain. A single bulk cargo may be for one shipper or a number of shippers and the cargo may be bought or sold during the voyage.

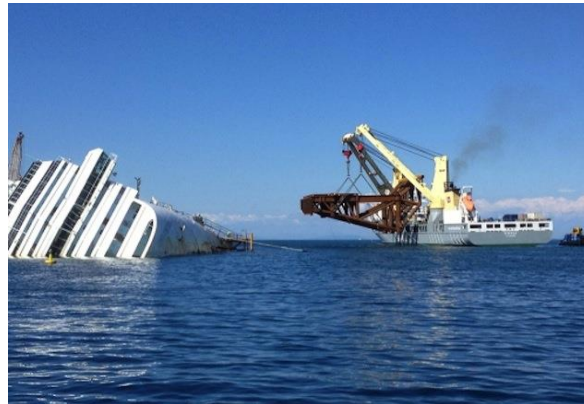


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MARINE RISK CONTROL

3. Specialist marine operations, such as support vessels to offshore and other operations, salvage, dredging, towage.

Changes in ship technology, such as containerisation and a high degree of automation have reduced the number of on board ships (major vessel have between 15-25 crew).



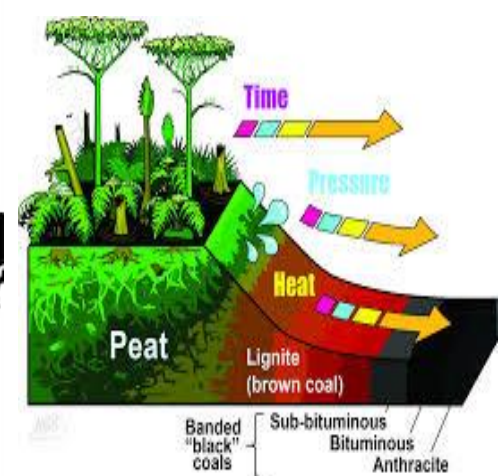
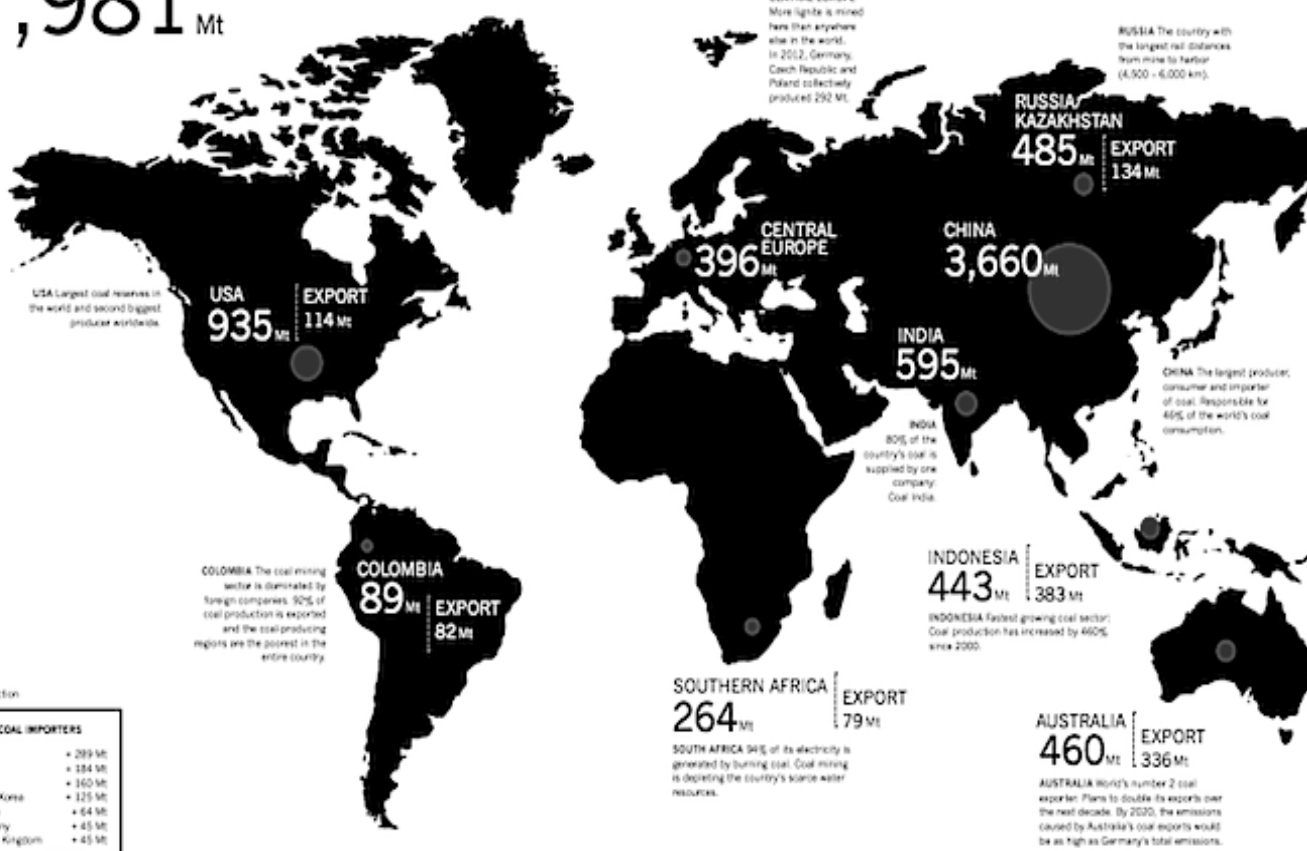
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ILLUSTRATION - COAL

Global Coal Production 2012

7,981 Mt

IV. The "Hot Spots"



● Production

MAIN COAL IMPORTERS	
China	+ 289 Mt
Japan	+ 184 Mt
India	+ 160 Mt
South Korea	+ 125 Mt
Taiwan	+ 64 Mt
Germany	+ 45 Mt
United Kingdom	+ 45 Mt

Mt = million tons

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ILLUSTRATION COAL CARRIER





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MARINE AND RELATED LIABILITIES

Type of liability	Comments and coverage
1. Collision	Limitation under Merchant Shipping Act
Loss or damage to other ship demurrage/ Loss of use, general average sacrifice and Contribution	3/4 th cover – under Institute Time Clauses (RDC) Other 1/4 th covered by P&I Club
2. Salvage/salvage charges	Institute Time Clauses
3. General average contribution General average sacrifice	Institute Time Clauses pays General average recovery pays
4. To cargo (note limited conditions of Hague-Visby Rules)	Cargo owners insures risk Recovery from shipper in limited situation is Paid by P&I Club



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MARINE AND RELATED LIABILITIES

Types of liability	Comments and Coverage
5. Excess liability	Liability in excess of insured value of ship for general average, salvage, salvage charges, sue and labour, collision liability Insurable such as Institute Excess Liabilities clauses (Hull)
6. Employers' liability	P&I Club
7. Fines	P&I Club
8. Towage	Liability imposed on towed ship by towage contract for damage to tug however caused P&I Club



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MARINE AND RELATED LIABILITIES

Type of liability	Comment and Coverage
9. Third Party in and near ship wreck removal Damage other than collision Collision with other objects	Not covered under ITC P&I Club covers Ship owners may have limitation on a tonnage basis in ports, harbours, waterways etc.
10. Pollution	Tanker owners have limitation cover under TOVALOP/CRISTAL Others including non-cargo tanks of tankers under P&I Club.