

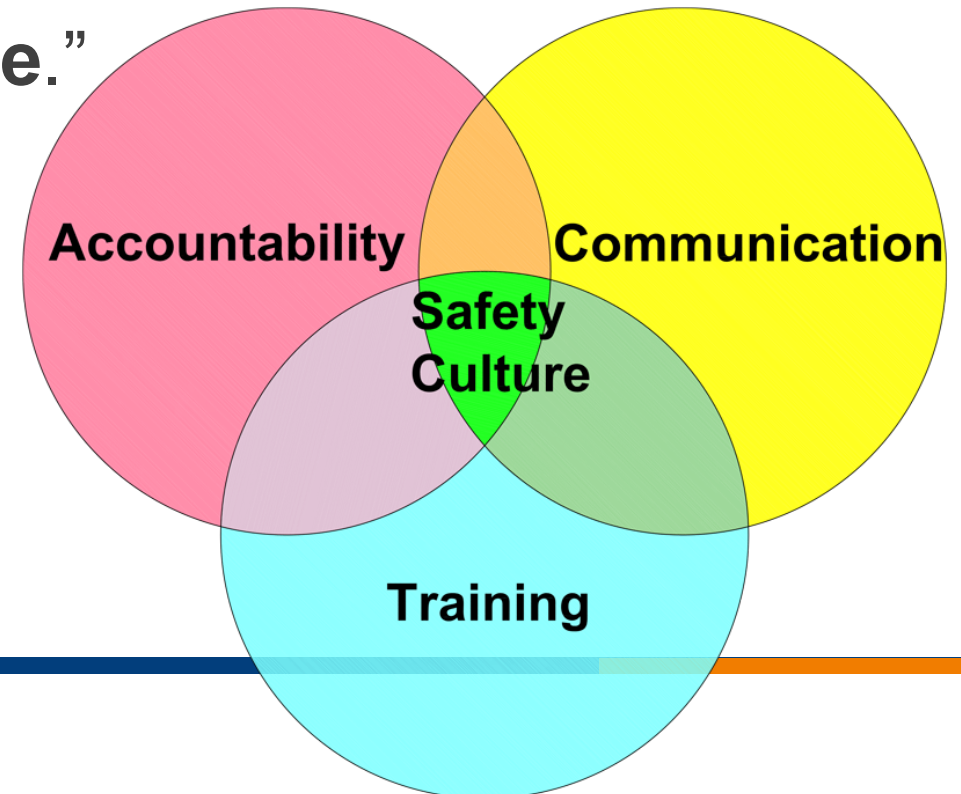
AUDIT 101

Department of Medicine, NUS Medicine
26th August 2016

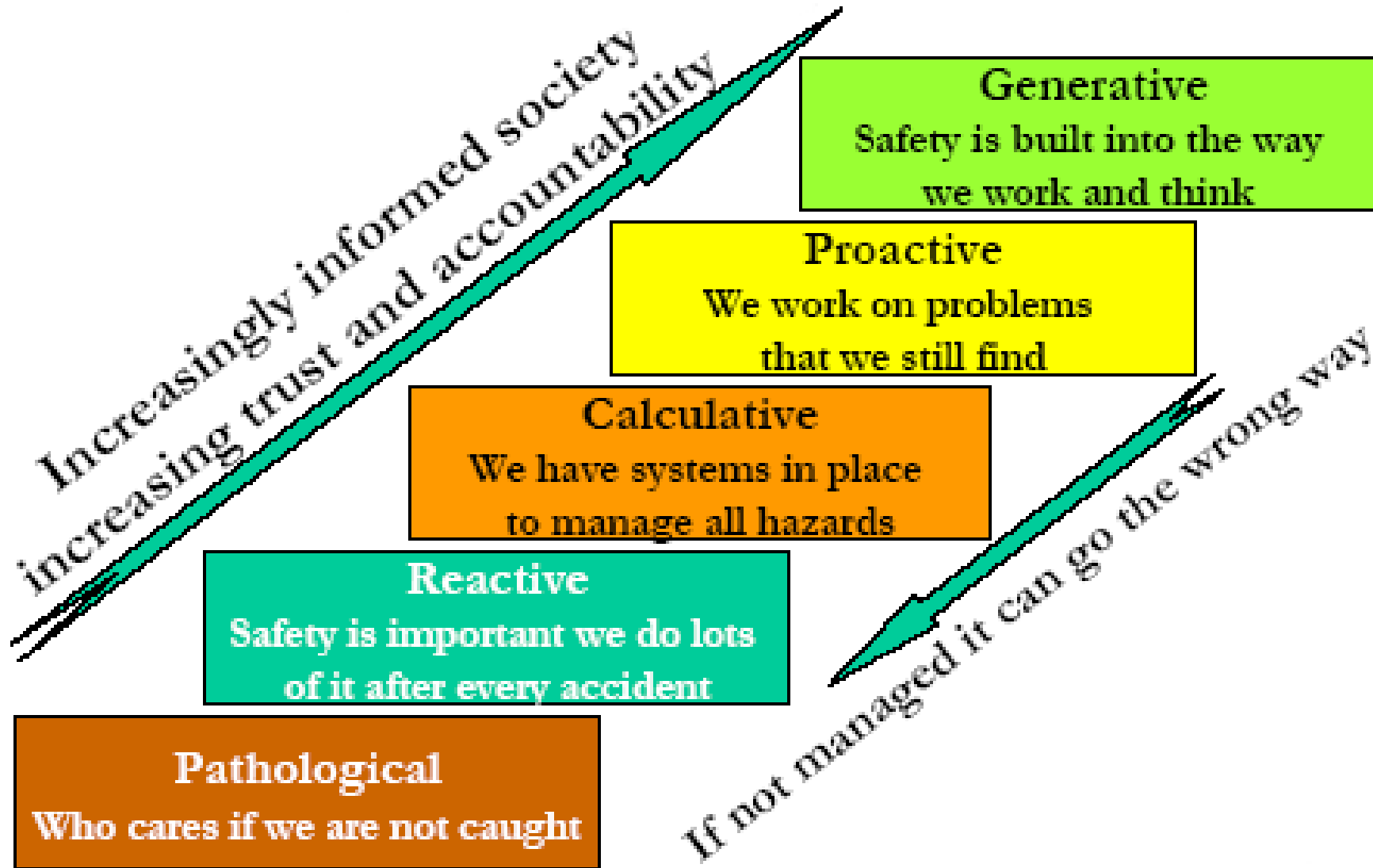
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“Workplace health promotion, services, and safety & health management may have a major preventive impact, **leadership and management at all levels**, and engagement of workers are key issues in **changing the workplace culture.**”



SAFETY CULTURE MATURITY



OVERVIEW

1. Introduction – global overview on workplace safety
2. Risk Assessment
 - Principles of assessing risk
 - An example (for discussion)
 - Common findings
3. Accident / Incident reporting
 - Previously shared on the overview of AI
 - Brief introduction on EHS360 and AIMS
 - Tools available
4. S&H Legislations

GLOBAL OVERVIEW ON WORKPLACE SAFETY

- The International Labour Organization (ILO) estimated that about **2.3 million workers** die from occupational accidents and diseases worldwide every year.



■ **Asia** – 50% of Estimated Global Work-Related Deaths

COST OF AN ACCIDENT

- 4% of annual global GDP, or USD 2.8 trillion, being lost to direct and indirect costs of accidents and diseases.
- Estimated SGD 10.45 billion (equivalent to 3.2% GDP) lost in 2011 to work injuries and ill health.

“If you think Health & Safety is expensive.
Try having an accident.”



200 Bill C / year



15 X

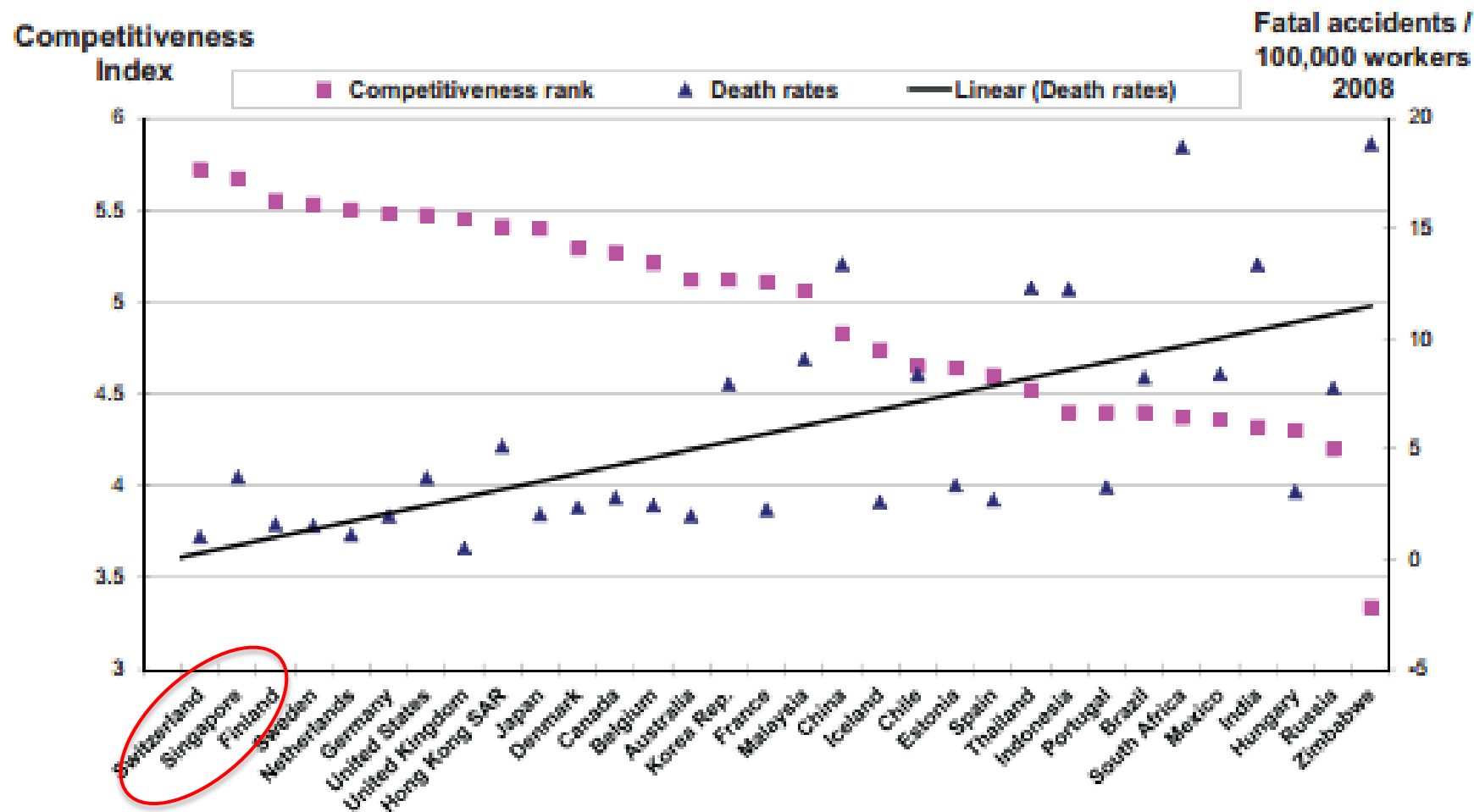
3000 Bill C / year



Imbalance between investments into safety and health and costs due to lack of safety and health in the European Union

Takala J, Hämäläinen P, Saarela KL, et al. Global Estimates of the Burden of Injury and Illness at Work in 2012. *Journal of Occupational and Environmental Hygiene*. 2014;11(5):326-337.

INVERSE CORRELATION OF COMPETITIVENESS AND OCCUPATIONAL SAFETY



Takala J, Hämäläinen P, Saarela KL, et al. Global Estimates of the Burden of Injury and Illness at Work in 2012. *Journal of Occupational and Environmental Hygiene*. 2014;11(5):326-337.

JUST IN

- 50 lives have been lost this year
 - Mostly in construction sector
- ~ 2.2 deaths per 100,000 workers



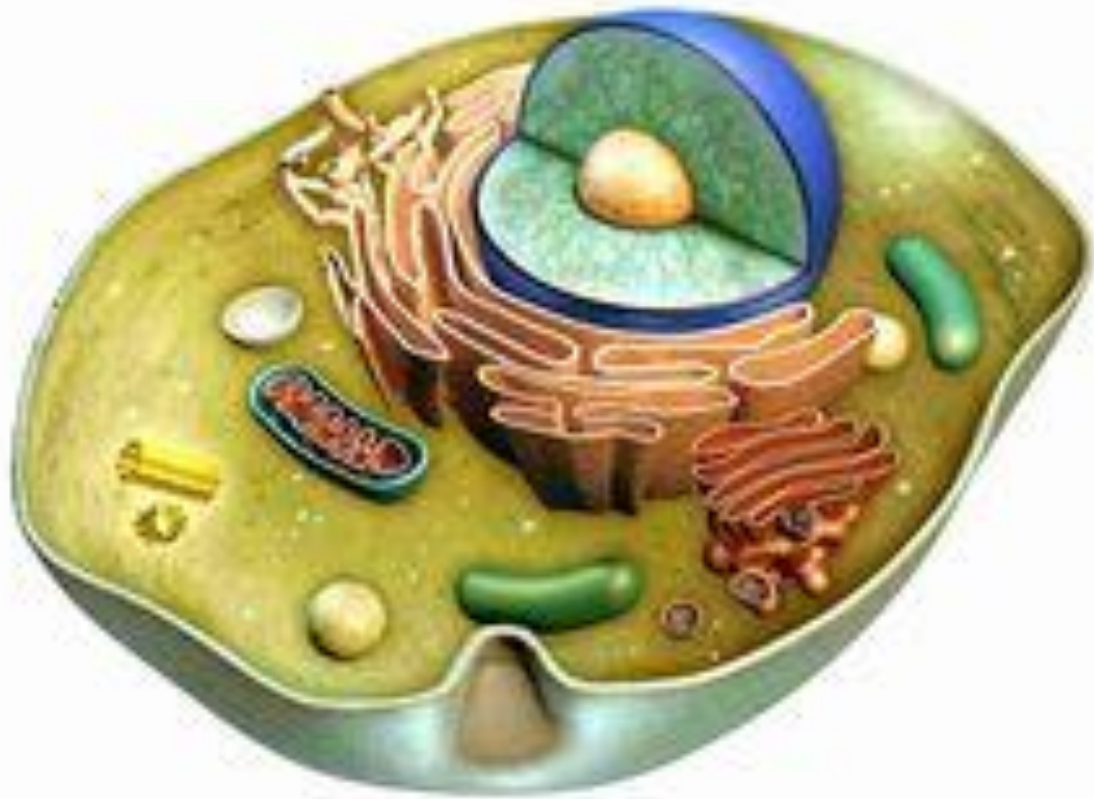
Channel NewsAsia

24 Aug at 22:35 • 🌐

Some firms have set aside "safety budget" for fines for workplace safety and health infringements said Manpower Minister **Lim Swee Say** at the SWSH Conference 2016. "Clearly, we need to do more and do better to strengthen WSH ownership across all levels in the construction sector - the employers, the supervisors and the workers."

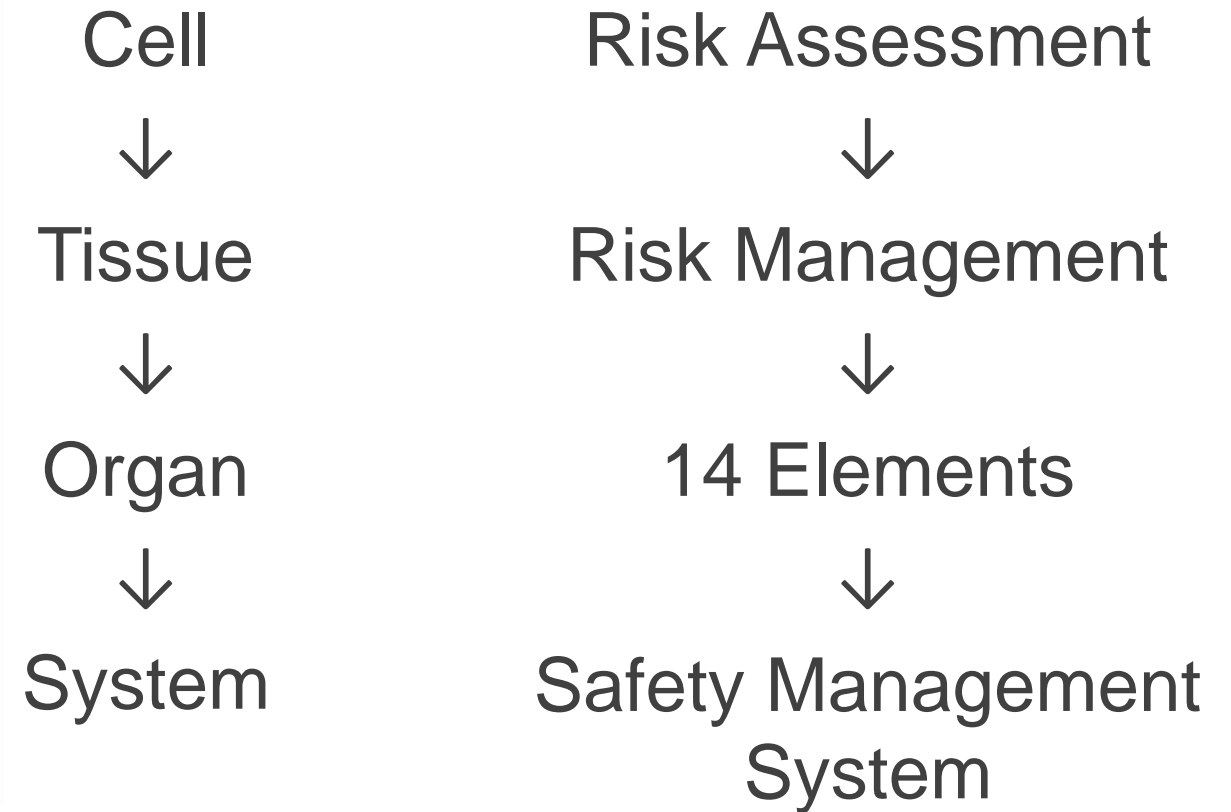
"We are deeply concerned with the recent spate of fatalities," Minister of State for Manpower Sam Tan told The Straits Times yesterday. "We will continue to take strong enforcement actions against errant employers and will prosecute those who are found liable for the accidents. We call on employers and workers to work together to take all measures to prevent further workplace accidents."

WHAT IS THIS?



CELL BIOLOGY 101

The cell is the most basic unit of living things.

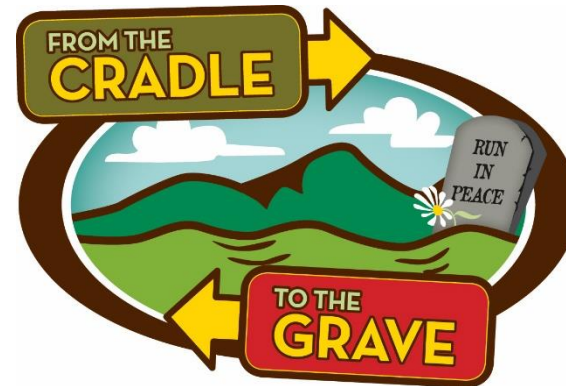


RISK ASSESSMENT = ASSESSING RISK

Hazard Identification, Risk Assessment & Determining Controls (HIRA)

1. **Identify** – most important step
2. Assess
3. Control

Chemical / Biological / Radiation
Mechanical / Physical / Energy
Environmental / Human factor



1. Procurement
2. Storage
3. Movement
4. Handle & processing
5. Dispose

For more information, iVLE training (OSHSMS01) 3 hrs
Safety and Health Management System (SHMS)

Activity-Based Risk Assessment Form

Name of Department _____

Location of Lab _____

Name of Laboratory _____

Name of PI _____

Name of Researcher/LO _____

Name of Activity/Experiment _____

No	Description/Details of Steps in Activity	Hazards	Possible Accident / Ill Health & Persons-at-Risk	Existing Risk Control (Mitigation)	Severity	Likelihood (Probability)	Risk Level	Additional Risk Control	Person Responsible	By (Date)
1							0			
2							0			
3							0			
4							0			
5							0			
6							0			
7							0			
8							0			
9							0			
10							0			

Conducted By _____

Approved By

Name _____

Signature _____

Approval date _____

 Next Revision date
 (Maximum 3 years) _____

STEP BY STEP

1. Description/Details of Steps in Activity
2. Hazards (Procedural / Substance / Equipment)
3. Possible Accident / Ill Health & Persons-at-Risk (Consequence)
4. Existing Risk Control (Mitigation) – Hierarchy of Controls
5. Severity – next slide
6. Likelihood (Probability) – next slide
7. Risk Level = severity x likelihood
8. Additional Risk Control
9. Person Responsible
10. By (Date)

		Likelihood		
		Likely	Possibly	Unlikely
Severity	Low	3	2	1
	Med	6	4	2
	High	9	6	3

Risk = Likelihood x Severity

RISK	DECISION PROCESS
< 3	RISK ACCEPTABLE
3, 4	CONSIDER ADDITIONAL RISK CONTROL
> 4	ADDITIONAL RISK CONTROL REQUIRED

Likelihood

- 1 **Unlikely** Not likely to occur (has not occurred in the PI's Lab or similar Lab setup.)
- 2 **Possible** Possible or known to occur (has occurred in the PI's Lab or Similar Lab setup.)
- 3 **Very Likely** Common or repeating occurrence (has occurred repetitively in the PI's Lab or similar Lab setup.)

Severity

- 1 **Low** (e.g. No injury, injury or ill-health requiring first aid treatment only - includes minor cuts and bruises, irritation, ill-health with temporary discomfort)
- 2 **Medium** (e.g. Injury requiring medical treatment or ill-health leading to disability - includes lacerations, burns, sprains, minor fractures, dermatitis, deafness, work-related upper limb disorders)
- 3 **High** (e.g. Fatal, serious injury or life-threatening occupational disease - includes amputations, major fractures, multiple injuries, occupational cancer, acute poisoning and fatal diseases)

Severity - Consider the magnitude/severity of the consequences of the Risk Factor occurring and then list this as 3 (High), 2 (Moderate) or 1 (Low).
 Severity normally will not change unless there is a physical change to the equipment or process.

Likelihood - Team should rely upon their experience and consider realistic scenarios. Listed below are examples of factors that may be considered in determining the likelihood.

- Past experience / incidents
- Complexity of the activity
- Number of personnel involved in the activity (e.g. all personnel, a limited number of trained personnel, etc)
- Frequency of use or execution
- Degree of control (involvement of contractors)
- Strength/completeness of administrative controls
- Sufficiency/formality of training
- Other....

MAGGI 2 MINUTE NOODLES

How to Make <<< Refer to SOP

MICROWAVE

STOVE TOP

Serves: 1 | Preparation time: 0 Minutes | Cooking time: 3 Minutes

- 1 Break noodle cake into quarters and place in a medium microwave-safe bowl. Cook in 1½ (375mL) of boiling water in an 850 watt microwave oven on HIGH for 2 minutes.
- 2 Stir in contents of flavour sachet and enjoy!CAUTION: Take care when removing from microwave as contents will be very hot.Serve with or without broth as desired, these MAGGI 2 Minute Noodles also make a great base for a quick and delicious meal.



Ingredients

Noodle Cake:

Wheat flour, vegetable oil (antioxidant 319), salt, mineral salts (508, 451, 501, 504), Vegetable Glycerol (12),

Flavour Mix Sachet:

Iodised Salt, Maltodextrin (Contains Sulphites), Flavour Enhancers(621, 635), Flavours (contains Wheat, Soy, Celery, and Sulphites), Mineral Salt (508), Onion Powder (contains Sulphites), Vegetable Fat (antioxidant (320)), Colours (Turmeric, Caramel III)(Contains Sulphites), Parsley Flakes, Spices.

Contains Wheat, Soy, Celery and Sulphites

Made on equipment that also processes products containing crustacea, fish, milk, mustard and sesame

<<< Refer to SDS

No	Description/ Details of Steps in Activity	Hazards	Possible Accident / Ill Health & Persons-at-Risk	Existing Risk Control (Mitigation)	Severity
1	Remove packaging	Cut by scissors	Minor cut	Avoid using scissors by tearing along the opening line	1
2	Breaking noodle cake into quarters	Broken pieces of noodles	May cause choking for children under 2	Break the noodle cake in the packet	1
3	Cook noodles in 375mL of boiling water	Physical contact with hot water	Minor skin burn	1. Ensure that hot water is poured slowly. Avoid splashing. 2. Wear thermal gloves when pouring hot water.	1
4	Switch on the 850 watt microwave oven on High for 2 minutes	Equipment failure	Electric shock	1. Do not contact power supply with wet hands 2. Check for loose wiring and deterioration of wire insulation .	1
5			Fire caused by electrical arcing	1. Keep power socket free from combustible materials 2. Cut electrical supply immediately when burnt smell is observed.	3
6		Finger pinched by oven door	minor bruising	Open/shut the door gently using the handle	1
7		Soup overflow of the bowl	Spills	1. Do not cook for more than 2 min on high power 2. Use a large bowl with capacity above 600ml 3. Use a microwave safe bowl	1
8	Removing the prepared noodles for consumption	Minor splashes	Minor skin burn	Same as step 3.	1
9		Dropping the bowl	Major skin burn	Same as step 3, in addition: 1. Ensure first aid kit is available for treating burn/scalding	2
10			Minor Cut	1. Pick up the noodles/broken bowl using kitchen tongs	2
11			Slip	1. Mop up excessive liquid. 2. Ensure that the floor is not slippery	3

10 COMMON FINDINGS (HIRA)

1. Identification of hazards was incomplete
2. Existing control measures not documented in RA
3. Control measures identified were not specific to the hazard
4. Potential accident/ill health was not specific to the hazard described
5. Control measure described was not effective in mitigating the hazard identified
6. Hierarchy of controls were not considered when prescribing the control measures
7. Grouping of hazards and consequences
8. Severity level for the hazards has been understated
9. RA not reviewed at least once every 3 years, or when necessary
10. No evidence that the RA was conducted



End of Risk Assessment / Management

AIRS AIMS

ACCIDENT / INCIDENT MANAGEMENT SYSTEM

EHS 360



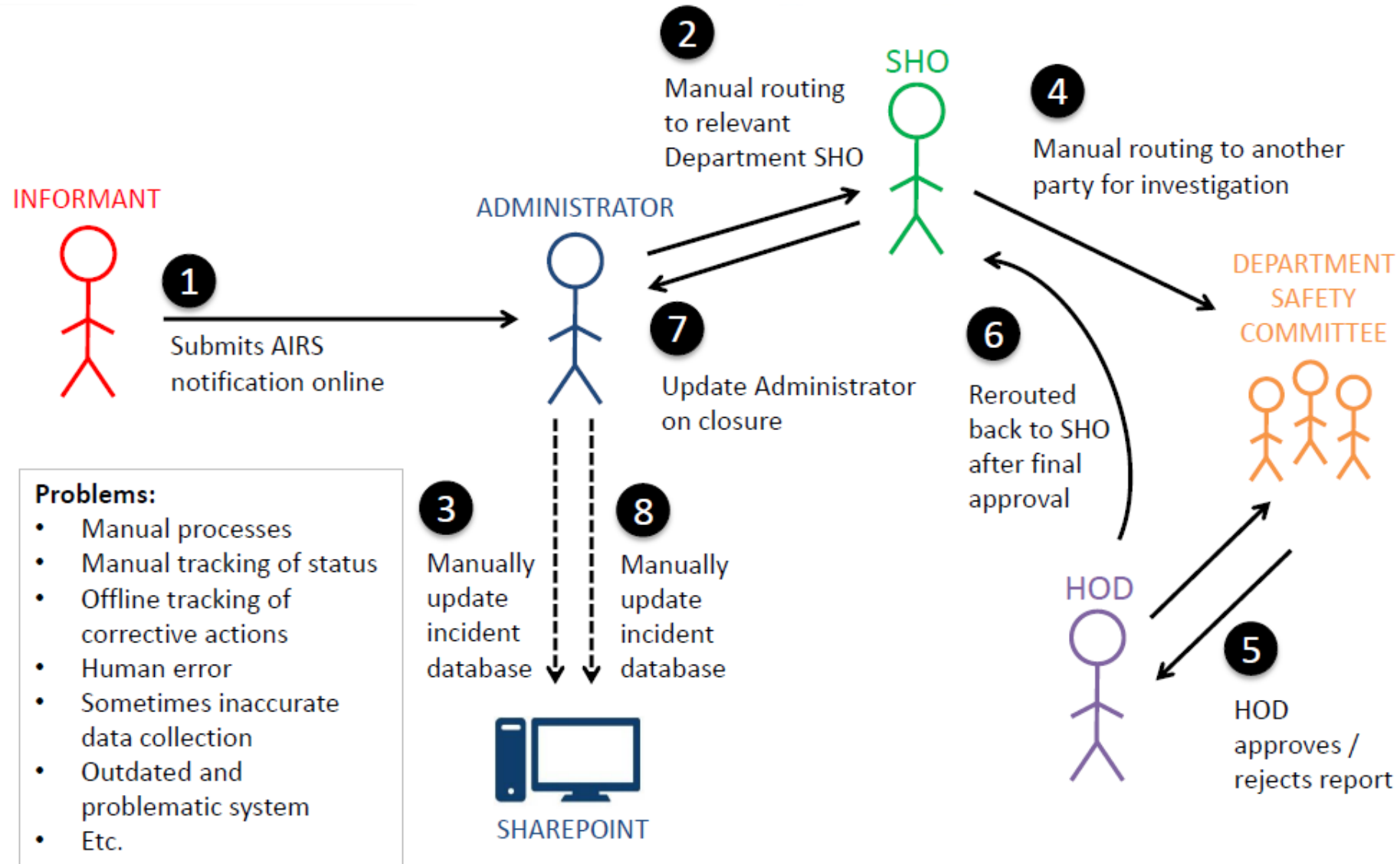
Purpose – To reduce
paperwork and
increase productivity.



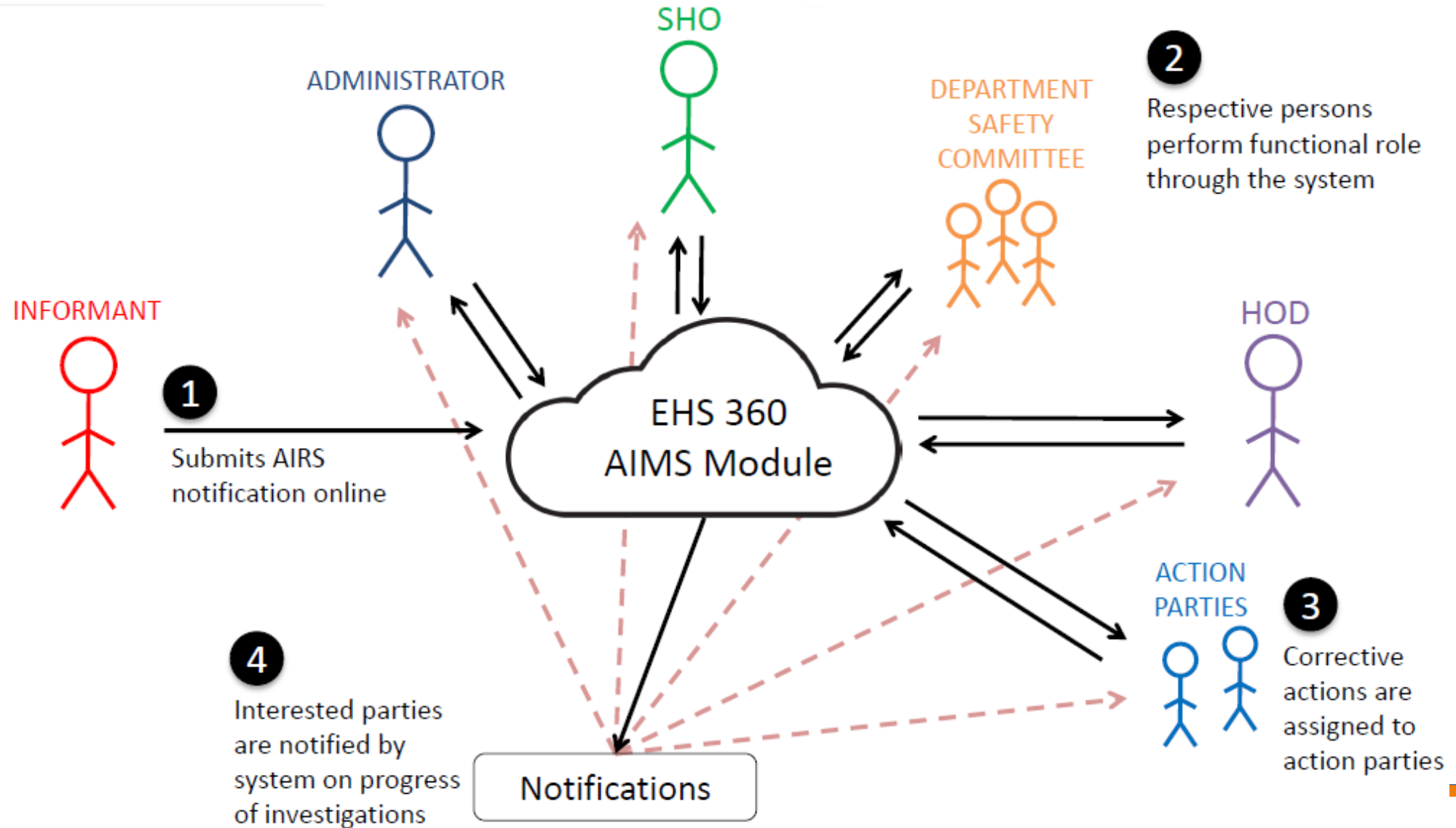
4 Modules



Previous - AIRS



Current - AIMS



Introduction

- AIMS (Accident and Incident Management System) was launched on 1st August 2016 at 0800 hrs
- AIMS is a module of an integrated IT platform EHS360
- To assist Pls and Departments to manage safety and health holistically



Staff Access

<<< **NUS Staff Portal**

or

OSHE Portal >>>>

- Staff Development Plan ?
- In-house Training ?
- Declaration of external commitments, close relationships & gifts/gains ?
- Declaration of Conflict of Interest (Student-related)
- Medical & HealthChoice
- TRAC
- Mid Term Advisory Report System ?
- Peer Review System ?
- SPACE
- Research
- VOICES
- OHR Shared Services (HR Professional use only)
- More...
 - NUS Quality Service Award
 - Service Request Tracker
 - Accident and Incident Management System (AIMS)**
 - Assumption of Duty (Acad)
- Risk Management

e-Services

- Integrated Online Research Compliance (iORC) System [Apply](#)
- Temporary Change of Use Permit Application (TPA) [Apply](#)
- Accident and Incident Management System (AIMS) [Report](#)**
- Anonymous Safety Concern Reporting
- Non-lab based declaration
- Safety Suggestion through VOICE
- OSHE Customer Feedback

Student Access

Quick Links

- Academic Calendar
- Acceptance Record
- Accident / Incident Reporting System (AIRS)
- Circulars to Students
- Centre for Future-ready Graduates
- Code of Student Conduct
- Copying of Library Materials
- Examination Directory
- Financial Aid
- Finance-related Forms
- Health Service
- Integrated Virtual Learning Environment (IVLE)
- Library Portal
- Message of the Day

<<< **NUS Student Portal**

Com Centre is taking awhile
to change to AIMS

Accident and Incident Management System (AIMS)

Introduction

The Accident and Incident Management System (launched on the 1st of August 2016), is an online platform for the reporting of safety and health incidents on campus and the subsequent management of investigation reports and follow up actions. This system supersedes the Accident and Incident Reporting System (AIRS), which has ceased operations with effect from 2 August 2016.

The AIMS module in EHS 360 is an integrated system that allows for:

1. Incidents, near-misses and unsafe acts/conditions to be reported to a centralised
2. Management of investigations and follow-up by respective departments-in-charge
3. Tracking of corrective and preventive actions
4. Monitoring of statistics and trends for identification of possible intervention and prevention programmes

https://inetapps.nus.edu.sg/osh/portal/eService/ehs360_aims.html

Tools

Tools

To report an incident, near-miss or safety concern using your NUSNET account
We encourage named reporting in order for a more effective follow-up by the respective departments-in-charge.
To report a safety concern anonymously, click [here](#).

[Launch
AIMS](#)

NUS Accident / Incident Reporting and Investigation Standard

[View standard](#)

User Guide for AIMS

[User Guide for Informants](#)
[User Guide for Investigators](#)
[User Guide for Approvers](#)
[User Guide Action Owners and Assignees](#)

Communication Slides

[Update on AIMS launch](#)

Benefits

Roles	Person Affected	Changes	Reference
Informants	All NUS Staff and Students	a) Change of user interface b) There will be no significant change in the information to be provided.	User guide for Informant
Investigators	1. Safety Lead or 2. Department Safety Coordinator	a) The incident investigation form will be on an online system. b) Less hassle and administrative work	User guide for Investigator
Approvers	1. PI/Lab Supervisor 2. Head of Department	a) Approval is triggered by email	User guide for Approver
Action owners and assignees	Any NUS Staff and Students	a) Follow-up actions assigned electronically b) Automated reminder system	User guide for Action owner and assignees
Department Safety Coordinators		a) Analytics to assist department to identify areas for improvement b) Automated monitoring and tracking of incident/accident investigation process.	

It takes time & practice to AIM& properly

THE END



“Health and safety at work is not just sound economic policy, it is a basic human right.”

THANK YOU