

# BPS1353 Hazard Recognition & Risk Management

# Hazard Identification Risk Assessment and Risk Control (HIRARC)

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## Chapter Description

- Aims
  - Explain the process of HIRARC
- Expected Outcomes
  - Able to describe about HIRARC process.
- References

- Guidelines for Hazard Identification, Risk Assessment and Risk Control (HIRARC), DOSH (2008), JKKP DP 127/789/4-47, ISBN 978-983-2014-62-1



## Content

- Introduction
- HIRARC





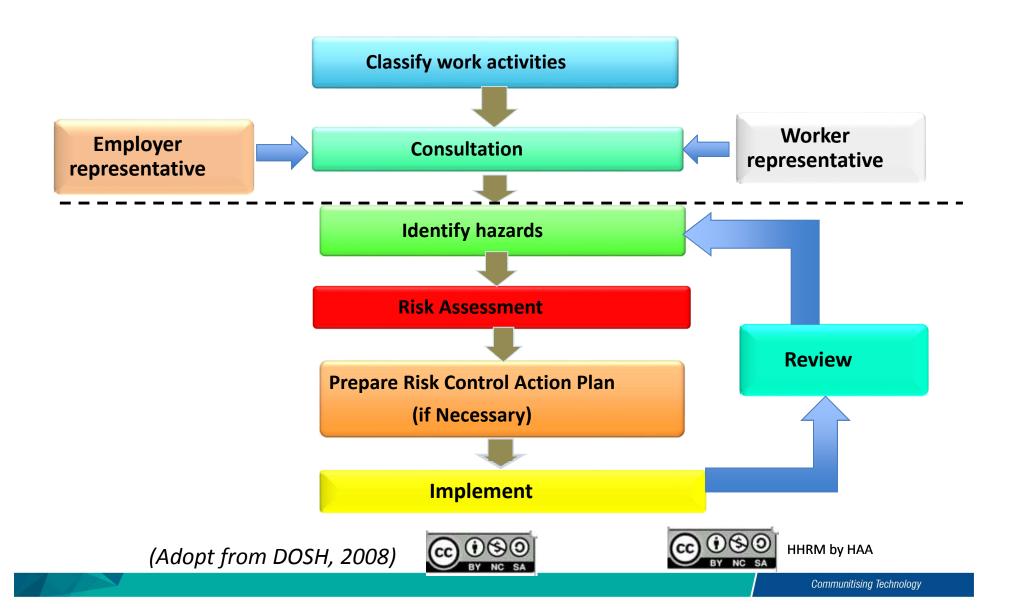
## Introduction





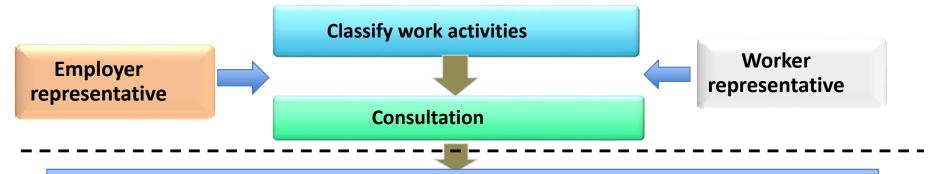
HHRM by HAA

## FLOWCHART OF HIRARC PROCESS Universiti Malaysia PAHANG PAHANG



# HAZARD IDENTIFICATION PRE- ASSESSMENT





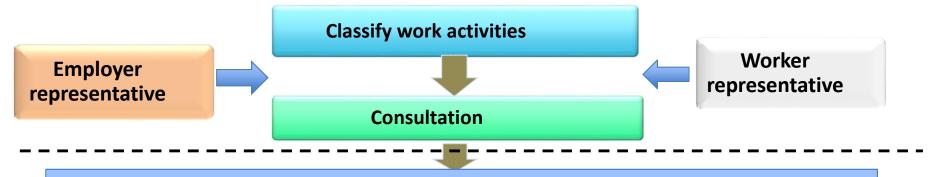
Information of the process, facilities and activities of the organization:

- A) Area map
- B) Site plan, own and neighbor
- C) Process flow charts
- D) Inventory of materials (raw material, waste, products and sub products)
- E) Toxicology and other health and safety data
- F) Monitoring data



# HAZARD IDENTIFICATION PRE- ASSESSMENT



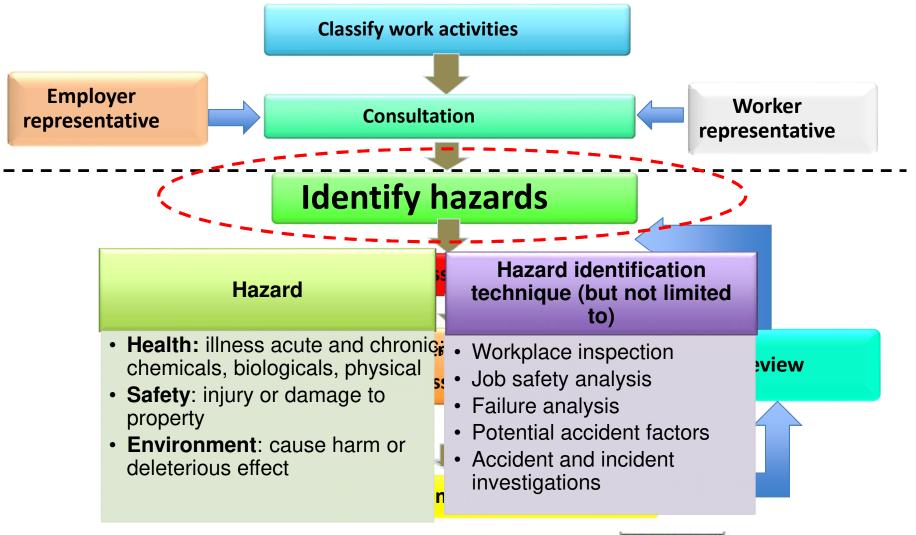


#### Classifying work activities:

- A) Geographical area with/outside premises
- B) Stages in production process, or in a provision of a services
- C) Defined the task (machine operator, sales officer)
- D) Identify the working group
- E) Land use, previous property use, future use
- F) Not too big (e.g. building a car) and not too small (e.g. fixing a screw)



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#### Risk Assessment

- Risk is the determination of likelihood and severity of the credible accident/event sequences in order to determine magnitude and to priorities identified hazards.
- Risk can be calculated by the equation -

**Risk = Likelihood x Severity** 





Closer a control to the source of the hazard is the better Prepare Risk Control Action Plan
(if Necessary)

Hazard should be controlled at their source

#### **NOTES:**

These control measures are not usually mutually exclusive e.g. engineering controls can be implemented together with administrative controls like training and SWPs.

#### Elimination

(e.g. dispose of unwanted chemical)s

#### Substitute the hazard

(e.g. use a less toxic chemicals)

#### Isolate the hazard

(e.g. place barriers around a spill until cleaned up)

#### Use engineering controls

(e.g. place guards on moving machinery parts)

**Use administrative controls** (e.g. introduce job rotation)

#### Use personal protective equipment

(e.g. hearing and eye protection, gloves, nard hats)



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- Check the effectiveness of controls regularly.
- Inspections, routine maintenance and start-up review
- Document control activities



### Conclusion

- HIRARC process include hazard identification, risk assessment and risk control.
- The effectiveness of controls must be checked regularly.





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