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# BPS1353 Hazard Recognition & Risk Management

## Hazard Identification Risk Assessment and Risk Control (HIRARC)

by  
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HHRM by HAA

# 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), JKPP DP 127/789/4-47, ISBN 978-983-2014-62-1



HHRM by HAA

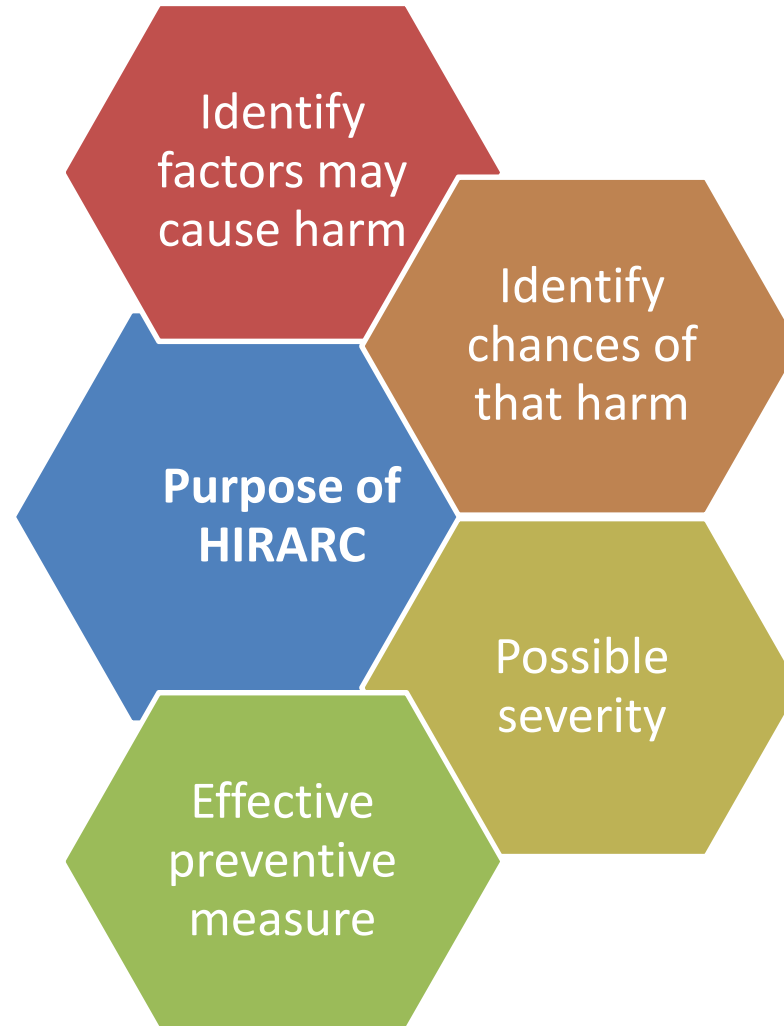
# Content

- Introduction
- HIRARC



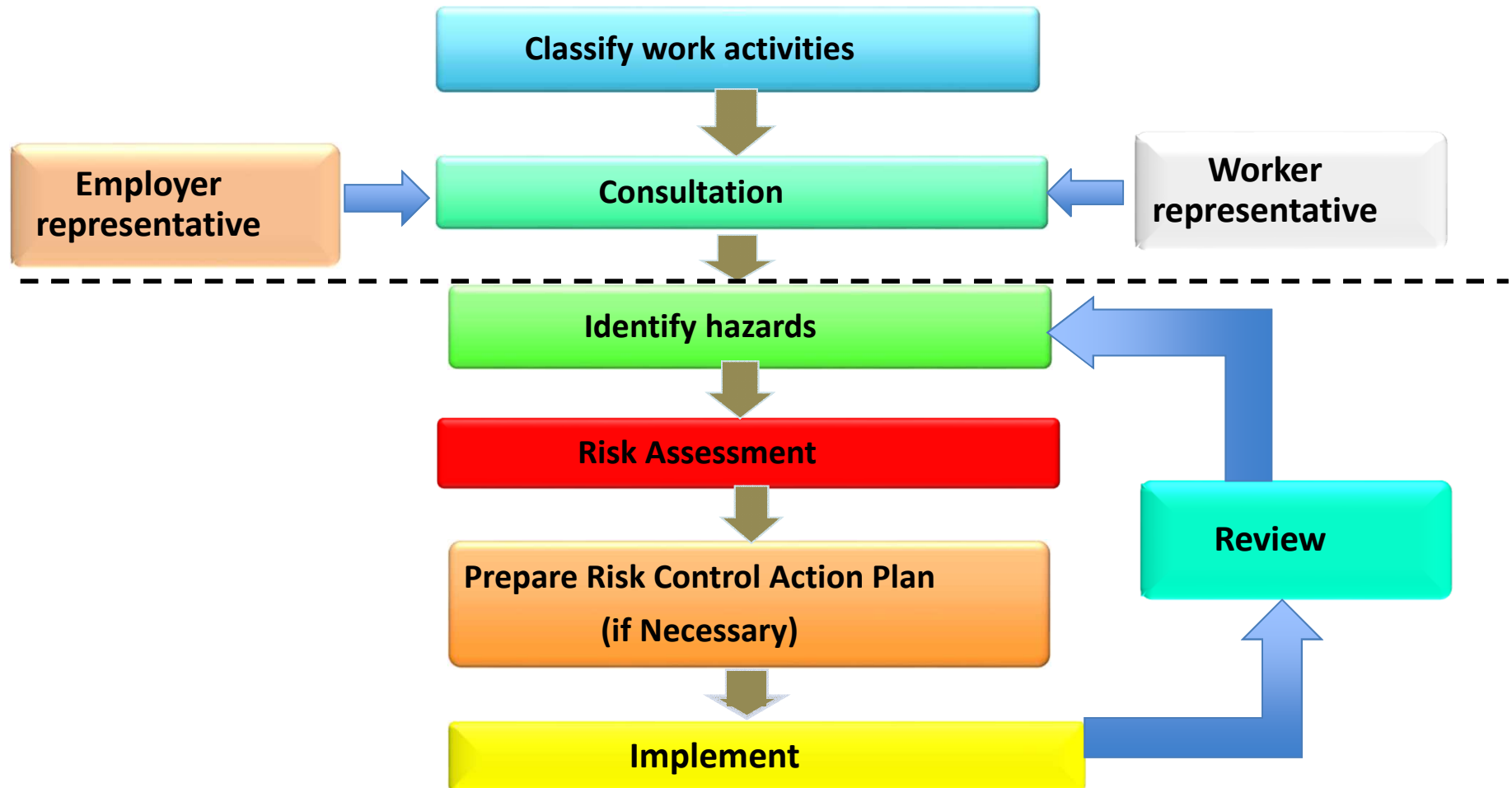
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# Introduction



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# FLOWCHART OF HIRARC PROCESS

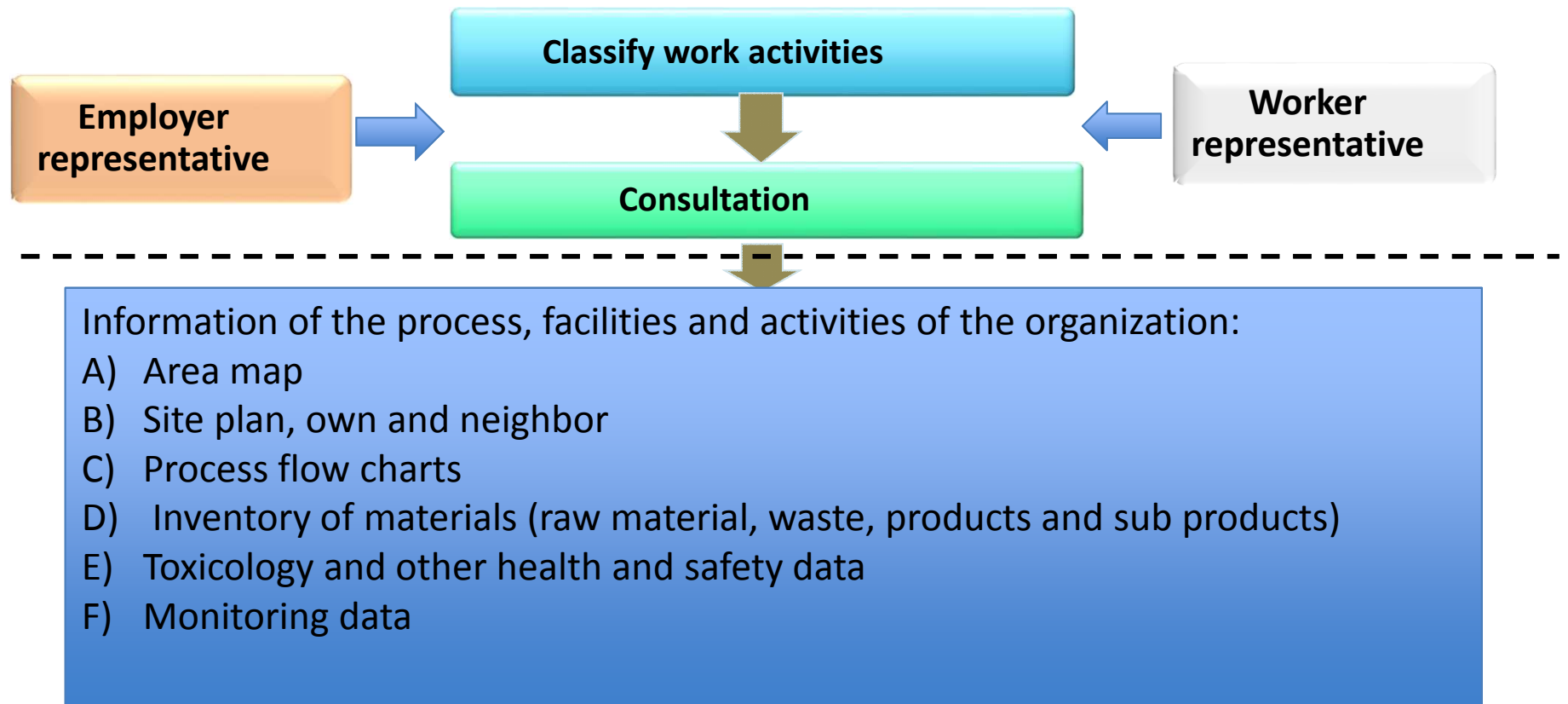


(Adopt from DOSH, 2008)

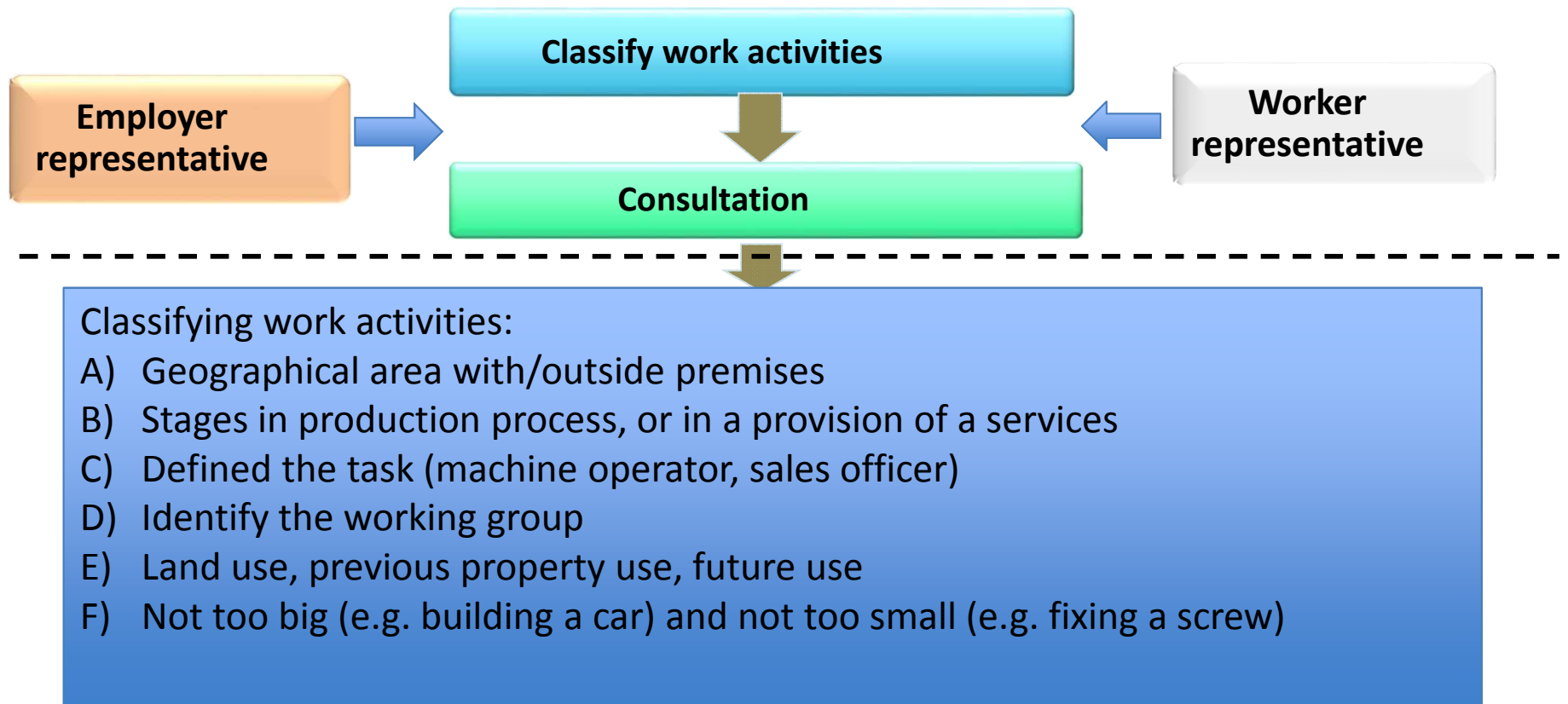


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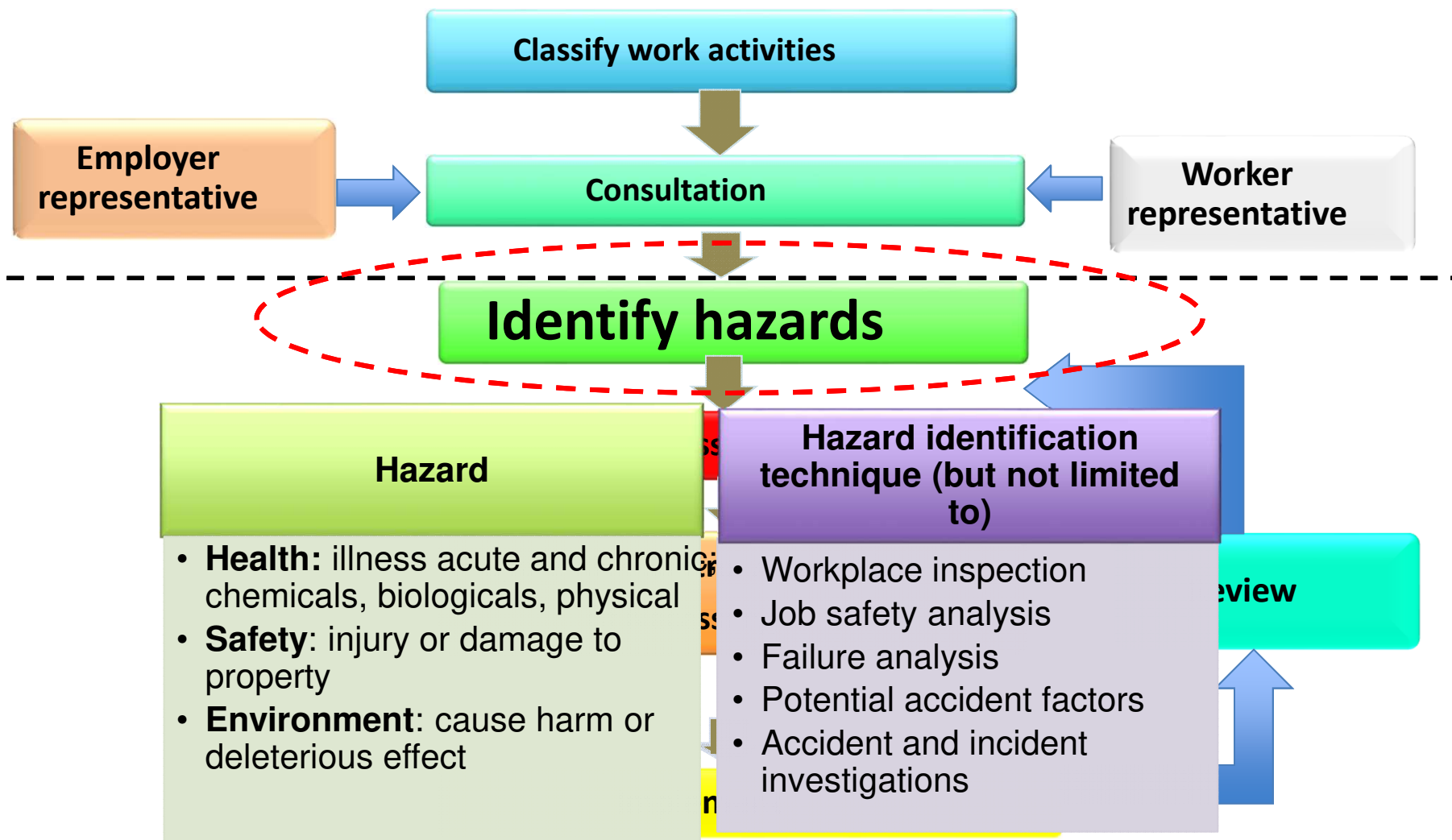
# HAZARD IDENTIFICATION PRE- ASSESSMENT



# HAZARD IDENTIFICATION PRE- ASSESSMENT



# FLOWCHART OF HIRARC PROCESS







## 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 -

$$\text{Risk} = \text{Likelihood} \times \text{Severity}$$



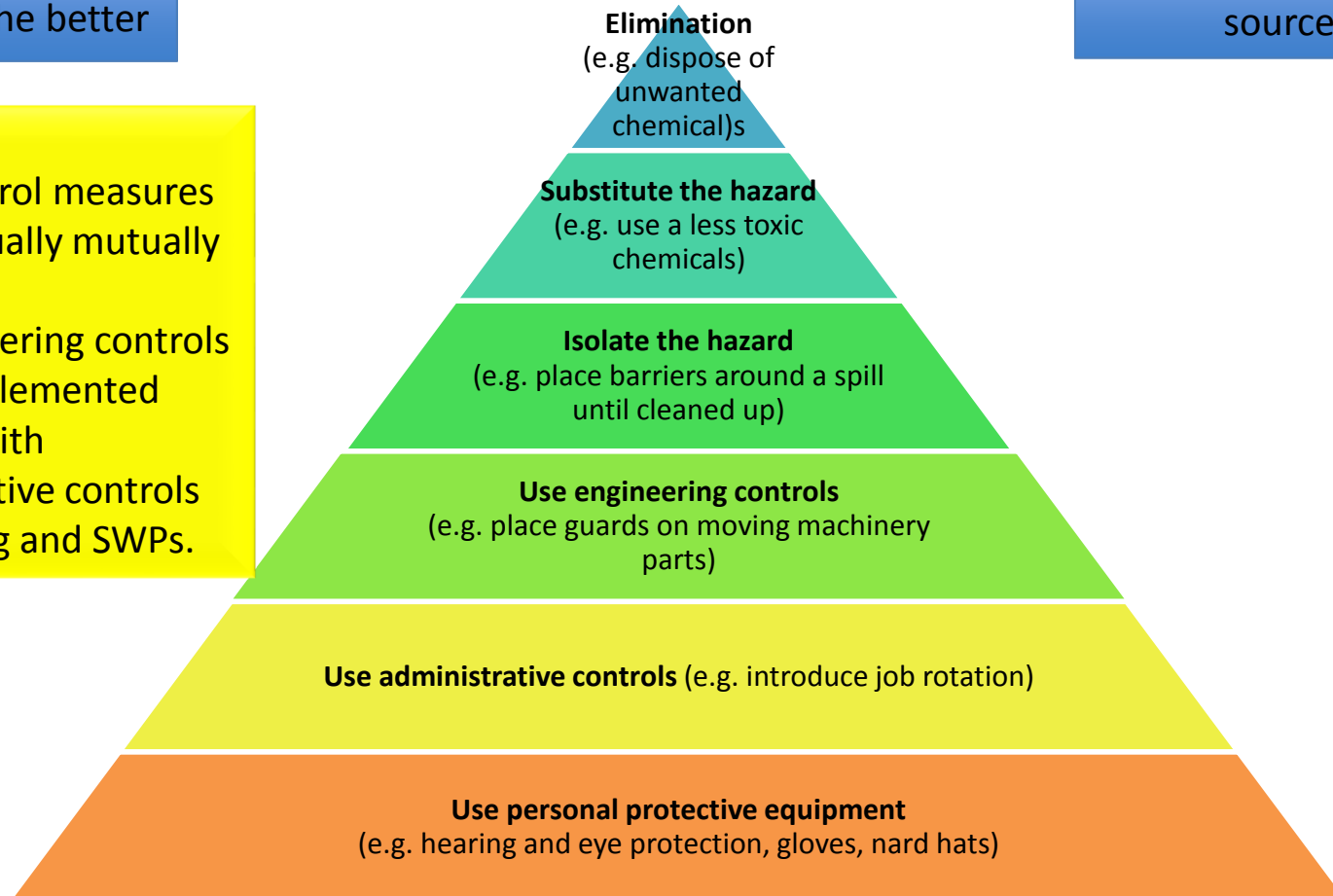
**Prepare Risk Control Action Plan  
(if Necessary)**

Closer a control to the source of the hazard is the better

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.



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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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