



International Regulators' Forum
GLOBAL OFFSHORE SAFETY

ASSET INTEGRITY

AN INTRODUCTORY PERSPECTIVE

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ASSET INTEGRITY HAS MANY DIFFERENT FACETS





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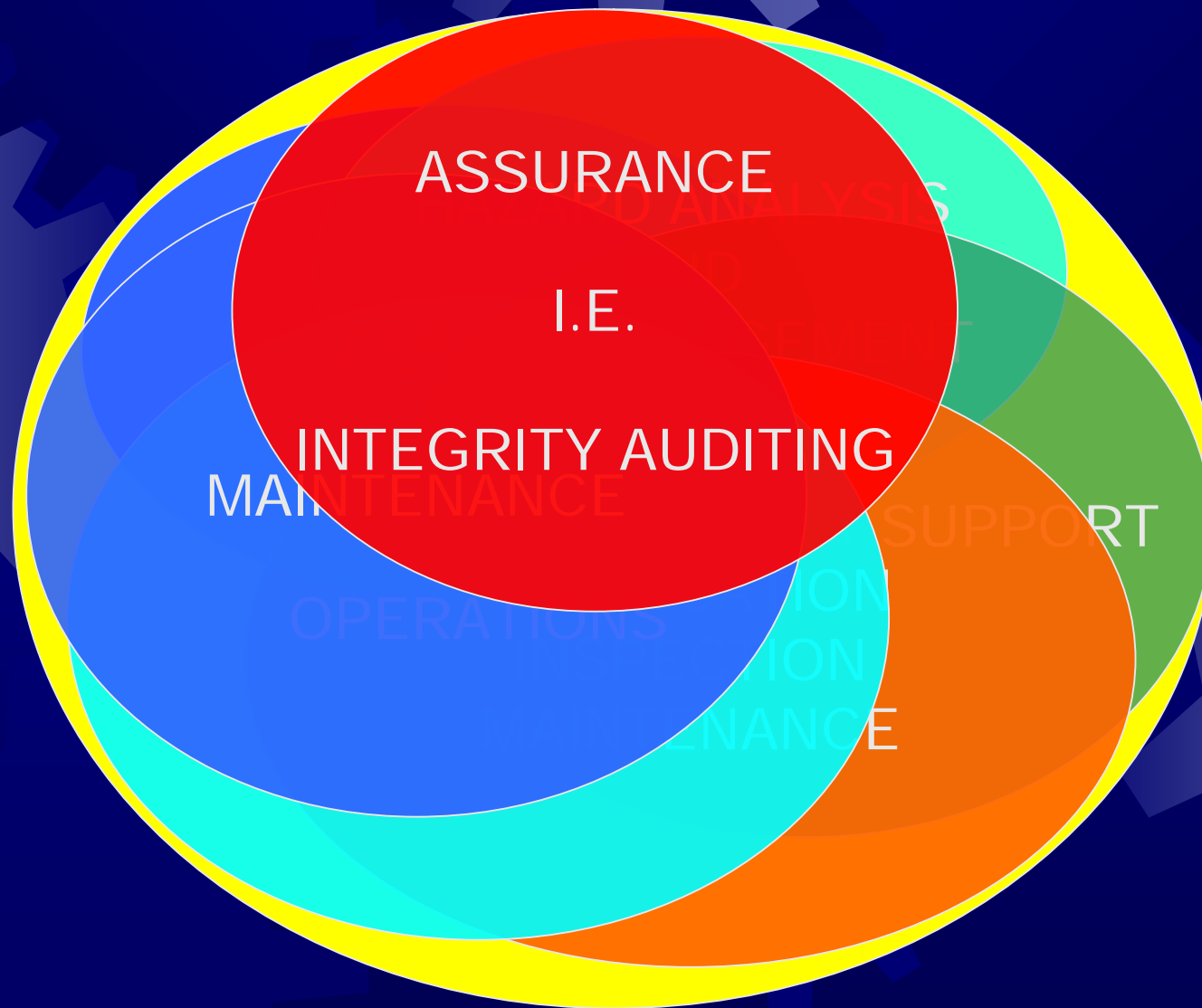
IRF DEFINITION

The maintenance of **fitness for purpose** of offshore structures, process plant, connected pipelines and risers, wells and wellheads, drilling and well intervention facilities, and safety systems.





ENSURING FITNESS FOR PURPOSE





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AS REGULATORS WHAT DO WE MEAN BY ASSET INTEGRITY?





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The Asset Must Function Effectively And Efficiently Whilst

SAFEGUARDING LIFE AND THE ENVIRONMENT

Assuring Asset Integrity Means That

Risks To Personnel Are Controlled And Minimised

Which At The Same Time

Will Help Ensure Stable Production





Safety Versus Production

- Safety And Production Are Inextricably Linked
- Good Safety Performance Means Good Business
- Stable Production Means Reduced Risks
- But
- If Integrity Management Is Sacrificed For Production, Production Will Eventually Suffer

And Lives May Be Lost

Brent B
Texas City Refinery
Grangemouth Refinery





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WHAT DOES THIS MEAN IN PRACTICE?

Assuring Integrity Means **Putting In Place And
Maintaining BARRIERS**

To Prevent, Control And Mitigate
Accident Hazards

And
Injuries





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WHAT ARE THE HAZARDS?

JET FIRE





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WHAT ARE THE HAZARDS?

POOL FIRE





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WHAT ARE THE HAZARDS?

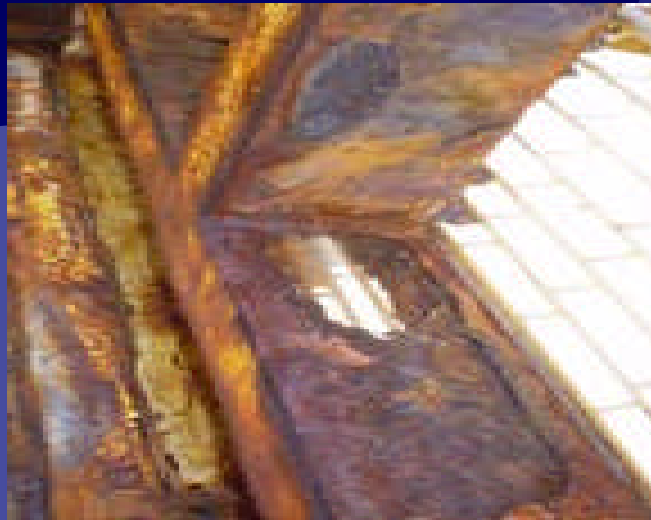
EXPLOSIONS





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FABRIC DEGRADATION





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EQUIPMENT DEGRADATION & FAILURE





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INTEGRITY IN EQUIPMENT DESIGN

BAD



GOOD





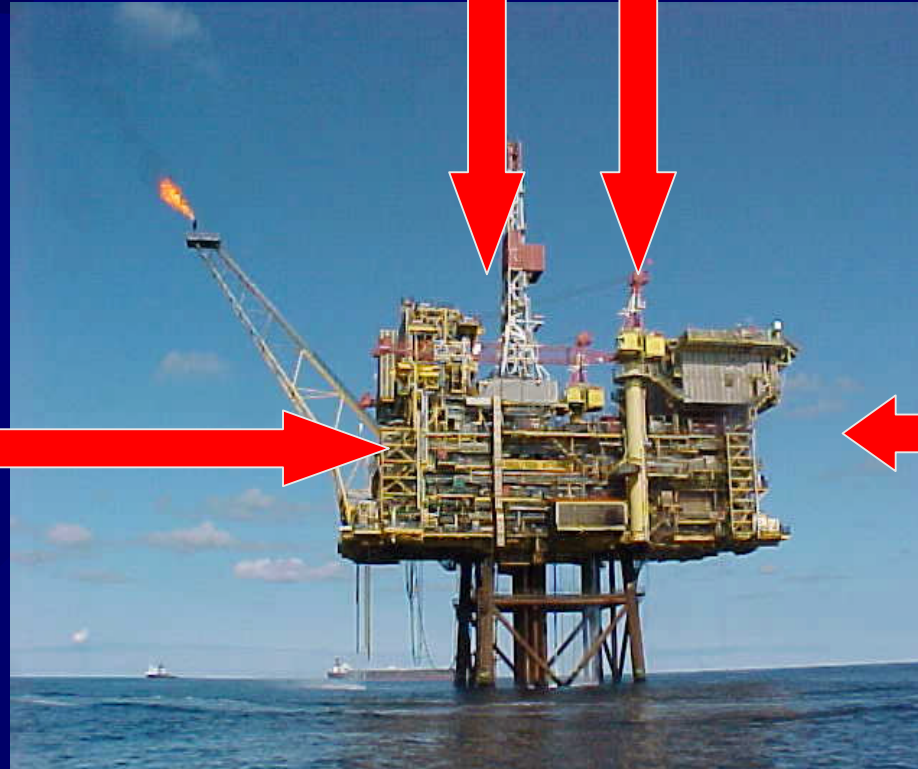
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INTEGRITY IN INSTALLATION DESIGN

BARRIERS

HAZARDS

PEOPLE





INTEGRITY IN SAFETY SYSTEMS DESIGN

Fire And Blast Walls (Control)

Deluge Systems (Mitigation)

Fire & Gas Detection (Mitigation)

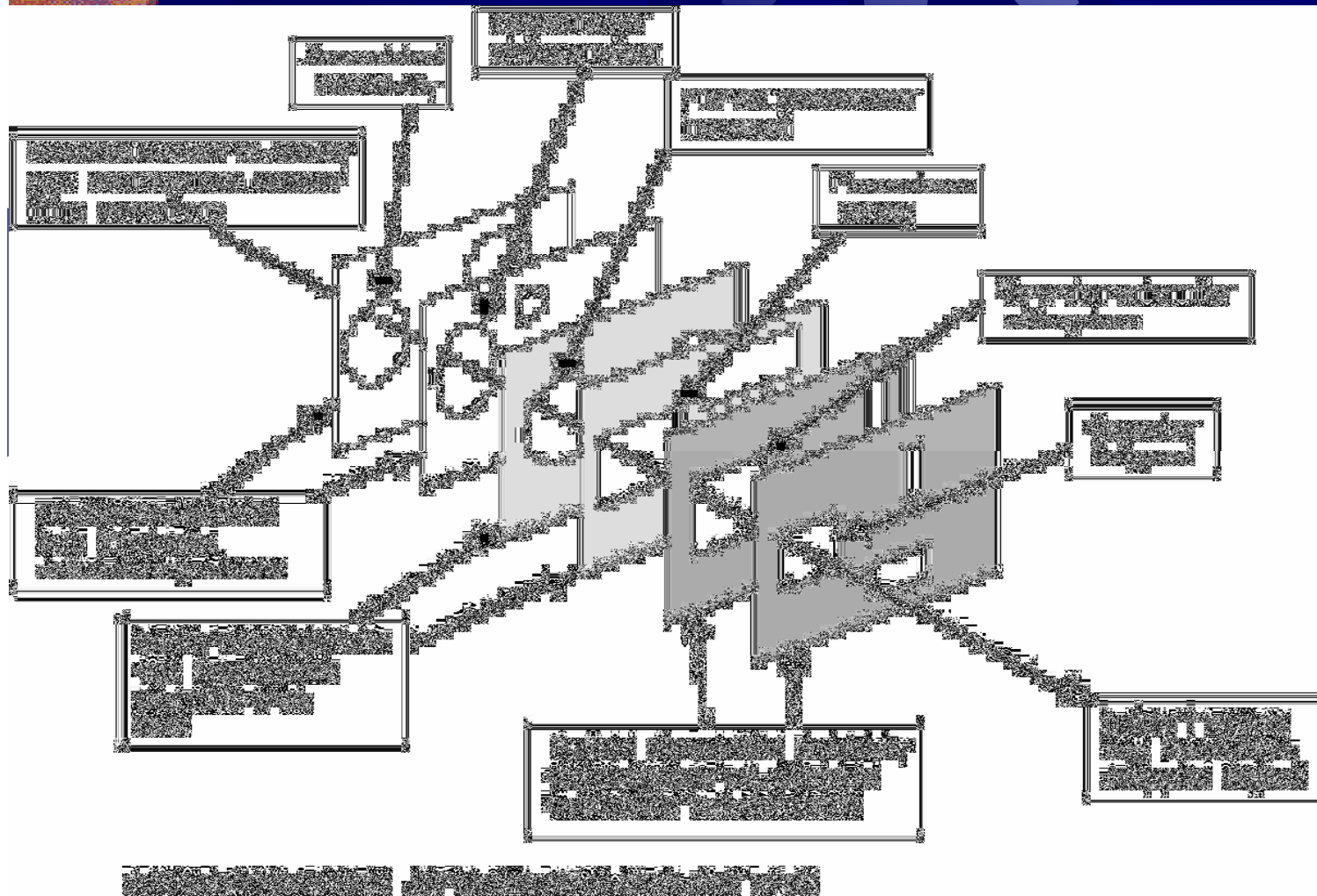
Temporary Refuge (Protection)





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INTEGRITY MANAGEMENT ELEMENTS





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ENSURING CONTINUED INTEGRITY

Maintenance Management;

Making Sure The Barriers Will Be **AVAILABLE**

And Work When Called Upon





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FINALLY INVESTMENT IN ASSET INTEGRITY

There is a need for **LONG TERM** investment strategies and decision making for maintenance of Asset Integrity.

There is a need for Management to deal **with the outcomes of their decisions and strategies**

KP3 FINAL REPORT

“Appropriate adjustments to its performance contract system are recommended along with greater continuity of refinery plant managers and other refinery-level managers having significant process safety leadership roles.”

[Baker Report into the Texas City Refinery Incident]





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QUESTIONS