



Offshore Marine Environment Protection Risks & How to Treat Them

Risk – What is a "Risk"

“**expose (someone or something valued) to danger, harm, or loss**”

Equipment availability

Equipment owner collaboration

Time of response

Who pays and when

P&I Club

Local & international regulations / laws

Correct equipment

Personnel

Training



- Accidental spills

- Result of tanker or platform incidents
- Dramatic & Initially high profile

- Location & Magnitude

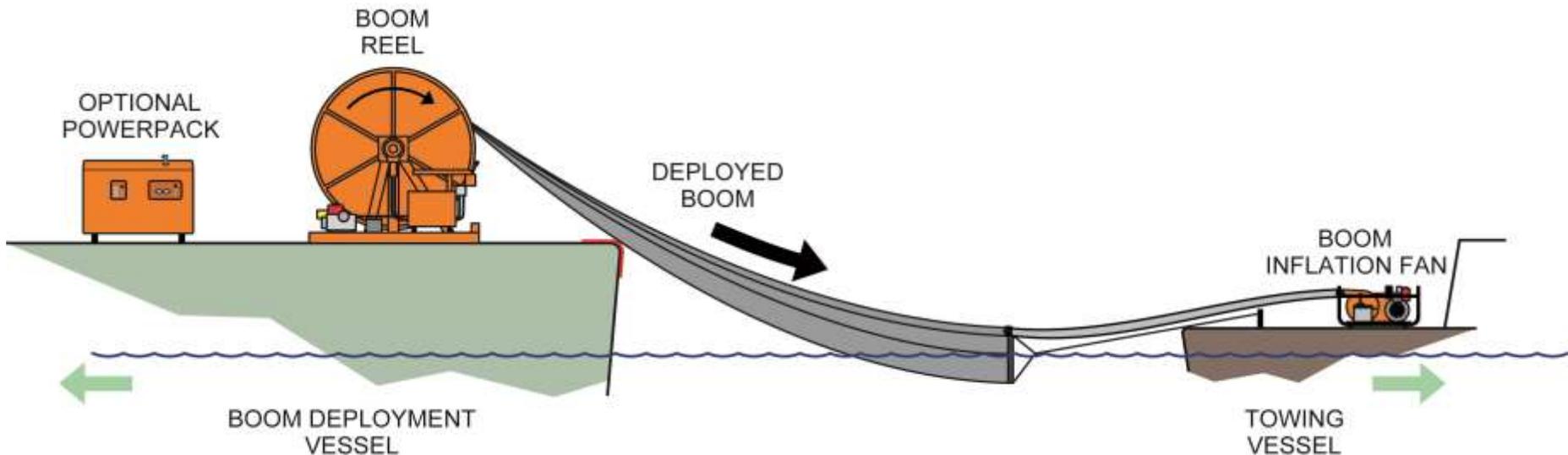
- Location often determines what technology is best suited

- Differing Equipment

- Different equipment is required for coastal spills than spills occurring offshore

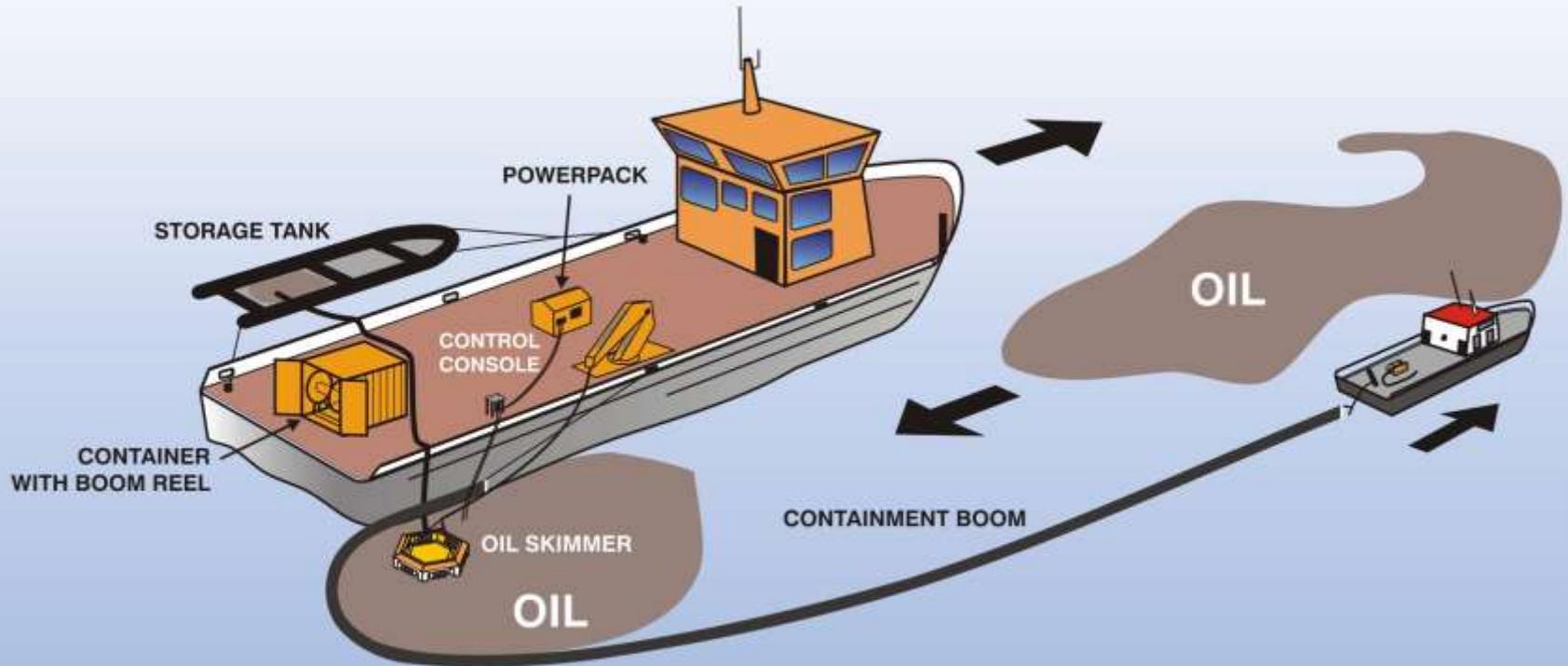


- The faster the response to contain the spill the better
 - Plan to contain & limit the spill at source in the shortest possible time is crucial for an effective spill control.
 - Main risks at this level:
 - Lack of maintenance
 - Incorrect / missing equipment
 - Incorrect / lack of trained personnel
 - Who will pay for equipment





OFFSHORE EQUIPMENT



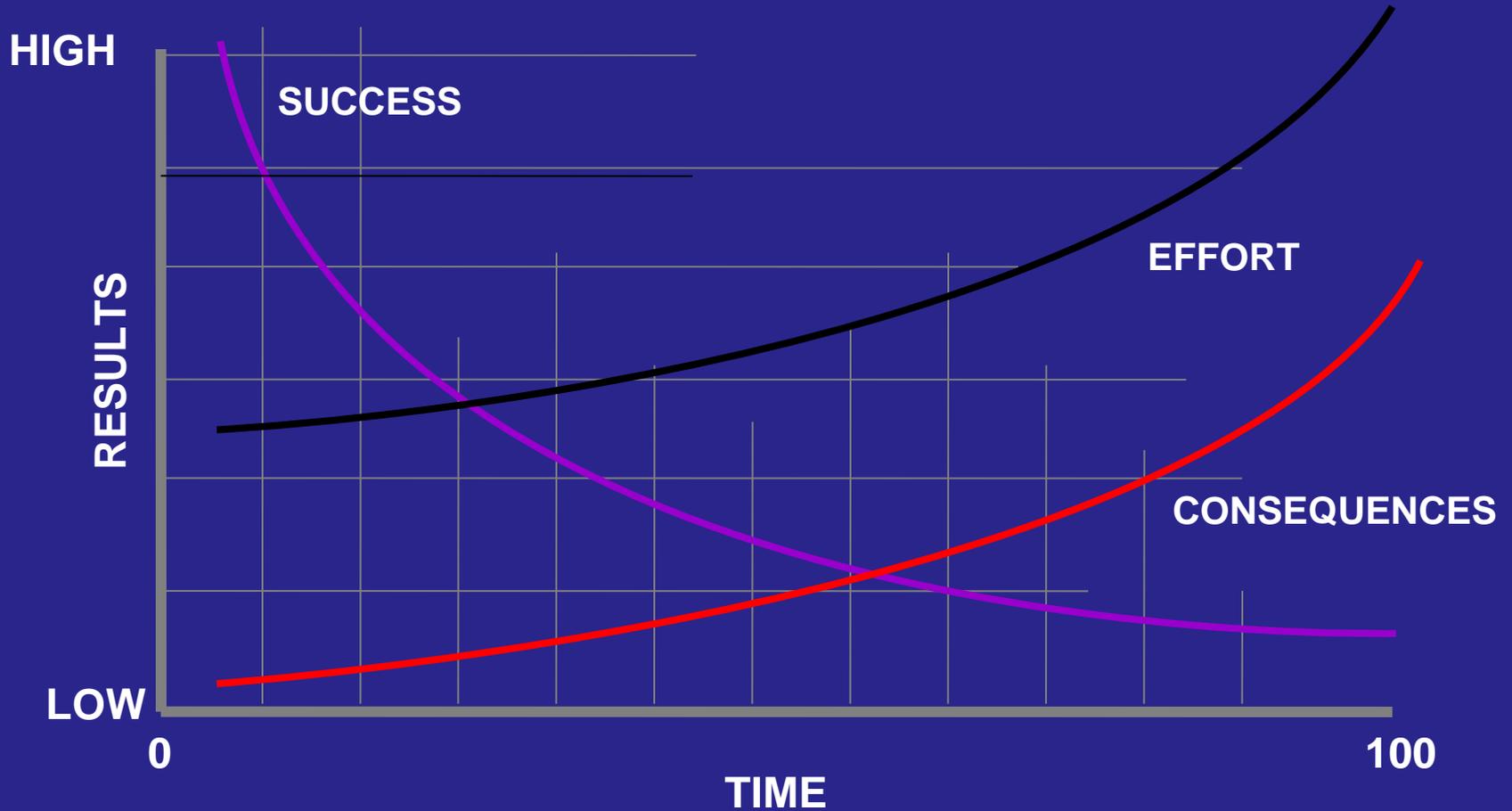
- Contingency plan
 - Follow the plan, but don't be afraid to change it.
 - Main risks at this level:
 - Is there a plan
 - Is the plan up to date
 - Has the plan been acted on, people trained based on the plan
 - Correct equipment based on contingency plan



- On going operation
 - Oil spill clean up could be for days, weeks offshore, be prepared.
 - Main risks at this level:
 - Personnel fatigue
 - Offshore supplies, food, water, etc
 - Equipment – long running periods, down time, spare parts, repair kits



When enough is enough



booms
skimmers
tanks & storage
vessels
industrial
powerpacks & pumps
dispersants
spare parts



- Three main points to remember:
 - Containment – Booms
 - Recovery – Skimmers
 - Temporary storage – Tanks
 - If one of these are missing, the response has a major risk of failure.



- Contained & recovered– where to put it?
 - Do not underestimate spill size, what went in will increase by 50x if not more.
 - Main risks at this level:
 - Temporary storage exhausted / non existent
 - Recovery efforts having to be postponed
 - Incorrect type of storage resulting in failure and secondary containment.



containment booms

First line of defence – the quicker the spill is contained – the more effective the response.





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