

LEARNING FROM INCIDENTS

PREVENT INVESTIGATE SHARE

FACILITATOR GUIDE

“Together We Can Lift Safely”

1. Preparation
2. Materials
3. Execution
4. Supporting Information



This document is made available for information only and on the condition that (i) it may not be relied upon by anyone, in the conduct of their own operations or otherwise; (ii) neither the Shell company issuing this document nor any other person or company concerned with furnishing information or data use herein (A) is liable for its accuracy or completeness, or for any recommendations or advice given in or any omission from this document, or for any consequences whatsoever resulting directly or indirectly from any use made of this document by any person, even if there was a failure to exercise reasonable care on the part of the Shell company or any other person or company as aforesaid; or (B) make any claim, representation or warranty, express or implied, that acting in accordance with this document will produce any particular results with regard to the subject matter contained herein, or satisfy the requirements of any applicable federal, state or local laws and regulations; and (iii) nothing in this document constitutes technical advice. If such advice is required it should be sought from a qualified professional adviser.

The content of this document may (i) be based on, but not identical to facts relating to a third party incident about which Shell has become aware; (ii) contain Recommendations that are one, but not necessarily the only way, of addressing incident learnings.

The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate entities. In this Learning From Incident Alert, the expression “Shell” is sometimes used for convenience where references are made to companies within the Shell group or to the group in general. Likewise, the words “we” and “our” are also used to refer to Shell companies in general or those who work for them. These expressions are also used where no useful purpose is served by identifying specific companies.

1. PREPARATION



INTRODUCTION

This reflective learning material is part of a series that all focus on Barrier Ownership. Knowing and owning your barrier(s) is crucial to achieve GOAL ZERO; NO HARM to people and NO LEAKS to the environment. In this engagement session we focus on the impact on barriers when things change. Especially then you need to make an extra effort to ensure they stay strong and healthy! The key message to communicate is: **“Together We Can Lift Safely”**

Reflective Learning

Reflective Learning is a facilitated interactive group discussion. Through simple and engaging materials (video!) we make an emotional connect and let people internalize an incident.

IT'S NOT ABOUT WATCHING A VIDEO. Through discussions with colleagues people learn from each other and can have an opportunity to gain new insights. At the end of the session we ask everybody to identify a personal action. **WHAT ARE YOU GOING TO DO DIFFERENTLY?**

TOPIC	DETAILED INFORMATION
NUMBER OF PARTICIPANTS	15-25 people - working in small teams. (Bigger groups need more facilitators)
TIME REQUIREMENT	60 minutes (<i>but book some extra time in case session overruns</i>) Note: It's a significant investment of time at operational sites, but research shows that sessions like this provide the best chance for people to reflect, really learn and change behaviours as a result.
FACILITATION	By skilled facilitator. If you are acting as a facilitator for this session please ensure you have the right skills to facilitate an engagement to get participation and learning. <u>Further information:</u> <ul style="list-style-type: none">■ for Shell employees with access to Shell Open University: Reflective LFI Engagements (45 mins e-learning) Crucial for the leader/facilitator: <ol style="list-style-type: none">1. Present with passion2. Listen and don't talk too much yourself (the answer is in the room!)3. Be open and curious (ask open questions)4. Knowledge level of understanding Bowties, Barriers and HSE Cases is crucial. Ask an HSE- Technical Safety- or Process Safety specialist to co-facilitate when needed.
EQUIPMENT	■ PC/laptop for accessing and projecting the video as appropriate. Note: Be sure to test <i>both video and audio</i> on the equipment before the meeting
ROOM SET UP	Chairs for all participants and a few tables. Make sure there is enough space for people to break into groups of 4-6 people for discussion groups. NB: where possible do not use breakout rooms, you will lose valuable time when people are moving in and out of meeting rooms.
MATERIALS	■ Reflective Learning video ■ Hand-Out ■ Poster or Post card to self to capture personal actions ■ Apples!

PREPARATION	<p>As with everything, good preparation is crucial for a successful result! Review the “Together We Can Lift Safely” video and study this facilitator guide thoroughly. Meet with the line manager of the team and discuss the approach and role of the manager. <u>Other things to not forget are:</u></p> <ul style="list-style-type: none"> ■ Book a room well in advance, if possible with a table set-up. ■ Have the video readily installed on your PC/laptop for the session. ■ Agree how to capture the actions of participants. ■ Prepare for a safety briefing at the start of your sessions: familiarise yourself with alarm procedure and emergency numbers and review the evacuation floor plan for emergency exits and muster points. <p>TIP: Make sure you are aware of local Lifting & Hoisting incidents and that Lifting & Hoisting is not only about cranes! There is a lot more Lifting & Hoisting ongoing on our facilities!</p>
TARGET AUDIENCE	<p>All Shell staff, Joint Venture- and Contractor partners INVOLVED IN LIFTING & HOISTING ACTIVITIES THAT PLAY A ROLE IN:</p> <ul style="list-style-type: none"> ■ Contractor Management (when Lifting & Hoisting is part of the scope) ■ Site design (e.g. discipline engineers such as civil engineers, construction engineers, site construction managers) ■ Preparing of work e.g. planners, schedulers, permit to work coordinators, transport coordinators) ■ Supervisors, Front line Leaders and all staff working on sites (e.g. operators, maintenance staff, crane operators, Persons in Charge, banksmen, drivers, riggers)
LINKS	<p>The video and supporting materials are available under the following links:</p> <ul style="list-style-type: none"> ■ Global Learning From Incidents Website ■ UP Learning From Incidents Website ■ Global Shell external Contractor Website <p><i>Do not share this link with participants before the session. Just viewing the video may reduce the appetite for joining the engagement session. Rather send them the teaser.</i></p>
HELPDESK	<p>If you need any help with the preparation, execution or follow up of this session, please contact your local Learning from Incidents coordinator or the developers of the materials in the Upstream HSE team in The Hague.</p> <p><u>Overall coordination:</u> Elianne Leeffer, UP Manager Learning From Incidents (elianne.leeffer@shell.com)</p> <p><u>Project Manager TOGETHER WE CAN LIFT SAFELY:</u> Piet van Dam, UP Manager Operational Safety (piet.vandam@shell.com)</p>

2. MATERIALS



REFLECTIVE LEARNING VIDEO

- The video is the core tool to use during the reflective learning session.
- The menu structure will help you go through the session and makes facilitation as easy as possible.
- **NO SLIDES** need to be used. Keep it simple. This is not an information sharing session!
- To download and “unpack” the tool from the website requires some IT skills, but in fact it’s not that difficult. Just follow the instructions.
- The video consists of 3 parts.
- The first part of the video is called **“The Power of Gravity”**. In this first part we see an apple and a tool falling from a tree illustrating the power of Gravity. Examples of industry Lifting & Hoisting incidents are shown.
- This part ends with a moment of silence for all victims of Lifting & Hoisting incidents and there is a pause of 1 minute embedded in the video.

TIP: It’s up to the facilitator if he or she wants to stop the video to ask people to say a few words. People might want to share personal experiences after this moment of fatalities of people they know.

- The second part of the video continues after the memorial and is called **“The Importance of Every Step”**. In this second part the importance of every step in the process is explained. It all starts with planning. We see an incident evolving over time, starting in the office and dramatically ending on site.
- In the last part of the video called **“Situational Awareness in the Office and On Site”** the concept of situational awareness is explained. Imagining what happens next and having a clear understanding of your role in owning barriers or critical processes is crucial for avoiding Line of Fire type incidents.

HAND-OUT

- The Hand-Out contains a summary of the video, including questions to reflect on the first page. On the second page examples of situational awareness in the office and on site are given and the DROPS calculator is explained briefly.
- **The Hand-Out should be handed out at the end of the session** to not give away the answers on one of the questions in the video.

LEARNING FROM INCIDENTS

RECENT INVESTIGATIONS SHARE

HANDOUT - TOGETHER WE CAN LIFT SAFELY!

KEY MESSAGE - ONLY TOGETHER WE CAN LIFT SAFELY!

Key Messages:

- Understanding the role that gravity plays in all lifting operations.
- The importance of creating/maintaining strong barriers in every phase of the work.
- Having situational awareness in the office and on site and imagine what could go wrong.

1. THE POWER OF GRAVITY

In the first part of the video we see an apple and a tool falling from a tree illustrating the power of Gravity. Examples of industry Lifting & Hoisting incidents are shown. This part ends with a moment of silence for all victims of Lifting & Hoisting incidents.

2. THE IMPORTANCE OF EVERY STEP

In the second part of the video the importance of every step in the process is explained. It all starts with planning. We see an incident evolving over time, starting in the office and dramatically ending on site.

Questions to reflect on:

- What Lifting & Hoisting incidents have you heard of, or been involved in?
- What went wrong, and how could these incidents have been avoided?
- What is important for every Lifting & Hoisting job?

3. SITUATIONAL AWARENESS ON SITE AND IN THE OFFICE

In the last part of the video situational awareness is explained. Imagining what happens next and having a clear understanding of your role in owning barriers or critical processes is crucial for avoiding Line of Fire type incidents.

Questions to reflect on:

- What barriers and critical processes can you identify and how are they applied at your location?
- How do you ensure your barrier is strong? eg: How do you ensure your critical processes is working well?
- How can you apply situational awareness in your job?

SITUATIONAL AWARENESS IN THE OFFICE

During Design

- Minimize potential Line of Fire risks in the design.
- Timely involvement of an expert to discuss the Lifting & Hoisting Line of Fire risks.
- Review during Constructability Reviews - imagine the Line of Fire risks.

During Preparation of work

- Be sure you understand the situation at the workplace.
- Go out and see for yourself!
- Imagine how the job can be executed without minimizing Line of Fire risks.
- Ensure the right type of equipment and tools are available on site.
- Select those equipment and tools that minimize Line of Fire risks.

SITUATIONAL AWARENESS ON SITE

Before start of the work

- Discuss Line of Fire risks during the Toolbox or Last Minute Risk Assessment.
- Make sure access to the workplace is controlled and properly barricaded off.
- Inspect the area where you are going to work.
- Make sure the equipment and tools to be used are inspected.

During execution of the work

- Be aware of what's around, what's above you, and of changing conditions.
- Imagine the time of time - what could hurt you?
- Look for objects that could fall and hit you (never walk under a suspended load).
- **PAUSE**, step back and regularly check if anything has changed.
- Watch out for each other - one other people in the Line of Fire!
- Use and respect the Signalers.

THE DROPS CALCULATOR

As explained in the video a small tool can already cause a very serious injury when drops from a 7 meters height. In table below you can calculate the potential effect depending on weight and falling height.

More information can be found on www.drops.org

10 QUESTION CARD & AN APPLE!

- **The 10 Question card for a Safe Lift should be handed out at the beginning of the session.**
- Make sure you have enough cards available. They are available in many local languages. [10 Questions for a Safe Lift Pocket Card](#)
- An apple features at the beginning and end of the video (visualizing the power of gravity).
- To make the session more memorable you might want to consider organizing a box of apples and lay them in the room on the tables for each participants, together with the 10 Question cards.
- It's healthy and fun, something different and a nice "icebreaker"!



The Apple is an artistic license building on the Newton/apple theme with the objective to make this video memorable. Obviously we do not eat at worksites!

CAPTURE PERSONAL ACTIONS



LEARNING FROM INCIDENTS

PREFIDENT INVESTIGATE PHASE

ACTION POSTER

This is what we will do differently...

<p>Name: _____</p> <p>Location: _____</p> <p>Date: _____</p>				
<p>Event ID: 0001</p> <p>Signatures: _____</p>	<p>Event ID: 0002</p> <p>Signatures: _____</p>	<p>Event ID: 0003</p> <p>Signatures: _____</p>	<p>Event ID: 0004</p> <p>Signatures: _____</p>	<p>Event ID: 0005</p> <p>Signatures: _____</p>
<p>Event ID: 0006</p> <p>Signatures: _____</p>	<p>Event ID: 0007</p> <p>Signatures: _____</p>	<p>Event ID: 0008</p> <p>Signatures: _____</p>	<p>Event ID: 0009</p> <p>Signatures: _____</p>	<p>Event ID: 0010</p> <p>Signatures: _____</p>
<p>Event ID: 0011</p> <p>Signatures: _____</p>	<p>Event ID: 0012</p> <p>Signatures: _____</p>	<p>Event ID: 0013</p> <p>Signatures: _____</p>	<p>Event ID: 0014</p> <p>Signatures: _____</p>	<p>Event ID: 0015</p> <p>Signatures: _____</p>
<p>Event ID: 0016</p> <p>Signatures: _____</p>	<p>Event ID: 0017</p> <p>Signatures: _____</p>	<p>Event ID: 0018</p> <p>Signatures: _____</p>	<p>Event ID: 0019</p> <p>Signatures: _____</p>	<p>Event ID: 0020</p> <p>Signatures: _____</p>
<p>Event ID: 0021</p> <p>Signatures: _____</p>	<p>Event ID: 0022</p> <p>Signatures: _____</p>	<p>Event ID: 0023</p> <p>Signatures: _____</p>	<p>Event ID: 0024</p> <p>Signatures: _____</p>	<p>Event ID: 0025</p> <p>Signatures: _____</p>
<p>Event ID: 0026</p> <p>Signatures: _____</p>	<p>Event ID: 0027</p> <p>Signatures: _____</p>	<p>Event ID: 0028</p> <p>Signatures: _____</p>	<p>Event ID: 0029</p> <p>Signatures: _____</p>	<p>Event ID: 0030</p> <p>Signatures: _____</p>

Feedback: you could have been more informative in your observations and the location you were in. You could have been more specific.

Next steps: you could have been more specific in your observations and the location you were in. You could have been more specific.

Other: you could have been more specific in your observations and the location you were in. You could have been more specific.

Suggestions for improvement:

LEARNING FROM INCIDENTS

POSTCARD TO SELF



POSTCARD TO SELF

We hope you gained new insights from this reflective learning session. We now would like to ask you what you can do differently to prevent incidents (related to the theme you have just discussed). Please write down your personal action. After filling out your action and address please hand this card to your facilitator. Your facilitator will ensure this card is mailed back to you in a couple of months to the address you filled out on the right hand.



My action

Name: _____

Street & nr: _____


Zip code: _____

City: _____

Country: _____

3. EXECUTION



START 10 minutes	<ul style="list-style-type: none"> ■ Welcome everyone and explain how the session is structured. ■ As the participants arrive, when possible, help to spread out the participants into groups of 4-6 to facilitate the discussions. ■ Do the Safety briefing: explain Alarm procedure, Emergency numbers, Evacuation signs and Muster Point(s). ■ Check whether all participants are familiar with each other and if not, hold a brief introduction round where all participants tell their name and function in the organisation. ■ Opening of the session by the line leader is preferable. It gives the local leader the opportunity to show his/her commitment. ■ Open the video link and the following screen appears. Press "Menu" to see the structure. 
VIDEO PART 1 4 minutes	Part 1: "The Power of Gravity" <ul style="list-style-type: none"> ■ When the introductions are done press play to start the video. ■ This part ends with a 1 minute memorial and will then continue with Part 2.
VIDEO PART 2 4 minutes	Part 2: "The Importance of Every Step" <ul style="list-style-type: none"> ■ When the narrators are finished, the questions to pose will appear on the screen and the video will pause itself. <ul style="list-style-type: none"> ○ What Lifting & Hoisting incidents have you heard of, or been involved in? ○ What went wrong and how could these incidents have been avoided? ○ What is important for every Lifting & Hoisting job?
BREAK 1 10 minutes	<ul style="list-style-type: none"> ■ In this first break we will NOT split up in groups, but ask for some answers in plenary. ■ Ask a number of people to share their personal experiences. ■ Ask a few people to answer the third question specifically. ■ Once the feedback and discussion are over, press "Next" to continue the video.

VIDEO PART 3: 4 minutes	Part 3: "Situational Awareness in the Office and On Site" <ul style="list-style-type: none"> ■ When the narrators are finished, the questions to pose will appear on the screen and the video will pause itself. <ul style="list-style-type: none"> ○ What barriers and critical processes can you identify and how are they applied at your location? ○ How do you ensure your barrier is strong? -or- How do you ensure your critical processes are working well? ○ How can you apply situational awareness in your job?
BREAK 2 10-15 minutes	<ul style="list-style-type: none"> ■ Split up in groups of 4 to 6 people and ask people to answer the questions. ■ Ask some groups to give feedback to the whole group. ■ Once the feedback and discussion are over, press "Next" to continue. The following question will appear: <ul style="list-style-type: none"> ○ What personal action(s) will you take to avoid Lifting & Hoisting incidents?
SUBMIT Reflection and personal action 5 minutes	<ul style="list-style-type: none"> ■ Ask the participants to reflect on what they have heard and discussed in their teams, and to write down a personal action.
CAMPAIGN APPROACH	<ul style="list-style-type: none"> ■ The Reflective Learning campaign approach is optional and aimed to extend the learning value of the reflective learning session. ■ The participants WILL NOT write down a personal action, but we discuss in teams or as individuals what will be investigated during the upcoming "observation weeks". ■ In the "observation weeks", the participants will further investigate the work has been prepared and what happens in practice. "Info letters", STOP/SMAT/PAUZE feedback, Inspection results, Last Minute Risk Assessment cards, Field visit findings, Idea box suggestions, Photo's, Posters and such are used to collect findings ■ During a follow-up meeting the participants discuss what was observed in the past month and agree what they want to improve upon in the upcoming "action weeks". ■ In the "action weeks" the participants implement the agreed improvements and monitor progress and effectiveness. ■ In a final "close out" session the participants reflect on the theme and discuss: <ul style="list-style-type: none"> ○ What did we improve, what else could be done? ○ What did we learn? ■ Successes are celebrated and good performance is rewarded. ■ At the end of the campaign feedback is given to the Country LFI coordinator to improve future campaign activities. <p>For more info on the Campaign approach please contact elianne.leeffers@shell.com lars.vanderzande@shell.com or piet.vandam@shell.com</p>

SUPPORTING INFORMATION



The Lifting & Hoisting / Mobile Heavy Equipment Checklist

The Lifting & Hoisting/Mobile Heavy Equipment Checklist that is shown in the video contains a list of several general- and specific Lifting & Hoisting/Mobile Heavy Equipment Hardware Barriers, Human Barriers and Critical Processes. It can be downloaded [here](#)

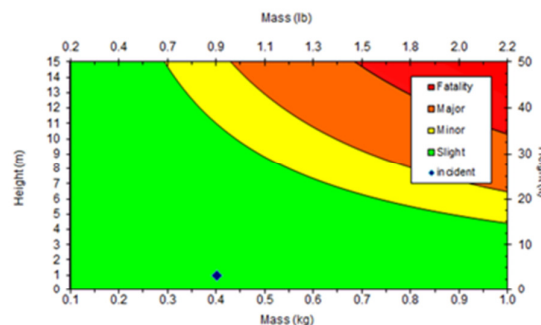
BARRIERS & CRITICAL PROCESSES LIFTING & HOISTING/MOBILE HEAVY EQUIPMENT

Hardware Barriers	Human Barriers	Critical Processes
GENERIC <ul style="list-style-type: none"> <input type="checkbox"/> Structural Integrity <input type="checkbox"/> Process Containment <input type="checkbox"/> Ignition Control <input type="checkbox"/> Detection Systems <input type="checkbox"/> Protection and shutdown Systems <input type="checkbox"/> Emergency Response equipment <input type="checkbox"/> Personal Survival Equipment LIFTING & HOISTING & MOBILE HEAVY EQUIPMENT SPECIFIC <ul style="list-style-type: none"> <input type="checkbox"/> Equipment Design, e.g.; <ul style="list-style-type: none"> <input type="checkbox"/> Rollover Protection, <input type="checkbox"/> Safety Cut-Off Devices, <input type="checkbox"/> Dead Man switches, <input type="checkbox"/> Load Moment Indicator, <input type="checkbox"/> Visibility Mirrors, <input type="checkbox"/> Taglines <input type="checkbox"/> Equipment Monitoring Systems, e.g.; <ul style="list-style-type: none"> <input type="checkbox"/> In Vehicle Monitoring System, <input type="checkbox"/> Data Logger, <input type="checkbox"/> Collision Avoidance Devices, <input type="checkbox"/> Physical Barriers, e.g.; <ul style="list-style-type: none"> <input type="checkbox"/> Exclusion Zones, <input type="checkbox"/> Boundary Markers, <input type="checkbox"/> Hard & Soft Barriers, <input type="checkbox"/> Berms made of soil 	GENERIC <ul style="list-style-type: none"> <input type="checkbox"/> Operating in accordance with procedures <input type="checkbox"/> Surveillance, operator rounds and routine inspection <input type="checkbox"/> Authorization of temporary and mobile equipment <input type="checkbox"/> Acceptance of handover or restart of equipment <input type="checkbox"/> Response to alarms and upset conditions <input type="checkbox"/> Response to emergencies LIFTING & HOISTING & MOBILE HEAVY EQUIPMENT SPECIFIC <ul style="list-style-type: none"> <input type="checkbox"/> Being aware of the situation (not in the Line of Fire!) <input type="checkbox"/> Being always alert and PAUSE, Step back, and STOP when needed <input type="checkbox"/> Doing the daily inspection of equipment, Using Checklists <input type="checkbox"/> Communicating risks on site (Toolbox, Last Minute Risk Assessment) <input type="checkbox"/> Respecting Signalers <input type="checkbox"/> Being fit for Duty 	GENERIC <ul style="list-style-type: none"> <input type="checkbox"/> Permit to Work (Job Hazard Analysis, Last Minute Risk Assessment) <input type="checkbox"/> Emergency Response/Management <input type="checkbox"/> Competency Management <input type="checkbox"/> Management of Change LIFTING & HOISTING & MOBILE HEAVY EQUIPMENT SPECIFIC <ul style="list-style-type: none"> <input type="checkbox"/> Site/Job Planning (timely involve SME) <input type="checkbox"/> Design Layout, e.g.; <ul style="list-style-type: none"> <input type="checkbox"/> Constructability Reviews, <input type="checkbox"/> Equipment Selection, <input type="checkbox"/> Physical Barriers <input type="checkbox"/> Worksite Access & Control <input type="checkbox"/> Company Standards & Equipment Operating Procedures <input type="checkbox"/> Use of Industry Guidance <input type="checkbox"/> Adhere to legal legislation <input type="checkbox"/> Maintenance & Inspections of Equipment <input type="checkbox"/> Certification of materials and Equipment <div> UPDATE March 2016 Owner: willem.caljouw@shell.com </div>

The DROPS Calculator

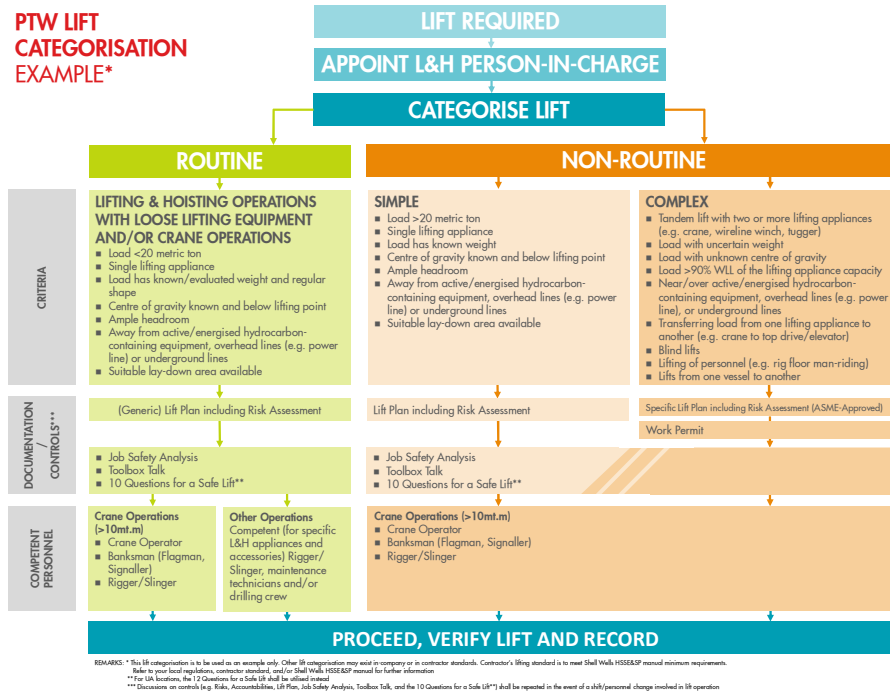
More information on the DROPS Calculator that is explained in the first part of the video can be downloaded [here](#)

DROPS CALCULATOR



Lifting & Hoisting Categorisation Matrix

The Lifting & Hoisting Categorisation Matrix shown in the video is a Wells example and can be downloaded [here](#).



Key Roles & Responsibilities

The key Roles & Responsibilities from staff involved in Lifting & Hoisting activities are described in the Lifting & Hoisting HSE&SP Control Framework guide. Here a summary:

Person In Charge Of The Lift:

- Coordination and control of the lifting operation, including ensuring that involved people are competent for performing their task, aware of the task, procedures to be followed and their responsibilities.
- Ensure that the lifting equipment is inspected and appropriate for use, the Job Safety Analysis is followed and the toolbox talk is held prior to the lift.

Crane Operator:

- Responsible for the crane operations under his/her control.
- Perform crane inspections with the exception of the initial, quarterly and annual inspections.
- Duly complete all required crane operation logs pre-use inspection procedures and checks.

Banksman (Flagman, Signaller)

- Coordinate the lifting movements and maintain radio- and/or visual communication with Crane Operator and persons close to the load.
- Participate in JSA/risk assessment for the lift.
- Should not get involved as Rigger when also performing the role of a Banksman.

Authorised Person:

- Check the Lifting and Hoisting equipment before all lifts.
- Confirm that equipment is suitable for its intended purpose.
- Confirm that safety devices are installed and operational.

	<p><u>Subject Matter Expert:</u></p> <ul style="list-style-type: none"> ▪ Provide global and/or regional support in the topic area. ▪ Actively contribute in knowledge sharing networks. ▪ Support PWR (Practices Worth Replicating). <p>Link to the HSSE&SP Control Framework Guidance document can be found here.</p>
Links to more info on Line of Fire	<ul style="list-style-type: none"> ▪ Reflective Learning - Line of Fire I "Stay out of the Line of Fire" ▪ Global Operational Safety Line of Fire Website ▪ Projects Line of Fire materials
Links to more info on Dropped Objects (DROPS)	<ul style="list-style-type: none"> ▪ Wells DROPS materials ▪ Wells DROPS Lifting & Hoisting video ▪ Projects DROPS materials ▪ Projects Dropped Object Prevention Scenario Guide ▪ Drops online
Links to more Lifting & Hoisting information and training materials	<ul style="list-style-type: none"> ▪ GROUP HSSE&SP CF Lifting and Hoisting Minimum Requirements SOU e-Learning ▪ Wells Integrated Gas Lifting & Hoisting video explaining the 10 Questions for a safe lift ▪ Lift Categorization sheet (Wells example) ▪ Marine Learning From Incident Lifting & Hoisting pack
Links to more info on Situational Awareness	<ul style="list-style-type: none"> ▪ Hearts & Minds Situational Awareness toolkit