

...frels oss fra det vonde

fra håp til en aktivt lærende organisasjon

Aker BP

The making of a NCS champion



2006



2009



2014



2016



2017



2020

2022*



* Average daily production Q4 2022

World-class oil and gas portfolio

Safe, efficient and low emission

Production¹

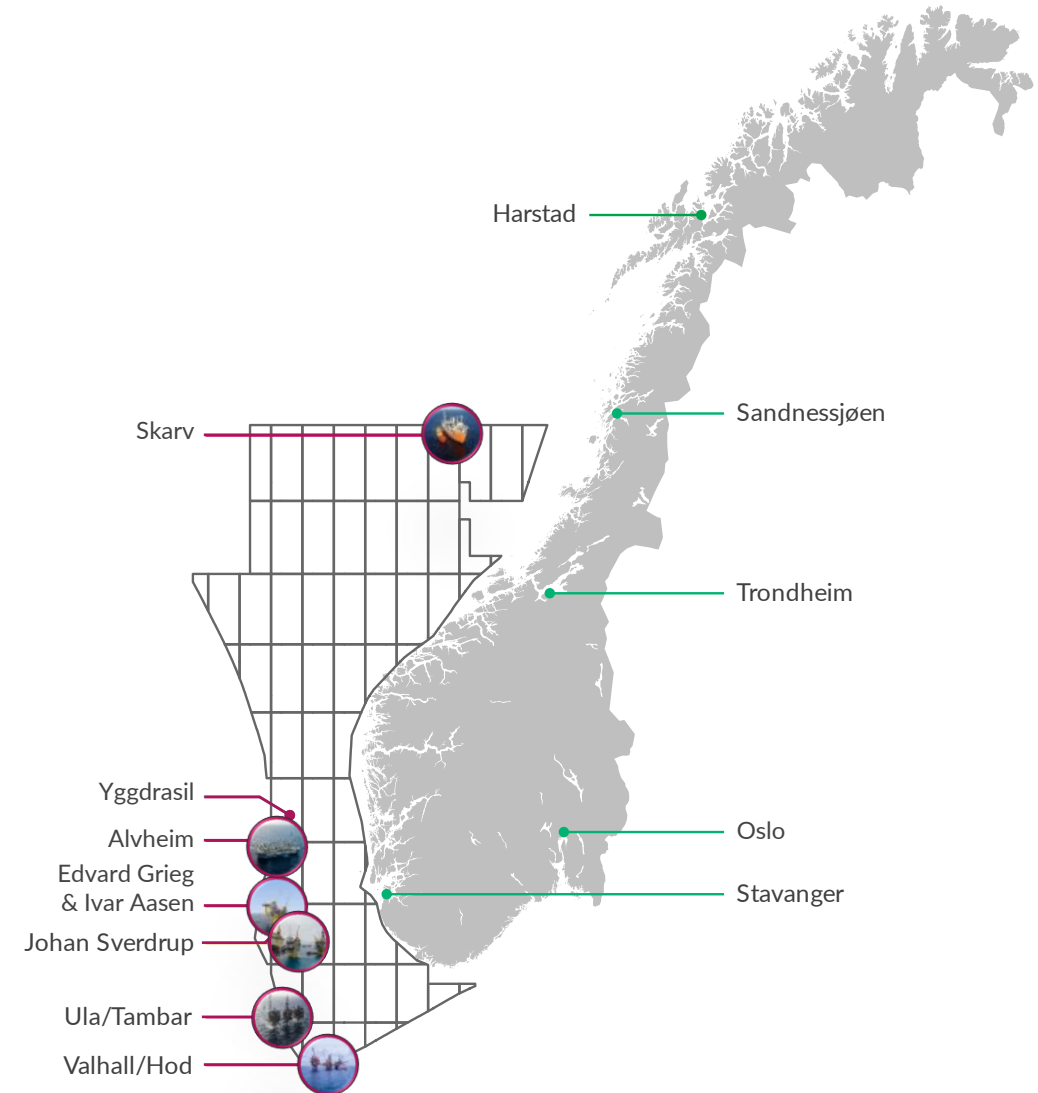
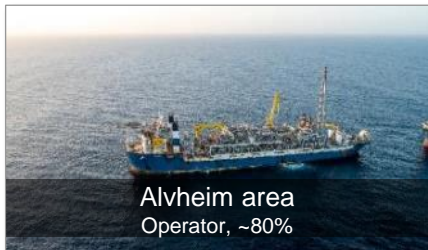
480
mboepd

Emissions¹

2.6
kg CO₂/boe

OPEX¹

5,6
USD/boe



1) Average daily production Q2 2023

Så hvordan lærer vi?

- Uønskede hendelser forårsakes – de skjer ikke....
- Oppfølging av uønskede hendelser er derfor sentralt i sikkerhetsarbeidet og det å være en lærende organisasjon.








Tillit er grunnleggende i en god kultur

- *Vernetjenesten i Aker BP mener vi er en organisasjon som har en kultur, prosesser og lederstil som motiverer sine medarbeidere til å lære av sine handlinger.*
- *Læring blir ofte ferskvare hvis den ikke blir innarbeidet i styringssystemet.....*

Hvordan setter vi dette ut i praksis?

“En rapporteringsvillig kultur” – bygget på tillit

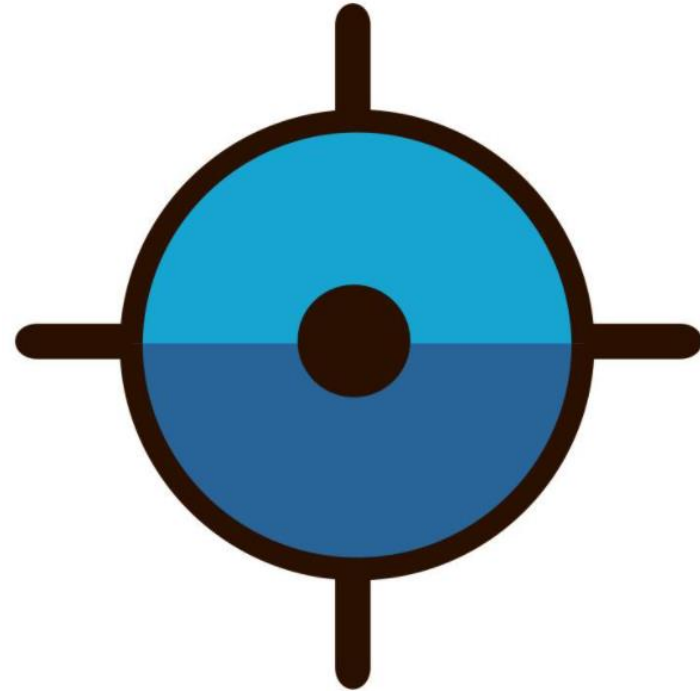
1.0 Consequence classification 				About this document	Table of contents	References	Notification/Reporting	How to report	Different activities	Classification	Falling objects	El-accidents	NAV form	Examples	?
Actual/ Potential consequence	Personnel			Leak 			Fire/ Explosion	Barriers 		Security 			Quality 		Rep- utation
	Personal injury	Acute contagious disease	Possible work related disease (Only health personnel)	Chemicals Black, red and yellow Y2/Y3 Exceedance of discharge permit. ref. 5.4.1	Chemicals Yellow and green Exceedance of discharge permit. ref. 5.4.1	Produced hydrocarbons Exceedance of discharge permit. ref. 5.4.1	Fire and/or explosion	Loss/reduced safety function/barrier (process, collision, structural, weather, power, etc.)	Loss of/reduced well control Guideline 135 - Offshore Norge	Personnel	Objects	Information External activity that leads to	Production loss	Financial loss (Gross) Gross loss	Loss of reputation
A (4)	Fatality	Several with serious illness who are evacuated to hospital	100% working disability	To sea: Black >10m ³ Red, Y2, Y3 >100m ³ Leak not sea to be set to actual B	NA	>1 kg/s and total HC volume >100 kg Crude oil to sea >1000m ³	Significant damage to installation, evacuation of personnel	Critical failure in integrity of installation. Evacuation of all personnel. Loss of all barriers.	Critical well control incident	Critical serious criminal act (for ex. murder, kidnapping, terrorism)	Taken control of installation or office building.	Critical Cyber crime (e.g. important OT or IT systems corrupted or essential information stolen / corrupted)	300% of IPC (Installed Production Capacity)	>100 mill. NOK	Negative regional/national media coverage 1-6 mos. Damage to relationship with key stakeholder (s). Threat of negative exposure from national authorities / regulators.
B (3)	Serious personal injury	Large outbreak with many ill onboard	Partial working disability	>1 m ³ Produced water with oil concentration >200mg/l over 24 hours.	>100 m ³	>0,1 kg/s and total HC volume >10 kg Crude oil to sea >1m ³	Serious damage to area/module/equipment	Jeopardizes the integrity of the whole installation.	Serious well control incident	Serious criminal act, investigated by police (for ex. Physical violence, threat, fraud)	Halt of operation or equipment sabotage, damage to property, serious theft	Serious Cybercrime (e.g. OT or IT systems corrupted or important information stolen)	25 – 300% of IPC	50-100 mill. NOK	Negative local/regional media coverage 1-4 weeks. Damage to relationship with non-key stakeholder. Threat of regulatory compliance issue.
C (2)	Medical treatment	Extraordinary hygiene measures implemented	Reduced work ability, frequent sick leave	>0,01 m ³ Produced water with: - oil concentration > 60mg/l over 24 h	>10 m ³	>0,01 kg/s and total HC volume >10 kg Crude oil to sea >0,01 m ³	Flames/small fire with limited local damage	Puts part of the installation's safety in jeopardy (incl. Shutdown). Incidents which results in only one intact barrier	Regular well control incidents	Less serious criminal act (which is reported to the police (e.g. theft from person, minor embezzlement)	Violation of safety zones or areas with particular limitation, theft of items.	Moderate Cyber Crime (e.g. Important IM&T services negatively impacted, severe GDPR incident).	4 – 25% of IPC	5-50 mill. NOK	Negative local / regional media coverage <1 week. Damage to relationship with non-key stakeholder. Threat of regulatory compliance issue.
D (1)	First aid treatment	NA	No consequence for work ability	<0,01 m ³ Prod and drain water - Weighted monthly avg. > 30 mg/L - smaller events which might be useful to report in Synergi	<10 m ³	>20%LEL 10 cm for the leak source. > 4 drops/min.	Insignificant fire/smoke quickly extinguished.	Puts local areas in danger. Loss of barrier, but with two tested and verified barriers intact.	Unclassified well control incident	Violation of security routines.	Violation of security routines	Less serious Cyber crime (e.g. IM&T services negatively impacted, GDPR incident).	<4% of IPC	<5 mill. NOK	Local complaints and/or isolated negative local news coverage. Negative impact on relationship with stakeholder of limited importance.

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[Consequence matrix](#)

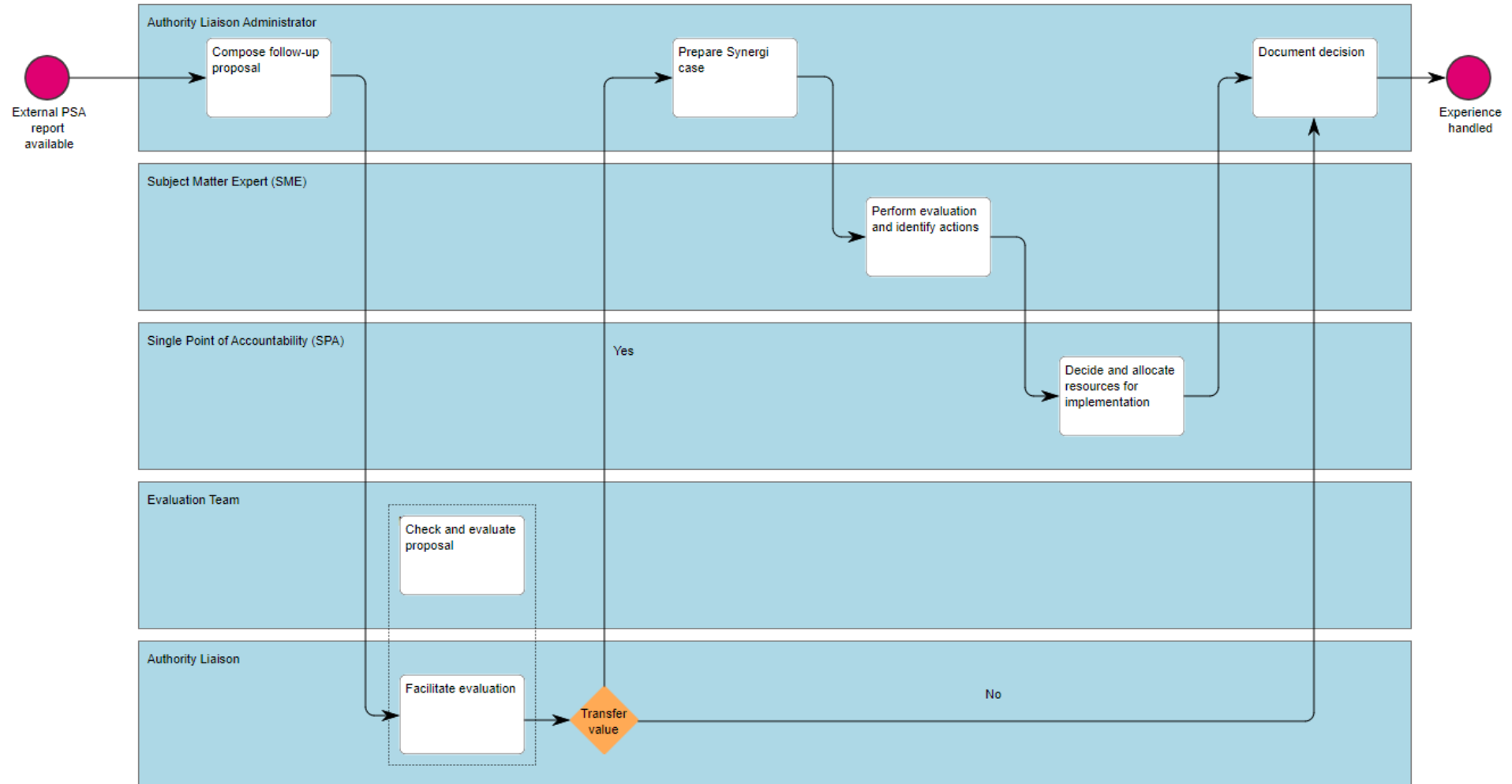
En aktiv tilsynsetat

- 1) vurder overføringsverdi til andre enheter i selskapet (funn og tiltak)
 - 2) 1 år etter siste tiltak er ferdigstilt, vurder om tiltakene hadde ønsket varig effekt
- Kostnad? – egentlig ingen....annet enn noen få interntimer



«... frels oss fra det vonde»

Hvordan lære av andres uønskede hendelser?



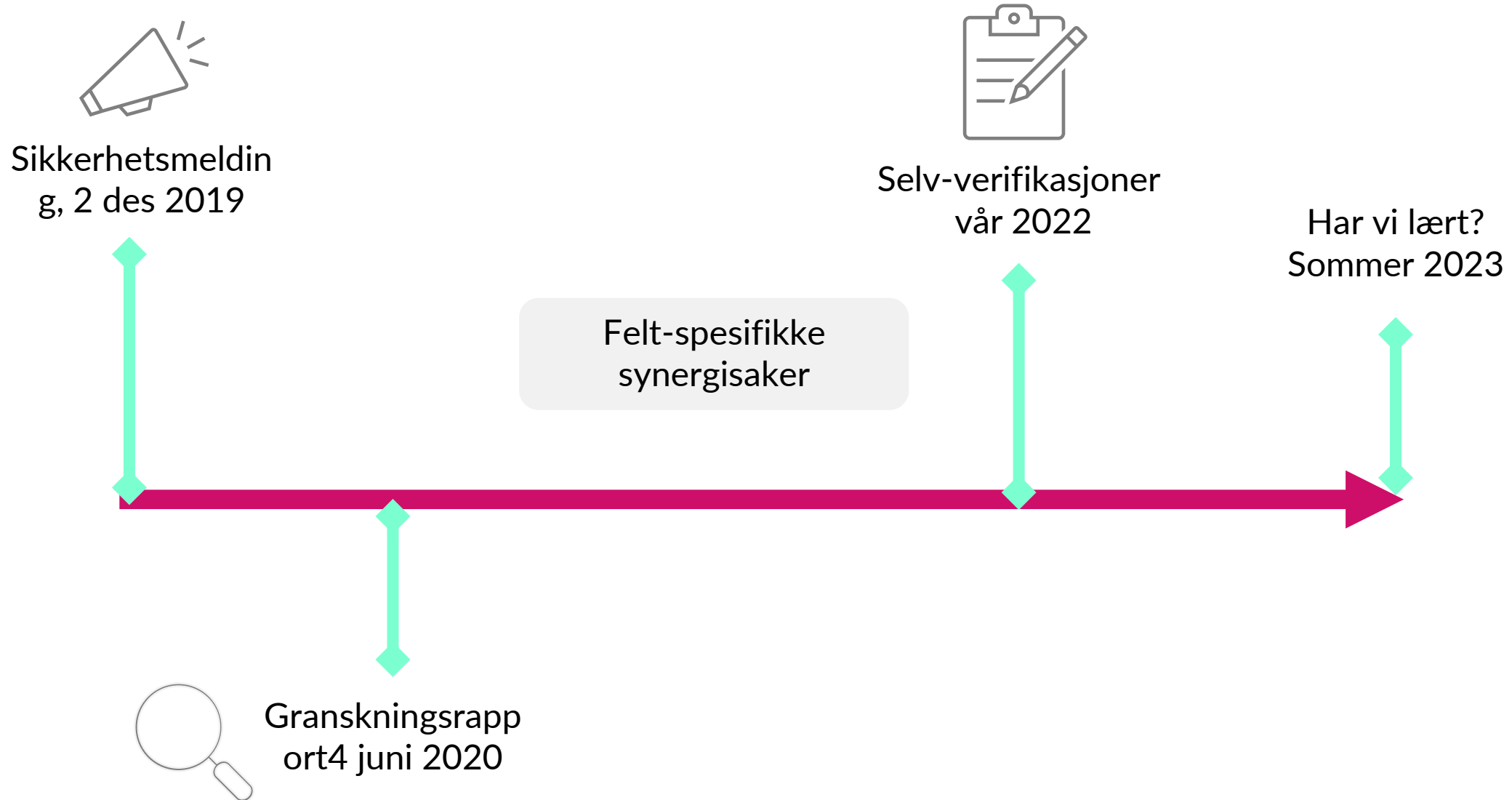
Fungerer det?

Eksempel fra en hendelse på en offshore-innretning 28. nov 2019 (ikke Aker BP operasjon!)



3,4 kg Nitrogen-flaske - 200 bar

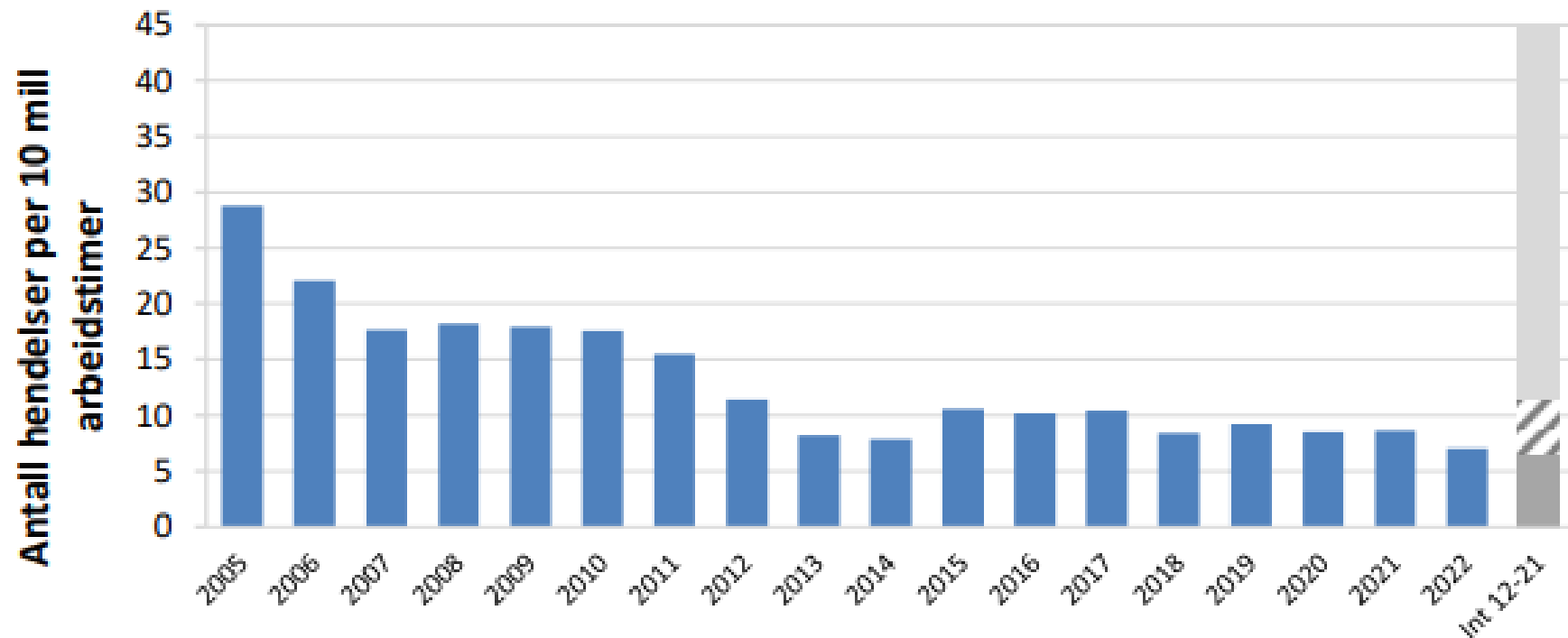
Tidslinje for oppfølging i Aker BP



Hvordan er våre resultater?

Risikonivået i norsk petroleumsvirksomhet

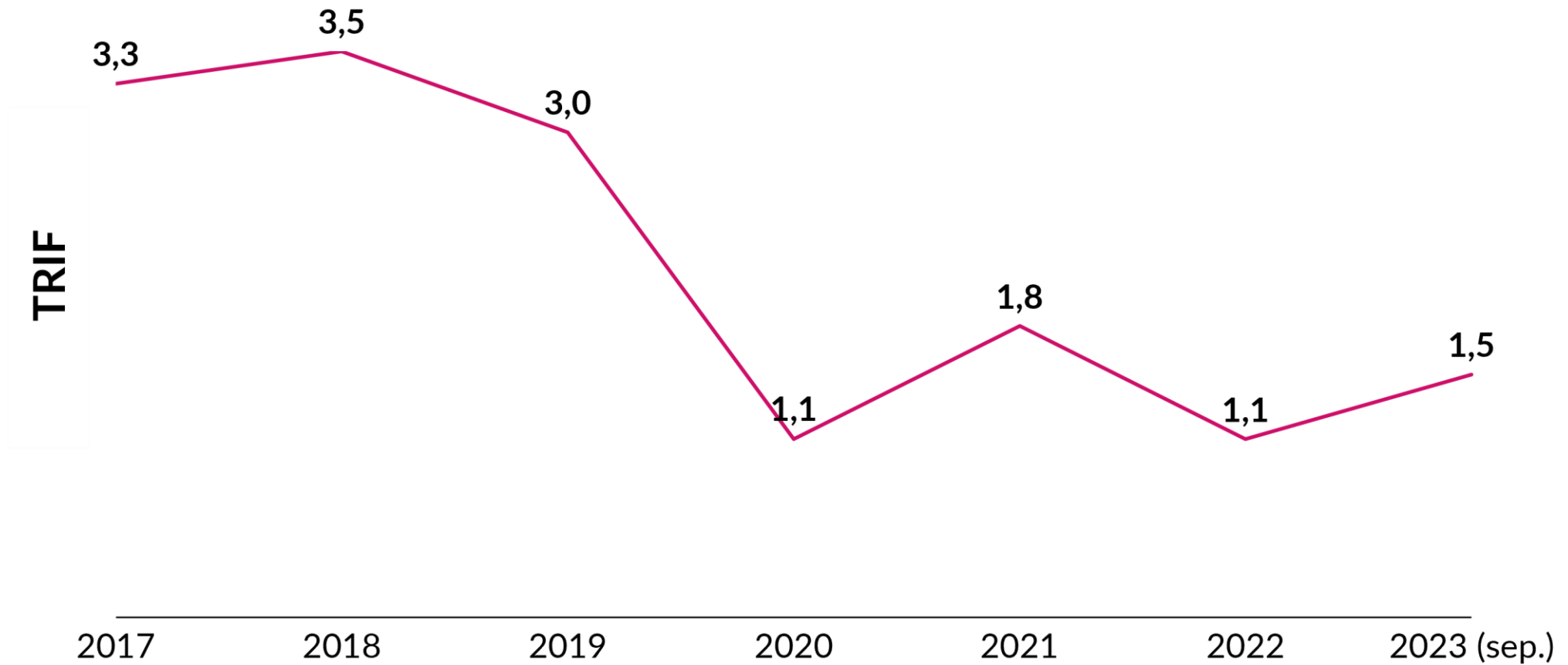
RISIKONIVÅ – UTVIKLINGSTREKK 2022 NORSK SOKKEL
PETROLEUMSTILSYNET



Figur 6-4 Totalt antall hendelser DFU1-10 normalisert i forhold til arbeidstimer

Aker BP resultater i perioden 2017-2023

(Total Recordable Injury Frequency - dvs antall skader per million eksponerte timer)



Hva er essensen?



Er våre ansatte «i trygge hender»?

- Vi vil svare et ubetinget «ja»,
 - men viktig å beholde ydmykheten - en ulykke kan ramme senere i dag eller i morgen.
 - Derfor må alle gjøre sitt beste for å levere kvalitet i alle ledd – fra CEO til den skarpe enden





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