



vår energi

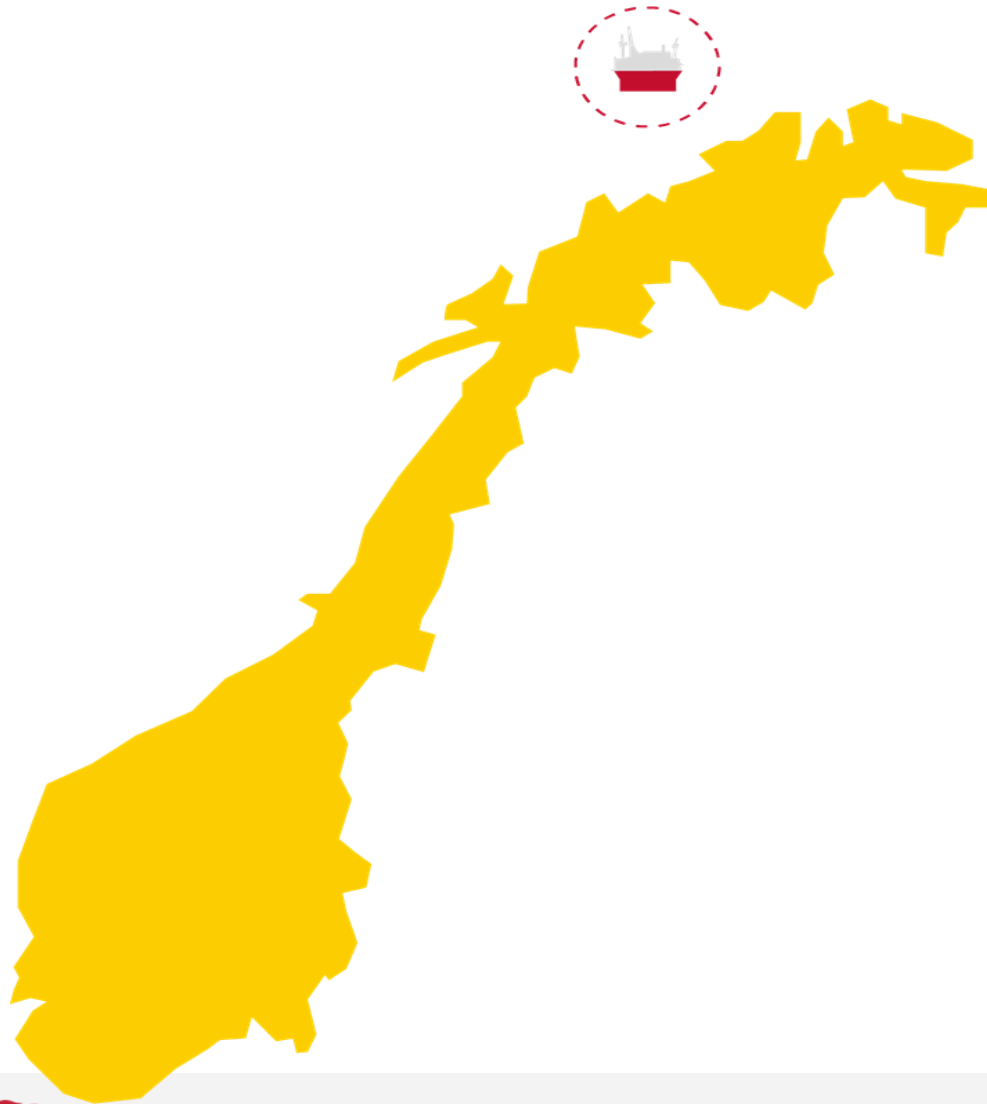
# Barrierestyring Goliat FPSO – Vår Energi

Årsmøteseminar for ESRA Norge - 2019

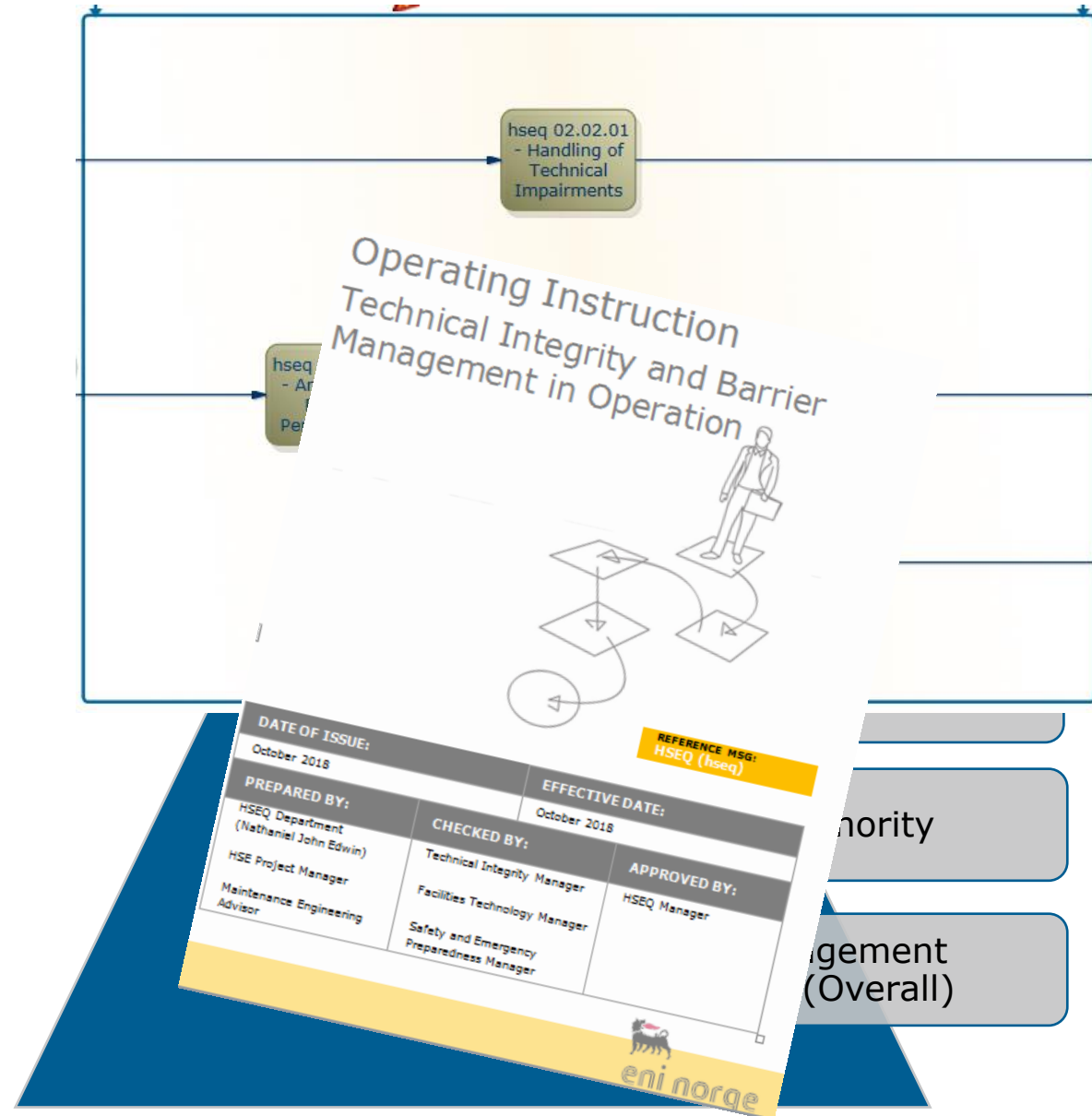
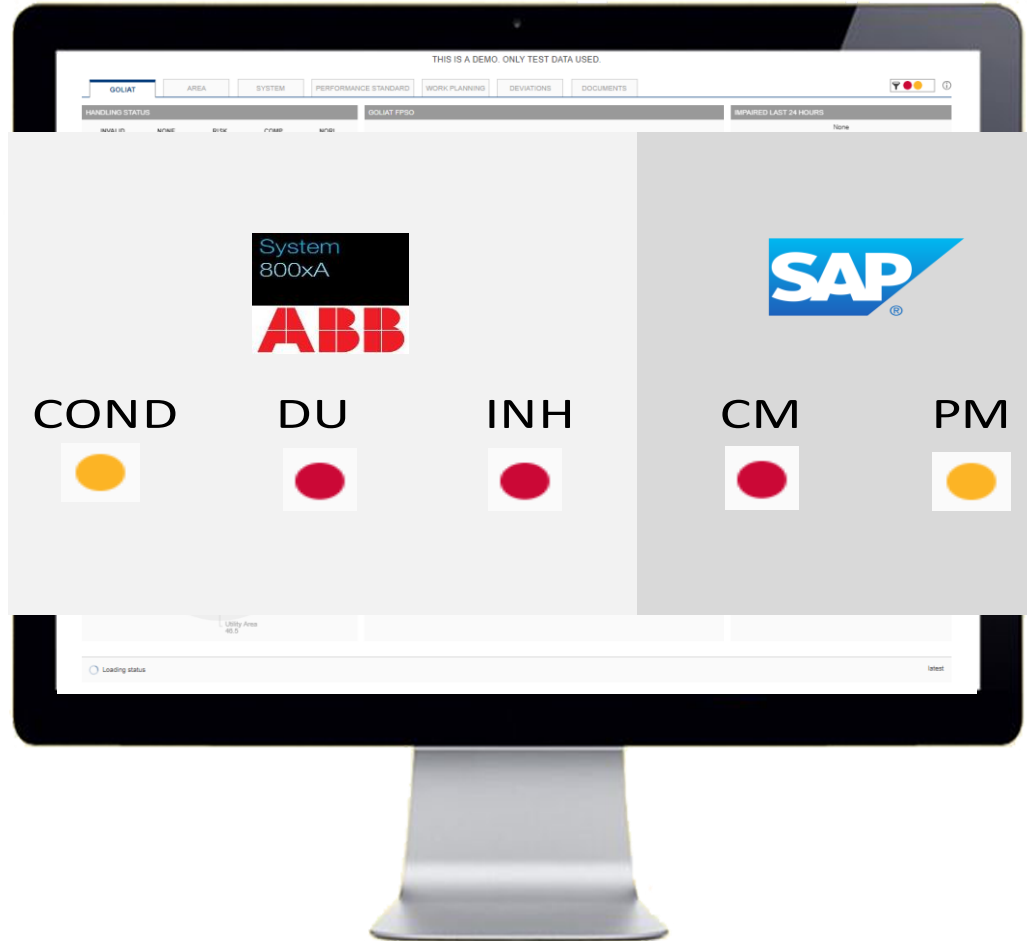


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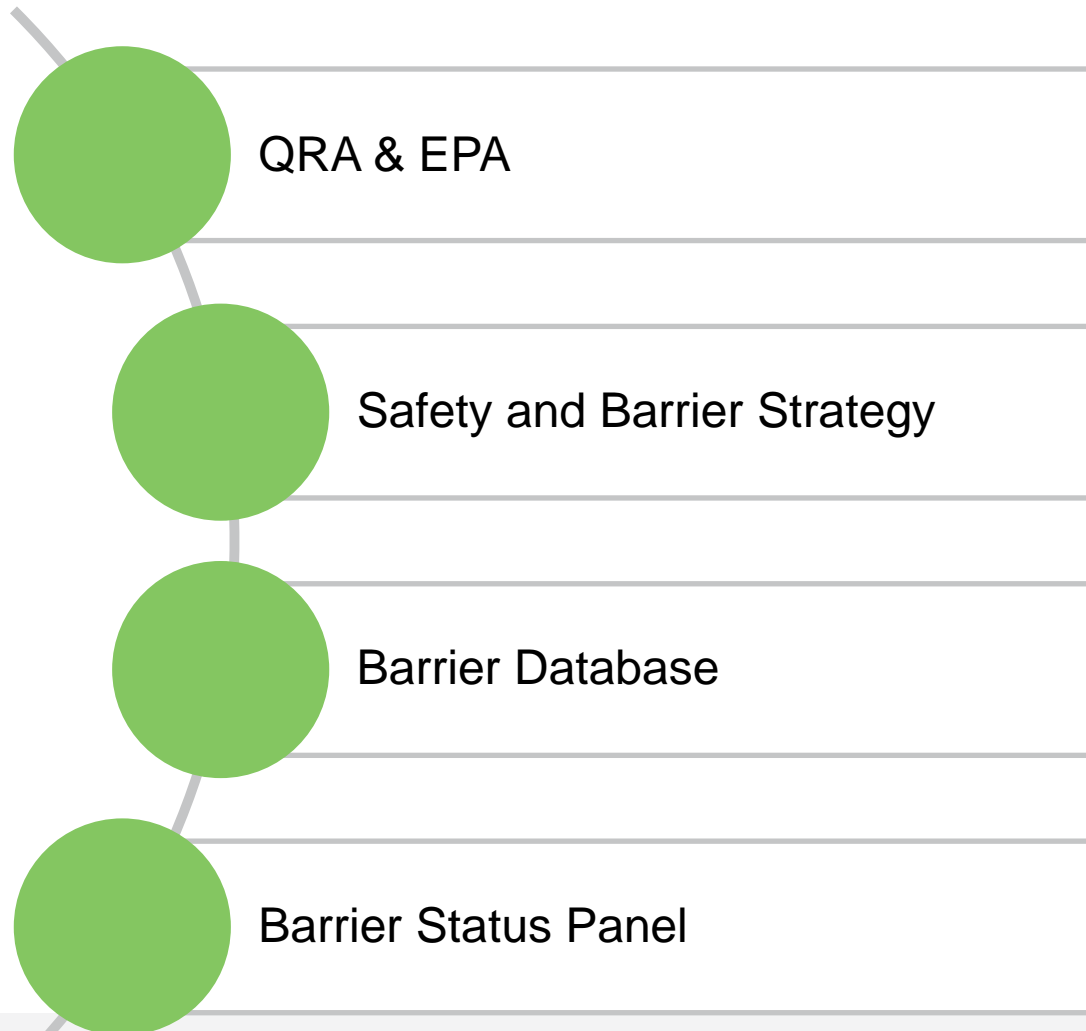
# Operatør i Barentshavet



# Barrier Management Today



# Goliat Barrier Management Project (2014-2018...)



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**SAFETEC**

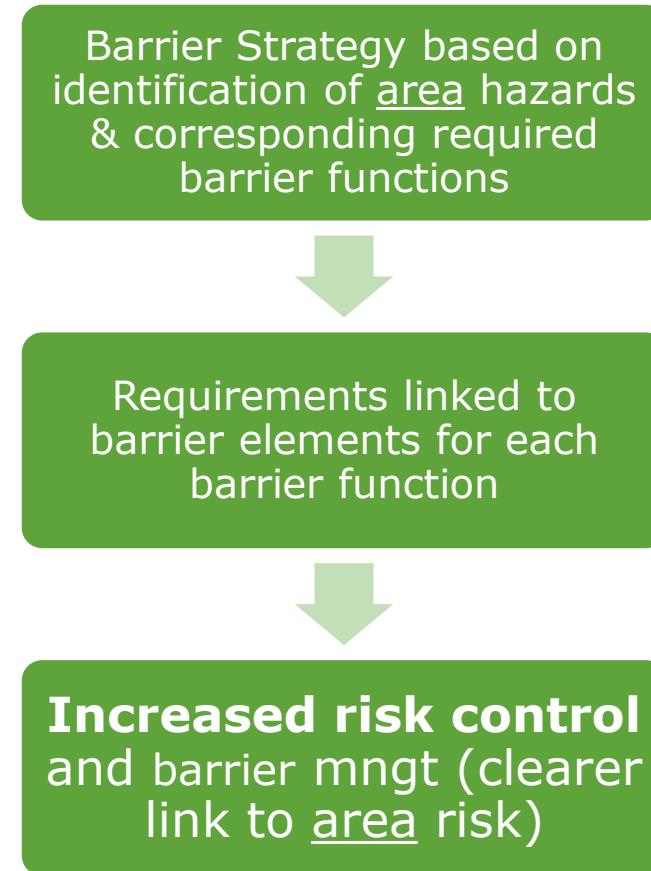


# Barrier Management Project - Methodology

From this:



To this:

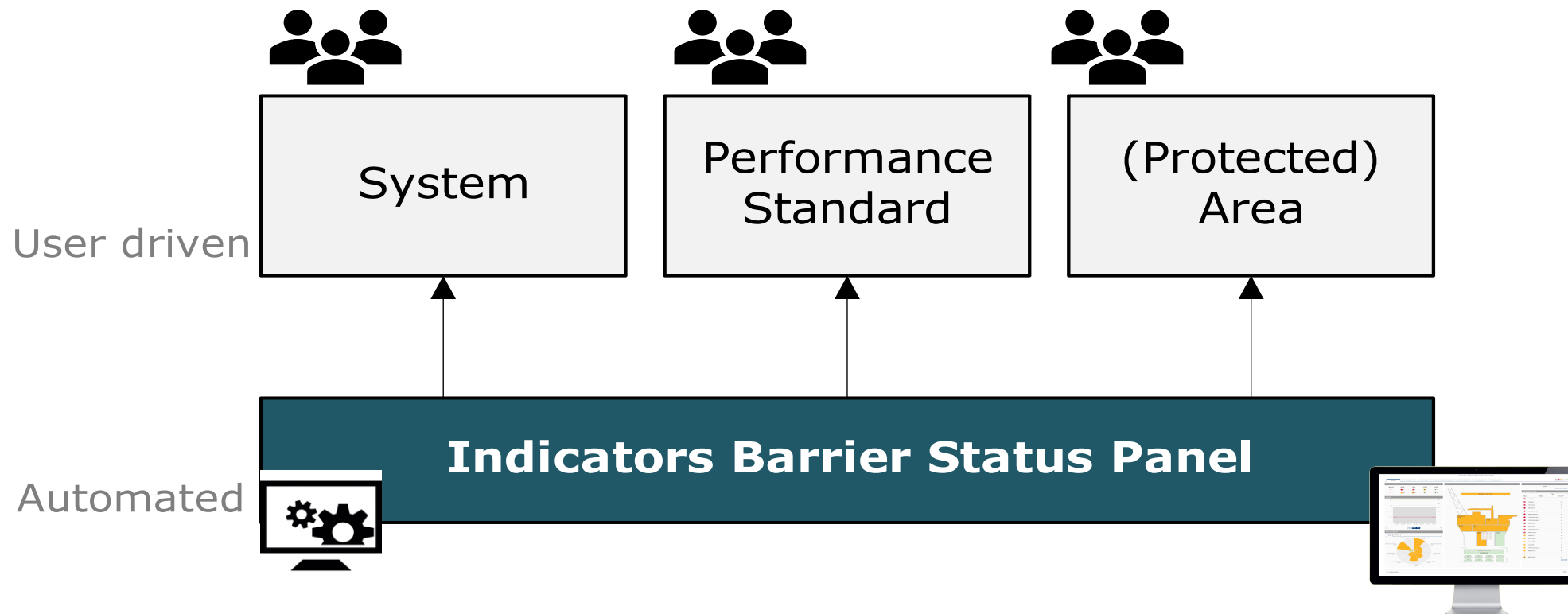


# Erfaringer – prosjekt

- Metodeutvikling
- Tidlig involvering av sluttbrukere
- Visualisering og brukergrensesnitt
- Å etablere helhetlig/aggregert barrierestatus vs. forenklingsgrad
- Mulighet til å optimalisere etter implementering



# Barrierepanelet - en del av bildet...





# System & PS Evaluation

- BSP status
- Approved/Pending Deviation Permits
- Pending modifications
- Missing procedures/manuals

- Inspiration from Equinor's TIMP-method
- Once every quarter
- Qualitative evaluation of systems
- Prevents over-reliance on the BSP

## Part 3: Conclude on Overall System Status

No or insignificant Defect/ Deficiency <b>A</b>	Minor Deficiencies <b>B</b>	Medium to Severe Deficiencies <b>C</b>	Severe Deficiencies <b>D</b>
All safety functions are intact, or only slightly affected	Defect can eventually lead to Failure, but will most likely function in a severe accidental event	Certain selected equipment/functions will not function in a severe accidental event	Critical safety functions will not function in an accident situation
Minor shortcomings and delays on maintenance plan	Maintenance is inadequate and can lead to a function failure.	Critical maintenance is not performed. Equipment reliability is unknown and not in compliance.	
Deviation handling, document and procedure updates are in accordance to defined processes	Deviation handling, document and procedure updates deviate slightly from specified processes	Deviation handling, document and procedure updates deviate significantly from specified processes	



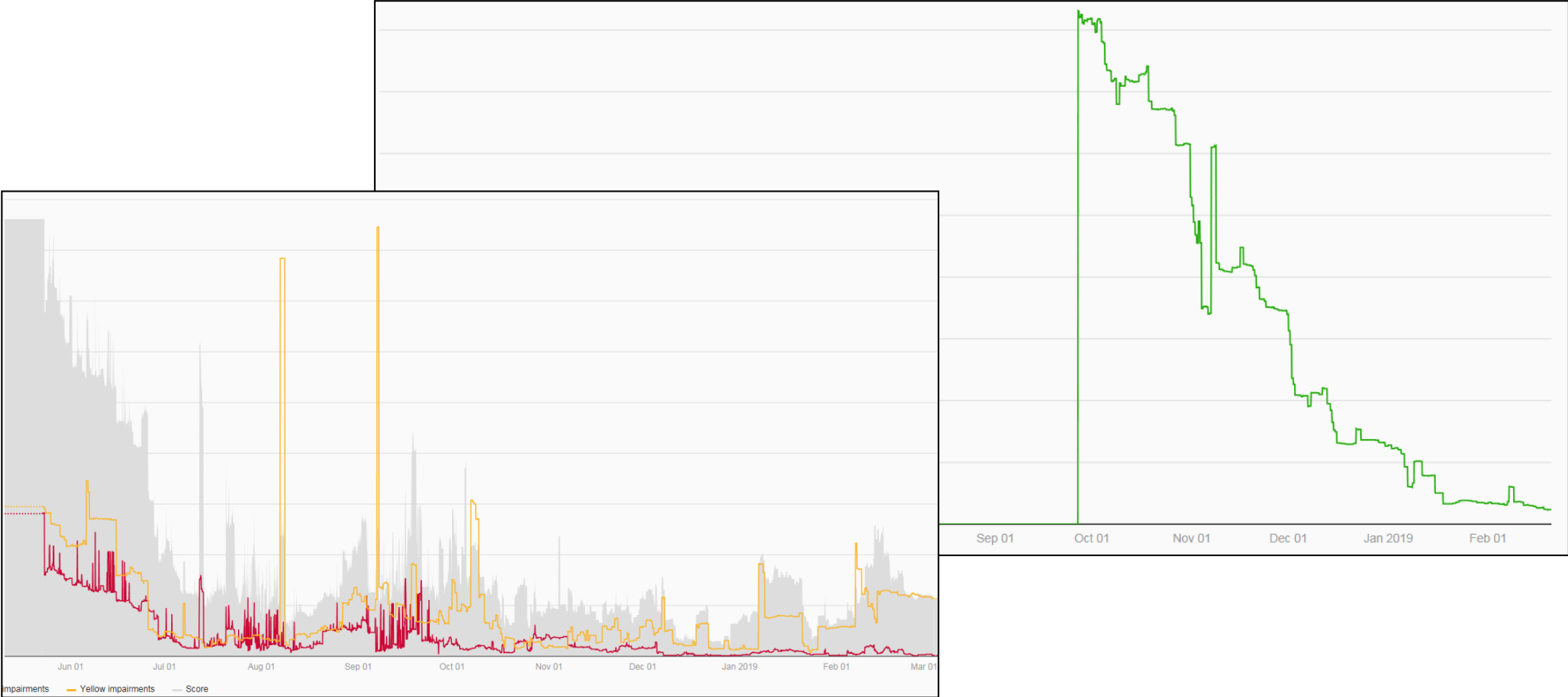
# Erfaring i drift

- *Tilpasset opplæring*
- *Kvalitet på risikovurderinger*
- *Modning i drift*
- *Etterlevelse*
- *Blindsoner*
- *Fokus fra ledelse*



# Trender på barrieresvekkelser – BSP 2.0

## Impairment Trend

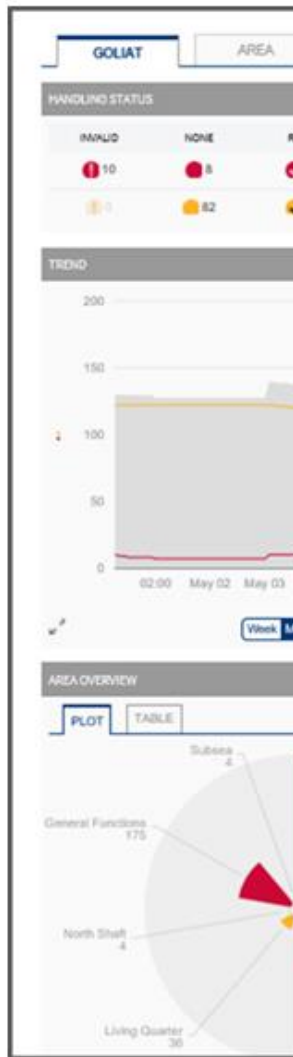


# Oppsummert

- Bedre kontroll på barrierene våre I dag – risikobasert planlegging av arbeid
- T.T.T... Ting Tar Tid!
- Ledelses- og brukerinvolvering er nøkkelen
- Planlegg implementeringsfasen godt
- Endringsvilje...



# Veien videre.... O&O barrierer...



GOLIAT | AREA | SYS

**Functions** | Competence

**WORK PROCESSES**

hseq 02.03 - Work Permit (WP)	ope 02.04
man 06.03 - Corrosion Control, Pipeline and Structure Integrity Manage...	ope 02.0 Normally Sy
ope 01.03.02.02 - Shuttle Tanker Operation - Offloading & Completion	ope 02.0 Confir
ope 02.02 Lifting Operations	ope 02.09 iso

**ORGANISATIONAL BARRIER ELEMENT**

Field Operator	1
CCR	1
OIM	1
M&L	1

GOLIAT | AREA | SYSTEM | PERFORMANCE STANDARD | WORK PLANNING | DEVIATIONS | DOCUMENTS | **Organisational Barriers**

Functions | **Competence**

All Personnel	Innsatslagsleder
Authorised Person Electro	Instrument technician
Beredskapsleder	Lifeboat Captain & Crew
Beredskapsleder OIM	Lifting appliance operator (LAO)
Catering team lead	M&L
<b>CCR Operator</b>	M&LCCR operator
Electrician	Marine adviser
Fagansvarlig prosess	Mechanic
Field operator	O&M supervisor Maintenance Supe...
Førstehjelpslag	O&M supervisor Operations Superv...
HLO & Helideck Crew	OIM

**COMPETENCE STATUS**

	Day			Night	
	CCR3	CCR4	CCR5	CCR1	CCR2
PROC-MAIN	●	●	●	●	●
ROC	●	●	●	●	●
P-OILSPILL	●	●	●	●	●
SRC-VHF	●	●	●	●	●
BAL-OPR			●		
BAL-OPR-RE	●	●		●	●
SAP-PM-WP	●	●	●	●	●





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