“In short, the software solutions is for the management of conditions on a platform.

In the bottom of is a kind of search-robot, that after carefully programmed parameters continuously scans the entire 56 different data sources.

The system can also generate graphs showing development and the relationship between processes.”

- digital background/next slide...
We had a headstart on digital transformation ...

Tenker nytt på Tampen

Hydro prøver et nytt system for drift og vedlikehold som avvik fra tradisjonell, hierarkisk komandostruktur.

Tradisjonelt har offshorestållasjonene hatt fastspikrede programmer for den daglige driften, med manualer og en klar hierarkisk komandostruktur. Vedlikeholdet var ofte styrt gjennom virkemidlene. Norsk Hydro har imidlertid tenkt nytt...

Nå er stikkordene informasjonsutveksling og resultatering.

Datasystemet PMR2000, som er utviklet av firmaene Triangle Maintenance Consultant og iSolutions i samarbeid med Hydro, syrer med tilvarende regler for klassisk driftsadministrasjon. PMR står for Performance, Management, Reporting system. Det som nå prøves ut på Tampen- plattformene Visund og Snorre B, har sin oppfølging i Oljedirektoratets basisstudie, som ble videreført av Hydros prosjekt Team Tampen til toppen.
Speaker topic;

Supporting drilling crew and management’s risk awareness in operations using digitech
Lessons: Underlying Organizational/Human Causes

- Lack of major hazard leadership
- Failure of MOC and SEMS
- Compartmentalization of information
- Ineffective management and oversight
- Failure to analyze and appreciate risk
- Failure of decisions support
Industry responded - $ investment in updating of documents and risk analysis

<table>
<thead>
<tr>
<th>SCE</th>
<th>OPERATIONAL BARRIER ELEMENT</th>
<th>ORGANISATIONAL BARRIER ELEMENT</th>
<th>REQUIREMENT</th>
<th>REQUIREMENT REFERENCE</th>
<th>INDICATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1</td>
<td>BF1: Prevent Well Control Problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** CGE Risk
Complex Adaptive Systems Challenge

Source: PSA

Copyright 2017 Presight Solutions AS. All rights reserved. All trade and service marks are the property of their respective owners.
Songa Offshore Build up

Performance Standards

Bow ties

Pexecight Application

IFS Objects & Service and Maintenance

CM Skills

Synergi

StormGeo
Every hour

NCS
03:00
09:00
15:00
21:00

Copyright 2017 Presight Solutions AS. All rights reserved. All trade and service marks are the property of their respective owners.
Digitalised MTO performance monitoring – User context for decision making
Decision support for operations – status today and situation ahead

Brørnoperasjon

Risk score Brørnoperasjon (1-very, 4-worst)

Risk score Barriere Funktion

Brørnoperasjon ikke-tekniske barjerer

Brørnoperasjon tekniske barjerer

Værprognose høydepunkt

Værprognose vindstyrke

Copyright 2017 Presight Solutions AS. All rights reserved. All trade and service marks are the property of their respective owners.
Dynamic bowtie diagrams with drill-down through schema to source system
Importantly – digital approach making a difference in off- & onshore operations

“Has increased barrier safety and risk awareness across our operations”

“Disipline leaders and offshore crew is now driving our safety improvements”

“Now achieving ‘pull vs push’ in our safety performance needs from onshore”

“Red is not bad – now we know and can do something about it!”

“As Songa’s drilling environment becomes more complex, we will continue to improve, as all of us can now recognise the signal from the noise”

Rig Manager - Songa Delta
Presight Effect

Day-to day use through permit meetings offshore
Part of morning meeting presentation with client
Heightened focus on barriers
User-friendly. Information easy to access.
Quality in sub systems increase ("Big brother")
Seeing all elements of barrier management (Barrier functions)

Dashboard for OIMs morning meeting
Extended Reality solution for operations status and spatial awareness in planning
Thank you for your attention.

Q&A...

Questions or clarifications to points in document, contact;

www.presight.com