



Future Fit and Sustainable Operations

C-NLOPB Spill Prevention Forum

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Manager, Operations

Driven by purpose, inspired by vision, guided by values

Our purpose

Turning natural resources into energy for people
and progress for society

Our vision

Shaping the future of energy

Our values

Open, courageous, collaborative and caring

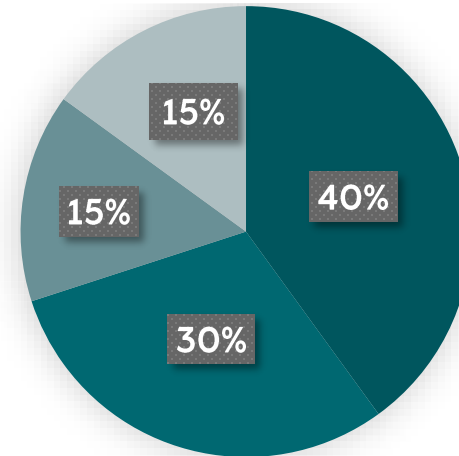
Our strategy

Always safe, high value, low carbon

The world's first floating wind farm.
Hywind Scotland.



Project Influence on Future fit and Sustainable Operations



- Engineering
- Fabrication, construction, commissioning
- TR related
- LCI related

60% of all serious incidents in Equinor can be related back to the project phase



* Based on SIOB, 2007-2017.









Major Accident Prevention

- Training of personnel
Real and Virtual
- Operational knowledge
about process safety
- Experience transfer



8 red flags:
The dominant direct causes for major accidents in our industry 1994-2019*
(* Equinor and IOGP data)

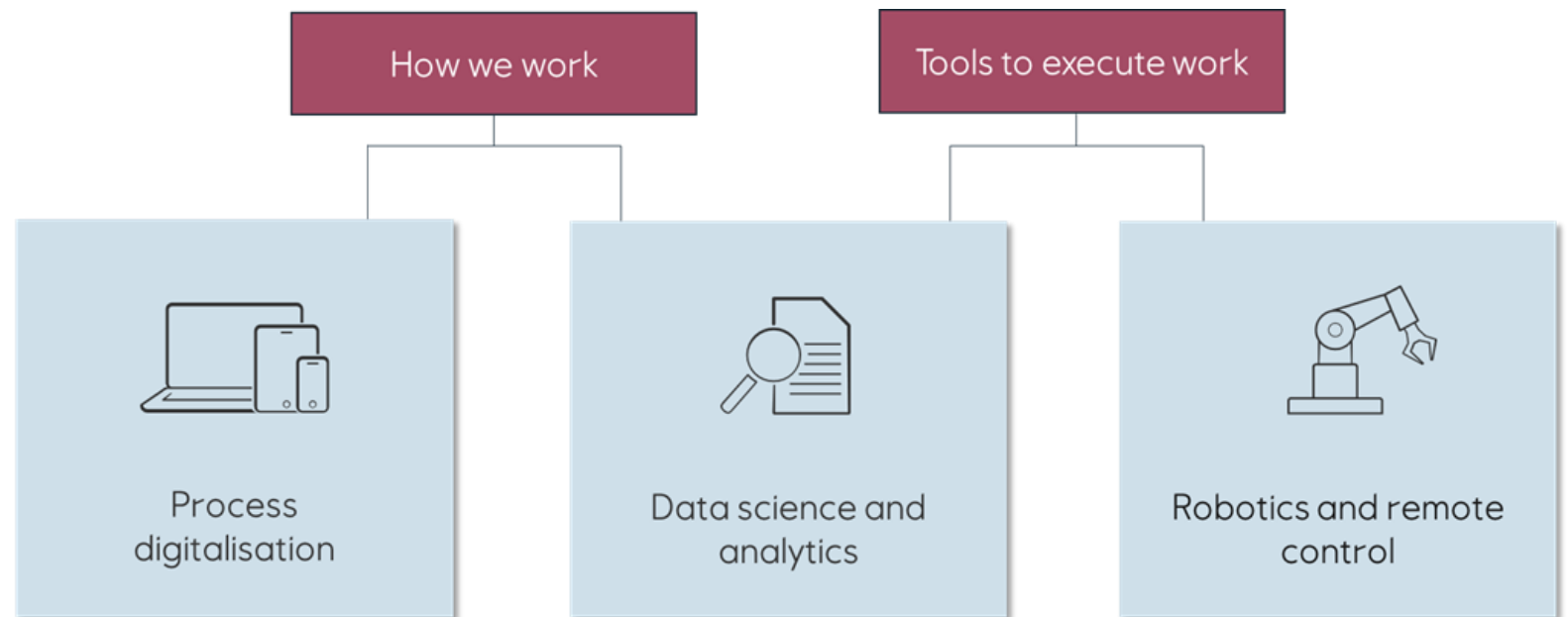
OUR 8 RED FLAGS

-  Plant vibrations
-  Corrosion/erosion
-  Overdue critical maint.
-  Diffuse gas leaks
-  Transport of risks between shifts
-  «Last minute» change of plans
-  Compliance with safety requirements
-  Competence

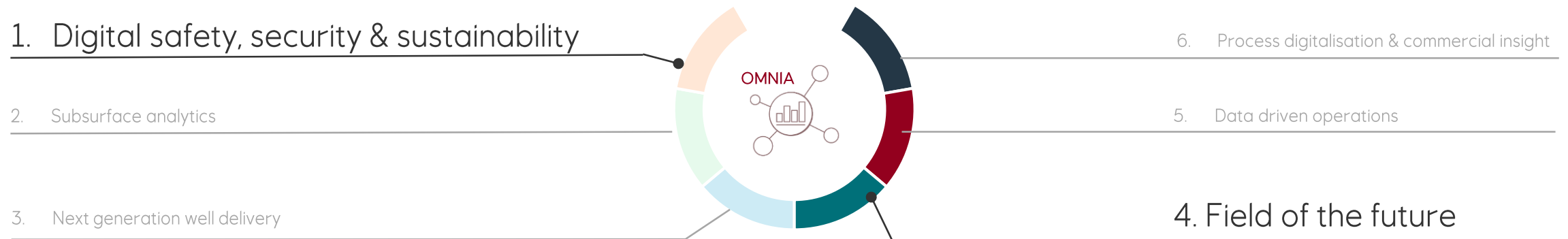
Digitalization in Prevention

Digitalization is the use of new technologies and integrated data to change how we work and the tools we use to execute our work.

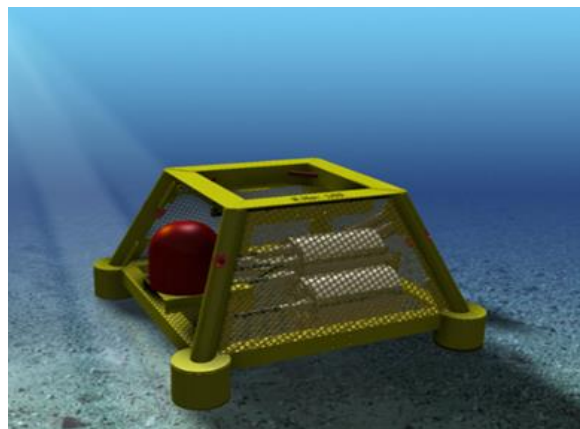
- Enhanced Situational Awareness
 - Barrier status and risk awareness
- Condition Monitoring
- Predictive Analytics
- Remote Inspection
- Intervention and Repair



Digitalization roadmap – current and future capabilities



Leak Detection



Digital Twin

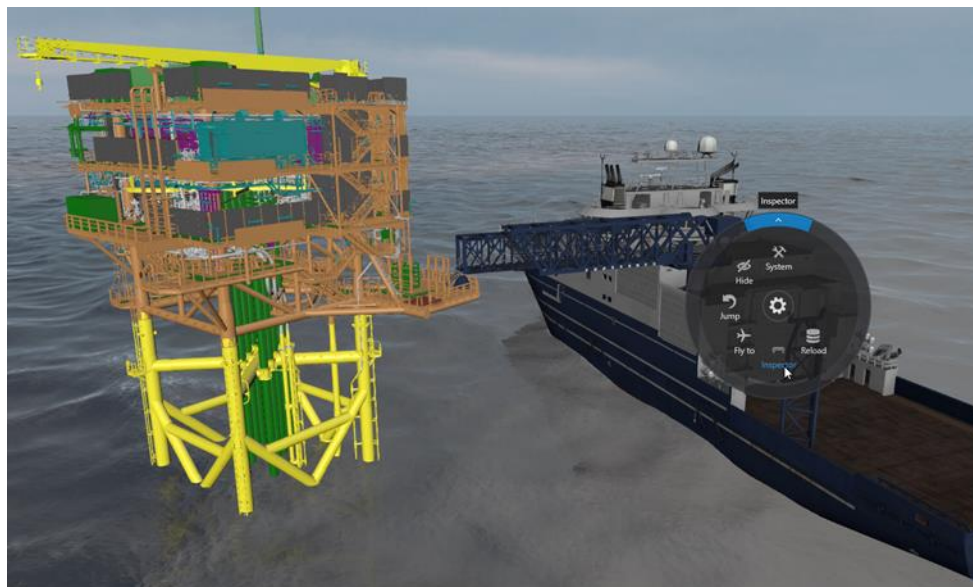


Underwater Intervention Drones



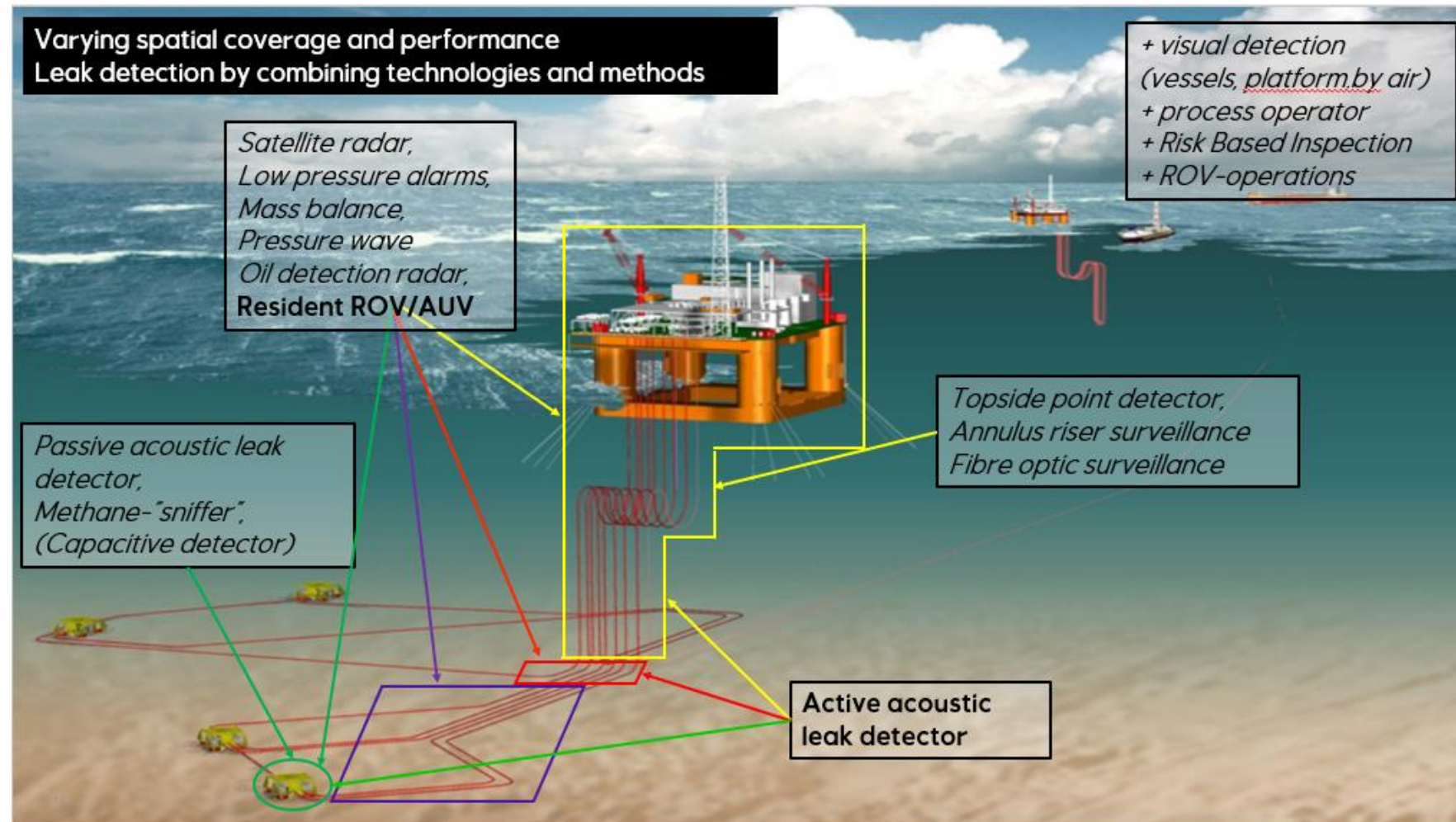
Digital Twin

- A digital twin is a virtual representation of the asset used from early design through building and operation.
- The digital representation provides both the elements and the dynamics of how a physical device or an asset operates.



Leak Detection Toolbox - *present* and future

- consideration is given to the technology readiness as well as the specific risk picture, capabilities and needs of each asset when assessing which tools are used



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