

Xodus and CNOOC

Digital Emissions Reduction Action Planning: CNOOC Case study

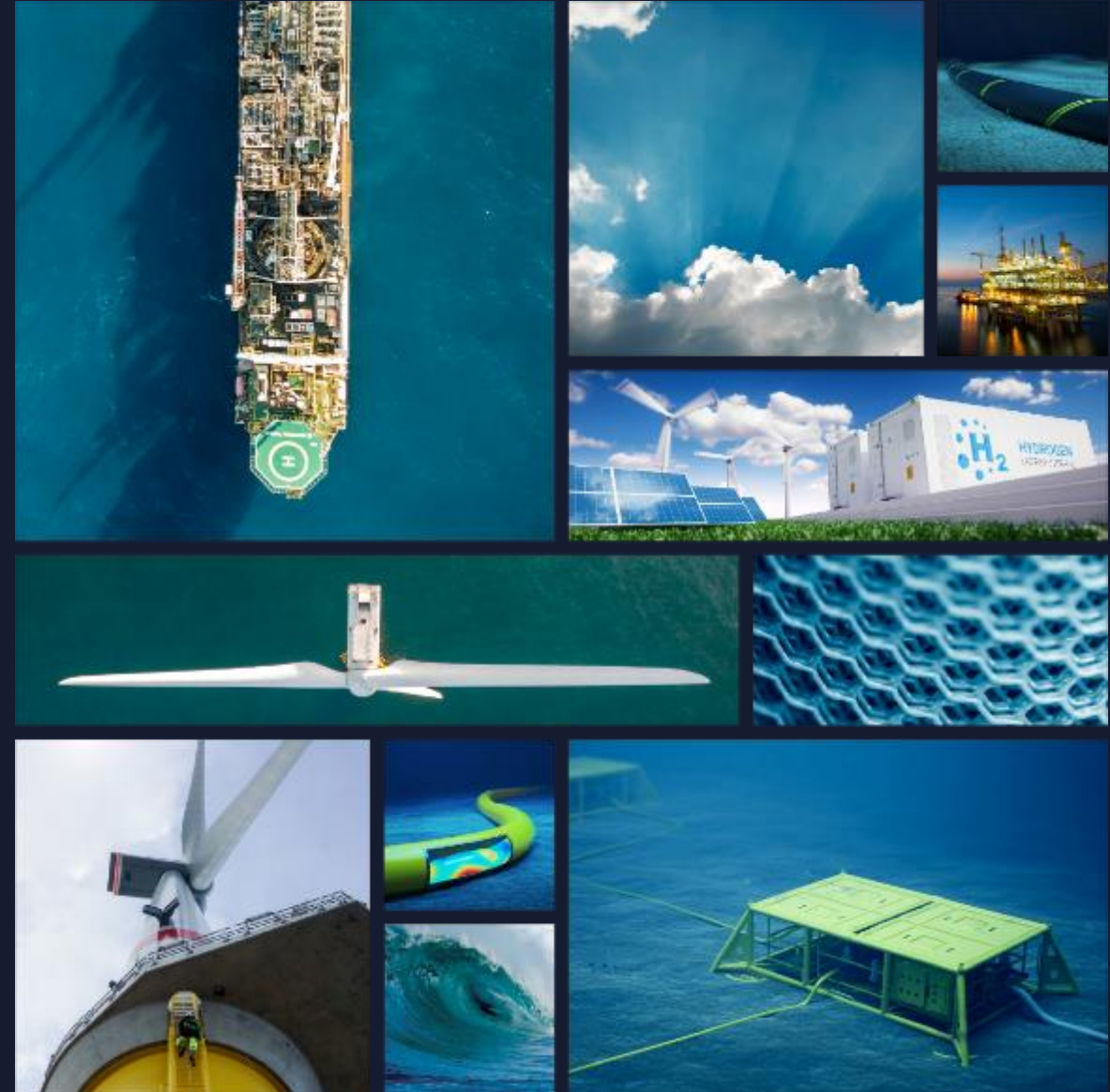
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DIGITAL ERAP: CNOOC International CASE STUDY

Digital Emissions Reduction
Action Planning

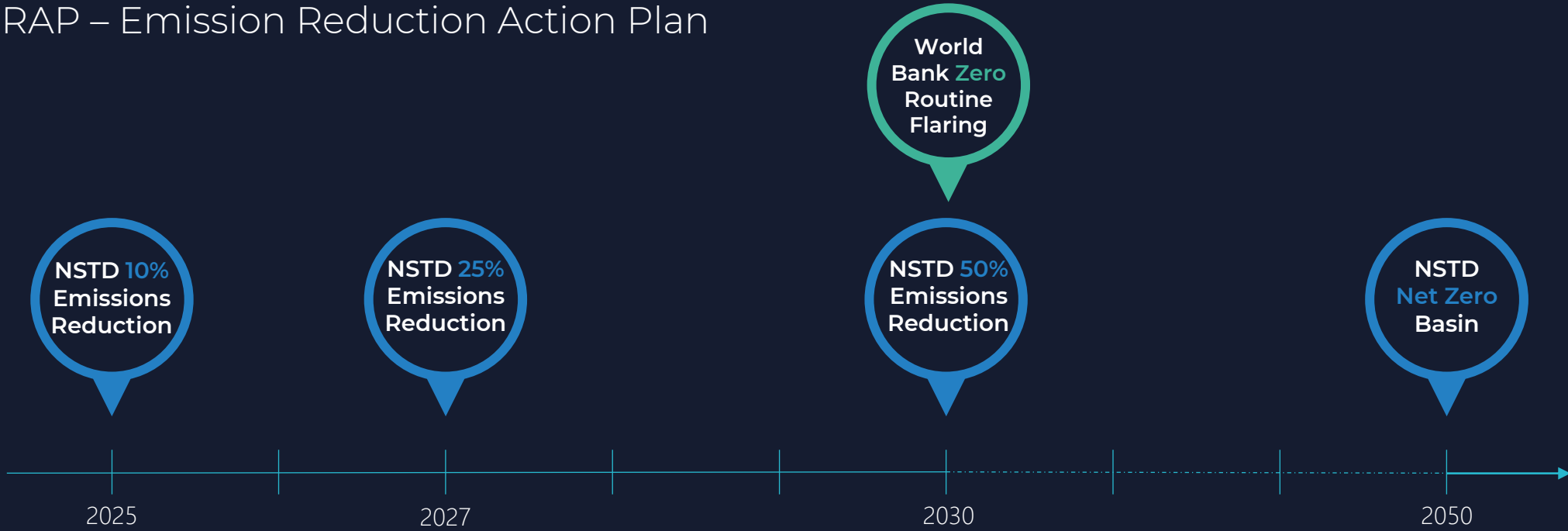
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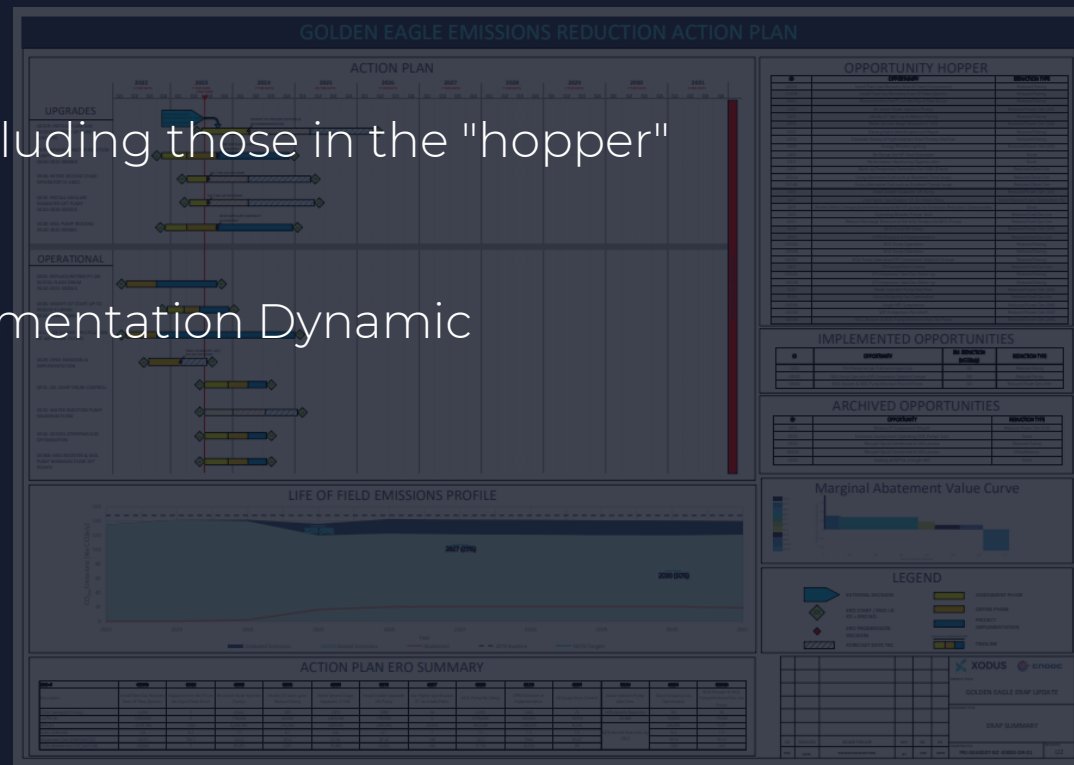
INDUSTRY TARGETS

- Basin Targets as agreed North Sea Transition Deal (NSTD)
- Stewardship Expectation (SE) 11
- ERAP – Emission Reduction Action Plan



THE CHALLENGE

1. Review/Update existing ERAP opportunities including those in the "hopper"
2. Update ERAP Report
3. Consider Offshore Operation and Project Implementation Dynamic
4. Incorporate Dynamic Changes
5. Sustainable product



91

OPPORTUNITIES TO
BE PROCESSED

18+

EXCEL SPREADSHEETS
AND DOCS

5+

OPPORTUNITY TYPES



3 ASSETS: 1 APPROACH



Buzzard



Golden
Eagle



Scott



XODUS DIGITAL ERAP

A secure, web-based solution to store, calculate, assess and rank emissions reduction opportunities (EROs).

PROBLEM



- Various spreadsheets to update.
- Emissions basis varies.



- Output is manual and static
- Multiple updates for simple change.



- EROs not linked to emissions pathway.



- Manual update and processing of all reports, graphs and figures.

SOLUTION

Reduces human error, removes time intensive tasks, through [automated calculations](#).

Easily accessible and updateable, with an [audit log](#) to ensure all changes are tracked and justified.

Intuitive [scenario analysis](#), considering the [interactions](#) between EROs to generate live emissions pathway.

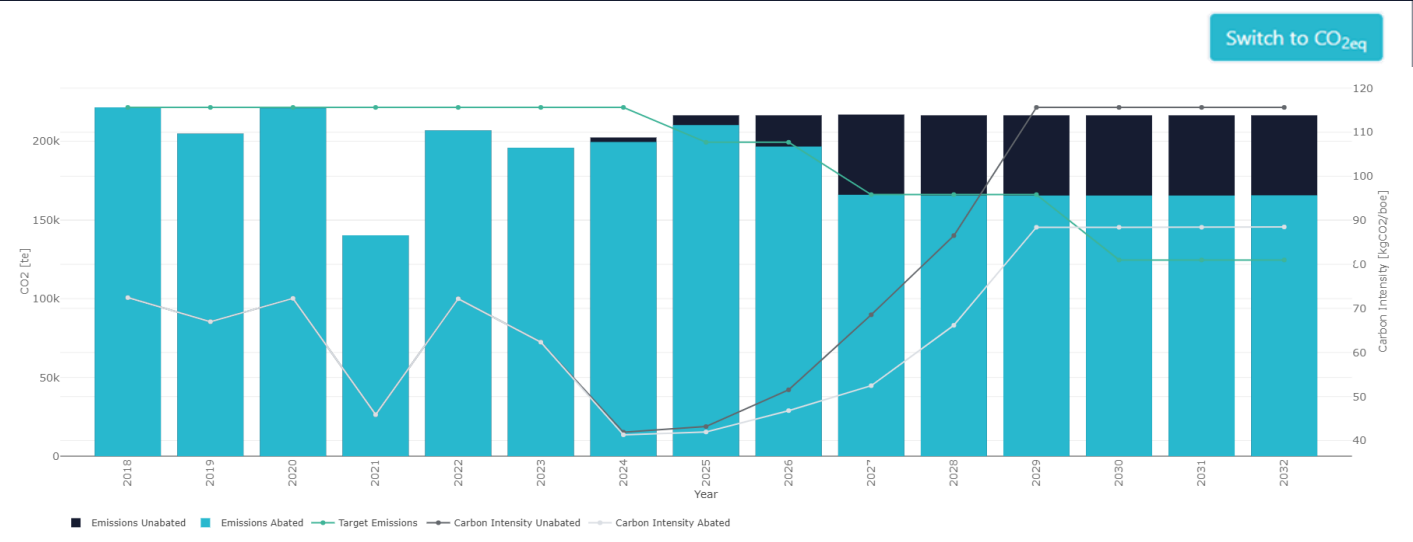
Bespoke [visualisations](#) inc. emissions profiles, MAVC, waterfall charts, automatically updated and available with [export report](#) functionality.



DIGITAL ERAP: KEY OUTPUTS

ABATEMENT SCENARIO EMISSIONS PROFILES

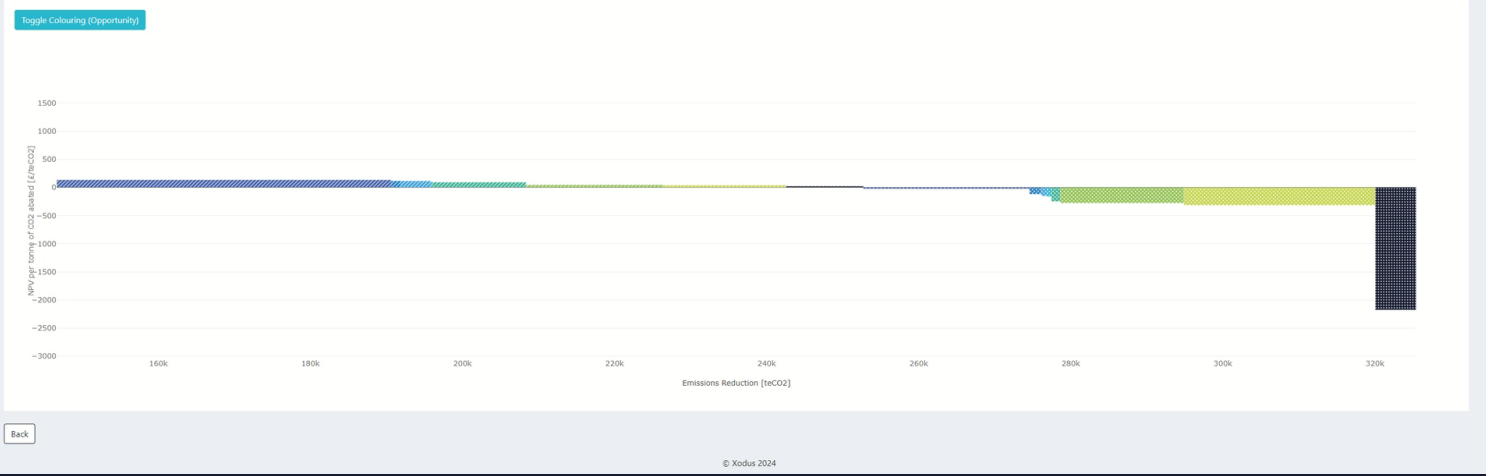
Reporting of both absolute emissions and emissions intensity for the scenario, with ability to superimpose targets.



CONSTITUENT BREAKDOWN

Option of CO2 or CO2e reporting, with individual species breakdown.

Maximum Abatement - Marginal Abatement Cost/Value Curve (MACC)



MARGINAL ABATEMENT VALUE CURVE

Calculation of NPV per ERO and scenario, with other metrics such as IRR & payback period.

BENEFITS FOR CNOOC

DYNAMIC



Visualisation of scenarios with and without specific EROs.

Changes can be implemented quickly and easily.

CONSISTENT



Ensure all 3 asset's opportunities are assessed in a consistent manner.

Single source for all EROs.

Global calculation methodology.

AUDITABLE



Inbuilt audit log. Assumptions clearly stated.

Individual user logins and permissions.

ACCESSIBLE



Online platform allows multiple users to access ERAPs.

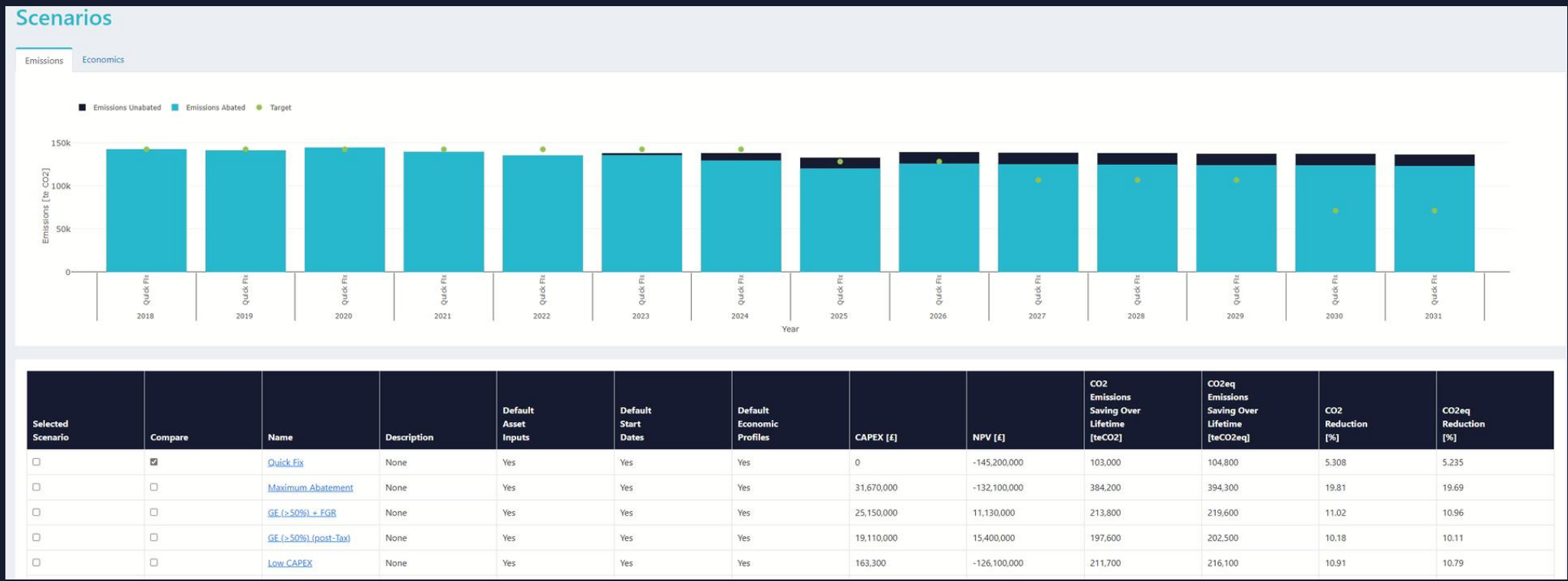
Ease of communication on progress and comparison of options.

COLLABORATION

Xodus & CNOOC have worked together to implement changes with recognised benefits such as:

- Scenario Comparison
- Improved Export Functionality
- Additional Flare & Power Generation Features

INTUITIVE SCENARIO COMPARISON



DIGITAL ERAP: SUMMARY

A secure, web-based solution to store, calculate, asses and rank emissions reduction opportunities (EROs).



EFFICIENT

Meets ERAP requirements through automated calculations and reporting



LIVE

Online solution meets stewardship intent of easy access and regular updates



ENGAGEMENT

Effective communication of plans to stakeholders for funding and action



TRACK & RANK

Single source of EROs allows consistent evaluation, ranking and tracking



PLAN

Intuitive scenario planning with sensitivities and powerful visualisations



ACCURATE

Robust calculations and consideration of interactions between EROs