



ASTF
Joint Venture Hub Strategy

Industry Good Practice

Issue 1

Acknowledgments

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- Tony Peters (NSTA)

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1 Introduction

The Asset Stewardship Taskforce, under the North Sea Transition Forum, was established to support the NSTA Strategy, in respect of both production and net zero obligations by improving asset stewardship in the UK Continental Shelf area.

A cross-industry ASTF workshop was held in June 2023 with representatives from Well Operators, Regulators & OEUK. The topic was split into four themes: JV Hub Strategy, ERAP, Learning & Sharing, Culture. The purpose of the JV Hub Strategy:

Develop a fit for purpose industry best practice approach to Joint Venture (JV) hub strategies that identifies areas of value, improves delivery, and drive more collaboration and cross-industry improvements.

A task group (TG) was formed to capture the opportunities and challenges industry is facing regarding current hub strategies and opportunities to enhance greater consistency across the UKCS. The TG after reviewing the current as-is assessment reviewed and shared most effective Hub Strategies either as lead operator or JV partner. Through this exercise the TG concluded a template of requirements would be beneficial and should easily deliver the core aims of the JV Hub Strategy to identify areas of value, improve delivery, drive collaboration and improvements. The NSTA ASTF Joint Venture Hub Strategy is available here: <https://oeuk.org.uk/product/astf-joint-ventu...ractice-template/>

This good practice is to be accompaniment to the NSTA Asset Stewardship 1 (SE1) : https://www.nstauthority.co.uk/media/5895/oga_se1_joint_hub_strategy_july_2019.pdf and does not replace the current SE1 or any future updates.

There was also a recognition that although a standard template was developed it should not be used as the sole template. All parties must be willing to expand and share additional items for inclusion as merited to address area nuances.

The Industry Good Practice document and accompanying template is used to give practical advice on how to comply with NSTA Stewardship Expectation 1. The Task Group aspiration and intention if an Operator follows the template you should be complying with the JV Hub Strategy Stewardship Expectation.

2 Joint Venture Hub Strategy Template

The JV Hub Strategy should cover the following requirements with an expectation to be completed with 22 individual core slides. Typically, within each template page there is a summary section, graphical or tabular to increase visibility of the hub strategy and a list of prioritized activities. Notes will be included in the speaker notes section of the template to help address any inconsistencies.

The key elements covered in the template are listed below. All slides may not be applicable for all assets/hubs and will be dependent on the timing of the asset life cycle, there is no expectation to complete all slides, only those appropriate to the asset/hub in question.

1. Overall Hub Strategy 1-Page Summary
2. Hub Timeline
3. SWOT Analysis
4. MAH Prevention/Process Safety
5. Emissions Baseline, Forecasts and Targets
6. Emissions Reduction Project Program & Investments
7. Exploration Prospectivity (Add Multiple Slides for Additional Opportunities)
8. Undeveloped Discoveries (Add Multiple Slides for Additional Opportunities)
9. Infill/Workover Opportunities (Add Multiple Slides for Additional Opportunities)
10. Enhanced Recovery Opportunities (Add Multiple Slides for Additional Opportunities)
11. 3rd Party/Business Development Opportunities
12. Topsides Projects (Add Multiple Slides for Additional Projects)
13. Barrel Adding Opportunities
14. Production Efficiency/Debottlenecking Opportunities
15. Shutdown/TARs/Maintenance Backlog
16. Life Extension Opportunities
17. Technology Requirements
18. OPEX/CAPEX/ABEX
19. Decom Preparation & Post CoP Options
20. JV Collaboration & Alignment

- 21. Development Scenario Analysis
- 22. Good Practice Matrix

Appendix A contains further information on each individual template topic suggestions, in this same information is stored within the PowerPoint template.

If an operator has additional pages to be encapsulated in the hub strategy due to specific nuances or technical challenges are welcomed. Please give feedback to the central team listed at the end of the document for future potential updates.

3 Joint Venture hub strategy - ways of working

Effective ways of working between JV partners should be established ahead of commencing a Hub Strategy. The following is an outline guide to effective ways of working when developing a hub strategy.

- Establish joint framing session, utilising the hub strategy template as initial default minimum expectation. Must be led by the lead operator with active participating from the non-operating partners
- Expectation is that six months should be allowed for an initial strategy to be completed or a major update or for a large or complex area modification. For regular updates or minor amendments should be completed in less than three months.
- The NSTA Asset Stewardship submissions annual data deadlines to the NSTA should be incorporated into planning cycle.
- All parties quickly confirm the “as is” situation including aspects like, licence status, resource status, safety & environmental, production, operational & drilling performance
- Assess functioning of JV including a SWOT analysis (or similar) for the asset and JV.
- During the production of a hub strategy expectation is to be able to describe and assess multiple strategies scenarios both qualitative and quantitative. Scenarios to include elements like; key assumptions, NPV, reserves, UOC, COP and emissions.
- Active follow-up in/with the OCM reps as required to ensure collaboration is embedded in strategy production.
- Active follow-up with adjacent bodies including NSTA, HSE, OPRED, OEUK, NZTC to ensure latest technology or good practice are reviewed and captured as required.
- Finalisation and formal approval in Operator & JV Partner OCM prior to issue to NSTA including selected strategy and key actions and information / decision points.

4 Hub Strategy SWOT key words

To assist the development of a consistent industry response the following keyword list for the SWOT analysis should be utilized as a starting point on the SWOT analysis.

SWOT Key words

- JV Engagement Level
- Partner Alignment Level on Hub Strategy
- Operator Experience on Assets/Hub
- High Asset/Hub Efficiency/Availability
- Unit Operating Cost
- Emissions Reductions/ERAP Commitments
- Synergies with Other Assets/Hubs
- Further JV Exploration Bids in Licence Rounds
- 3rd Party Tie-Back Opportunities Near Hub
- Scope for Further Resource Maturation
- Available resources; LWIV or Drilling Rig for infill well activity
- Predictive production declines or failures known / unknown.
- Onshore Infrastructure status
- Commercial agreements with Onshore Reception Facilities
- Project Delivery of ERAP Commitments confidence
- Licence to Operate status.
- Commodity Price prediction support expenditure plans
- Reception Facilities Cost and Longevity
- Asset Life Extension impacts on Net Zero Commitments
- Supply Chain Challenges / Opportunities

5 Proposed next steps

ASTF & OEUK formally roll out Template ASTF Joint Venture Hub Strategy to wider industry

The Industry Good Practice Template should be used to supersede any previous versions of the Joint Venture Hub Strategy and there will be no expectation of a supporting document. The PowerPoint slides provided in the template will be sufficient to satisfy the requirements of Stewardship expectation 1.

Q2 2024; Operators are already utilising the template to update JV Hub Strategy to the satisfaction of both JV Partners and the NSTA.

The Task Group are looking to receive feedback and case studies. For further information or to join the ASTF please contact Keith Wise kwise@oeuk.org.uk or Mark Wilson mwilson@oeuk.org.uk

Appendices

A Joint Venture Hub Strategy Template – further information

Slide 0



- Please refer to the supporting NSTA JV Hub Strategy Good Practice Guide for additional supporting information to this template pack.
- NSTA Stewardship Expectation 1 (Joint Venture Hub Strategy) should also be referred to when populating this template pack –
https://www.nstauthority.co.uk/media/5895/oga_se1_joint_hub_strategy_july_2019.pdf
- Not all slides will be applicable, therefore please refer to slide 22 (JV Hub Strategy – Good Practice Matrix) which provides a guide on which slides are applicable dependent on the lifecycle stage of the assets/hub in question.
- This template should be treated as a guide and all slides can be adjusted by the Operator as necessary to suit their asset/hub.
- The Operator can add additional slides where necessary to support their JV Hub Strategy.
- Multiple copies of each template slide can be used if necessary to provide further detail.
- All graphics/figures throughout the slide pack are provide as guidance, the operator can replace with any specific/relevant graphics which best describe the corresponding section of the strategy.

[Hub Name]: Hub Strategy Revision History		
[Hub Name]: Update Table Below with Key Revision History		
Revision Date	Revision Number	Key Change/Updates Since Last Submission
11/01/24	Rev 4	<ul style="list-style-type: none"> Further information provided with regards Decision Preparation / Pre Bid CAP Options? Developed Life Extension Opportunities (addition) Updated SOWT Analysis following IV DCOM/TCM?
11/10/23	Rev 3	<ul style="list-style-type: none"> Updated OPERCATEX/UNDERSTANDING following new life extension approach? Updated Fluid Treatment Mitigation (new work)? Added details on new work and other opportunities?
11/08/23	Rev 2	<ul style="list-style-type: none"> 3rd Party Business Development Opportunities added following recent BD engagements? Updated Operational Opportunities (aka following recent well intervention update?) Updated Business Strategy for Hub Name XXX?
28/01/23	Rev 1	<ul style="list-style-type: none"> Updated Hub Strategy 2 Page Summary following IV DCOM/TCM? Updated Commercial slides following latest ERM submission? Added new Exploration Opportunity (New Fluid XCO)?

- This slide should be used to capture key changes for the JV Hub Strategy

[Hub Name]: Hub Strategy 1-Page Summary

[Hub Name]: Mission Statement xxx

Strategic

Operational

Financial

- **Heart Application Summary Picture**
 - Total Mkt
 - Total Leads
 - Prospects, Customers & Leads in 10km
 - Potential Average Yield by JV

- [Hub Name] Strategic Intent (e.g. Key Strategic Points):
 - Hub Timeline
 - SWOT Analysis
 - Market Penetration/Process Safety
 - Environmental, Business, Finance & Targets
 - HRM Program & Investments
 - MSB – Expansion Prospective, Underserved Segments, Hub/Workshop Opportunities & Enhanced Recovery Opportunities
 - 3rd Party Business Development Opportunities
 - Supply Chain Management (e.g. ESG)
- Shared-Adding Opportunities
 - PE/Debt/Investing Opportunities
 - Sustainable/Zero-Maintenance Sealing
 - Life Extension Opportunities
 - Technology Requirements
 - OTC/COP/CD/EEA
 - Decarbon Prog. & Fuel Cap Options
 - JV Collaboration & Alignment
 - Development Scenario Analysis

Resource Progression (million)

Year	Investment	Revenue
2020	100	0
2021	150	100
2022	120	120
2023	100	140
2024	80	160
2025	60	180
2026	50	190
2027	50	200

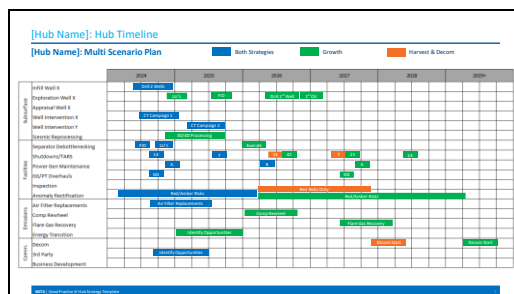
Estimates (2024 or 2025)

Metric	Value
Investment	100
Revenue	100
Total Mkt	150
Total Leads	150
Prospects, Customers & Leads in 10km	150
Potential Average Yield by JV	150

the asset/hub including reduction opportunities, ERAP commitments, increases associated with new opportunities, emissions intensity.

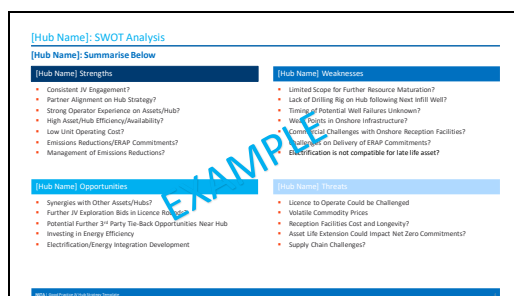
- Strategic Intent Bullet Points – selected bullet points which summarise forthcoming slide in the pack (e.g. key activities associated with long term strategy for the asset/hub).

Slide 3



- This slide should be updated to include a long term plan/timeline for the asset/hub in alignment with the strategy of the asset (as shared in slide 1)
- If possible, please include multiple scenarios for the asset/hub.
- It is important to include both opportunities to maximise economic recovery and emissions reduction activities.
- Multiple copies of this slide could be used for more complicated scenarios/alternatives.

Slide 4



- This slide should be updated to demonstrate the key strengths, weaknesses, opportunities & threats for the asset/hub.

- The bullet points provided in the template are a guide and can be included or deleted as necessary.

- The Operator should consider the necessary actions to mitigate the identified weaknesses and threats from the SWOT Analysis.

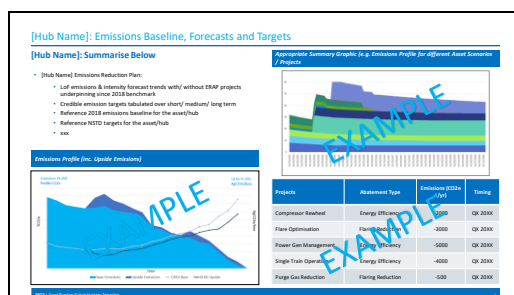
Slide 5



- The purpose of this slide is for the Operator to provide a summary of the MAH prevention and/or process safety aspects of the asset/hub.

- The bullet points and graphics in the template slide are provided as a guide and should be changed/updated by the Operator for those applicable to the asset/hub.

Slide 6



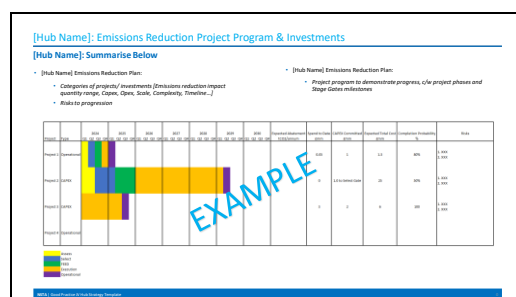
- This slide should be updated by the Operator to provide a summary of the emissions baseline, forecast and targets for the asset/hub.

- Appropriate summary graphics should be provided to demonstrate emissions profiles for various asset scenarios and supporting table of opportunities to reduce emissions as per the asset/hub ERAP Document.

- Stewardship Expectation 11 (Net Zero) should be referenced while populating this slide –

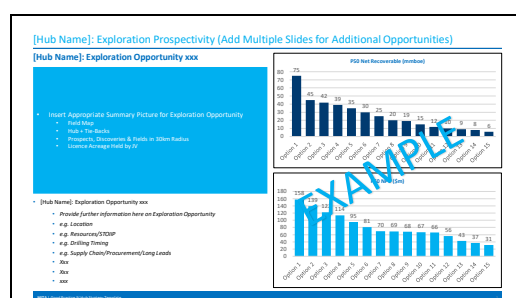
https://www.nstauthority.co.uk/media/7184/se11_net-zero.pdf

Slide 7



- This slide should be updated by the Operator to provide a summary of the emissions reduction program including a supporting timeline.
- An appropriate timeline should be shared in this slide demonstrating the timeline for each key ERAP commitment, emissions savings etc.
- Stewardship Expectation 11 (Net Zero) should be referenced while populating this slide – https://www.nstauthority.co.uk/media/7184/se11_net-zero.pdf

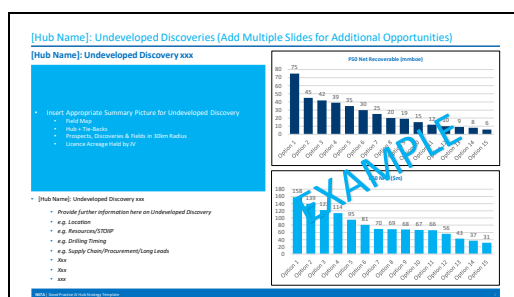
Slide 8



- This slide is a template to summarise applicable exploration opportunities for the asset/hub.
- The slide should include an appropriate graphic for the opportunity (top left), bullet point summary of the opportunity (bottom right) and supporting graphics/graphs to demonstrate the value of the exploration prospect.
- If not applicable, this slide can be removed from the slide pack.
- Multiple copies of this slide can be included if there are multiple

exploration opportunities on the asset/hub.

Slide 9



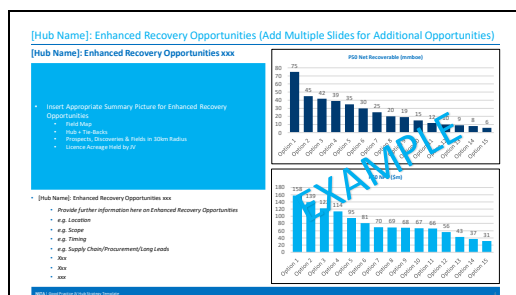
- This slide is a template to summarise applicable undeveloped discoveries for the asset/hub.
- The slide should include an appropriate graphic for the opportunity (top left), bullet point summary of the opportunity (bottom right) and supporting graphics/graphs to demonstrate the value of the undeveloped discovery.
- If not applicable, this slide can be removed from the slide pack.
- Multiple copies of this slide can be included if there are multiple undeveloped discoveries on the asset/hub.

Slide 10



- This slide is a template to summarise applicable infill/workover opportunities for the asset/hub.
- The slide should include an appropriate graphic for the opportunity (top left), bullet point summary of the opportunity (bottom right) and supporting graphics/graphs to demonstrate the value of the infill/workover opportunity.
- If not applicable, this slide can be removed from the slide pack.
- Multiple copies of this slide can be included if there are multiple infill/workover opportunities on the asset/hub.

Slide 11



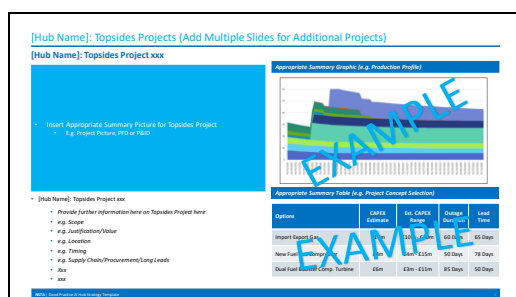
- This slide is a template to summarise applicable enhanced recovery opportunities for the asset/hub.
- The slide should include an appropriate graphic for the opportunity (top left), bullet point summary of the opportunity (bottom right) and supporting graphics/graphs to demonstrate the value of the enhanced recovery opportunity.
- If not applicable, this slide can be removed from the slide pack.
- Multiple copies of this slide can be included if there are multiple enhanced recovery opportunities on the asset/hub.

Slide 12



- The purpose of this slide is for the Operator to demonstrate all potential 3rd party or business development opportunities near the asset/hub have been considered.
- If not applicable, this slide can be removed from the slide pack.

Slide 13



- This slide is a template to summarise key topsides projects for the asset/hub.
- This template can also be used to provide further information associated with any key emissions reduction/ERAP opportunities.
- If not applicable, this slide can be removed from the slide pack.
- Multiple copies of this slide can be included if there are multiple enhanced recovery opportunities on the asset/hub.

Slide 14

[Hub Name]: Barrel Adding Opportunities

[Hub Name]: Summarise Table Below

Opportunity	Description	Project Phase	Timing	Volume/Production	Comments
Well XXX	Velocity String	Engineering & Procurement	Q4 2024	10mmrcf/yr	
Well XXX	Isolate water producing interval	Design	Q1 2025	TBC	
Well XXX	Perforate new zone	Detailed Design	Q2 2025	5mmrcf/yr	
Compressor Station	Reduce Export Compressor suction pressure to improve well performance and reduce liquid loading	FEED	Q4 2025	10mmrcf/yr	

- This slide is a template to summarise key barrel adding opportunities for the asset/hub (e.g. well intervention, compression optimisation) including appropriate descriptions, timing and value of each opportunity.
- Examples provided in the table are a guide only and the Operator should populate the table with applicable opportunities for the asset/hub.
- If not applicable, this slide can be removed from the slide pack.

Slide 15

[Hub Name]: Production Efficiency/Debottlenecking Opportunities

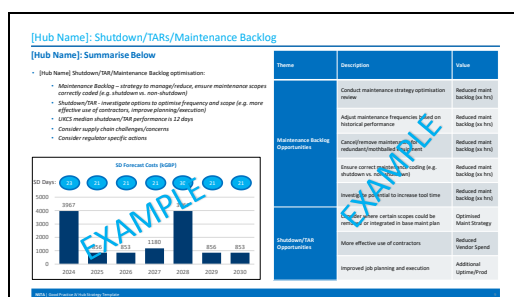
[Hub Name]: Summarise Table Below

Theme	Opportunity	Status	Timing	Value / Risks
Optimize Current Installed Facilities	<ul style="list-style-type: none"> Optimize Gas Lift Optimize Water Injection Rates Reduce Compressor Section Pressure 	<ul style="list-style-type: none"> Ongoing Not Started Planned Q4 20XX 	<ul style="list-style-type: none"> Completed Q4 20XX Planned Q4 20XX Delayed From Q4 20XX 	<ul style="list-style-type: none"> Increased Daily Production Rate / Increased PC
Debottlenecking	<ul style="list-style-type: none"> Increased Separator Capacity Compressor Anti-Surge Tuning Key Instrument Loop Tuning 	<ul style="list-style-type: none"> Completed Q4 20XX Planned Q4 20XX Delayed From Q4 20XX 	<ul style="list-style-type: none"> Completed Q4 20XX Planned Q4 20XX Delayed From Q4 20XX 	<ul style="list-style-type: none"> Increased Daily Production Rate
Optimize Current Well Stock (e.g. Well Interventions)	<ul style="list-style-type: none"> Conduct Well Interventions (e.g. LCT) 	<ul style="list-style-type: none"> Planned Q4 20XX 	<ul style="list-style-type: none"> Planned Q4 20XX 	<ul style="list-style-type: none"> Increased Daily Production Rate
Optimize Shutdowns/TARs	<ul style="list-style-type: none"> Remove Non-Critical Scope from Shutdowns/TAR 	<ul style="list-style-type: none"> Planned Q4 20XX 	<ul style="list-style-type: none"> Planned Q4 20XX 	<ul style="list-style-type: none"> Increased PC/Reduced Shutdown Time

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- This slide is a template to summarise key debottlenecking and/or production efficiency improvement opportunities.
- Examples provided in the table are a guide only and the Operator should populate the table with applicable opportunities for the asset/hub.
- If not applicable, this slide can be removed from the slide pack.

Slide 16



- The purpose of this slide is to demonstrate optimisation associated with shutdowns/TARs and the asset/hub maintenance backlog management.
- All information/graphics/tables on this slide can be updated by the Operator to appropriately demonstrate the Shutdown/TARs/Maintenance Backlog for the asset/hub.

Slide 17

[Hub Name]: Life Extension Opportunities

[Hub Name]: Summarise Below

[Hub Name]: Late Life Strategy Summary	What?
<ul style="list-style-type: none"> High level summary of Late Life Strategy Framing Document and Detailed Execution Plan? <ul style="list-style-type: none"> Understand why, how and what? CapEx & Opex Strategy? Asset/Hub Economics? Organisational readiness? Assessment support? Key management systems & reporting mechanisms? 	<ul style="list-style-type: none"> Surface history? Well and subsurface condition/integrity? Process and utility systems (inc. power)? Offshore and onshore routes? Execution methodologies?
How?	Why?
<ul style="list-style-type: none"> Government, driver, regulations, business driver, NTS PCB above normal ops? Commercial structure and economics models? HSE and Safety Case? Inspection, maintenance, repair and mods performance/activities? Frequency of assessment? 	<ul style="list-style-type: none"> New fields and drilling? Maximise economics recovery? Other new tie-backs? Original design life extension? Safety Case material change? Environmental drivers?

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- This slide should be updated to demonstrate the late life strategy of the asset.
- The bullet points provided in the template are a guide and can be included or deleted as necessary.
- If not applicable, this slide can be removed from the slide pack.

Slide 18

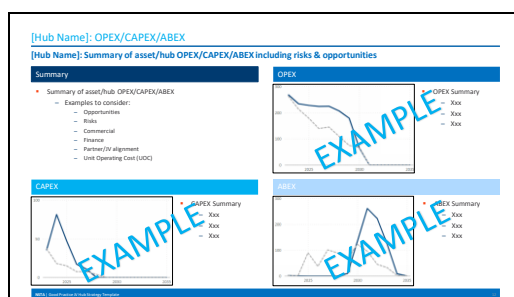
[Hub Name]: Technology Requirements
[Hub Name]: Summarise Table Below

Theme	What?	When?	Value / Risks
Hydraulic Fracturing	<ul style="list-style-type: none"> Identify Fracturable Completions Optimise & Offset Fracturing Modelling & Prediction 	<ul style="list-style-type: none"> Fracturing Trials Planned Q4 2024 Wellbore plans for Q4 2024 	<ul style="list-style-type: none"> Optimise Integrated Downside Resource Outcomes
Advanced Seismic Imaging	<ul style="list-style-type: none"> Quantitative Analysis Imaging Optimisation Microseismic Monitoring for Fracs 	<ul style="list-style-type: none"> Advanced Seismic Imaging Q4 2024 Fracturing Trials Planned Q4 2024 	<ul style="list-style-type: none"> Vertical (e.g. sidetrack cost savings, optimised well targets)
Well Drilling & Completions Optimisation	<ul style="list-style-type: none"> Drill Isolation Remotely Fracturable Sleeve Completion 	<ul style="list-style-type: none"> Well Intervention Activities Planned Q4 2024 Wellbore Deployment 2024+ 	<ul style="list-style-type: none"> Support Fracturing & Interventions Intelligent/Agile Water Breakthrough
Well Interventions	<ul style="list-style-type: none"> Water Shutoff Technology 	<ul style="list-style-type: none"> Well Intervention Activities Planned Q4 2024 Trials Planned Q4 2024 	<ul style="list-style-type: none"> PLT Cost Saving Well Optimisation
Remote & Digital Operations	<ul style="list-style-type: none"> Production Operator Workbench Production Optimisation Tools 	<ul style="list-style-type: none"> In Use Since Q4 2024 	<ul style="list-style-type: none"> Potential P2B Reduction
Resource Modelling	<ul style="list-style-type: none"> Modelling for Uncertainty Range Prediction Natural Fracture Geomechanics Modelling 	<ul style="list-style-type: none"> Modelling to be Deployed 2024 Natural Fracture Modelling Planned 2024+ 	<ul style="list-style-type: none"> Optimised Well Targets

Wells Development & Technology Hub

- This slide should be updated to demonstrate technology opportunities on the asset/hub.
- The examples/bullet points provided in the template are a guide and can be included or deleted as necessary.
- If not applicable, this slide can be removed from the slide pack.

Slide 19



- This slide should be updated to summarise the OPEX, CAPEX and ABEX of the asset/hub including opportunities, risk etc.
- The bullet points and graphics provided in the template are a guide and can be included or deleted as necessary.
- Commercially or financially sensitive information should be removed from this slide prior to sharing out with the JV.

Slide 20

[Hub Name]: Decom Preparation & Post CoP Options
[Hub Name]: Summarise Below

Pre-Cessation of Production: APPRAISE, ASSESS and DEFINE		
Activity	What?	When?
APPRAISE: Late Life Operating & Decommissioning Strategy	<ul style="list-style-type: none"> Latest Life Operating Philosophy & Decommissioning Development LS schedule and preliminary cost estimate Decommissioning Engagement Plan & Subsurface Basis of Design 	2 to 5 years prior to CoP
ASSESS: Regulatory & Development of Decommissioning Plan	<ul style="list-style-type: none"> Review/refreshing consideration and Decommissioning Programme approved by OPRD Develop decommissioning programme elements and early P&ID Identify scope aggregation / categorisation for decommissioning Contracting Strategy & Performance Indicators 	2 to 3 years prior to CoP
DEFINE: Detailed Engineering, Contract Award & Early Execution	<ul style="list-style-type: none"> Detailed engineering for decommissioning (e.g. wellbore & technology assessment) EPRI (and other) decommissioning standards Procurement strategy (e.g. risk of shut-in wells) Performance indicators and schedule 	1 to 3 years prior to CoP
Post-Cessation of Production: EXECUTE		
Activity	What?	When?
EXECUTE: Implement Decommissioning Plan per approved Decommissioning Programme	<ul style="list-style-type: none"> Plug, shut and disconnect pipelines & wellbore, engineer down and close rigging Plug & abandon platform & access wells, transfer facility into cold stack Removal and disposal of platform and subsea infrastructure Pipeline & related remediation and close-out surveys, ongoing monitoring Cost and schedule monitoring 	As per plan To minimise post cessation / retiring costs

Wells Development & Technology Hub

- This slide should be updated to decommissioning preparation activities and post cessation of production opportunities for the asset/hub.
- Through the NSTA Stewardship process, the Operator/JV will need to demonstrate they have maximised economic recovery from the area/hub and cost efficient readiness for cessation of production to minimise unnecessary post CoP operational expenditure.
- The bullet points provided in the template are a guide and can be included or deleted as necessary.

- Stewardship Expectation 10 (Cost Effective Decommissioning) should be referenced while populating this slide –
https://www.nstauthority.co.uk/media/5904/oga_se10_cost_effective_decommissioning_july_2019.pdf
- If not applicable, this slide can be removed from the slide pack.

Slide 21

[Hub Name]: JV Collaboration & Alignment

[Hub Name]: Summary slide to demonstrate collaboration for JV Partners

Collaboration - Summary

- High level summary of Collaboration & CRCT
 - 10 Partners?
 - Pipeline Operations?
 - Shoppers/Terminals?
 - Nearest Asset/Hub Operations?
 - Supply Chain Challenges?

CRCT Output

Collaboration - Focus Area & Action Plans		
Focus Area	Specific Actions	Timeline
10 Partner Sessions on Strategic Issues	Using Team Floor - share accomplishments with JV Partners to support budget/partners planning	Q3 2024
Partner Workshops	Asset Risk Register - share with JV Partners for Input	Q3 2024
Partner Workshops	Asset Risk Register - share with JV Partners for Input	Q3 2024
JV Hub Strategy	Commence asset life extension study to achieve CR Impact 2030	Q3 2024
JV Hub Strategy	Explore additional 2 nd party bid opportunities to the asset	Q3 2024

[View Collaboration & Supply Chain Strategy](#)

- This slide should be updated to demonstrate appropriate JV collaboration and alignment for the asset/hub.
- The bullet points/tables/graphics provided in the template are a guide and can be included or deleted as necessary.
- Key interfaces outside the JV should be considered (e.g. shippers/terminals, nearby assets/operators, supply chain challenges/constraints).
- If not applicable, this slide can be removed from the slide pack.

Slide 22

[Hub Name]: Development Scenario Analysis

[Hub Name]: Summary of Development Scenario Analysis

Base Case + Development Scenarios / Variations

- Base Case + Key variations included for the Scenario
- Examples of variations to consider:
 - Improved / delayed drilling performance
 - Increased / decreased reserves (per well or P10/50/90)
 - Additional wells / successful EOR trial
 - Successful seismic developments
 - Reduced / increased cost (capex/opex)
 - Life time extension / decarbonisation

Development Scenarios Overview

Scenarios → Iterations	Base	1	2	3	4	5
Reserves	P50					
EOR	No					
No wells	25					
Seismic	1					
Cost	P50					

Development Scenarios Analysis

- Key conclusion Scenario Analysis work

Scenario Outputs

Scenario	NPV (capex)	& NPV (opex)	Reserves (mbo)	Capex (\$m)	Opex (\$m)	First Oil
Base						
1						
2						
3						
4						

- This slide should be populated in conjunction with slide 2 (Hub Timeline/Multi Scenario Plan).
- The purpose of this slide is to provide further information associated with various scenarios for the asset/hub.
- The bullet points/tables/graphics provided in the template are a guide and can be included or deleted as necessary.

Slide 23

JV Hub Strategy – Good Practice Matrix

Slide	Pre-Production Phase	Early Production Phase	Mid Production Phase	Late Production Phase	Post-Production Phase
Hub Strategy - Page Supplementary (Slide 1)	✓	✓	✓	✓	✓
Hub Timeline (Slide 2)	✓	✓	✓	✓	✓
SMART Analysis (Slide 3)	✓	✓	✓	✓	✓
Market Presentation/Process Safety (Slide 4)	✓	✓	✓	✓	✓
Emissions Reduction/Decarbonisation/Target (Slide 5)	✓	✓	✓	✓	✓
Emissions Reduction Project Progress & Investments (Slide 6)	✓	✓	✓	✓	✓
Exploration/Production/Processing (Slide 7)	✓	✓	✓	✓	✓
Underground Storage (Slide 8)	✓	✓	✓	✓	✓
Life/Water/Power/Opportunities (Slide 9)	✓	✓	✓	✓	✓
Enhanced Recovery Opportunities (Slide 10)	✓	✓	✓	✓	✓
2D/3D Seismic/Development/Opportunities (Slide 11)	✓	✓	✓	✓	✓
Top-down Projects (Slide 12)	✓	✓	✓	✓	✓
Bottom-up Projects (Slide 13)	✓	✓	✓	✓	✓
Production/Processing/Decarbonisation/Opportunities (Slide 14)	✓	✓	✓	✓	✓
Shutdown/Restart/Maintenance/Outage (Slide 15)	✓	✓	✓	✓	✓
Life Extension/Opportunities (Slide 16)	✓	✓	✓	✓	✓
Technology/Innovation (Slide 17)	✓	✓	✓	✓	✓
CAPEX/OPEX/MAINT (Slide 18)	✓	✓	✓	✓	✓
Process Presentation/Process Safety (Slide 19)	✓	✓	✓	✓	✓
2D/3D Seismic/Development/Opportunities (Slide 20)	✓	✓	✓	✓	✓
Development/Shutdown/Restart/Outage (Slide 21)	✓	✓	✓	✓	✓

- This slide has been included as a guide for the Operator/JV to determine which slides are applicable for the asset/hub dependent on the stage in their lifecycle.
- This matrix should be treated as a guide and the Operator/JV should decide which slides are applicable to their asset/hub.

Slide 24

Joint Venture Hub Strategy
Backup/Supplementary Slides
Optional

20 February 2024

- This section of the slide pack/template is optional – further slides can be added in the backup to support for detail in the JV Hub Strategy if necessary

B List of abbreviations (TBA)

Abbreviations	Definitions
<Abbreviation>	<Definition>
<Abbreviation>	<Definition>
<Abbreviation>	<Definition – To insert more rows, press TAB key>

C Case Studies & Examples

Case Studies & examples – upon completion of roll out the Task Group are seeking examples for inclusion.



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