Decision Metrics Assessment Tool - Requirements Document

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1. Executive Summary

The Decision Metrics Assessment Tool (DMAT) is used by Exploration to support the decision-making process by assessing and measuring the strengths and weaknesses of a proposed recommendation. The tool is used to evaluate an opportunity or a decision to be made against six key Exploration metrics prior to an EXAC proposal in order to assess the overall quality. The tool provides a simple, visual representation of strengths and weaknesses of the decision in the form of a radar plot.

The aim of this project is to provide a system to capture the decision metrics, display the assessment metrics details for a decision and visualize the metrics spatially against a captured opportunity or Woodside permit as a radar plot in the Competitive Insights System.

2. Project Description

The purpose of this project is to capture and store the DMAT information in a corporate information system. The current tool uses a spreadsheet and each decision's assessment is stored as a DRIMS document.

Storing the data in an enterprise system means that:

- the assessment can be viewed and analysed in relation to other pertinent information such as the opportunity or permit details;
- access is granted through a single system for all related information rather than using DRIMS access.

By capturing the DMAT details and providing the ability to query and visualize the information easily, this will ensure:

- Decision metrics assessment details are stored and versioned when a change is approved
- Data is readily accessible and available,
- Data is easily interrogated visually or through a report
- Information can be visualized as a radar plot against an opportunity or a permit
- Information can be visualized spatially against other spatial datasets

3. Project Scope

The project aims at capturing the DMAT data into a system that will allow Exploration management to evaluate and review the current and future state of a decision and quickly assess its strengths and weaknesses. The assessment will be done against an opportunity or a permit and will provide the user the ability to maintain, display, query and visualize the information as a radar plot.

3.1 In Scope

The following areas are in scope for this project

- Capture the decision assessment details and calculate overall rating against an opportunity/permit for current and future state
- Provide for an audit trail for assessment that has been approved multiple times
- Provide the ability to query and display the assessment details

- Provide the ability to visualize both the current and future state ratings as an overlapping radar chart.
- Provide the ability to represent the decision assessment as a point in the centroid of the opportunity polygon or permit polygon with the radar chart as the symbology. The data is to be displayed as a layer in the CI Portal.
- Provide the ability to extract a Decision Metrics Assessment and export the data and radar plot as a report.

3.2 Out of Scope

The following areas are out of scope for this project

- Ability to overlap multiple DMATs
- Ability to display the actual radar plot symbology on the map based on ratings for individual decision.

4. Business Drivers

Exploration is initiating this project so as to:

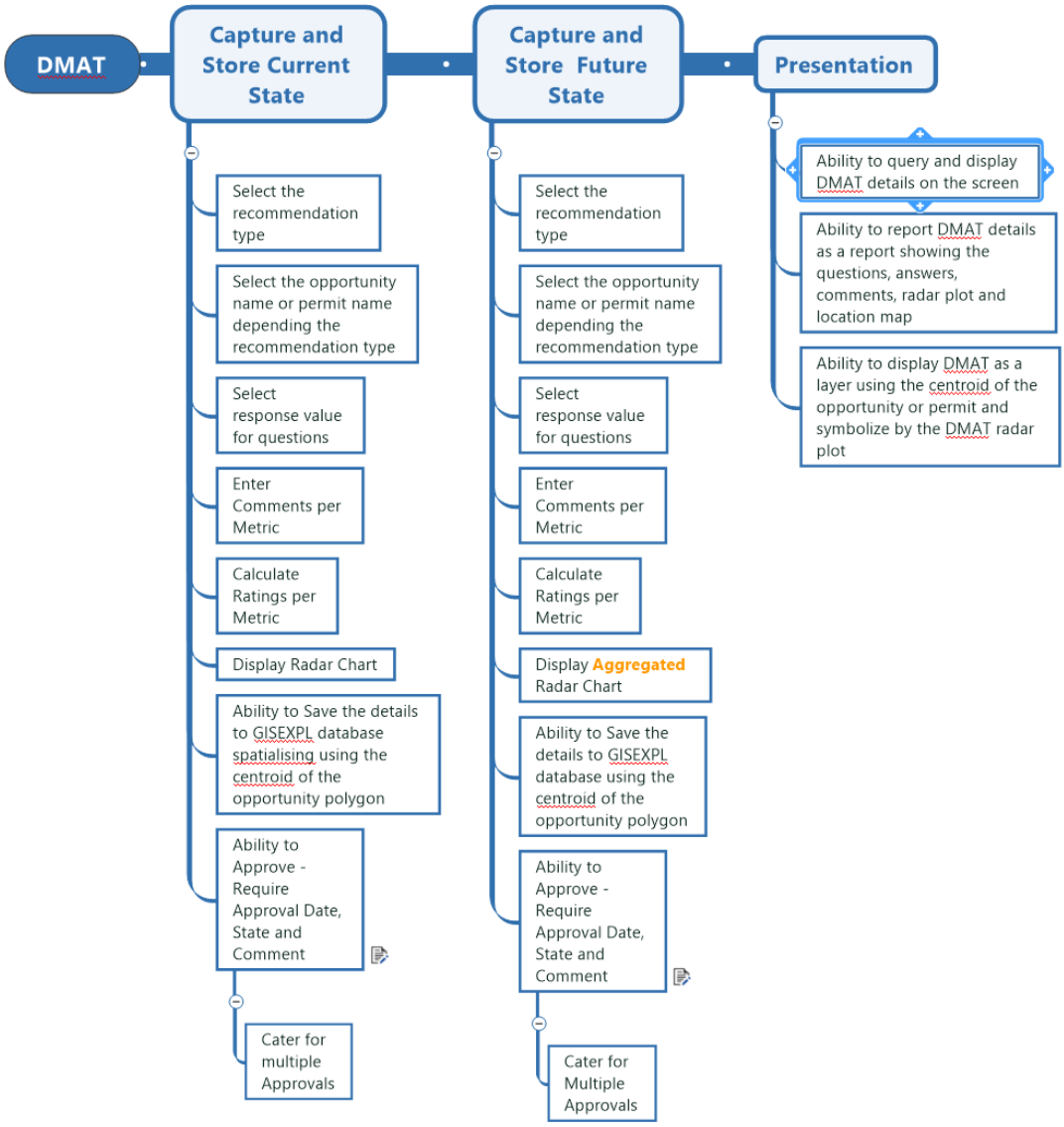
- Improve capture of the decision making process
- Safe and secure data storage
- Reduce time to search for information
- Create a tangible audit stamp of when decision is final and why it was approved/declined.
- Single place to search for Opportunity, permit and decision-making process related to the opportunity/permit
- Have the ability to compare and contrast multiple decisions and conduct lookback analyses

5. Proposed Process

Currently the data is being entered manually in a spreadsheet and the radar plot is then generated based on the calculated overall metrics per theme.

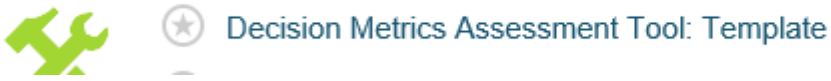
The solution works fine but it means that each DMA is required to be drims'ed and somehow linked to the opportunity or held asset permit. Also, there is no way to view the radar plot on the CI Online Maps.

The new process is captured as below:



6. Functional Requirements

The current DMAT is a spreadsheet that can be found in WMS under the Explore Value Stream Business Activities.



The new system is to capture the details, ratings, results and comments for the themes and questions for the current state and future state. The system is to provide a radar plot for both current and future state that can be overlapped. The calculation for the ratings and the weightings can be found in the ‘Do Not Touch PFS Working Sheet’ in the spreadsheet (Refer Appendix 7.1)

The table below displays the ratings for the questions and themes based on the responses.

For example, a ‘Yes’ for Question 1 in the Strategy and Budget Theme is classified as a 5 as compared to ‘No’ which is classified as a 1. Once all the question for the theme is answered, the ratings are added and displayed as a percentage. The assessment result is based on the rating percentage per theme. The assessment result mapping is defined the worksheet above.

above.

Theme	Q1	Q2	Q3	Q4	Total	%	Result
Strategy & Budget	1	1	5	5	12	60	Strong
Exploration Portfolio Fit	1	1	4	6	12	60	Strong
Development Concept	4	4	8	4	20	100	Very Strong
Technical/Subsurface	5	5	5	5	20	100	Very Strong
Above Ground	4	4	4	8	20	100	Very Strong
Commercial	8	4	4	4	20	100	Very Strong

Example rating table for responses received

The Recommendation is required to be done against either an entity of opportunity or held asset.

Recommendation Type	Opportunity	Held Asset
Farm-in (Drilling)	√	
Farm-in (Seismic)	√	
Farm-out		√
Drilling		√
Seismic Acquisition		√
Relinquishment		√
Bidding	√	
Studies (JSA)	√	

If a recommendation type is against an opportunity then, the location point is defined as the centroid of the opportunity otherwise it is the centroid of the permit/s (the decision could involve multiple permits)

Additional information to capture is:

- Entity - Opportunity name/Permit Name (For opportunity display the dropdown list, for permit, display the permit name).
- Decision Description,
- Approval Date,
- Approval state
- Approval comment.

The Approval state has the following dropdown values:

- KOKO
- EXRP Information
- EXRP Approval
- EXAC
- LookBack

The Approval Comment values are as below:

- Pre EXRP
- PRE EXRP Recommended
- Others

Once an assessment is completed and saved, the ‘Current State’ radar plot is to be displayed in the DMAT layer.

APPENDIX A: Example of DMAT

Select the [Subject]		Select the [Recommendation]			Opportunity Reviewer
PROSPECT		FARM-IN (drilling)			Enter Name

Metric	Pre-cursor	Question	Guidance	Answer	Comments
Strategy & Budget	Does the.....	have a future work program that offers staged flexibility to exit prior to significant activity/expenditure?	Yes = subject is immature and has staged exit points OR the subject has no exit points but is sufficiently mature to warrant significant activity/expenditure, No = subject is immature with no exit points prior to significant activity/expenditure.	NO	Input comments pertinent to the Strategy & Budget Assessment
	PROSPECT	align with Woodside's corporate strategy?	Yes = Supports cashflow requirements 2023 to 2025 during major Browse & Scarborough execution phase (e.g. cashflow forecast in this period, and/or minimal expex/capex 2023 to 2025) AND fast to FID (<4 years); Possible = Forecast high level expex/capex in 2023 to 2025, however potential to mitigate through options (sell/defer/dilute), partnering or new technology AND fast to FID; No = Does not support cashflow requirements 2023 to 2025 (e.g. no cashflow forecast in this period and onerous expex/capex 2023 to 2025) AND slow to FID (>4 years)	NO	
	.....recommended for.....	support an established, emerging or future growth hubs?	Established = Existing Woodside production eg. NWS Australia. Emerging = Existing Woodside discoveries (2C booked), eg Myanmar, Senegal. Future Growth = no Woodside discoveries (2C booked) but with future discovery potential (held asset or new opportunity).	ESTABLISHED	
	FARM-IN (drilling)	align with Woodside's working interest guidelines and fit within current budget cycle constraints?	Yes = fully funded from or accomodated within existing budget AND proposed equity fits within the guidelines (15-50% WI) or there is a strategy in place to mitigate (eg farm-down); No = Signifcant unallocated funds required (>US$5M) OR proposed equity does not fit within the guidelines (15-50% WI) and there is no strategy in place to mitigate.	YES	
Exploration Portfolio Fit	Does the.....	contain a predicted hydrocarbon phase consistent with nearby producing fields/infrastructure capability?	Yes = predicted hydrocarbon phase is consistent with nearby producing fields/infrastructure capability, No = predicted hydrocarbon phase is not consistent with nearby producing fields/infrastructure capability.	NO	Input comments pertinent to the Exploration Portfolio Fit Assessment
	PROSPECT	support current basin maturity balance in the exploration portfolio?	Yes = opportunity resides within an emerging basin, OR a frontier basin with DHI support, pre-drill exit points, low level spend and a clear commercialization strategy, OR a mature Basin adjacent to existing Woodside infrastrucure; No = opportunity resides within a frontier basin without the aforementioned exceptions OR a mature basin outside of Australia (NWS/Pluto etc). Please note that this question relates to BASIN maturity, not PLAY maturity. Refer to the Basin Maturity Definitions tab for additional guidance.	YES	
	.....recommended for.....	Increase diversity in the exploration portfolio?	Yes = new basin or, a new play/geologcical concept in an existing basin in the portfolio, No = will not add a new basin or, a new play/geolgocical concept to the portfolio.	YES	
	FARM-IN (drilling)	Have the potential to contribute signifcantly to the net risked recoverable portfolio volume?	Yes = offers single prospects/leads/concepts/pools with >75mmboe MSV, Moderate = offers single prospects/leads/concepts/pools with 25-75mmboe MSV, No = offers single prospects/leads/concepts/pools with <25mmboe MSV.	YES	
Development Concept	Does the.....	have an expected high, moderate or low subsurface complexity?	The subsurface complexity illustrates the likely complexity of the development from a subsurface perspective based on the available information and in a geological success case. It addresses risks and opportunities such as: Structural and stratigraphic complexities, reservoir quality and hydrocarbon properties, drainage plan and recovery mechanism.	LOW	Input comments pertinent to the Development Concept Assessment
	PROSPECT	have an expected high, moderate or low development concept complexity & cost?	The question characterizes the level of complexity of the opportunity development cases including considerations for: Physical environment; remoteness, metocean and weather conditions, Market regulations and local content requirement, Technical and concept definitions: D&C complexity, flow assurance, well interventions requirements, process facility complexity.	LOW	
	.....recommended for.....	have the potential to be delivered fast to market?	The ability to deliver fast to market post discovery is assessed across the following criteria: Location; maturity of domestic and regional O&G industry (analogues?), Ability to progress; domestic development and logistic index, infrastructure, JVP alignment, contractual terms and third party access requirements, Capability fit: Woodside / Operator / JVPs and Technology maturity of proposed concept.	YES	
	FARM-IN (drilling)	represent a future company project portfolio and cost fit?	The company portfolio resilience question addresses how the development opportunity fits relative to some of Woodside's corporate targets: project supply cost competitiveness (LNG development value chain ><US$6.50/Mmbtu, offshore gas <US$4/MMbtu to plant inlet, offshore oil development cost <US$30/bbl), unit production cost (gas <$4/boe, oil <$18/boe), development concept carbon intensity and project sanction robustness across volumes ranges.	YES	
Technical/Subsurface	Does the.....	have a high, moderate or low geological risk for the primary prospect segment (unrolled-up)?	High risk = primary segment GPOS <25%, Moderate risk = primary segment GPOS 25-50%, Low risk = primary segment GPOS >50%.	LOW	Input comments pertinent to the Technical/Subsurface Assessment AND provide a description of the available information and subsurface data used to make the decision (eg. a new 3D seismic survey has been acquired but we do not have access to it)
	PROSPECT	Have follow up potential?	Yes = multiple identified prospects within permit, Possible = additional, but poorly defined leads/concepts within permit or prospects/leads/concepts identifed in adjacent acreage with reasonable possibility of capture , No = single identified prospect only.	YES	
	.....recommended for.....	have geological risk and volumetric ranges that are well constrained by available data?	Yes = multiple near off-set wells + dense 2D/3D, Moderate = no or limited well data + coarse/poor quality 2D/3D, No = no well data + primarily analogues.	YES	
	FARM-IN (drilling)	pose significant operational risks (i.e. HP, HT, severe loss zones, Metocean)?	Yes = signifcant operational risks are expected, Possible = insufficient data to adequately assess risk, No = signifcant operational risks are not expected.	NO	
Above Ground	Does the.....	reside within a country where country entry has been approved?	Yes = country entry has been approved, No = country entry is not currently approved.	YES	Input comments pertinent to the Above Ground Assessment
	PROSPECT	reside within a country where Woodside is currently active (assuming country entry has been approved)?	Yes = Woodside is actively working in-country, No = Woodside is not actively working in-country, N/A = country entry is not currently approved.	YES	
	.....recommended for.....	reside within a country in which the country entry and/or gap analysis has been recently evaluated?	Yes = country entry initial assessment/gap analysis still valid, Moderate = country entry initial assessment/gap analysis evaluated within the last 1-3 years, No = country entry initial assessment/gap analysis has not been evaluated within the last 3 years.	YES	
	FARM-IN (drilling)	reside within a country with an acceptable above ground risk rating, or where risks can be appropriately mitigated?	Yes = exploration global risk profile with a low rating and no possibility of significant reputational damage, OR where there is high confidence that identified risks can be confidently mitigated; Moderate = exploration global risk profile with a moderate rating OR moderate possibility of significant reputational damage, OR where there is moderate confidence that identified risks can be mitigated; No = exploration global risk profile with a high rating OR strong possibility of significant reputational damage AND where there is low confidence that identified risks can be mitigated.	YES	
Commercial	Does the.....	return or contain an opportunity with an EPOS>20% and EMV/DrillEx >1.5?	Yes = EPOS >20% AND EMV/DrillEx >1.5, Possible = EPOS <20% AND/OR EMV/DrillEx <1.5 however potential to exceed both thresholds through aggregation or other mechanism, No = EPOS <20% AND EMV/DrillEx <1.5 with no possibility to exceed through aggregation or other mechanism.	YES	Input comments pertinent to the Commercial Assessment
	PROSPECT	return or contain an opportunity with success case economics for the MSV scenario that meet all corporate investment thresholds at $65/bbl?	Yes = project VIR > 0.25 + IRR >15%, Most = exceeds 1 of 2 corporate investment thresholds, No = exceeds no corporate investment thresholds	YES	
	.....recommended for.....	return or contain an opportunity with success case economics for the MSV scenario robust to all key uncertainties?	Yes = robust across price, CAPEX and OPEX sensitivites, Most = robust across 2 of 3 key uncertainties, No = robust across only one or no key uncertainties	YES	
	FARM-IN (drilling)	have fiscal and broader commercial terms that are required for commerciality sufficiently defined, and legally robust?	Yes = commercial terms are well defined and legally robust, No = commercial terms are poorly defined or not yet agreed and legally exposed.	YES	

Notwithstanding/In light of the x, y, z weaknesses/strengths of the opportunity, the decision to/not to proceed with the recommendation has been taken because....

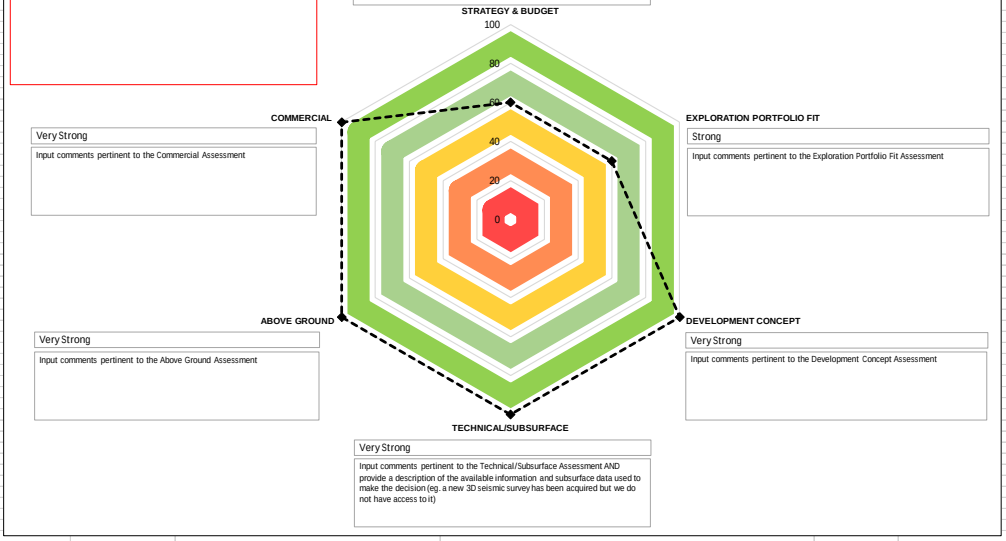
Strong

Input comments pertinent to the Strategy & Budget Assessment

Current State.....

Potential Future State.....

Not all data available or more data may become available that may impact assessment....



Very Strong

Input comments pertinent to the Commercial Assessment

Strong

Input comments pertinent to the Exploration Portfolio Fit Assessment

Very Strong

Input comments pertinent to the Above Ground Assessment

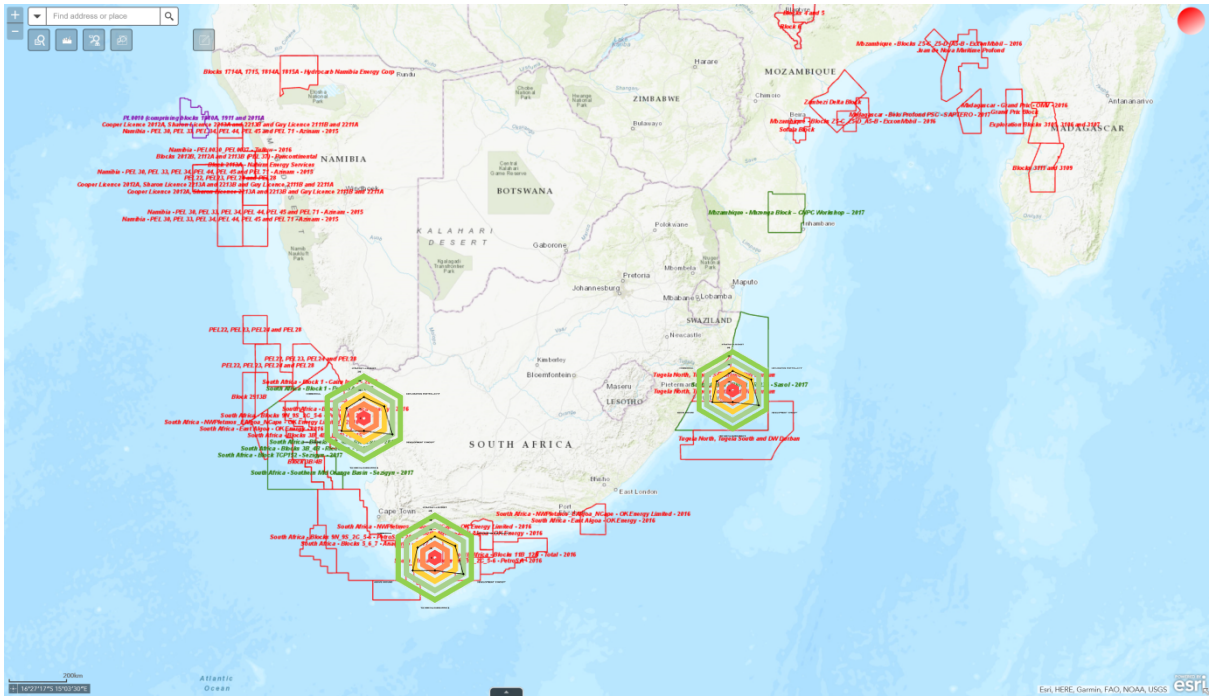
Very Strong

Input comments pertinent to the Development Concept Assessment

Very Strong

Input comments pertinent to the Technical/Subsurface Assessment AND provide a description of the available information and subsurface data used to make the decision (eg. a new 3D seismic survey has been acquired but we do not have access to it)

APPENDIX B: Map showing the DMAT stamp



Woodside