

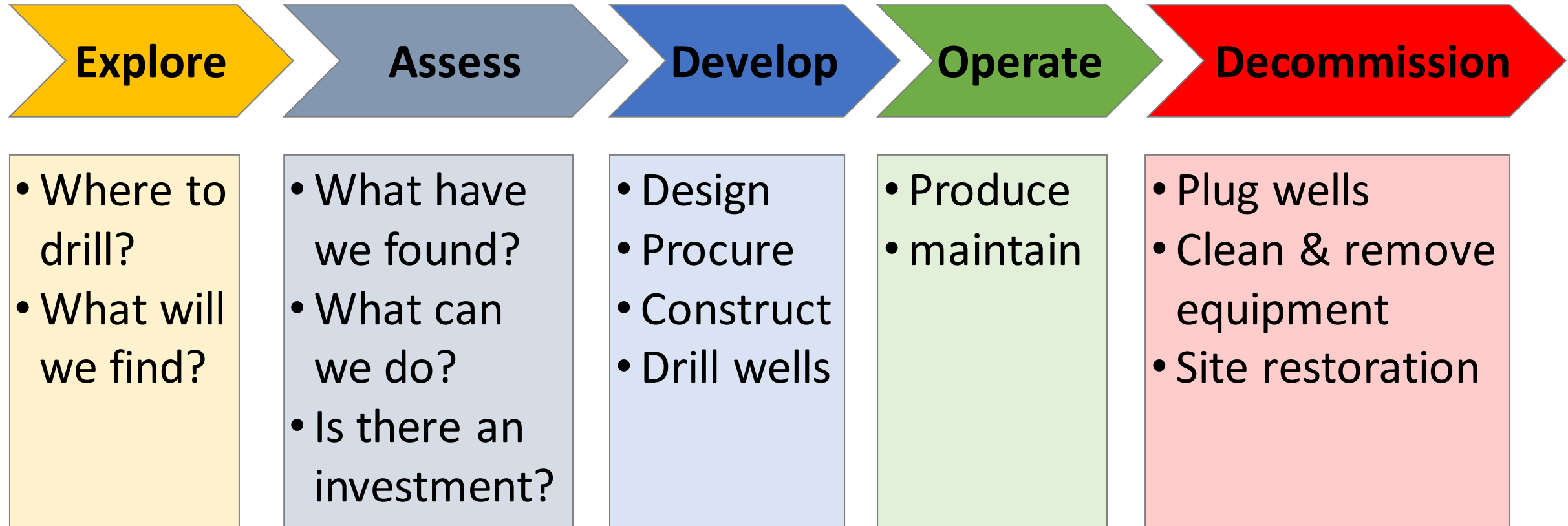


Economic Factors for Decommissioning Planning

SPE Petroleum Economics Conference 2018

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Exploration & Production Lifecycle



10 to 15 years

Strategy

- Identify preferred owner for late life
- Approach to maximise value
- Make financial provision

Cessation of Production

5 to 10 years

Readiness for Cessation of Production

- Quantify Economic Limit uncertainty
- Timing?
- decommissioning options?
- phasing?
- Engage with authorities
- Optimise operating cost

0 to 5 years

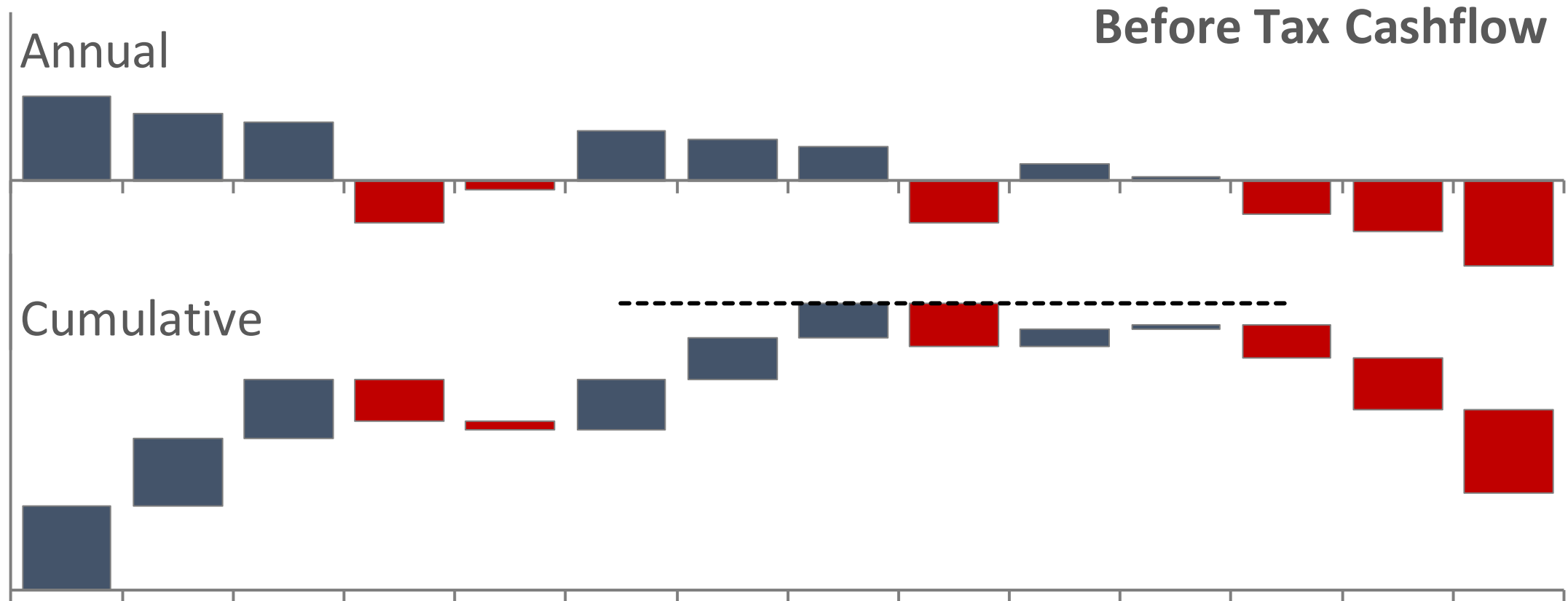
5 to 10 years

Decommissioning

- Technical studies to compare options
- Approve funding
- Execute work
- Monitor site

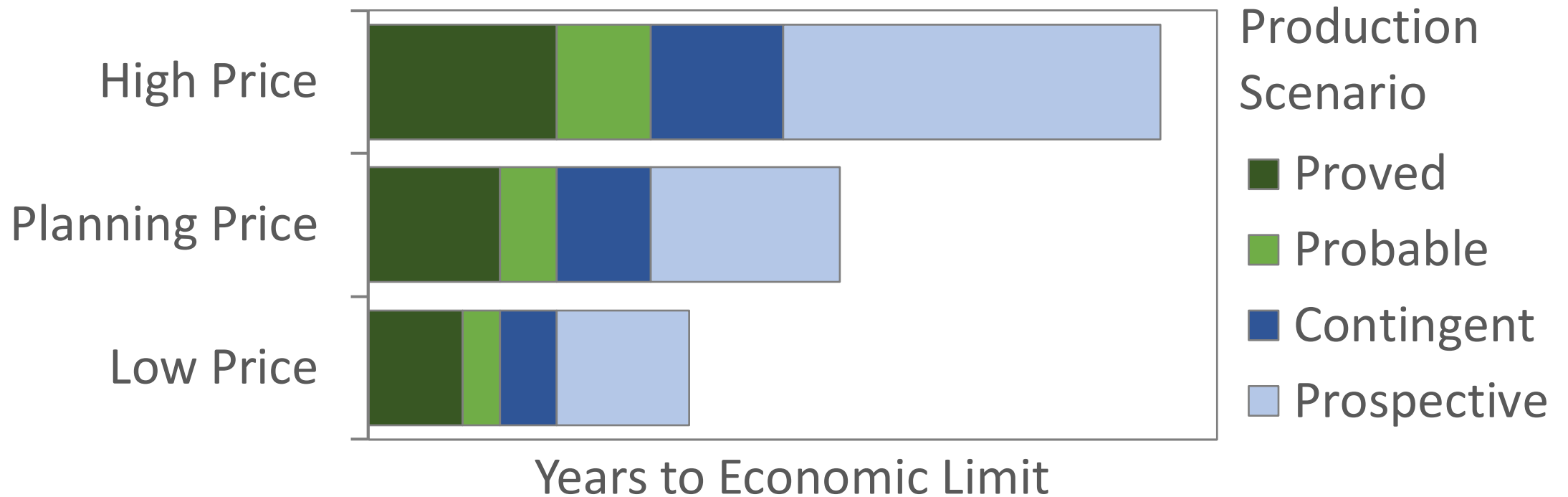
Decommissioning Planning Horizon

Economic Limit



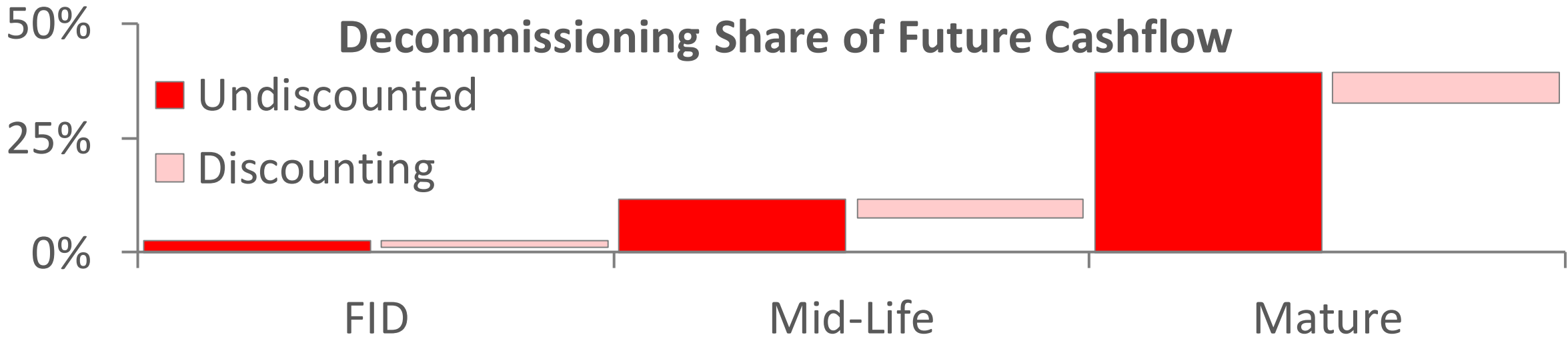
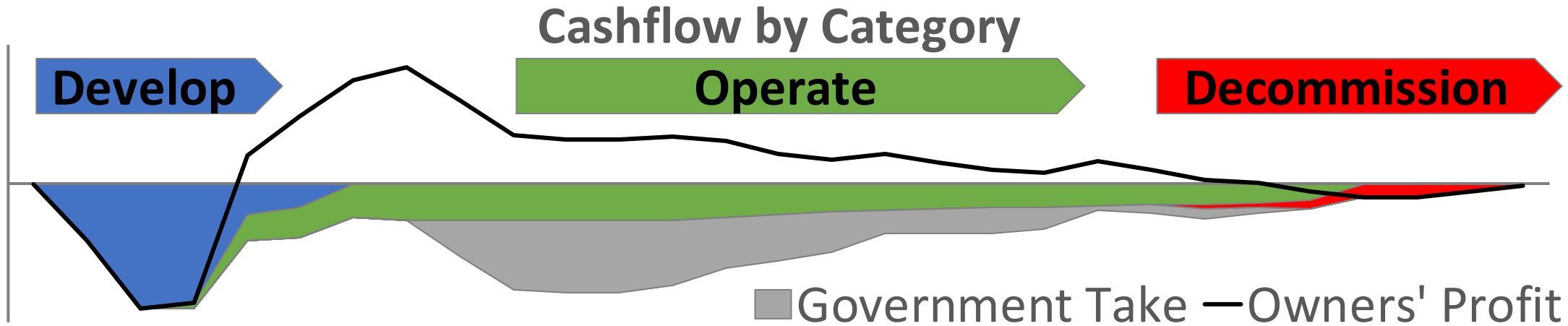
- Cessation of production timing is a decision
- Informed by Economic Limit

Economic Limit Uncertainty

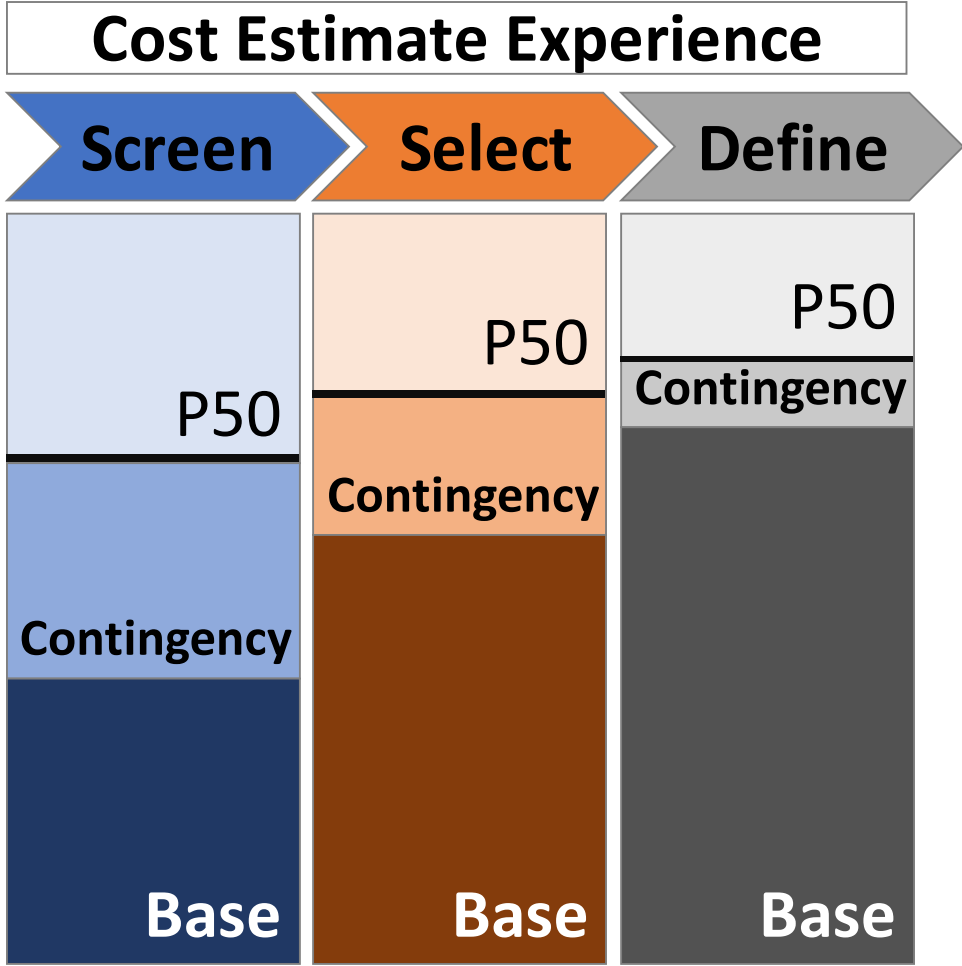
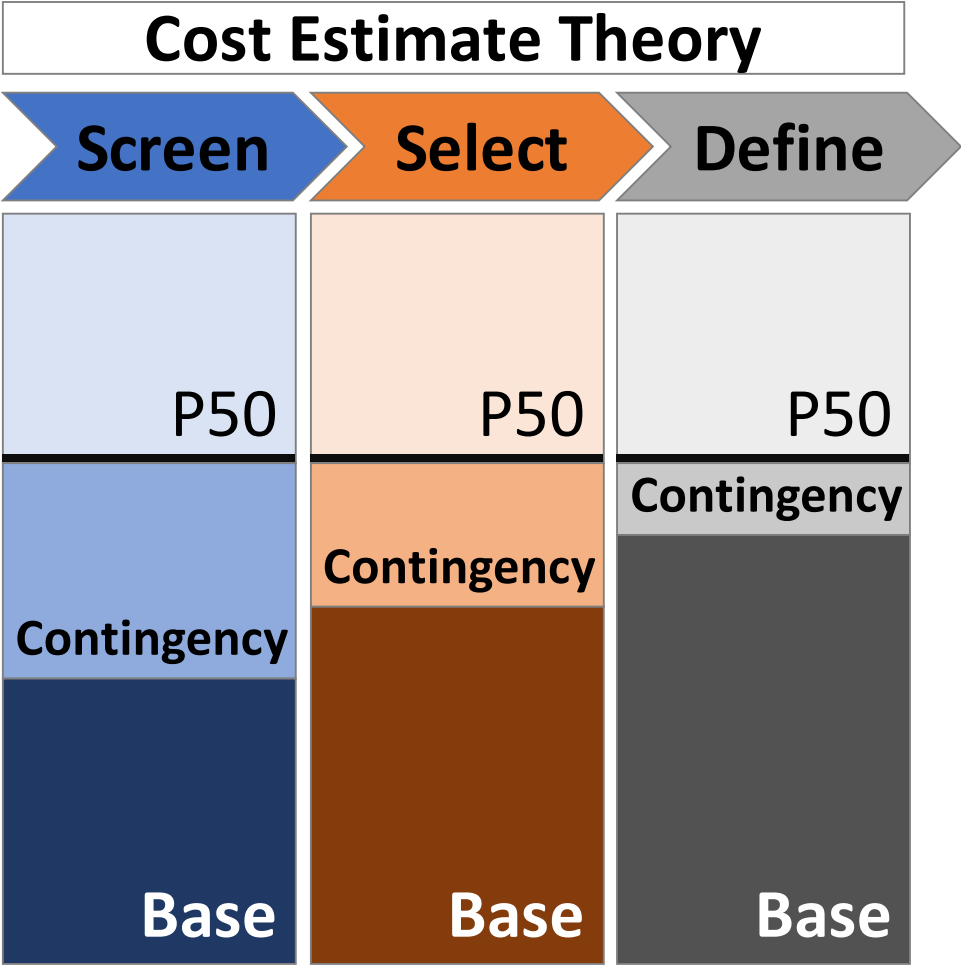


- Potential for spread in Economic Limit estimates
- Events...leading to unexpected changes

Decommissioning Cost Estimate



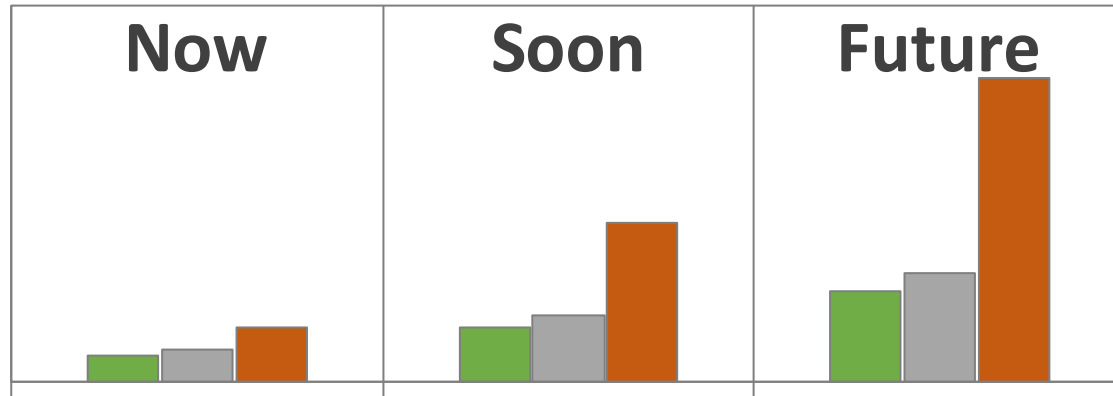
Decommissioning Cost Estimate



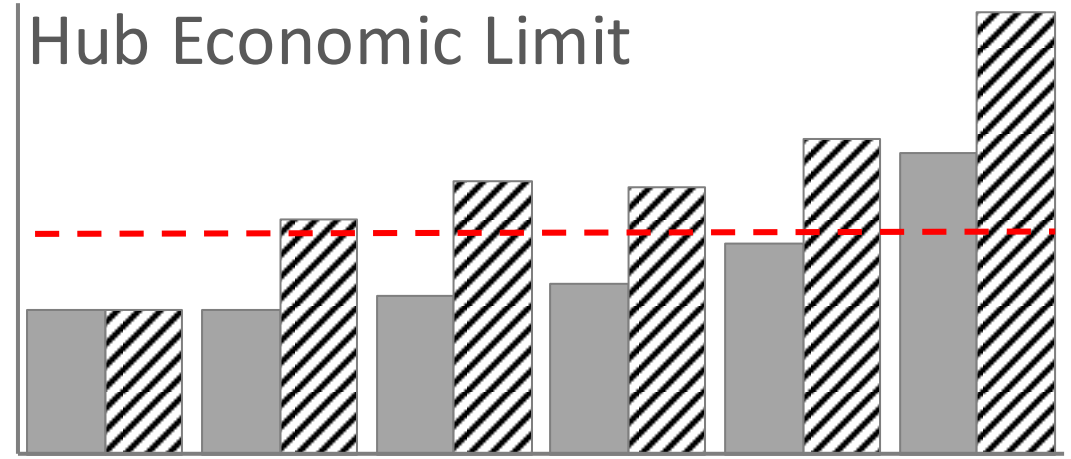
Hub Complexity

Shared Facilities Unit Cost

Spread of Commercial Terms



Hub Economic Limit



■ Advantaged Users ■ Average (all users) ■ Disadvantaged Users
▨ Average (fewer Users) - - Product Price

Asset Transfer

Why Transfer

- Specialised capability
- Commercial viability limits
- Materiality, returns, competition

Funding Mechanism

- Borrowing, investor(s), cash
- Deferred payments

Decommissioning Liability

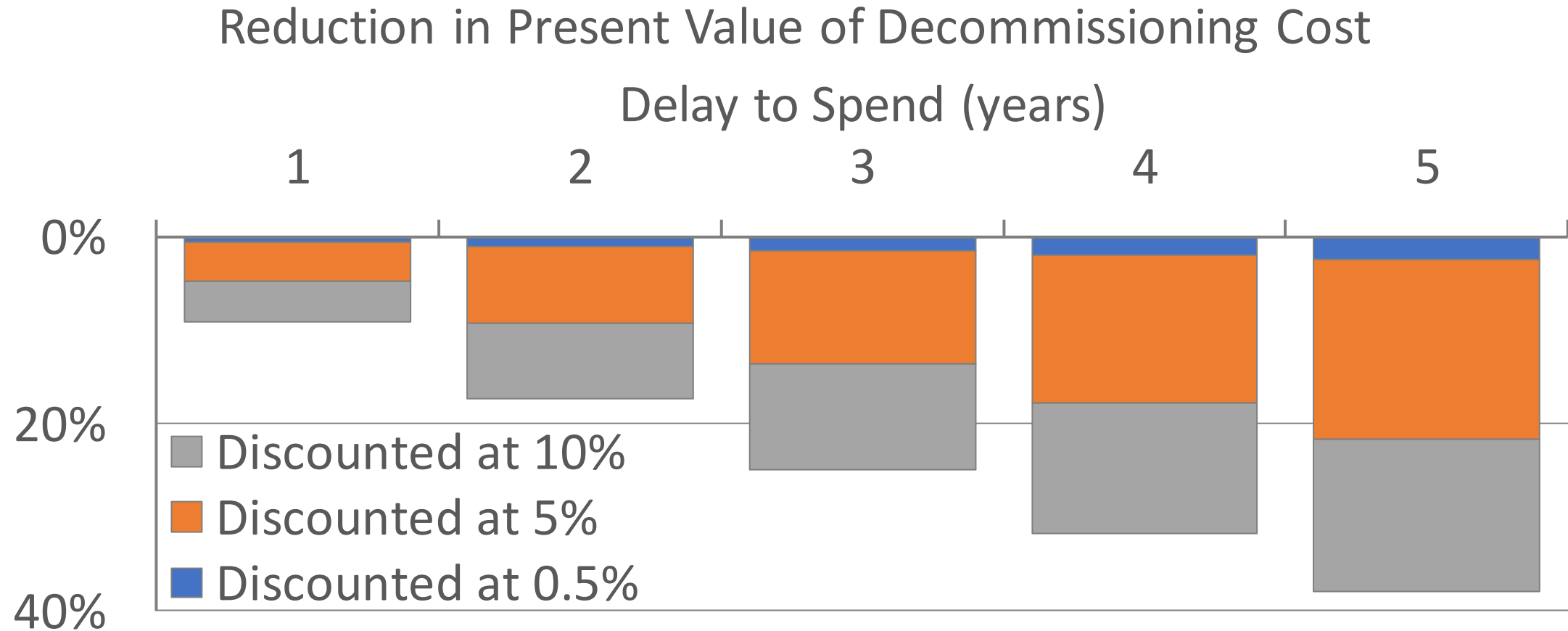
Intention of deal (success)

- No transfer of liability
- Partial/full transfer of liability
- Cap on retained liability

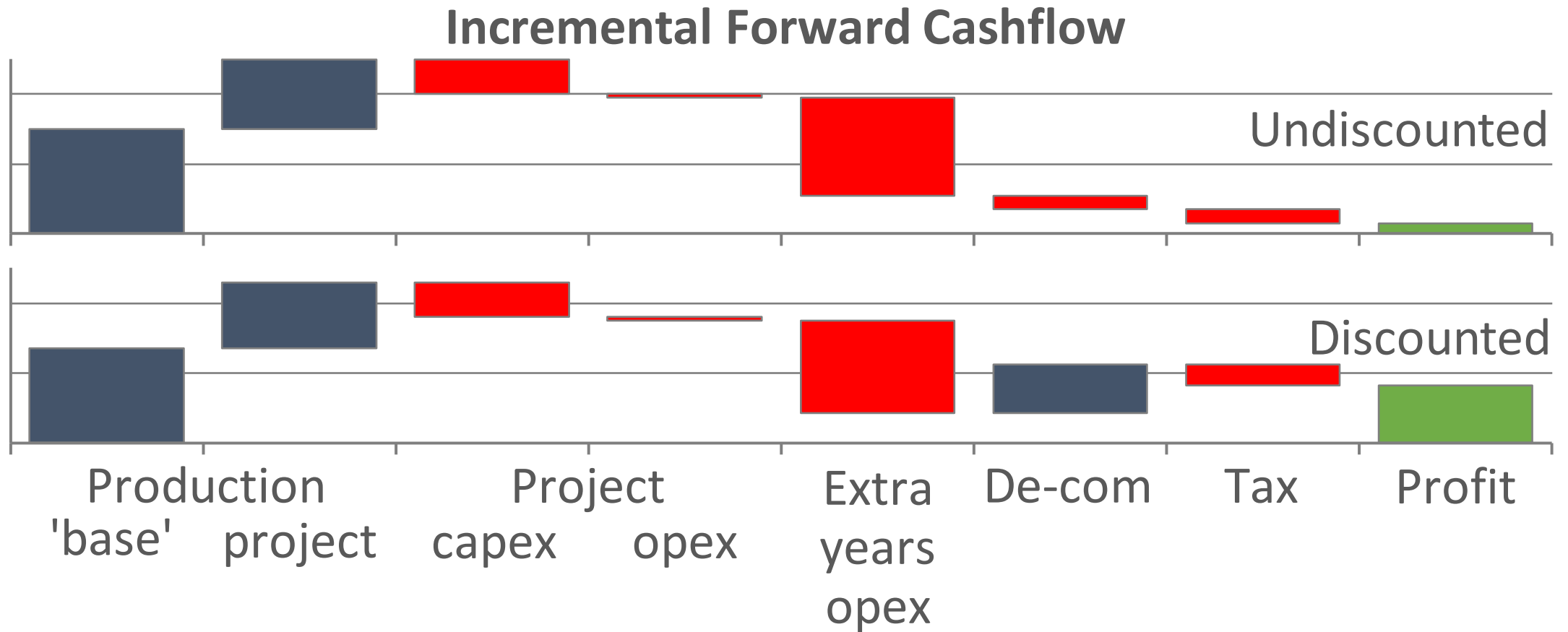
Risk management (default)

- Security agreement

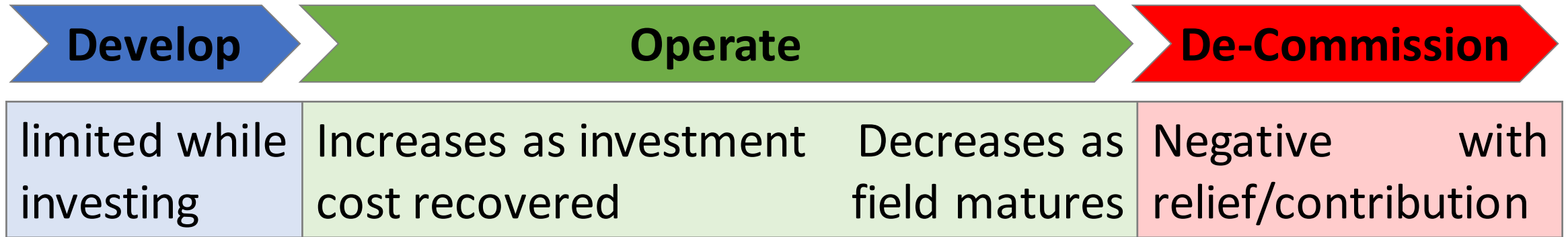
Discounting Decommissioning Cost






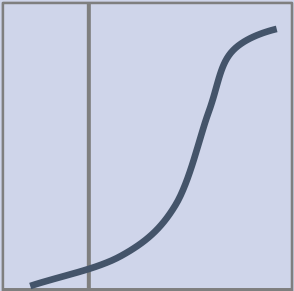

Contributors to Value



Government as Decommissioning Partner



Mature Asset Investments

	Pre-Development	Mature Asset
Invest	Discretionary commitment to fund project 	Discretionary commitment to fund project 
Do Not Invest	No financial commitment Evaluate other opportunities .	Trigger Non-discretionary commitment to fund decommissioning 
Risk Profile		

Summary

- Decommissioning integral to project lifecycle
- Use Economic Limit as a tool to inform cessation of production date
- Timely preparation to evaluate late-life strategies and test priorities

Government	Asset	Portfolio
Economic Activity	Commercial Return	Near-Term Cashflow
Tax and Royalty	Cost Estimates	Transfer Asset(s)
Recovery	(Discounted) Profit	Technical Resources



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