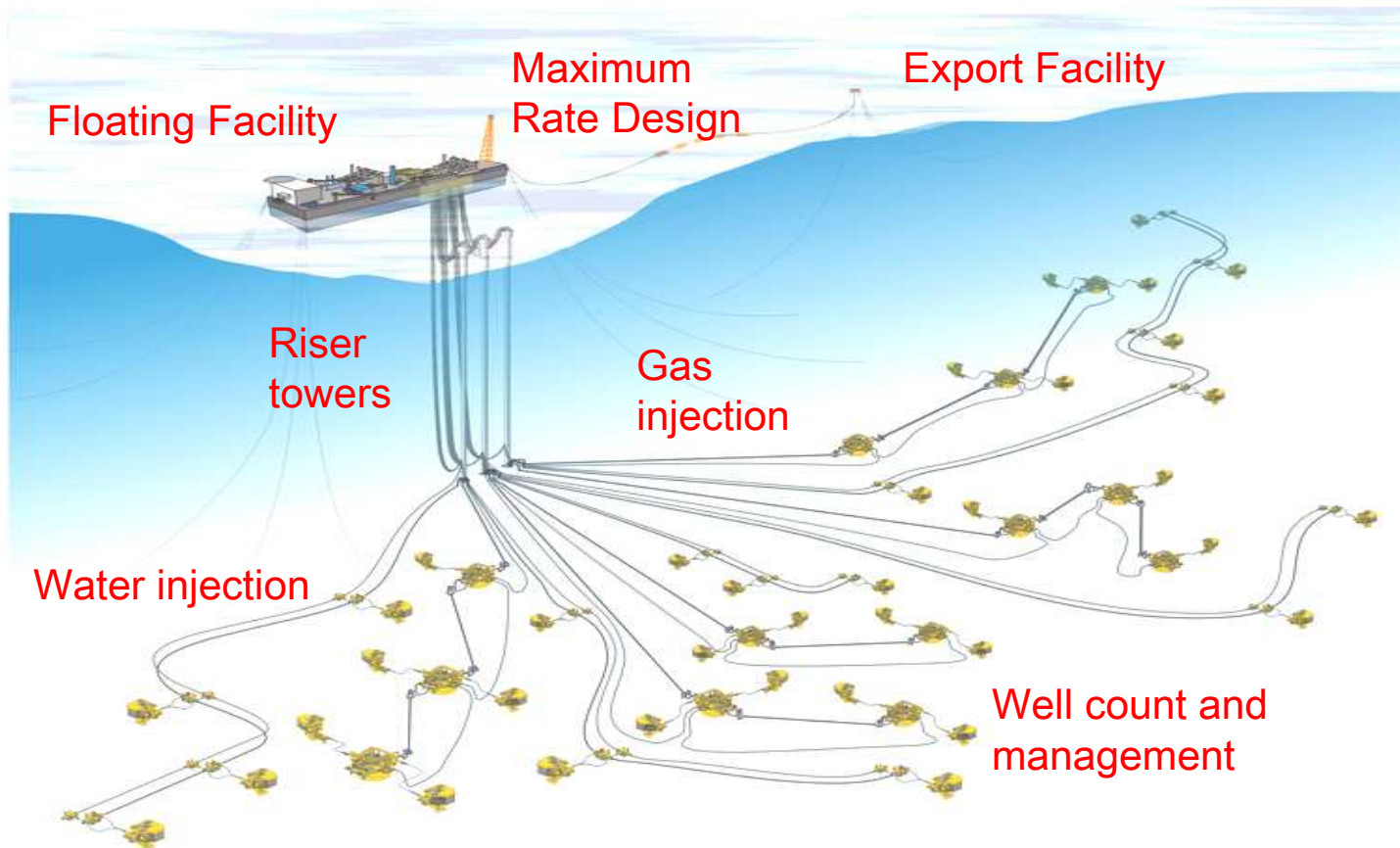




Sustainable Production: Progressing Contingent Resources

David MacDonald
VP Segment Reserves, BP

Typical Deepwater Facility Design



Sources of Uncertainty

- Subsurface
 - Static
 - Dynamic
- Gathering
- Processing
- Transport
- Commercial

Successful development plans include contingencies and mitigations for possible outcomes.

PRMS Classification Framework

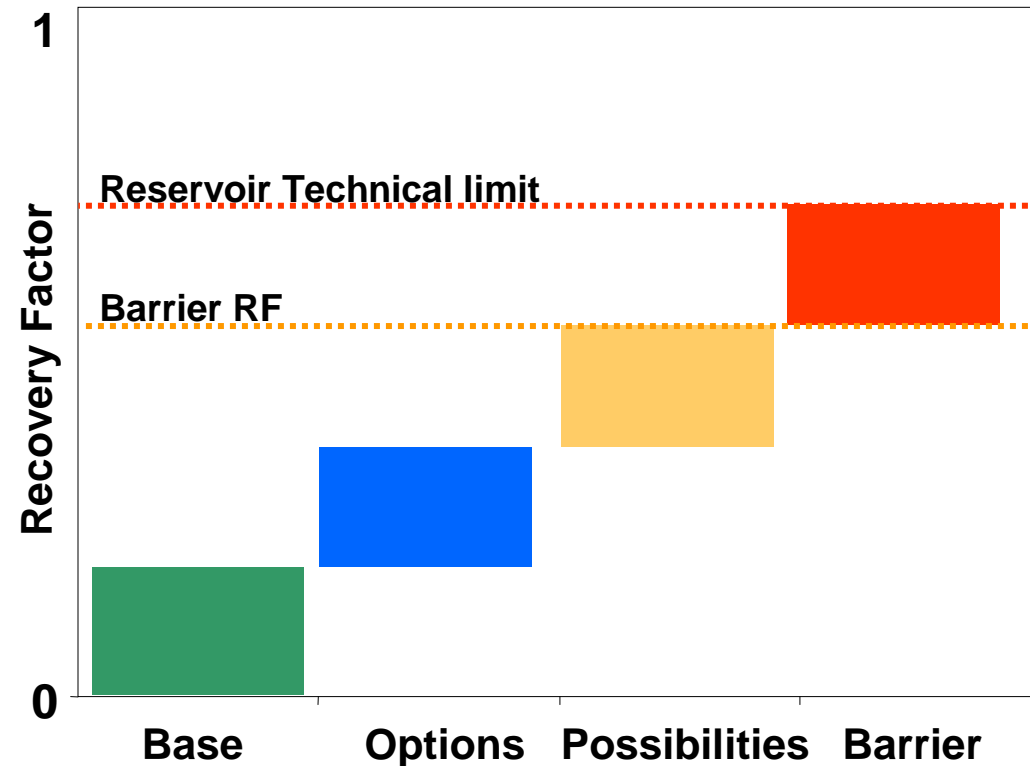


	Extracted	Sales Production			
		Non-sales Production			
		Class	Categories		
			E	F	G
	Future recovery by commercial development projects or mining operations	Commercial Projects	1	1	1, 2, 3
	Potential future recovery by contingent development projects or mining operations	Potentially Commercial Projects	2	2	1, 2, 3
		Non-Commercial Projects	3	2	1, 2, 3
	Additional quantities in place associated with known deposits		3	4	1, 2, 3
	Potential future recovery by successful exploration activities	Exploration Projects	3	3	4
	Additional quantities in place associated with potential deposits		3	4	4

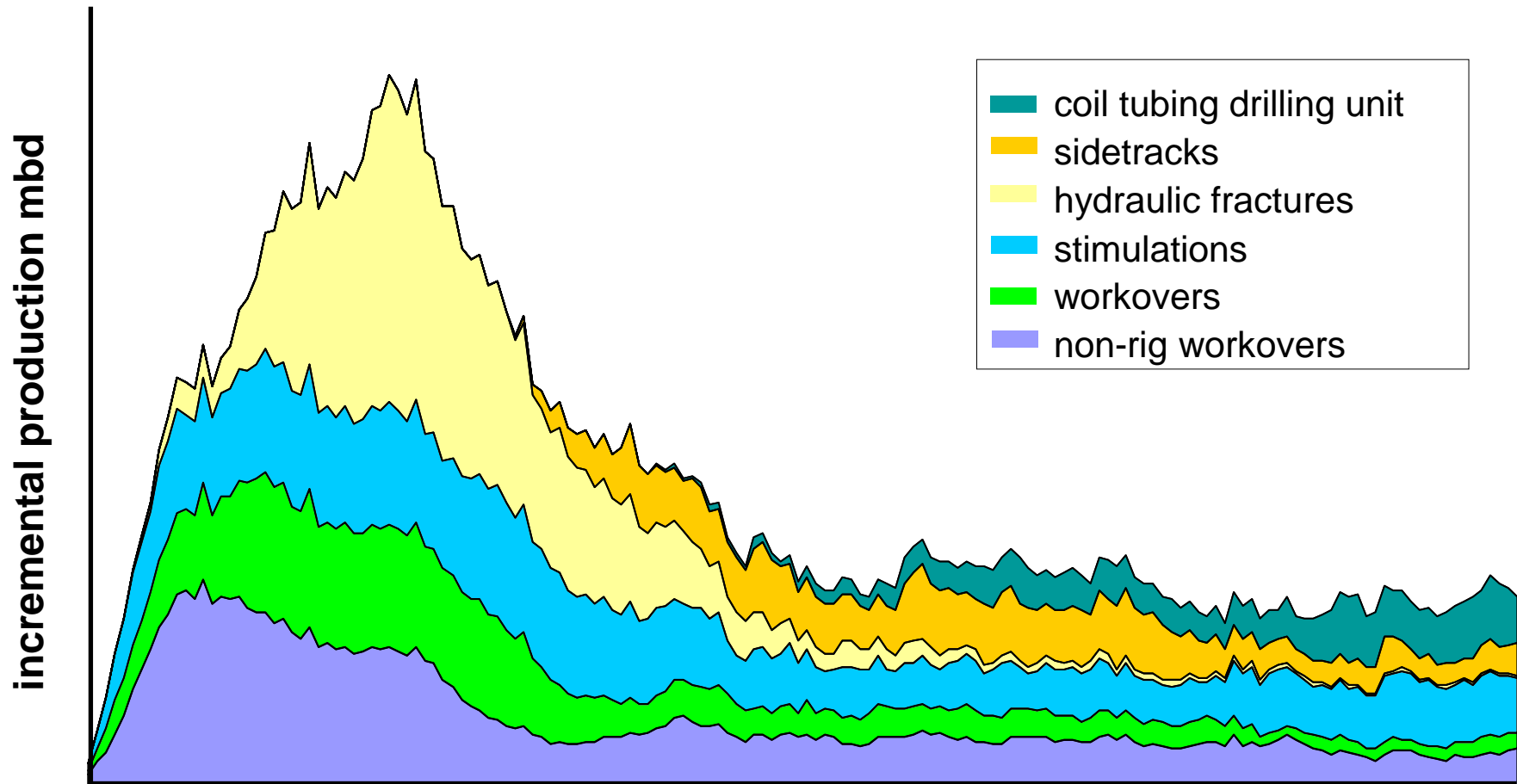


Reservoir Technical Limits

- Options
 - Doable now (or almost)
- Possibilities
 - Potentially economic
 - May require incremental technology development
 - <5 & >5 yr timescales
- Barrier opportunities
 - Technical or commercial barrier
 - Not currently doable or uneconomic
 - Requires step change



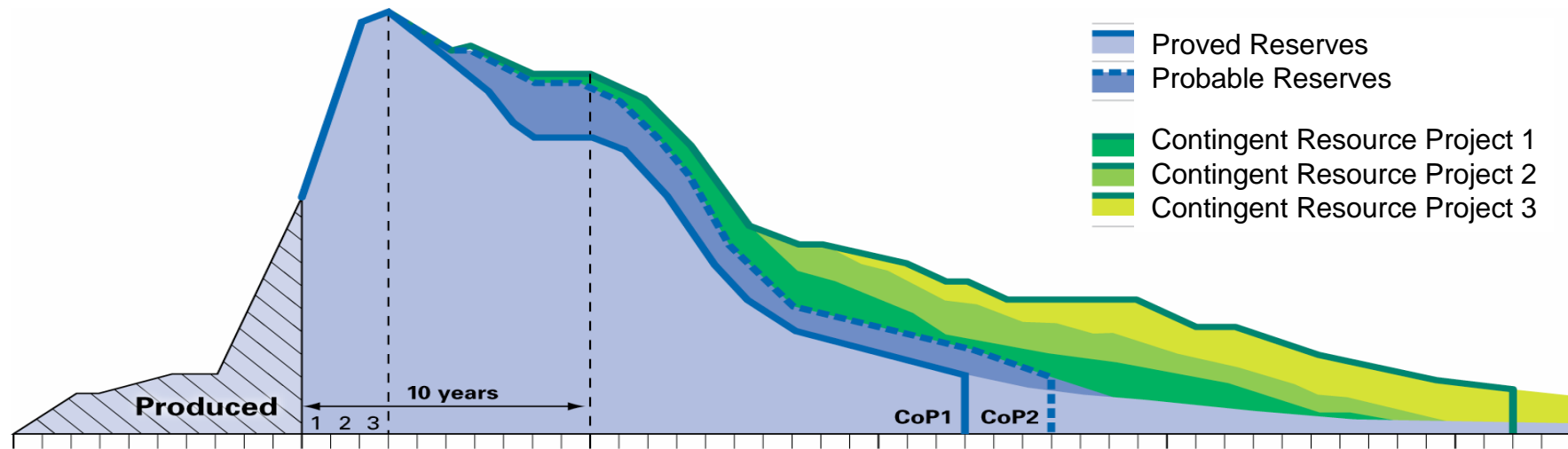
Role of Technology



The improvement of hydrocarbon recovery and investment efficiency is demonstrably linked with advances in technology.

The right linkage between depletion and technology plans is vital to maximising value from our assets.

The Depletion Plan & Business Planning



Activity Plan

Focuses on production of proved and probable reserves and timely execution of activity to complete future projects, such as water and/or gas injection

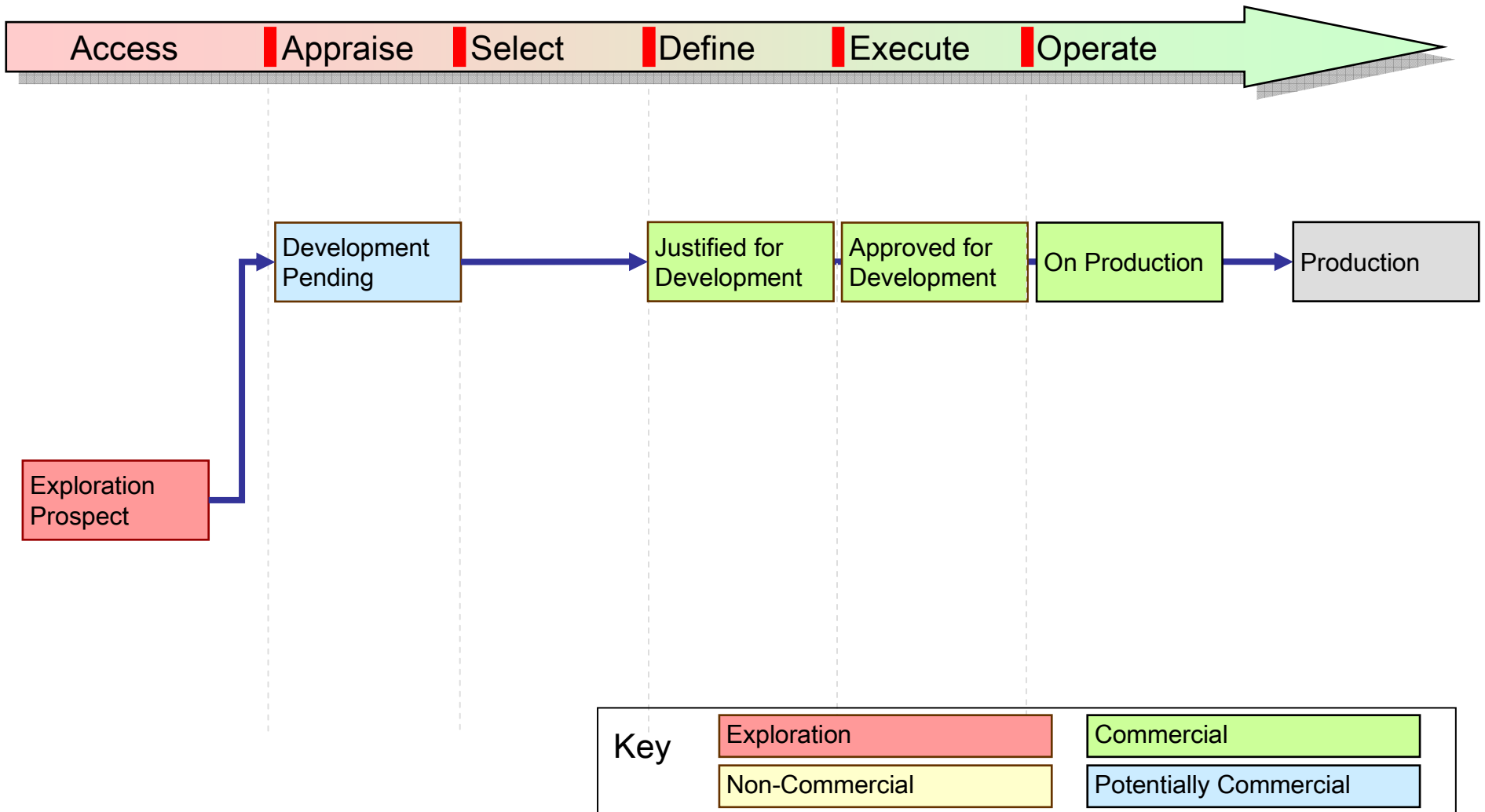
Business Plan

Focuses on the medium to long term value of the Asset but is constrained by assumptions regarding corporate strategy and investment availability.

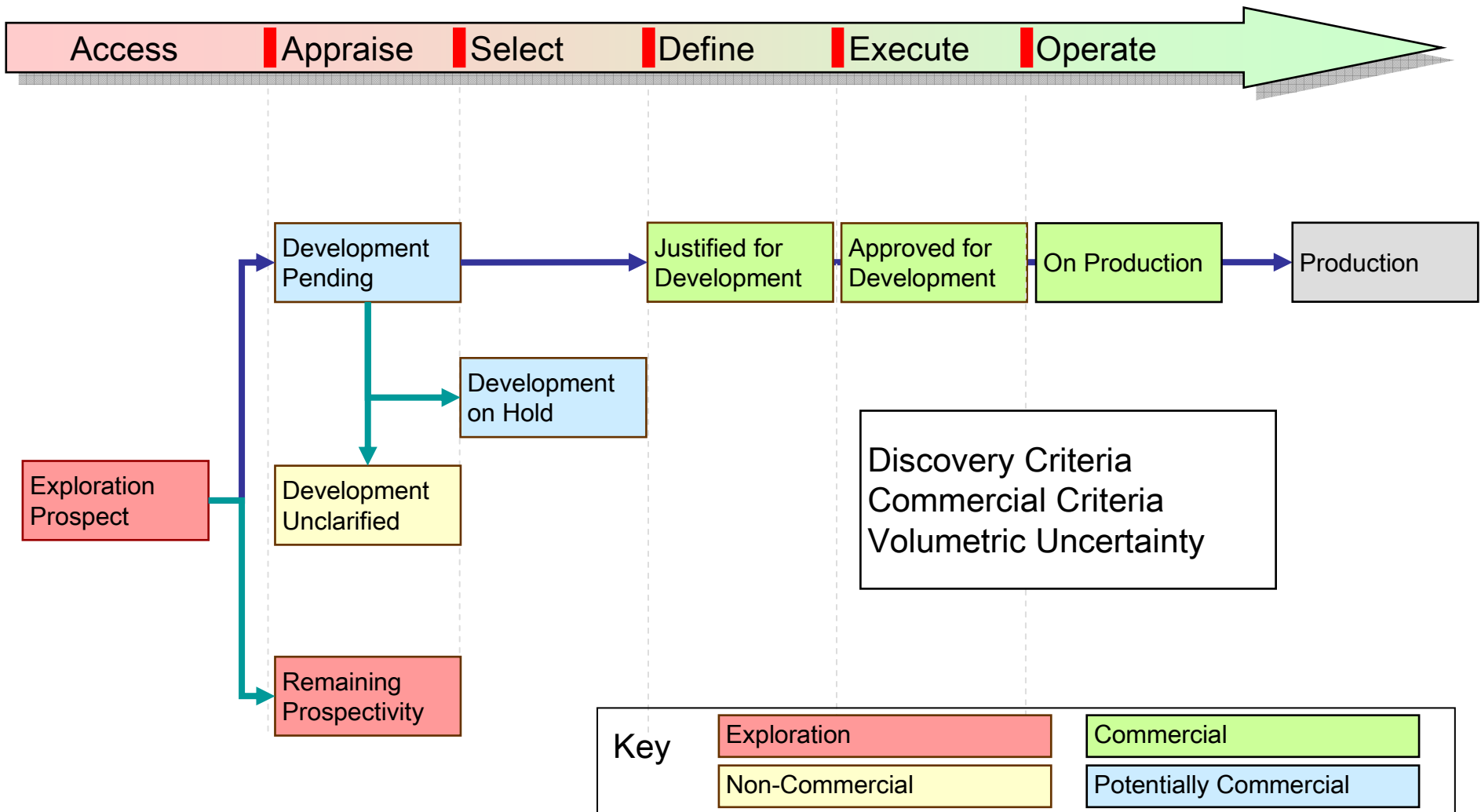
Depletion Plan

Describes the total resource envelope including the proved and probable reserves and Contingent Resources up to the estimated ultimate recovery or technical limit.

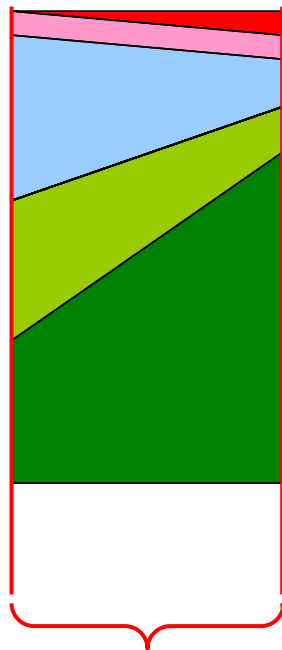
Resource Progression



Resource Progression



Hypothetical Progression



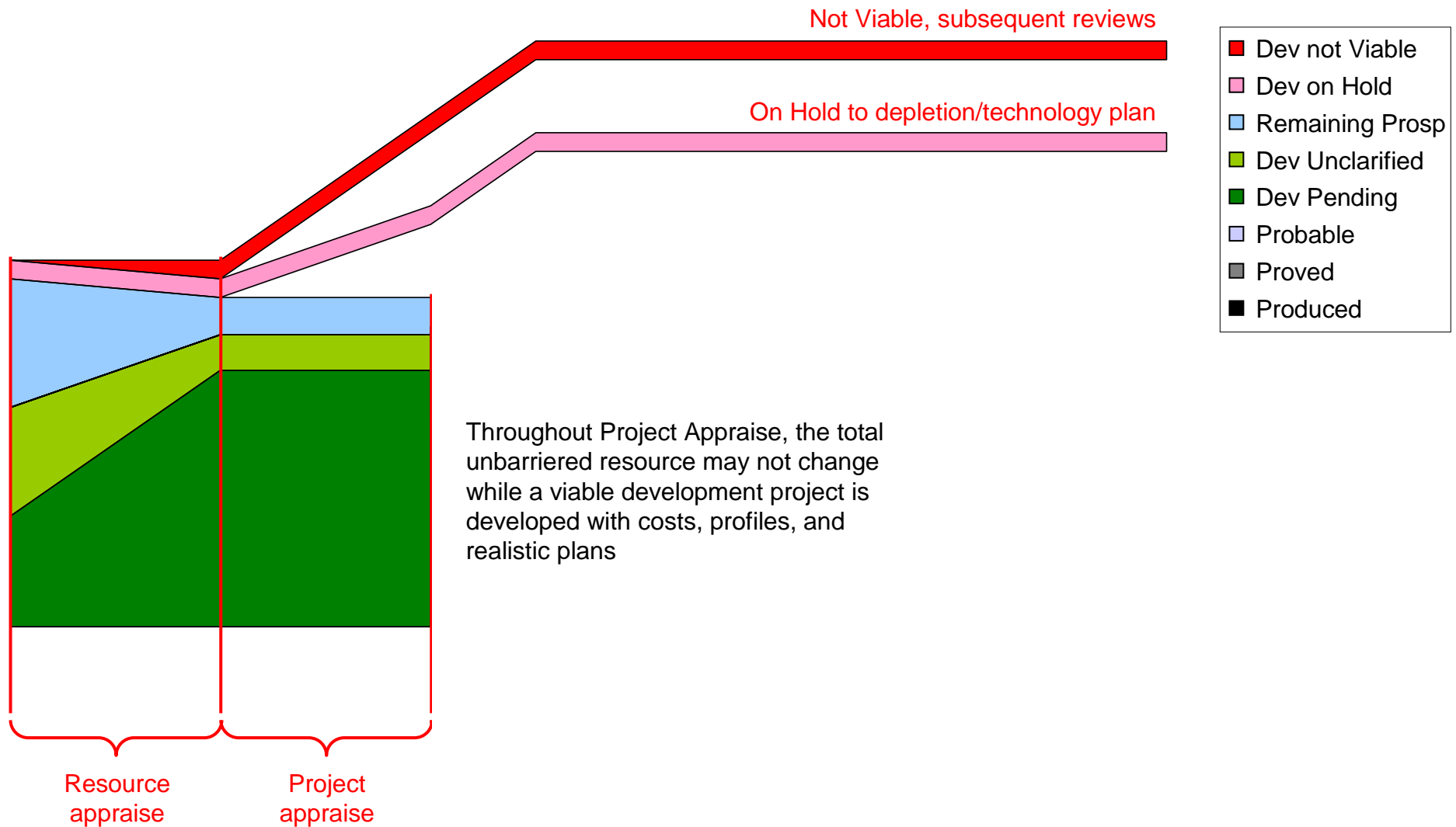
In Resource Appraise, the resource gets better definition. More of the resource is put in Development Pending as key risks and uncertainties are resolved

- Dev not Viable
- Dev on Hold
- Remaining Prosp
- Dev Unclarified
- Dev Pending
- Probable
- Proved
- Produced

Resource appraise

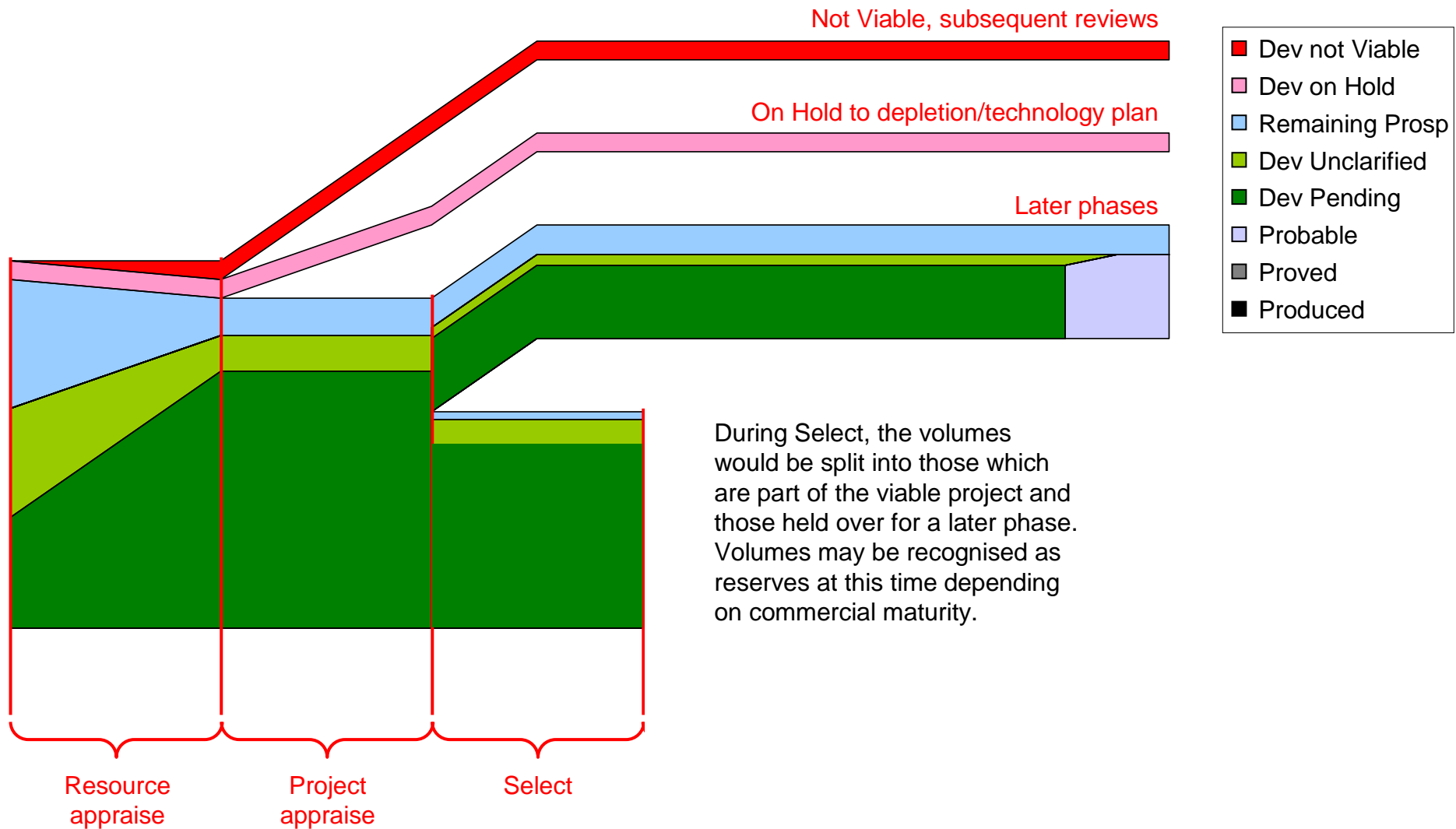


Hypothetical Progression

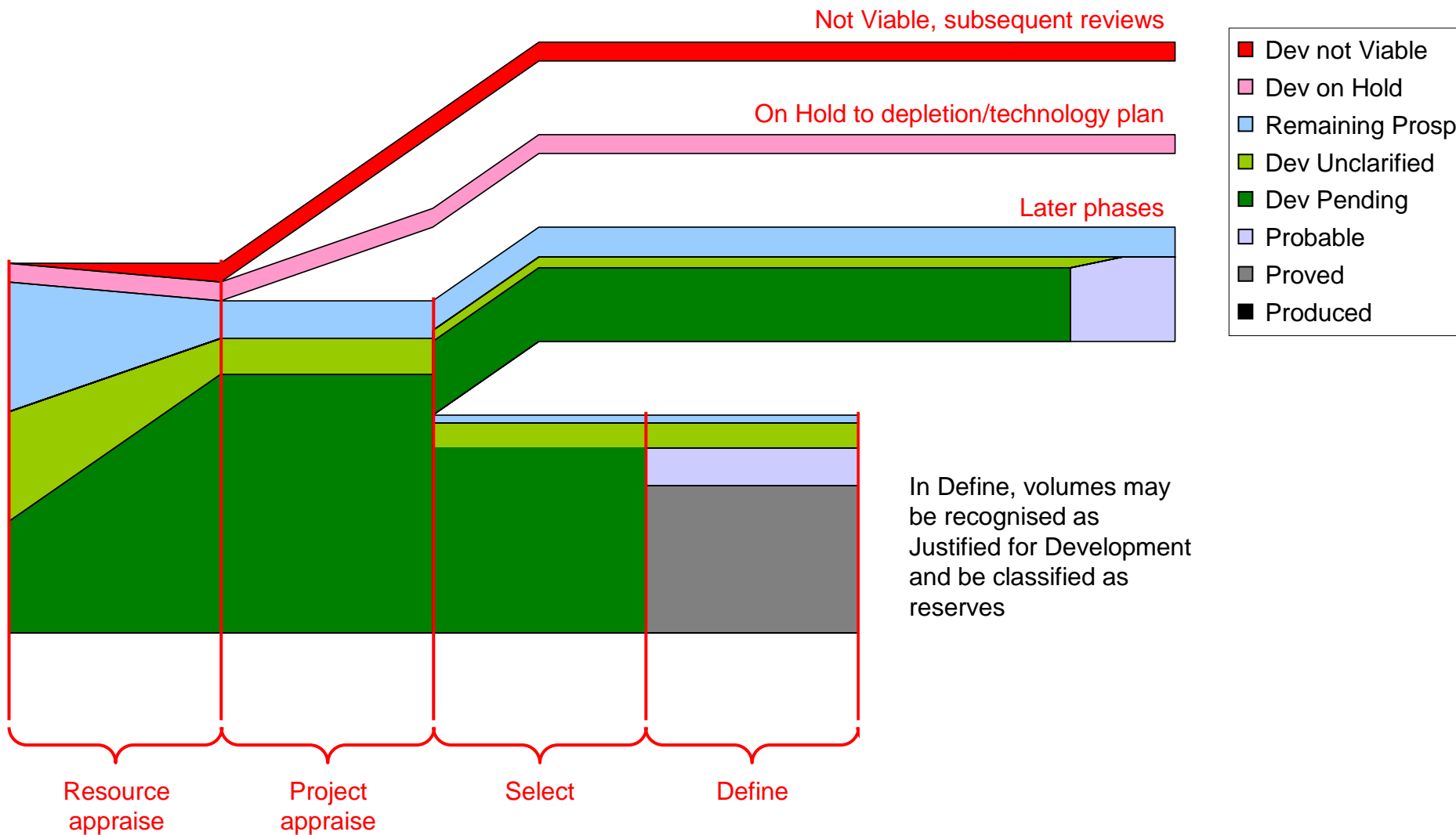




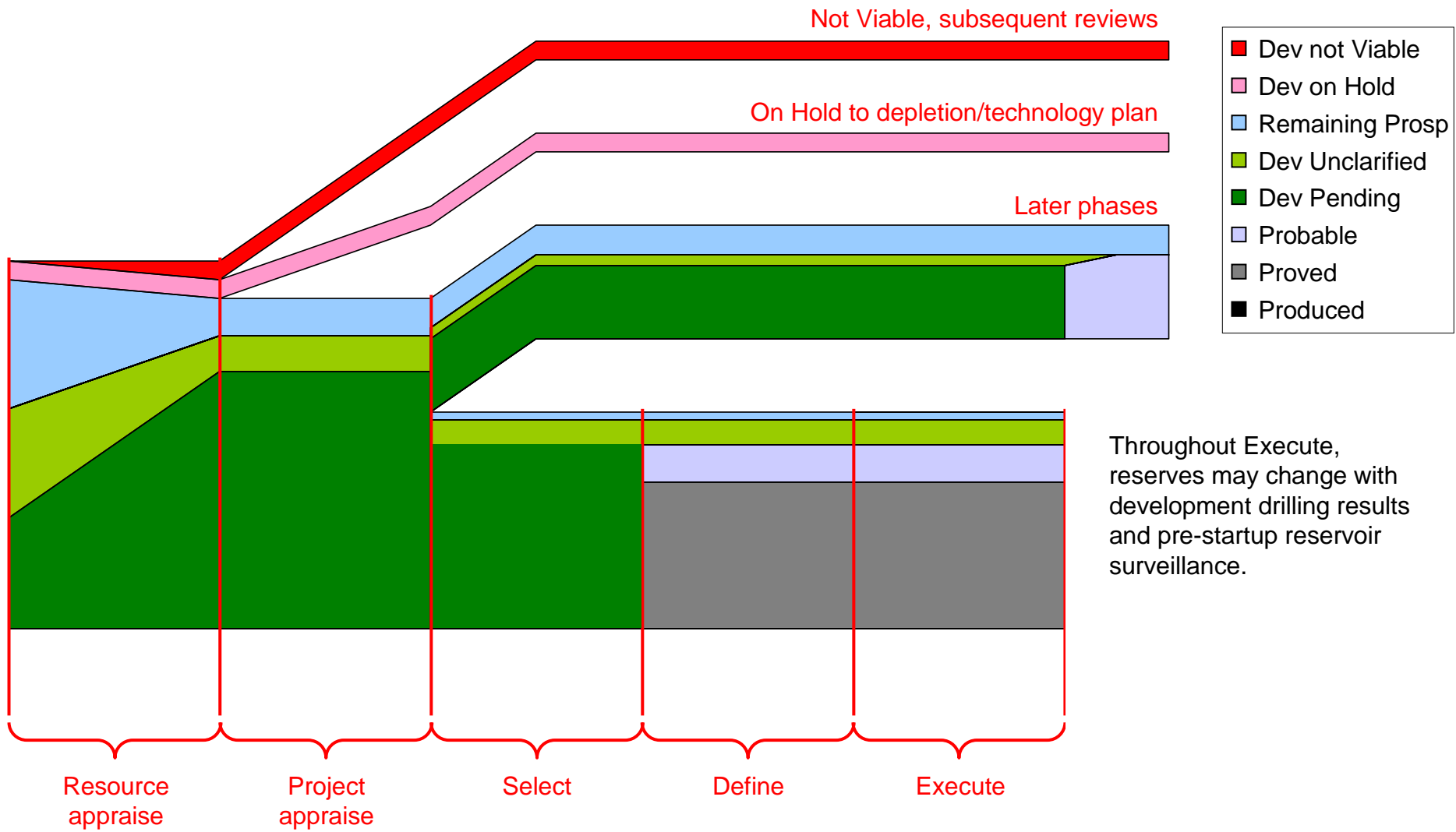
Hypothetical Progression



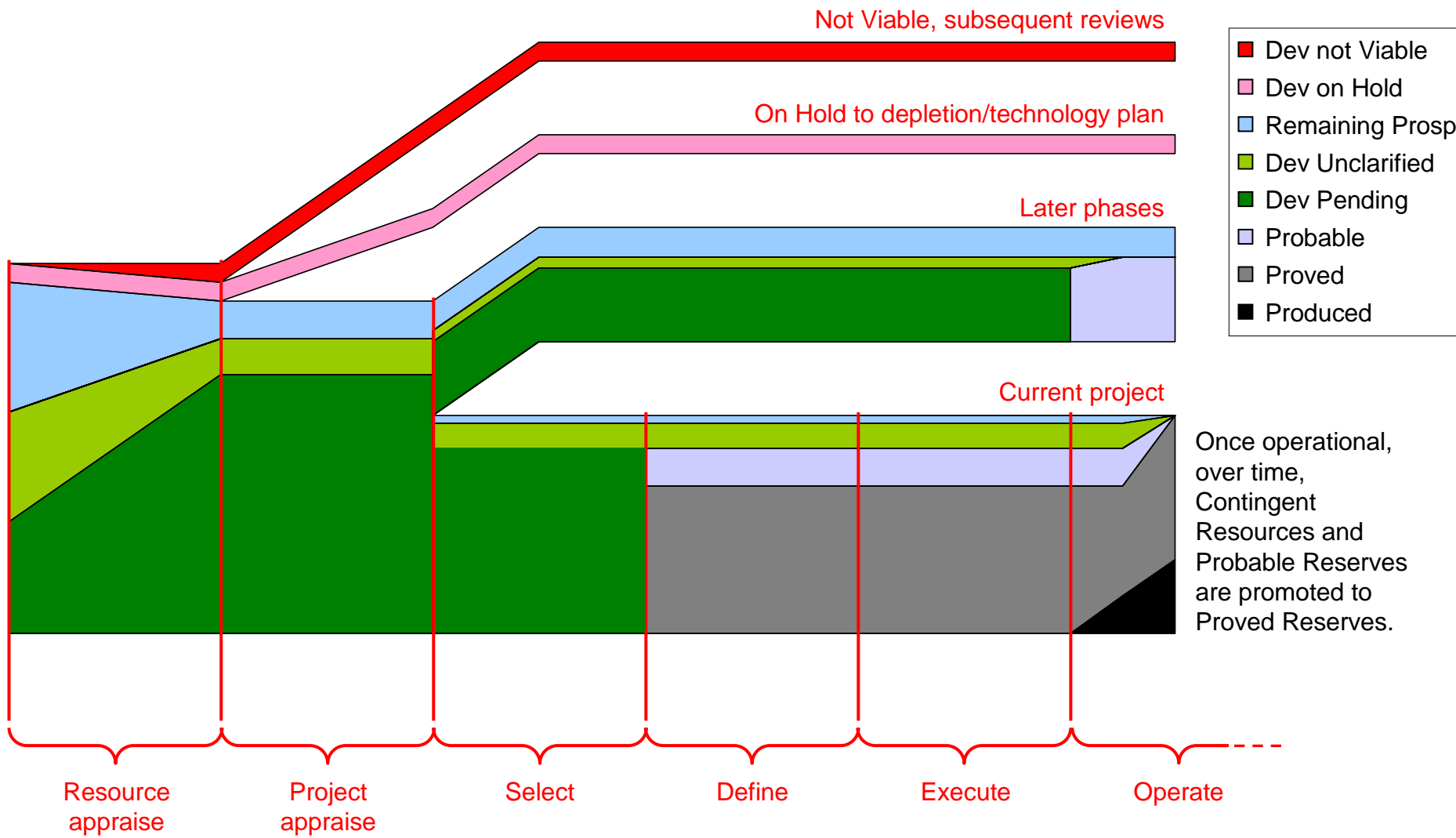
Hypothetical Progression



Hypothetical Progression



Hypothetical Progression



Sustainable Development for All



- Definition must include entire resource base
 - Maintain competitive advantage
 - Recognise the total potential
- Over-conservatism may lead to lost opportunity
- Uncertainty analysis must identify the components
 - Subsurface
 - Project
 - Commerciality

The UNFC with its focus on the criteria of economic viability, technical feasibility and geologic endowment are well placed to meet all of these needs.