United Nations Framework Classification: Application to Project Resources

Presented on behalf of the EGRC
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EGRC Bureau Chair
VP Segment Reserves, BP

Astana, 13 June 2017

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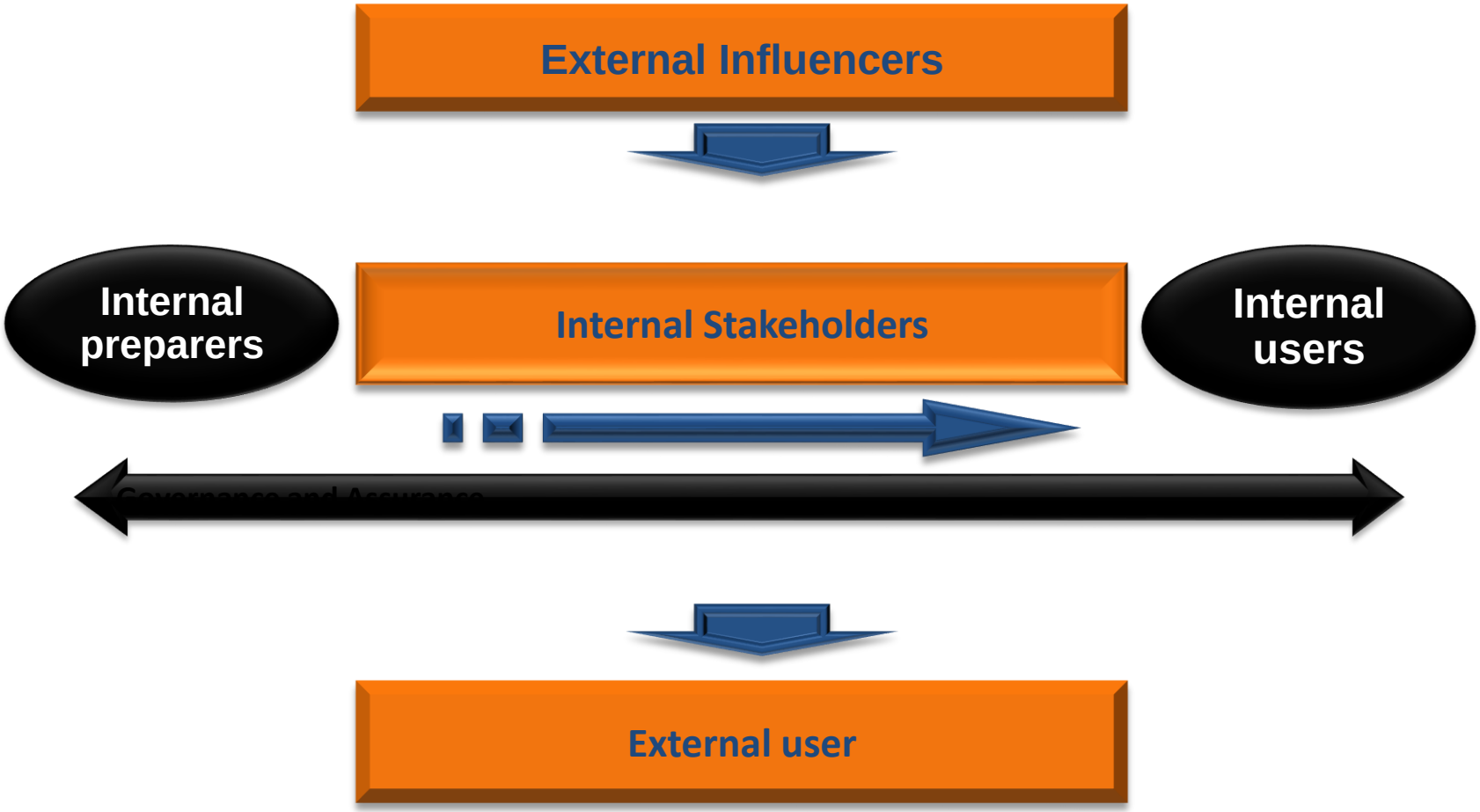
Stakeholders for Resource Classification

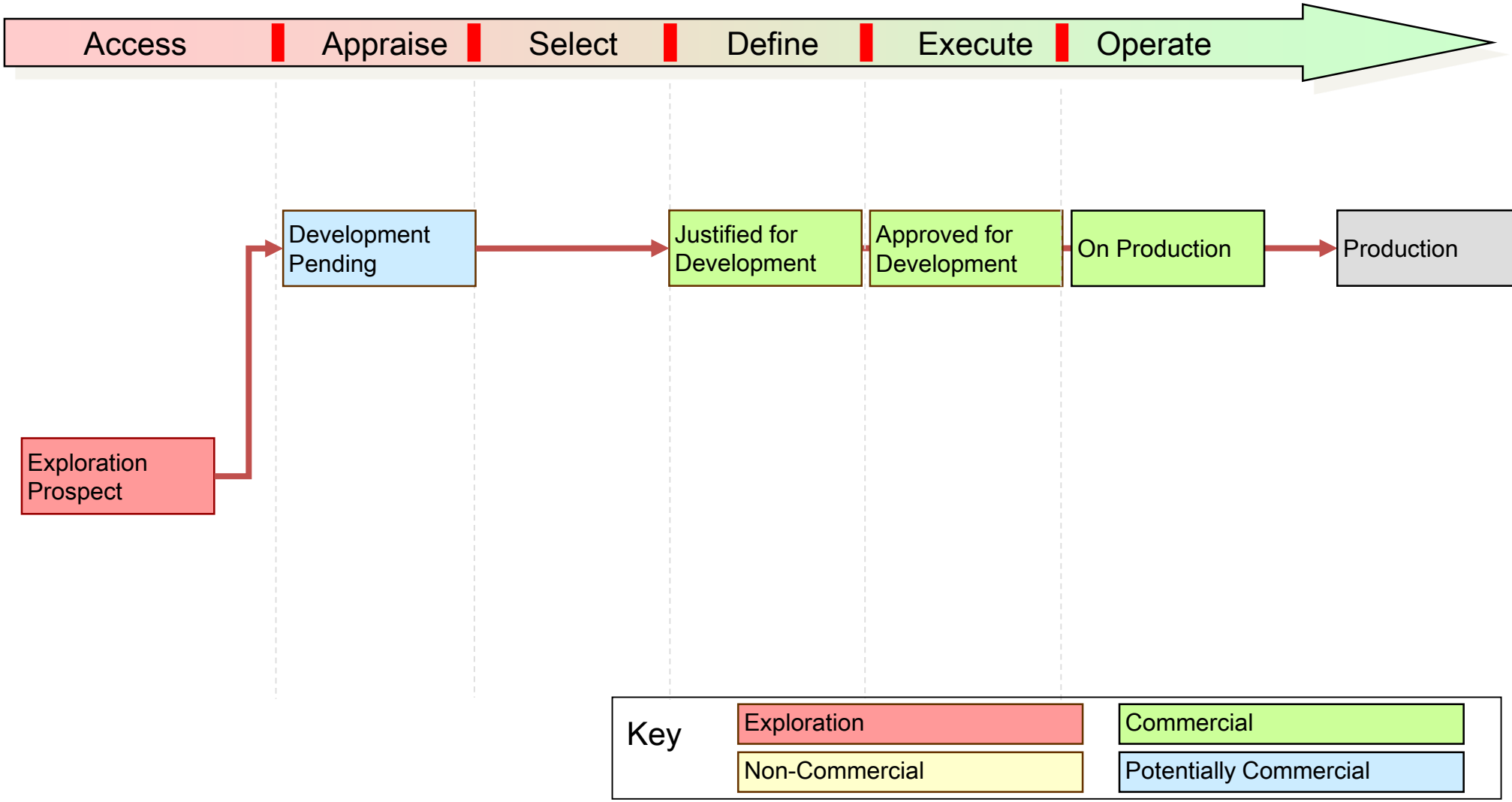


Diversity in stakeholder characteristics

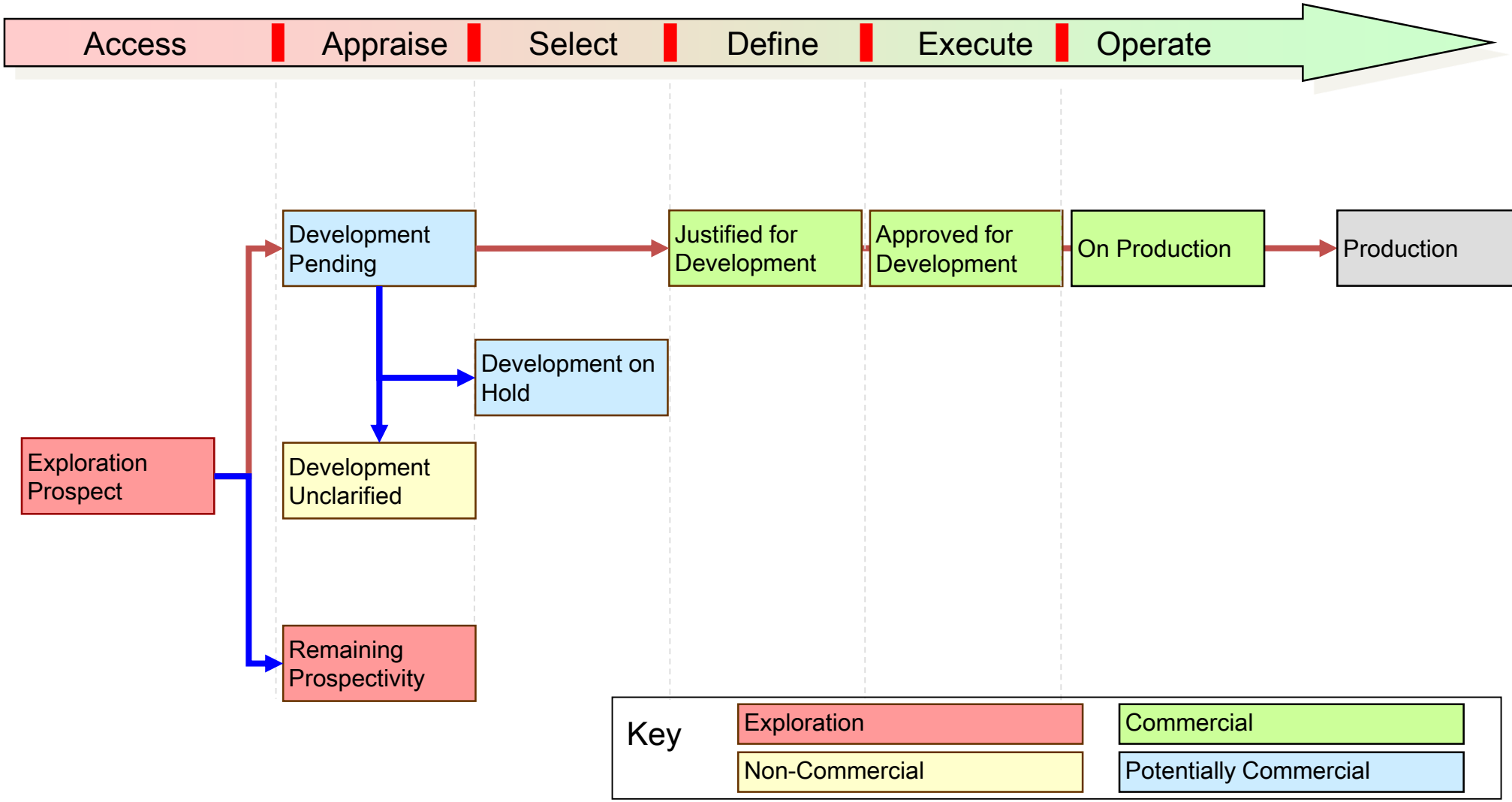
- Ability to tailor reporting information
  - Range of information available- financial statements or beyond?
- Level of sophistication
  - Sophisticated users
    - » Industry specialists
    - » Use of information as inputs to own analysis using own assumptions
    - » Use of full range of value relevant information
  - Less sophisticated users
    - » Greater reliance on financial statements
- Conflicts between stakeholders?
  - Views on cost/ benefit of information
- View of what is useful information

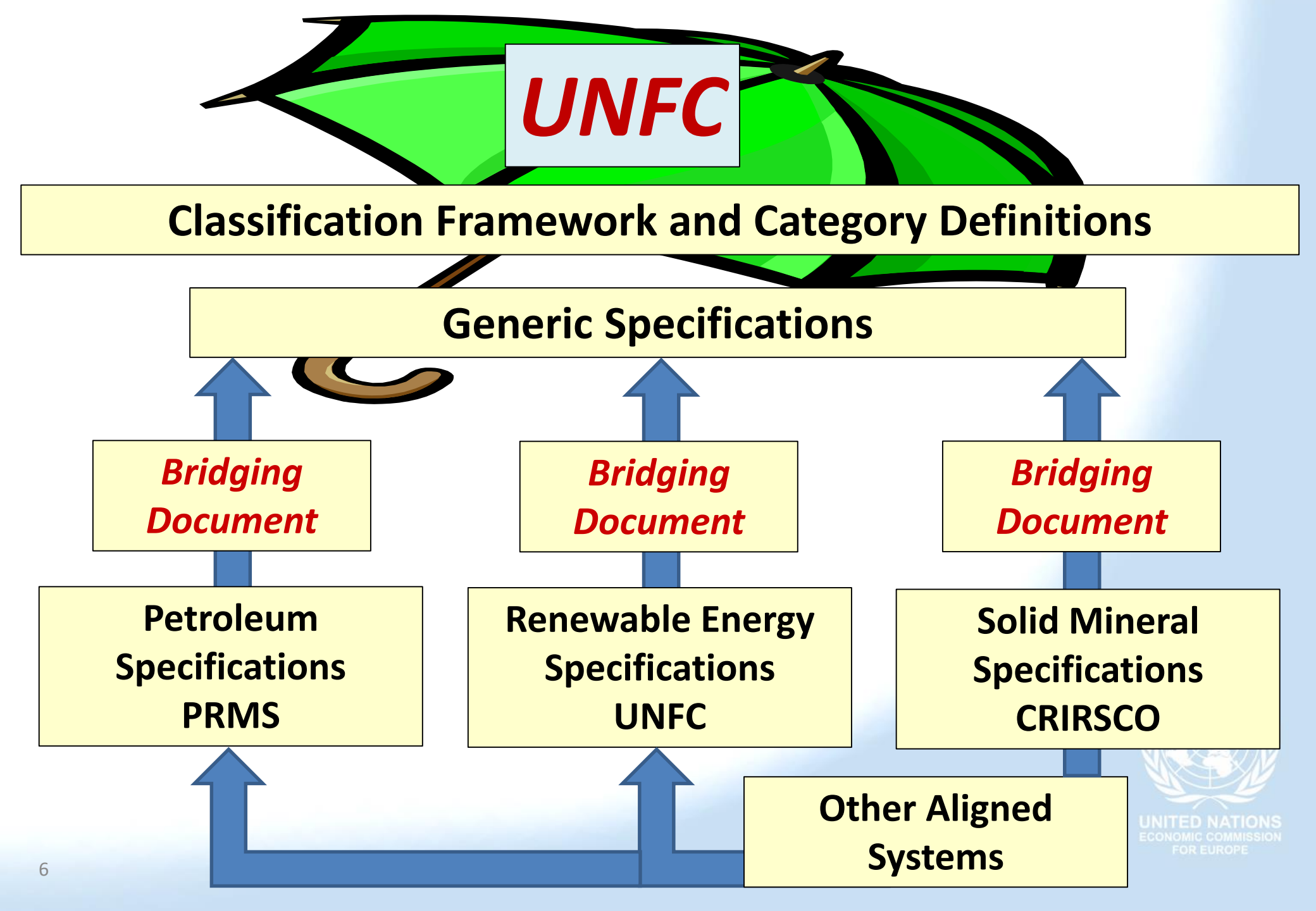
- Is there one 'answer' that meets the needs of all users?

Resource Progression and Project Maturity



Resource Progression and Project Maturity




UNFC
Classification Framework and Category Definitions
Generic Specifications
Bridging Document
Bridging Document
Bridging Document
Petroleum Specifications PRMS
Renewable Energy Specifications UNFC
Solid Mineral Specifications CRIRSCO
Other Aligned Systems
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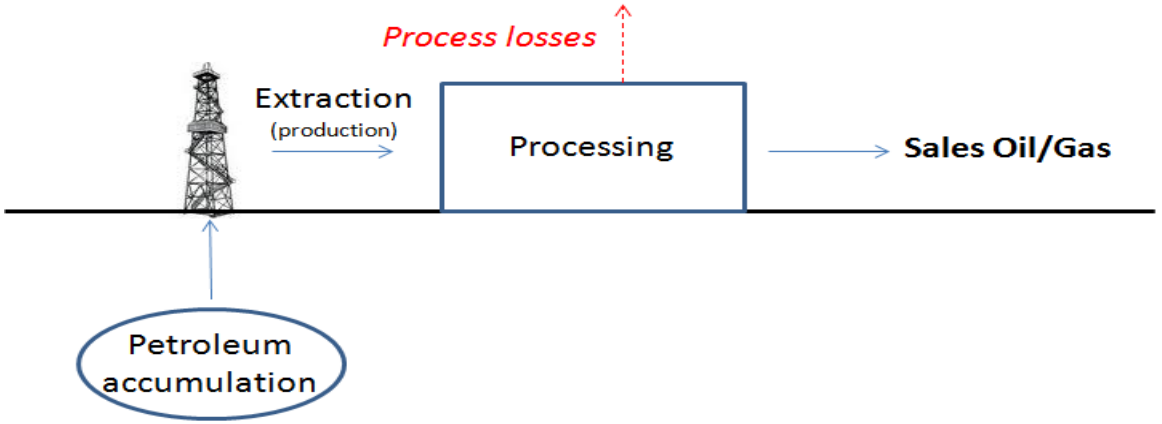
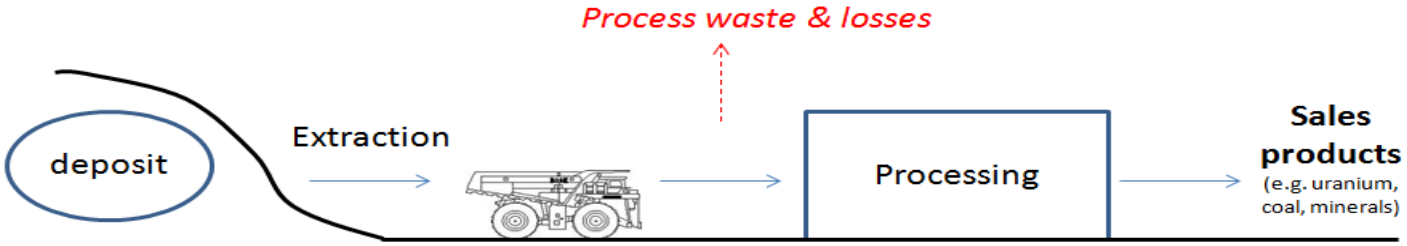
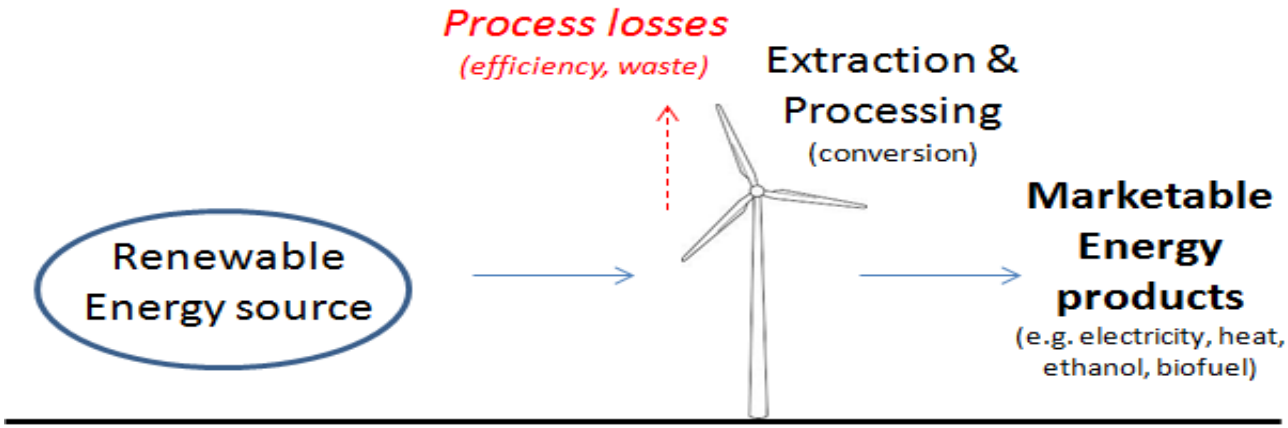
UNFC is “project-based”



The **project** generally represents the level at which a decision is made whether or not to proceed (i.e., spend more money)



Renewable energy projects are very similar to fossil energy or mineral projects



The Project is the link between the Renewable Energy Source and sales quantities of Energy Products and provides the basis for economic evaluation and decision-making

Why three criteria?

Project resources must be …

Economic to extract (commercially feasible)

Geologically well defined (with high confidence)

Technically feasible to extract

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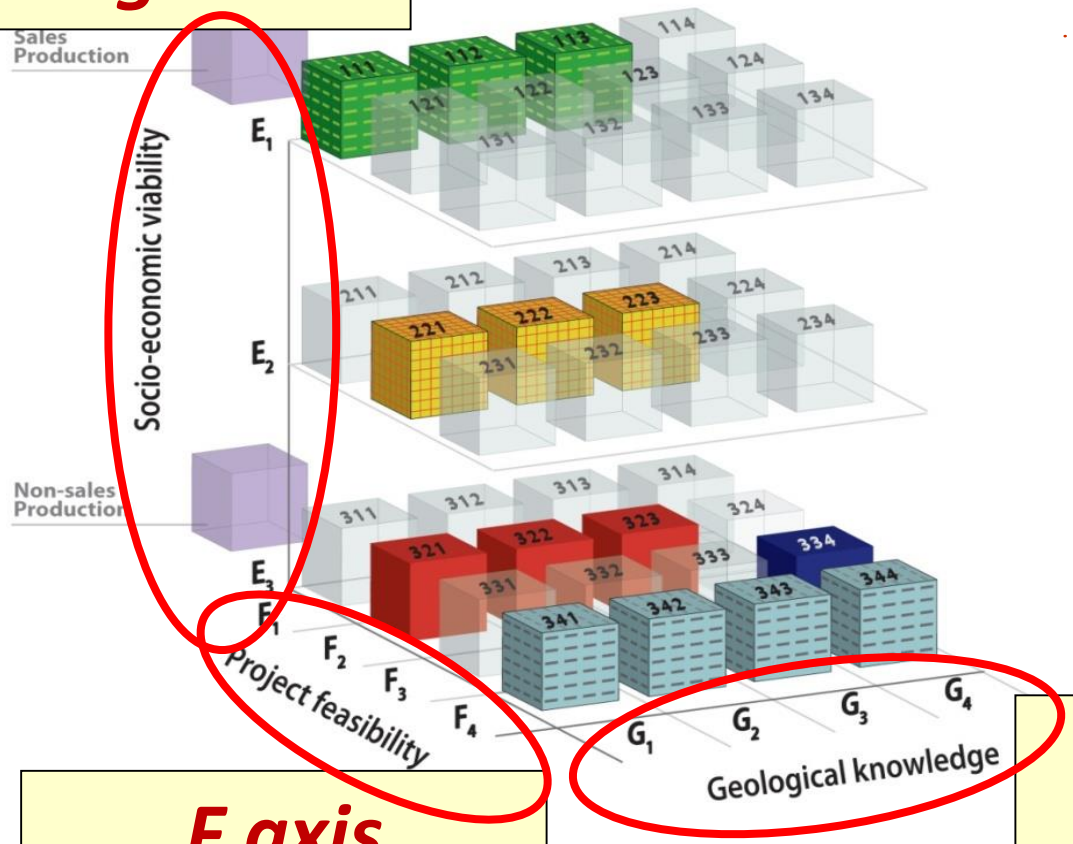
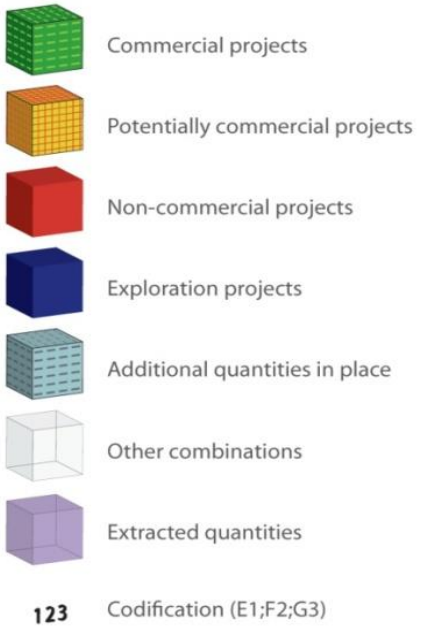
Categories and Classes … Codification

E axis categories





F axis categories

G axis categories

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UNFC – E axis

- **Degree of favourability of social and economic conditions in establishing the commercial viability of the project**
- **Key points to consider:**
  - **Access & entitlement (who owns the resource?)**
  - **Market & sales connectivity (can we market the resource?)**
  - **Social and environmental impact (are we a benefit to the community?)**
  - **Authorisation & commitment (do we have approvals & investment decision?)**
  - **Economic viability (does the project meet pass the economic criteria?)**

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E axis category definitions

Category	Definition
E1	Extraction and sale has been confirmed to be economically viable.
E2	Extraction and sale is expected to become economically viable in the foreseeable future.
E3	Extraction and sale is not expected to become economically viable in the foreseeable future or evaluation is at too early a stage to determine economic viability.

The phrase "economically viable" encompasses economic (in the narrow sense) plus other relevant "market conditions", and includes consideration of prices, costs, legal/fiscal framework, environmental, social and all other non-technical factors that could directly impact the viability of a development project.

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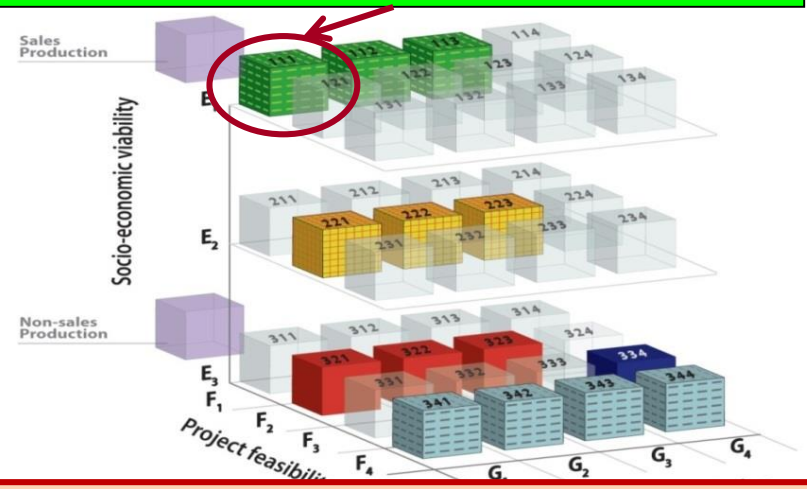
UNFC – How it works

UNFC Class: 111



Proved Reserves are those quantities of petroleum, which by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be commercially recoverable, from a given date forward, from known reservoirs and under defined economic conditions, operating methods, and government regulations.

Category	Definition
E1	Extraction and sale has been confirmed to be economically viable.

Category	Definition
F1	Feasibility of extraction by a defined development project or mining operation has been confirmed.

Category	Definition
G1	Quantities associated with a known deposit that can be estimated with a high level of confidence.

In summary …

- **UNFC-2009 is a generic, principles-based system**
  - Applicable to both solid minerals, fluids and renewable energies
  - Uses a numerical coding system
- **Based on three fundamental criteria**
  - Economic and social/environmental viability
  - Field project status and feasibility
  - Uncertainty, confidence and knowledge of quantities
- **Clear criteria for project maturity**
  - Fits well with business capital value assurance processes

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