



CRIRSCO: Past Present Future

Perth, Australia
Garth Kirkham
Chairperson, CRIRSCO

Why is CRIRSCO necessary?

The mining industry – an international business and a vital contributor to national and global economies;

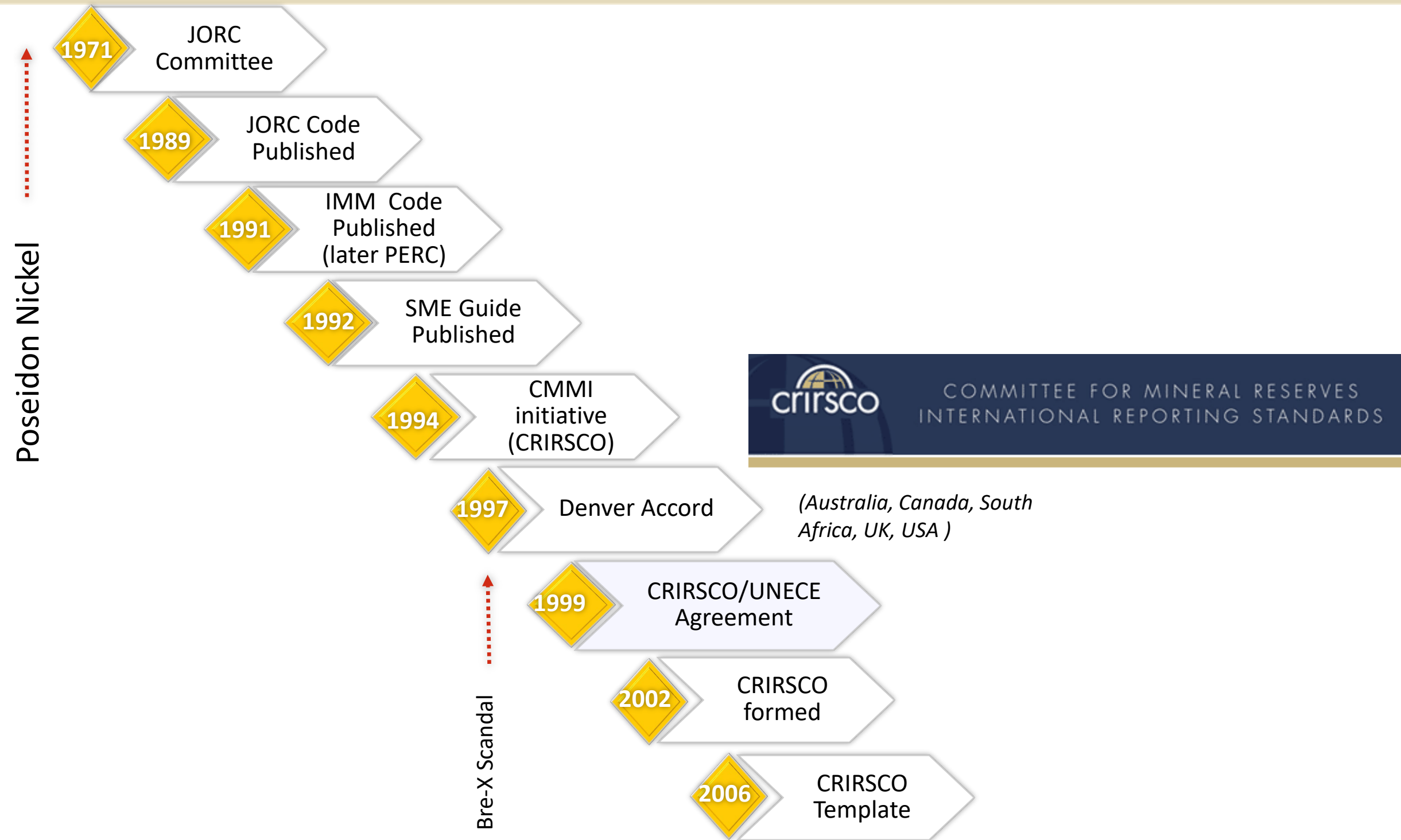


Based on depleting mineral assets - knowledge is imperfect before extraction.

Requires clear communication of risks – depends on the trust and confidence of investors and other stakeholders for its financial and operational well-being.

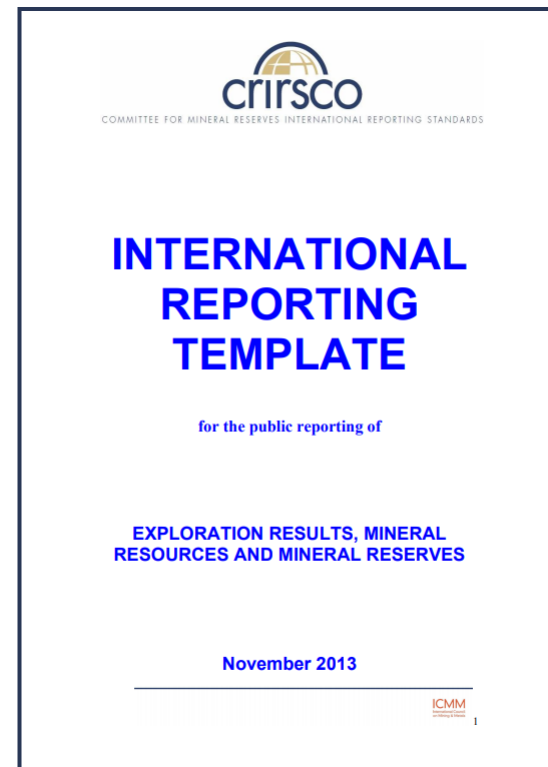


How CRIRSCO was born



Why was CRIRSCO created?

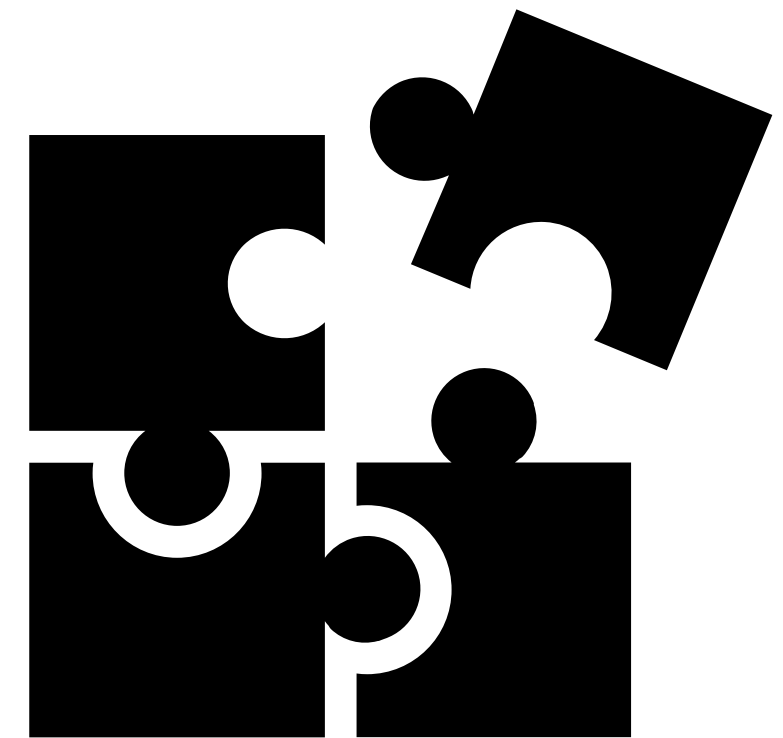
"To promote International Best Practice in the Reporting of Mineral Exploration Results, Mineral Resources and Mineral Reserves"



Provides the framework for a **required minimum standard** for the **Public Reporting** of Exploration Results, Mineral Resources and Mineral Reserves

Relevant to **all solid minerals**

- 3 Basic Principles: Transparency, Materiality and Competence
- Standard Definitions, represented in a simple diagram
- A Global Template for Reporting of Exploration Results, Mineral Resources and Mineral Reserves
- Professional Competence and Responsibility
- Self-regulation
- Governance structured in four layers

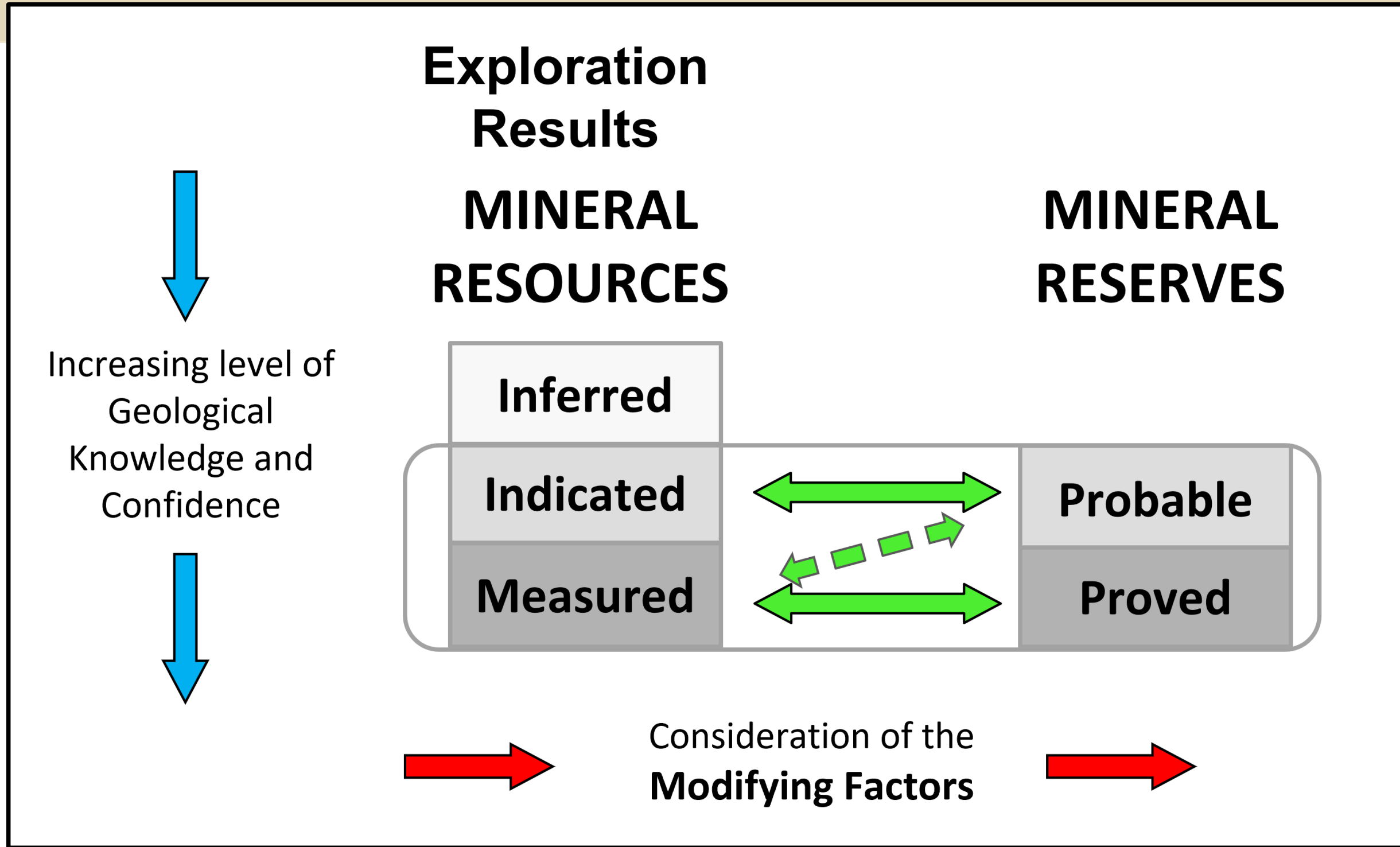


CRIRSCO reporting framework

- **Public Reporting**
 - Disclosure by Listed Mineral Companies
 - Also used by many unlisted companies
- Principles based
 - Transparency, Materiality and Competence
- Public Reporting Guidelines
 - They do not prescribe how estimations should be done
- CRIRSCO International reporting template
 - Common definitions of 16 important terms (+ Figure 1)
 - Checklist of assessment criteria (Table 1)
- Other considerations
 - Other regulations (e.g. NI 43-101 Form F1, S-K 1300)

For more details download the CRIRSCO Template (2024) from www.crirSCO.com

CRIRSCO Template – Figure 1 (June 2024)



Source: The CRIRSCO template (2024) www.crirSCO.com



THE CRIRSCO CODES AND STANDARDS (PUBLIC REPORTING)



CRIRSCO is formed by representatives of 15 self-regulated associations

JORC (Australasia) 1994



CBRR (Brazil) 2015



CIM (Canada) 1994



Comision Minera (Chile) 2003



CRRR (Colombia) 2018



PERC (Europe) 1994 (as IMM Code)



NACRI (India) 2019



Kombers-KCMI (Indonesia) 2017



KAZRC (Kazakhstan) 2016



MPIGM (Mongolia) 2014



OERN (Russia) 2011



SAMCODES (South Africa) 1994



UMREK (Turkey) 2018



SME (United States of America) 1994



PMRC (Philippines) 2023



Each CRIRSCO Member has country specific needs and requirements based on local laws and regulations, relationships with government and regulators along with regional issues and concerns

Source; AMC Consultants

Country	Language	Code Status	Name	First Version	Number of Updates	Current Version	Legislative/ Regulatory	Security Exchange /Other	Length (pages)
Australia	English	Code	Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC)	1989	6	2012	Regulatory	ASX (ASIC), NZX	44
Brazil	Spanish, English	Guide	Commission Brasileira de Recursos e Reservas Guide for Reporting Exploration information, Mineral Resources and Mineral Reserves (CBRR)	2015	3	2022	Guidance	N/A	84
Canada	English, French	Code	Canadian Institute of Mining Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves	2001	3	2014	Legislative	TSX, TSX - V	10 (+44 + Best Practice Guidelines)
Chile	Spanish, English	Code	Chilean Code for Reporting Mineral Prospects, Resources, and Reserves (Code CH 20.235, CC)	2003	2	2015 (English, 2023 update is in Spanish only)	Legislative	Mining Code CH 20.235	50

Country	Language	Code Status	Name	First Version	Number of Updates	Current Version	Legislative/Regulatory	Security Exchange/Other	Length (pages)
Colombia	Spanish, English	Code	Colombian Standard for the Public Reporting of Exploration Results, Mineral Resources and Reserves (ECRR)	2018	1	2018	Legislative	Law 1955 of 2019, Resolution 514 of May 29, 2023, Mineral Resources and Reserves Reconciliation Form.	66
Europe	English, summary guide in German, Swedish, Finnish Portuguese, French, Spanish and Italian	Standard	The Pan European Reserves and Resources Reporting Committee (PERC)	2001	5	2021	Guidance/ Voluntary disclosure	Including (but not restricted to) countries of the European Union and European Economic Area, and the United Kingdom.	106
India	English	Code	Indian Mineral Industry Code (IMIC), For Reporting Exploration Results, Mineral Resources and Mineral Reserves	2019	0	2019	Regulatory	Indian Stock Exchange	62
Indonesia	Bahasa, English	Code	Komite (Bersama) Cadangan Mineral Indonesia (KCMI), Exploration Results, Mineral Resources and Mineral Reserves Indonesian Joint Committee for Mineral Reserves	2017	0	2017			37
Kazakhstan	Kazakh, English	Code	Kazakhstan Public Reporting Code for Exploration Results, Mineral Resources and Mineral Reserves (KAZRC)	2016	2	2021	Regulatory		65

Country	Language	Code/Standard	Name	First Version	Number of Updates	Current Version	Legislative/ Regulatory	Security Exchange/ Other	Length (pages)
Mongolia	Mongolian, English	Code	Mongolian Code for the Public Reporting of Exploration Results, Mineral Resources and Mineral Reserves (The MRC Code)	2015	0	2015	Legislative	Minerals Law, enacted on 8 July 2006 (Minerals Law)	40
Russia	Russian, English	Code	Russian code for the public reporting of Exploration Results, Mineral Resources and Mineral Reserves (NAEN Code)	2011	1	2013	Guidance		64
South Africa	English	Code	The South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (SAMREC)	2000	4	2016	Regulatory	JSE	98 (+SAMESG)
Turkey	Turkish, English	Code	The National Public Reporting of Exploration Results, Mineral Resources and Mineral Reserves Code of Türkiye (the UMREK Code)	2016	2	2023	Regulatory	Various, including the Istanbul Stock Exchange (BİST)	104
USA	English	Code	SME Guide for Reporting Exploration Information Mineral Resources and Mineral Reserves	1992	4	2017	Regulatory	NYSE (SEC)	97
USA	English	SEC Rule SK-1300	17CFR96.1300-1305	2018	0	2018	Regulatory	SEC	15
CRIRSCO	English	Standard	Committee for Mineral Reserves International Reporting Standards (CRIRSCO)	2006	5	2019	Guidance	N/A	79

Region	Standard/Code	Year of last update	CRIRSCO template version	NRO	Last updated
Colombia	ECRR Standard	2025	2024	CCRR	January 2025
Turkey	The UMREK Code	2023	2019	UMREK	February 2023
Brazil	CBRR Guide	2022	2019	CBRR	November 2022
Kazakhstan	KAZRC Public Reporting Code	2021	2019	KAZRC	July 2021
Europe	PERC Reporting Standard	2021	2019	PERC	October 2021
Philippines	Philippine Mineral Reporting Code	2020	2019	PMRCC	October 2020
India	Indian Mineral Industry Code (IMIC)	2019	2013	NACRI	July 2019
Indonesia	KCMI Code	2017	2013	KCMI	November 2017
USA	The SME Guide	2017	2013	SME	July 2017
South Africa	The SAMREC Code	2016	2013	SAMCODES	2016
Chile	Chilean Reporting Code	2015	not stated	Comisión Minera	May 2015
Canada	CIM Definition Standards	2014	not stated	CIM	May 2014
Mongolia	The MRC Code	2014	2013	MPIGM	2014
Russia	The NAEN Code	2013	2013	NAEN	November 2013
Australasia	The JORC Code	2012	2012 definitions	JORC	December 2012

NOTE: Last updated 6-Feb-2025

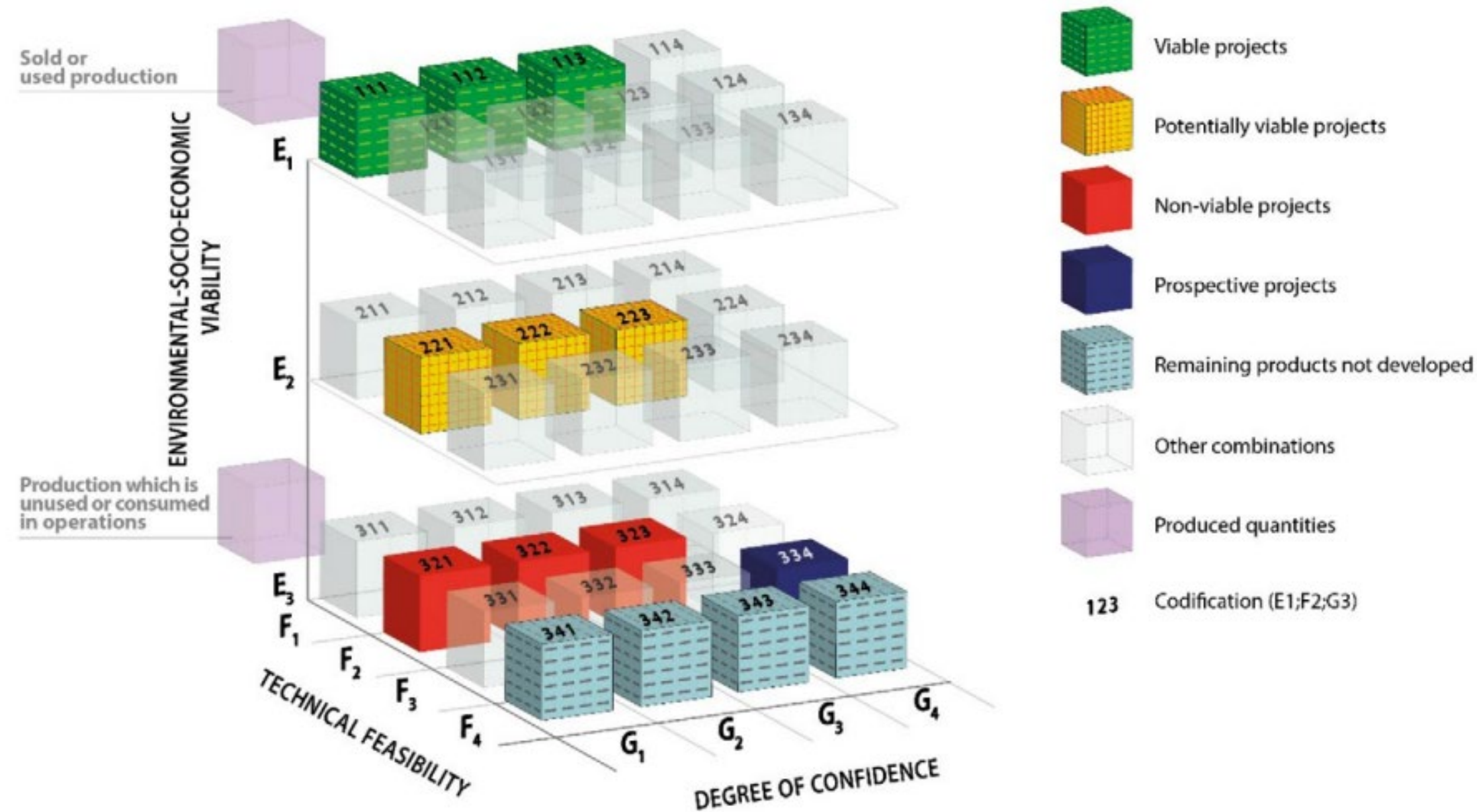
NOTES: NRO = National Reporting Organisation

All 15 NROs use identical (or not materially different) definitions for the 16 CRIRSCO defined terms
The Canadian NI 43-101 legislation incorporates by reference the CIM Definition Standards
In the USA, the SEC's regulation S-K, subpart 1300, also uses definitions which are closely aligned

CRIRSCO Template 2024: <https://crirSCO.com/>

Comparison of Reporting Systems (Source ; Micon)

CRIRSCO (JORC/CIM/ PERC/ NAEN)	Resource		Measured	Indicated			Inferred		Exploration Potential or Exploration Target
	Reserve		Proven	Probable					
Russian State Classification	Reserve		A, B and C1	B, C1 and C2			C2 and P1		P2 and P3
UNFC-2009 (Chinese and Indian Classification)	"E"	Economic Evaluation (100)	Designed Mining with loss	Recoverable Reserve (111)	Probable Recoverable Reserve (121)		Probable Recoverable Reserve (122)		
			Designed Mining without loss						
		Marginal Economic (2M00)		Basic Reserve (2M11)	Basic Reserve (2M21)		Basic Reserve (122b)		
		Sub-Economic (2S00)		Resource (2S11)	Resource (2S11)		Resource (2S22)		
		Intrinsically Economic (300)				Resource (331)	Resource (332)	Resource (333)	Resource (334)
	"F"	Feasibility Evaluation		Feasibility (101)	Pre-Feasibility (020)	Scoping (030)	Pre-Feasibility (020)	Scoping (030)	Scoping (030)
	"G"	Geological Evaluation		Measured (001)			Indicated (002)		Inferred (003) Predicted (004)



Application: “solar, wind, geothermal, hydro-marine, bioenergy, injection for storage, hydrocarbons, minerals, nuclear fuels and water”

Bridging Document

- A document that explains the relationship between UNFC and another classification system, including instructions and guidelines on how to classify estimates generated by application of that system using UNFC Numerical Codes.

Aligned System

- A classification system that has been aligned with UNFC as demonstrated by the existence of a Bridging Document that has been endorsed by the Expert Group on Resource Management.

Milestones

- Signed CRIRSCO-ICMM MoU for 2025-2026;
- Received Certificate of Incorporation as a Canadian federal corporation in February and opening of independent bank accounts;
- Distributed updated list of the CRIRSCO Standing Committees and Working Groups;
- Secretarial Services appointment to the Executive
- Working Groups/Standing Committees Coordinators until the end of 2026.

Documentation

- CRIRSCO Template to UNFC Bridging Document (UNECE)
- Guidance note to the use of the Bridging Document (CRIRSCO + UNECE)
- June 2024 Update of the CRIRSCO Template
- ESG Guidelines
- Beyond Inferred

Meetings and Training

AGM – Perth, Australia, 1-4 September 2025

- Held simultaneously by Critical Minerals conference 2-5 Sept. (AUSIMM lead organiser)
- Annual training conference in Indonesia

Membership

- Philippines (PMRC) became 15th member in October 2023
- Membership applications advancing for:
 - China, Ecuador, Peru, Kyrgyzstan, Uzbekistan, West Africa, Saudi Arabia, Mexico, Armenia



COMMITTEE FOR MINERAL RESERVES
INTERNATIONAL REPORTING STANDARDS