



CATALYTIC MINERALS FUND

Technical Assistance Facility

Catalytic Capital - USD 5M Grant or Programme-Related Investment Funding
Pan-African Mandate | Scalar International | May 2026



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OPPORTUNITY

Securing long-term mineral supplies requires securing the communities where they come from – today and for future generations.

“The next chapter of critical minerals must be built differently – in Africa. A transactional, pit-to-port approach risks a *Resource Curse 2.0* — extraction without lasting benefit for producing countries or communities. A new model, where supply security, industrial development and shared prosperity are aligned. That is what Scalar was established to deliver.”

Hubert Gutsa, Managing Director





Energy security **is where** climate **and** minerals **extraction intersect...** for everyone.

Mining projects **fail above ground,**
not below it.

Deploying hands-on expertise **alongside** equity **to convert**
promising geology **into** bankable assets **backed by** durable
social licence.

Africa's Junior Miners Fail above Ground, not Below it

01 Capital

Africa holds 30% of global critical mineral reserves and 20% of new global mineral discoveries. Its share of global exploration investment has declined to 10.4%. Most conservative scenario: US\$500 bn new mining investment required by 2040 (IEA). Explorers and early-stage junior miners are largely closed out of capital markets, delaying development and constraining future supply.

02 Commercial Capability Gap

93% of junior mining companies globally remain stuck in pre-production. The constraint is not demand or geology. It is the capability to develop projects into forms credible counterparties can transact against.

03 Social Licence Failure

Juniors lack incentives and the capability to engage communities meaningfully. Engagement that should begin at exploration is typically triggered by a crisis in production. The costs can be fatal. A junior cannot survive even a short suspension. Failure to engage early creates material risks at all stages.

04 Information Asymmetry

Junior miners negotiate with DFIs and off-takers from a structurally weak position, lacking the technical documentation, governance systems and commercial credibility that capital providers require.

FAILURE EXAMPLES

Zambia Copper Belt

Mining companies negotiated development agreements with central government without meaningful community-level consultation. The result: road blockades, supply chain disruption and complete operational suspension. Engagement that should have begun at exploration began instead under crisis at production.

OECD 2026

Xolobeni, Eastern Cape — Failure of Consent

Titanium mining rights sought without Free, Prior and Informed Consent from customary landholders. The High Court ruled that regulatory permission alone is insufficient to legitimise operations without genuine community approval, establishing a binding domestic precedent aligned with UNDRIP. The project has been paused indefinitely. Over 15 years of applications have yet to produce a mining right.

High Court of South Africa, 2018

THE OPPORTUNITY

Designed correctly from day one, \$100M deployed generates:

300–600

direct jobs

\$21–28M

GDP contribution

\$7–10M

annual government revenue

\$10M+

regional infrastructure

BCG and Brookings 2026

Junior Mining: a Broken Supply Pipeline

Why they are stuck: structural constraints, not geology.

~2,000

junior mining companies remain stuck in pre-production stages

93%

of junior miners are stuck at pre-production globally

No revenue or ROI until late-stage development. Traditional capital cannot bridge the exploration and study phases, where there is no cash flow, and outcomes remain binary.

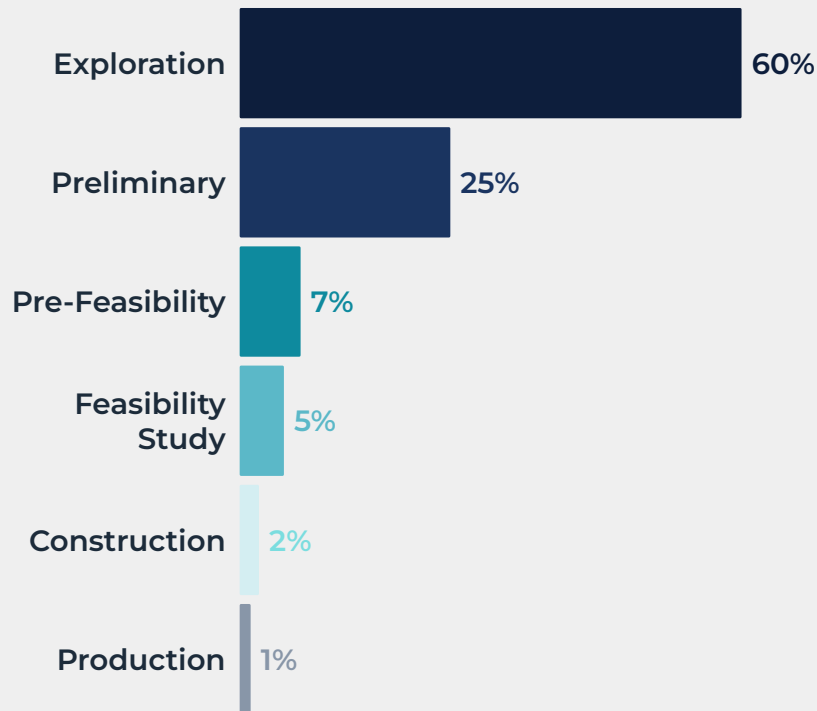
Progression requires patient, risk-tolerant capital. Multi-year exploration and feasibility timelines sit outside the risk appetite and return horizon of commercial capital markets.

Perceived political and community risk inflates discount rates. Above-ground risk that could be managed is instead priced in, raising the cost of capital precisely where it is most needed.

Balance sheet and technical constraints block the next stage. Junior miners cannot commission the studies, reports and governance systems that would unlock the next tranche of capital without external support.

Development Stage Distribution

Percent of junior mining companies by stage



A Value-creation Engine

TAF-supported portfolio companies reach exit with JORC-compliant resources, IRMA- & IFC PS-aligned ESG practices/systems, durable social licence with co-designed benefit-sharing agreements, and offtake-ready commercial packages. Capital without capability and active de-risking does not achieve this.

VISION

Re-structure early-stage mining investment by turning above-ground risk into a competitive advantage and embedding **positive impact** as a core driver of value and sustainability

MISSION

Deploy hands-on expertise alongside equity to convert promising geology into bankable assets backed by durable social licence, materially enhancing the value of CMF investments beyond what capital alone can achieve

Embedded, not advisory

TAF expertise sits within the Fund structure and deploys alongside equity from pre-screening through post-exit. It is not a parallel track. It is integral to the investment. The TAF Support Plan is a required input to every IC investment decision throughout the project lifecycle.

Bespoke, not standardised

No two TAF Support Plans are identical. Scope, intensity and sequencing are calibrated to each project's stage and the capability of the investee team. What applies at a Stage 1 graphite project in South Africa is not what applies at a Stage 6 cobalt project in the DRC.

Dual conditionality enforced

Every tranche release requires that milestones both for investment and TAF are met. Neither gate compensates for failure in the other. The fund cannot accelerate deployment by cutting corners on ESG. That is by design.

Four Practice Groups, Deployed Concurrently across the Lifecycle

Four interlocking capabilities deployed simultaneously in combinations and intensities calibrated to each project. Their real impact derives from how they reinforce one another.

01

Technical and Geological

Primary gap: information asymmetry

Converts geological potential into the investor-ready technical packages capital providers require. Every intervention is designed backwards from the next financing event. The question at each stage is what the next capital provider needs to see, not what the next geological step should be.

02

Community Engagement and Social Licence

Primary gap: timing, capability, formalisation

Social licence failure is a material risk for all projects. The practice group deploys before any ground disturbance, building the stakeholder relationships and benefit-sharing frameworks that convert community risk into community partnership, seeding the impact structures that survive exit.

03

Governance and Reporting

Primary gap: valuation bottleneck

Implementing the right governance and reporting frameworks turns financial burden to financial opportunities. This practice group builds the ESG management systems, financial reporting structures and board-level governance that make portfolio companies legible and trustworthy to the capital providers that determine exit valuation.

04

Financial, Transaction and Offtake

Primary gap: commercial capability

Where technical, social and governance readiness convert into actual transactions. This practice group structures the capital pathway, builds lender-standard financial models and develops offtake relationships, ensuring that when a project is ready, the commercial architecture is ready with it.

The TAF's 4-Tool Approach

Our operational logic shifts the investment model from episodic, compliance-driven due diligence to continuous, structured risk management. Identify risk early, understand it deeply, actively reduce it, convert it into value and assure that positive impact sustains beyond exit.

TOOL 1

Asset and ESG Pipeline Screening

Dual-track screen applied across all pipeline opportunities before any capital is committed

Track A assesses the geological and investment case: resource quality, capital requirements, exit route viability and market access.

Track B assesses the ESG and community profile: social risk, environmental sensitivity, governance and regulatory exposure.

Both tracks must clear independently. The fund only commits due diligence resources where both cases can be made.

TOOL 2

Site-Based Pre-Qualification

On-site validation for prioritised projects that clear the initial screen

All four dimensions assessed in the field:

- Geological ground-truthing and site conditions
- Community dynamics and consent
- Financial structure and cap table integrity
- Environmental and regulatory no-go conditions.

What a desk review cannot surface gets assessed in person. Fatal risks identified here close the door to investment regardless of geological merit.

TOOLS 3 + 4

Lifecycle Risk Management and Impact Planning

Active across all practice groups from first investment through exit

Tool 3 monitors and intervenes across all four practice groups: tracking technical milestones, community performance, financial pathway development and governance compliance, actively closing gaps as they emerge.

Tool 4 runs in parallel: building the community benefit frameworks, equity participation and royalty structures that convert the work of all four practice groups into demonstrably higher asset value at exit.

THE FRAMEWORK

The TAF Intervenes Systematically across the Full Mining Project Lifecycle

From pipeline screening to post-exit impact assurance, identifying above-ground risk early, reducing it actively and converting it into bankable, shared value.

Pre-investment Asset and ESG Screening <i>Tools 1 and 2</i>	Portfolio Lifecycle — Stages 1–8				Exit and Beyond Closure <i>Post-Invest. Impact Assurance</i>
	Exploration	Pre-Feasibility	Feasibility	Construction and Production	
	<i>Stages 1–4, Tools 3 and 4</i>	<i>Stages 5–6</i>	<i>Stage 7</i>	<i>Stage 8</i>	
Geotechnical vetting	SESA landscape assessment and SLO baseline established	ESG framework documented to IFC PS standard	ESIA completed with community input	CDA implementation monitoring active	Pre-exit: CDA, community equity, mine closure plan and standards subscriptions embedded as conditions of sale. Post-exit: CDA compliance monitoring, community trust support and impact continuity reporting to investors.
Semi-automated ESG screen; all known risks scored	Stakeholder map and engagement plan in place	ESIA designed and commissioned	ESMS operational and investor-aligned	Technical performance monitoring underway	
Red flag exclusions applied	Benefit-sharing framework conversation opened with the community	Benefit-sharing framework in active negotiation	Community benefit agreement signed or in final negotiation	ESG credentials and exit data room prepared	
Site walk and community visit for top candidates	Grievance mechanisms operational	GBV Prevention and Response Plan in place	Financial model to lender standards	Valuation support incorporating ESG premium	
TAF Support Plan produced for IC pre-qualification		CDA structuring begins	Term-sheet negotiation support provided		

Tools 1 & 2 — ESG Pipeline Screening

Scores social (40%), environmental (35%) and governance (25%) risk across hundreds of prospective projects.

Assesses management capability alongside inherent risk, separating manageable from uninvestable.

Produces a clear Go/No-Go output, replacing ad hoc judgement with structured, defensible decision-making.

Tool 3 — ESG Risk Mitigation and Embedding Best Practice

Deep-dives risk exposure and impact opportunity

Identifies and addresses ESG, commercial and technical capability gaps

Generates a residual risk profile: the true measure of investability and basis for TAF intervention

Annual monitoring tracks trajectory, triggering re-engagement where needed

TAF does not merely monitor; it intervenes with guidance, tools and support to reduce risk over time

Tool 4 — Positive Impact Planning

Begins with exploration as a hypothesis: how the project creates lasting value for communities.

As the project advances, it translates into community engagement frameworks, benefit-sharing and ASM integration protocols. By the feasibility stage, impact structures are bankable components, not aspirations.

Annual monitoring tracks trajectory, triggering re-engagement where needed.

The Screening and Investment Process

Due Diligence							Gate 2
Tool 2 — Site-based Pre-qualification (Selective)			FULL DUE DILIGENCE WORKSTREAMS				
Technical	Social and Community	Financial	Technical and Geological <i>CGS/Gemell Mining Engineers</i>	Transaction and Financial <i>CMF Deal Team</i>	Legal and Compliance <i>LEX Africa</i>	Community and Social Performance <i>TAF</i>	Final IC Approval
On-site confirmation of anomalies and outcropping mineralisation	Site visit by TAF social specialist; community power dynamics assessed	Legacy royalties, debt covenants and encumbrances reviewed	SAMREC/JORC-compliant resource estimate review and verification	Full financial model-built base, bull and bear scenarios	Corporate structure and title chain verified	Environmental and social baseline: hydrology, biodiversity, land use; protected areas (IUCN I-IV); cultural heritage assessed	Quorum: 3 of 4 voting IC members.
Site logistics, infrastructure and access conditions assessed	Active grievances and historical conflicts identified	Related-party arrangements and cap table integrity assessed	Competent Persons Report prepared or reviewed under SAMREC	Three-pool capital pathway mapped; study scope designed to next capital provider requirements	Mining rights legal review: validity, renewal and transferability; permits and land access documentation	Stakeholder engagement evidence; no active conflicts with communities, ASM operators, or indigenous groups; power structures mapped	IC reviews Full Investment Memorandum.
Observable ore characteristics; early process constraints identified	Consent conditions and benefit-sharing expectations mapped	Management realism on capital requirements evaluated	Independent site visits; physical geological validation	Capital structure optimised; equity or quasi-equity instrument designed	Environmental authorisation compliance reviewed	Feasible pathway to SLO; benefit-sharing framework scoped with community input	TAF Support Plan presented alongside investment case.
Physical setting assessed against proposed development pathway	Women and vulnerable groups directly engaged on-site	Preliminary ownership and instrument structure reviewed	Metallurgical sampling and process risk workstream initiated	Offtake landscape assessed; initial counterparty longlist prepared	Enhanced KYC: deep dive on flagged beneficial owners, PEPs	ESG responsibility assigned; basic HSE policy and risk mitigation procedures in place	Investment approved on agreed terms.
	Environmental no-go conditions confirmed against SESA findings		Mining rights status, tenure security and environmental baseline	Return scenarios modelled against fund hurdle rate	Existing offtake, debt and royalty encumbrances assessed	ESG Risk Screening Note and Exploration ESMP; aligned to IFC PS; full ESIA not required	Transaction costs committed at fund cost from this point.
	Community survey; scored against IFC PS, ICM, IRMA, Equator Principles		CGS milestone sign-off: condition precedent to each tranche release		Deal structure reviewed; term sheet to SPA	TAF Support Plan finalised; presented to IC alongside Investment Memorandum	

Hard Stop — Fatal risks identified at this stage: project does not advance regardless of geological merit

Exploration and Pre-Feasibility — Stages 1 to 6

The TAF does not wait for problems to emerge. It foresees them, plans for them and creates the conditions to prevent them from emerging.

1–4

EXPLORATION

Four practice groups deployed simultaneously from day one.

Once capital is committed, all four practice groups activate in parallel.

The geological programme is shaped toward what the next financing event requires.

Community engagement, capital pathway mapping and governance framework establishment run simultaneously, each informing the others.

TRANCHE CONDITION

- ✓ SESA complete
- ✓ Stakeholder map and engagement plan implemented
- ✓ Benefit-sharing framework initiated
- ✓ Governance and regulatory risk documented

5

RESOURCE DEFINITION DRILLING

The investment case moves from potential to credible.

The CPR is prepared, and resource estimation has advanced to the SAMREC standard.

The financial model is built to a PFS-ready standard, the ESIA was conducted with community input, and the benefit-sharing framework moved into active co-creation.

By Stage 5, the project has geology, governance, community credibility and a commercial case that DFIs can engage with.

TRANCHE CONDITION

- ✓ ESG framework documented to IFC PS standard
- ✓ SAMREC-compliant resource defined
- ✓ Benefit-sharing framework in active negotiation
- ✓ Financial modelling framework established

6

SCOPING AND PRE-FEASIBILITY

Four tracks converge into a package a capital provider can transact against.

The PFS is reviewed against what the next capital provider actually requires, not simply completed.

The financial model is built with scenario analysis, DFI engagement commences, and the ESIA is conducted with full community input.

What exits Stage 6 is a complete package: technical, financial, social and governance credibility together.

TRANCHE CONDITION

- ✓ PFS complete
- ✓ Capital stack advisory initiated
- ✓ ESIA commenced with community input
- ✓ Board governance assessment complete
- ✓ Mining right application lodged

Feasibility, Construction and Exit — Stages 7, 8 and Beyond

Stage 7 is the bankability gate. What passes through it is complete — not trailing conditions a lender will price into their terms.

7

FEASIBILITY AND FINANCE

The bankability gate is a genuine gate.

All four workstreams close in the same window.

The DFS is delivered to lender standard, the financial model upgraded to DFI standard, the community benefit agreement finalised and the ESMS completed and operational.

A project that is technically bankable but carries an unsigned CBA does not pass. All four tracks must close together.

TRANCHE CONDITION

- ✓ Bankable DFS in place
- ✓ Community benefit agreement signed or in negotiation
- ✓ Financial model to lender standard
- ✓ ESMS operational
- ✓ Investor-grade data room complete

8

CONSTRUCTION AND PRODUCTION

The work shifts from building to verifying.

Technical monitoring is active, the offtake is finalised, and ESG credentials are verified to meet or exceed the standard required by an acquirer's due diligence team.

CDA implementation is monitored at the board level, and the exit data room is built.

The TAF ensures that what an acquirer finds matches what was promised at Stage 7, across all four tracks.

EXIT PREPARATION

- ✓ Independent social performance assurance commissioned
- ✓ Mine closure plan provisioned
- ✓ ESG credentials investor-grade
- ✓ Exit-ready data room prepared

∞

POST-EXIT AFTERCARE

The transaction closes. The obligations do not.

Community development agreements, benefit-sharing structures and standards subscriptions are embedded as conditions of sale before any buyer approaches the process.

They transfer with the asset, not because of goodwill, but because they are built into the legal architecture of the deal.

An independent reviewer monitors CDA compliance, the community trust operates independently, and impact continuity is reported to investors beyond the exit date.

IMPACT ASSURANCE

- ✓ CDA compliance monitored independently
- ✓ Standards subscriptions verified as condition of sale
- ✓ Impact continuity reported beyond exit date

Technical Assistance to Portfolio Companies

IMPACT	Responsibly mined projects that catalyse economic opportunities for host communities				
OUTCOMES	Asset progression towards mine development	Operational community benefit streams and environmental/social management	Investment-ready, ESG-embedded assets	Next stage financing/exit	
OUTPUTS	3rd party classified asset (resource/reserve)	Community Development Agreements and Environmental and Social Management Plan	Double Materiality Assessment and Traceability Solution	Offtake and Financing deal readiness	
ACTIVITIES	Technical and Geological guidance and upgrades	Community and Environment Baseline Studies, Social licence development	Governance and Reporting capability measurement and development	Financial, Transaction and Offtake structuring	
INPUTS	CMF equity capital	TAF funding, impact capital	Geo-technical and ESG screening and SESA	Strategic partner network	Lifecycle tools and methodologies
PROBLEM	African junior explorers lack the capability and access to finance to convert geological potential into bankable, ESG-compliant assets				



Delivered by named **individuals**
with demonstrated **delivery**
records in the mandates that
matter most to the sector

The Team and Partners

The TAF is not a framework on paper. It is delivered by named individuals with demonstrated delivery records in the mandates that matter most to this sector.

Tim Vickery

TAF Lead, Principal

30 years | 50+ countries

- Special Advisor, UK Critical Raw Materials Strategy (FCDO/DBT, 2025).
- Co-Lead, Africa-wide CRM Support Facility (ACF, 2025).
- Senior Implementation Advisor, UK EITI and CRM Strategy (FCDO/DESNZ, 2021-24).
- Senior Advisor, World Bank CRM Regional Roadmaps, Eastern and Southern Africa (2024).
- EITI International Secretariat (2008-13).

Dr Jeremy Weate

TAF Committee Member—
Investment Committee Member

20+ years | 37+ countries

- Led EBRD's five-year mining strategy for Sub-Saharan Africa.
- Senior Advisor, Zambia Presidential Delivery Unit (CRM strategy, EV battery value chain).
- Ongoing mandates: World Bank, FCDO, EU/GIZ, US State Department.
- Direct mining transactions across graphite, manganese and cobalt from South Africa, Uganda and Zambia.

Elaine Pypers

Analyst, Social Performance

10 years | Southern Africa

- Operational social performance roles at Tullow Oil, Thungela, Newmont and South32.
- Designer and facilitator, CRL practitioner training (Synergy Global).

Dr Michael Dorsey

TAF Committee Member—
Investment Committee Member

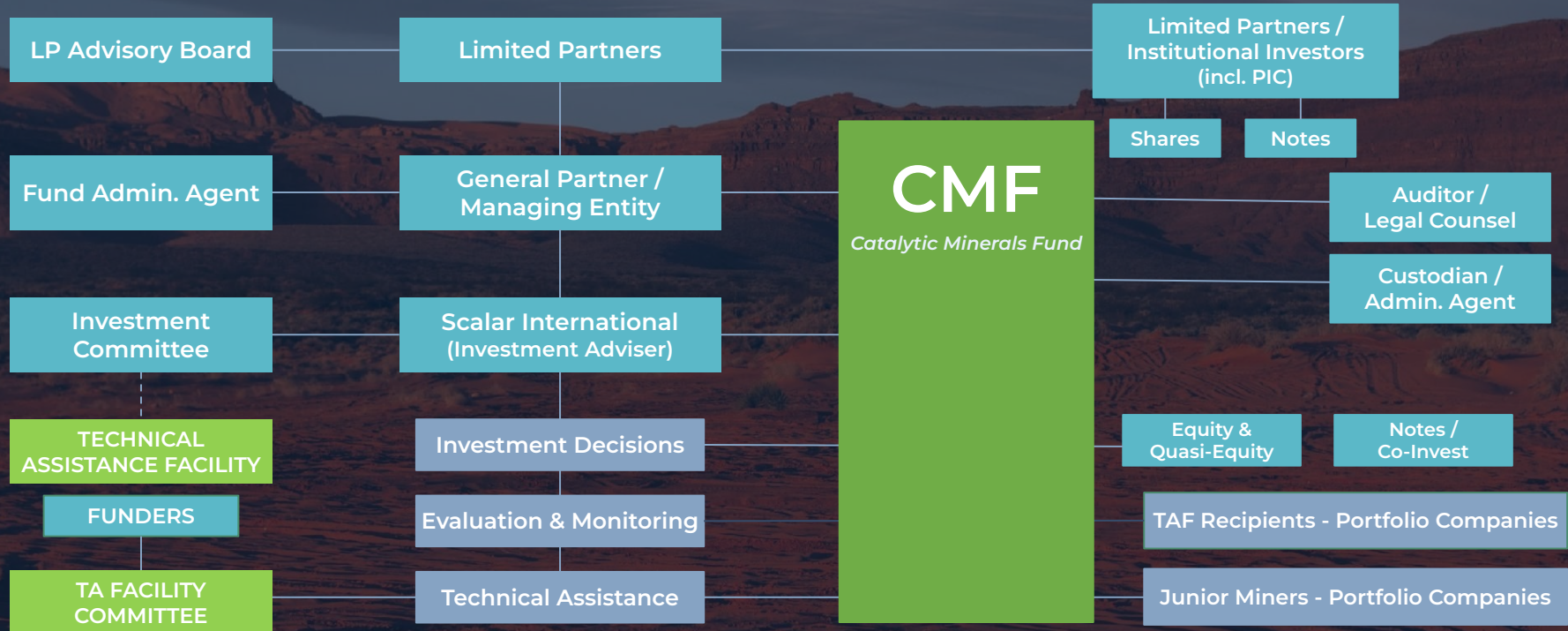
30 years | 20+ countries

- Director, Rob and Melani Walton Sustainability Solutions Services, Arizona State University.
- Senior advisory to US Presidential Council on Sustainable Development.
- Direct catalytic investment including co-founding investor in Iber Sun Solar and sustainability engagement with Rio Tinto Zimbabwe.

STRATEGIC PARTNERS | **CGS (Council for Geoscience)** — Technical partner; permanent secretariat to OAGS covering 41 African states | **Gemell Mining Engineers** — independent technical review | **Webber Wentzel** — Legal support | **Forward** — IMM partner

Governance Structure

Robust governance structure between the TAF and Fund



GP elected by LPs; general responsibility for fund administration and management. IC minimum 3 members, at least one independent; makes all investment decisions. IM Scalar International, appointed by GP for origination, portfolio management, and TAF coordination. TAF donor-funded facility providing geological support, governance capacity building, community engagement, and offtake facilitation.

The Catalytic Minerals Fund is building the first replicable system for responsible exploration-stage investment and impact in Africa.

The **fund** is the vehicle. The repeatable framework is the system. **Impact** is the legacy.

No fund operating in African junior exploration currently embeds community mapping, benefit-sharing framework design and SESA at Stage 1 before any ground disturbance. The Fund is the first.

The TAF knowledge base, ESG risk tools, lifecycle framework and tranche conditionality architecture are being built simultaneously with the portfolio. Each investment refines the standard.

The output is transferable: an evidence-based operational framework usable by successor funds, DFIs, bilateral donors and national geological surveys — built from real deployment, not theory.

For impact capital providers, this is project-level systems change — the kind of intervention OECD and World Bank analysis identifies as structurally absent from the Africa critical minerals investment landscape.

Invest in secure supplies... and the places they come from

Catalytic capital is structurally required at Stages 1–4 where commercial equity cannot absorb the costs without making early-stage investment uneconomic. This is the precondition for the capital stack that follows.

FUNDING ASK

USD 5M

Catalytic capital

PURPOSE

Embed best practice from Day 1

TAF deployment across all four practice groups at the exploration stages where no commercial capital source can reach

REPORTING

Milestone-linked

Staged impact reporting at each tranche release. Post-exit impact assurance reporting continues beyond fund exit.

Request the full information memorandum

For more information, to request the IM, or to discuss co-investment,
please contact:

Hubert Gutsa

Founder & Managing Partner

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SCALAR



Scalar Catalytic
Minerals Fund

securing supplies... and the places they come from