



International Digital
Asset Association
(IDAA)

1CAD.
PROTOCOL FRAMEWORK
ASSET ATTESTATION

IDAA · 1CAD Protocol

1CAD-G PRACTICAL GUIDE

Tokenization Without Investors: 7 Business Models for Gold Mining

International Digital Asset Association (IDAA)

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EXECUTIVE SUMMARY

The global gold mining market reached **\$272.4 billion** in 2025, with production around **3,600 tons** annually.¹ Yet producers face 10-15% traditional bank loan rates and limited working capital options.

This guide presents seven business models where tokenization creates value through operational efficiency and treasury management - **not capital raising**. Zero external investors required.

The 1CAD Protocol provides compliance infrastructure and IoT verification that make tokenized gold acceptable to banks, DeFi protocols, and trade partners.

CRITICAL DISTINCTION

Process	Action	Capital Flow
Tokenization	Create digital representation of physical gold	No money changes hands
Token Sale	Sell tokens to investors	Capital raised

You can do one without the other.

MODEL 1: COLLATERALIZED LENDING

Structure

- Tokenize gold via Tokeny (MiCA-compliant platform)
- Integrate 1CAD Protocol for IoT verification
- Deposit GMT tokens into DeFi lending pool as collateral
- Borrow stablecoins (USDC/USDT) at 60% LTV
- Convert to fiat for operational use

No investors. No equity dilution. No token sale.

Economic Comparison

Traditional Bank Loan	DeFi Collateralized Loan
10-15% interest rate	4-8% interest rate
Personal guarantees required	Collateral only
3-6 months approval	1-2 weeks setup
Limited to €5-10M	Up to 60% of gold value

Example ROI

Producer with 5,000 kg gold (€300M at €60/gram):

- Borrow €180M at 60% LTV
- DeFi rate 6% = €10.8M interest/year
- Traditional bank rate 12% = €21.6M interest/year
- **Annual savings: €10.8M**

Conservative estimate for typical mid-size producer (€50M borrowing):

- DeFi rate 6% = €3M interest/year
- Traditional bank rate 12% = €6M interest/year
- **Annual savings: €3M**

MODEL 2: FRACTIONAL OWNERSHIP (INTERNAL)

Instead of selling tokens to external investors, distribute them to internal stakeholders.

Option A: Employee Compensation

Example structure:

- Senior Engineer: €60k salary + 5,000 GMT (current €300k value)
- 4-year vesting (25% per year)
- Tradable on DEX after vesting

Annual savings: Reduced cash payroll + improved talent retention

Option B: Supplier Payments

Example transaction:

- Equipment purchase: €2M
- Pay 50% cash (€1M) + 50% GMT (16,667 tokens)
- **Working capital preserved: €1M**

MODEL 3: TRADE FINANCE

Use tokens as payment instruments in supply chain, creating closed-loop token economy.

Closed-Loop Example

Mine (Georgia) → tokenizes gold → GMT

↓

Jeweler (Italy) → buys gold → pays 50% GMT

↓

Jeweler → sells jewelry → pays suppliers GMT

↓

Suppliers → redeem GMT for gold from mine

↓

CYCLE repeats

Result: GMT circulates without external investors, reducing SWIFT/FX costs.

MODEL 4: RESERVE ATTESTATION (FOR BANKING)

Use tokenization + 1CAD monitoring to reduce banking costs through continuous reserve verification.

Economics Comparison

Without Tokenization	With 1CAD Tokenization
€10M loan @ 12% = €1.2M/year	€10M loan @ 8% = €800k/year
Quarterly audits = €40k/year	1CAD monitoring = €36k/year
Total: €1.24M/year	Total: €836k/year

Annual savings: €404k | ROI: 10x in first year (based on €36k setup cost)

MODEL 5: TREASURY MANAGEMENT

Use tokens as internal financial instrument to manage cash flows.

Example: Equipment Purchase Deferral

- Equipment for €5M
- Pay 30% cash (€1.5M) immediately
- Pay 70% GMT (58,333 tokens) in 90 days
- Working capital preserved: €3.5M for 3 months
- At 10% annual cost of capital = €87.5k quarterly savings

Annual benefit (4 cycles): ~€350k

MODEL 6: VOLATILITY HEDGING

Create derivative instruments based on tokens to protect against gold price swings.

Problem

Gold fluctuates €50-70/gram. Producer plans to sell 1,000 kg in 6 months but fears price decline.

Solution via 1CAD-G

- Tokenize 1,000 kg → 1,000,000 GMT
- Sell futures contract on DEX at fixed price €60/gram
- After 6 months:
 - If price drops to €50/g → futures compensate €10M loss
 - If price rises to €70/g → lose upside, but protected downside

Hedging cost: 2-3% of contract value = €360k-€540k

Risk protection: €10M+ potential losses

MODEL 7: CROSS-BORDER SETTLEMENTS

Use GMT tokens for international payments, avoiding SWIFT fees.

Problem: Traditional Route

Mine in Georgia → buyer in Japan:

- SWIFT transfer: $€3M \times 0.3\% = €9,000$
- Conversion GEL→EUR→JPY: 1.5% spread = €45,000
- Time: 3-5 business days
- **Total: €54,000 + delay**

1CAD-G Solution

Mine → sends 50,000 GMT (€3M) → Japanese buyer:

- Blockchain fee: €20 (0.0007%)
- Conversion: buyer sells GMT for JPY on DEX, 0.3% = €9,000
- Time: 15 minutes
- **Total: €9,020**

Savings per transaction: €44,980 (83% reduction)

At 20 transactions/year: €899,600 annual savings

SUMMARY: ALL 7 MODELS (CONSERVATIVE ESTIMATES)

Model	Annual Value (Mid-Size Producer)	Investors?
1. Collateralized Lending	€3M savings (on €50M borrowed)	NO
2. Fractional Ownership	€500k-1M cash preservation	NO
3. Trade Finance	€200k-500k efficiency	NO
4. Reserve Attestation	€404k banking cost reduction	NO
5. Treasury Management	€350k working capital optimization	NO

Model	Annual Value (Mid-Size Producer)	Investors?
6. Volatility Hedging	€10M+ price risk protection	NO
7. Cross-Border Settlements	€899k SWIFT fee elimination	NO
ESTIMATED TOTAL	€5.4M - €6.2M + hedging protection	NO

Note: These are conservative industry-based estimates for a mid-size gold producer with: €300M gold reserves, €50M annual borrowing needs, 20 international transactions/year, and typical operations scale. Actual results will vary based on specific operations, lending terms, and transaction volumes.

IMPLEMENTATION ROADMAP

Phase 1: Foundation (Weeks 1-2)

- IDAA Corporate Membership enrollment
- Legal entity structure review
- Initial gold reserve audit

Phase 2: Tokenization (Weeks 3-4)

- Tokeny platform integration
- Smart contract deployment
- 1CAD Protocol implementation

Phase 3: Verification (Weeks 5-6)

- IoT sensor installation
- Continuous monitoring setup
- MiCA compliance documentation

Phase 4: Activation (Weeks 7-8)

- DeFi protocol integration OR bank relationship negotiation
- First collateralized loan test
- Operational workflow training

Total timeline: 8 weeks from enrollment to first loan

COST-BENEFIT ANALYSIS

Setup Costs (One-Time)

Item	Cost
IDAA Corporate Membership	€10,000/year
Tokeny platform setup	€15,000
Smart contract deployment	€8,000
IoT verification infrastructure	€12,000
1CAD Protocol integration	€5,000
TOTAL SETUP	€50,000

Annual Benefits (Conservative Mid-Size Producer)

Source	Annual Value
Interest savings (Model 1)	€3,000,000
Cross-border efficiency (Model 7)	€899,600
Reserve attestation (Model 4)	€404,000
Treasury management (Model 5)	€350,000
Other operational efficiencies	€500,000
ESTIMATED TOTAL	€5,153,600

ROI: ~103x in first year (€5.15M value / €50k setup)

Breakeven: <5 days of operations

CONCLUSION

Tokenization is a treasury management tool, not exclusively a capital-raising mechanism.

Gold producers can:

- Access liquidity at dramatically reduced cost
- Improve operational efficiency
- Reduce cross-border friction
- Protect against price volatility
- Retain 100% ownership

The question isn't "should we tokenize?" The question is "which combination of models creates the most value for our specific operations?"

SOURCES & REFERENCES

1. Grand View Research. (2025). Gold Mining Market Size, Share & Industry Analysis Report 2025-2034. Market valued at \$272.4 billion in 2025. Retrieved from <https://www.grandviewresearch.com/industry-analysis/gold-mining-market-report>
2. Industry standard for traditional bank loans to mid-market mining operations typically range 10-15% based on creditworthiness, collateral, and jurisdiction.
3. DeFi lending rates vary by protocol and market conditions. AAVE, Compound, and similar platforms typically offer 4-8% for over-collateralized stablecoin loans. Rates sourced from DeFiRate.com (2025-2026).
4. Cross-border transaction cost analysis based on SWIFT network fees (0.25-0.5%), correspondent bank fees (0.1-0.3%), and FX spreads (1-2%) for typical international commodity settlements.

NEXT STEPS

To implement tokenization without investors:

Contact IDAA for 1CAD accreditation:

- Corporate Membership: €10,000/year
- Includes: 1CAD Protocol license, technical support, MiCA consulting
- Support: Legal framework, DeFi integration, banking relationships

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