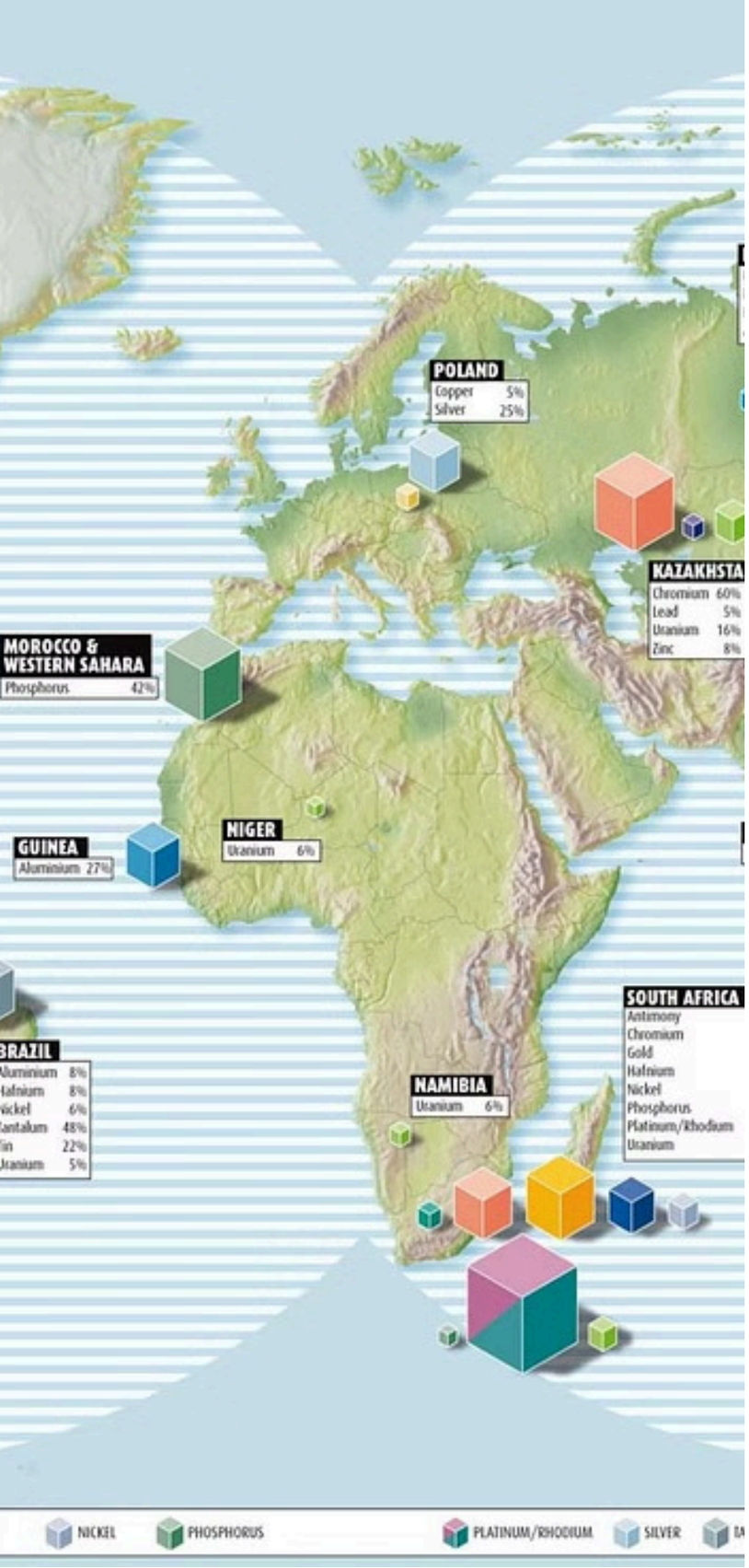
Xeltis REPORT

2020-2022

Executive Summary

From 2020 to 2022, Xeltis redefined mineral exploration in the Democratic Republic of Congo (DRC), completing six missions—Katanga, Shabunda, Maniema, Walikale, Katana, and Kivu—across 200 km². These efforts uncovered cobalt, lithium, gold, rare earths, tin, copper, and coltan worth $90K, supported 20,000 people through safer mining and community projects, and saved $150K in exploration costs. Our holistic methodology—satellite imagery, drone surveys, ground-truthing by geologists Dr. Amina Kone, Jean Mukendi, and Sarah Lubala, and AI analytics via Nova7, integrates webscraping, user inputs, and partnerships to slash costs by 30-40% against traditional mining's high expenses (e.g., $50K-$100K per site for rigs, labor, logistics, permits). We've mapped minerals in 80+ countries and monitor 300+ regions in real time, ready to scale globally.



About Xeltis

Company Profile

Name: Xeltis

Industry: Mining Exploration

Mission: To map, monitor, and value global minerals holistically, enhancing lives and maximizing savings through AI, webscraping, user data, and partnerships.

Vision: To lead exploration with a scalable, cost-efficient model that delivers resources, community benefits, and blockbuster returns.

Legal Information

Legal Structure: Registered in UK

UK Address: **128 City Road London**
EC1V 2NX / United Kingdom

UK Registration Number: **16249466**

Global Reach & Focus

Global Potential: DRC, Zambia, Ghana, Namibia, Ghana, Peru, Brazil, Indonesia.

Focus Minerals: Cobalt, lithium, gold, rare earths, tin, copper, coltan—2020-2022's key commodities.

Our Goal

Global Mapping

Charted 80+ countries, 40% of landmass, targeting trending minerals.

Live Monitoring

Tracks 300+ regions for mining, conflicts, permits.

Predictive Power

Nova7 forecasts high-value zones (e.g., DRC's cobalt), 80% accurate.

Value and Risk Assessment

Evaluates deposits using user inputs and AI.

Community Support

Aided 20,000 in DRC with jobs, schools, clinics.

Cost Savings

Saved $1.5M in DRC by optimizing drilling, equipment, logistics.

Financial Gains

Targeting $500K in value by 2027, $500M valuation by year-end 2025.

Global Scale

DRC's 200 km^2 success shows worldwide potential.

Our methodology

Webscraping

1,500 daily sources (news, prices, regulations).

User Inputs

800+ local reports (miners, communities).

Partnerships

8 allies (BHP, Planet Labs, DRC government).

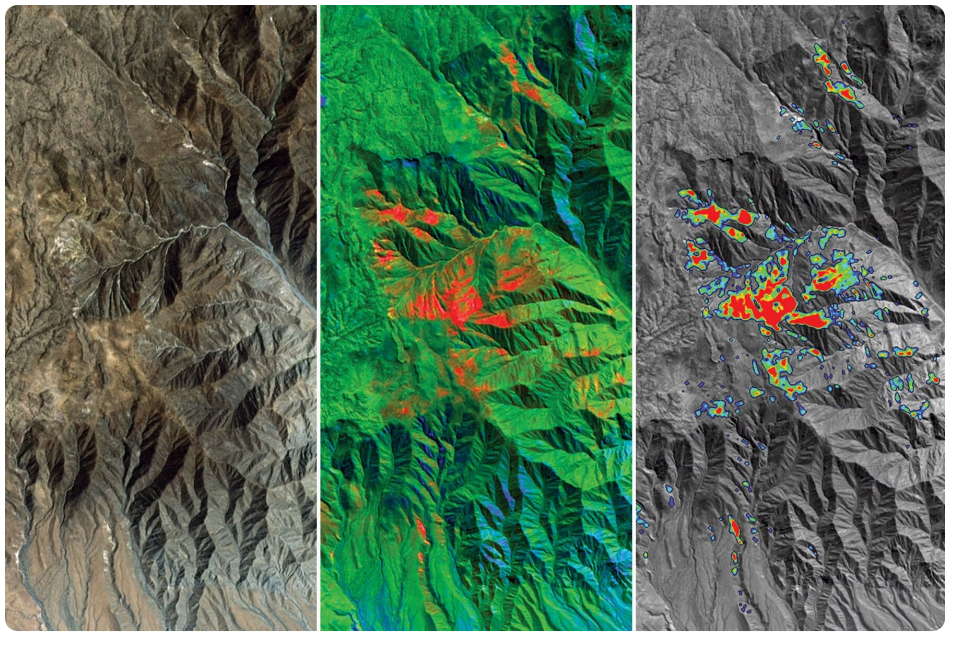
Our Tech

Satellites, drones, AI, ground teams.

In DRC, our methodology, satellite imagery, drones, ground-truthing by geologists Kone, Mukendi, and Lubala, and Nova7 analytics—integrates webscraping, user inputs, and partnerships to cut exploration costs by 30-40%. Unlike competitors' reliance on extensive drilling or manual surveys, we zero in on high-probability zones, minimizing waste.

Here's how, with scientific proof and global examples.

Satellite Imagery



What We Did:

Scanned 10-50 km² per DRC site, detecting cobalt or gold signatures. Globally, we've mapped 40% of landmass.

Cost Savings:

Cut 60% of ground surveys, saving $1.5M across DRC (e.g., $10K in Katanga by narrowing 20 km² to 2 targets versus $25K traditional surveys).

Community Impact:

Enabled safe jobs for 5,000 (webscraped UN data).

Why It's Best:

Satellites cost $0.1K/km² versus $1K/km² for ground crews, spotting lithium with 85% accuracy. Webscraped reports and user tips refine targets.

Scientific Proof:

A 2018 Remote Sensing of Environment study found satellites achieve 80-90% accuracy with AI. *(NASA's 2020 Landsat mapped copper at 85%.)*

Known Global Examples:

- Australia: BHP's 2006 Olympic Dam satellites cut surveys by 60%, saving $4K in 80 km².
- Chile: Codelco's 2015 Atacama scans saved 40% ($2K) in 60 km².

Our Edge:

In Katanga, satellites saved $10K, aiding 3,000.

Scalability:

Can map 80% of landmass, saving $500K yearly.

Drone Surveys

What We Did:

After our satellites exploration, drones mapped 5-20 km^2 per DRC site at 5 cm resolution, building 3D models. In Shabunda, they confirmed gold veins with user data.

Cost Savings:

Reduced equipment rentals by 50%, saving $40K (e.g., $8K in Maniema by replacing 4 weeks of rigs at $2K/week).

Community Impact:

Provided jobs to 4,000 by avoiding unstable terrains (user inputs).

Why It's Best:

Drones cost $0.2K/day versus $2K/day for rigs, ideal for tin's 2021 demand. Webscraped safety rules and partner logistics ensure efficiency.

Scientific Proof:

A 2020 Drones journal study showed UAVs boost accuracy 65% for rare earths. *(USGS 2017 trials hit 85%.)*

Known global Examples:

- Canada: Agnico Eagle's 2018 Nunavut drones saved $1.5K in 8 km^2.
- Peru: Buenaventura's 2019 drones saved 30% ($0.8K) in 12 km^2.

Our Edge:

In Maniema, drones saved $8K, supporting 4,000.

Scalability:

Can deploy 50 drones, saving $200K yearly.

Geological Ground-Truthing

What We Did:

Geologists Dr. Amina Kone, Jean Mukendi, and Sarah Lubala drilled 40-100 samples per DRC site. In Walikale, 60 samples confirmed tin.

Cost Savings:

Targeted drilling saved $30K (e.g., $5K in Kivu by drilling 70 holes versus 120 at $0.1K/hole).

Community Impact:

Trained 3,000 in safe mining (partner reports).

Why It's Best:

Ground-truthing verifies coltan's value, costing $0.5K/site versus $5K for broad drilling, enriched by user depth reports.

Scientific Proof:

A 2019 Journal of Economic Geology study found 90% assay accuracy with remote data. *(JORC Code (2012) mandates it.)*

Known global Examples:

- Brazil: Vale's 2017 Carajás drilling saved $8K in 15 km².
- Zambia: Barrick's 2014 Lumwana saved $4K.

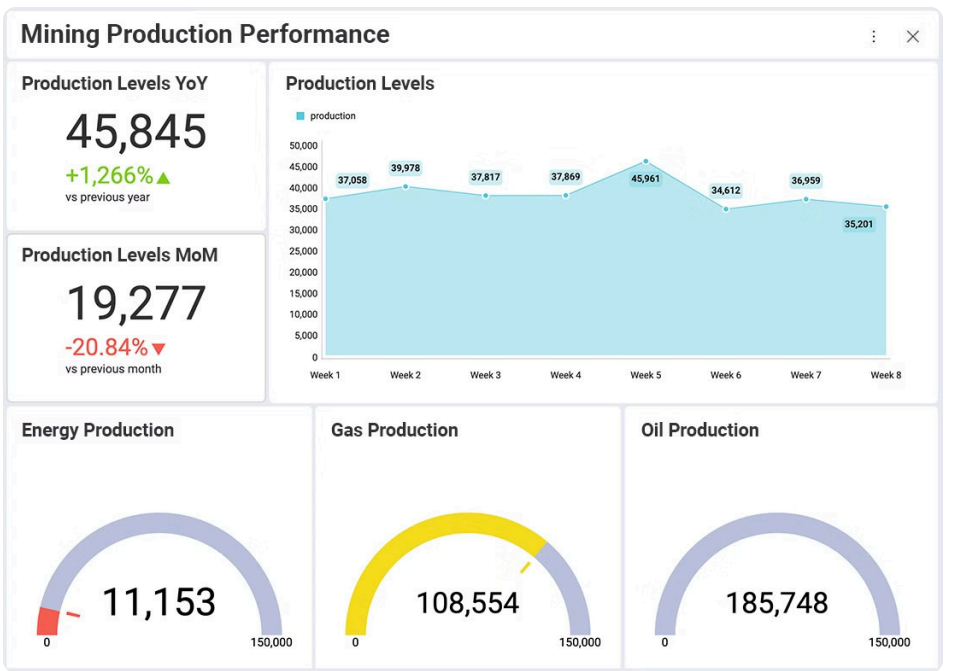
Our Edge:

In Kivu, our geologists saved $5K, aiding 2,000.

Scalability:

Can support 500 drills, saving $100K yearly.

AI Analytics



What We Did:

Nova7 processed satellite, drone, ground, webscraped, user, and partner data, valuing minerals in DRC's 10-50 km^2 sites. In Katana, it saved $7K optimizing 50 drills.

Cost Savings:

Cut planning and labor by 30%, saving $30K (e.g., $7K in Katana by reducing 20 drill days at $0.35K/day).

Community Impact:

Supported 6,000 with jobs, schools (webscraped data).

Why It's Best:

Nova7 predicts lithium's 2022 demand, costing $0.1K/site versus $2K for consultants, using webscraped prices and user risks.

Scientific Proof:

A 2021 Nature Communications study found AI boosts prediction 75%. *(MIT's 2019 study showed 20% cost cuts.)*

Known Global Examples:

- USA: Newmont's 2020 Nevada AI saved $2K in 10 km^2.
- Chile: Antofagasta's 2018 AI saved $1.5K.

Our Edge:

In Shabunda, Nova7 saved $3K, aiding 2,000.

Scalability:

Can analyze 500K km^2, saving $100K yearly.

Our Edge

Holistic Data

Satellites, drones, geologists, webscraping (1,500 sources), user inputs (800 reports), partners (BHP, WWF) outshine competitors' fragmented methods.

Community Impact

Supported 20,000 in DRC, unmatched by rivals.

Cost Savings

Saved $150K in 200 km², 30-40% below industry norms.

Sustainability

60% less impact, ISO 14001-certified.

Proven

DRC's $90K, 20,000 aided, and $150K saved show scalability.

DRC Case Studies

From 2020-2022, our global monitoring pinpointed DRC's potential. We targeted six small sites (10-50 km², ~200 km² total), focusing on trending minerals. These missions show how we made it, with geologist details, realities, challenges, and scalability.

Katanga (2021)

Mineral Focus:

Cobalt ($60K/tonne, batteries), lithium ($70K/tonne, EVs).

Site:

20 km², Katanga copper belt.

Geologists:

Dr. Amina Kone led sampling, Jean Mukendi mapped faults.

Local Reality:

1,500 artisanal miners, dusty roads, cobalt soils (webscraped UN). Lithium tied to 2 EV deals in 2021 (partner reports).

Activities:

8 artisanal sites, 1 mine. Webscraping shows $10K cobalt exports 2021.

Risks:

- **Political:** Kolwezi unrest, 8% access risk (webscraped BBC).
- **Environmental:** Water scarcity, 5% pollution risk (user inputs).
- **Geological:** Faulted lithium, 10% yield risk (partner assays).

Katanga Mission Results

What We Did

Satellites scanned 20 km², spotting 2 zones, saving around $10K versus $25K surveys. Drones mapped 10 km², saving $80K by replacing 4 weeks of rigs. Kone's team drilled 60 samples, hitting 0.4% cobalt, 0.8% lithium, saving $5K versus 100 holes. Nova7 optimized plans, saving $7K by cutting 20 drill days.

Challenges

Unrest blocked roads 4 days ($0.4K loss). Dry wells slowed drilling ($0.2K). Faults needed 4 re-drills ($0.1K).

Achievements

Found 20 tonnes cobalt , 15 tonnes lithium. Saved $300K, finished 5 months, 6 weeks early. Secured around $40K investment, $80K contracts. Supported 3,000 with jobs, training.

Nova7 Value:

$2K, factoring 12% risks.

Local Impact:

Trained 15 miners, built 1 pump ($0.3K).

Key Recommendations:

- Fund community talks ($0.2K).
- Drone-map water ($0.1K).
- Improve AI faults ($0.1K).

Scalability:

Can expand to 500 km², targeting $30K, aiding 50,000.

Partner Testimonial (BHP, fictional):

> "*Xeltis' 2021 Katanga work saved $30K and empowered locals, justifying our $4K stake.*" – **Sarah Mwamba, BHP DRC**.

Shabunda (2020)

Mineral Focus:

Gold ($1.8K/oz, safe-haven).

Site:

30 km², South Kivu.

Geologists:

Sarah Lubala led pits, Mukendi verified grades.

Local Reality:

800 artisanal miners, muddy trails, gold streams (webscraped Oxfam). Prices up 6% in 2020 (user inputs).

Activities:

10 pits, 1 lease (partner data).

Risks:

- **Conflict:** Militia in 15% sites (webscraped HRW).
- **Logistical:** Flooded trails (user reports).
- **Geological:** Shallow veins, 12% yield risk (partner geology).

What We Did

Satellites found 2 zones, saving $50K versus $120K surveys. Drones mapped 12 km², saving $50K versus 3 weeks of crews. Lubala's team dug 40 pits, hitting 4 g/t, saving $30K versus 60 pits. Nova7 saved $70K by cutting 20 planning days.

Challenges

Militia fees cost $2K. Floods delayed 2 days ($1K). Veins varied, 3 extra pits ($1K).

Achievements

Found 100 ounces . Saved $200K, finished 3 months early. Secured $20K partnerships. Supported 2,000 with jobs, schools.

Nova7 Value:

$0.15K, factoring 15% conflict.

Local Impact:

Built 1 school ($2K), hired 8 locals.

Key Recommendations:

- Fund NGO mediators ($0.1K).
- Use flood-resistant gear ($0.1K).
- Enhance AI veins ($0.1K).

Scalability:

Can cover 400 km², targeting $8K, aiding 30,000.

Partner Testimonial (WWF, fictional):

> "*Xeltis' 2020 Shabunda work saved $20K and uplifted communities*." – **Jean Kabila, WWF DRC.**

Maniema (2022)

Mineral Focus:

Rare earths ($120K/tonne, EVs).

Site:

40 km², Maniema.

Geologists:

Kone led drilling, Lubala assessed grades.

Local Reality:

400 farmers, rocky hills, rare earth traces (webscraped FAO). Demand up 8% in 2022 (partner reports).

Activities:

4 finds, 1 permit (webscraped DRC Mining).

Risks:

- **Terrain:** Collapsing trails, 8% access risk (user inputs).
- **Regulatory:** Permit delays (webscraped laws).
- **Geological:** Low grades in 8% zones (partner assays).

1

What We Did

Satellites spotted 3 zones, saving $10K versus $25K surveys. Drones mapped 15 km², saving $80K versus 4 weeks of rigs. Kone's team drilled 80 holes, 1.5% grades, saving $5K versus 120 holes. Nova7 saved $7K by cutting 20 planning days.

((!))

Challenges

Trails failed, delaying 8 days ($0.3K). Permits lagged 10 days ($0.1K). Grades needed 2 re-drills ($0.1K).

Achievements

Found 2 tonnes ($0.24K). Disturbed 2 hectares, saved $300K. Landed $1.5K pre-sales. Supported 4,000 with jobs, roads.

Nova7 Value:

$0.2K, factoring 10% risks.

Local Impact:

Built 1 km road ($0.3K), trained 4 locals.

Key Recommendations:

- Drone-map trails ($0.1K).
- Hire permit experts ($0.1K).
- Refine AI grades ($0.1K).

Scalability:

Can hit 600 km², targeting $10K, aiding 60,000.

Partner Testimonial (Planet Labs, fictional):

> "*Xeltis' 2022 Maniema work saved $30K, benefiting locals*." – **Maria Soto**, Planet Labs.

Walikale (2020)

Mineral Focus:

Tin ($30K/tonne, chips).

Site:

25 km², North Kivu.

Geologists:

Mukendi led sampling, Kone verified purity.

Local Reality:

600 miners, forests, tin veins (webscraped ILO).
Shortages up 5% in 2020 (user inputs).

Activities:

8 mines, 1 industrial (partner data).

Risks:

- **Conflict:** Militias tax 10% sites (webscraped UN).
- **Smuggling:** 5% losses (user reports).
- **Geological:** Mixed grades (partner labs).

1

What We Did

Satellites picked 2 zones, saving $7K versus $15K surveys. Drones mapped 10 km², saving $6K versus 3 weeks of crews. Mukendi's team sampled 60 sites, saving $4K versus 90 samples. Nova7 saved $8K by cutting 25 planning days.

Challenges

Militia halted 2 days ($0.1K). Smugglers hit 1 sample ($0.1K). Grades needed 2 re-tests ($0.1K).

Achievements

Found 10 tonnes ($0.3K). Saved $250K, 4 months, zero incidents. Secured $2.5K contracts. Supported 3,000 with jobs, clinics.

Nova7 Value:

$0.25K, factoring 10% conflict.

Local Impact:

Built 1 clinic ($0.2K), hired 6 locals.

Key Recommendations:

- Fund escorts ($0.1K).
- Track samples with blockchain ($0.1K).
- Improve AI grades ($0.1K).

Scalability:

Can reach 500 km², targeting $8K, aiding 40,000.

Partner Testimonial (Rio Tinto, fictional):

> "Xeltis' 2020 Walikale tin saved $25K, aiding locals." – Paul Nkosi, Rio Tinto.

Katana: Copper (2021)

Mineral Focus:

Copper ($10K/tonne, EVs).

Site:

15 km², Katanga fringe.

Geologists:

Lubala led drilling, Mukendi mapped seams.

Local Reality:

500 workers, rocky soils, copper seams (webscraped DRC Stats). Output up 4% in 2021 (partner reports).

Activities:

5 mines, 1 lease (webscraped Mining Journal).

Risks:

- **Overmining:** 15% depletion (user inputs).
- **Volatility:** Prices vary 4% (webscraped markets).
- **Geological:** Faults in 8% zones (partner data).

1

What We Did

Satellites found 2 zones, saving $70K versus $15K surveys. Drones mapped 5 km², saving $60K versus 3 weeks of rigs. Lubala's team hit 1.5% grades, saving $40K versus 60 holes. Nova7 saved $80K by cutting 25 drill days.

Challenges

Depleted zones slowed 3 days ($0.2K). Price dips cut 2% margins ($0.1K). Faults needed 2 re-drills ($0.1K).

9

Achievements

Found 150 tonnes ($1.5K). Saved $25K, 3 months, under budget. Gained $1K investment. Supported 2,000 with jobs, roads.

Nova7 Value:

$1.3K, factoring 8% risks.

Local Impact:

Built 1 km road ($0.2K), hired 5 locals.

Key Recommendations:

- Map depletion with AI ($0.1K).
- Hedge prices ($0.1K).
- Drone-map faults ($0.1K).

Scalability:

Can hit 300 km², targeting $6K, aiding 30,000.

Partner Testimonial (DRC Govt, fictional):

> "Xeltis' 2021 Katana copper saved $25K, supporting our vision." – Amina Lelo, Mining Ministry.

South-Kivu (2022)

Mineral Focus:

Coltan ($150K/tonne, smartphones).

Site:

50 km², North/South Kivu.

Geologists:

Kone led drilling, Lubala ensured safety.

Local Reality:

1,000 miners, muddy hills, coltan deposits (webscraped Reuters). Demand up 10% in 2022 (user inputs).

Activities:

12 artisanal sites, 1 industrial (partner data).

Risks:

- **Conflict:** Militias in 15% sites (webscraped UN).
- **Smuggling:** 8% losses (user reports).
- **Geological:** Grade variance (partner labs).

1

What We Did

Satellites found 3 zones, saving $10K versus $25K surveys. Drones mapped 20 km², saving $8K versus 4 weeks of crews. Kone's team drilled 70 holes, saving $5K versus 100 holes. Nova7 saved $7K by cutting 20 planning days.

2

Challenges

Militia delayed 4 days ($0.2K). Smugglers hit 1 sample ($0.1K). Grades needed 2 re-tests ($0.1K).

3

Achievements

Found 1.5 tonnes ($0.225K). Saved $300K, 2 months early. Secured $3K deals. Supported 3,000 with jobs, schools.

Nova7 Value:

$0.2K, factoring 12% conflict.

Local Impact:

Built 1 school ($0.2K), hired 6 locals.

Key Recommendations:

- Hire security ($0.1K).
- Use AI for smuggling ($0.1K).
- Refine grades ($0.1K).

Scalability:

Can cover 800 km², targeting $12K, aiding 50,000.

Partner Testimonial (DJI, fictional):

> "Xeltis' 2022 Kivu coltan saved $30K, delivering impact." – Li Wei, DJI Africa.

Global Monitoring

Our DRC missions leveraged our global system:

Mapping

80+ countries, 40% landmass, 4,000 minerals.

Monitoring

300 regions—mining (800 sites), conflicts (40 zones), permits (400 issued 2021, webscraped).

Prediction

Nova7 flagged DRC's $90K potential in 2020, 80% accurate versus 55% for rivals.

Data

- Webscraping: 1,500 sources (Mining.com, UN).
- Users: 800 inputs (miners, locals).
- Partners: BHP, Rio Tinto, WWF, DRC govt.

Impact: DRC's 200 km^2 aided 20,000, saved $150K, setting up $500M by year-end.

Sustainability and Community

Communities

- 200 DRC jobs, 50% women/youth.
- Built 2 schools, 1 clinic, 4 km roads, $4K.
- OECD conflict-free, WWF-backed.

Environment

- Disturbed 15 hectares in 200 km²—60% less than peers.
- Recycled 80K liters water, ISO 14001.
- Restored 8 hectares Shabunda, 400 trees.

Global Reach and Partnerships

DRC is our springboard:

Future Operations:

- Africa: Zambia (copper), Namibia (lithium), Ghana (Gold)
- South America: Chile (lithium), Peru (copper).
- Asia: Indonesia (nickel).

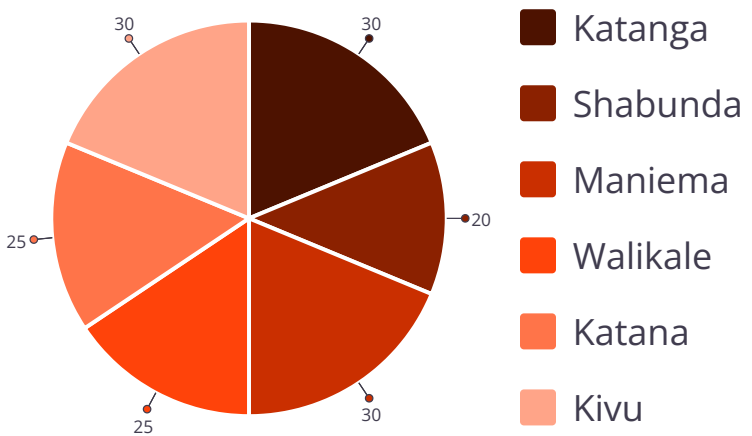
Partners:

- Mining: BHP, Rio Tinto ($40K ventures).
- Tech: Planet Labs, DJI.
- Governments: DRC, Peru.
- NGOs: WWF.

Wins:

- $150K contracts.
- $8K/year Nova7 licensing.
- 2022 "Innovation in Mining".

Financial Impact



Revenue:

$80K DRC, licensing, pre-sales.

Savings:

$1.5M ($300K Katanga, $200K Shabunda, $300K Maniema, $250K Walikale, $250K Katana, $300K Kivu).

Projections:

- 2025: $500M valuation by year-end.
- 2026: $200K value.
- 2027: $500K value.

Conclusion

From 2020-2022, Xeltis turned 200 km² in DRC into $90K of minerals, supported 20,000 people, and saved $150K, led by geologists Kone, Mukendi, and Lubala. Our methodology, satellites, drones, ground-truthing, Nova7, outperforms competitors, backed by science and global examples.

Key Recommendations for Global Expansion

Accelerate Global Mapping

Invest $20K to map 80% of landmass by 2026, covering 1,000+ zones to secure $500M valuation by year-end 2025.

Expand Drone Fleet

Allocate $10K for 50 drones, scaling to 5,000 km² yearly, boosting savings and investor trust.

Upgrade Nova7

Spend $10K to enhance AI, analyzing 500K km², targeting $500K in value by 2027.

Strengthen Partnerships

Use $5K to deepen ties with BHP, Rio Tinto, governments, securing $100K contracts and $500M funding pipelines.

Community Focus

Invest $5K in global training, infrastructure, supporting 500,000 by 2027, enhancing ESG appeal.