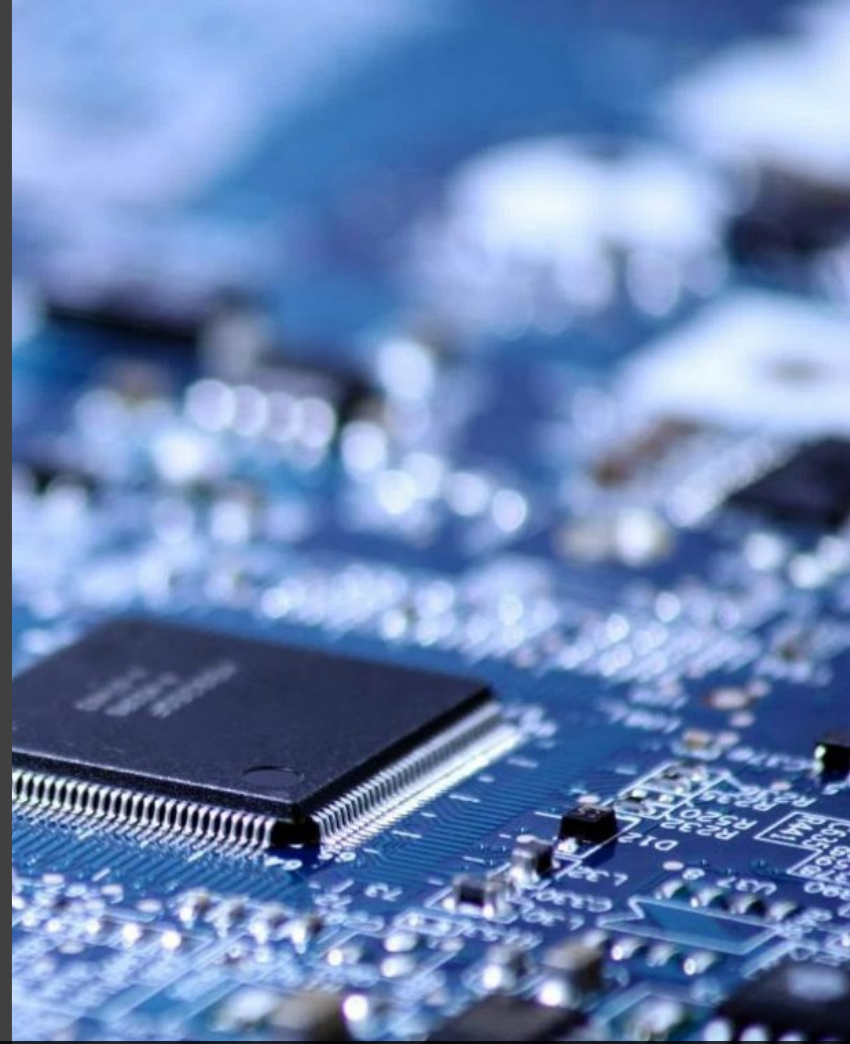


enviroleach

Technologies

Reinventing GOLD Recovery…

Business Model Canvas

Problem	Solution	Unique Value Proposition	Competitive Advantage	Target Customers
Gold Mining Sector • High permitting, construction and remediation costs associated with cyanide use. • Negative environmental impacts • Limits on the use of cyanide. • Limited efficacy of conventional technology of gold recovery from material containing copper. • Cyanide cannot be used in-situ to unlock the value of smaller deposits **Urban Mining Sector** • Emissions from the smelter-based treatment of Scrap Printed Circuit Boards (PCB's) and Catalytic converters. • No domestic treatment. • Limited options for the recovery of platinum group metals (PGM's) from diesel catalytic converters.	**Gold Mining Sector** • Reduce the environmental footprint of gold mining using EnviroLeach reagent. • Elimination of cyanide and mercury usage. • Potential for non-invasive in-situ recovery of gold. **Urban Mining Sector** • Significant reduction of smelter-based CO2 emissions by reduction of carbon- based substrate (non-metallic fraction) • A domestic, cost effective, and sustainable alternative to the conventional processing of PCB's and catalytic converters.	• A proprietary sustainable, non-toxic process with multiple applications. • Competitive recoveries and cost structures to existing technologies. • Reduces environmental & social impact and risk. • Completed and R2-RIOS Certified PCB processing facility	• 2 patents issued and 1 pending on chemistry and process. • First mover advantage in all sectors. • Limited competition • The only non-smelter-based recovery of platinum and palladium from diesel based catalytic converters. • Complex formulas and processes • No significant development of similar chemistry since 1800's	**Gold Mining Sector** • Gravity & flotation concentrate producers • **Developing stage gold miners.** • Projects in environmentally sensitive locations • Small gold deposits **Urban Mining Sector** • Recyclers, aggregators & OEM's • Catalytic converter manufacturers and recyclers
		Key Resources • Patented chemical process • Trade secrets • Strong scientific, technical and engineering teams. • In-house research and analytical laboratory. • Existing R2-RIOS Certified 300 tonne per month PCB processing facility.	**Key Metrics** • Established supply channels for PCB's. • Gold mining concentrate treatment. • Tonnage throughput at ETI process facilities. • Earnings per share • Development and enhancements of metal recovery technologies.	**Channels** • Electronics manufacturers • ITAD's and E-Waste processors • Government institutions • PCB aggregators • Smelters • Gold concentrate brokers • Recycling Associations
Cost Structure		**Revenue Streams**		
Fixed costs: Facility operational expenses, payroll, sales & marketing, reporting… **Variable costs:** Cost of goods, chemical and smelting/refining costs.		• Company owned PCB and gold concentrate processing facilities; margins dependent on costs and grades • Mining royalties and licenses revenues. • Catalytic converter processing licenses.		

Safe Harbor Forward Looking Statements

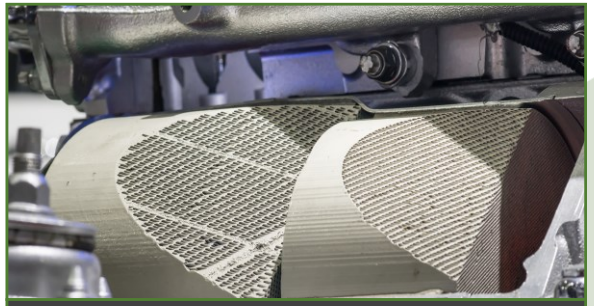
This Presentation contains “forward-looking information” and “forward looking statements” within the meaning of applicable Canadian and United States securities legislation. Statements contained herein that are not based on historical or current fact, including without limitation statements containing the words “anticipates,” “believes,” “may,” “continues,” “estimates,” “expects,” and “will” and words of similar import, constitute “forward-looking statements” within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking information may include, but is not limited to, information with respect to our Research and Development activities, the accuracy of our capital and operating cost estimates; production and processing estimates; the results, the adequacy of EnviroLeach’s financial resources and timing of development of ongoing research and development projects, costs and timing of future revenues or profits and adequacy of financial resources. Wherever possible, words such as “plans”, “expects”, “projects”, “assumes”, “budget”, “strategy”, “scheduled”, “estimates”, “forecasts”, “anticipates”, “believes”, “intends”, “targets” and similar expressions or statements that certain actions, events or results “may”, “could”, “would”, “might” or “will” be taken, occur or be achieved, or the negative forms of any of these terms and similar expressions, have been used to identify forward-looking statements and information. Statements concerning future revenue or earnings estimates may also be deemed to constitute forward-looking information. Any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions or future events or performance are not statements of historical fact and may be forward-looking information. Forward-looking information is subject to a variety of known and unknown risks, uncertainties and other factors that could cause actual events or results to differ from those expressed or implied by the forward-looking information. Forward-looking information is based on the expectations and opinions of EnviroLeach’s management on the date the statements are made. The assumptions used in the preparation of such statements, although considered reasonable at the time of preparation, may prove to be imprecise. We do not assume any obligation to update forward-looking information, whether as a result of new information, future events or otherwise, other than as required by applicable law. For the reasons set forth above, prospective investors should not place undue reliance on forward-looking information. The CSE has not approved or disapproved of the information contained herein.

Who is EnviroLeach?

EnviroLeach *is a clean-tech focused company offering the* ***ONLY*** *cost-effective and sustainable alternative for the recovery of precious metals from primary and secondary sources…*

Gold Mineral Ores

Electronic Waste

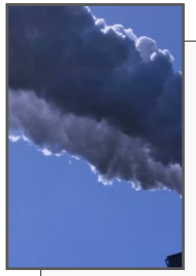


Catalytic Converters

How Sustainable?

Environmentally Friendly

All ingredients in the formula are FDA approved… safe to use, handle and transport

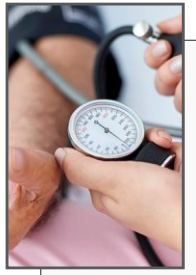


No Air or Water Effluent

No waste-water or air emissions. Significantly CO2e reduction compared to conventional smelting

Neutral pH

Operates at neutral pH (6-7 same as human tears) safe, easy on equipment and harmless if spilled



Improved Safety and Simplicity

Operates at ambient pressure and temperature – no heating of solution or high pressures required

Low Environmental Impact

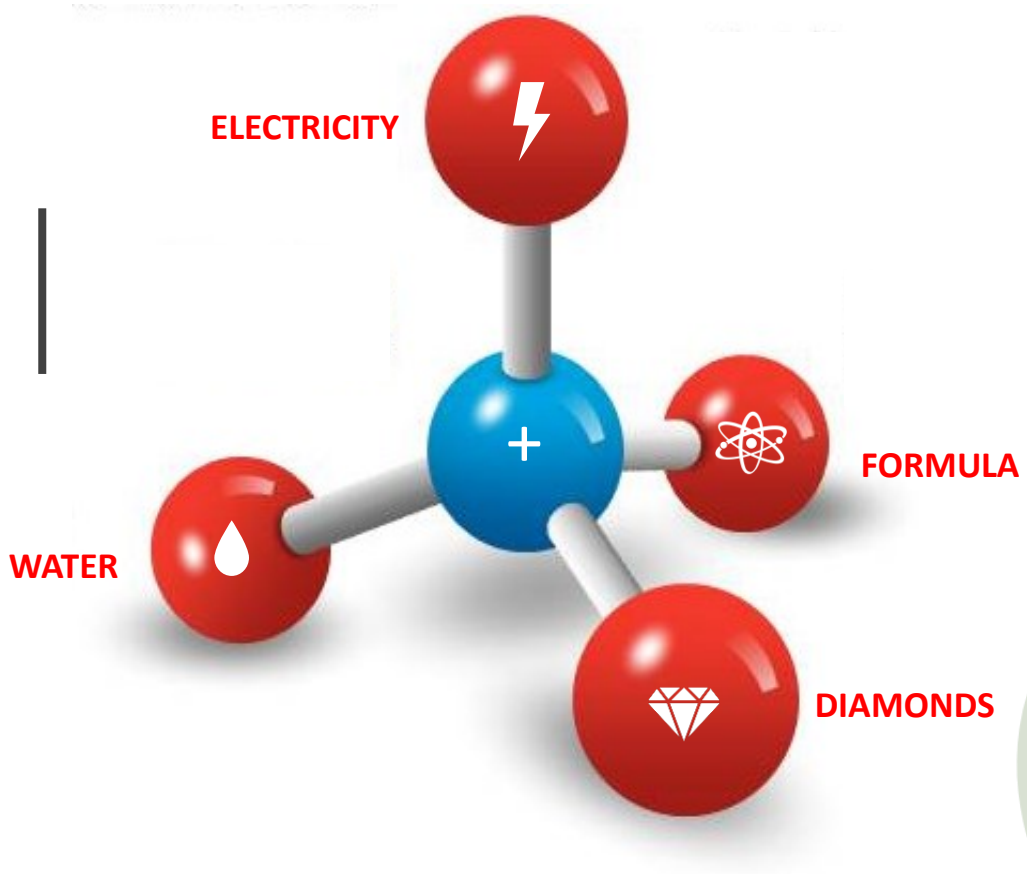
No toxic emissions produced in the process Cost-effective alternative to Cyanide, Mercury and Smelting

ZERO impact gold mining

Potential for in-place or in-situ gold recovery offering almost Zero impact mining.

Electrochemical Formula

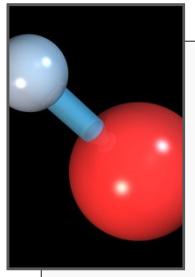
*A simple **equation** that solves a very complex problem…*



Technology Highlights

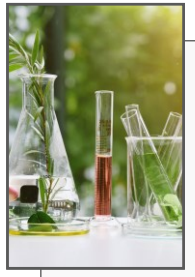
Patented & Proven Process

A patented and proven process for the extraction of precious metals from recycled goods and gold ores.



Reusable and Sustainable

Technology is based on a proprietary and patented, reusable inorganic electrochemical process.



Environmentally Friendly

The only eco-friendly alternative to the use of cyanide & smelters in gold mining and recycling.

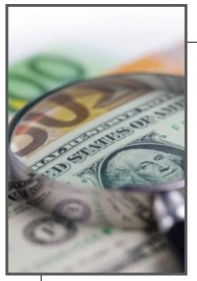
High-Performance Alternative

Leach kinetics (recoveries) are typically better and faster than the incumbent processes.

Low Water Consumption

Proprietary chemical and water recovery process provides a long-term, sustainable solution

Key Business Drivers

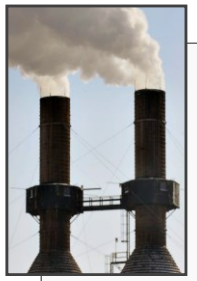


Large Diversified Markets

Combined $360B annual opportunity in recycling and gold mining sectors

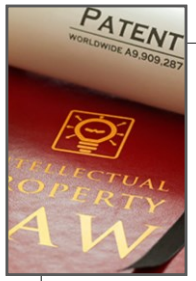
In Revenue Stage Now

PCBA processing facility now operational. Developing strong long-term feedstock supply chain.



The Only Sustainable Alternative

The only cost-effective alternative to smelting and cyanide. Meeting ESG responsibility demands.



Solid Barriers to Entry

Strong intellectual property barriers including Patents and trade secrets.

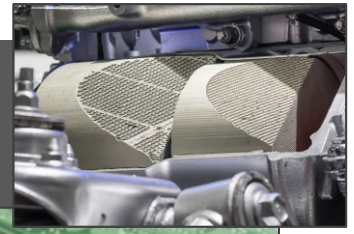
Limited Competition

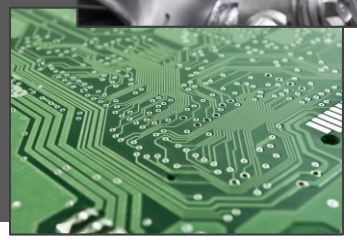
Early mover advantage and the only eco friendly and sustainable solution in both sectors.

Target Markets

Recycling Sectors - US$65B

- Sustainable treatment of spent Printed Circuit Board Assemblies (PCBAs) and catalytic converters
- Over 3 million tonnes of spent PCBAs each year projected by 2026
- Over 25 million catalytic converters produced each year
- Domestic, cost-effective and green alternative to existing smelting process





Gold Mining Sector - US$180B

- Offers cost-effective and sustainable alternative to cyanide & smelting processes
- High efficiency recoveries and fast leach kinetics
- Simplifies and accelerates mine permitting process
- Unlocks the value of smaller and environmentally sensitive deposits

Recycling/Secondary Markets

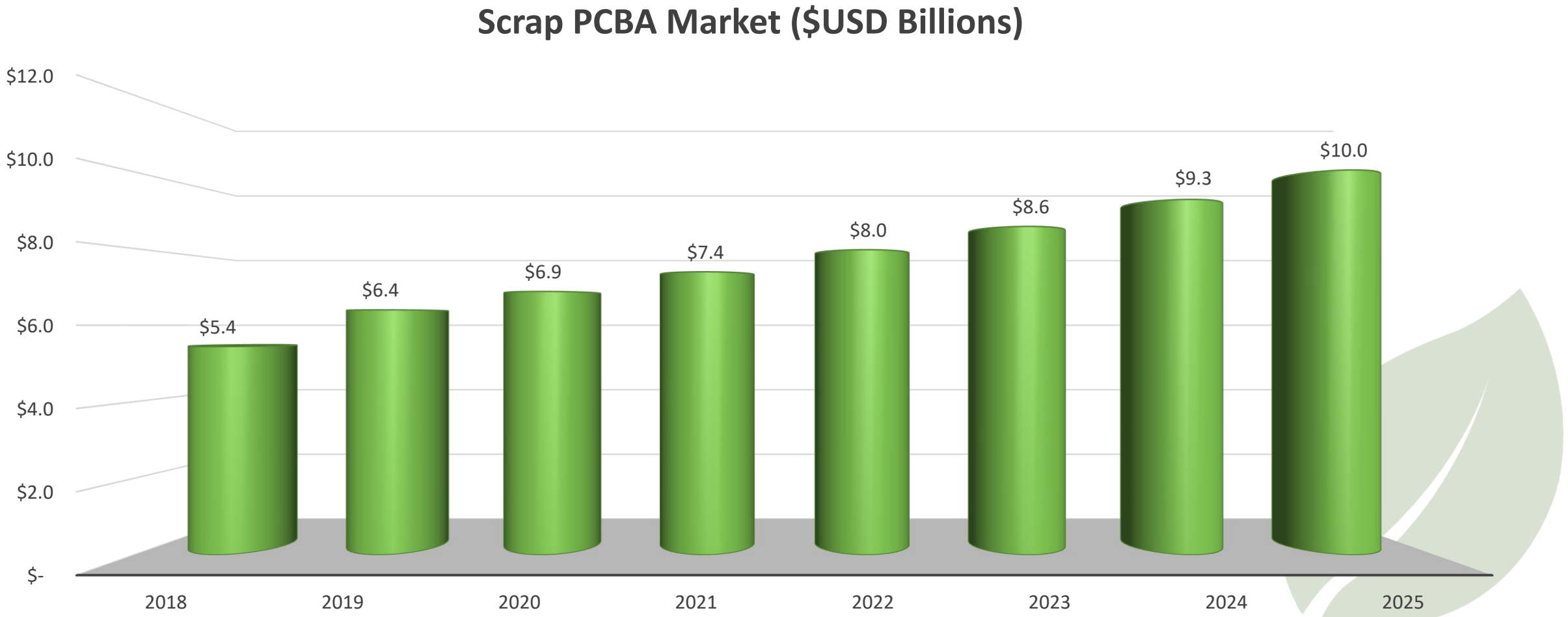
Opportunities

- No domestic, eco-friendly treatment solution for spent PCBAs or Catalysts
- Current international smelting processes produces vast CO2e emissions
- Recyclers incur significant treatment and shipping charges to international smelters
- Smelters do not pay for all metal content in PBCAs
- Low CAPEX and high rate of return for on-site processing facilities
- Tin recovery from spent PCBAs does not exist on an economic basis

Trends

- Increasing OEM and consumer demand to adopt circular economy
- Industry requiring accountability of metals especially conflict minerals
- Domestic recovery of metals benefits local and national economies
- Consumers demanding sustainable end-of-life solutions
- OEMs looking for more metal supply chain certainty and predictable costs

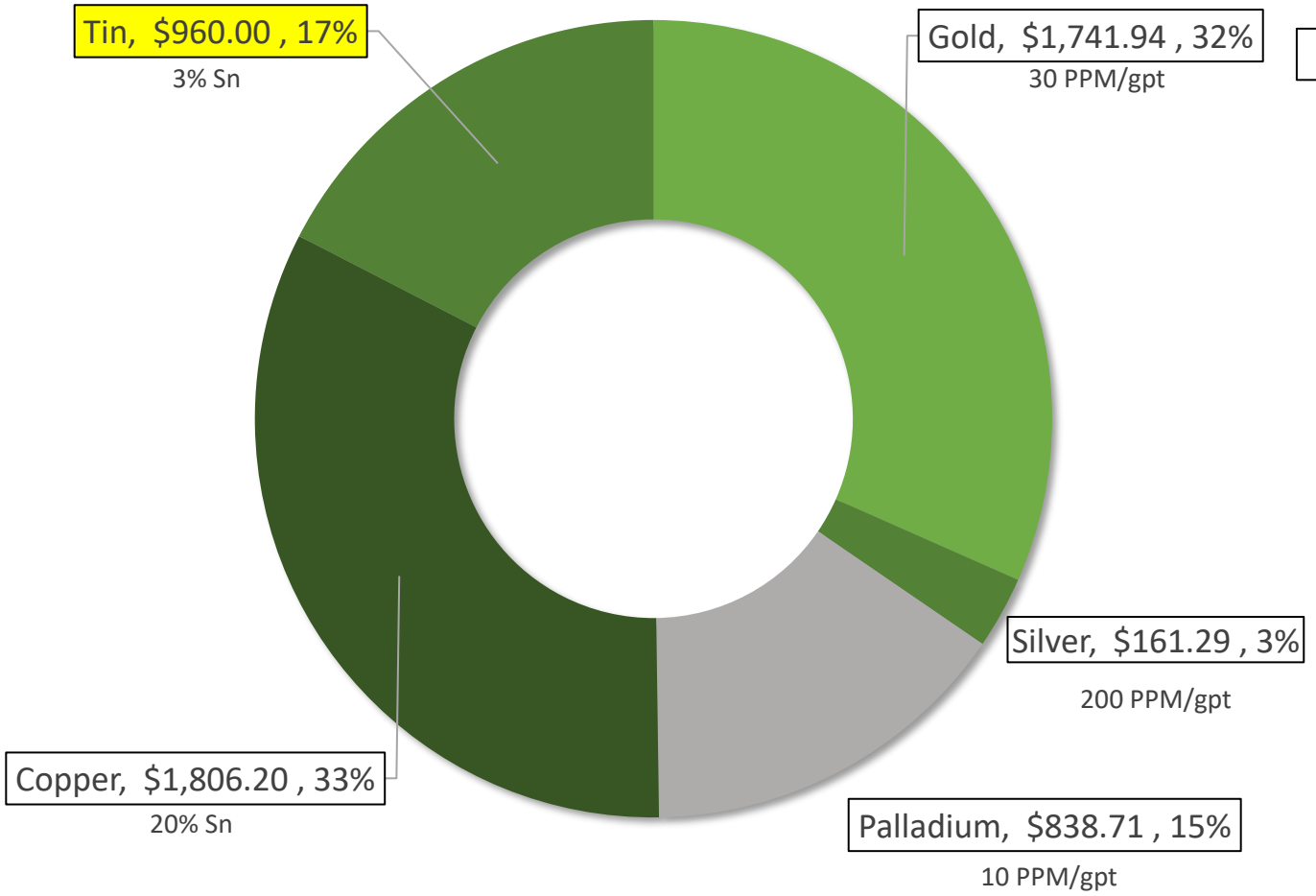
Global Scrap PCBA Supply



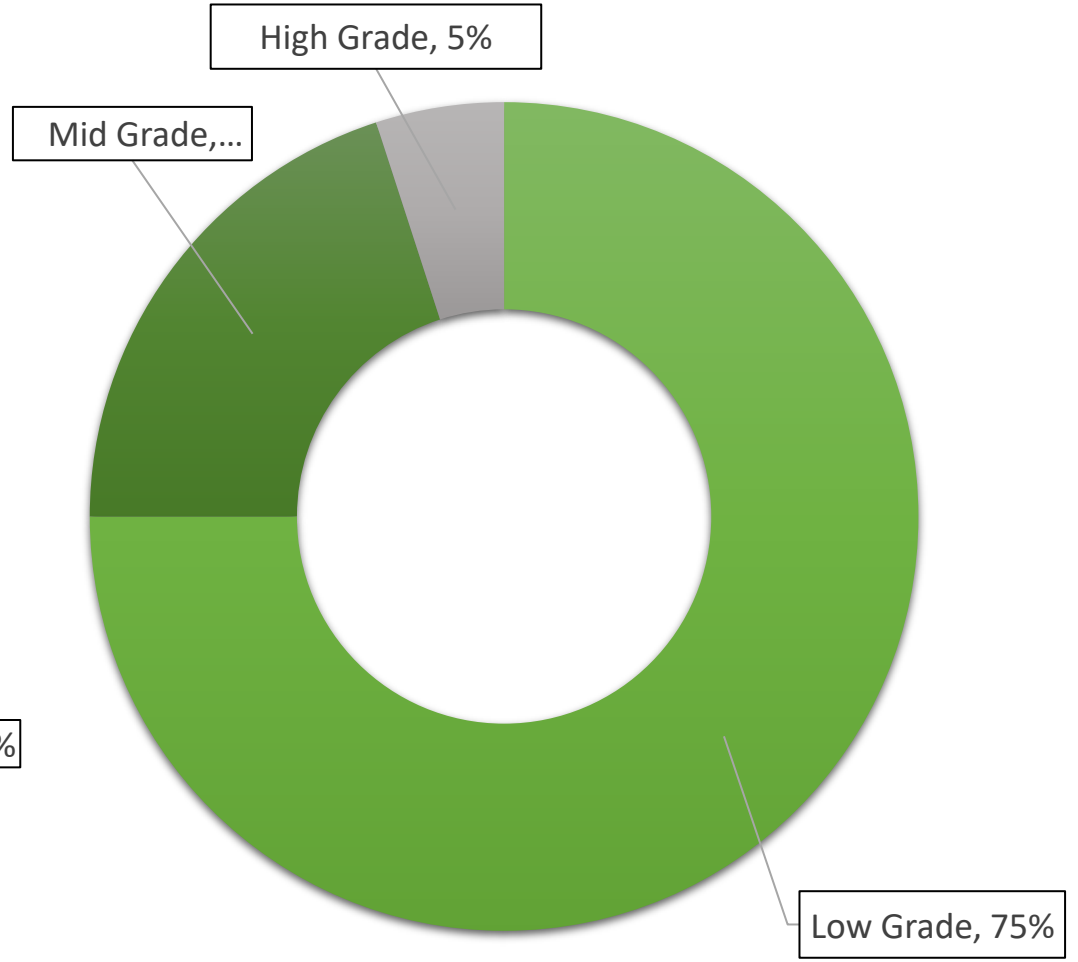
*Transparency Market Research Forecast

PCBA Value per Tonne

Typical Low to Mid-Grade PCBA Gross Value per Tonne *(~$5,500)*

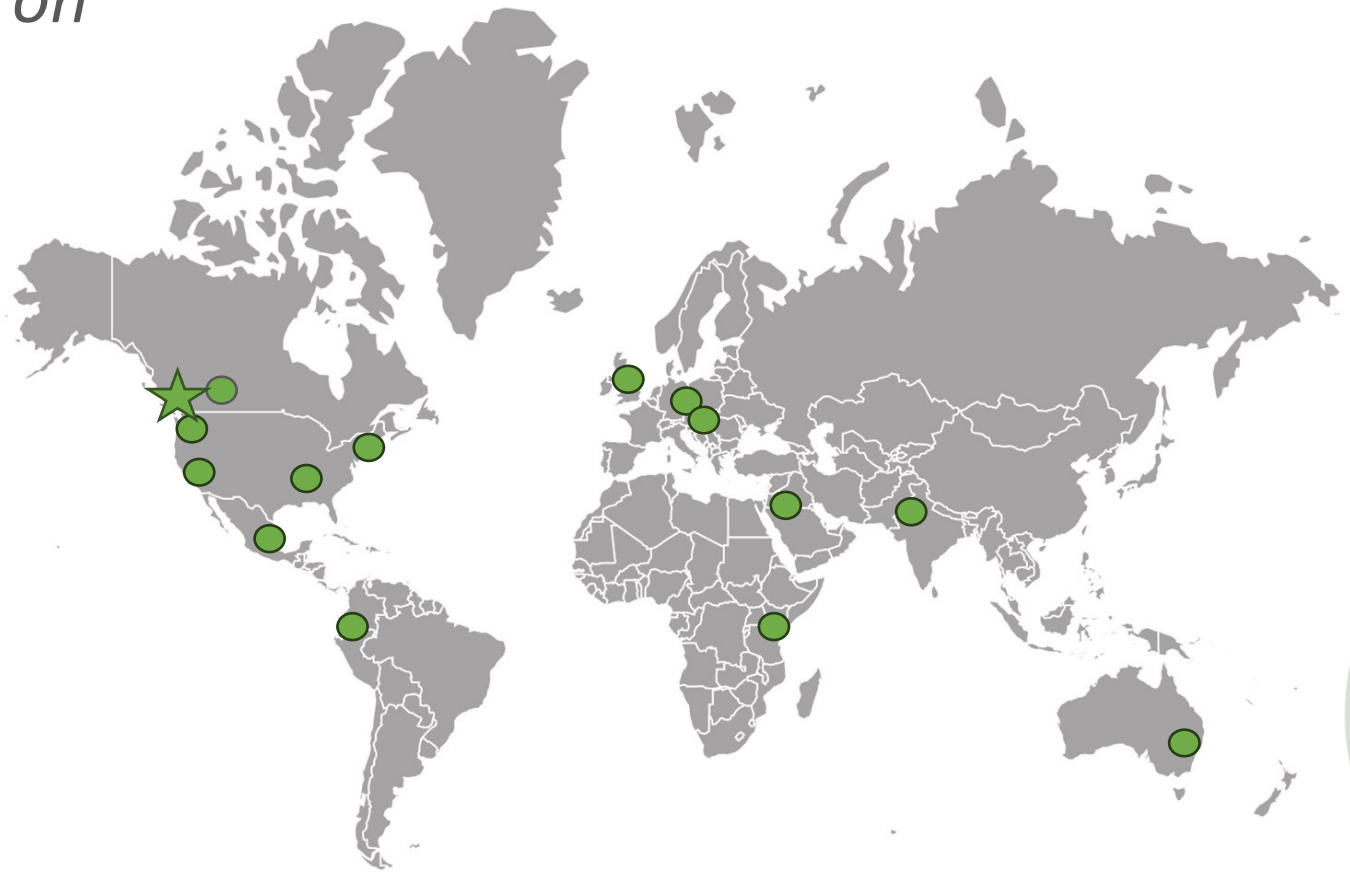


Low Grade focussed strategy



Developing Global PCBA Supply Chain

Actively negotiating on over 30,000 TPA…



Spent Catalysts Value per Tonne

Almost all catalytic converters contain Platinum Pl, rhodium Rh and palladium Pd (PGMs). The amounts of PGMs depends on the age and type of vehicle.

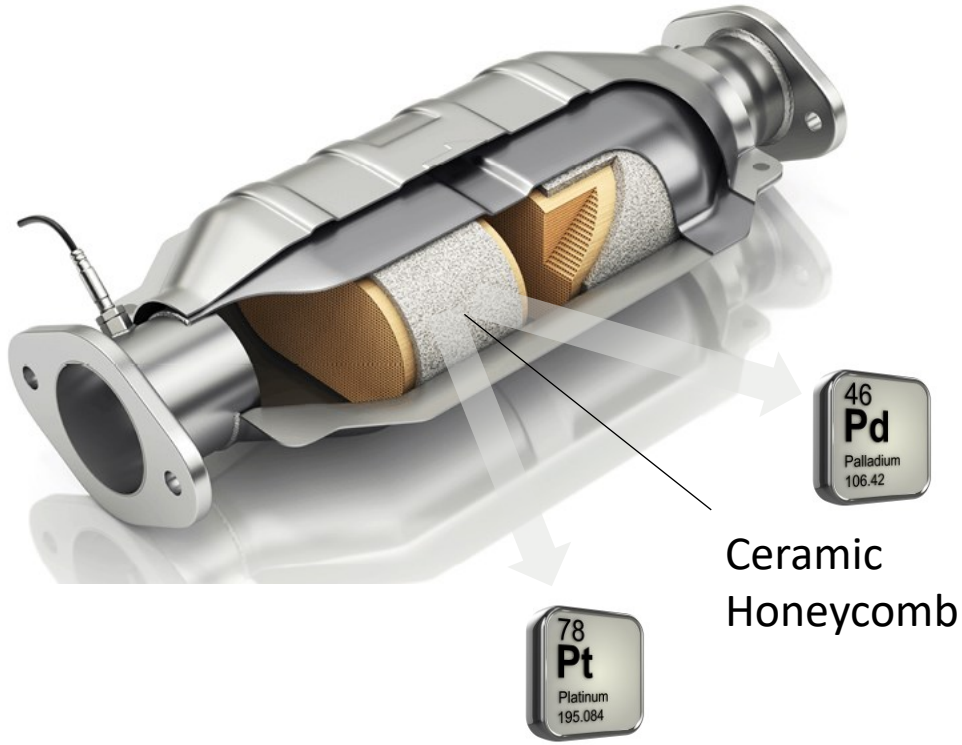
($150-$500)

Cars, light-duty trucks, and motorcycles average total is 2-6 grams of Platinum and/or Palladium.

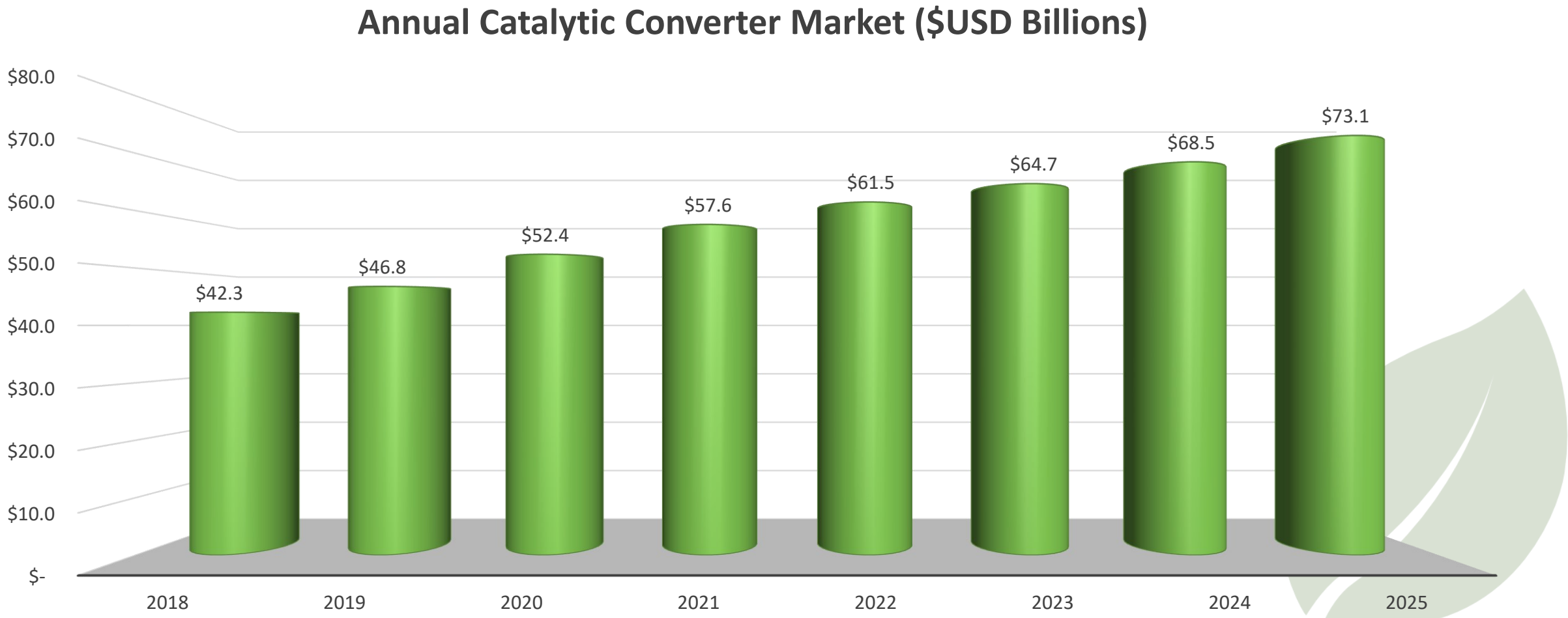
($500-$2,500)

Larger-engine SUV's and trucks average total can range anywhere from 6-30 grams of palladium and Rhodium.

PGM value in spent catalyst honeycomb material can be as high as 400 grams per tonne Pd valued at over $USD 30,000 per tonne.



Catalytic Converter Market (USD$)



*Transparency Market Research Forecast

Recycling Treatment Process

Combining a detailed understanding of mineral and mechanical processing with proprietary inorganic chemistry…

…to produce high purity gold and a copper rich concentrate

Recycling Sector | Benefits

- Faster and higher payments for recyclers
- Higher payable metals including future tin recovery
- Lower shipping and treatment costs
- Cost-effective alternative to conventional smelting of PCB's
- Little or no environmentally friendly competition
- Domestic metal recovery benefits local and national economies
- More accurate PCBA assay values for recyclers
- Potential PCBA additional value capture from tin recovery

PCBA Processing & Growth Strategy

Current Operations

- 2,400 TPA facility located Metro Vancouver, Canada
- Securing long-term PCBA feedstock partnerships
- R2/RIOS certified & permitted
- Operating and generating revenue now
- Developing catalytic converter recovery business model and supply chain template

Future Plants

- 6,000 TPA per facility
- 4 planned locations
- 24,000 TPA combined (4% North American market penetration)
- $24M per facility revenue potential
- $100M+ combined annual revenue potential
- $10M per Facility Capex
- ~ 20% Operating Margins

Partnerships

- Target partners: e-waste recyclers, ITAD firms & OEMs
- Regionalized processing near market sources
- Modular and scalable, bolt on solution
- Global licensing model
- Exploring partnership opportunities in the catalytic converter recycling sector

Gold Mining Sector

Gold Mining Sector - $180B

- Offers cost-effective and sustainable alternative to cyanide & smelting processes
- High efficiency recoveries and fast leach kinetics
- Low CAPEX and high rate of return for processing facilities
- Reduces and accelerates permitting process
- Unlocks the value of smaller and environmentally sensitive deposits
- Improves gold miners ESG profile with regulators, communities and investors

Setting the new environmental standard for gold mining…

Gold Mining Market Sector

Focus

- $180B global gold mining market sector
- Gravity and flotation mineral concentrates
- Arsenopyrite or copper contaminated concentrates
- 1.5M tonne per year gold concentrate market
- Potential for in-situ gold recovery (testing underway)

Challenges

- Current processes are toxic, environmentally harmful
- Cyanide is banned and widely opposed
- Long & costly permit process
- Miners want to produce gold at mine site
- Concentrates are shipped to off shore smelters
- Industry produces high emissions
- No reagent for in-situ recovery

Trends

- Pressure by regulators and investors to address environmental impact and carbon footprint
- Industry seeking to adopt UN SDGs, including environmental stewardship
- Focus shifting to smaller deposits requiring new extraction methods
- Potential in-situ recovery of gold

Gold Mining | Benefits

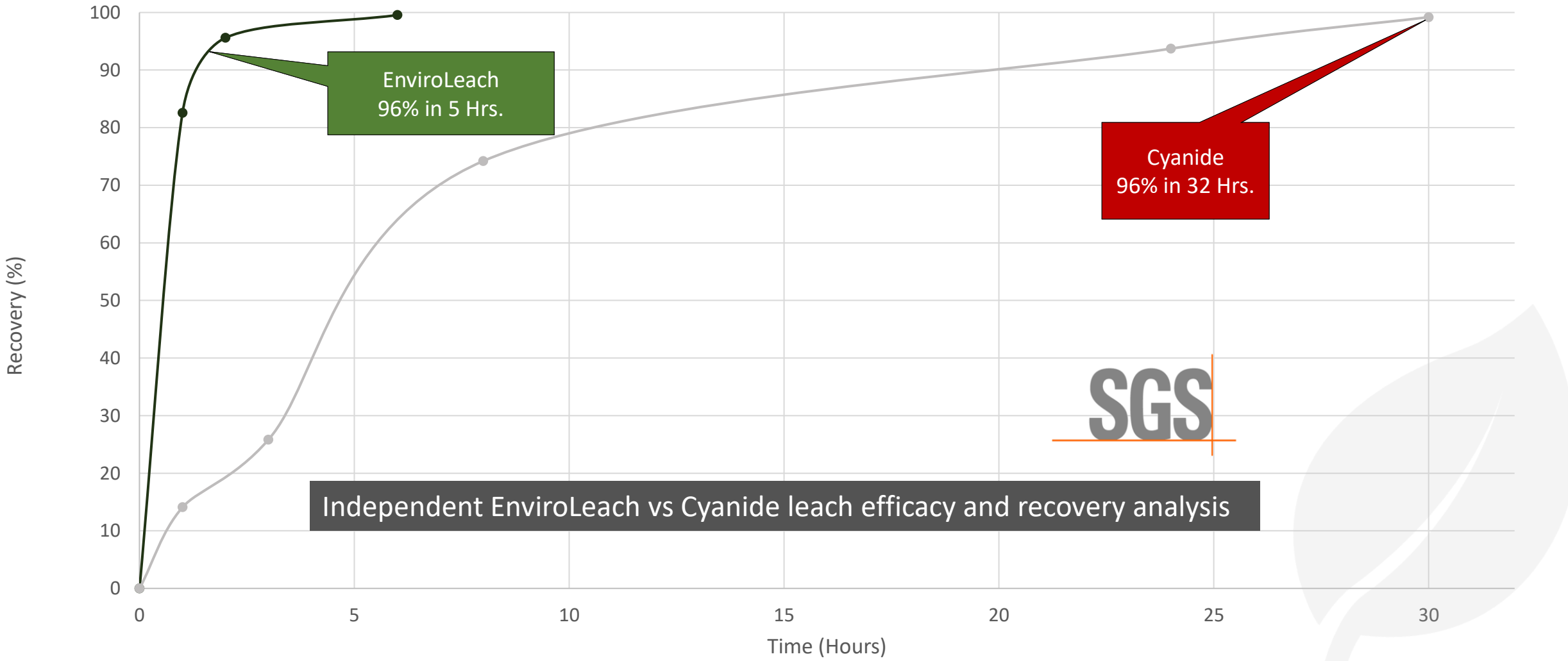
- Low environmental impact
- Simplified permitting process
- Elimination of shipping, smelter treatment costs and delayed payments
- Low CAPEX and infrastructure requirements
- Reduced risk of environmental contamination
- Saves water with no effluent and no tailings ponds necessary
- Provides the production of gold doré at the mine site
- Lower CO2e emissions and reduced waste byproducts
- Unlocks the value of smaller gold deposits
- Potential for In Situ (in place) gold recovery

Cyanide vs EnviroLeach

Simply better than cyanide…

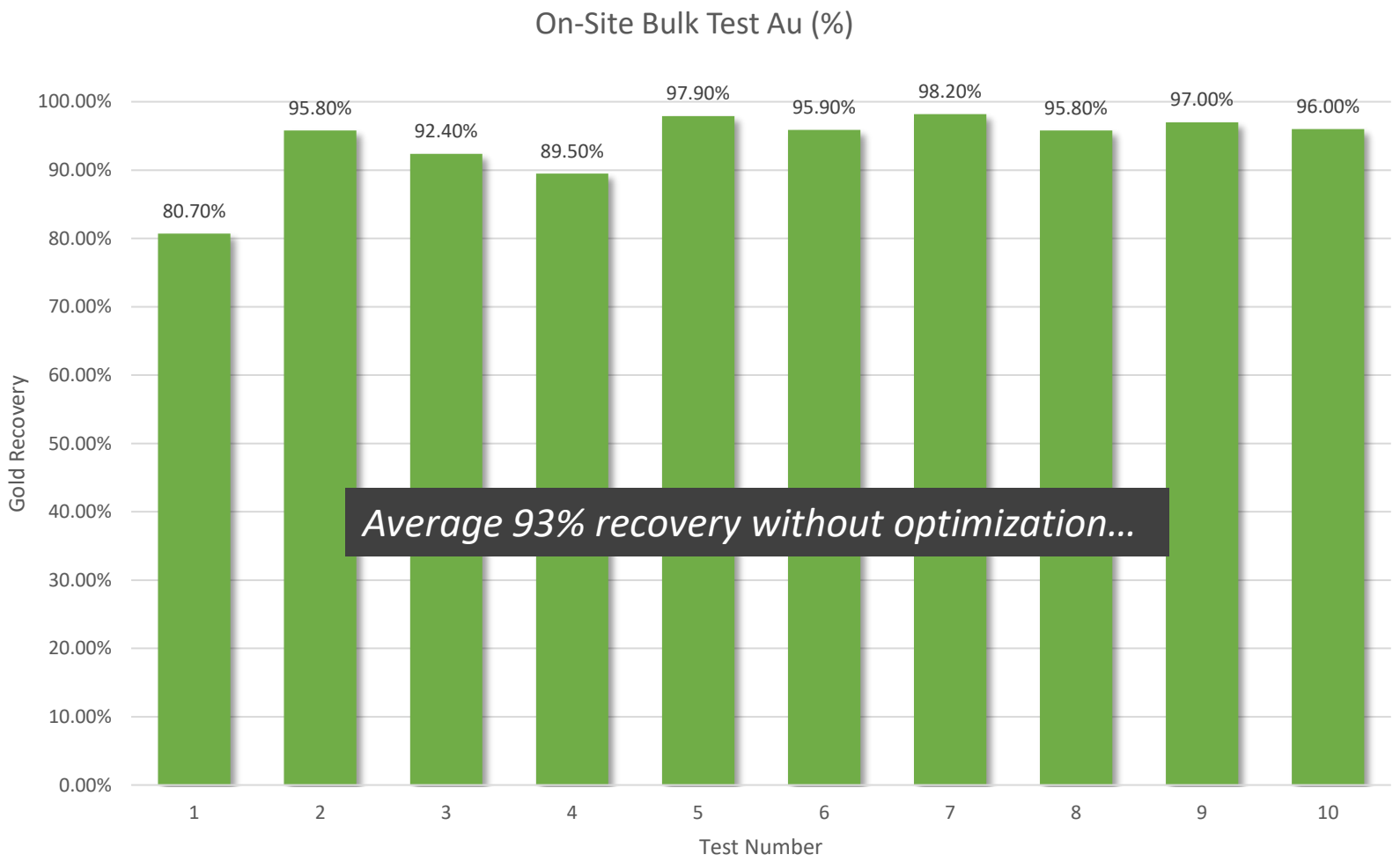
	Cyanide	EnviroLeach
High gold recoveries	✓	✓
Fast leach kinetics	✓	✓
Environmentally safe & sustainable	✗	✓
Safe to handle & transport	✗	✓
Broad applicability spectrum	✗	✓
No potential for dangerous off-gassing	✗	✓
No dangerous waste-water effluent	✗	✓
Functions in the presence of copper	✗	✓
Has potential for In-Situ gold recovery	✗	✓

Cyanide vs EnviroLeach



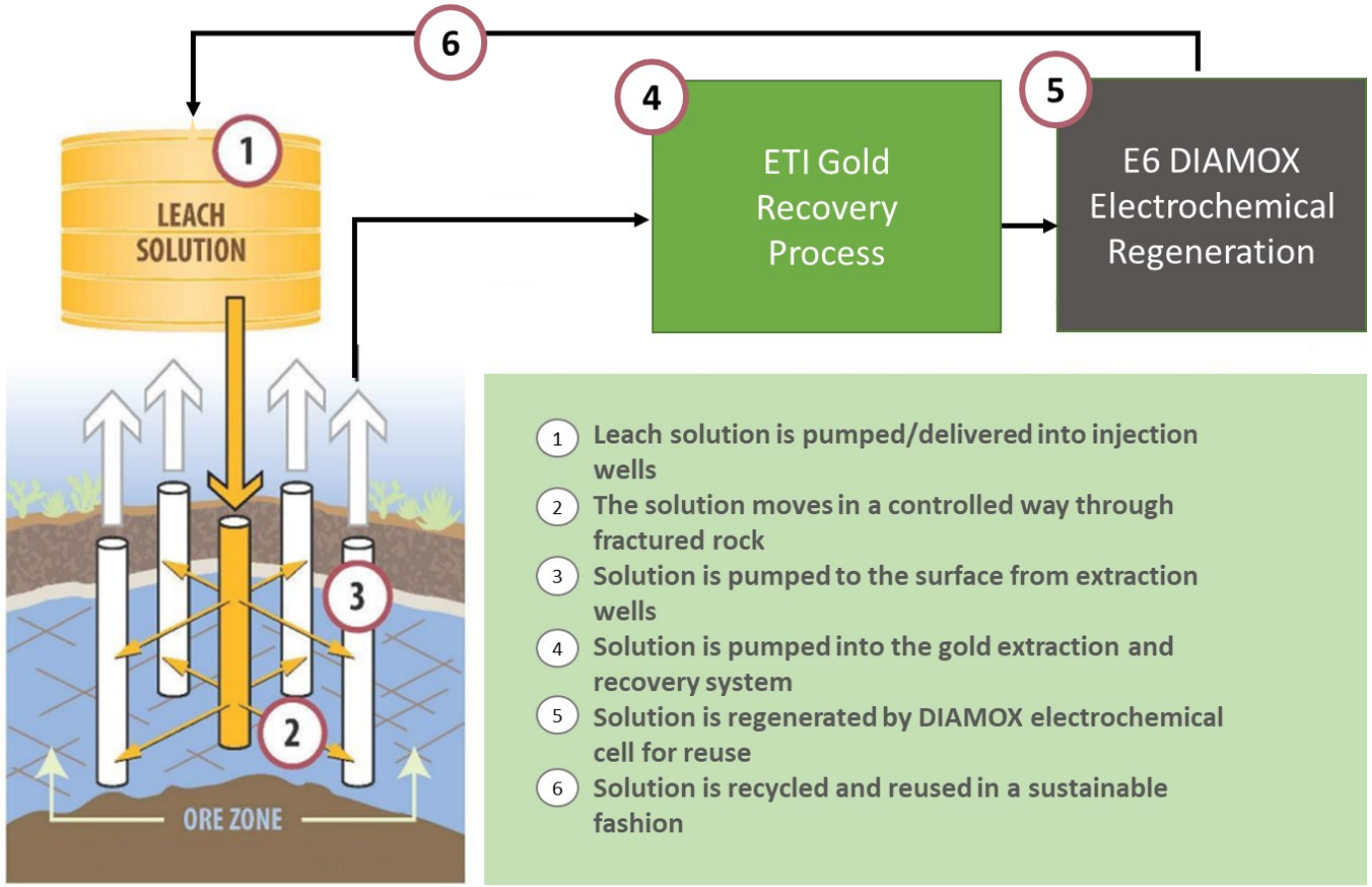
Proven Technology - On-site Test Results

Results of Multiple On-site Bulk tests at Golden Predator Mine - 426 Oz "Green" Gold Bar Poured

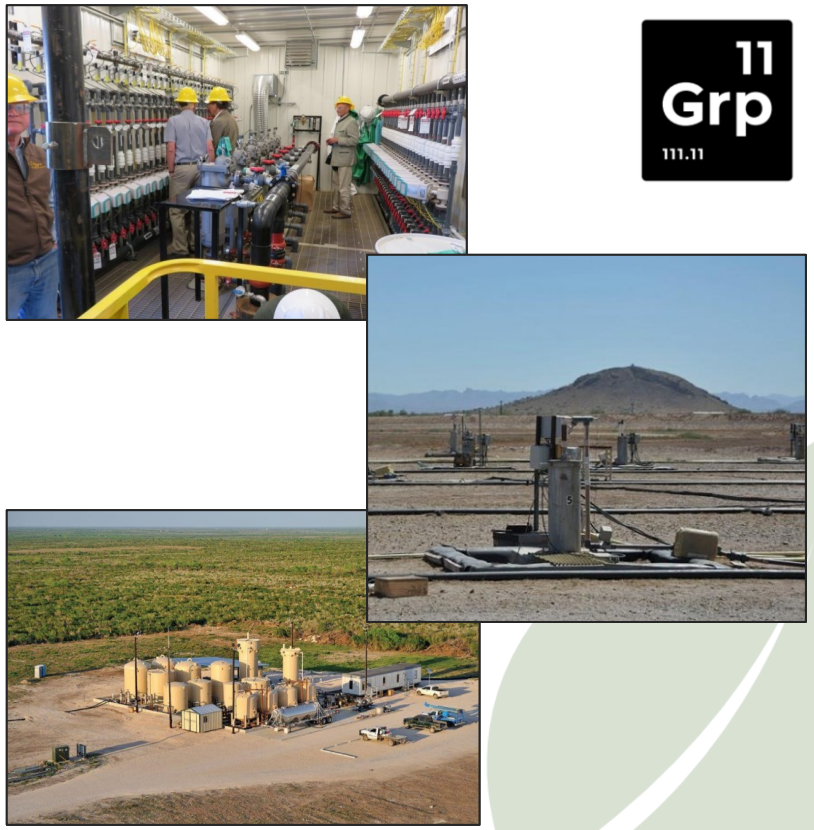


In Situ Gold Recovery

Non-Invasive gold mining…

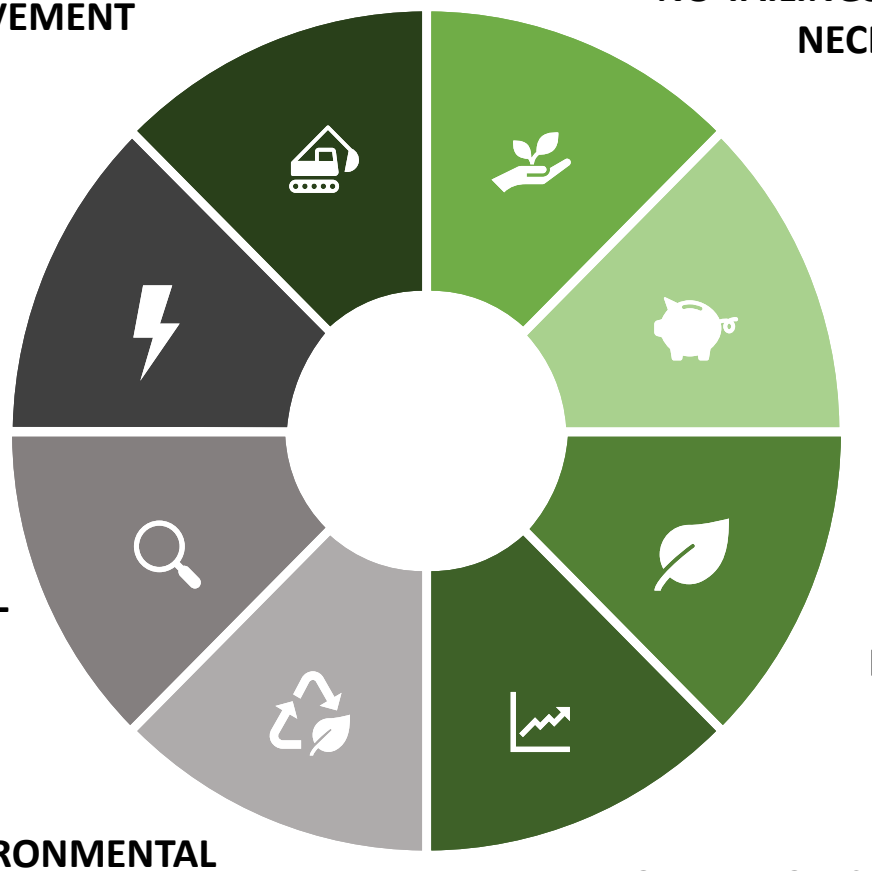


1. Leach solution is pumped/delivered into injection wells
2. The solution moves in a controlled way through fractured rock
3. Solution is pumped to the surface from extraction wells
4. Solution is pumped into the gold extraction and recovery system
5. Solution is regenerated by DIAMOX electrochemical cell for reuse
6. Solution is recycled and reused in a sustainable fashion

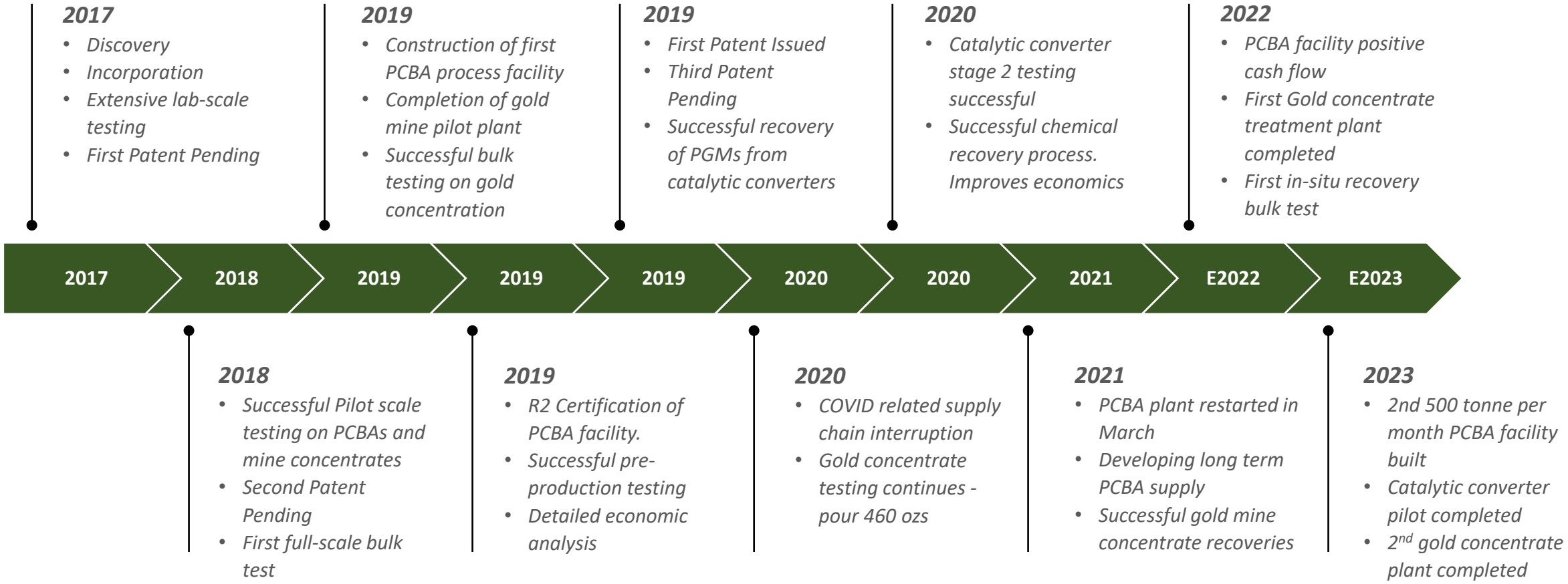


The **future** of gold mining…

Insitu Gold Recovery - Benefits



Corporate Timeline



Why EnviroLeach?

- Large diversified **target markets**
- **Superior performance** and economics to incumbent processes
- The **ONLY eco-friendly** and **sustainable** solution for these sectors
- Significant portfolio of **intellectual property, patents** & trade secrets
- Strong independent **third-party validation** of chemistry
- Limited or **no competition** and early mover advantage
- **Finalist** in Canadian PDAC 2018 "**Innovation in Mining**"
- In **revenue phase** at company-owned PCBA facility
- Successfully **developing PCBA supply chain** following COVID shut down
- Proven & **experienced management** team

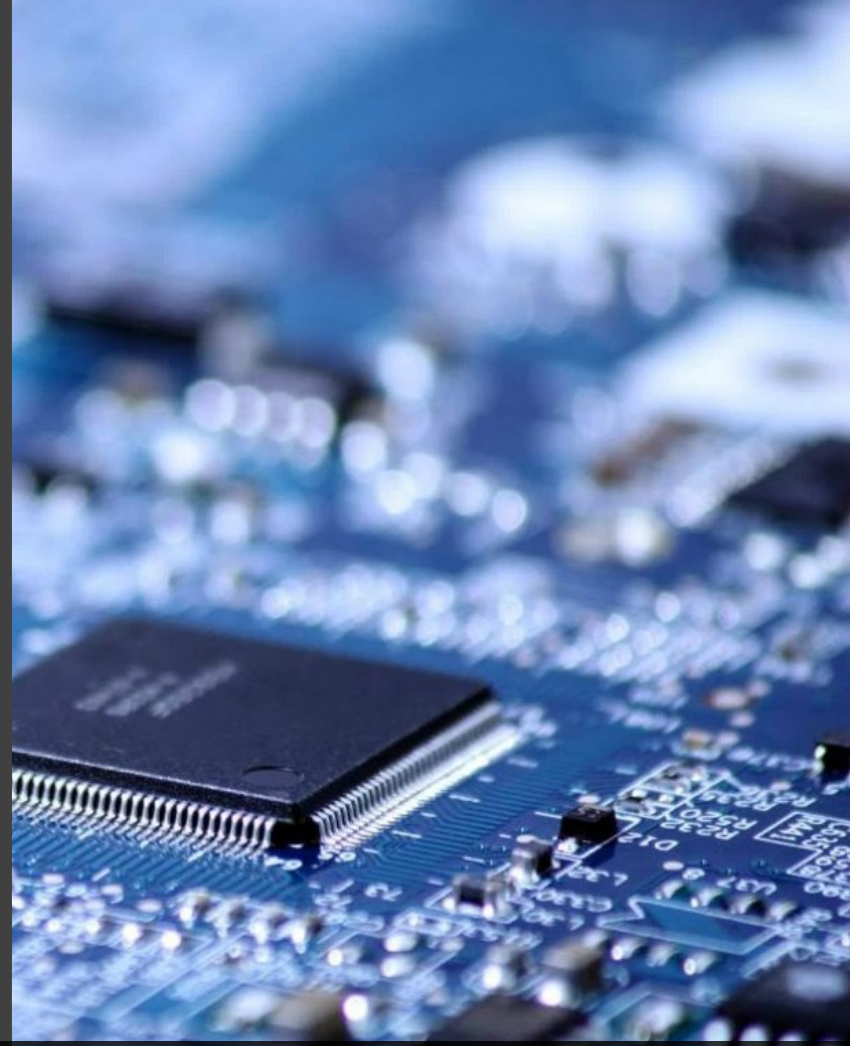
Why EnviroLeach?

Cleantech Industry Comparables

Name	Symbol	Share Price	MCAP $B USD	2020 Revenue
EnviroLeach Technologies Inc	EVLLF	$ 0.35	0.04	$ 816,000
Aquametals	AQMS	$ 2.69	0.18	$ 108,000
NEO Lithium	CVE:NLC	$ 3.40	0.44	$ -
LOOP Industries	LOOP	$ 12.26	0.52	$ -
Green Power	GP	$ 29.82	0.61	$ 13,500,000
American Superconductor	AMSC	$ 17.37	0.49	$ 63,840,000
EOS Energy	EOSE	$ 17.62	0.91	$ 220,000
Galaxy Resources	ASX:GXY	$ 2.78	1.46	$ 55,293,000
Blink Charging Co.	BLNK	$ 37.38	1.57	$ 6,230,000
Greenlane Renewables Inc	GRN (TSX)	$ 1.50	0.211	$ 22,500,000
Lithium Americas Corp.	LAC	$ 14.55	1.74	$ -
Xebec Absorption	XEBEF	$ 3.319	0.50	$ 45,810,000
Questor Technology	QST (TSX)	$ 2.02	0.05	$9,200,000
Power Integrations	POWI	$ 85.53	5.07	$ 488,320,000
NextEra Energy Partners, LP	NEP	$ 76.97	5.84	$ 917,000,000
Clearway Energy, Inc.	CWEN	$ 26.43	5.33	$ 1,199,000,000

Upcoming Name Change

Est: Aug 2021



ENVIROMETAL

Technologies Inc.

Reinventing GOLD Recovery…