CoTec Holdings Corp.
Suite 428
755 Burrard Street
Vancouver, BC
V6Z 1X6
Phone: (604) 992-5600
https://cotec.ca/

Ticker (Exchange)	CTH-TSXV; CTHCF-OTCQB
Recent Price (02/18/25)	C$0.68
52-week Range	C$0.43- 0.70
Shares Outstanding	71.5 mm
Market Capitalization	C$48.6 mm
Average 3-mo. volume	17,160
Insider Ownership +>5%	~75%
Institutional Ownership	~2.8%
EPS (Qtr. ended 09/30/24)	(C$0.03)
Employees	4

One-year Stock Chart

COTEC'S TECHNOLOGY AND ASSET HOLDINGS		
Technology	**Asset**	**Process**
Maginito	**HyProMag USA**	Hydrogen Processing of Magnet Scrap (HPMS)
BINDING SOLUTIONS	**Lac Jeannine**	Iron Pellet Cold Agglomeration
MagIron	**Plant 4**	Iron Upgrading Technology
Ceibo	**TBD**	Copper Oxidative Leaching

COMPANY DESCRIPTION

CoTec Holdings Corp. ("CoTec" or "the Company") is a mineral resource **Environment, Social, and Governance (ESG)†**-focused company dedicated to acquiring and advancing disruptive technologies and assets that have the potential to fundamentally change the way metals and minerals are extracted and processed. The Company's strategy is based on a two-pronged approach: (1) acquiring stakes and technology rights in innovative mineral extraction technologies; and (2) applying these technologies to undervalued mineral assets to unlock value. CoTec's investments prioritize recycling and waste mining, allowing the reprocessing of existing mining waste and scrap to generate value from sites that were thought to outlive their profitability. This allows CoTec to transform undervalued, unprofitable, or dormant assets into profitable ventures. The Company's strategic approach provides it with three key competitive advantages: (1) low cost of entry; (2) reduced time to revenue (three to five years); and (3) strong barrier to entry due to proprietary technology. CoTec's revenue model is driven by two key pillars: (1) value appreciation from its technology investments and mining assets, and (2) a proportional share of revenue generated by its mining assets. The Company currently holds a stake in four technologies: Maginito Ltd (20.6% equity stake), focusing on **rare earth element (REE)** recycling; Binding Solutions Ltd (BSL) (3% equity stake) and MagIron LLC (16.86% equity stake) to advance low-carbon steel production; and Ceibo Inc. (3% equity stake), focused on the extraction of copper from low-grade ores and waste materials. CoTec's objective is to build a robust portfolio of 10 transformative technologies and 30 to 40 complementary assets.

KEY POINTS

- CoTec's assets include: (1) Lac Jeannine: a former iron mine in Quebec designed to reprocess mining waste; (2) HyProMag USA: a U.S.-based joint venture leveraging patented technology for **rare earth magnet** recycling; and (3) MagIron's Plant 4: a U.S.-based dormant plant designed to process mining waste into high-grade iron ore concentrate. CoTec is evaluating additional opportunities, including the application of Ceibo's technology to copper assets.
- The Company expects these assets to generate revenue in the near term—Lac Jeannine in early 2027, HyProMag USA on 1Q 2027, and MagIron Plant 4 in 2027.
- CoTec believes its market valuation does not reflect the value of its technology and asset acquisitions. Third-party NPV estimates place the combined equity ownership of two of its projects—Lac Jeaninne and HyProMag USA—at $217.5 million, exceeding the Company's current market cap.
- The Company's low corporate overhead—with only four full-time employees—ensures operational efficiency, led by a leadership team with a proven track record of value creation and company-building in the mineral extraction market.
- As of September 30, 2024, the Company's cash and cash equivalent position was C$1.17 million.

Table of Contents

Executive Overview 3

Intellectual Property 9

Company Leadership 11

Milestones 14

Core Story 18

- Revenue Roadmap 19
- CoTec's ESG Focus 20

Technology Portfolio 22

- Maginito Limited (Hypromag Ltd). 22
- Binding Solutions Ltd 28
- Magiron LLC 31
- Ceibo Inc. 33

Asset Portfolio 37

- LAC Jeannine 38
- Hypromag USA 42
- Magiron's Plant 4 47
- Cotec Value Proposition 49

Investment Highlights 51

Competition 53

Historical Financial Results 57

Recent Events 60

Risks and Disclosures 65

Glossary 68

Executive Overview

Note: All amounts are in U.S. dollars unless otherwise specified (C$ denotes Canadian dollars).

CoTec Holdings Corp. ("CoTec" or "the Company") is a forward-thinking mineral resource extraction and Environment, Social, and Governance (ESG)-focused company dedicated to transforming the global metals and minerals industry through innovative technologies and strategic asset acquisitions. The Company's mission is to drive the extraction industry toward a lower-carbon future, aligning with the green revolution spurred by technological advancements. By leveraging the growing demand for sustainable mining solutions, environmentally conscious technologies, and undervalued mining assets, CoTec is poised to become a leading mid-tier disruptor in the commodities sector.

CoTec employs a two-pronged approach to its business: (1) acquiring stakes in disruptive mineral extraction technologies that prioritize efficiency, environmental sustainability, and scalability; and (2) applying these technologies to majority-owned undervalued mineral assets to enhance profitability and operational efficiency. This dual strategy allows the Company to unlock value in previously unprofitable or dormant assets while advancing the transition to a low-carbon economy. CoTec's objective is to build a robust portfolio comprising 10 transformative technologies and 30 to 40 complementary assets.

The Company's strategic approach delivers three key competitive advantages, allowing it to unlock value in previously unprofitable or dormant assets. By leveraging its proprietary technologies, it transforms undervalued, commodity-rich assets into profitable ventures:

(1) Low capital requirements: A cost-efficient entry strategy with minimal upfront investment.

(2) Accelerated revenue generation: Significantly shortens the time to production, achieving revenue within three to five years.

(3) High barriers to entry: Proprietary technology provides a competitive edge and limits market competition.

CoTec's investments prioritize recycling and waste mining. This allows the Company to reprocess existing mining waste and scrap to quickly produce critical minerals and continue production from mining sites that were thought to have outlived their profitability. This "mining what has already been mined" approach accelerates the production of critical minerals, reduces development timelines, and mitigates environmental impact compared to conventional mining.

In addition, CoTec's focus on the acquisition of scalable technologies strengthens its ability to lower the cost of entry and significantly reduce the time to production. The scalable technologies allow the Company to start operations with smaller infrastructure footprints and then ramp up as needed, or move to the next asset once the current one is depleted, avoiding the massive and costly operational infrastructure built-up common in traditional mining methods.

CoTec Revenue Model

CoTec's revenue model is built on two pillars: (1) Equity Appreciation: value growth from its technology investments and mining assets; and (2) Operational Revenue: income generated through the application of these technologies to its mining assets. The Company aims to create value through equity interests and mining projects designed to advance commercial applications, leading to a proportional share of the assets' profits flowing back to CoTec.

CoTec's financing and acquisition strategy emphasizes minimizing shareholder dilution by leveraging non-dilutive funding sources, such as government grants, debt financing, and off-take agreements. The Company's low corporate overhead—with only four full-time employees—ensures operational efficiency, while its disciplined capital allocation is guided by a strong governance framework led by a leadership team with a proven track record of value creation, and a demonstrated record of company-building in a unique space.

CoTec's ESG Commitment

As climate change intensifies, the resource industry is rapidly adopting technologies that align with environmental goals. The demand for green technologies is set to surge, enabling cleaner, more efficient methods for extracting and processing metals and minerals. CoTec believes that the mining industry, as it stands, will not be able to meet future demand, partly due to its historic reluctance to embrace new disruptive technologies. CoTec's approach leverages the growing demand for sustainable mining solutions, driven by global efforts to combat climate change and secure critical mineral supply chains. Aligned with its ESG-focused mission, CoTec's overall strategy aims to achieve the following objectives: (1) reduce environmental impact by prioritizing waste reclamation and recycling; (2) advance green technologies to accelerate the low-carbon transition; and (3) support a circular economy by repurposing mining waste and scrap materials.

CORE OPERATIONS AND ASSET PORTFOLIO

CoTec's investment strategy seeks to acquire or invest in cutting-edge, scalable, high margin mineral extraction disruptive technologies that can be monetized through their application across primary projects, operating mines, and secondary extraction ventures. Its technology portfolio focuses on three key operating groups—**Green Iron**, Critical Minerals, and Copper. The Company currently holds a stake in four companies in the mineral and extraction market, which provides access to their proprietary technology:

(1) Maginito Ltd (HyProMag Ltd) (20.6% stake), focused on rare earth element (REE) recycling to address global supply chain challenges through the application of its Hydrogen Processing of Magnet Scrap (HPMS) proprietary technology.

(2) Binding Solutions Ltd (3% stake), involved in the application of its proprietary **cold agglomeration** process to transform **iron ore fines** into high-quality pellets without high-temperature sintering, reducing its carbon footprint.

(3) MagIron LLC (16.86% stake), engaged in the application of its proprietary technology to advance low-carbon steel production through the revival of a dormant iron ore processing plant (Plant 4); and

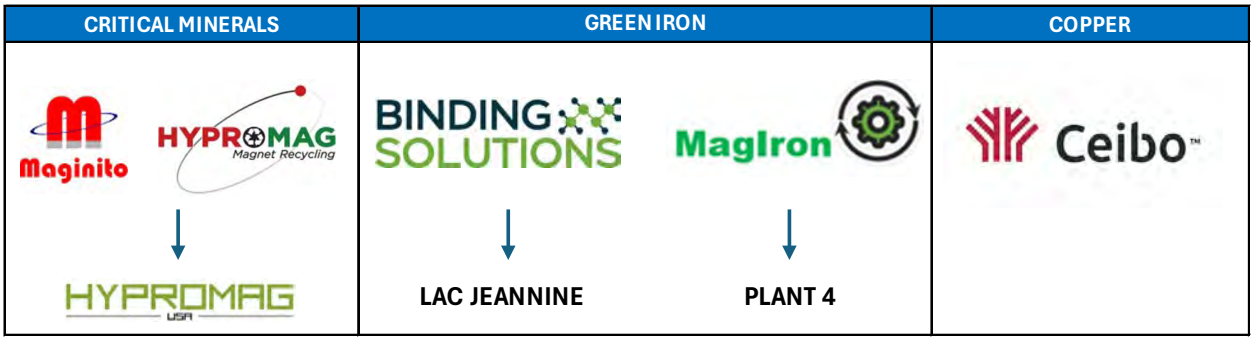
(4) Ceibo (3% stake), involved in the use of its proprietary technology for extracting copper from sulfide ore and waste materials with high recovery rates and minimal environmental impact.

In parallel, CoTec also acquires and operates undervalued, unprofitable, or dormant mining and recycling assets. The Company applies and leverages its technology portfolio to these majority-owned underutilized mineral assets to unlock value, transforming their profitability and operational efficiency.

As shown in Figure 1, (page 5), CoTec's key assets include: (1) Lac Jeannine: A former operating iron ore mine in Quebec, consisting of 31 mineral claims, with potential for reprocessing iron ore fines and **iron ore tailings** into high quality iron **concentrate** and potentially iron pellets; (2) HyProMag USA: A U.S.-based joint venture to deploy the HPMS technology in the U.S. to produce rare earth magnets, securing a domestic supply; and (3) MagIron's Plant 4: A Minnesota-based dormant iron ore processing plant designed to process waste materials into high-grade iron ore concentrate. CoTec is actively evaluating additional acquisition opportunities, including the application of Ceibo's technology to copper assets, as well as other waste reclamation and waste recycling opportunities. The Company is now focused on rolling out its revenue-generating asset opportunities, with the goal of acquiring a total of 10 technologies and 30 to 40 assets, with an emphasis on investments that are complimentary to its current portfolio.

Figure 1

COTEC'S TECHNOLOGY AND ASSET PORTFOLIO



Sources: CoTec Holdings Corp. and Crystal Research Associates LLC.

Maginito Ltd

CoTec's investment in Maginito Ltd represents the Company's entry into the rare earth element (REE) sector. Maginito was established to pursue green technology opportunities in the rare earths supply chain, focusing on **neodymium iron boron (NdFeB) magnet** recycling. Maginito now holds a 50% interest in HyProMag USA LLC, focused on **short loop** rare earth magnet recycling in the USA: 100% interest in HyProMag Limited, focused on short loop rare earth magnet recycling in the UK; a 90% direct and indirect interest in HyProMag GmbH, focused on short loop rare earth magnet recycling in Germany; and a 100% interest in Mkango UK, focused on **long loop** rare earth magnet recycling in the UK via a chemical route.

Maginito, through the operations of HyProMag and its other subsidiaries, aims to generate a sustainably domestic source of rare earth raw material, reducing the global dependance on Chinese REE supply. One of the most valuable uses of REE is permanent magnets, specifically NdFeB magnets, which are considered the strongest magnets commercially available and play a vital role in military, aerospace, electronics, medical, and energy transition applications. China currently holds a dominant position in the global REE market, controlling the majority of the world's rare earth mining and processing capacity. Given the importance of NdFeB magnets to clean energy, national security, and economic prosperity, the U.S. government has been actively engaged in encouraging the creation of a domestic supply chain of rare earth magnets through different government grants, project funding, and initiatives.

HyProMag's core proprietary technology—Hydrogen Processing of Magnet Scrap (HPMS)—is a highly energy efficient hydrogen-based process used to extract and recover NdFeB alloy powders in magnets from end-of-life scrap and redundant electrical equipment, such as computer hard drives and electric vehicles (EV) motors. HPMS allows to reprocess NdFeB permanent magnets in the form of a demagnetized NdFeB alloy powder for remanufacture into recycled NdFeB magnets, with a significantly reduced carbon footprint.

Asset: HyProMag USA

On January 3, 2024, CoTec and Maginito announced a joint venture to apply the HPMS technology into the U.S. market. The venture—HyProMag USA—is to be jointly owned by Maginito and CoTec. This provides CoTec with a 50% direct equity interest and a further 10.3% indirect interest through its 20.6% equity interest in Maginito.

HyProMag USA's feasibility study, based on a manufacturing facility capable of producing up 1,041 **metric tons** of payable production, including 750 metric tons of sintered NdFeB magnets per year, demonstrated robust economics, yielding a post-tax NPV of $262 million and real IRR of 23% at current prices, and post-tax NPV of $503 million and real IRR of 31% when using forecasted prices. The up-front capital cost of the project was estimated at $125 million over a 1.7-year construction phase, with CoTec targeting initial revenue for Q1 2027.

In addition to its environmental and economic benefits, HPMS facilitates the creation of a permanent domestic magnet supply, reducing its dependance on China, a strategic priority for the U.S. government. CoTec is currently involved in discussions with federal, state, and municipal governments, to seek financing opportunities and other economic incentives to support this initiative.

Binding Solutions Ltd (BSL)

CoTec's BSL investment marked its first entry into the green steel space. BSL has developed a proprietary cold agglomeration process that transforms iron ore fines from iron mines/waste dumps into high-grade iron pellets, to support the development of a sustainable green steel industry. The technology, which eliminates the high-temperature sintering process, significantly reduces carbon emissions. This is significant, as steel production is one of the largest contributors to climate change, responsible for approximate 9% of global CO_2 emissions, and 15% of emissions in China.

CoTec has the exclusive right to apply BSL's pelletization technology to ferroalloy and slag waste projects in Canada, Germany, Austria, and the Netherlands for a period of 36 months from the date of the investment agreement.

Asset: Lac Jeannine

CoTec has entered into an option agreement to acquire the Lac Jeannine property in Quebec, comprising of a contiguous block of 31 mineral claims covering an aggregate of 1,649.34 hectares. The property has an estimated 73 million metric tons of resources at 6.7% total iron, resulting in 4.9 million metric tons of contained total iron. In addition, mineral resources in land that is part of the Lac Jeannine acquisition, but which was not included in the estimate, could potentially add 50 to 75 million metric tons at 6.0% to 7.5% total iron content.

Preliminary Economic Assessment (PEA) performed by an independent third party yielded a pre-tax NPV of $93.6 million and an IRR of 38%, while the after tax NPV was estimated at $59.5 million with an IRR of 30%; payback was achieved in 2.5 years. Furthermore, CoTec believes that the PEA results could be understated, as they did not include either the prospects for potential economic support from governments funding opportunities or other economic incentives; nor the additional 50 to 75 million metric tons of material outside the tested area. In addition, the estimate did not incorporate the potential enhanced economic benefits derived from the application of novels technologies, either those currently part of CoTec's technology portfolio (i.e. BSL) or new technologies the Company identifies. These factors could further enhance the economics of the project and improve the project's viability.

The Company plans to conduct a feasibility study in the first half of 2025, assessing the potential economic benefits of additional technology applications. The study is expected to also include an exploratory drilling program aimed at increasing the total mineral resource estimate by incorporating the adjacent tailings area not covered in the original assessment.

MagIron LLC

CoTec expanded its green steel market footprint through its MagIron investment, a company established to support the decarbonization of the U.S. steel industry through the acquisition and restart of an iron ore processing plant (Plant 4) in the midwestern U.S. MagIron has secured land containing more than 193 million metric tons of iron bearing waste material, which is sufficient to support an estimated 20+ years of operation. Furthermore, third-party resource analysis estimated an additional 2.6 billion metric tons of in-situ material with an average iron content of 36.82%.

Asset: MagIron Plant 4

Plant 4 is a past-producing iron ore concentrator plant commissioned in 2015 and designed to process previously discarded waste materials. The plant, benefiting from over $170 million of prior investment, operated for 21 months and displayed a run-rate of approximately 2.0 million metric tons per year. The company has designed an innovative process through disruptive technology that converts waste materials from historical mining operations, such as existing tailings and iron ore fines, into high-grade, low impurity iron ore concentrate. MagIron intends to restart the operations at Plant 4 following completion of a refurbishment program, which is currently anticipated to take approximately 24 months and cost approximately $80 million.

In terms of CoTec's other technology partnerships, the MagIron investment is different in the sense that the technology available through its investment will likely only be used in Plant 4 (and other MagIron activities). This differs from CoTec's other investments. For example, for both BSL and Ceibo, the Company is actively looking for additional assets in which they can apply their proprietary technology.

Ceibo Inc.

Ceibo has developed a proprietary technology that could represent a leading, low-carbon, high recovery process to mine copper from low-grade primary and waste material using a high throughput inorganic **leaching technology**. The application of Ceibo's technology could deliver considerable value through a significant reduction in the time required to bring additional copper into production, a competitive operational cost structure, and a lower environmental and carbon footprint. The novel technology's high recovery rate (70-75%, compared to ~20% for traditional methods) makes extraction of copper from deeper ores economically viable while leveraging existing infrastructure that would otherwise become idle.

Additionally, the technology allows for on-site production of the final product, which not only presents economic benefits, but also has geopolitical implications as it eliminates the need for smelting, a step that normally takes place in China or other Asian countries. This can assist countries like the U.S., Mexico, and Canada, which possess significant copper resources, in re-evaluating closed mines or previously challenging projects.

As a result of the investment, CoTec has a seat on Ceibo's Technical Advisory Board (TAB) and the opportunity to propose JV arrangements regarding the application of Ceibo's technology. CoTec is currently working on the identification of potential operational application opportunities for Ceibo technology. Opportunities identified by CoTec, if pursued by Ceibo, will be done in cooperation with the Company as a joint partner/investor.

COTEC VALUE PROPOSITION

Management believes CoTec's market valuation does not fully reflect its value proposition, with little recognition given to its technology acquisitions and no value assigned to its operational projects and joint ventures. Based on third-party post-tax Net Present Value (NPV) estimates, CoTec's ownership stakes in two key projects total $217.5 million—Lac Jeannine at $59.6 million and HyProMag USA at $262.0 million (with CoTec holding a direct and indirect 60.3% ownership stake). This combined valuation exceeds the Company's current market capitalization.

Additionally, the Company's technological investments hold significant value. CoTec's 20.6% stake in Maginito is expected to generate financial returns through Maginito's operations in the UK and Germany. Moreover, CoTec's initial investments have experienced substantial asset appreciation, as evidenced by recent financial transactions. Further information on the estimated value of CoTec's investments is provided on pages 49-50, under the CoTec Value Proposition section.

CORPORATE INFORMATION (HEADQUARTERS, EMPLOYEES, AND HISTORY)

CoTec Holdings Corp. was incorporated on December 15, 1986, under the laws of the Province of British Columbia, Canada. In its current form, CoTec was launched in April 2022; the Company was previously a listed shell company. CoTec is a publicly traded company listed on the Toronto Venture Stock Exchange (TSX-V) and the OTCQB, and trades under the symbol CTH and CTHCF, respectively. The Company is an ESG-focused investment firm dedicated to advancing disruptive, scalable technologies in mineral extraction. It strategically acquires assets where these innovations can be applied, driving efficiency, sustainability, and long-term value creation. The Company, headquartered in Vancouver, BC, Canada, currently has four full time employees.

Intellectual Property

CoTec's investment strategy seeks to acquire or invest in cutting-edge mineral extraction disruptive technologies that can be monetized through application across primary projects, operating mines, and secondary extraction ventures. Currently, the Company has invested in the following four companies, with an objective to expand to 10 total technologies in the mid-term: (1) Maginito Ltd (HyProMag Ltd) in the critical mineral space; (2) Binding Solutions Ltd in the green iron space; (3) MagIron LLC in the green iron space; and (4) Ceibo in the copper space.

CoTec strategically invests in mining technology companies to gain access to their proprietary innovations, driving efficiency and sustainability in the industry. In some cases, it provides CoTec with exclusive rights to deploy the technology on additional projects through the formation of joint ventures, as sole owners, or as licensees (i.e., BSL and Ceibo). In other cases, CoTec can profit from its investments through the formation of joint ventures with the technology owners (i.e. HyProMag USA) or through the activities of the technology company itself (i.e. MagIron).

Maginito/HyProMag Technology Overview

HyProMag's core proprietary technology—Hydrogen Processing of Magnet Scrap (HPMS)—is a highly energy efficient hydrogen-based process used to extract and recover NdFeB alloy powders from magnets in end-of-life scrap and redundant electrical equipment, such as computer hard drives and EV motors.

CoTec's investment in Maginito allows the Company to profit from the proprietary technology, not only through the operations of Maginito in the UK and Germany, but also through the formation of HyProMag USA, which intends to apply the HPMS technology in the U.S. market. HyProMag USA is to be jointly owned by Maginito and CoTec. This provides CoTec with a 50% direct equity interest and a further 10.3% indirect interest through its 20.6% equity interest in Maginito.

Binding Solutions Ltd (BSL)

BSL has developed a patented and proprietary cold agglomeration process for significantly reducing carbon emissions in iron making, enabling green steel production at scale. BSL technology converts the fine materials from mines/waste dumps into **DR-grade** pellets or briquettes used to produce green steel. According to the Company, its technology is not limited to steel production, with applications for a variety of metals and minerals.

CoTec has the exclusive right to apply BSL's pelletization technology to ferroalloy and slag waste projects in Canada, Germany, Austria, and the Netherlands for a period of 36 months from the date of the investment agreement. Such application would be via one or more joint venture entities that would initially be owned 50/50 by CoTec and BSL and on terms and conditions set out in the investment agreement. Although this arrangement has not been extended past the 36 months, CoTec continues to work with BSL on a case-by-case basis, as it plans to capitalize on its partnership by applying its novel technology to additional projects in specific geographies.

MagIron

In order to support its goal of the restart of Plant 4, an iron ore processing plant, MagIron entered into two transactions for the acquisition of intellectual property assets. The first transaction included a patented Natural pH Flotation Process (the "Rev3 Separator"), patented magnetic separators, and proprietary plant designs combined with common mineral processing techniques controlled with proprietary automation software to produce ultra-high grade iron ore. The second acquisition included selected assets from the receivership estate of Prairie River Minerals, LLC (PRM), providing MagIron with the capability to produce iron ore sinter fines and lump ore using PRM's Ultra-High Density Media technology.

With regard to CoTec's other technology partnerships, its MagIron investment is different in the sense that the technology available through its investments will likely only be used in Plant 4 (and other MagIron activities).

Ceibo

As a result of its Ceibo investment, CoTec has a seat on Ceibo's Technical Advisory Board (TAB) and the opportunity to propose JV arrangements regarding the application of Ceibo's technology. Ceibo has developed and validated a superior leaching process where electrochemical reactions catalyze the oxidation in the primary sulfide ores more quickly and effectively resulting in a faster and cleaner process for extracting **copper sulfides**. The company's chemistry-based approach mimics the way naturally occurring microbial communities liberate copper from sulfide ores, but at an accelerated pace. By altering conditions within the rock pile, including pH and oxidation state, the technology creates an optimal and controllable environment that allows for higher sulfide recovery rates in shorter operational cycles. The novel technology's high recovery rate (70-80% compared to ~20% for traditional methods) makes extraction of copper from deeper ores economically viable while leveraging existing infrastructure that would otherwise become idle. The Company is actively looking for additional assets in which they can apply proprietary technology.

Company Leadership

CoTec Holdings' management team combines deep expertise in strategy, finance, and operations to drive innovation and sustainable growth. With a focus on advancing transformative technologies, the team is committed to delivering long-term value for stakeholders and leading industry evolution. Biographies of its Management Team and Board of Directors are provided in the accompanying section.

Management

Julian Treger, President, Chief Executive Officer and Director

Mr. Julian Treger was previously the Chief Executive Officer of Anglo Pacific Group Plc. During his tenure at Anglo Pacific Group, he executed $450 million of acquisitions, transforming the business from a coal-based royalty business to a battery focused streamer, at the same time increasing income from £3 million in 2013 to close to £62 million in 2021. Mr. Treger also serves as non-executive chairman of Audley Capital Advisors LLP, an investment advisory firm focused on natural resources with a long track record of transforming and unlocking considerable value in the commodities extraction space, including the restructuring and sale of Western Coal Corp, and development of Mantos Copper, which recently merged with Capstone Copper Corp. In addition, he holds external non-executive directorships with MagIron LLC, and BSL plc. Mr. Treger has a BA from Harvard College and an MBA from Harvard Business School.

Abraham (Braam) Jonker, Chief Financial Officer

Mr. Abraham Jonker is an accomplished financial leader in the mining industry with almost 30 years of experience. He currently also serves as the Chief Financial Officer of Century Lithium Corp. (LSE-TSX). Mr. Jonker has played a pivotal role in several business recoveries and restructurings, was a key team member in management and at the board level in the strategic growth of a number of public companies and has participated, raised, and overseen the raising of more than $750 million in debt and equity in the mining industry. He is a registered Chartered Accountant as well as a member of the Chartered Institute of Management Accountants in the United Kingdom. Mr. Jonker holds a Master's degree in South African and International Tax from the Rand Afrikaans University, South Africa.

John Singleton, Chief Operating Officer

Mr. John Singleton has over twenty five years of experience in the mining industry. He started his career at De Beers Consolidated Mines in South Africa as a Senior Geotechnical Engineer, followed by 13 years at Rio Tinto Plc. During his time at Rio Tinto, Mr. Singleton gained extensive operational, commercial, and technical experience across multiple product groups and served in several senior leadership positions in Business Evaluation and Corporate Development. Most recently, he was Head of Corporate Development at Centamin Plc. Mr. Singleton's experience includes business development, strategy and capital planning, mergers and acquisitions, assessment of investment opportunities, project development and valuation. He has worked globally across multiple commodities and has led several multi-disciplined teams. Mr. Singleton is a Fellow of the Royal Geological Society and holds a BSc from the University of Bristol and a MSc in Engineering Geology from Imperial College London.

Eugene Hercun, Vice-President, Finance and Corporate Development

Mr. Eugene Hercun is an accomplished finance professional with over 10 years of progressive and varied experience in the mining space. He has held roles in mid-tier and senior mining producers leading the budgeting and financing functions, metal sales for concentrate and bullion, treasury, hedging, financial reporting, and internal audit. For concentrate sales, Mr. Hercun has lead negotiations for over $200 million in contract renewals annually and successfully positioned the company favorably for commercial terms and risk mitigation. He was a key member of the due diligence team for the SSR Mining-Alacer MOE, and led several high profile integration activities. Mr. Hercun is a registered CPA, CA and pursuing his CFA designation. He holds a Bachelor of Business Administration (Honours) from the Beedie School of Business at Simon Fraser University.

John McGagh, Technology Consultant

Mr. John McGagh has over 35 years of industrial experience spanning a range of commercial and technical global roles. He currently serves as Chief Digital Officer for the Snowy Hydro energy group and most recently served as Head of Innovation for Rio Tinto. Mr. McGagh is recognized for pioneering the introduction of advanced technologies spanning robotics, remote operations, big data modelling, and decision support into the industrial landscape in order to significantly improve performance outcomes. He most recently served as the Australian Chair of the Institute of Chemical Engineers and serves as Vice President IChemE. Mr. McGagh is a fellow of Australian Academy of Technology Science and Engineering and an adjunct professor in the University of Queensland Sustainable Minerals Institute.

Board of Directors

Lucio Genovese, Non-Executive Chairman

Mr. Lucio Genovese has 33 years of experience in both the merchant and financial sector of the metals and mining Industry. He is the CEO of Nage Capital Management in Baar, Switzerland. Mr. Genovese is also Chairman of Ferrexpo plc and a member of the board of directors of Mantos Copper S.A. and Nevada Copper Corp. He was previously employed at Glencore International AG, where he held several senior positions, including CEO of the CIS region and manager of the Moscow office. Mr. Genovese is a Chartered Accountant and has a B.Comm and B.Acc from the University of Witwatersrand, Johannesburg (South Africa).

Julian Treger, President, Chief Executive Officer And Director

Biography on page 11.

Tom Albanese, Non-Executive Director

Mr. Tom Albanese previously served as Chief Executive Officer of Rio Tinto plc from 2007 to 2013 and as Chief Executive Officer and Director of Vedanta Resources plc and Vedanta Limited from 2014 to 2017. He currently serves as non-executive director of Franco-Nevada Corporation and previously served on the Board of Directors of Ivanhoe Mines Limited, Palabora Mining Company and Turquoise Hill Resources Limited and Nevada Copper Corp.. Mr. Albanese holds a Master of Science degree in Mining Engineering and a Bachelor of Science degree in Mineral Economics both from the University of Alaska Fairbanks.

Sharon Fay, Non-Executive Director

Ms. Sharon Fay has over 35 years of experience in the investment industry. For 20 years, she served as a research analyst and portfolio manager, for North American, European and, ultimately, global portfolios for AllianceBernstein. She founded the firm's London office, where she served for 9 years before returning to the U.S. to become Head of Equities. In that role, Ms. Fay led the firm's research analysts, portfolio managers, and traders in re-imagining the active equity practice and achieving organic growth against the backdrop of a shrinking industry. Before retiring from AllianceBernstein in 2021, she served as the firm's first Head of Responsibility. During her tenure, Ms. Fay created a strategy and built the Corporate Responsibility and Responsible Investment teams, propelling the firm as a leader in the field. She is seasoned at evaluating companies' value creation strategies, successfully leading a global business, and attracting, developing, and retaining top talent. In addition, Ms. Fay is a Chartered Financial Analyst and has a BA from Brown University and an MBA from Harvard Business School.

Robert (Bob) Harward, Non-Executive Director

Mr. Bob Harward is a retired United States Navy Vice Admiral (SEAL) and a former Deputy Commander of the United States Central Command. He served on the US National Security Council in The White House and led several multi-national special forces commands in Afghanistan and Iraq. He joined Lockheed Martin in 2014 as their Chief Executive in the UAE and expanded his responsibilities to cover the Middle East, leaving to join Shield AI as Executive Vice President for International Business Development and Strategy based in the UAE.

Erez Ichilov Non-Executive Director

Mr. Erez Ichilov is a New York-based seasoned mining and metals executive, director, advisor, and investor, with a legal and financial background (LLB, MBA). In recent years, he has focused mainly on responsible mining of battery materials and other critical minerals and on sustainable exploration, mining, and processing technologies, enabling the transition to renewable energy sources and electric transportation on route to global carbon neutrality. During his career, Mr. Ichilov was also involved in various capacities in high-tech ventures, energy, logistics and infrastructure investments and projects, as well as gaining deep knowledge of building and operating global supply chains. Since 2012, Mr. Ichilov has served as a Managing Director at Traxys Projects LP, the investments and projects arm of the Traxys Group, a well-established global physical trading house with an annual turnover of ~US $10 billion and approximately 500 employees, where he remains an advisor. At Traxys, he drove the direct and pooled investments into Nouveau Monde Graphite (TSXV: NOU.V), Talon Metals (Nickel) (TSX: TLO) and Nemaska Lithium (exchanged in 2022 for Livent Corp. (LTHM:NYSE) shares), the recycling companies Li-Cycle Holdings Corp. (LICY: NYSE) and Princeton Nuenergy (https://pnecycle.com), Nzuri Copper (ASX:NZC, successfully exited), a private high grade Manganese company in South Africa, and others. Previously, Mr. Ichilov was the Deputy CEO, Corporate Development of the Ferro-Nickel miner and producer Cunico Resources N.V (2008-2012), then a prominent producer of refined ferronickel in its two plants and integrated mines in Kosovo and North Macedonia supplying products to top stainless steel producers around the world. During his term, Cunico also acquired mines in Guatemala and invested, traded, with and funded nickel mines in Indonesia, Philippines, Albania, and Turkey.

Margot Naudie, Non-Executive Director

Ms. Margot Naudie is a seasoned 25-year capital markets professional with expertise as Senior Portfolio Manager for North American and global natural resource portfolios. She has held senior roles at leading multi-billion-dollar asset management firms including TD Asset Management, Marret Asset Management Inc., and CPP Investment Board. Ms. Naudie is the President of Elephant Capital Inc. as well as Co-Founder of Abaxx Technologies Inc. She sits on a number of public and private company boards. Ms. Naudie holds an MBA from Ivey Business School and a BA from McGill University. She is also a Chartered Financial Analyst.

Milestones

In the past 12 months, CoTec has achieved the following milestones as it continues to make significant progress in the advancement of its asset opportunities and technology deployment:

Corporate

- Announced that the Company was included in the 2024 TSX Venture 50™ list, a ranking of the top fifty performing companies on the TSXV over the prior year.
- Engaged San Diego Torrey Hills, Inc. to provide market awareness and investor relations services to CoTec and commenced marketing initiatives in the U.S.
- Expanded its management team, with the appointment of Mr. Erez Ichilov and retired Vice-Admiral Robert Harward to the Board of Directors, as well as Ms. Linda Lourie to the Board of Directors for HyProMag USA LLC.
- Raised aggregate gross proceeds of C$2.75 million through a non-brokered private placement (July 11, 2024) as well as C$975,000 from the exercise of 1.3 million warrants (February 15, 2024).

Lac Jeannine

- Completed an initial Mineral Resource Estimate (MRE) and positive Preliminary Economic Assessment (PEA) for the Lac Jeannine Iron Tailings Project in Québec, Canada, on time and within budget.

  The PEA incorporated the 2023 drill-program, providing an initial Inferred Mineral Resource of approximately 73 million metric tons at 6.7% total Fe for 4.9 metric tons of contained total iron. Though the PEA is based on an initial 10-year life of mine, estimates are the life of mine could be extended by as much as a further 10 years with further drilling and resource definition during the feasibility study in 2025.
- Filed an independent **National Instrument 43-101** technical report entitled “Mineral Resource Estimate, Preliminary Economic Assessment and NI 43-101 technical report for CoTec’s Lac Jeannine Fe Tailings Project, Québec, Canada.”
- Commenced a process to appoint a drilling contractor to support its 2025 exploration drilling campaign.

Maginito/HyProMag USA

- Formed HyProMag USA, a 50/50 joint venture entity between CoTec and Maginito Ltd, which plans to roll out HyProMag Ltd’s Hydrogen Processing of Magnet Scrap (“HPMS”) recycling technology into the U.S.
- HyProMag Ltd entered into an exclusive agreement with Inserma Anoia S.L to commercialize automated processing of hard disk drives, loudspeakers, and electric motors to compliment HyProMag USA and HyProMag’s German and UK future operations.
- Completed and announced the results of an independent feasibility study for HyProMag USA LLC.
- Initiated a “Request for Proposal” process to complete the detailed engineering design, procurement, and construction management (EPCM) phase for HyProMag USA rare earth magnet recycling and manufacturing project.

MagIron/Plant 4

- Signed long-term mineral leases, resulting in aggregate iron-bearing materials secured to support Plant 4 for more than 20 years of operation.
- Successfully produced DR grade iron ore pellets in laboratory testing made from Minnesota **hematite** and **goethite** mineral resources.
- Announced the completion of independent maiden inferred Mineral Resource Estimate (MRE) prepared by Global Minerals Engineering (GME), yielding 2.6 billion metric tons of in-situ material with an average iron content of 36.82% located within land effectively controlled by MagIron.
- The Minnesota Pollution Control Agency granted MagIron an air quality control permit to operate its Plant 4 iron ore concentrator facility, the final permit required to support the restart of mining and processing activities.
- Completed the acquisition of land on which the Reynolds Pellet Plant in Indiana is based, with the end goal to pelletize part of Plant 4's iron concentrate material.

Ceibo

- Partnered with Glencore's (GB:GLEN) Lomas Bayas Mining Company to deploy Ceibo's proprietary leaching technologies at one of Chile's leading mines.
- Completed small- and large-scale leach testing for copper ores.

Figure 2 provides an overview of the milestones, key achievements, and near-term goals as the Company strives to expand its technology and asset portfolios and achieve initial commercialization of its projects.

Figure 2

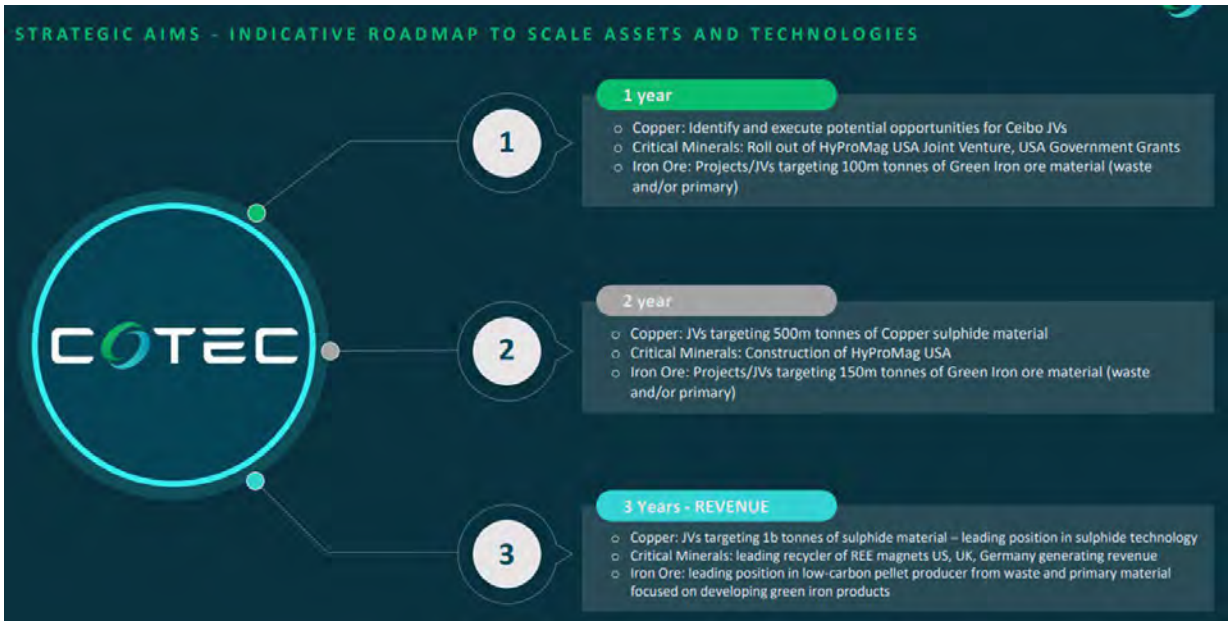
MILESTONES

Source: CoTec Holdings Corp.

POTENTIAL MILESTONES

CoTec's key potential milestones focus on the transformation of the Company from predominant investor to natural resource producer, with first revenue targeted by early 2027. Figure 3 provides a summary of the Company's three-year roadmap, followed by greater details.

Figure 3
ROADMAP



Source: CoTec Holdings Corp.

Corporate

- Identification of one or more application opportunities for BSL's and Ceibo's technologies.

Lac Jeannine

- Commence feasibility study on the Lac Jeannine property by 1H 2025
- Commence exploratory drilling with the objective of upgrading the current inferred resource to include the exploratory material, and expand the current resource tonnage by 1H 2025.
- Explore potential economic support and funding opportunities from federal and provincial governments, strategic partners, and private investors, as well as other economic incentives for the project.
- Undertake a formal request for proposal (RFP) process to solicit vendor quotes to improve the accuracy of the capital cost estimate.

HyProMag USA

- Commence detailed Design and Engineering phase (2025) to deliver further cost savings and design improvements.
- Final site selection for the Dallas Hub as well as the two satellite spoke facilities to be completed in H1 2025 with permitting expected by 4Q 25.

- Conduct parallel product and operational testing in the UK at the University of Birmingham pilot plant in conjunction with HyProMag's commercial developments in UK and Germany.

- Complete commercial arrangements with potential feed supply and product off taker; discussions with several potential parties are underway.

- Continue discussions with federal, state, and municipal governments, in relation to financing opportunities and other economic incentives, including carbon price premiums.

MagIron's Plant 4

- Complete studies and large-scale metallurgy testing to improve the production process **flowsheet** and productivity.

Core Story

Note: All amounts are in U.S. dollars unless otherwise specified (C$ denotes Canadian dollars).

CoTec Holdings Corp. ("CoTec" or "the Company") is a mineral resource extraction and Environment, Social, and Governance (ESG)-focused company dedicated to acquiring and advancing disruptive and innovative technologies that have the potential to fundamentally change the way metals and minerals are extracted and processed. In parallel, CoTec is also involved in the acquisition and operation of undervalued mining and recycling assets. The Company applies and leverages its portfolio of innovative technologies to unlock value in these underutilized assets, transforming their profitability and value.

The Company's overall strategy is based on a two-pronged approach:

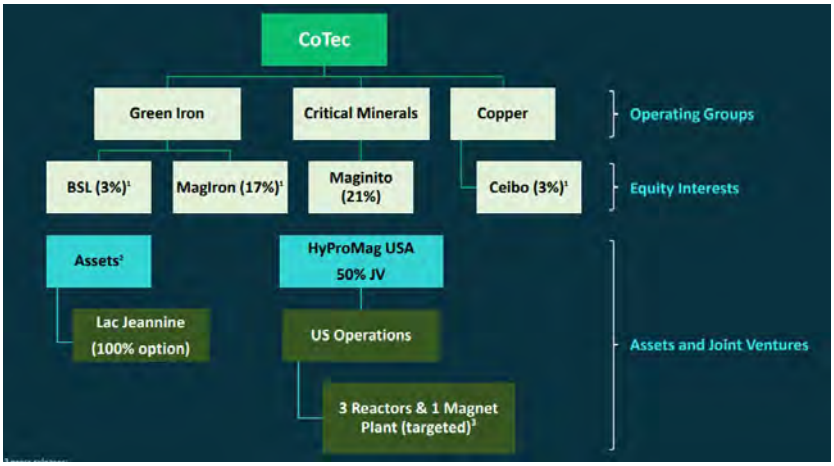
(1) Finding and acquiring stakes and rights in innovative resource extraction technologies; and

(2) Applying one or more of these technologies to majority-owned undervalued mineral-based assets to unlock value.

As shown in Figure 4, CoTec's technologies and assets can be categorized under three key operating groups: (1) Green Iron; (2) Critical Minerals; and (3) Copper. The Company currently holds a stake in four technologies—Maginito Ltd, Binding Solutions Ltd (BSL), MagIron LLC, and Ceibo Inc.—as well as two main value driving assets—Lac Jeannine and HyProMag USA. In addition, CoTec's assets include MagIron's restart of an iron ore processing plant (Plant 4). The Company is actively evaluating additional acquisition opportunities, including the application of Ceibo's technology to copper assets, as well as additional waste reclamation and waste recycling opportunities. CoTec is currently focused on rolling out its revenue-generating asset opportunities. Its medium-term objective is the acquisition of a total of 10 technologies and 30 to 40 assets, with an emphasis on investments that are complimentary to its current portfolio.

Figure 4

COTEC TECHNOLOGY AND ASSET OVERVIEW



Source: CoTec Holdings Corp.

CoTec's investment strategy focuses on acquiring and investing in cutting-edge, disruptive mineral extraction technologies that are scalable, high-margin, and commercially viable. These innovations are leveraged across primary projects, operating mines, and secondary extraction ventures to maximize value and efficiency. These technologies prioritize recycling and waste mining—allowing to reprocess existing mining waste and scrap to generate value from sites that were thought to have outlived their profitability—allowing for the rapid production of critical minerals while accelerating revenue generation and limiting capital expenditure, compared to conventional extraction methods. This allows CoTec to transform undervalued commodity-rich assets into profitable ventures.

REVENUE ROADMAP

CoTec believes that its investment strategy is key to generating value and revenue through two different channels: value from the equity appreciation of its technology investments and operating assets; and revenue through the application of the technologies to its different mining assets. The Company's revenue roadmap, shown in Figure 5, includes the following steps: (1) acquisition of disruptive technology; (2) access to mineral-bearing assets through investments and joint ventures; (3) project evaluation; (4) project implementation; and (5) revenue operations.

Figure 5
COTEC STRATEGIC ROADMAP

Source: CoTec Holdings Corp.

(1) Disruptive Technology

- Acquire stakes and rights in technologies. Technologies are innovative, low carbon, use less water, disruptive, and scalable.

(2) Operating Assets and Joint Ventures

- Identify mineral-bearing assets whose value is low and where disruptive technologies could be deployed.
- Focus on acquiring marginal mines, **brownfield restarts**, waste dumps, and recycled scrap as sole owners, joint venture partners, or licensees.

(3) Project Evaluation

- Fund joint ventures with the technology owners.
- Apply technologies to under-performing assets to unlock value.
- Disciplined approach to capital allocation through strong governance (Investment Committee).

(4) Project Implementation

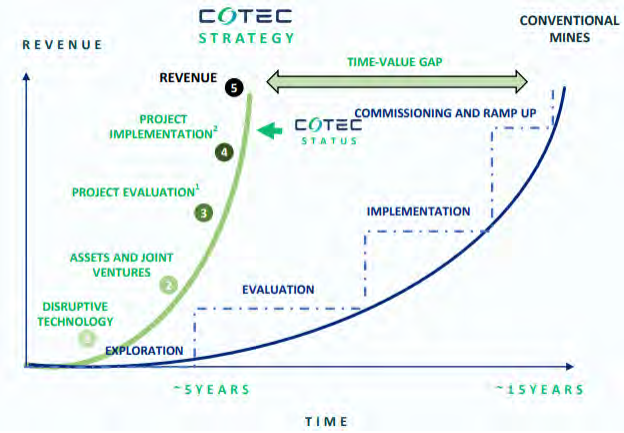
- Detailed engineering and construction with leading engineering design, procurement, and construction management (EPCMs) companies.

(5) Revenue

- Create a revenue-generating portfolio of diversified high-margin, eco-friendly assets in commodities that support green energy transition.
- Retain expansion options through a modular development approach.

Figure 6

PROJECT RAMP UP TIMELINE



Source: CoTec Holdings Corp.

A key advantage of CoTec's strategy is that the application of its disruptive technologies would allow the Company to achieve rapid production of critical minerals while accelerating revenue generation compared to conventional extraction methods, as shown in Figure 6. CoTec is aiming to reduce the development timeline in comparison to conventional mines by capitalizing on the advantages its technologies provide, allowing the Company to focus on recycling and waste mining. This focus on "mining what has already been mined" allows the Company to reprocess existing mining waste and recycle scrap to quickly produce critical minerals and continue the production from mining sites that were thought to outlive their profitability. This strategic approach provides the following benefits:

- Faster and simpler permitting process, as most sites were already operational;
- lower cost of entry by using existing infrastructure and power; and
- lower capital investment to extraction, including access to government funding.

In addition, CoTec's focus on the acquisition of scalable technologies strengthens its ability to lower the cost of entry and speed to production. The scalable technologies allow the Company to start operations with smaller infrastructure needs and then ramp up as needed or move to the next asset once the current one is depleted, avoiding the need for massive and costly operational infrastructure common in traditional mining and extraction methods.

COTEC'S ESG FOCUS

ESG investing, sometimes referred to as responsible or impact investing, is an investment principle that seeks to unlock financial, reputational, and sustainability benefits by prioritizing environmental and social issues through a well-established corporate governance strategy.

CoTec's ESG-focused mission is to pursue eco-friendly and technology-driven opportunities in the minerals extraction industry, and identify and develop opportunities that minimize environmental impact while enhancing operational efficiency. The Company is evolving into a full-fledged operator within the minerals extraction space by focusing on utilizing advanced technologies to add value. CoTec is emerging as a rapidly growing mid-tier disruptor in the commodity extraction industry, committed to advancing the transition to a low-carbon future. This sector stands on the brink of a green revolution, driven by the integration of cutting-edge technologies and innovation.

The pressing issue of climate change and the urgent need to cut carbon emissions are driving the mining industry to adapt. As the sector seeks to meet its environmental goals, the demand for green technologies is expected to surge. The industry is increasingly focused on cleaner and more efficient methods of extracting and processing metals and minerals. Investment in green technologies is expected to follow suit, with funding flowing from green funds, mining giants, and special purpose acquisition companies (SPACs). The adoption of modern technologies can unlock the potential to harvest commodities once deemed uneconomic, such as those in stockpiles, dumps, and heaps. These advancements can also enhance the economics of recycling efforts. By lowering costs and carbon footprints—making green credits available—these innovations can transform marginal primary commodity deposits into commercially viable, higher-margin ventures.

CoTec believes that the mining industry, as it stands, will not be able to meet future demand. To address this challenge, it advocates for a shift in focus towards "mining what has already been mined." Additionally, the Company is also exploring opportunities in marginal assets, which offer distinct advantages.

The Company plans to invest in, license, and own transformative technologies that dramatically reduce carbon footprints compared to traditional methods of metal and mineral extraction, refining, and processing. Its primary focus is on reprocessing existing mining waste and recycling scrap to quickly produce critical minerals, helping to drive a cleaner, circular economy.

CoTec plans to take advantage of the current inertia in the minerals extraction industry and its historic reluctance to embrace new technologies to be more entrepreneurial as it seizes the opportunities to adopt innovative technologies faster than the competition. It aims to create value through equity interests and joint ventures designed to advance commercial applications, leading to a proportional share of the assets' profits to flow back to CoTec.

Financing and Dilution Strategy

CoTec's financing strategy to obtain the required funding for its investments and projects is based on effectively minimizing shareholder dilution. As shown in Figure 7, the Company plans to use current reserves and private placements to cover its operational overhead. However, CoTec's cash burn at the corporate level is relatively low, with a limited employee count. The Company has only four (4) full-time employees, with the execution of its different projects being handled through contractors and engineering design, procurement, and construction management (EPCM) companies, to eliminate the need for large execution teams.

Figure 7
FINANCING STRATEGY

Source: CoTec Holdings Corp.

In terms of financing for individual projects and investments, CoTec plans to focus on non-diluting strategies, such as government financing based on the environmental benefits of its technologies, as well as other strategies that intend to eliminate or minimize dilution, such as debt financing, off take agreements, and royalty laden contracts.

TECHNOLOGY PORTFOLIO

The Company is investing in disruptive and scalable mineral extracting technologies that can change the way minerals can be extracted and processed. These technologies, requiring significantly less energy and water, transform undervalued commodity-rich assets into profitable ventures while focusing on recycling and waste mining.

CoTec is currently focusing on three mining and mineral extraction markets—critical minerals, green iron, and copper—through its stake in four companies that gives it access to their technology, as shown in Figure 8, and detailed in the accompanying section: (1) Maginito Ltd (Hypromag Ltd) in the critical mineral space (20.6% stake); (2) Binding Solutions Ltd in the green iron space (3% stake); (3) MagIron LLC in the green iron space (16.86% stake); and (4) Ceibo in the copper space (3% stake).

Figure 8

COTEC TECHNOLOGY PORTFOLIO

Source: CoTec Holdings Corp.

CoTec continues to assess additional investment opportunities, with the goal of obtaining a total of 10 technologies in the mid-term. The Company has been presented with technologies ranging from innovative battery related technology, arsenic, cyanide, silica, and radioactive material extraction and safe storage, to production of precious metals from catalytic converters. The reverse mining and carbon capture technology opportunities received to date involve gold, platinum, palladium, lithium, coal, iron ore, graphite, ferrous, and some non-ferrous metals.

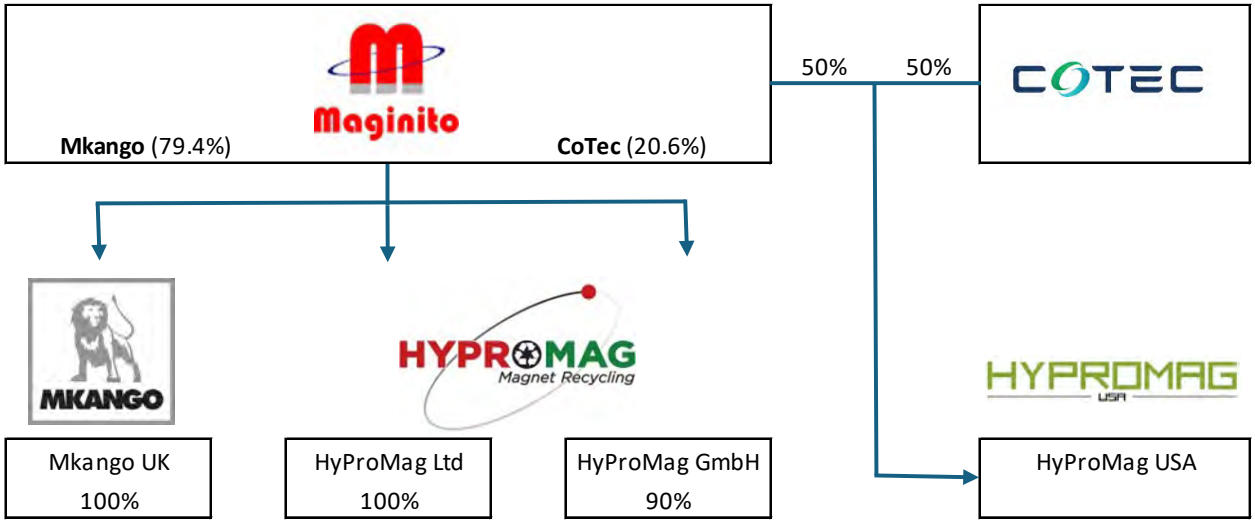
MAGINITO LIMITED (HYPROMAG LTD).

Maginito Limited (Maginito) and HyProMag Ltd represent the Company's investment in the rare earth element (REE) sector. Maginito was established by Mkango Resources Ltd (TSXV/AIM:MKA) (www.mkango.ca) to pursue downstream green technology opportunities in the rare earths supply chain, encompassing neodymium iron boron (NdFeB) magnet recycling and innovative rare earth alloy, magnet, and separation technologies. The company's strategy for value creation is underpinned by the application of its patented process to extract rare earths from recycled material. Maginito strives to obtain access to sustainably sourced primary and secondary rare earth raw materials aimed at accelerating growth in the electric vehicle market, wind power generation, AI, defense, and other industries.

In March 2023, Mkango and CoTec announced that they had closed a £1.5 million investment by CoTec into Maginito for a 10% interest, with an option to increase its equity to 20.6%. Currently, Mkango owns 79.4% of Maginito, with CoTec holding the remaining 20.6%. In connection with the investment, Mkango Rare Earths UK Ltd was transferred to become a subsidiary of Maginito. Maginito now holds a 100% interest in HyProMag Limited (www.hypromag.com) focused on short loop rare earth magnet recycling in the UK, a 90% direct and indirect interest in HyProMag GmbH (www.hypromag.de), a company focused on short loop rare earth magnet recycling in Germany, and a 100% interest in Mkango UK, a company focused on the development of innovative hydrometallurgical technologies and long loop rare earth magnet recycling in the UK via a chemical route.

In addition, Maginito and CoTec agreed to collaborate on the application of its patented process for the extraction and commercialization of downstream rare earth technologies in the U.S., evaluating development of recycling, chemical processing, and alloy and magnet manufacturing. To this end, the companies formed HyProMag USA in Q1 2024, a new U.S. subsidiary of Maginito, to be jointly owned by Maginito and CoTec. This provides CoTec with a 50% direct equity interest and a further 10.3% indirect interest through its 20.6% equity interest in Maginito. Figure 9 provides an overview of Maginito's holdings.

Figure 9
MAGINITO



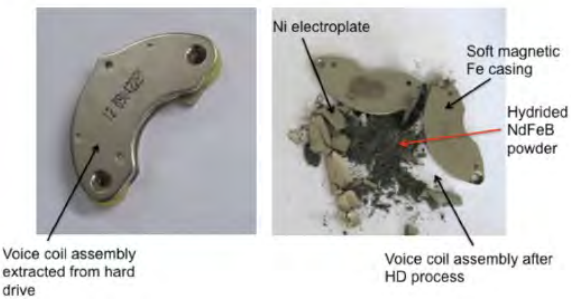
Sources: CoTec Holdings Corp. and Crystal Research Associates LLC.

HyProMag's Hydrogen Processing Of Magnet Scrap Technology (HPMS) Technology

HyProMag's core proprietary technology—Hydrogen Processing of Magnet Scrap (HPMS)—is a highly energy efficient hydrogen-based process used to extract and recover NdFeB alloy powders from magnets in end-of-life scrap and redundant electrical equipment, such as computer hard drives and EV motors.

During HPMS, products are exposed to hydrogen at atmospheric pressure and room temperature. HPMS uses hydrogen exposure to disintegrate NdFeB magnets into a loose, demagnetized powder, which makes it easier to extract. Coatings, screws, and other residues can then be mechanically separated from the powder (Figure 10). The extracted NdFeB powder can be re-processed into new magnetic materials or rare earth alloys, which can be sold back into the supply chain. HPMS allows for the recycling of rare earth magnets in electronics, electric vehicles, robotics, wind turbines, and other applications, with major competitive advantages, including a reduced carbon footprint.

Figure 10
HPMS PROCESS



Source: CoTec Holdings Corp.

The HPMS technology is being developed for both short-loop and long-loop recycling applications, with the produced recycled NdFeB alloy powder manufactured into a magnet (via the short-loop process) or the REE scrap material broken down into basic chemical components for the generation of rare earth carbonate or oxide (via the long-loop chemical process).

The HPMS process was originally developed by the Magnetic Materials Group (MMG) within the School of Metallurgy and Materials at the University of Birmingham at an estimated cost of $100 million and subsequently licensed to HyProMag. HyProMag is aiming to commercialize the HPMS technology in the UK (2025), Germany (2025), and the U.S. (2027), and evaluating other jurisdictions, including a collaboration with Envipro in Japan.

Rare Earth Element (REE) Background

The rare earth elements (REE) consist of 17 metallic elements which are chemically similar. They are soft, malleable, and ductile metals that are usually reactive. REEs are found in the earth's crust and although relatively abundant, they are typically dispersed and not found in concentrations that make them viable to mine. Thus, there are limited sites with REE concentrations that make mining economically feasible.

REEs are necessary components of more than 200 products across a wide range of applications, including high-tech consumer electronics like cellular telephones and computer hard drives; green technologies like wind turbines and electric vehicles; medical technologies like MRIs and laser scalpels; and military defense applications, including electronic displays, guidance systems, lasers, and radar and sonar systems.

One of the most valuable uses of REE is permanent magnets, specifically NdFeB magnets, which are considered the strongest magnets commercially available and provide a host of benefits to wide-ranging applications in consumer and industrial electronics. REE-based magnets play a vital role in aerospace, robotics, AI, electronic, medical, military, and automotive industries. The reliance of a number of green initiatives on REE magnets, such as wind turbines, electric vehicles, and battery technology, coupled with the aggressive decarbonization scenarios, such as those striving toward net-zero carbon emissions by 2050, should result in a rapid growth in the demand for rare earth magnets, both domestically and globally.

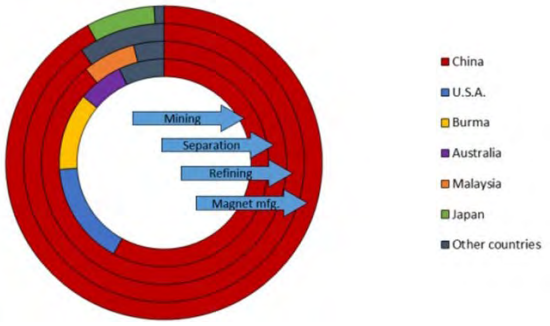
China's Dominance of the Global REE Market

The global REE magnet market size was valued at $19.5 billion in 2024 and is expected to reach $30.3 billion by 2033. Currently, NdFeB magnets account for the majority of the market share due to their strong magnetic fields and high resistance to demagnetization, allowing product miniaturization and compact designs (Source: iMarc's *Rare Earth Magnet Market Report 2025-2033*, 2024).

China currently holds a dominant position in the global REE market, controlling a significant majority of the world's rare earth mining and processing capacity, meaning many countries heavily depend on China for their REE needs. Estimates place China's share of global REE production at 70% or higher (depending on the source) in 2022, while controlling 85% of the global refining capacity. China has a near monopoly over processing of **Neodymium (Nd)** and Praseodymium (Pr), the key metals for EV magnets (Source: Reuters' *China's rare earths dominance in focus after it limits germanium and gallium exports*, December 2023). A 2022 assessment by the U.S. Department of Energy (DOE) stated that China dominates each of the major stages in the supply chain.

Figure 11

GEOGRAPHY OF NdFeB MAGNETS' SUPPLY CHAIN



Source: U.S. Department of Energy.

Even more significantly, China's dominant position increases at every downstream stage, rising from a 58% share of annual global rare earth mining in 2020 to a 92% share of annual global magnet production, the stage with the highest added value, as seen in Figure 11 (Source: U.S. Department of Energy 's *Rare Earth Permanent Magnets Supply Chain Deep Dive Assessment*, February 2022). This dominance gives China significant leverage in international markets, as disruptions to their REE exports could impact various industries across the globe.

U.S. Efforts to Secure REE Magnets' Supply Chain

Given the importance of NdFeB magnets to clean energy, national security, and economic prosperity, the U.S. government has been actively engaged in encouraging and incentivizing U.S. production and improving the resilience of the NdFeB magnet domestic supply chain.

In 2020, President Donald Trump signed an executive order declaring a national emergency in the mining industry, aimed at incentivizing the domestic production of REE critical for military technologies, while reducing American dependence on China. The following day, Ellen Lord, Undersecretary of Defense for Acquisition and Sustainment, mentioned in its testimony to the Senate's Armed Services committee, that "U.S. rare earth mineral strategy should consist of national stockpiles of certain rare earth elements, reestablishing rare earth mineral processing in the U.S. by implementing new incentives and removing disincentives, and research and development around new forms of clean rare earth mineral processing and substitutes"(Source: Foreign Policy Research Institute, 2020).

The U.S. dependence on China's produced REE material, which is critical for defense applications and weapons systems, has prompted the U.S. Department of Defense (DOD) to allocate more than $439 million since 2020 to support companies and initiatives aimed at achieving a domestic "mine-to-magnet" REE supply chain. REE permanent magnets are essential components in a range of defense capabilities, including the F-35 Lightning II aircraft, Virginia and Columbia class submarines, unmanned aerial vehicles, Tomahawk missiles, a variety of radar systems, and smart bombs (Source: U.S Department of Defense). The DOE has also directed research and development (R&D) funding to help secure the domestic supply chain of critical materials that are used to build clean energy technologies, including $30 million announced in 2021 for 13 national labs and university-led research projects.

In February 2021, President Biden signed the "Executive Order on America's Supply Chains" (EO 14017), directing executive agencies to evaluate the resilience and security of the nation's critical supply chains and to craft strategies for the industrial bases that underpin America's economic and national security. This was followed by a White House announcement on May 16, 2024, stipulating that beginning on January 1, 2026, the U.S. Government will impose a 25% tariff on imports of Chinese permanent magnets. The current Trump administration could also apply additional tariffs or advance the timeline of this effort.

However, China's control of the global REE market has not lessened, with China maintaining leadership in the downstream industrial supply chains of processing, refining, and magnet production. Although REEs were first discovered and put into use in the U.S., production gradually shifted to China behind lower labor costs, less concern for environmental impacts, and generous state subsidies. In addition, China's large investment in REE processing technologies gave the country a technical advantage as well. On December 2023, China banned the export of technology to extract and separate REE, a further step towards protecting its dominance in this market. Beijing continues to seek control of the REE market through foreign acquisitions as well, importing REE materials from other countries. It already owns a facility in Vietnam and has been seeking to acquire mining sites in Greenland, with Chinese Shenghe Resources Holding Company becoming the largest shareholder in Greenland Minerals Ltd. (Source: Foreign Policy Research Institute, 2020).

Technology Challenge

China's control of the REE supply chain has prompted an increase in R&D investments focused on discovering novel technologies that could help build a REE supply chain independent of China (Source: Wilson Center's *Mine the Tech Gap: Why China's Rare Earth Dominance Persists*, August 2024). One possibility to alleviate this issue is the recycling of REE material. Today, little REE material is recycled, partly due to the technological difficulties in separating magnets from waste streams. For example, removing an NdFeB magnet contained within a computer hard disk drive would require the removal of security screws and of the magnet, which is glued in place and coated in nickel. A vast majority of electronic and automotive waste streams are shredded today, which causes the contained NdFeB magnets to break up into magnetized NdFeB powder, which then sticks to the ferrous scrap and the shredder itself. By recycling NdFeB magnets, HyProMag can actively contribute to reducing the dependence on China and can offer a sustainable and clean alternative for the extraction of magnets and magnetic powder, providing a new source of these essential materials.

HPMS Advantages

According to CoTec, HPMS has significant competitive advantages versus other rare earth magnet recycling technologies, which are largely focused on chemical processes but do not solve the challenges of liberating magnets from end-of-life scrap streams. Figure 12 provides an overview of HPMS' advantages.

Figure 12
HPMS ADVANTAGES

- Enables REE recycling processing from end-of-life electronics, EVs, robotics, wind turbines, and other, with 200 to 500 metric tons per year of scrap expected by 2035.
- Provides rare earth magnets and alloys with reduced carbon footprint, significantly reducing the harmful impact of primary REE production.
- Enables energy efficient extraction (up to 90% energy savings) and shortened processsing timelines based on the use of demagnetized NdFeB magnet powder embedded in scrap.
- Provides a secure domestic source of REE permanent magnets independent of political influences, reducing the dependance on Chinese supply, a strategic priority for the U.S. government.

Sources: CoTec Holdings Corp. and Crystal Research Associates LLC.

In contrast to the chemical or **pyrometallurgical** routes, HPMS makes it possible to reprocess the extracted materials directly from the NdFeB alloy, thus creating shortened processing routes while significantly reducing the harmful impact of primary REE production. Compared to primary production, the output is increased by 25%, which simultaneously enables up to 90% energy savings and 98% less human toxicity compared to virgin magnet production. This is coupled with the ability to manufacture rare earth alloys and magnets with significantly reduced carbon footprint.

In addition to its environmental and economic benefits, HPMS also allows for the production of NdFeB magnets in the U.S. using traceable materials sourced in the country, contributing to the creation of a permanent domestic magnet supply that will support the defense, aerospace, automotive, medical science, hyperscale data centers, robotics and energy transition industries, reducing its dependance on Chinese REE supply.

Development Activities of HyProMag's HPMS Technology

Through the activities of its subsidiaries, HyProMag is focused on driving the application of its HPMS technology beyond pilot plants, aimed at the creation of large-scale processing plants to provide a sustainable solution for the supply of NdFeB magnets and alloys for a wide range of markets. The first such project is the development of a short loop recycling facility for NdFeB magnets at Tyseley Energy Park in Birmingham, UK, with the first production test runs completed, and the start of commercial operations expected for H1 2025. The plant is being developed together with the University of Birmingham, with the £4.3 million project being funded by Driving the Electric Revolution, an Industrial Strategy Challenge Fund delivered by UK Research and Innovation (UKRI). The main commercial product is expected to initially be a recycled NdFeB alloy for magnet manufacturing or for chemical processing by third parties, with initial commercial production capacity expected at an approximate rate of 25 to 30 metric tons per year based on 20% capacity utilization for the first few months, with approximately two months of NdFeB scrap supply currently in inventory. Full production capacity is expected to be at a minimum of 100 to 330 metric tons per year.

In addition, HyProMag GmbH (HyProMag's German subsidiary) is developing a similar plant to the one at Tyseley Energy Park, expected to be the first REE processing plant in Germany using the patented HPMS process, with production targeted for 2025. In addition, in parallel with the short-loop process being commercialized by HyProMag and its subsidiaries, Maginito subsidiary Mkango Rare Earths UK recently commissioned a pilot facility for long-loop chemical recycling of REE products not suitable for the short loop process.

HyProMag is also expanding the application of its HPMS technology into the U.S. market with the creation of HyProMag USA LLC (Q1 2024), a new U.S. subsidiary of Maginito, to be jointly owned by Maginito and CoTec. HyProMag USA has completed feasibility studies, is in the final stages of U.S. plant site selection, and is in initial discussions with U.S Government entities to secure grants and support the U.S. critical minerals supply chains. A detailed description of HyProMag USA activities is provided in the Asset Portfolio section, on pages 42-46.

Inserma Anoia, S.L. Collaboration

In September 2024, Maginito entered into a binding and exclusive agreement with Inserma to collaborate on the optimization, commercialization, and roll-out of pre-processing technologies for HyProMag in the UK, Germany, the U.S., and other regions. Inserma technologies include a range of automated pre-processing systems for rare earth magnets containing scrap streams complementary to HyProMag's HPMS technology.

This collaboration will initially be focused on the pre-processing of hard disc drives (HDDs), providing a rapid, automated, and scalable solution for the removal of the REE magnets from the HDD, which can then be fed directly into HyProMag's HPMS for REE magnet recovery. Inserma's pre-processing mobile units for HDD can be co-located at hyperscale data centers, shredding, recycling, or HyProMag facilities. These units rapidly remove (in less than 3 seconds per HDD) the HDD's voice coil motor (VCM) containing the rare earth magnet, providing a highly concentrated feed for a subsequent short loop HPMS recycling process, while creating a sustainable, secure, and low-cost recycling method of HDDs. The ultimate goal of the collaboration is to enable the deployment of hundreds of pre-processing units, across multiple jurisdictions, providing solutions for a range of end-of-life applications, including HDDs, loudspeakers, and electric motors, among other REE containing scrap material. The agreement includes the purchase of an initial three units for pre-processing HDDs by HyProMag and related institutions for the UK, Germany, and the U.S. markets.

HyProMag and the Mineral Security Partnership (MSP)

HPMS competitive advantages has prompted HyProMag to be one of the first projects to be selected by the Minerals Security Partnership (MSP) for support as one of its key projects. The MSP is a collaboration of 14 countries and the EU to accelerate public and private investment in responsible global critical minerals supply chains. MSP aims to accelerate the development of diverse and sustainable critical energy minerals supply chains projects, as well as to advance and accelerate the development of new technologies through financial and diplomatic support from its members. MSP partners include Australia, Canada, Estonia, Finland, France, Germany, India, Italy, Japan, Norway, the Republic of Korea, Sweden, the UK, the U.S., and the European Union (represented by the European Commission).

Examples of the collaboration between HyProMag and MSP are highlighted in two U.S. Department of State joint statements on MSP meeting activities:

- October 10, 2023—The theme of the meeting was the responsible investment in critical minerals, with the objective to strengthen collaboration between the MSP, like-minded partners, and the global financial community. HyProMag's HPMS recycling technology was one of the four projects highlighted on the announcement, strengthening HyProMag's position as one of the key projects MSP partners are working to advance (Source: The U.S. Department of State's *Joint Statement on the Minerals Security Partnership [MSP] Announce Support for Mining, Processing, and Recycling Projects*).

- December 12, 2024—The meeting, led by the Republic of Korea and the U.S., convened government officials and private sector investors, and focused on advancing and accelerating REE MSP projects, as well as identifying new responsible mining, processing, and recycling projects for critical minerals in MSP Forum member jurisdictions. At Korea's-led MSP Project Deep Dive meeting, participants discussed the challenges to develop specific MSP projects, where once again HyProMag's REE recycling project in the UK, Germany, and the U.S. was highlighted (Source: The U.S. Department of State's *Joint Statement on the High-Level Minerals Security Partnership Forum Events in Brussels*, December 2024).

BINDING SOLUTIONS LTD

CoTec green iron investment began in Q1 2022 with an equity investment in Binding Solutions Ltd (BSL), a fast-growing technology company that has developed a patented and proprietary cold agglomeration process for significantly reducing carbon emissions in iron making, enabling green steel production at scale. The Company's current equity stake in BSL stands at 3%. BSL's technology converts the fine materials from mines/waste dumps into ISO-compliant pellets or briquettes ready for furnace usage to produce green steel (Figure 13).

Figure 13

BSL TECHNOLOGY

Source: CoTec Holdings Corp.

CoTec has the exclusive right to apply BSL's pelletization technology to ferroalloy and slag waste projects in Canada, Germany, Austria, and the Netherlands for a period of 36 months from the date of the investment agreement. Such application would be via one or more joint venture entities that would initially be owned 50/50 by CoTec and BSL and on terms and conditions set out in the investment agreement. CoTec and BSL are targeting the production of DR-grade iron ore pellets to support the development of a sustainable green steel industry at almost zero per cent carbon emissions, compared to the traditional **induration** processes. Although this arrangement has not been extended past the 36 months, CoTec continues to work with BSL on a case-by-case basis.

Steel Market Overview–Green Steel

The global steel market size was estimated at $1,469.0 billion in 2023 and is projected to grow at a CAGR of 5.3% to $2,009.5 billion by 2030, behind a rising need for sustainable, durable, and low-cost materials for the construction industry (Source: Grand View Research's *Steel Market Size & Trends*, 2024). The competitive landscape of the global steel industry is evolving, with companies adapting to shifting economic and environmental priorities. Steel is essential to modern life; however, the steel industry plays a significant role in generating global greenhouse gas emissions due to its high-energy production processes.

Steel production is one of the largest contributors to climate change, responsible for approximate 9% of global CO_2 emissions and 15% of emissions in China. Over the years, China, the world's biggest steel producer, has increased production and flooded the markets with cheap steel. Steel production's main carbon emission occurs during the reduction of iron ore in blast furnaces, a carbon-dependent process that is expected to dominate the global market for the near future, with the steel industry not on track to stay in line with global emissions targets reduction goals.

One of the most effective ways to reduce the emission levels of the sector is to use recycled steel scrap, which greatly reduces the consumption of mineral and energy resources during the production process. Steel scrap can not only make the steel industry less carbon-intensive, but it can also help solve raw material shortage problems (Source: Statista's *Steel industry - Statistics & Facts*, 2024). As such, the use of recycled scrap steel is at the forefront of the expected growth in green steel production, as the world tries to shift to low-carbon steel. Green steel is steel made using low-carbon technologies like renewable energy and hydrogen reduction, with the ultimate goal of producing steel without using any fossil fuel.

The global green steel market was valued at $3.75 billion in 2024 and is projected to grow to $129.08 billion by 2032, exhibiting a CAGR of 55.6%. North America dominated the green steel market with a market share of 58% in 2023. The growth is driven by stricter environmental regulations, as well as increased consumer demand for more sustainable products. Rising investments in green construction are anticipated to present lucrative opportunities for the market to grow further, with many leading companies and governments investing millions of dollars and having

pledged to invest billions to develop sustainable technology to produce carbon-free steel (Source: Fortune Business Insights' *Green Steel Market Size, Share, and Industry Analysis, 2024-2032*, 2023).

Examples of these investment initiatives include 50 companies joining together and pledging to buy aluminum, steel, and other commodities with little to no carbon at the World Economic Forum in 2022; as well as the U.S. Department of Energy announcing an investment of $6.4 billion for 33 projects in over 20 states to decarbonize energy-intensive industries. These projects will be funded by the President's Bipartisan Infrastructure Law and Inflation Reduction Act. Such initiatives are poised to create demand for green products and motivate suppliers to invest in sustainable solutions.

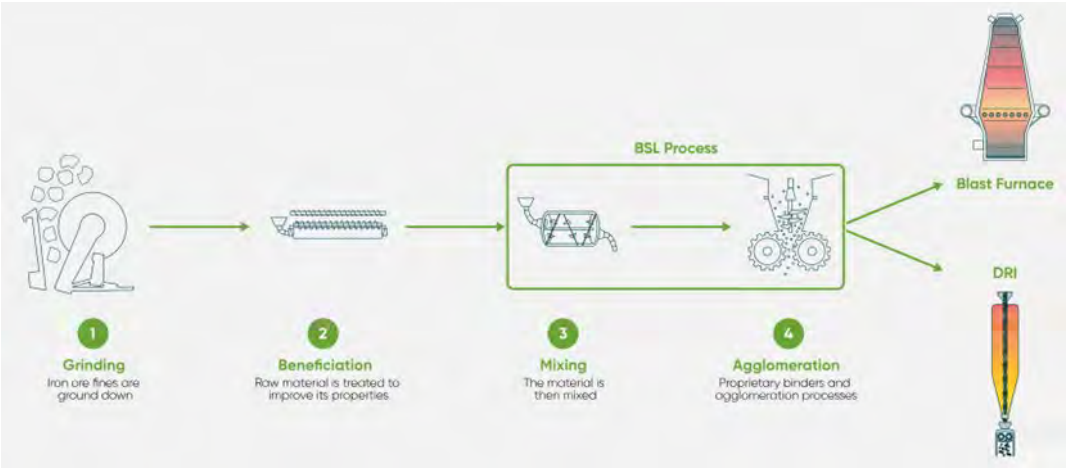
BSL's technology contributes to the production of green steel at scale. Annual emissions from the steel industry are estimated as equivalent to 2.6 billion metric tons per year (Source: Worldsteel Association), so BSL's technology could prevent the emission of up to 390 million tons of carbon per year. This is equivalent to the total annual emissions of South Africa or approximately 1% of global emissions every year.

BSL Technology

BSL has developed a patented and proprietary cold agglomeration process for significantly reducing carbon emissions in iron making, enabling green steel production at scale. BSL technology converts the fine materials from mines/waste dumps into DR-grade pellets or briquettes used to produce green steel. According to the company, its technology is not limited to steel production, with applications for a variety of metals and minerals.

During conventional iron making processes, iron ore fines are first agglomerated and heated to 1,000°C or more to create pellets or sinter. BSL's cold agglomeration technology uses proprietary organic polymer binders and agglomeration processes to produce cold agglomerated iron pellets (CAPs) without using high temperatures, thus saving energy, and reducing emissions compared to existing processes. BSL's CAPs can be used to replace standard indurated materials in all current and emerging iron making processes, including the production of direct reduced (DR) and **blast furnace (BF)** pellets from iron ore concentrate. According to the company, its cold agglomeration process has the potential to replace the need for induration, which is very energy intensive and accounts for approximately 15% of carbon emissions from the global steel industry. BSL's innovative technology reduces process complexity, lowers capital requirements, and significantly cuts emissions of atmospheric pollutants by replacing traditional technologies (induration) in iron and steel making. Figure 14 provides an overview of BSL's cold agglomeration process.

Figure 14
BSL TECHNOLOGY PROCESS



Source: Binding Solutions Limited.

BSL's Cold Agglomeration Advantages

BSL is playing an important role in reducing emissions from steel production by replacing existing pelletizing technologies to provide a low carbon source of premium pellets to meet growing demand. BSL has commercially proven its technology at a major steel plant in the UK, resulting in significant environmental, commercial, and performance benefits along the iron ore and steel production chain.

Environmental

BSL's cold agglomeration technology replaces traditional sintering and induration processes, which involve heating primary materials to 1,000°C or more and account for approximately 15% of carbon emissions from the global steel industry, resulting in the following environmental advantages:

- Reduction of up to 80% in energy usage.
- Reduction of up to 70% in carbon dioxide (CO_2) emissions.

Commercial

BSL's technology delivers significant commercial benefits for miners and pellet producers by:

- Upgrading fines into higher value products that meet industry specifications (ISO), cutting waste and enabling production from previously uneconomic deposits.
- Delivering large reductions in capex of up to 86% per 1 metric ton per year of production.
- Enabling rapid scalability through its modular processing approach.
- Providing the ability to build a cost-effective small-scale plant.

Performance

BSL's cold agglomerated pellets deliver performance improvements over indurated pellets in the steel furnace:

- Greater productivity as the reduction point is achieved more rapidly.
- Improved operational stability by cutting levels of fine waste material.

BSL Plants

BSL has built a dedicated Technology Centre located in Teesside, UK on the Materials Processing Institute's campus, a leading European steel center. The BSL Technology Centre includes a sophisticated pilot plant, where it works with leading iron ore miners and steel producers to test various iron ore types and refine its patented low-energy, cold binding process. The pilot plant, commissioned in August 2023, can operate continuously and produces up to two tons of CAPs per hour for large scale furnace trials.

To meet the continuing growth in customer demand, the Company is planning a full-scale commercial demonstration plant to produce commercial volumes (10 kilotons to 50 kilotons per hour) of high value iron ore pellets. In 2023, BSL raised $17.5 million from Australian-based Mineral Resources Limited to progress the design and construction of its industrial scale plant. BSL continues to advance its feasibility study and design of the full-scale plant, including evaluating several options for the location of the plant in the UK, Europe, and Australia, and is in discussions with several of its iron ore and steelmaking customers to partner on this project.

CoTec's Investment Overview

CoTec invested $2 million into BSL at a pre-money valuation of $75 million and had the option to invest a further $2 million at a maximum valuation of $130 million, an option that the Company exercised through a further investment of C$684,000 in 2023, raising its stake in BSL to 3%.

BSL received an equity investment from Mitsui at a valuation of $130 million and most recently by Mineral Resources Limited (Aug. 4, 2023) at a higher valuation of $158 million. This valuation represents a 107% increase over the $75 million valuation at which CoTec made its initial investment.

MAGIRON LLC

In May 2022, CoTec entered into an agreement to acquire 15.8% equity interest in MagIron LLC for $2 million. MagIron was established to support and accelerate the decarbonization of the U.S. steel industry through the acquisition and restart of an iron ore processing plant (Plant 4) in the midwestern U.S. designed to process previously discarded waste materials. In May 2023, CoTec increase its equity interest in MagIron to 16.89% through additional investments. CoTec's investment in MagIron expands its interest in the green steel market following the investment in BSL at the beginning of 2022.

Purchase of Plant 4

In May 2022, MagIron completed the acquisition of a dormant iron ore concentrator known as Plant 4 (Figure 15) based in Grand Rapids, Minnesota, as well as 2,483 acres of land in the surrounding area containing fine and coarse iron ore tailings. MagIron also leased an additional 1,700 acres of land, which houses Plant 4 and facilitates access to additional iron ore fines and tailings. MagIron acquired Plant 4 from the Chapter 7 Trustee for ERP Iron Ore (which in turn had acquired the plant and other assets from Magnetation LLC at a 2016 bankruptcy auction) for a purchase price of $4.5 million. Under the terms of the deal, MagIron is expected to provide a royalty of $2 per dry metric tons of concentrate produced capped at $15.5 million to settle the claims of certain lienholders over the property. MagIron intends to restart the operations at Plant 4 following completion of a refurbishment program, which is currently anticipated to take approximately 24 months and cost approximately $80 million.

Figure 15
PLANT 4

Source: MagIron LLC.

Plant 4 is designed to process previously discarded waste materials from historical mining operations, such as existing tailings and iron ore fines, and convert it into high-grade, low-impurity DR grade iron ore concentrate. Given the significant historical mining operations across the Mesabi Iron Range in northern Minnesota, there are vast amounts of waste material within close proximity to Plant 4 that can be used as feedstock. Through this acquisition and additional land leasing activities, MagIron has secured more than 193 million metric tons of iron bearing waste material, which is sufficient to support an estimated 20+ years of operation producing 2.5 million dry metric tons per year of high-grade DR iron, which is a key ingredient for green steel.

In June 2022, MagIron expanded the project's footprint with the acquisition of selected assets from the receivership estate of Prairie River Minerals, LLC (PRM), for total cash consideration of $2.6 million and assumption of $6.05 million of debt. The acquisition provides MagIron with additional infrastructure that allows it to produce iron ore sinter fines and lump ore using PRM's Ultra-High Density Media technology, which would accelerate the generation of positive cash flows, subject to market conditions.

Detailed information regarding MagIron's development activities with regard to the acquisition and refurbishing of Plant 4, including the purchase and leasing of iron-bearing material lands, is provided in the Asset Portfolio section on pages 47-49.

Technology Acquisition

MagIron is at the forefront of advancing the decarbonization of the U.S. steel industry. The company has designed an innovative process through disruptive technology that converts waste materials from historical mining operations into high-grade iron ore concentrate. The initial technology acquisition occurred at the same time as the original deal to acquire Plant 4. In addition to the Plant 4 transaction, MagIron also entered into a purchase agreement for intellectual property related to the iron ore concentrate process for a cash payment of $325,000 and a royalty of $2 per dry metric ton of concentrate produced by Plant 4, capped at $10 million.

The intellectual property utilizes a patented Natural pH Flotation Process (the "Rev3 Separator"), patented magnetic separators, and proprietary plant designs combined with common mineral processing techniques controlled by proprietary automation software to separate hematite and goethite from non-magnetic minerals (primarily silica) to yield ultra-high grade iron ore. The intellectual property allows for the efficient production of fine-grained iron ore concentrate with a silica content of approximately 2%. The Rev3 Separator also results in lower downtime due to its simple carousel design and discrete matrix media that allows for the free flow of material, which prevents plugging and clogging, resulting in overall improved efficiency.

CoTec Investment Overview

CoTec believes that a significant value driver of its investment in MagIron is the replacement value of the assets together with the 20-year life of operation of Plant 4. MagIron acquired the plant at a nominal value relative to its original cost of several hundred million dollars, providing a significant capital advantage. With an appropriate funding structure, the plant has the potential to generate value for MagIron and indirectly CoTec.

There is a significant amount of waste material within close proximity to Plant 4 to support a multi-decade business plan to produce DR grade concentrates and iron oxide pellets for green steel production. Currently, MagIron has secured access to enough feedstock to support an estimated 20 to 25 years of operation. In addition, there is an estimated 2.6 billion metric tons of in-situ maiden iron ore material within land effectively controlled by MagIron.

The value of CoTec's investment has appreciated over tenfold. On June 24, 2022, MagIron issued a convertible note for $5 million at a pre-money valuation of $30 million, representing an increase in valuation of approximately 130% from CoTec's initial investment. More recently, MagIron raised $1 million at a pre-money valuation of $200 million from insiders. This is over a 10x uplift from the $13.3 million post-money valuation at the time of CoTec's initial investment.

In terms of CoTec's other technology partnerships, its MagIron investment is different in the sense that the technology available through its investments will likely only be used in Plant 4 (and other MagIron activities). This differs from its other investments. For example, for both BSL and Ceibo projects, the Company is actively looking for additional assets in which they can apply the proprietary technology.

CEIBO INC.

On May 2023, CoTec invested $1.5 million into Ceibo, Inc, a Delaware company with a Chilean operating subsidiary, which has been developing technologies for the mining industry for more than a decade, representing a 3% equity and marking the Company's entry into the copper mining sector. As a result of the investment, CoTec has a seat on Ceibo's Technical Advisory Board (TAB) and the opportunity to propose JV arrangements regarding the application of Ceibo's technology.

Ceibo has developed a proprietary technology that could represent a leading, low-carbon, high recovery process to mine copper from low-grade primary and waste material using a high throughput inorganic leaching technology. The application of Ceibo's technology could deliver considerable value through a significant reduction in the time required to bring additional copper into production, a competitive operational cost structure, and a lower environmental and carbon footprint, increasing copper production while minimizing environmental impact through the use of a technology protected by a high technical barrier to entry.

Copper Market and Mining Background

The global copper market is projected to grow from an estimated $267.39 billion in 2025 to $341.96 billion in 2030, a CAGR of 5.03%. The market increase is expected to be driven by the growth of the electric vehicles (EVs) industry, clean and renewable energy, the rising manufacturing and industrial sector, and an increase in the real estate sector (Source: ResearchandMarkets' *Copper Market - Forecasts from 2025 to 2030*, 2024). Copper forms the backbone of the clean-energy economy, an essential component of solar panels, wind turbines, battery technology, and EVs. EVs, for example, use three times more copper than internal combustion engine (ICE) vehicles. Demand for the metal in these and other cleantech applications is expected to nearly triple by 2040 (Source: MIT's *Technology Review*, 2024).

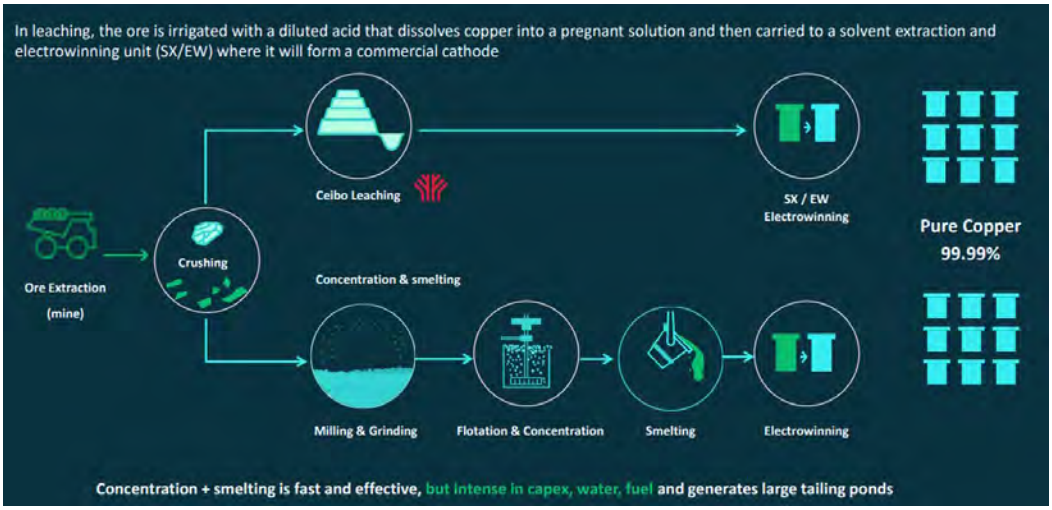
However, this growth presents a problem of increasing demand and decreasing output. With many of the best-quality and easily accessible ore deposits already exhausted, much of the copper that remains is locked deeper in the ground, where copper concentrations are lower, making it more complicated to extract. The average ore grade, which measures copper content per ton of ore, has declined from 1.2% 20 years ago to 0.6% today. This means twice as much ore is now required to produce the same quantity of copper (Source: Sightline Climate's *Copper extraction action with Ceibo*, 2023). As demand for copper increases, projections indicate a shortfall of seven million metric tons within the next 10 years and 20 million metric tons within the next 20 years, with global copper mines projected to only meet 80% of the world's copper demands as soon as 2030. Copper recently reached its highest-ever price, ballooning above $11,000 per metric ton on the London Stock Exchange, strictly due to investors anticipating supply shortages (Source: The Week's *A massive copper shortage is on the horizon*, June 2024).

Copper Processing Overview

Copper extraction primarily involves two technologies: leaching and concentration (Figure 16 [page 34]). Leaching involves crushing the rock and building a heap, which is then irrigated with a chemical solution (normally an acid) to dissolve the copper. As acid percolates through the rock, the copper dissolves and leaches out. The resulting solution is rich in copper ions, which are then deposited onto plates using electricity. Although leaching is considered to be the cleanest and lower-carbon intensive process, it only represents about 20% of the world's copper production, as it is normally only applied to **copper oxide** ores.

Figure 16

COPPER MINING



Source: CoTec Holdings Corp.

The remaining 80% of the world's copper comes from copper sulfide ores, which do not dissolve well in acid. To extract that copper, a more energy- and water-intensive process, called concentration, is needed. Concentration involves crushing the rock into a very fine powder and then introducing chemical reactions to create a concentrate. That concentrate is then shipped to a smelting facility, usually in Asia, and refined into the final copper product. This process is fast and effective but also energy and capex intensive. In addition, the leftover materials from this process are typically stored in tailings ponds, which have negative environmental impacts. Furthermore, China possesses around 50% of the global smelting capacity, making it a significant bottleneck in the production process (Sources: MIT's *Technology Review*, 2024; and Sightline Climate's *Copper extraction action with Ceibo*, 2023).

Ceibo's Technology

Leaching technology has traditionally been used to extract copper ore from the superficial layers of the earth. However, over 70% of the copper reserves are located deeper in the ground and composed of more iron and sulfites, which makes them more difficult to extract and requires processing them via the concentration route. Ceibo's technology is a variation of the conventional leaching process that allows it to work on copper sulfites as well as in copper waste material.

Ceibo has developed and validated a superior leaching process where electrochemical reactions catalyze the oxidation in the primary sulfide ores more quickly and effectively, resulting in a faster and cleaner process for extracting copper sulfides. The Company's chemistry-based approach mimics the way naturally occurring microbial communities liberate copper from sulfide ores, but at an accelerated pace. By altering conditions within the rock pile, including pH and oxidation state, the technology creates an optimal and controllable environment that allows for higher sulfide recovery rates in shorter operational cycles.

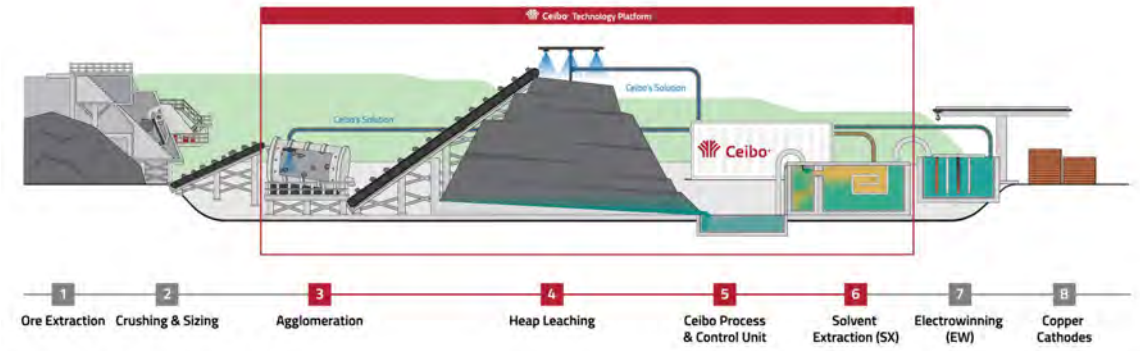
The novel technology's high recovery rate (70-80%, compared to ~20% for traditional methods) makes extraction of copper from deeper ores economically viable while leveraging existing infrastructure that would otherwise become idle. Since the technology is a leaching-based process, it provides the same affordability and simplicity of regular leaching operations, allowing it to be implemented into existing infrastructure without costly retrofits and without the need for new plants or facilities. Additionally, the technology allows for on-site production of the final product, which not only presents economic benefits, but also has geopolitical implications as it eliminates the need for smelting, a step that normally takes place in China or other Asian countries. These benefits can assist countries like the U.S., Mexico, and Canada, which possess significant copper resources, in reevaluating closed mines or previously challenging projects.

Ceibo Process Flow

Ceibo's technology enables a controllable, efficient, and sustainable process flow to produce copper from sulfide-rich ores and copper waste material seamlessly, integrating into existing leaching infrastructure and flexible to the characteristics of each mine. The process, illustrated in Figure 17, consists of the following eight steps:

Figure 17

CEIBO TECHNOLOGY PROCESS



Source: Ceibo Inc.

(1) Extraction: copper ore is mined from the ground.

(2) Crushing and Sizing: the ore is crushed into smaller more uniform pieces.

(3) Agglomeration: a rolling drum where the ore is mixed and moisturized to improve permeability.

(4) Heap leaching: copper ore is extracted from the ore using Ceibo's technology.

(5) Ceibo process and control unit: customized chemical adjustments of Ceibo's leaching technologies.

(6) Solvent extraction: the separation of copper ions from the solution to create a concentrated and purified copper solution.

(7) **Electrowinning**: copper ions are platted into cathode plates to form solid copper metals.

(8) Copper cathodes: the final product can be used in various industries.

Ceibo's Technology Advantages

Ceibo's innovative chemical-based approach enables copper sulfide ore leaching, an achievement that methods for oxide leaching alone have not been able to sustain. The technology accelerates access to copper reserves and transforms the value chain, offering a superior alternative to traditional methods.

Ceibo, through the operations of its technology lab and pilot sites, has conducted testing on over 30+ copper sulfide ores from mines around the globe, resulting in copper recovery rates of 70% to 75%. The technology accomplishes this while using five times less water than concentration methods.

The ability of the technology to be implemented in existing infrastructure, without the need for costly retrofits, results in low capex requirements and shorter permitting approvals. In addition, the technology results in a smaller environmental footprint due to greater water efficiencies and lower-carbon intensive process. Figure 18 (page 36) provides an overview of Ceibo's technology advantages.

Figure 18

CEIBO'S TECHNOLOGY ADVANTAGES

- 75% Recovery in <1 year
- Smaller environmental footprint
- Greater water efficiencies
- Low-carbon footprint
- Low capital intensities, and high barrier to entry
- Faster ramp-up than conventional mine developing
- Shorter permitting approvals
- Low all-in costs to final product

Source: Ceibo Inc.

According to Ceibo, the use of its technology could add over 10 years of life to a mine, with a payback period as short as one year. Liberating the potentially vast quantities of copper tied up in sulfide ores, as well as those in copper waste material, which are not economical to mine with traditional processes, may be key to closing the copper supply gap. Ceibo is aiming to produce a million metric tons of copper within the next 10 years, with further expansion in the future. At such scales, Ceibo's low-impact approach to copper processing could help reduce the industry's environmental impact (Source: MIT Technology Review, 2024).

Ceibo Development Activities and Investment Overview

On November 2024, Ceibo partnered with Glencore's (GB:GLEN) Lomas Bayas Mining Company to deploy Ceibo's proprietary leaching technologies at one of Chile's leading mines. Lomas Bayas has validated Ceibo's technology and is scaling up testing to assess if Ceibo's technology is an alternative to extend the life of their mining operations. Testing will begin on-site through Lomas Lab, a Glencore world-class test site. This agreement demonstrates Ceibo's technical progress towards commercialization with a major mining company and affirms the potential value that Ceibo's advanced leaching technologies could bring to copper assets globally.

CoTec Investment

CoTec participated in Ceibo's Series B financing round in 2022, which was led by Energy Impact Partners and a syndicate of mining-focused investors, including (in addition to CoTec) BHP Ventures, Orion Industrial Ventures, and Unearth Capital, together with existing investors Khosla Ventures and Aurus Ventures. In total, Ceibo raised over $30 million to fund the scaling of the technology through continued small and large column testing and building a demonstration plant. Although CoTec expects asset appreciation—based on companies such as Jetti Resources LLC, which has developed a competitive extraction process and received a valuation of $2.5 billion—it believes the real value lies in the JV opportunities to apply Ceibo's technology to undervalue assets. In line with Ceibo's strategy to pursue commercial alliances with smaller operators so it can apply its technology in commercial applications sooner and gather valuable data to build a strong pipeline of projects all over the world, CoTec is currently working on the identification of potential operational application opportunities for Ceibo's technology. Opportunities identified by CoTec, if pursued by Ceibo, will be done as a joint partner/investor.

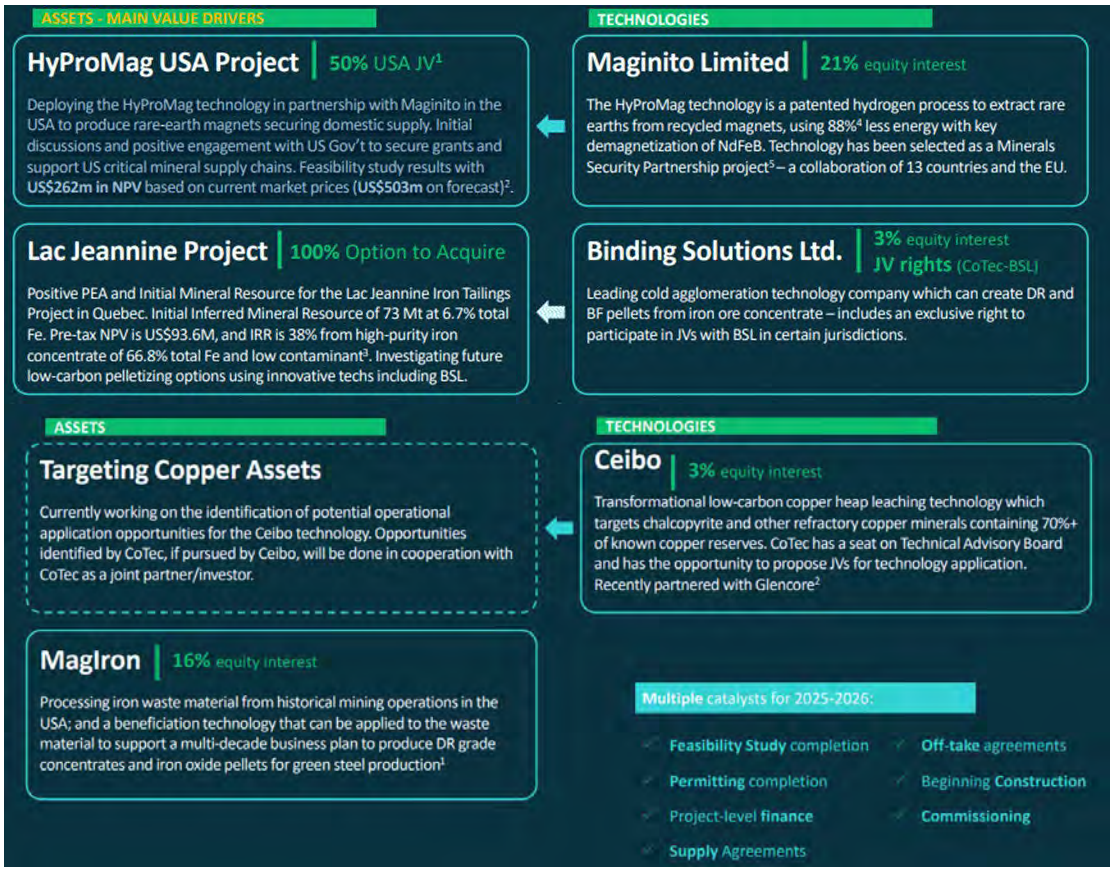
ASSET PORTFOLIO

CoTec intends to acquire and operate commodity rich assets, where it can apply its innovative, eco-friendly, disruptive technologies to produce critical minerals rapidly. Unlike traditional mining investments, CoTec will seek out marginal assets, waste, and even sometimes liabilities, where it believes its technologies can make a transformation from loss-making to profitability, or from marginal to much more lucrative businesses, thereby creating value for its shareholders. CoTec's model involves transforming waste to wealth, reducing environmental footprint, while liberating commodities at a far lower carbon footprint than legacy processes.

CoTec's asset portfolio includes the following three active projects: (1) Lac Jeannine, encompassing the acquisition of 31 mining claims; (2) HyproMag USA, created to apply the HyProMag technology in partnership with Maginito in the U.S. to recycle rare-earth magnets; and (3) MagIron, focused on the refurbishment and operation of Plant 4 using MagIron proprietary technology. In addition, CoTec is looking for investment in copper assets through the application of Ceibo's technology. Though the Company's current operational focus is on the operational roll-out of its main value drivers—HyProMag USA and Lac Jeannine—it continues to assess and evaluate new technologies and complementary assets to its existing investments, with the objective of accumulating 30 to 40 assets. Figure 19 provides an overview of the Company's current asset portfolio, followed by greater details.

Figure 19

ASSET PORTFOLIO



Source: CoTec Holdings Corp.

LAC JEANNINE

Figure 20
LAC JEANNINE

Source: CoTec Holdings Corp.

CoTec has entered into an option agreement to acquire the Lac Jeannine property (Figure 20), and its mining claims, located in the Côte-Nord region of Quebec, Canada. The Lac Jeannine property comprises a contiguous block of 31 mineral claims covering an aggregate of 1,649.34 hectares. The property contains historical tailings of the previous iron ore mine operated by the Québec Cartier Mining Company and encompasses the former Lac Jeannine open pit mine, from which approximately 260 million long tons of ore at 33% iron was extracted between 1961 to 1976. The Property also covers the "Tailings Storage Facility (TSF)," the area where the tailings from the on-site ore concentrator were deposited. In 1984, the Lac Jeannine mining and processing facilities were shut down and the mine site reclaimed.

Pursuant to the option agreement, CoTec agreed to pay $250,000 on exercise of the option and $1,000,000 at the start of commercial extraction of the tailings. If the option is exercised, the vendor will also receive a 1% net smelter royalty (NSR) from the sale of minerals from the historical tailings and a 1.5% NSR from the sale of other minerals from the project. The 1% NSR and 1.5% NSR could each be reduced, at CoTec's option, by half through the payment of $1,000,000 and $2,000,000, respectively. Prior to exercising its option to acquire the property, the Company conducted a Maiden Resource Estimate (MRE) and a Preliminary Economic Assessment (PEA), with results announced on June 27, 2024 and highlighted below.

Following the positive MRE and PEA results, the Company intends to complete a feasibility study regarding the recovery and production of low cost and low carbon iron ore pellets from the property. CoTec's focus is on the reprocessing of the property's tailing material for residual iron, which it intends to re-process for residual iron, while rehabilitating the TSF to as close to its natural state as possible. To facilitate this, CoTec extracted a bulk sample from the property tailings material intended to be used for independent metallurgy testing, in part to assess the effect of applying additional novel technologies to the project. Discussions with relevant stakeholders are underway, ensuring the commercial framework is in place for the start of the feasibility study during 1H 2025.

CoTec believes that the enhanced economic benefits derived from the application of one or more of the Company's technology portfolio to iron tailing sites can demonstrate how historic mine sites can be rehabilitated in accordance with best practices, generating high purity, low carbon iron concentrates for the green steel industry at competitive cost structures, while creating jobs and economic opportunities for local and Indigenous communities.

Mineral Resource Estimate (MRE) and Preliminary Economic Assessment (PEA)

On June 27, 2024, CoTec announced the completion of an initial Mineral Resource Estimate (MRE) and positive Preliminary Economic Assessment (PEA) for the Lac Jeannine iron tailings project. The PEA was prepared by Addison Mining Services Ltd., Soutex Inc, JPL GeoServices, and other independent experts.

Mineral Resource Estimate

The MRE, reported in accordance with National Instrument 43-101, is based upon 13 vertical sonic drillholes totaling 522.0 meters. The initial inferred MRE is approximately 73 million metric tons at 6.7% total iron, resulting in 4.9 million metric tons of contained total iron. Identified tailings material surrounding the inferred mineral resource area, if confirmed by drilling and analysis, could potentially add an additional 50 to 75 million metric tons at 6.0 to 7.5% total iron content.

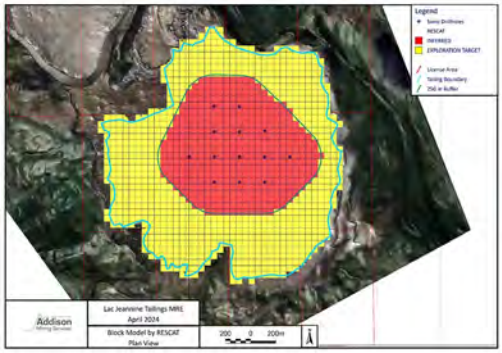
Further tailings are present outside of the drilled area (inferred resource area) and it is reasonable to expect that, with further appropriate exploration drilling, the mineral resource tonnage could be increased. Assuming 70% to 100% of the tailing's material surrounding the inferred resource has a similar total iron grade to the MRE, an exploration target tonnage of 50 to 75 million metric tons is postulated, with global average total iron grade of 6.0% to 7.5% considered a reasonable possibility. This results in total estimated tonnage of approximately 145 million metric tons. This number is in line with a study completed by Soutex in 2007,' which estimated that 154 million metric tons of tailings grading 7.5% total iron were deposited at the Lac Jeannine tailings pile, with these numbers based on historical production and mass balance records rather than systematic sampling. Figure 21 provides an overview of the results of the MRE, as well as a representation of the inferred resource (in red, with the 13 drill hole locations marked by black dots) and the exploration target zone (in yellow).

Figure 21

MRE RESULTS

INFERRED (RED AREA)	
Million Tonnes	73
Total Fe grade %	6.7
Total Fe (Mt)	4.9
Fe_2O_3%	9.6

ADDITIONAL (YELLOW AREA)	
Million Tonnes	50 to 75
Total Fe grade %	6.0 to 7.5



Source: CoTec Holdings Corp.

Preliminary Economic Assessment (PEA)

The PEA study was undertaken by a multidisciplinary team appointed by CoTec and supported by JPL GeoServices Inc. and Soutex Inc. of Canada; Axe Valley Mining Consultants Ltd, Amerston Consulting Ltd., and Addison Mining Services Ltd of the U.K.

The PEA assumes the extraction and reprocessing of the Lac Jeannine tailings based on an extraction rate of 7 million metric tons per annum (Mtpa), to produce on average 380 Ktpa of concentrate for just over 10 years. Given there is no surface waste covering (organic material or low grade), it is expected that 100% of the MRE within the inferred area limit (73 million metric tons) can be re-processed. The average grade for the inferred material was 6.7 % total iron (Fe).

Based on the study to date, the concentrate is expected to be a high purity premium grade product containing 66.8% total Fe with low concentrations of contaminants, such as silica, phosphorus, and alumina, and therefore benefits from a price premium over and above the standard 65% iron index price.

The up-front capital cost of the project was estimated at $64.6 million (inclusive of a 15% contingency margin and estimated further study and engineering costs), with all-in sustaining operating costs (AISC) of $61/metric ton (including transport to port and royalty payments). The project is expected to benefit from access to renewable hydroelectric power, water, roads, airfield, and existing rail and port facilities in a proven regional labor market and mining friendly jurisdiction with a long history of supporting iron ore operations.

Based on open-pit extraction methods and the production of a gravity concentrate via conventional processing techniques, the pre-tax NPV is $93.6 million with an IRR of 38%, while the after tax NPV was $59.5 million, with an IRR of 30% with payback achieved in 2.5 years. The key financial and production assumptions and results of the PEA are summarized in Figure 22 (page 40).

Figure 22

PEA RESULTS

Assumptions	Unit	Estimate
Mineral resources	M dmt	73
Project Duration	Years	11
Average annual production (dry)	K tonnes per annum	380
Average total Fe In-situ grade to plant	%	6.7
Average total Fe metallurgical recovery	%	51.6
Average concentrate grade sold	% Fe	66.8
Economic Assumptions		
P65 Index CFR China Iron ore price	US$/dmt	121
Average realised price (Inc. high grade premium)	US$/dmt	145
Average shipping cost	US$/dmt	21
Capital Cost		
Construction period	Years	2
Initial capex (excl. closure and sustaining)	US$ million	64.6
Operating cost per tonne		
Total cash cost (C1 Cost)	US$/dmt	53
Total AISC	US$/dmt	61
Economic Result		
Pre-Tax NPV at 7% discount rate	US$M	**93.6**
Pre-Tax IRR	%	**38**
Post-Tax NPV 7% discount rate	US$M	**59.5**
Post-Tax IRR	%	**30**
Payback	years	**2.5**

Source: CoTec Holdings Corp.

In addition to the economic factors, the project significantly reduces the environmental liability of the Lac Jeannine site, as it is anticipated that the rejects from the reprocessing of the tailings will be pumped back into the former Lac Jeannine mine open pit so that the natural topography can, as much as possible, be returned to its natural state. Furthermore, since the current tailings pile is considered an orphan site, the provincial government carries the environmental liability.

CoTec believes that the PEA results could be understated, as the PEA did not incorporate prospects for potential economic support from governments, funding opportunities, or other incentives that could improve economics and influence the feasibility study and investment decision. In addition, while the inferred resource is currently restricted to approximately 73 million metric tons of material, it is recognized that there is additional material present outside of the drill tested area. This material, classified as an exploration target, was treated as waste for the purpose of the PEA and was not considered as payable material in the financial analysis. The inclusion of the adjacent tailings has the potential to almost double the life expectancy of the mine with no additional capex, and CoTec is expected to focus on this strategy as well as several other optimization opportunities to further enhance the results of the PEA. Furthermore, the Company believes that the enhanced economic benefits derived from the application of novel technologies, either those currently part of CoTec's technology portfolio (i.e. BSL) or new technologies the Company identifies, which were not considered in the PEA calculations, could further improve the project's viability.

In August 2024, CoTec filed an independent National Instrument 43-101 technical report—a securities regulatory instrument that governs how companies can disclose mining-related information in Canada. The PEA NPV results confirm management's belief that CoTec's value proposition is not reflected in the market. The PEA's $59.5 million post-tax NPV for the Lac Jeannine project alone is significantly higher than the Company's current market cap. Further information on the estimated value of CoTec's investments is provided on pages 49-50, under the CoTec Value Proposition section.

CoTec believes that the PEA represents a first step in demonstrating the feasibility of the Company's strategy with regard to recovering the economic potential of large historical tailing sites, with further potential enhancement of these projects through the deployment of CoTec technologies, where applicable. The Company intends to pursue the development of the project, including a program of exploratory drilling at Lac Jeannine, with the objective of upgrading the current inferred resource to include the exploratory material and expanding the total estimated resource tonnage available.

Feasibility Study and Future Work

CoTec is committed to continuing discussions with potential strategic partners and relevant stakeholders, including the Government of Québec, First Nations, and other interested parties, in order to move rapidly onto preparation of a feasibility study during 1H 2025. Based on the PEA's recommendations, the feasibility study could include the following steps:

- Complete the next phase of exploration drilling and additional field programs to support the increase of total mineral resource value from inferred to indicated resources (the latter including the exploratory area). To support this, on December 12, 2024, CoTec commenced a process to appoint a drilling contractor.

- Investigate future low carbon pelletizing options to produce pellets in Québec using innovative, low carbon green technology, including BSL's cold bonding technology, which will further enhance the economics of the project.

- Explore potential economic support and funding opportunities from federal and provincial governments, potential strategic partners, and private investors, as well as other economic incentives for the project, including carbon price premiums and other initiatives aiming to encourage the development of critical minerals and a circular economy.

- Conduct test work to further optimize the grade/recovery data, with the goal being to achieve a 67.5% total Fe concentrate with minimal impact to recovery, including the evaluation of an alternative flowsheets. The capital and operating costs will be revisited as a result of the expected improvements to the overall process flowsheet.

- Commence hydrogeological investigations and environmental baseline data collection, including air, water, soil, fauna, and flora studies, in order to initiate the permitting process applicable to the project.

- Undertake a formal request for proposal (RFP) process to solicit vendor quotes to improve the accuracy of the capital cost estimate.

HYPROMAG USA

On January 3, 2024, CoTec and Maginito Limited announced a joint venture entity which plans to roll out HyProMag's Hydrogen Processing of Magnet Scrap (HPMS) recycling technology into the U.S. HPMS allows the reprocessing of NdFeB permanent magnets from end-of-life scrap streams in the form of a demagnetized NdFeB metallized alloy powder, with a significantly reduced carbon footprint. The newly formed joint venture company, HyProMag USA, LLC, plans to develop a low cost, low carbon, sustainable rare earth magnet recycling and production process. The new venture is to be jointly co-owned by Maginito and CoTec (50/50). This provides CoTec with a 50% direct equity interest and a further 10.3% indirect interest through its 20.6% equity interest in Maginito.

Sintered NdFeB magnets will be produced in the U.S. using materials sourced in country, providing the U.S. with a long term and secure domestic source of permanent magnets for U.S. industries that include defense, aerospace, automotive and EV, medical science, data centers, robotics, and energy transition industries. This is a strategic priority for the U.S. government, as seen by a number of initiatives highlighted on the "*U.S. Efforts to Secure REE magnets' Supply Chain"* section on page 25.

To support this initiative, CoTec has appointed Robert Harward (biography on page 12), a retired Vice Admiral, U.S. Navy SEAL, and a senior defense technology executive to its Board of Directors. Mr. Harward will be focused on supporting and guiding HyProMag USA in the application for U.S. Government Grant support, and the long-term strategic supply of rare earth permanent magnets to U.S. Government prime contractors.

HyProMag USA Feasibility Study

HyProMag USA engaged Canada-based BBA USA Inc. (BBA) and U.S.-based PegasusTSI Inc. (PegasusTSI) to complete the HyProMag USA bankable feasibility study to engineer and design a state-of-the art rare earth magnet recycling and manufacturing operation in the U.S., which was completed 4Q 2024.

The feasibility study is based on the development of a 40-year magnet manufacturing facility in Dallas-Fort Worth, Texas, capable of producing up to 750 metric tons of sintered NdFeB magnets and 291 metric tons of associated coproducts per year. First revenue is targeted for Q1 2027, with HyProMag USA targeting 10% of U.S-domestic demand for NdFeB magnets within five years of commissioning. The main products are sintered magnet materials split between blocks and finished magnets. These products are expected to support a closed loop system in the U.S. whereby end-of-life NdFeB magnets are recycled into new magnets via HyProMag's short-loop process.

On November 25, 2024, HyProMag USA announced the results of the feasibility study. The study demonstrated robust economics at current prices and indicates a significant upside based on the forecast recovery in the rare earths market. Based on current market prices, the feasibility study indicates a post-tax NPV of $262 million and real IRR of 23% (pre-tax NPV $343 million and real IRR of 27%), while results indicate post-tax NPV of $503 million and real IRR of 31% (pre-tax NPV of $647 million and real IRR of 36%) when using forecasted prices. The project has a low estimate all-in sustaining cost (AISC) of production at $19.6 per kg of NdFeB, which compares well to current market prices of $55 per kg of NdFeB.

The up-front capital cost of the project was estimated at $125 million (inclusive of a 10% contingency margin and estimated detailed design study and engineering costs) over a 1.7-year construction phase. The current market price payback is achieved in 3.9 years at a profitability index (PI) of 2.1, while at forecast prices, payback is achieved in 3.1 years at a PI of 4.0. Initial capital expenditure (CAPEX) costs for the project were based on a system capacity of 1,147 metric tons per annum (mtpa) with a nominal payable production capacity of approximately 1,041 mtpa, of which 750 mtpa are sintered blocks and finished magnets.

The key feasibility study metrics are summarized in Figure 23 (page 43). The study did not incorporate prospects for potential economic support from governments, funding opportunities, or other economic incentives, which could improve the economics and influence a future updated detailed design engineering and investment decision.

Figure 23

HYPROMAG USA FEASIBILITY STUDY

Assumptions	Unit	Current Prices	Forecast Prices
Project Duration (Life of Asset)	Years	40	40
Average annual system capacity	Metric tons NdFeB per annum	1,147	1,147
Average annual payable production	Metric tons NdFeB per annum	1,041	1,041
Average total payable Sintered Magnets	Metric tons NdFeB per annum	750	750
Average total payable co-products excluding residual scrap	Metric tons NdFeB per annum	291	291
Capital Cost			
Construction period	Years	1.7	1.7
Initial CAPEX (excl. closure and sustaining)	US$ million	125.3	125.3
Sustaining CAPEX	US$ million per annum	0.21	0.21
Operating cost per metric ton			
Transport Cost (Spoke to Hub)	US$/kg NdFeB	0.46	0.46
Royalty Cost	US$/kg NdFeB	0.23	0.69
TOTAL AISC LIFE OF ASSET	US$/kg NdFeB	19.63	31.86
Economic Assumptions			
Weighted average price (Life of Asset)	US$/Kg	55	94
Revenue (Life of Asset)	US$M	2325	3941
EBITDA (Life of Asset)	US$M	1528	2642
Pre-Tax NPV at 7% discount rate	US$M	343	647
Pre-Tax real IRR	%	0.27	0.36
Post-Tax NPV 7% discount rate	US$M	262	503
Post-Tax real IRR	%	0.23	0.31
Payback	years	3.9	3.1
PI		2.1	4

Source: CoTec Holdings Corp.

Site Selection

The project will use a “hub and spoke” operational model, with a central magnet recycling and production hub located in the Dallas-Fort Worth (DFW) area of Texas, supported by two pre-processing spoke sites in the eastern and western regions of the U.S. (Figure 24, page 44). Site selection for three plants in the U.S. has commenced, spearheaded by PegasusTSI, collaborating with environmental consultant Weston Solutions, Inc.

DFW was identified as a suitable location to build the magnet recycling operation hub based on its central location in the U.S., its sizable e-waste recycling activities, proximity to national rail roads and interstate highways, and ease of doing business there. DFW also has other existing and developing magnets and rare earth related businesses in the area. Final site selection for the Texas hub is underway, with the potential site expected to be approximately 100,000 square feet in area, 36 feet in height, and utilize a pre-existing factory storage unit with basic utilities fully installed. The project design assumes the site will be secured through long term leases in Q1 2025. Baseline permitting for the selected site is expected to commence in Q1 2025, with completion of permitting targeted for the end of 2025.

Figure 24

SITE SELECTION

Source: HyProMag USA, LLC

The logistics for the project include two main satellite spokes engaged in the collection and pre-processing of end-of-life magnets and scrap: Satellite Spoke 1, potentially located in Nevada; and Satellite Spoke 2, potentially located in South Carolina. The transportation process from each satellite spoke to the Texas hub is expected to employ intermodal (truck and rail) transportation.

Production Process

The process begins with scrap pre-processing at the spoke facilities, where electronic and industrial scrap containing NdFeB magnets is pre-processed, sorted, and prepared for HPMS at the hub. This pre-processed material is then transported to the central hub for HPMS and magnet manufacturing.

At the hub in Texas, the HPMS system extracts NdFeB powder from the scrap material in a series of controlled reactions. This method minimizes energy consumption and reduces environmental impact compared to conventional extraction methods. Following extraction, the NdFeB alloy powder undergoes conventional magnet manufacturing processes to produce high-performance magnets that meet industry standards.

The study assumed a system capacity of 1,147 mtpa, with a payable capacity of 1,041 metric tons of NdFeB, composed of ~750 metric tons of NdFeB finished permanent magnets and 291 metric tons of associated NdFeB co-products (e.g., alloy powders, pellets, and strip cast flakes), over a 40-year operating life. Production at the hub facility is readily expandable with the study evaluating the inclusion of an additional HPMS vessel (bringing the total HPMS reactors to three) within three years following commissioning, for an additional capital cost of approximately $7 million.

Discussions with potential feedstock suppliers and off takers in the U.S. have commenced, targeting agreements to secure recycled feedstock through strategic partners. These efforts include capitalizing on HyProMag's agreement with Inserma (described on page 27) for the installation of pre-processing systems for rare earth magnets containing scrap streams complementary to HyProMag's HPMS technology. This collaboration is expected to initially be focused on the pre-processing of hard disc drives (HDDs), with the agreement including the purchase of an initial three units for pre-processing HDDs by HyProMag for the UK, Germany, and the U.S.

Detailed Engineering-Design and Value Phase

Following completion of the feasibility study, HyProMag USA will move to its engineering design and value phase. This process is expected to deliver further cost savings and design improvements, which should enhance the project's metrics even further. The Design and Value Engineering phase is expected to include the following:

- Evaluation of significant opportunities to optimize construction and operational efficiency, and to reduce capital expenditure and operating costs, as well as to expand production.
- Parallel product and operational testing in the UK at the University of Birmingham pilot plant in conjunction with HyProMag's commercial developments in UK and Germany.
- Completion of commercial arrangements with potential feed suppliers and product off takers; discussions with several potential parties underway.
- Continued discussions with federal, state and municipal governments, in relation to financing opportunities and other economic incentives, including carbon price premiums which could improve economics.

The Detailed Engineering Design phase is expected to focus on optimization of construction and operational efficiency, as well as identifying potential improvements that could lead to substantial capital expenditure and operating cost savings compared to the feasibility study results. The process is also expected to encompass definition and optimization of the third HPMS expansion case. It is likely to further support final site selection efforts, which are targeted for H1 2025, and allow the commencement of site permitting in line with the initial project schedule.

In parallel with Detailed Engineering Design and Value process, product and operational testing will continue in the UK at the University of Birmingham Magnetic Materials Group (MMG) pilot plant in conjunction with HyProMag commercial developments in UK and Germany. This data, together with data derived from historical test work and magnet production at the HPMS pilot plant, is to be used to assess improvements of the process flowsheet, particularly as it related to the HPMS reactor operation optimization.

HyProMag USA began a formal request for proposal (RFP) process in December 2024 to solicit final vendor quotes from leading providers to complete the detailed engineering design, procurement, and construction management (EPCM) phase for HyProMag USA manufacturing project. This RFO process is expected to improve the accuracy of the capital cost estimate. The detailed engineering design phase considers a “one contractor” approach who is appointed to develop and build the complete process plant.

In parallel, HyProMag USA is working towards securing potential U.S. federal and state government funding, financial grants and incentives, and strategic partnerships with U.S. companies in the critical mineral supply chain. Continued discussions with federal, state, and municipal governments, in relation to financing opportunities and other economic incentives are ongoing. Since the feasibility study did not incorporate prospects for potential economic support, funding, or economic incentives from governments, any positive outcome from this effort should enhance the economic prospects of this project. In addition, discussions with a number of parties and potential partners in the areas of feed supply and recycled NdFeB magnet offtake are ongoing.

Following completion of the detailed engineering design phase, a decision is expected to be made mid-2025 as to whether HyProMag USA will proceed with the final procurement and construction of the project.

Project Timeline and Phased Execution

HyProMag USA development project is strategically phased to ensure cost-effective development, operational efficiency, and flexibility for future expansion. The projected timeline is as follows:

(1) Detailed Design and Engineering (2025): The Detailed Engineering Design will include the completion of sufficient engineering design works to support an updated capital estimate to complete the feasibility study as well as final site selection to be completed in H1 2025 and the commencement of site permitting.

(2) Site Development and Facility Construction (2025-2026): The initial phase includes site preparations and facility construction at the Texas hub and two spoke locations. The hub will be equipped with purpose-built infrastructure for HPMS recycling, magnet alignment, and sintering operations. The modular layout supports scalability, allowing for future expansion as demand for NdFeB magnets grows.

(3) Equipment Installation and Commissioning (2026): Equipment installation will follow construction, including HPMS vessels, sintering furnaces, alignment presses, and auxiliary systems. Each piece of equipment will be tested and calibrated to meet quality and operational standards.

(4) Initial Production Ramp-Up (2027): The Project’s first production phase is expected to begin Q1 2027, with a gradual increase in output to stabilize operations and optimize equipment performance. Initial production volumes are expected to be dedicated to fulfilling contracts with key customers in sectors such as defense, renewable energy, and electronics.

(5) Full Operational Capacity and Modular Expansion (2027 onward): By H2 2027, the project aims to reach full capacity at 750 metric tons per year, positioning HyProMag USA as a major participant in the U.S. NdFeB magnet market. The facility's modular design supports phased expansions, allowing for the addition of processing lines and spoke sites as demand increases. This flexible approach allows HyProMag to scale up with minimal disruption and align production with market growth, particularly in EVs, wind energy, and defense.

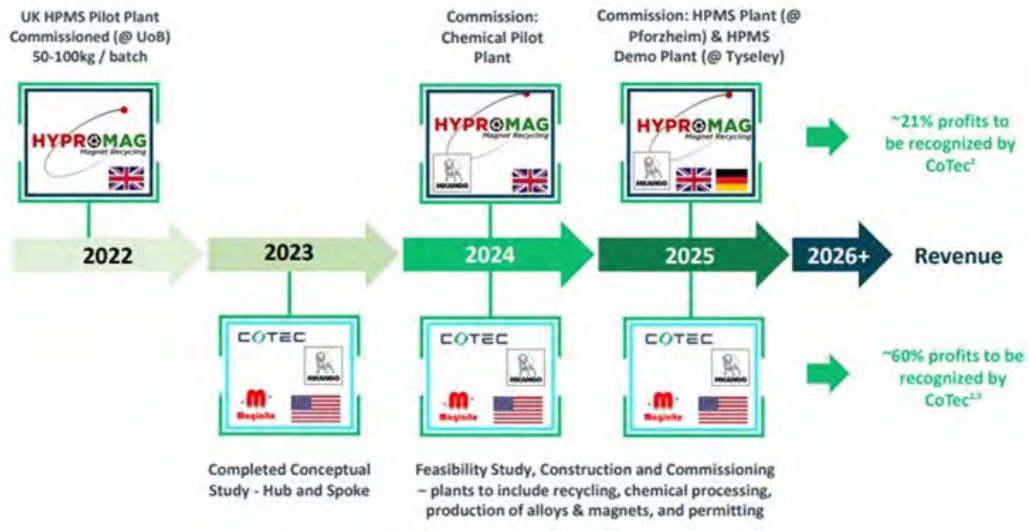
(6) Modular Expansion (2030 onward): By 2030, potential installation of the third HPMS vessel, debottlenecking and expansion of system capacity.

(7) Regional expansion (2030 onward): HyProMag USA is targeting 10% of the U.S domestic demand within five years of commissioning; design is modular, can be replicated, and accelerated to facilities on eastern and western U.S. Any legislation to support recycling is expected to further accelerate expansion.

The potential development timeline for HyProMag USA, in parallel with UK and German demo plants, is illustrated in Figure 25.

Figure 25

HYPROMAG DEVELOPMENT TIMELINE



Source: CoTec Holdings Corp.

MAGIRON'S PLANT 4

In May 2022, MagIron completed the acquisition of Plant 4, a modern dormant iron ore concentrating facility based in Grand Rapids, Minnesota. Plant 4 is designed to process previously discarded waste materials from historical mining operations, such as existing tailings and iron ore fines, and convert it into high grade, low impurity DR grade iron ore concentrate. The acquisition included 2,483 acres of land in the surrounding counties containing fine and coarse iron ore tailings.

Plant 4 is a past-producing iron ore concentrator benefiting from over $170 million of prior investment. The relatively new plant, completed in early 2015 and operated for 21 months, has previously displayed an annualized run-rate of approximately 2.0 million mtpa and was designed to expand to 3.0 million metric tons per year relatively quickly and at low capital intensity.

MagIron has designed an innovative process through disruptive technology that converts waste materials from historical mining operations into ultra high-grade iron ore concentrate. The process capitalizes on proprietary technology—including Natural pH Flotation Process (the Rev3 Separator), Ultra-High Density Media technology, patented magnetic separators, proprietary plant designs, and proprietary automation software—acquired through two transactions, detailed on page 32.

Stockpile Acquisition

Plant 4 is designed to process previously discarded waste materials from historical mining operations. The initial deal included 2,483 acres of land surrounding Plant 4. Given the significant historical mining operations across the area, there are vast amounts of waste material within close proximity to Plant 4, which can be used as feedstock.

On May 14, 2024, MagIron signed long-term mineral leases that provide further operational and economic support for the restart of Plant 4. When combined with the iron-bearing stockpiles from the initial transaction, MagIron has secured more than 193 million metric tons of iron bearing waste material, which is sufficient to support an estimated 20+ years of operation, producing 2.5 million dry metric tons per year of high-grade DR grade iron concentrate, which is a key ingredient for green steel.

Furthermore, on August 5, 2024, MagIron announced a maiden Inferred Mineral Resource Estimate (MRE) of 2.6 billion metric tons of in-situ material with an average iron content of 36.82% located within land effectively controlled by MagIron. This mineral resource estimate was prepared by independent firm Global Minerals Engineering (GME), and was based on data from historical drillings assays, mine maps, and mine cross sections. GME also confirmed that the identified mineral resource should be amenable to DR ore concentration using developing technologies. This mineral resource excludes the legacy iron-bearing stockpiled materials available to MagIron.

While MagIron's immediate strategy continues to focus on the low capex, low risk restart of Plant 4 to process stockpiled legacy iron-bearing materials from historical mining operations, the presence of this large iron oxide deposit represents a compelling growth opportunity. This area has great potential for inground mining using present and future mineral processing technologies, and positions MagIron to become a major supplier of DR grade iron products that will be critical to the transition to green steel for many decades, both in North America and globally.

Plant 4 Restart Activities

The acquisition provides MagIron with an attractive portfolio of assets, including a large strategic land package surrounding Plant 4, in-ground mineral rights, proprietary technology, plant and equipment fixtures, and useful permits that should facilitate the process of restarting Plant 4, in addition to significantly de-risking and enhancing the value of MagIron's restart strategy.

MagIron intends to restart the operations at Plant 4 following completion of a refurbishment program, which is currently anticipated to take approximately 24 months and cost approximately $80 million. Following its restart, Plant 4 is expected to be able to produce DR grade iron ore concentrate at a reduced carbon footprint compared to traditional steel production techniques as it will recycle existing tailings rather than require new mining.

Metallurgy Test Work

The Company is currently conducting studies and large-scale metallurgy testing to improve the production process flowsheet and productivity, while at the same time confirm the potential to produce high-grade concentrate at Plant 4 using waste materials as feedstock. On June 16, 2023, MagIron announce that it has successfully completed an extensive campaign of metallurgical test work at laboratory level conducted by independent experts at the Natural Resources Research Institute (NRRI) of the University of Minnesota with assistance from Canadian based Soutex Inc. The results have confirmed a new process flowsheet that demonstrated the potential to double the historical iron recovery achieved at Plant 4 and to produce DR grade iron concentrate. The new Plant 4 process flowsheet has been designed to achieve DR grade concentrate with combined silica and alumina levels below the steel industry's DR grade standard of 2.5%. Furthermore, the test work results produced final concentrates at iron recoveries ranging from 82% for DR grade to 88% for Blast Furnace grade.

Pelletization

Figure 26
MAGIRON PELLETS

Source: MagIron LLC.

The use of the high grade concentrate for the production of pellets could result in a final product chemistry with an iron content in excess of 67.5% iron and a combined silica and alumina content equal or below 2.5%, suitable for use as feedstock for **Direct Reduce Iron (DRI) Shaft Furnaces** that feed **Electric Arc Furnaces (EAF)**. Expanding on this idea, on May 24, 2024, MagIron announced that it successfully produced DR grade iron ore pellets in laboratory testing made from Minnesota hematite and goethite mineral resources (Figure 26).

The pellets were produced in a mini-pot tester at the Natural Resources Research Institute (NRRI) of the University of Minnesota from iron ore concentrate made using legacy iron-bearing materials representative of stockpiles and tailings basins controlled by MagIron. Importantly, these DR pellets were produced using biochar, rather than the traditional coke breeze or other coals, creating a green credentialed DR grade iron ore pellet useful for natural gas or hydrogen furnaces that produce direct reduced iron, a critical enabler to decarbonize steel production. These results are based on the test work completed over the last 20 months to demonstrate that MagIron concentrate will produce pellets with high iron content, superior physical properties, and excellent iron making characteristics.

The successful production on a laboratory scale of the DR grade pellets is another significant leap forward in MagIron's restart of Plant 4. These results demonstrate that MagIron's high-quality DR grade concentrate has the potential to be converted into top tier iron ore pellets at a significantly reduced carbon footprint compared to existing alternatives for use in direct reduction furnaces in the U.S. and abroad.

To capitalize on this synergy, MagIron has recently acquired land on which the Reynolds Pellet Plant in Indiana is based, with the end goal to pelletize the Plant 4 concentrate to further improve economics and significantly reduce carbon emissions. Similar to Plant 4, the Reynolds pelletizer was also previously owned by Magnetation LLC. The palletizer, built in 2014/2015, require refurbishing before it can operate.

Additional Work

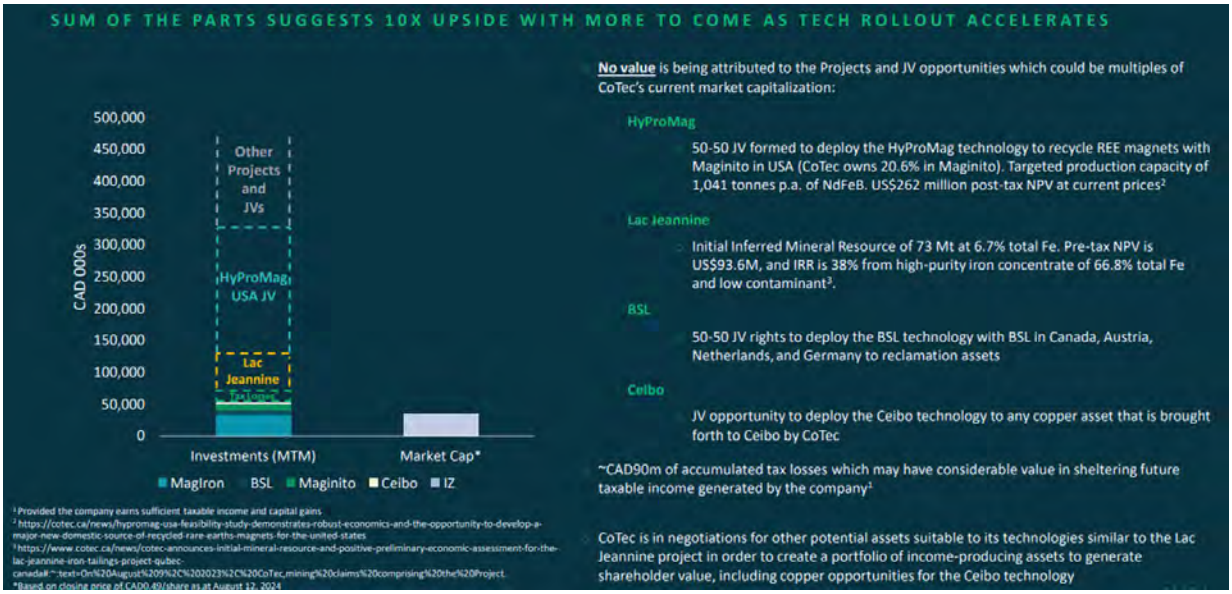
On December 10, 2024, MagIron achieved another milestone, with the Minnesota Pollution Control Agency granting the Company an air quality control permit to operate its Plant 4 iron ore concentrator facility—the final permit required to support the restart of mining and processing activities. MagIron continues to make significant progress on various de-risking workstreams, including a National Instrument 43-101 compliant resource estimate, pilot plant test work, and a feasibility study focused on optimizing the capital expenditure required to restart operations. Behre Dolbear has been appointed to progress both the NI 43-101 report and feasibility study, and the NRRI is leading the pilot plant test work.

COTEC VALUE PROPOSITION

Management believes CoTec's market valuation does not fully reflect its assets, with limited recognition of its technology acquisitions and no value assigned to its operational projects and joint ventures—potentially representing multiples of its current market cap. As shown in Figure 27, the estimated cumulative value of CoTec's technology investments and assets far exceeds its market capitalization. This includes third-party Net Present Value (NPV) estimates for the Lac Jeannine and HyProMag USA assets, which alone surpass CoTec's overall valuation.

Figure 27

COTEC VALUATION



Source: Source: CoTec Holdings Corp.

Lac Jeannine Project Estimated NPV
(Currently CoTec has a 100% ownership option)

The Preliminary Economic Assessment (PEA) study reports a post-tax NPV of $59.5 million with an IRR of 30%. The projected payback period is 2.5 years.

HyProMag USA Estimated NPV
(Currently CoTec has a 60.3% direct and indirect equity stake)

On November 25, 2024, HyProMag USA (of which the Company owns a 60.3% direct and indirect equity) released the results of its feasibility study, revealing a post-tax Net Present Value (NPV) of $262 million with a real Internal Rate of Return (IRR) of 23% at current prices. Under forecasted pricing scenarios, the study projects a post-tax NPV of $503 million with a real IRR of 31%.

The Combined NPV of both projects belonging to CoTec, based on its respective ownership stake in each company, amounts to $217.5 million, significantly higher than the Company's current market cap. Additionally, the Company's technological investments hold significant value. CoTec's 20.6% stake in Maginito is expected to generate financial returns through Maginito's operations in the UK and Germany. Moreover, CoTec's initial investments have experienced substantial asset appreciation, as evidenced by recent financial transactions described below.

BSL Investment

CoTec initially invested $2 million in BSL at a pre-money valuation of $75 million, later increasing its equity stake to 3% with an additional C$684,000 investment in 2023. Subsequently, Mitsui invested in BSL at a $130 million valuation, followed by Mineral Resources Limited on August 4, 2023, at an even higher valuation of $158 million. This latest valuation reflects a 107% increase from the $75 million valuation at which CoTec made its initial investment.

MagIron Investment

CoTec invested in MagIron at a post-money valuation of $13.3 million. On June 24, 2022, MagIron issued a $5 million convertible note at a pre-money valuation of $30 million, reflecting a 130% increase in valuation. More recently, insiders invested $1 million at a pre-money valuation of $200 million, marking a 10x increase from the valuation at the time of CoTec's initial investment.

Investment Highlights

Note: All amounts are in U.S. dollars unless otherwise specified (C$ denotes Canadian dollars).

- CoTec Holdings Corp. ("CoTec" or "the Company") is a forward-thinking mineral resource extraction and ESG-focused enterprise dedicated to transforming the global metals and minerals industry through innovative technologies and strategic asset acquisitions. By leveraging the growing demand for sustainable mining solutions, environmentally conscious technologies, and undervalued mining assets, CoTec is poised to become a leading mid-tier disruptor in the commodities sector.

- The Company employs a two-pronged approach to its business: (1) Technology Investments: acquiring stakes in disruptive mineral extraction technologies that prioritize efficiency, environmental sustainability, and scalability; and (2) Asset Transformation: applying these technologies to underutilized or undervalued mineral-based assets to enhance profitability and operational efficiency.

    - The Company's objective is to build a robust portfolio comprising 10 transformative technologies and 30-40 complementary assets.

    - CoTec's investments prioritize recycling and waste mining. This allows the Company to reprocess existing mining waste and scrap to unlock value in previously unprofitable or dormant assets that were thought to outlive their profitability, transforming undervalued commodity-rich assets into profitable ventures.

- The Company's strategic approach provides it with three key competitive advantages: (1) low cost of entry; (2) reduced time to revenue (three to five years); and (3) strong barrier to entry due to proprietary technology.

- CoTec's revenue model is built on two pillars: (1) Equity Appreciation: value growth from its technological investments, mining operations and joint ventures; and (2) Operational Revenue: income generated through the application of these technologies to its mining and recycling assets.

- CoTec's financing strategy emphasizes minimizing shareholder dilution by leveraging non-dilutive funding sources, such as government grants, debt financing, and off-take agreements. The Company's low corporate overhead—with only four full-time employees—ensures operational efficiency, while its disciplined capital allocation is guided by a strong governance framework led by a leadership team with a proven track record of value creation, and a demonstrated record of company-building in a unique space.

ASSETS AND TECHNOLOGIES

- CoTec currently holds a stake in four technologies—Maginito Ltd (20.6% equity stake), focusing on rare earth element (REE) recycling to address global supply chain challenges; Binding Solutions Ltd (BSL) (3% equity stake); MagIron LLC (16.86% equity stake) to advance low-carbon steel production; and Ceibo Inc. (3% equity stake), whose proprietary technology revolutionizes the extraction of copper from low-grade ores and waste materials.

    - The Company's key assets include: (1) Lac Jeannine: A former iron ore mine in Quebec with potential for reprocessing historical tailings; (2) HyProMag USA: A U.S.-based joint venture leveraging patented technology for rare earth magnet recycling; and (3) MagIron's Plant 4: A Minnesota-based iron ore concentrator designed to process waste materials into high-grade iron ore concentrate.

- Maginito, through the operations of HyproMag and its other subsidiaries, aims to generate a sustainably domestic source of rare earth raw material that will support the defense, aerospace, automotive, medical science, and energy transition industries, reducing its dependance on Chinese REE supply.

    - HyProMag's core proprietary technology—Hydrogen Processing of Magnet Scrap (HPMS)—is a highly energy efficient hydrogen-based process used to extract and recover NdFeB alloy powders from magnets in end-of-life scrap and redundant electrical equipment, such as computer hard drives and EV motors.

- Maginito now holds a 100% interest in HyProMag Limited (www.hypromag.com) and a 90% direct and indirect interest in HyProMag GmbH (www.hypromag.de), companies focused on short loop rare earth magnet recycling in the UK and Germany, respectively, and a 100% interest in Mkango UK, a company focused on long loop rare earth magnet recycling in the UK via a chemical route.

- On January 3, 2024, CoTec and Maginito announced a joint venture to apply the HPMS technology into the U.S. market. The venture—HyProMag USA (www.hypromagusa.com),—is to be jointly owned by Maginito and CoTec. This provides CoTec with a 50% direct equity interest and a further 10.3% indirect interest through its 20.6% equity interest in Maginito.
  - HyProMag USA's feasibility study demonstrated robust economics, with results yielding a post-tax NPV of $262 million and real IRR of 23% at current prices, and post-tax NPV of $503 million and real IRR of 31% when using forecasted prices.

- CoTec's Binding Solutions Ltd (BSL) investment marked its first entry into the green steel space. BSL has developed a proprietary cold agglomeration process that transforms iron ore fines into high-quality pellets without high-temperature sintering, enabling green steel production at scale. CoTec has the exclusive right to apply BSL's pelletization technology to ferroalloy and slag waste projects in Canada, Germany, Austria, and the Netherlands for a period of 36 months from the date of the investment agreement.

- CoTec has entered into an option agreement to acquire the Lac Jeannine property in Quebec, comprising a contiguous block of 31 mineral claims covering an aggregate of 1,649.34 hectares. The property has an estimated 73 million metric tons of resources at 6.7% total iron, resulting in 4.9 million metric tons of contained total iron, with lands surrounding the tested area potentially holding an additional 50 to 75 metric tons.
  - Preliminary Economic Assessment (PEA) yielded a pre-tax NPV is $93.6 million, and an IRR of 38%, and the after tax NPV is $59.5 million, and an IRR of 30% with payback achieved in 2.5 years. The Company is planning to conduct a feasibility study during 1H 2025.

- CoTec expanded its green steel market footprint through its MagIron investment. MagIron was established to support the decarbonization of the U.S. steel industry through the acquisition and restart of an iron ore processing plant (Plant 4) in the midwestern U.S., designed to process previously discarded waste materials.
  - MagIron has secured lands containing more than 193 million metric tons of iron bearing waste material, which is sufficient to support an estimated 20+ years of operation.

- Plant 4 is a relatively new, past-producing iron ore concentrator benefiting from over $170 million of prior investment. The plant, completed in early 2015 and operated for 21 months, previously displayed a run-rate of approximately 2.0 million mtpa and was designed to expand to 3.0 million metric tons per year relatively quickly.
  - MagIron intends to restart the operations at Plant 4 following completion of a refurbishment program, which is currently anticipated to take approximately 24 months and cost approximately $80 million.

- Ceibo has developed a proprietary technology that could represent a leading, low-carbon, high recovery process to mine copper from low-grade primary and waste material using a high throughput leaching technology.
  - CoTec is currently working on the identification of potential operational application opportunities for Ceibo technology. Opportunities identified by CoTec, if pursued by Ceibo, will be done in cooperation with CoTec as a joint partner/investor.

- CoTec believes its market valuation does not accurately reflect the value of its technology and asset acquisitions. Third-party NPV estimates place the combined equity ownership of just two projects—Lac Jeannine and HyProMag USA—at $217.5 million, exceeding the Company's current market cap. Additionally, CoTec's technological investments represent further significant, yet unrecognized, value.

- As of September 30, 2024, the Company's cash and cash equivalent position was C$1.17 million.

Competition

The competitive landscape for CoTec Holdings Corp. reflects the dynamic and evolving nature of the mineral extraction and sustainable technology sectors. As a forward-thinking company, CoTec operates at the intersection of resource development and technological innovation, positioning itself to address global challenges in efficiency, environmental impact, and resource utilization. Its primary competitors range from established mining giants to emerging innovators in green technologies and advanced material processing. Understanding this competitive environment is essential to appreciate CoTec's strategic positioning and its potential to disrupt traditional resource markets through sustainable and scalable solutions. The list of companies represented within this Competition section is not an exhaustive collection of CoTec's potential competitors; however, it is believed to be an example of the type of competition that the Company may face.

Resource and Mining Companies

Anglo American (AAL-LSE, NGLOY-OTC)

Anglo American is a diversified mining company with a global footprint that is headquartered in London. It produces a range of materials, including platinum group metals (PGMs), copper, diamonds, and iron ore. With significant operations in South Africa, South America, and Australia, Anglo American emphasizes sustainable mining practices. The company has developed innovative technologies, such as hydrogen-powered mining trucks and implemented advanced water conservation systems. Anglo American's platinum and copper operations position it as a key supplier to the renewable energy and automotive sectors, especially for electric vehicles (EVs) and hydrogen fuel cells.

BHP Group (BHP-NYSE, LSE, ASX)

BHP Group, headquartered in Melbourne, Australia, is one of the largest and most diversified mining companies globally. With a history dating back to 1851, BHP produces key resources, such as copper, iron ore, nickel, and metallurgical coal, vital for global infrastructure and renewable energy systems. The company has committed to a net-zero emissions target by 2050 and has adopted low-emission technologies in its operations. BHP's large-scale projects, such as Olympic Dam in Australia, highlight its capability to extract high-value resources efficiently. Its copper and nickel operations, in particular, are critical to supporting the electrification of transportation and renewable energy grids.

Freeport-McMoRan Inc. (FCX-NYSE)

Freeport-McMoRan is a leading international mining company headquartered in Phoenix, Arizona. The company is a top producer of copper, gold, and molybdenum, with major operations in North America, South America, and Indonesia. Its Grasberg mine in Indonesia is one of the largest copper and gold reserves in the world. Freeport has made significant investments in renewable energy and emission reduction technologies to align its operations with global sustainability standards. Its focus on copper production makes it a vital supplier for electric vehicles and renewable energy infrastructure.

Glencore plc (GLEN-LSE)

Glencore is a Switzerland-based multinational commodity trading and mining company. Its diverse portfolio includes metals like zinc, nickel, and cobalt, as well as energy products like coal and oil. Glencore has a significant presence in the Democratic Republic of Congo, where it mines cobalt for use in lithium-ion batteries. The company is actively transitioning toward sustainability, aiming for net-zero emissions by 2050 and reducing coal production in favor of greener commodities.

Jetti Resources (closely held)

Jetti Resources is a trailblazing technology company revolutionizing the copper mining industry with its innovative, environmentally friendly solutions. Headquartered in Boulder, Colorado, Jetti has developed a proprietary catalytic technology that enables the efficient extraction of copper from low-grade primary sulfide ores, which were previously uneconomical to process. By unlocking vast untapped copper resources, Jetti is helping to meet the growing global demand for this critical metal used in electric vehicles, renewable energy, and other clean technologies. Committed to sustainability, Jetti's process significantly reduces the environmental footprint of copper production while enhancing the efficiency and profitability of mining operations worldwide. Jetti Resources is a privately held company.

Rio Tinto (RIO-NYSE, LSE, ASX)

Rio Tinto is a global leader in mining and mineral extraction with operations spanning six continents. Founded in 1873 and headquartered in London, Rio Tinto focuses on producing aluminum, copper, iron ore, and lithium, among other resources critical to modern infrastructure and renewable energy technologies. The company is heavily invested in sustainability, with initiatives to reduce carbon emissions, improve water efficiency, and develop renewable energy projects at its mining sites. It also invests in innovation, exploring technologies like autonomous haul trucks and advanced mineral recovery processes. By prioritizing high-demand materials like lithium for batteries, Rio Tinto is a key participant in the global transition to a low-carbon economy.

Vale S.A. (VALE-NYSE, B3)

Based in Rio de Janeiro, Brazil, Vale S.A. is among the world's largest mining companies. The company specializes in iron ore, nickel, and copper production, which are integral to construction, manufacturing, and battery technology for EVs. Vale is also a key global supplier of manganese and cobalt. It has embraced sustainability by investing in renewable energy projects, reforestation programs, and initiatives to reduce tailings dam failures through dry stacking technology. Vale's strategic focus on nickel production aligns with the growing EV market, making it a crucial participant in the green energy supply chain.

Sustainable and Innovative Technology Companies

American Manganese Inc. (AMYZF-OTC)

American Manganese Inc. is a Canadian critical metals company focused on sustainable solutions for the circular economy, specializing in recycling lithium-ion batteries and developing high-purity manganese products. Headquartered in Surrey, British Columbia, the company's flagship RecycLiCo™ process efficiently recovers valuable materials like lithium, cobalt, nickel, and manganese from spent batteries, contributing to the growing demand for sustainable energy storage and electric vehicle production. With a strong commitment to innovation and environmental stewardship, American Manganese is positioned as a leader in advancing clean energy technologies and reducing waste in the battery supply chain.

Energy Fuels Inc. (UUUU-NYSE American, TSX)

Energy Fuels Inc. is a leading U.S.-based producer of critical materials, specializing in uranium, vanadium, and rare earth elements. Headquartered in Lakewood, Colorado, the company is a key supplier to the clean energy and advanced technology sectors, providing essential components for nuclear energy, renewable energy systems, and high-tech applications. Energy Fuels operates the only conventional uranium mill in the U.S., the White Mesa Mill in Utah, which also serves as a REE processing facility. Committed to sustainability and innovation, Energy Fuels is focused on strengthening domestic supply chains for critical materials essential to reducing carbon emissions and advancing clean energy solutions.

Neo Performance Materials Inc. (NEO-TSX)

Neo Performance Materials Inc., headquartered in Toronto, Canada, is a global leader in advanced materials critical to high-growth industries like electric vehicles, renewable energy, and electronics. The company specializes in manufacturing neodymium-iron-boron (NdFeB) magnetic powders, rare metals, and engineered rare earth-based chemicals and oxides. With operations spanning North America, Europe, and Asia, Neo ensures a vertically integrated supply chain and strong customer partnerships. Committed to sustainability, Neo plays a key role in enabling green technologies, such as EV motors and wind turbines while emphasizing recycling and resource efficiency.

Recycling and Circular Economy Innovators

Aqua Metals, Inc. (AQMS-NASDAQ)

Aqua Metals, Inc. is a pioneering clean technology company revolutionizing the recycling industry with its proprietary AquaRefining™ technology. Headquartered in Reno, Nevada, Aqua Metals provides sustainable and cost-effective solutions for recycling critical metals, including lead and lithium-ion battery materials, without harmful emissions or waste. The company's innovative electrochemical process minimizes environmental impact while maximizing material recovery, supporting the growing demand for clean energy and circular economy initiatives. Committed to advancing green technologies, Aqua Metals is at the forefront of creating sustainable supply chains for energy storage and battery manufacturing.

Li-Cycle Holdings Corp. (LICY-NYSE)

Li-Cycle Holdings Corp. is a leading global company specializing in the sustainable recycling of lithium-ion batteries. Headquartered in Toronto, Canada, Li-Cycle utilizes its proprietary Spoke & Hub technology to recover critical battery materials such as lithium, nickel, and cobalt with high efficiency and minimal environmental impact. By supporting the circular economy, Li-Cycle provides essential materials for electric vehicles and energy storage systems, reducing the need for new mining and advancing global clean energy initiatives. With operations across North America and Europe, Li-Cycle is a trusted partner in enabling sustainable energy solutions.

Umicore (UMI.BR-Euronext Brussels)

Umicore is a global materials technology and recycling company headquartered in Brussels, Belgium, specializing in sustainable solutions for clean mobility and the circular economy. The company develops and manufactures advanced materials for rechargeable batteries, catalytic converters, and renewable energy applications while offering world-class recycling services to recover precious and critical metals. With a focus on innovation and environmental stewardship, Umicore plays a pivotal role in enabling the transition to a low-carbon economy. Serving industries such as automotive, energy, and electronics, Umicore is recognized as a leader in clean technology and sustainable resource management. It is publicly listed on Euronext Brussels.

Metal Extraction and Processing Technology Providers

Lynas Rare Earths Limited (LYC-ASX)

Lynas Rare Earths is a global leader in the mining and processing of rare earth elements, essential for high-tech, green energy, and defense applications. Headquartered in Australia, Lynas operates one of the world's largest, rare earths deposits at Mount Weld in Western Australia and runs advanced processing facilities in Malaysia. The company is committed to sustainability and environmentally responsible practices, offering critical materials such as neodymium and praseodymium, which are vital for electric vehicles, wind turbines, and other renewable energy technologies. With a focus on innovation and strategic expansion, Lynas plays a pivotal role in securing a reliable and ethical supply of rare earths to global markets. As one of the leading rare earth producers outside of China, Lynas attracts significant interest from investors seeking exposure to the growing demand for critical materials used in green energy and high-tech applications.

MP Materials Corp. (MP-NYSE)

MP Materials is a leading producer of rare earth materials, which are essential components in modern technologies, including electric vehicles, wind turbines, robotics, and advanced defense systems. Headquartered in Las Vegas, Nevada, the company owns and operates the Mountain Pass mine in California, the only rare earth mining and processing site of scale in North America. MP Materials is committed to revitalizing the U.S. rare earth supply chain with a focus on innovation, sustainability, and reducing reliance on foreign sources. By vertically integrating mining, separation, and magnet production, MP Materials is positioned to support the global transition to clean energy and advanced technologies.

Metso Outotec (MOCORP-OMXH)

Metso Outotec is a global leader in sustainable technologies, solutions, and services for the aggregates, minerals processing, metals refining, and recycling industries. Headquartered in Helsinki, Finland, the company provides innovative solutions that improve energy and resource efficiency, helping industries meet their sustainability goals. Metso Outotec's portfolio includes advanced equipment, automation, and lifecycle services designed to optimize performance and reduce environmental impact. Formed through the merger of Metso Minerals and Outotec in 2020, the company combines decades of expertise to serve a wide range of industries, from mining to renewable energy. Its mission is to drive sustainable growth and resource efficiency for a better future.

Emerging Green-Tech Companies in Metals and Mining

First Cobalt Corp. (now known as Electra Battery Materials Corporation) (ELBM-NASDAQ, TSX)

First Cobalt Corp., now known as Electra Battery Materials Corporation, is a Canadian company focused on building a sustainable and vertically integrated supply chain for battery materials critical to the electric vehicle (EV) market. Headquartered in Toronto, Canada, the company operates the only permitted cobalt refinery in North America, located in Ontario, with plans to process cobalt, nickel, and recycled battery materials. Electra is committed to supporting the clean energy transition by providing ethically sourced, low-carbon materials to global EV and battery manufacturers. With its emphasis on innovation, sustainability, and strategic partnerships, the company plays a pivotal role in the development of the North American battery ecosystem.

Novamera Inc. (closely-held)

Novamera Inc. is a Canadian technology company pioneering innovative mining solutions to enhance the sustainability and efficiency of mineral extraction. Headquartered in Toronto, Novamera specializes in precision mining techniques, including its proprietary Sustainable Mining by Drilling (SMD) technology, which integrates advanced imaging, data analytics, and directional drilling. This solution enables miners to extract high-grade ore selectively, minimizing waste, environmental impact, and operational costs. By focusing on smaller, previously uneconomic deposits, Novamera is helping the mining industry unlock new opportunities while adhering to strict environmental and social responsibility standards. The company's mission is to transform the future of mining with smarter, more sustainable practices.

Historical Financial Results

Figures 28, 29, and 30 (pages 57-59) provide a summary of CoTec Holdings' most recent financial statements for the quarter ended September 30, 2024.

Figure 28
CoTec Holdings Corp.
INTERIM CONDENSED CONSOLIDATED STATEMENTS OF INCOME (LOSS) & COMPREHENSIVE INCOME (LOSS)
(Expressed in Thousands of Canadian Dollars)
FOR THE PERIODS ENDED SEPTEMBER 30, 2024, AND 2023

	For the three months ended		For the nine months ended	
	Sept. 30, 2024	Sept. 30, 2023	Sept. 30, 2024	Sept. 30, 2023
INCOME/(EXPENSES) FROM INVESTMENTS				
Gain (loss) on equity investments (Note 5)	(501)	3,307	2,987	15,000
Share of loss in associate and joint venture accounted for using the equity method (Note 6)	(77)	-	(277)	-
Gain on convertible notes receivable	-	1,670		1,806
EXPENSES				
Professional consulting fees	(51)	(179)	(381)	(530)
G&A expenses	(355)	(687)	(1,676)	(1,896)
Share-based compensation (Note 4)	(1,192)	(776)	(1,246)	(1,275)
Operating income (loss)	**(2,175)**	**3,335**	**(593)**	**13,105**
Finance expense (Note 10)	(48)	(73)	(162)	(118)
Finance income (Note 8)	6	48	19	137
Foreign exchange (loss) gain	24	(61)	(40)	(21)
Net finance expense	(18)	(86)	(183)	(2)
Income tax expense	-	-	-	-
Comprehensive income (loss) for the period	**$ (2,193)**	**$ 3,249**	**$ (775)**	**$ 13,103**
Net income (loss) per common share (Note 12)				
Basic	($0.03)	$0.06	($0.01)	$0.25
Diluted	($0.03)	$0.06	($0.01)	$0.25

Source: CoTec Holdings Corp.

Figure 29
CoTec Holdings Corp.
INTERIM CONDENSED CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
(Expressed in Thousands of Canadian Dollars)
AS AT SEPTEMBER 30, 2024, AND DECEMBER 31, 2023

	Sept. 30, 2024	Dec. 31, 2023
ASSETS		
Current		
Cash and cash equivalents	$ 1,168	$ 1,282
Sales tax receivable	69	138
IZ Note Receivable (Note 8)	340	323
Other receivables and prepaids	18	58
Total current assets	1,595	1,801
Non-Current		
Investments in equity instruments (Note 5)	27,979	24,080
Investments in associate and joint venture (Note 6)	9,753	9,623
Due from HyProMag USA (Note 7)	2,052	-
Exploration & Evaluation (Note 9)	884	389
TOTAL ASSETS	**$ 42,263**	**$ 35,893**
LIABILITIES		
Current		
Accrued liabilities	$ 1,433	$ 252
Trade and other payables	65	972
Total current liabilities	1,498	1,224
Non-Current		
Note payable (Note 10)	$ 2,144	$ 2,426
Stock-based compensation liability	1,250	875
Deferred share unit liability	401	299
TOTAL LIABILITIES	5,293	4,824
EQUITY		
Share capital (Note 4)	112,670	106,777
Contributed surplus	15,105	14,322
Deficit	(90,805)	(90,030)
TOTAL EQUITY	36,970	31,069
TOTAL LIABILITIES AND EQUITY	**$ 42,263**	**$ 35,893**

Source: CoTec Holdings Corp.

Figure 30
CoTec Holdings Corp.
INTERIM CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Expressed in Thousands of Canadian Dollars)
FOR THE PERIODS ENDED SEPTEMBER 30, 2024, AND 2023

	For the nine months ended	
	Sept. 30, 2024	**Sept. 30, 2023**
OPERATING ACTIVITIES		
Net income (loss) for the period	$ (775)	$ 13,103
Add items not affecting cash		
Director fees paid in shares (Note 5)	(183)	-
Gain on equity investments (Note 5)	(2,987)	(15,000)
Share of loss in associate and joint venture accounted for using the equity method (Note 6)	277	-
Gain on convertible note receivable	-	(1,806)
Share-based compensation	1,246	1,275
Non-cash finance expense & foreign exchange	202	(2)
Changes in non-cash working capital balances related to operations		
Sales tax receivable	69	(60)
Other receivables and prepaids	40	8
Trade and other payables and accrued liabilities	275	33
Cash used by operating activities	**(1,837)**	**(2,449)**
INVESTING ACTIVITIES		
Equity investment (Note 5)	(729)	(3,418)
Investment in associate and joint venture (Note 6)	(407)	(3,403)
Cash advanced to HyProMag USA (Note 7)	(2,052)	-
Exploration & evaluation assets (Note 9)	(495)	(269)
Cash used by investing activities	(3,683)	(7,090)
FINANCING ACTIVITIES		
Shares and warrants issued for cash	5,323	7,306
Share buyback	(391)	-
Notes payable	(500)	2,217
Warrant exercise	974	-
Cash from financing activities	5,406	9,523
Net (decrease) in cash and cash equivalents for the period	**(115)**	**(16)**
Cash and cash equivalents, beginning of period	1,282	239
Cash and cash equivalents, end of period	**$ 1,168**	**$ 223**

Source: CoTec Holdings Corp.

Recent Events

December 13, 2024—CoTec Holdings Corp. announced that all resolutions were passed by requisite majority at its annual and special meeting of shareholders held on December 13, 2024 in virtual format. The five incumbent directors, Julian Treger, Margot Naudie, and Sharon Fay as well as the two new directors, Erez Ichilov and Robert Harward, were elected to the Board by shareholders. The shareholders also approved the re-appointment of PricewaterhouseCoopers LLP as auditors of the Company for the ensuing year and the confirmation of the Company's omnibus equity incentive plan.

December 13, 2024—Mkango Resources Ltd. and CoTec announced that HyProMag Ltd. presented its rare earth magnet recycling and manufacturing projects during the Minerals Security Partnership (MSP) meeting in Brussels.

December 12, 2024—Announced it has commenced a process to appoint a drilling contractor to support the expansion of the previously announced PEA mineral resource estimate at its Lac Jeannine Property in Québec. Furthermore, it recently received the approval of the Québec Ministère des Resources naturelles et des Forêts (for its plan in connection with the Company's targeted 2025 exploration drilling campaign.

December 6, 2024—Announced that it has engaged Peter Epstein to provide certain investor relations services to the Company, subject to acceptance by the TSX Venture Exchange (TSX-V).

December 5, 2024—CoTec and Mkango Resources Ltd. announced the initiation of a Request for Proposal process from leading Engineering, Procurement and Construction Management (EPCM) providers to complete the detailed engineering design, procurement, and construction management phase for HyProMag USA LLC state-of-the-art rare earth magnet recycling and manufacturing project in the U.S.

December 5, 2024—Announced that the Company will be relying on CSA Coordinated Blanket Order 51-931 (the Order) for exemption from the requirements to send proxy-related materials for its upcoming annual and general special meeting held on Friday, December 13, 2024 at 11:00 AM (Toronto time) virtually at https://meetnow.global/MNAPPF6 due to the current delays and suspension of mail service in Canada as a result of the nationwide strike of the Canadian Union of Postal Workers that commenced on November 15, 2024.

November 25, 2024—Announced that the Company's CEO, Julian Treger, was to host an investor update on November 26, 2024, at 7:00am PDT/10:00am EDT.

November 25, 2024—Announced that it has entered into a convertible loan agreement dated November 19, 2024 with Kings Chapel International Limited. The Convertible Loan Agreement amends and restates, effective as of November 1, 2024, the terms of a series of loans that Kings Chapel has previously provided to the Corporation for the purposes of funding the Corporation's investments and working capital. As of the date hereof, the total principal amount of the Prior Loans, including an additional CAD$500,000 loan that the Corporation received from Kings Chapel on November 7, 2024, is CAD$3,013,147 with accrued and unpaid interest of CAD$220,896. Kings Chapel has also committed to advance an additional CAD$1,500,000 principal amount to the Corporation in three tranches of $500,000 to be advanced during December 2024, January 2025, and February 2025, respectively.

November 25, 2024—CoTec and Mkango Resources announced the results of an independent Feasibility Study for HyProMag USA, detailing plans to establish a rare earth magnet recycling and manufacturing facility in the U.S. Utilizing the patented Hydrogen Processing of Magnet Scrap (HPMS) technology, the project aims to produce 750 metric tons of recycled neodymium iron boron (NdFeB) magnets annually, with operations centered in Dallas Fort Worth, Texas, and additional pre-processing sites in the eastern and western U.S. The study indicates a post-tax Net Present Value (NPV) of $262 million and a 23% internal rate of return (IRR) based on current market prices, with potential increases to a $503 million NPV and 31% IRR under forecasted market conditions. With an initial capital investment of $125 million, the facility is expected to commence revenue generation by the first quarter of 2027, contributing to the domestic supply chain for sectors, such as defense, aerospace, and automotive industries.

November 20, 2024—CoTec provided an update to shareholders on the potential impact of the strike by the Canadian Union of Postal Workers on the Corporation's ability to comply with its obligations to deliver to shareholders, among others, its financial statements and related disclosure and meeting materials in respect of the Corporation's special and annual general meeting of shareholders scheduled to be held on December 13, 2024.

November 15, 2024—Announced that the Company has filed its unaudited interim condensed consolidated financial statements and the accompanying management discussion and analysis (MD&A) for the three and nine months ended September 30, 2024. The financial statements and MD&A can be accessed under the Company's SEDAR profile at www.sedarplus.ca. The Company announced a comprehensive loss for the quarter and nine months ending September 30, 2024 of C$2.19 million and C$0.78 million, respectively. The comprehensive loss was primarily driven by the impact of adverse exchange rate movements on the value of the Company's investments (S381k) and non-regular vesting of Equity Incentive Units (C$822k).

September 3, 2024—Mkango and CoTec announced that Maginito, which is 79.4% owned by Mkango and 20.6% owned by CoTec, and Inserma have entered into a binding and exclusive collaboration agreement. This collaboration will initially be focused on the pre-processing of HDDs, providing a rapid, automated and scalable solution for the removal of the magnet containing VCM from the HDD, which can then be fed directly into HyProMag's HPMS vessel for magnet recovery. Inserma pre-processing technologies in combination with HPMS, are scalable, do not require heat treatment or dismantling for magnet recovery while facilitating and lowering the cost and carbon footprint of subsequent shredding of the rest of the HDD assembly.

August 8, 2024—Announced that it has filed an independent National Instrument 43-101 technical report entitled Mineral Resource Estimate, Preliminary Economic Assessment and NI 43-101 technical report for CoTec's Lac Jeannine Iron Tailings Project, Québec, Canada dated August 5, 2024 and having an effective date of March 19, 2024 prepared by Addison Mining Services Ltd., JPL GeoServices Inc., Soutex Inc., Amerston Consulting Ltd. and Axe Valley Mining Consultants Ltd.

August 7, 2024—Announced it has filed its unaudited interim condensed consolidated financial statements and the accompanying management discussion and analysis (MD&A) for the three and six months ended June 30, 2024. The financial statements and MD&A can be accessed under the Company's SEDAR profile at www.sedarplus.ca.

August 1, 2024—Announced that it has engaged San Diego Torrey Hills Capital, Inc., a Rancho Santa Fe, California based investor relations firm, to provide market awareness and investor relations services to the Company, subject to acceptance by the TSX Venture Exchange. Cliff Mastricola is the principal of Torrey Hills and will be responsible for all activities related to the Corporation.

July 15, 2024—CoTec and Mkango announced the findings of the mid-project review for the bankable feasibility study for HyProMag USA, LLC, a Delaware corporation. Canada-based BBA USA Inc. and U.S.-based PegasusTSI Inc. have been engaged to complete the HyProMag USA bankable Feasibility Study to engineer and design its REE magnet recycling plants and a production facility in the U.S.

July 15, 2024—Announced that the Company has granted a total of 532,301 stock options to an officer and director of the Company and a further aggregate 350,000 stock options to officers of the Company. The Options have an effective grant date of July 15, 2024, vest over a three (3) year term, are valid for a ten-year period and 682,301 are exercisable at C$0.50 per share, being the higher of the closing share price on the day preceding the award and the price of the latest fundraise and the remaining 200,000 are exercisable at C$0.75. The Options have been granted under and are governed by the terms of the Company's Omnibus Equity Incentive Plan and are subject to the policies of the TSX Venture Exchange.

July 11, 2024—Announced that it has completed its previously announced non-brokered private placement of 5,500,000 common shares in the Corporation to Kings Chapel International Limited at a price of C$0.50 per Common Share for gross proceeds of C$2,750,000.

July 3, 2024—Announced that it intends to complete a non-brokered private placement of 5,500,000 common shares in the Corporation to Kings Chapel International Limited at a price of C$0.50 per Common Share for gross proceeds of C$2,750,000. The Corporation will use the gross proceeds of the Private Placement to repay a portion of the loans previously advanced to the Corporation by Kings Chapel, to fund potential investment opportunities, and for working capital purposes.

June 27, 2024—Announced the completion of an initial Mineral Resource Estimate (MRE) and positive Preliminary Economic Assessment (PEA) for the Lac Jeannine Iron Tailings Project, Québec, Canada. The PEA was prepared by independent experts Addison Mining Services Ltd., Soutex Inc, JPL GeoServices, and other independent experts.

June 26, 2024—Announced that the Company's CEO, Julian Treger, will host an investor update on June 28, 2024, at 7:30am PDT/10:30am EDT.

June 24, 2024—Announced the appointment of Linda Lourie as an Advisory Board Director to HyProMag USA LLC effective June 20, 2024. Linda Lourie is currently a Principal with WestExec Advisors, Principal with the Washington Circle Advisory Group, LLC, a Member of the U.S. Export-Import Bank's Advisory Subcommittee on Strategic Competition with the People's Republic of China (PRC), and serves as Commissioner on the Atlantic Council's Commission on Software-Defined Warfare, among other affiliations.

June 6, 2024—Announced that it has become a member of the Rare Earth Industry Association. The Rare Earth Industry Association (REIA or the Association) is a global, Belgium-based not-for-profit organization founded in 2019. REIA's mission is to serve, promote, and advance the sustainable development of the global rare-earth-element (REE) value chain. The Association's more than 80 members are drawn from across the entire REE value chain, including public and private companies, research and academic institutions, government entities, policy makers and other stakeholders. REIA is currently developing a framework and guidelines to help standardize ESG reporting accepted by upstream, midstream, and downstream participants. The Association provides its members with a platform for networking and benchmarking; for making their voice heard by policy makers, regulators, and other key stakeholders; for finding potential partners and collaborators; for accessing and sharing data, information, and best practices; and gaining visibility and highlighting their engagement towards a more sustainable supply chain.

May 30, 2024—Announced it has filed its unaudited interim condensed consolidated financial statements and the accompanying management discussion and analysis for the three months ended March 31, 2024. The financial statements and MD&A can be accessed under the Company's SEDAR profile at www.sedarplus.ca. The Company announced a net loss for the quarter of C$39,000. This marginal net loss was mainly driven by foreign exchange gains on equity investments offset by the operating costs for the quarter.

May 16, 2024—CoTec noted the White House's announcement that beginning in 2026, the US Government will impose a 25% tariff on imports of Chinese permanent magnets. CoTec holds a 60.3% equity interest (50% direct and 10.3% indirect) in HyProMag USA LLC, a company that is targeting the deployment of the revolutionary HyProMag rare earth element (REE) recycling technology in the U.S. The remaining 50% direct equity interest in HyProMag USA is held by Maginito Limited, a 79.4% subsidiary of Mkango Resources Ltd.

May 15, 2024—Announced that it has completed a second and final closing of its previously announced non-brokered private placement of units at a price of C$0.50 per Unit for gross proceeds of up to C$3,000,000. Each Unit consists of one common share in the capital of the Corporation and one Common Share purchase warrant. Each Warrant entitles the holder to purchase one Common Share at an exercise price of C$1.05 for a period of 12 months following the issuance of the Units.

May 14, 2024—Announced that MagIron LLC, in which the Company has an approximate 17% equity interest on a fully diluted basis, has signed long-term mineral leases that provide further operational and economic support for the restart of MagIron's Plant 4 iron ore concentrator. When combined with the iron-bearing stockpiles already owned by MagIron, the aggregate iron-bearing materials secured could be sufficient to support Plant 4 for more than 20 years of operation, targeting annual production of 2.5 million dry tonnes per annum of Direct Reduction grade iron concentrate.

April 29, 2024—Announced that it has filed its audited annual financial statements and the accompanying management discussion and analysis for the financial year ended December 31, 2023. The Company reported net income of C$9.8 million for the financial year.

April 25, 2024—Announced that it has completed an initial closing of its previously announced non-brokered private placement of up to 6,000,000 units at a price of C$0.50 per Unit for gross proceeds of up to C$3,000,000 (the Private Placement). Each Unit consists of one common share in the capital of the Corporation (each a Common Share) and one Common Share purchase warrant. Each Warrant entitles the holder to purchase one Common Share at an exercise price of C$1.05 for a period of 12 months following the issuance of the Units.

April 17, 2024—Announced that it intends to complete a non-brokered private placement of up to 6,000,000 units at a price of C$0.50 per Unit for gross proceeds of up to C$3,000,000. Each Unit will consist of one common share in the capital of the Corporation and one Common Share purchase warrant. Each Warrant will entitle the holder to purchase one Common Share at an exercise price of C$1.05 for a period of 12 months following the issuance of the Units. The Corporation will use the gross proceeds of the Private Placement to fund pending investment commitments and for working capital purposes.

April 2, 2024—Announced progress on key projects and its share repurchase program. For HyProMag USA, a bankable feasibility study is underway, with the first plant planned for Texas and commercial production expected in H1 2026. Robert Harward, retired U.S. Navy Vice Admiral, joined the board to support U.S. Government partnerships. For Lac Jeannine, high-grade iron concentrate testing is complete, and a Preliminary Economic Assessment (PEA) is expected in H1 2024. Under its NCIB program, CoTec repurchased 625,000 shares since January 2024, demonstrating confidence in its long-term value. The company remains focused on innovative, ESG-driven technologies for the mineral resource sector.

March 11, 2024—CoTec and Mkango Resources announced that Canada-based BBA USA Inc. and U.S.-based PegasusTSI Inc. have been engaged to complete the HyProMag USA, LLC bankable feasibility study to engineer and design its REE magnet recycling plants and a production facility in the U.S. The Feasibility Study is expected to be completed during H2 2024. HyProMag USA has the potential to supply the U.S. with a sustainable, long term domestic supply of neodymium/iron/boron (NdFeB) permanent magnets to enable the creation of secure, low carbon and traceable rare-earth supply chains.

March 6, 2024—Announced that the Company has granted 66,667 deferred share units (DSU's) to a non-executive director of the Company. Furthermore, the Company granted 53,333 restricted share units (RSU's) to an advisor to the Board of Directors. The DSU's and RSU's have been granted under and are governed by the terms of the Company's Omnibus Equity Incentive Plan and are subject to the policies of the TSX Venture Exchange.

March 4, 2024—Announce the appointment of Retired Vice-Admiral Robert Bob Harward to its Board of Directors effective March 4, 2024. Bob is a retired U.S. Navy Vice Admiral (SEAL) and a former Deputy Commander of the U.S. Central Command, where he served on the U.S. National Security Council in The White House and led several multi-national special forces commands in Afghanistan and Iraq. He joined Lockheed Martin in 2014 as their Chief Executive in the UAE and expanded his responsibilities to cover the Middle East, leaving to join Shield AI as Executive Vice President for International Business Development and Strategy based in the UAE.

February 22, 2024—Announced that the Company has been included in the 2024 TSX Venture 50™ list. The TSX Venture 50™ is a ranking of the top fifty performing companies on the TSXV over the prior year. Ten companies from each of five industry sectors are selected based on three equally weighted criteria to qualify as a TSX Venture 50™ Company.

February 20, 2024—Announced that the Company has granted an aggregate of 333,335 deferred share units to non-executive directors of the Board of Directors. Furthermore, the Company granted an aggregate 730,000 incentive stock options to an officer, management, and employees of the Company. The Options vest over a three (3) year term are exercisable at C$0.75 per share, being the higher of the closing share price on the day preceding the award and the price of the latest fundraise and are valid for a ten-year period. The Options have been granted under and

are governed by the terms of the Company's Omnibus Equity Incentive Plan and are subject to the policies of the TSX Venture Exchange.

February 15, 2024—Announced that it has received C$975,000 from the exercise of 1.3 million warrants at 75 cents by Kings Chapel International.

February 7, 2024—Announced that the Corporation's CEO, Julian Treger, will be presenting at the Emerging Growth Conference on Thursday, February 8, 2024, at 3:10pm to 3:20pm EST.

January 29, 2024—Provided an overview of its 2023 operational highlights and key targets for 2024. On August 12, 2021, the Company announced its change of name to CoTec Holdings Corp., Julian Treger's future appointment as CEO of the Company and its intended change of business. Following its successful change of business, CoTec was re-listed on the TSXV in April 2022. It has subsequently completed four investments, attracted a highly experienced and senior Board of Directors and Executive Management, and began pursuing operational roll-out opportunities for two of its technology investments.

January 26, 2024—Announced that a total of 279,954 incentive stock options have been granted to a director and officer of the Company pursuant to the Company's 10% rolling stock option plan. The Options have an effective grant date of January 25, 2024, and are exercisable for a period of 10 years at a price of C$0.75 per common share, with 1/3 of the Options vesting every 12 months, over a 3-year period.

January 23, 2024—Announced that it has filed with the TSX Venture Exchange (the TSXV), and the TSXV has accepted a notice of intention to commence a normal course issuer bid for its common shares. The Corporation's board of directors believes that purchases of the Shares at below the Corporation's view of their intrinsic value are an attractive investment opportunity, a desirable use of the Corporation's available capital, and in the best interests of the Corporation and its shareholders.

January 3, 2024—CoTec Holdings Corp. and Mkango Resources Ltd. announced that CoTec and Maginito Limited have formed a 50/50 joint venture entity which will roll out HyProMag Limited's Hydrogen Processing of Magnet Scrap (HPMS) recycling technology into the U.S. The newly formed joint venture company, HyProMag USA, LLC, plans to develop a low cost, low carbon, sustainable rare earth magnet recycling and production business underpinned by HPMS. HyProMag has sublicenced the HPMS technology to HyProMag USA.

Risks and Disclosures

This Executive Informational Overview® (EIO) has been prepared by Crystal Research Associates, LLC ("CRA") with the assistance of CoTec Holdings Corp. ("CoTec" or "the Company") based upon information provided by the Company. CRA has not independently verified such information. Some of the information in this EIO relates to future events or future business and financial performance. Such statements constitute forward-looking information within the meaning of the Private Securities Litigation Act of 1995. Such statements can only be predictions and the actual events or results may differ from those discussed due to the risks described in CoTec's statements on forms filed from time to time.

The content of this report with respect to CoTec has been compiled primarily from information available to the public released by the Company through news releases and other filings. CoTec is solely responsible for the accuracy of this information. Information as to other companies has been prepared from publicly available information and has not been independently verified by CoTec or CRA. Certain summaries of activities and outcomes have been condensed to aid the reader in gaining a general understanding. CRA assumes no responsibility to update the information contained in this report. In addition, for year one of its agreement, CRA has been compensated by the Company in cash of fifty thousand dollars for its services in creating this report and for quarterly updates.

Investors should carefully consider the risks and information about CoTec's business, as described below and more fully detailed in the Company's recent filings. Investors should not interpret the order in which considerations are presented in this document or other filings as an indication of their relative importance. In addition, the risks and uncertainties covered in the accompanying sections are not the only risks that the Company faces. Additional risks and uncertainties not presently known to CoTec or that it currently believes to be immaterial may also adversely affect the Company's business. If any such risks and uncertainties develops into an actual event, CoTec's business, financial condition, and results of operations could be materially and adversely affected.

This report is published solely for information purposes and is not to be construed as an offer to sell or the solicitation of an offer to buy any security in any state. Past performance does not guarantee future performance. For more complete information about the risks involved of investing in the Company, as well as for copies of this report, please contact CoTec by calling (604) 992-5600.

RISK FACTORS

Investing in CoTec Holdings Corp. involves several risks that could materially impact the Company's business, financial condition, and operations. These risks reflect the evolving economic, geopolitical, and operational challenges in today's global market.

Project Development and Execution Risk

The success of CoTec's key projects, such as HyProMag USA and Lac Jeannine, depends heavily on their timely development and execution. Delays in feasibility studies, permitting, construction, or commissioning could disrupt timelines and cash flow projections. For example, the HyProMag USA project requires the successful completion of construction and environmental permitting to achieve commercial production by the first half of 2026. Any setbacks at these stages could delay progress. Similarly, the Lac Jeannine project remains in its early stages, and unfavorable results from the Feasibility Study (FS) could result in delays, suspension, or cancellation. Rising input costs due to inflation, supply chain challenges, and labor shortages further amplify the risk of cost overruns and project delays.

Financing and Capital Availability

The Company's projects require significant capital investments to advance from feasibility to commercial operations. In today's environment of cautious investor sentiment, securing financing may be more expensive or difficult. Equity financing could result in shareholder dilution, while heavy reliance on debt could strain the Company's balance sheet. Additionally, access to government grants, subsidies, or tax incentives introduces further uncertainty, as such funding sources are often subject to changing political priorities and conditions. Failure to secure adequate funding could significantly impair the Company's growth plans and ability to meet project milestones.

Market and Commodity Price Risk

The Company's revenue potential is directly tied to the prices of iron ore (Lac Jeannine) and rare earth elements (HyProMag USA), which are influenced by global supply and demand dynamics. Sustained declines in commodity prices could render these projects uneconomical, while price volatility may disrupt off-take agreements and strategic partnerships, limiting revenue predictability. Additionally, increased competition for critical minerals could place downward pressure on pricing, further impacting profitability.

Technology and Operational Risk

CoTec's reliance on innovative, ESG-driven technologies to differentiate itself introduces operational risks. Scaling these technologies to commercial levels may expose inefficiencies, unexpected costs, or operational challenges. For example, HyProMag's rare earth recycling processes could underperform at larger scales, impacting expected productivity or profitability. Dependence on third-party technology providers also introduces risks, including licensing disputes, intellectual property challenges, and supply chain disruptions that could increase costs or delay projects.

Regulatory and Environmental Risk

The Company must navigate complex regulatory and environmental frameworks across multiple jurisdictions. For the HyProMag USA project, failure to meet Texas' local and federal environmental standards could result in delays, fines, or shutdowns. Similarly, the Lac Jeannine project in Québec requires engagement with government authorities and Indigenous stakeholders to secure a social license. Missteps in compliance or stakeholder relations could halt project advancement. Additionally, heightened scrutiny around ESG standards may increase compliance costs, placing further strain on the Company's financial outlook.

Geopolitical and Supply Chain Risk

CoTec's focus on critical minerals exposes it to geopolitical tensions and supply chain vulnerabilities. Trade restrictions, tariffs, or instability—particularly between the U.S. and China—could disrupt the availability of feedstock, technology components, or transportation. These risks could escalate operational expenses and delay project milestones, while logistical disruptions in global supply chains could further compound challenges.

Competition Risk

The Company operates in highly competitive sectors, facing challenges from well-capitalized players with established market share. CoTec must compete for feedstock supply, off-take agreements, and government incentives, all of which are crucial to project success. Additionally, emerging technologies and new entrants may disrupt the sector, eroding CoTec's competitive advantage.

Shareholder Dilution and Market Liquidity

The Company may require equity financing to fund its growth, which could result in shareholder dilution. Limited trading liquidity in CoTec's shares may also impact investors' ability to buy or sell stock at desired prices. While the Company's share repurchase program demonstrates confidence in its valuation, its sustainability depends on CoTec's financial health and cash flow.

Management and Governance Risk

CoTec's success depends on the expertise and continuity of its leadership team. The loss of key executives or technical personnel could disrupt operations and delay progress. Additionally, concerns around management decisions, governance, and alignment with shareholder interests may arise, particularly given the Company's limited operational track record with its current project portfolio.

Macroeconomic and Inflationary Risk

Global economic uncertainties pose overarching challenges to CoTec's operations. Rising inflation is driving up costs for labor, materials, and equipment, which could significantly increase project expenses. Higher interest rates may also raise the cost of debt financing, while economic downturns could reduce demand for iron ore and rare earth products, placing downward pressure on revenues and profitability.

Conclusion

While CoTec Holdings Corp. offers substantial growth potential through its focus on innovative, ESG-driven technologies and critical minerals, investors must carefully consider the associated risks. Project execution delays, financing challenges, commodity price volatility, regulatory hurdles, geopolitical disruptions, and intense competition represent significant obstacles. These risks could materially impact the Company's ability to deliver sustainable value and achieve its strategic objectives.

Glossary

Blast Furnace (BF)—A large, vertical furnace used in the steelmaking process to extract iron from iron ore by reducing it with coke and limestone at high temperatures.

Brownfield Restarts—The process of resuming operations at previously closed or underutilized industrial sites, often with upgraded technology and infrastructure.

Cold Agglomeration—Also known as cold binding, a process used to form fine iron ore particles into larger, more manageable shapes (pellets or briquettes) without high-temperature sintering, often through the use of binding agents.

Concentrate—A refined product obtained after the beneficiation of ore, increasing the proportion of valuable minerals while reducing impurities.

Copper Oxide—A type of copper ore that contains oxidized copper minerals, requiring extraction methods such as leaching to produce copper metal.

Copper Sulfide—A type of copper ore that contains sulfur compounds, commonly processed through flotation and smelting to extract copper.

Direct Reduce Iron (DRI) Shaft Furnaces—Vertical furnaces used in direct reduction processes to convert iron ore into Direct Reduced Iron (DRI) using a reducing gas instead of coke.

DR-Grade—Iron ore pellets or concentrate with high iron content and low impurities, suitable for use in Direct Reduction Ironmaking (DRI) processes.

Electric Arc Furnaces (EAF)—Steelmaking furnaces that melt scrap metal or DRI using electrical energy, offering a more energy-efficient and flexible alternative to traditional blast furnaces.

Electrowinning—A hydrometallurgical process that uses an electric current to extract and deposit metal, such as copper, from a solution.

Environment, Social, and Governance (ESG)—A set of criteria measuring a company's sustainability performance in environmental impact, social responsibility, and corporate governance.

Flowsheet—A diagram representing the sequence of operations in a mineral processing or metallurgical plant, showing how raw materials are processed into final products.

Green Iron—Iron produced using low-carbon or carbon-free technologies, such as hydrogen-based reduction, to reduce emissions compared to traditional ironmaking.

Goethite—An iron-bearing mineral (FeO(OH)) commonly found in oxidized iron ore deposits, often a secondary mineral formed through weathering.

Hematite—A high-grade iron oxide mineral (Fe_2O_3) that serves as a primary source of iron for steel production.

Induration—A heat treatment process that hardens iron ore pellets, making them suitable for use in blast furnaces or direct reduction processes.

Iron Ore Fines—Small particles of iron ore generated during mining and processing, often requiring agglomeration before being used in ironmaking.

Iron Ore Tailings—Waste material left after extracting iron from ore, often stored in tailings dams or repurposed for alternative uses.

Leaching Technology—A hydrometallurgical process that dissolves valuable metals from ores or concentrates using chemical solutions, commonly used for copper and rare earth extraction.

Long Loop—A process flow in metal recovery or refining that involves multiple stages of treatment, purification, and recycling to optimize material use.

Metric Tons—A unit of mass equivalent to 1,000 kilograms (2,204.62 pounds), commonly used in mining and metal production.

National Instrument 43-101—A Canadian regulatory standard governing the disclosure of scientific and technical information related to mineral projects.

Neodymium (Nd)—A REE used in high-strength permanent magnets, electronics, and clean energy applications.

Neodymium Iron Boron (NdFeB) Magnet—A powerful permanent magnet composed of neodymium, iron, and boron, widely used in electric vehicles, wind turbines, and electronics.

Pyrometallurgical—Refers to a metallurgical process that uses high temperatures to extract and refine metals from ores, concentrates, or recycled materials.

Rare Earth Element (REE)—A group of 17 chemically similar elements crucial for high-tech applications, including magnets, batteries, and defense technologies.

Rare Earth Magnet—A type of strong permanent magnet made from alloys of rare earth elements, typically neodymium (Nd), samarium (Sm), or dysprosium (Dy). These magnets generate significantly stronger magnetic fields than traditional ferrite or alnico magnets due to their unique crystalline structures.

Short Loop—A streamlined metallurgical process that minimizes steps and energy consumption using Hydrogen Processing of Magnet Scrap (HPMS) technology while maximizing material recovery to produce NdFeB magnets with a significantly reduced carbon footprint.

About Our Firm: For the past decade, Crystal Research Associates, LLC (www.crystalra.com) has successfully articulated the exceptional stories of small- and mid-cap companies to the Wall Street investor community. Our methods are well-established and diverse, from compiling and disseminating objective, factual information for both institutional and retail investor audiences to capitalizing on our expansive line of targeted distribution channels, which include industry-leading financial data and information providers. Our distribution efforts are accompanied by the use of prominent social media channels and by strategic and targeted appearances on national news programs and print media.

Crystal Research Associates is led by Wall Street veterans, Jeffrey Kraws and Karen Goldfarb. Together, Kraws and Goldfarb have built a unique business model, capitalizing on decades of experience as an award-winning sell-side analyst team to produce institutional-quality industry and market research in a manner that is easily understood by investors and consumers. Our firm's approach has been proven successful over the years as our products are published and available on Bloomberg, Thomson Reuters/First Call, Capital IQ, FactSet, Yahoo! Finance, and scores of other popular forums.

Office: (212) 851-6685 | www.crystalra.com