



April 17<sup>th</sup>, 2023

## SMX – Update Report

**SMX is creating a new digital platform of raw materials like plastic, fabrics, gold and many others; secured funding from various technology investors; Recent strategic deal with Sumitomo of up to \$35M of potential revenues; we initiate our coverage at price target of \$6.5 per share**

As global businesses faces new and complex challenges relating to carbon neutrality and meeting new governmental and regional regulations and standards, SMX is able to offer players along the value chain access to its marking, tracking, measuring and digital platform technology to transition more successfully to a low-carbon economy. SMX’s technology includes a chemical-based marking system, a unique reader to identify the code, and a blockchain record to collect and protect data.

**Market:** According to Frost and Sullivan, the global circular economy of plastic packaging recycling market is expected to achieve a valuation of \$20 billion by 2023, with a projected growth rate of 9.1%. **This market represents one of several prospects available to SMX.** In addition, the luxury goods authentication and re-use market alone presents significant opportunities.

**Strategy and business model:** SMX is an end-to-end turnkey solution comprising of three components – a chemical based marker system couple with a unique reader and connected to a block-chain digital platform. The Company has a **platform addressing IOT segment focusing on the circular economy sector.** Its business model is based on partnerships in which it sells its technology (tracking and data).


SMX builds successful partnerships with leading global companies, working strategically across different business segments with a wide variety of materials, including circular supply chains for plastics and rubber; mining and raw minerals (gold, diamonds, timber/lumber, cement, ore & rare earths); electronics & components (electronics & silicon wafer); fashion & cosmetics (leather, organic silk, organic cotton, wool, vegan leather, polyester, EVA, TPU, ABX, PET); as well as agriculture and food production (wine, animal feed, palm oil, seeds). We also analyze the company’s technology and competitive landscape. There is currently few competitors such as Applied DNA’s CertainT, iTRACE and SecureMarking we explore.

The company has secured funding from various technology investors, collectively amounting to approximately \$7 million. As of March 31st, 2023, SMX has \$5.68M of cash and cash equivalents (including funds from its SPAC deal and other sources) and loans (long term loans until 2024) of \$3.86, i.e. net cash of \$1.82. We assume quarterly burn rate of approx. \$1.2M, thus, SMX will raise capital before the end of the year to support its strategy of growth and the opportunities at hand for 2023 and beyond.


**We see the investment opportunity in SMX in three main layers: SMX can create generic format of authentication; That can lead to a new digital platform and/or marketplace of raw materials like plastic, fabrics, gold and many others; Forming a new industries standards for digital twining physical assets like Swift did for bank transfers.**

Frost and Sullivan’s economic model is based on market benchmarks for recent M&As transactions for industrial internet of things and supply chain tech firms. We initiate our coverage with a price target of \$6.5 per share.


 Stock Exchange  
**NASDAQ**

 Symbol  
**SMX**


 Sector  
**Technology**

 Sub-sector  
**Circular Economy**


 Stock price target  
**USD 6.5**

 Closing price  
**USD 2.1**

 Market cap  
**USD 48 Mn**

 No. of shares  
**22.59 Mn**

 Avg Vol (3 month)  
**962.2 stocks**

 Stock Performance  
(Since 8 March 2023)  
**-38%**

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## Investment Opportunity Summary

**Data is the new gold. SMX has developed a chemical based digital tracking solution that has the potential to efficiently and securely realize the benefits of the circular and closed loop economy.**

SMX aims to establish itself as the industry best practice benchmark for recording, tracking and connecting physical goods with a block-chain enabled digital twin. The transformative solution of SMX aims at building on the principles of the Sustainability Development Goals and especially SDG 12 of Responsible Consumption and Production and enable a transition from both a linear and regulatory driven linear approach to a B2B driven closed loop Circular Value Chain Approach (CVCA) that drives value for all participants in the circular economy – thereby to reach an Equilibrium Economy.

With the creation of a digital twin of physical goods – this enables every participant in the value chain to come together and form the global ledger for the goods with SMX providing the platform for safe and secure revenue flow and transactions. Increasing number of industries and sectors from plastics to mining are committing from an initial small percentage to 100% of recycled material and also realize the broader strategic vision of net zero.

*SMX's blockchain-based technology gives materials memory, providing full supply chain visibility without intermediaries. This is an integral part of the future of industry 5.0*

SMX is an end-to-end turnkey solution comprising of three components – a chemical based marker system couple with a unique reader and connected to a block-chain digital platform.

The uniqueness and advantages of the SMX solution are:

- Chemical based hidden marker (with the option of durable or dissolvable) can be applied on solid, liquid or gas and in multiple layers to form an Intelligence of Things (IoT<sup>2</sup>) marking system.
- The patented unique reader is able to retrieve information on product using a patented algorithm.
- Addresses key unmet industry needs of product authentication, brand accountability as well as an auditable closed loop supply chain.
- Solution is market agnostic and have a diverse target market from base chemistry to plastics, electronics, precious metals & minerals and agriculture markets.

### The company:

- SMX was established in 2015 based on technology originating from the Israeli government.
- SMX consists of a strong team of experts in key sectors and applications such as polymerics, physics, chemistry, and block-chain.

- On 28th February 2023, the Federal Court approved the company’s business combination with Lionheart III Corp., a special purpose acquisition company (“SPAC”) traded on the Nasdaq Global Market. The combined entity has a pro forma valuation of US\$360 million and is listed on Nasdaq via a newly formed Irish company named SMX Public Limited Company (SMX). SMX began trading on Nasdaq on 8th March 2023.

### **Circular Economy of Plastic Packaging Recycling and Resource Recovery**

- Size:
  - Total volumes: 28.8 Mn tons in 2017 = USD \$5.55 Bn(recycling only); 102 Mn tons by 2030 = \$102 Bn.<sup>1</sup>
- Current challenges:
  - Hard to recycle post-consumer multilayer plastic due to the difficulties in collection, segregation and recycling.
- SMX value offering:
  - The Circular Value Chain Approach (CVCA) of SMX provides for a closed loop of plastic and also introduces Plastic Credits;

Plastic Credits can be traded between stakeholders and ensures the economic benefits are both captured and relayed through the plastic value chain to drive the circular economy of plastic recycling.

### **Waste Electrical and Electronic Equipment (WEEE) Recycling Market**

- Size:
  - Total WEEE Generated in 2020: 53.50 Mn Tonnes. Total Volume Collected and Recycled in 2020: 11.95 Mn Tonnes. Total Revenues for Collection and Recycling: \$3.85 Bn.
- Current challenges:
  - Increasing scarcity of rare earth minerals used in electrical and electronic equipment.
  - Lack of transparency of the product through the value chain from manufacturing, supply to customer and post-consumer disposal.
- SMX value offering:
  - The CVCA methodology can also be applied to WEEE and similar to Plastic Credits – a Material Credit concept can be used to enable stakeholders to transfer and transact electrical and electronic equipment to ensure the economic value is captured to drive the circular economy of WEEE recycling and resource recovery.

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<sup>1</sup> All data is in USD

**We see the investment opportunity in SMX in three layers:**

- **SMX can create generic format of authentication;**
- **That can lead to a new digital platform and/or marketplace of raw materials like plastic, fabrics, gold and many others;**
- **Forming a new standard for digital twin physical assets like Swift did for bank transfers.**

**However, like any technology firm, SMX is in the scale up phase with proven technology and the initiation of sales.**

# 1. Current Global Challenges and Incentives for Continuing Sustainable Development

In 2015, all United Nations (UN) Member States adopted the 2030 Agenda for Sustainable Development that comprises 17 complex Sustainable Development Goals (SDGs). The SDGs are the urgent call to actions for both developed and developing countries to collaboratively sustain “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Source: UN). The Paris Agreement, adopted by 196 countries in 2015, together with the 2030 Agenda for Sustainable Development, provides the global foundation for sustainable, resilient, and low-carbon future to mitigate progressing climate change.

In 2023, the world is approaching the half-way targets of the 2030 Agenda for Sustainable Development and is in urgent need to move from planning to actions. The European Green Deal, approved in 2020, includes a set of policies driving climate-neutral development of the region with key focus on 55% reduction of net GHG emissions by 2030 (compared to 1990 levels). The EU Green Taxonomy builds on UN SDG’s and Paris Agreement to create a universal classification system, providing a global benchmark for investors and industry stakeholders to promote investments in sustainable economic activities and limit greenwashing with misleading information on companies’ environmental impact and sustainable development. The EU leads the global race to implement climate actions along with sustainable development, focusing on incorporating science-based targets that are economically and technically achievable. This offers a peer learning approach to help other global economies to drive their transition towards low-carbon economies, taking into account the European Green Deal in climate mitigation approach and playing an important role in scaling up sustainable investments worldwide. 3

Figure 1. The Future of the Resource Economy



The future of the resource economy is set to be shaped by the three key levers – Sustainability

Development Goals together with Circular Economy, Risk and Resilience and Digital Transformation – to derive the key tangible benefit of the digital productivity bonus as well as much needed transparency.

The recently published Global Risks Report 2023 of World Economic Forum (WEF) clearly indicates that the post-pandemic carbon emissions of the global economy have reached the levels not seen in decades. Failure of climate-change mitigation and adaptation, along with continuing natural disasters and extreme weathers, environmental damage, as well as natural resource crises are ranked among the top environmental risks both in short and long-term perspective. Additionally, the food and energy crisis coupled with dramatic inflation and rising cost-of-living are resulting in social unrest, further emphasizing the urgent need to reshape the world we all live in. The world is facing the real potential of socioeconomic and environmental polycrisis with an urgent need for solutions that guarantee more stable future, taking into account long-term sustainable development. 4

Figure 2. The Global Risks Perceptions in short-term (One-, Two-year) and Long-term (10-Year) Perspective

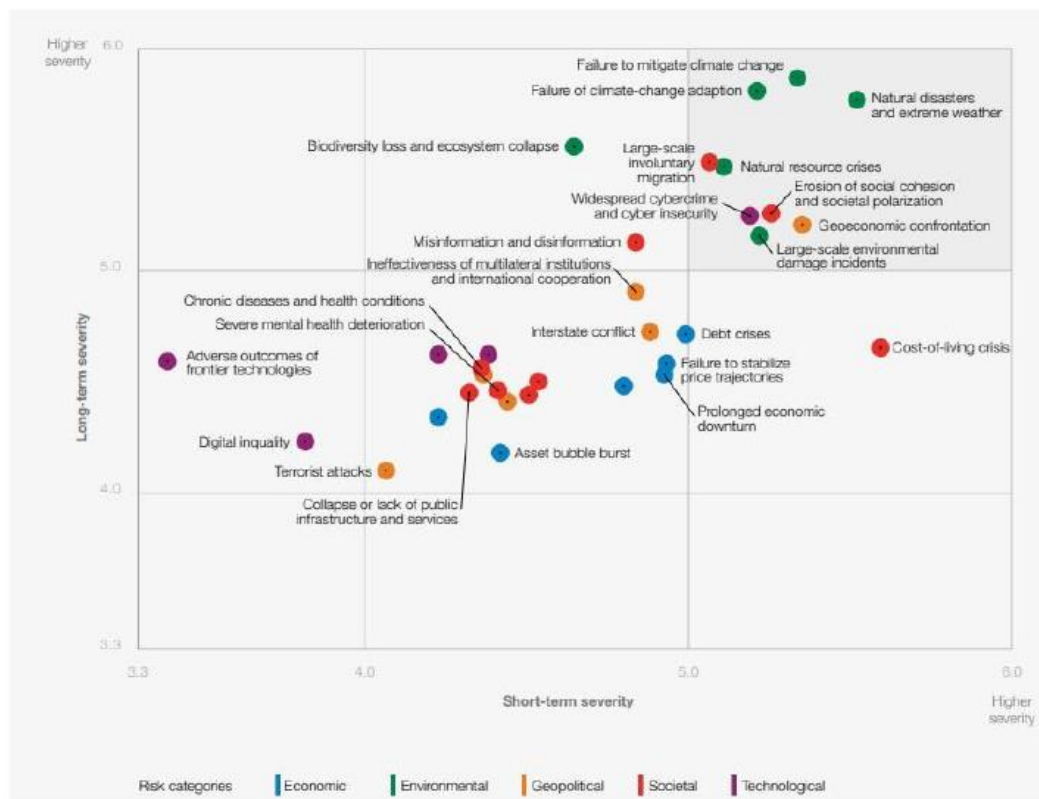


Image source: WEF Global Risks Report (2023)

## The Role of Technology & Data, Cross-industry Collaboration, and 5P's Approach

New technologies play an important role in the transition to net-zero, but need to be inclusive and fit for purpose. Technology has become a powerful tool enabling the move of the Circular Economy approach forward and the shift from start-up phase to full implementation and impact phase. Digital transformation is becoming an inseparable part of the global transition to the Circular Economy and net zero. The main goal is to apply new technologies in areas where they can result in added value, pushing the outcomes a step further to reach different industries. Data has become the new gold. Both qualitative and quantitative data is considered the new currency for growth and innovation, enabling the connection of business profits with progressing sustainability. Global trends indicate the growing adoption of new technologies by the individual customers as well as across industries to advance a shared vision of contributing in digital transformation to fulfil the The Paris Agreement and the 2030 Agenda for Sustainable Development.

The global resource management sector is transitioning toward greater digital technology adoption using disruptive smart technologies and platform-based solutions to ensure physical and digital tracking of closed-loop material management, to authenticate sustainability claims as well as to enable cross-industrial collaboration, bringing a significant series of environmental, social, and economic benefits, and driving much-needed transparency to avoid greenwashing. In these terms, the digital solutions can shape a bigger picture of the circular economy approach, not only from the business perspective but also from the industrial point for better understanding, transparency, and mapping of the sustainability potential.

Figure 3. Top 10 Growth Opportunities Across Waste Recycling and Circular Economy Industry (2023)



Image source: Frost & Sullivan

In the recent report “Growth Opportunity Outlook in the Waste Recycling and Circular Economy Industry” published in December 2023, Frost & Sullivan has identified top 10 growth opportunities across the waste recycling and circular economy industry that drive the transformative shift from a linear to a circular economy. It highlights the importance of



collaboration across key industry verticals to develop innovative technologies and services backed by strong business models and driven by digital transformation to increase resource recovery and efficiently recycle materials.

One of the key top growth opportunities identified by Frost & Sullivan for 2023 is development of the waste-to-resource mapping, verification and validation platforms. As the circular economy approach prioritizes the reuse and resale of secondary materials with no modification of the product or materials as well as recovery and recycling that include efficient processing and refurbishment, it is in urgent need to implement solutions that enable data-based operation and verified material tracking along entire life-cycle. Material, component, product, and waste exchange platforms connect producers, users, and processors with transparent information about supply and demand as well as and exchange opportunities. Waste-to-resource platforms support reverse logistics while creating growth opportunities for circular business models and collaboration among stakeholders with compatible waste or resource streams. Results include improved resource management and recovery, enabling material and cost efficiencies. Digital resource management platforms can aggregate and analyse data and, using advanced analytics and AI, automatically match suppliers and other partners across the waste and material supply chain for efficient coordination of reuse, resale, and waste upcycling operations. Digital mapping of material and waste data ensures that it is accessible, visible, verifiable, and valuable. Waste-to-resource platforms will empower businesses with the tools and knowledge to take action on decarbonization and limit waste generation. Digital platforms also support growth opportunities in the areas of reusable packaging solutions, online marketplaces for resale or sharing of otherwise unwanted items, and innovations in design for recovery and reuse.

According to Frost & Sullivan, successful businesses focus on five core pillars of the Environmental, Social, and Governance (ESG) factors: Process, People, Product, Partnerships, and Platform (the 5P’s). Effective synergies across these five pillars create growth opportunities and development of new business models while ensuring companies meet the ESG standards consistent with a “good for people, good for planet, good for business” approach. 7



Image source: Frost & Sullivan

#### Figure 4. The Frost & Sullivan's 5P's Approach to ESG Platforms

The global resource management sector is transitioning toward greater digital technology adoption using disruptive smart technologies and platform-based solutions to ensure physical and digital tracking of closed-loop material management, authenticate sustainability claims as well as to enable cross-industrial collaboration, bringing a significant series of environmental, social, and economic benefits, and driving much-needed transparency. In these terms, the digital solutions can shape a bigger picture of the circular economy approach, not only from the business perspective but also from the industrial viewpoint for better understanding, transparency, and mapping of the sustainability potential.

## 2. SMX: Company overview

SMX has developed a chemical based digital tracking solution that has the potential to efficiently and securely realize the benefits of the circular and closed loop economy.

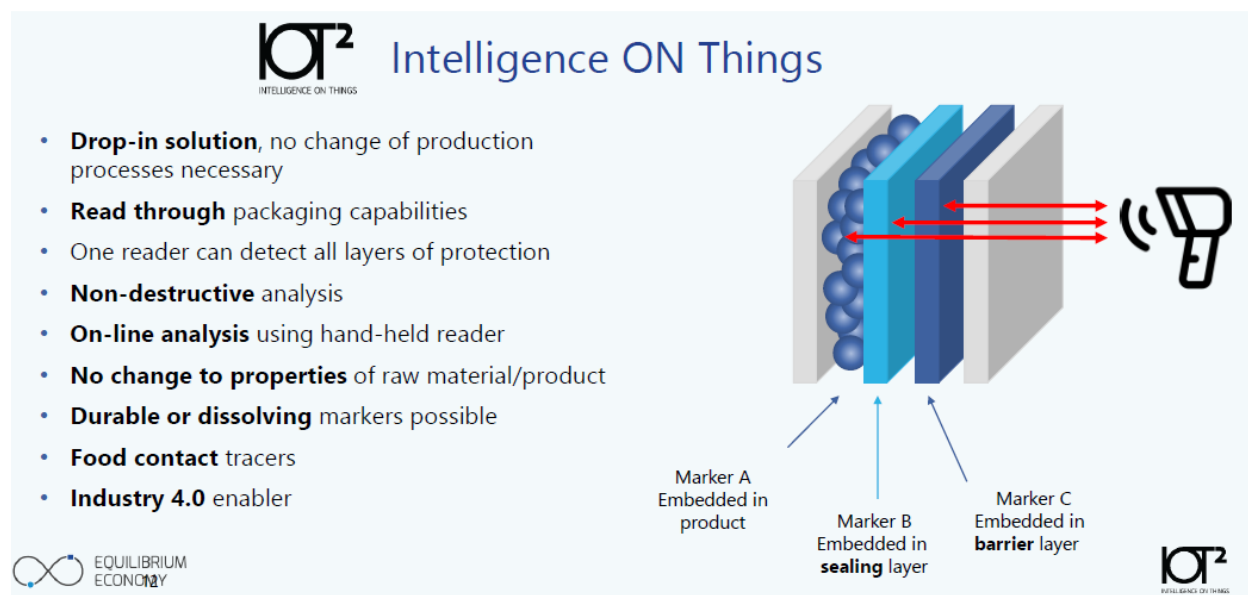


Figure 2: SMX's IOT<sup>2</sup> – Intelligence ON Things

Source: SMX

### *The technology*

SMX's chemical based marker system imprints a permanent mark on solid, liquid or gaseous objects or materials with the marker capable of being deployed in multiple layers. As the marker comprises a combination of 500,000+ marker codes – each mark is unique.

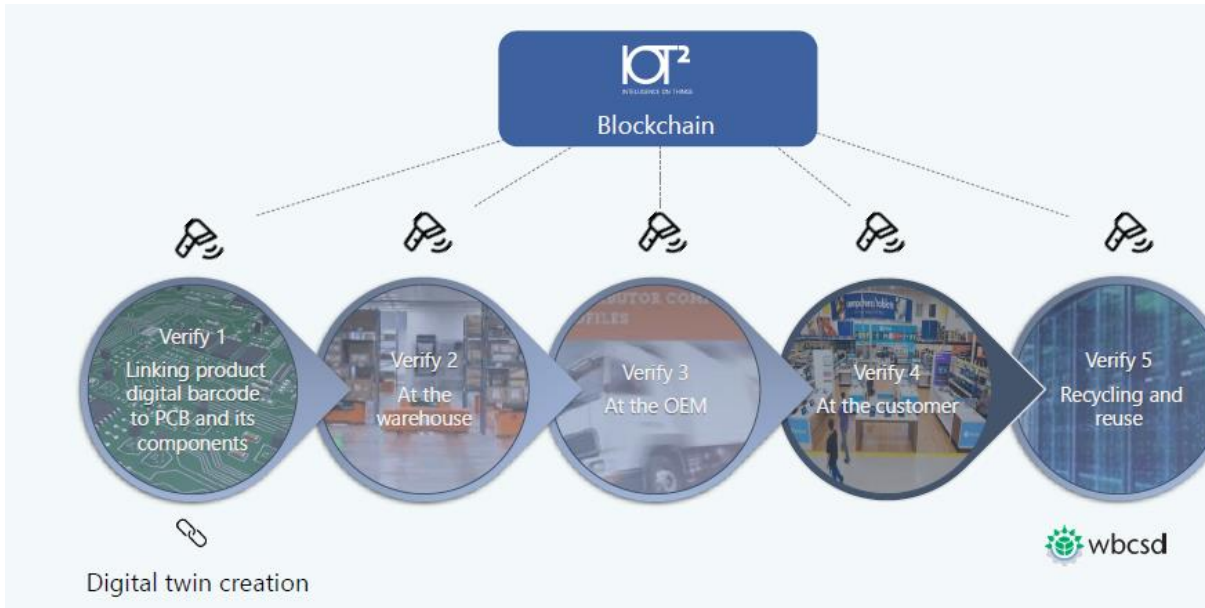
The marker system is coupled with a unique patented reader that responds to signals from the marker and coupled with a patented algorithm captures the details of the product retrieved and stored securely through block-chain.

The key value proposition of the SMX solution is to enable next generation Intelligence ON Things with the following distinct offerings:

- Easily deployable solution – Drop-in solution – with toolkits available for industry to deploy the solution with no changes needed in the production processes
- Given the markers' embedded nature – the ability to detect the embedded data within seconds via the SMX reader without destroying the product/material or any need for special lab tests. The block-chain offers an additional layer of authentication.
- Best-in-class offering – with considerable value and operational benefits in comparison to similar offerings.
- Supply chain integrity – being the first solution to provide end-to-end transparency to increase trust and reduce liability

- Brand authenticity – strong tool in the global fight against counterfeit

**Box #.1: SMX Transparent Supply Chain Management for Electronics**



**SMX has been chosen to be in the Intel Integrity Partner Program**

As highlight in Figure 3 below – SMX is able to also provide the much needed food security in a post coronavirus world.

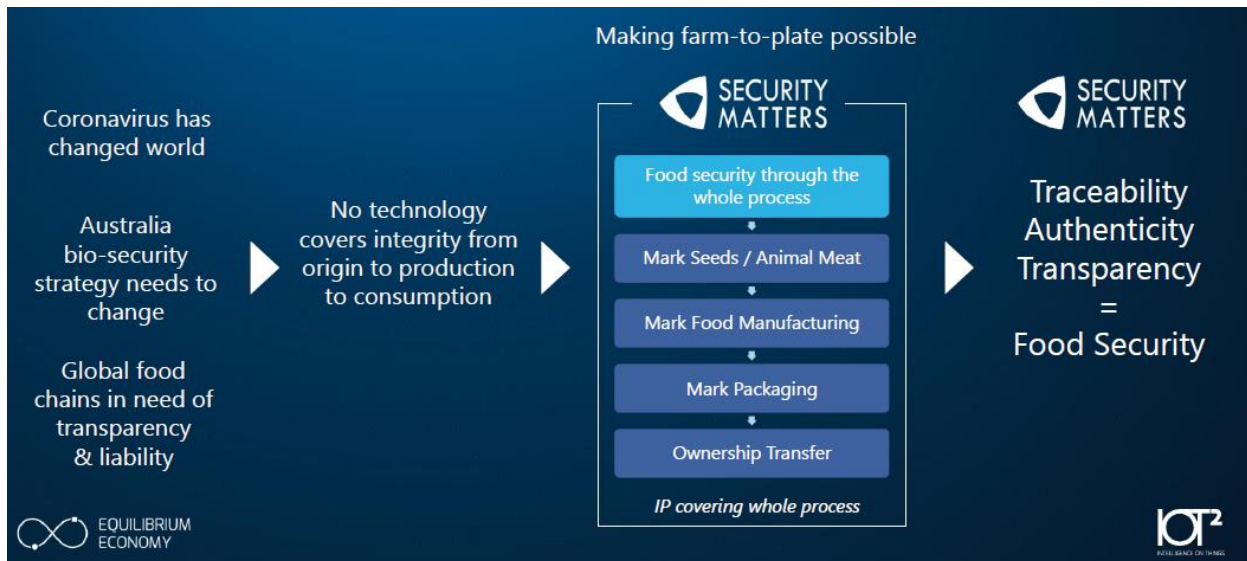


Figure 3: SMX solution delivering on the food security in the post-coronavirus world

Source: SMX

SMX is pursuing a clear three-stage roadmap for market entry:

1. Market leader adoption – Adoption of the solution by market leader such as BASF, Intel, The Perth Mint etc.
2. Become an industry standard – Building on the adoption of the market leader to establish itself as an industry benchmark and also increase adoption by other companies in the value chain
3. Regulator adoption – Build on prior two points to then influence regulators and professional agencies in key industries to become a preferred solution

**The SMX business model is to be a B2B service platform to accelerate collaboration and partnership in each target segment such as chemicals, precious metals, pharma, food, beverage, agriculture and electronics. It aims to have multiple revenue streams that will grow and compound over time and comprise of – an implementation fee/one-time set-up fee, technology license fee/recurring SaaS payment and lastly - a service fee that will be recurring and based on usage.**

**We will focus on circular economy and specifically plastic as the main growth engine for SMX future operations.**

## 2.1 The Circular Economy of Plastic Recycling and Resource Recovery

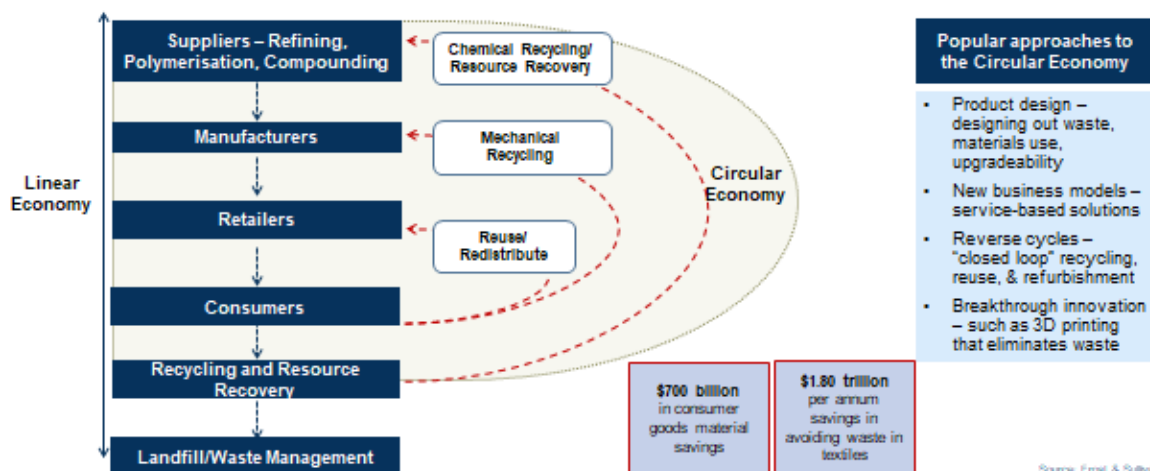
### Key Takeaways

- The Global Circular Economy of Plastic Packaging Recycling, Resource Recovery and Disposal Market is estimated to be \$14.01 billion in 2019 and is expected to grow at a CAGR of 9.1%.
- Volume generated for 2019 is 108.2 million metric tonnes and is expected to increase to 186.8 in 2030. The recycling rates will reach 54.7% in 2030 compared to 28.6% in 2018.
- PET, HDPE, LDPE, PVC and PP recycling rates will increase to 66.8%, 57%, 36%, 48%, 47.1% respectively in 2030.
- SMX address some of the key unmet needs of the plastic recycling industry particularly with regards to hard to recycle post-consumer plastic segment. The embedded chemical marker will allow for better tracking, monitoring and sorting of the post-consumer plastic with the Circular Value Chain Approach.

China's waste ban has created numerous opportunities in countries that were exporting their plastic waste. Producers, consumer and recyclers are working together to enhance recyclability of packaging plastic. Europe is leading the circular economy way in dealing with packaging plastic waste by establishing a "zero landfill" of plastic waste by 2030. The "Circular Economy of Plastic Recycling" refers to an industrial economy that, contrary to the traditional linear economy, reclaims used materials and recycles them as secondary raw materials for new products.

### GROWTH OPPORTUNITIES

### WHAT IS THE CIRCULAR ECONOMY FOR PLASTIC?



Given the challenges around mechanical recycling – chemical recycling is emerging as a promising solution to tackle global challenge associated to single use plastic waste.

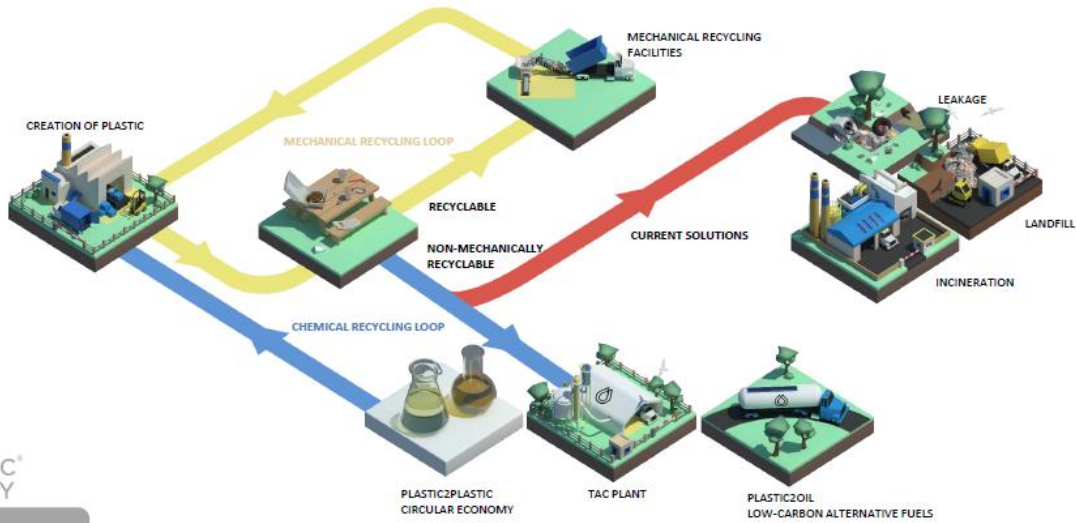
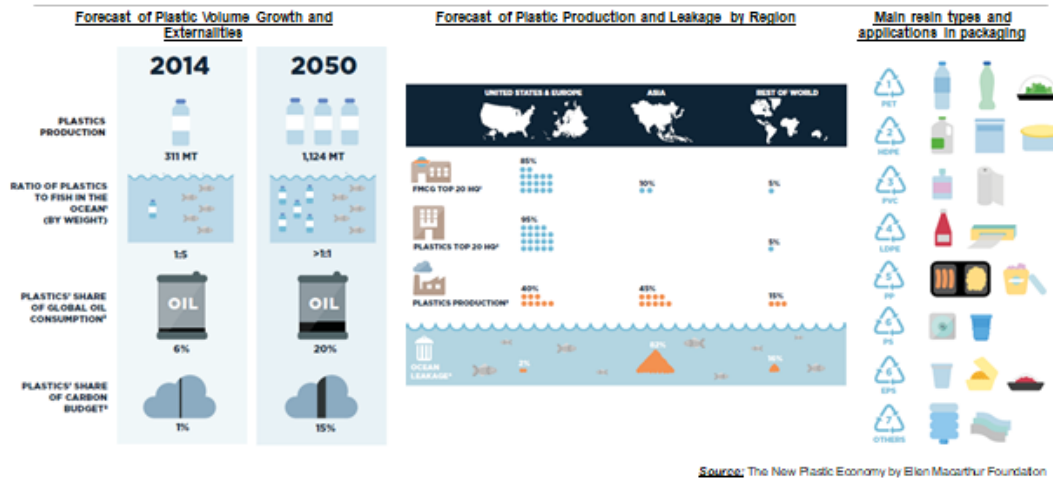


Figure 8: Plastic Energy's Innovative Solution provides a framework for a Circular Economy of Plastic Waste Recycling and Resource Recovery

Plastic packaging accounts for close to one-third of overall plastic and comprises of various grades and types that are graded from 1 to 7 and are posing challenges both in the collection, sorting and recycling of plastic waste. About 6% of global oil production devoted to production of plastics and in 2012 the resulting emissions amounted to approximately 390 million tonnes of CO<sub>2</sub>(for all plastic and not packaging specifically)

## 7 PLASTIC PACKAGING RESIN TYPES AND PRODUCTION METRICS

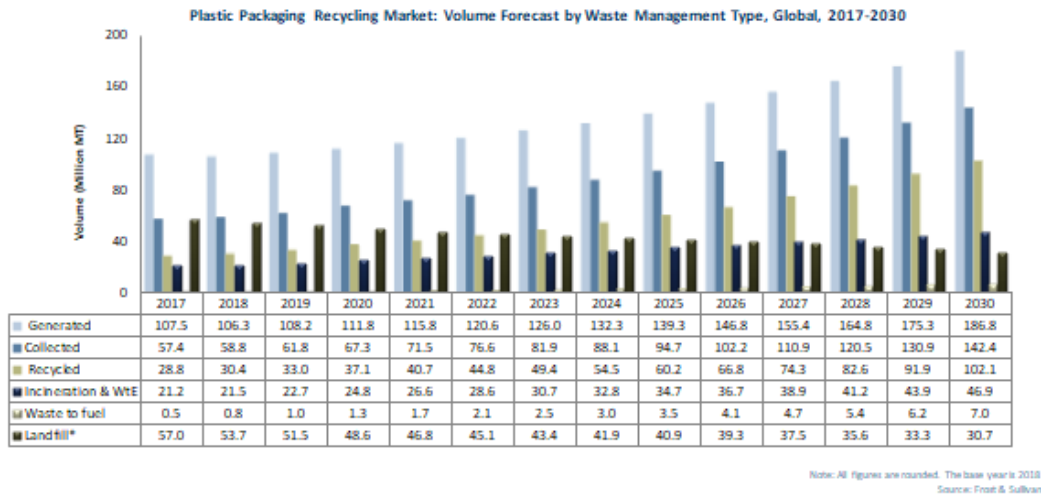


Source: The New Plastic Economy by Ellen MacArthur Foundation

Only 30 million tonnes of the 106.3 million tonnes of plastic packaging collected was actually recycled. One of the biggest challenges for the plastic packaging recycling industry has been the post-consumer packaging comprising largely of multi-layer plastic packaging- which are difficult to segregate and effectively recycle.

GROWTH OPPORTUNITIES

**ONLY ONE-THIRD OF PLASTIC GENERATED IS RECYCLED – TRACK AND TRACE SOLUTIONS CAN TRANSFORM COLLECTION AND RECYCLING**



A solution such as the SMX marker, will allow for both an effective tracking and monitoring as well as enable for better sorting and separation of plastic for a fuller circular economy. Improved tracking & tracing of materials and products beyond the point of sale is also set to improve trust, authentication and incorporate resale and material recovery.

GROWTH OPPORTUNITIES

**Examples of Industries Incorporating Blockchain Solutions - Taking Advantage of Emerging Technologies**





## 3. Company Financial Analysis & Valuation

### *Valuation Method & Approach*

Valuation of a start-up company in its early stages can be challenging due to limited cash flow (if any) and uncertainty regarding the future. As part of a Discounted Cash Flow (DCF), the accepted method used in financial valuations, there are several modifications to a start-up company's valuation. In general, there are four primary methods within the DCF method:

1. Real options – this valuation method is designated for pre-clinical and early-stage clinical programs/companies where the assessment is binary during the initial phases and based upon scientific-regulatory assessment only (binomial model with certain adjustments).
2. Pipeline assessment – a valuation method used for early-stage companies before the market stage where time-to-market may be a few years for full operations. The company's value is the total discounted cash flow for its products/signed agreements plus unallocated costs and its technology platform assessment.
3. DCF valuation - this method applies to companies with products that have a positive cash flow from operations.
4. Market benchmark – this method is based on recent deals (M&A and/or fundraising) within the company's domain and market multiples.

SMX is a publicly held firm, thus a late-stage firm from a financial aspect, however early-mid stage in its time-to-market. Our valuation is based on a market benchmark approach with recent M&As deals similar to the company.

### **3.1 Financial overview – Supply Chain Tech Market**

Today's global supply chain is a highly fragmented industry that includes a sprawling ecosystem of disparate providers, each at different technological maturity stages. We view this as a compelling backdrop for new entrants seeking to address gaps in the status quo and see growth areas across the value chain, including procurement, inventory management, freight, warehousing, fulfillment, and last-mile delivery.

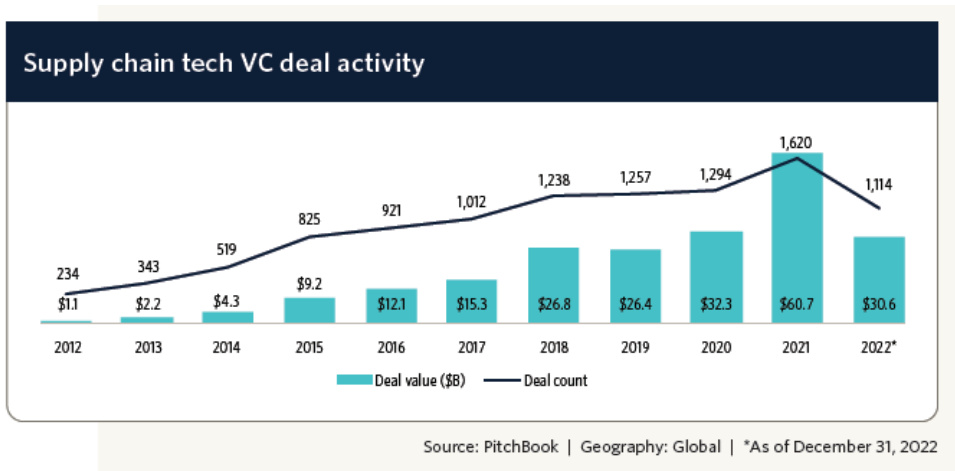
The COVID-19 pandemic has strained global supply chains and led to significant mismatches in supply and demand. Assembly and manufacturing plants have faced shutdowns, causing production delays and shortages of global goods. Nonessential goods have been stuck in limbo, with retailers unable to accept deliveries. Grocers have struggled to keep household goods on shelves. These disruptions have highlighted the need for technologies that can help ensure business continuity and mitigate economic shocks' impacts. Additionally, businesses involved in global trade are demanding better visibility across delivery and supply channels, quicker shipping capabilities, and the ability to source products on-demand to reflect real-time conditions at the consumer level.

Startups are rising to the occasion, developing software and data services to address these pressing needs. Investors, in turn, have put substantial amounts of venture funding to work to

both modernize and disrupt this industry. In 2020, VC investors funneled approximately \$12.6 billion into supply chain technology startups in North America and Europe across 555 deals.

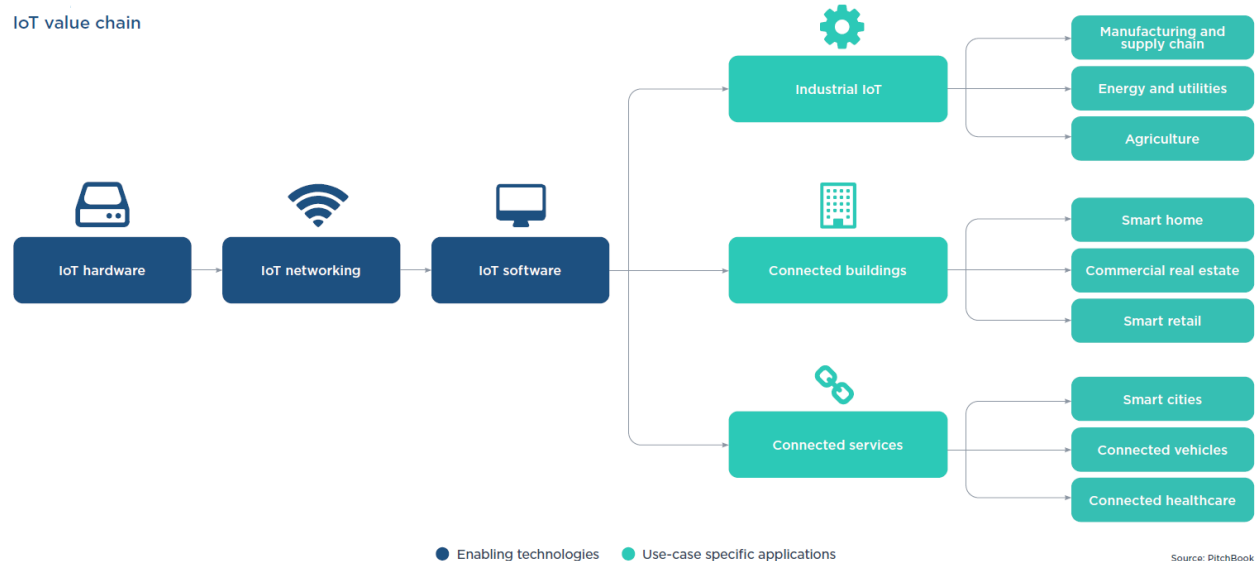
### VC activity

Venture capital activity in supply chain tech continued to normalize in Q4 2022. Deal count declined modestly quarter-over-quarter (QoQ) by 7.8% to 201 deals. On a YoY basis, the number of deals was down 46.4%. Deal value in the quarter increased by 28.2% QoQ to \$4.0 billion, but was down 71.4% YoY. The sequential lift in deals stemmed mainly from a few larger deals in Q4. The top three deals accounted for nearly one-third of the total. Overall value of supply chain tech deals for 2022 fell back to approximately the average of the 2018 to 2020 period following the dramatic run-up in 2021 in supply chain tech deals and VC funding. The number of deals across stages was relatively steady QoQ, but on a value basis, late-stage deals saw a big increase, while other stages remained flat.<sup>2</sup>



### Financial overview – Industrial Internet of Thing (IIoT) Market

We characterize SMX's role in the supply chain as an IIoT company. Specifically, as a use-case specific application provider, addressing the visibility and authentication needs along the supply chain using IIoT.



## Overview

Industrial IoT (IIoT) technologies, collectively referred to as "Industry 4.0," allow for the digital and smart transformation of capital-intensive industries including manufacturing, logistics, transportation, and oil & gas production. Sensor technologies, big data, analytics, and other technologies are used to monitor and diagnose manufacturing machinery and equipment, supply chain, and safety operations. This allows for predictive maintenance, demand forecasting, improved productivity, and better efficiencies across the entire value chains of industrial companies.

Subsegments within IIoT include:

**Manufacturing & supply chain:** Devices that enable predictive maintenance of industrial equipment and **asset tracking of inventory along the supply chain.**

**Energy & utilities:** Devices and sensors that measure power generation and usage (also includes oil & gas extraction monitoring) .

**Agriculture:** Devices that monitor field conditions for agricultural planning .

### Industry drivers

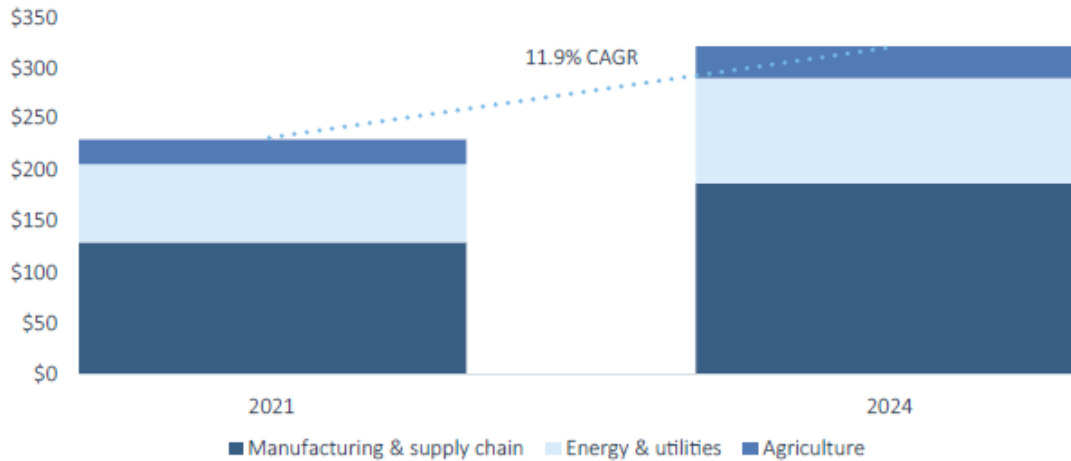
First, many industries are utilizing IoT connectivity to empower autonomous equipment operations, including robotics and unmanned aerial vehicles. Second, rising volume of equipment data from programmable logic controllers, enterprise resource planning systems and industrial sensors has created a need for companies to make sense of it. **Last, global supply chains increasingly pressure companies to maintain visibility along networks of manufacturers and distributors to avoid "retail shrinkage," or loss of inventory due to shoplifting, theft, or administrative errors.**

### Market size

The industrial IoT market is forecast to grow over 22% to \$229.2 billion in 2021. From 2021-2024, **we forecast both manufacturing & supply chain and agriculture subsegments to grow in line with the market or above, at 13.2% and 11.1% CAGRs respectively.** Energy & utilities is forecast to grow at only 10.0%, in part because of the fixed rate of investment in the utilities sector and risk-averse nature of oil & gas technology investments. Use cases we expect to benefit most from an economic recovery include power generation, mine operation, factory automation, and livestock tracking. Logistics and asset tracking may lag slightly given high growth experienced in 2020, although they may still grow in double-digits.



## IIoT Market Size<sup>1</sup> (\$B)



Note: This market size is based on total end user spending

### Updated market size estimates by subsegment

		MARKET SIZE GROWTH ESTIMATE (2020-2021)		
		2020 ESTIMATE (\$B)	2021 ESTIMATE (\$B)	UPDATED CAGR FORECAST (2021-2024)
INDUSTRIAL IOT	Manufacturing & supply chain	\$99.3	\$128.9	13.2%
	Energy & utilities	\$68.6	\$77.7	13.1%
	Agriculture	\$18.9	\$22.7	11.1%

Source: PitchBook, IDC, Omdia, Gartner | Geography: Global

### Disruption potential

Existing IIoT platforms can be disrupted through the creation of a holistic, cloud-based platform that integrates controls and analytics across all the devices in a network. Incumbent control systems can be walled gardens that work only with certain devices and may not communicate fully with analytics systems. This gap decreases the ROI of IIoT systems but also increases customer lock-in. Some incumbents have attempted to overcome the innovator's dilemma, including GE, SAP, Microsoft, and IBM. These platforms each have drawbacks in user experience that create opportunities for startups to create use-friendly API-driven platforms.

### VC activity

Industrial IoT had a breakout year in VC funding, raising over \$2 billion for the first time, according to our data. VC funding remained robust throughout the COVID-19 pandemic, reflecting the needs of startups to meet urgent customer demands to adapt to digital operations. While H2 saw only two industrial IoT mega-deals, some startups' valuations continued to grow. Predictive maintenance startup Augury raised a \$55.0 million Series D, achieving a 1.6x valuation step-up.

Mining platform vendor Intellisense.io raised its valuation 2.7x in its second institutional round of the year. We believe few companies are achieving scale during the pandemic, but some appear to be establishing product-market fit, creating opportunities for M&A.

We recorded only two industrial IoT exits in 2020 and note industrial automation incumbents have been inactive in M&A. IIoT incumbents include General Electric (NYSE: GE), Siemens (ETR: SIE), Robert Bosch, ABB Group (NYSE: ABB), and National Instruments (NASDAQ: NATI) based on their IoT revenue and mindshare in the industry. Despite partaking in broader M&A activity, none of these incumbents have made pure-play acquisitions in IoT since 2018. However, market conditions appear to be changing in ways that may support increased M&A by industrial automation incumbents. The manufacturing & supply chain, is the largest category of IoT in terms of end-user spending, is positioned for a high-growth year in 2021. In Q4 2020, ABB acquired hygienic robotics startup Codlan Robotics, demonstrating gaps exist in industrial automation portfolios and signaling the potential for increased exit activity in 2021.

### Opportunities

**Asset tracking: Existing GPS and RFID solutions are not ideal for tracking assets over long distances because of high power requirements and low range, respectively. Low-power non-cellular sensors can be used to track assets for many industries that rely on freight for their supply chains.** Consumer goods, transportation, and defense are target markets for new technologies in the space due to high maintenance and inspection costs. **We believe asset tracking will be among the fastest-growing IIoT subsegments, especially given the need for enterprises to gain additional visibility over their supply chains because of the pandemic.** In 2020, Accel-KKR invested \$45.0 million in supply chain management startup Pinc, citing its ability to give Fortune 500 customers additional visibility over their supply chains during the pandemic. Samsara, Cloudleaf, and Nexxiot have developed a series of low-power sensors that enable longer-distance tracking. Omni-ID and Eximia are developing improvements to conventional RFID solutions, although we expect these solutions to remain limited.

**Digital twins:** Digital twins refer to digital replicas of physical assets that can be used to measure and manage the real asset using a software platform. These replicas can reduce maintenance costs and improve manufacturing efficiency since manufacturing processes can be simulated in a software model. Digital twins are built on top of data from IoT devices, including sensors, antennae, and control systems. An example is a digital twin of a jet engine built using the equipment sensors on the engine. If damage occurs, pilots can simulate how that engine will perform in various conditions and if fatal failure is likely to occur. They can then decide how best to use that engine, removing the guesswork from the process. OEMs benefit from these models because they can automate sales orders for replacement parts as soon as they are proven to be defective, enabling distributors to gain an additional one to two turns of inventory per year. Digital twins maintained a flat market size in 2020 due to high demand and their ability to enhance workforce efficiency. End-user spending on digital twins is forecast to reach \$12.7 billion in 2021, an 18.8% snapback over 2020.<sup>2</sup> Startups constructing replicas of real assets include Humatics and Uptake. Uptake can leverage its industry-leading library of equipment failure modes to build digital twins that evolve over time with new data. At the early stage, Elevat is

planning to connect digital twins to sales order automation, which could be a value creator for OEMs.

### Considerations

Limited product-market fit with enterprises: Architectural complexity among disparate machineries makes implementing new IoT components and protocols especially difficult and time-consuming. Many companies that are adopting IoT strategies remain in "pilot" mode. Although international standards such as ISA-95 have been developed to help create automated interfaces across control systems and enterprises, successful deployments and use cases still require a patchwork of custom software integrations and long sales cycles to persuade both IT and OT stakeholders.

Incumbents dominate the market and have wide moats: Currently, the major players in this space are the large conglomerates such as GE or Siemens that dominate the market. Additionally, collaboration among incumbents is increasing, which may crowd out startups in this space. For example, Cisco has integrated its networking capabilities with GE's Predix. The result of such partnerships may bridge the gap between controls and analytics.

### Outlook

**Niche use cases to generate organic growth for focused startups:** In the near term, enterprises may not be ready to swap out legacy control systems for widescale IoT deployments. For this reason, we do not expect holistic solutions for industrial automation to gain much traction. Startups that focus on specific problems, including agricultural field monitoring, oil & gas optimization, and mine monitoring, are likely to deliver better analytics and predictive maintenance relative to incumbents and have a better shot at unbundling existing control system platforms.

**CVC Investments to translate to acquisitions:** Industrial automation incumbents escalated their VC activity in recent years, with investment count led by Honeywell, Siemens, and ABB doubling. The parent companies of each of these corporate venture arms have business lines in IIoT, and we believe that IIoT companies are prime acquisition targets for the parents of these CVC arms, especially given valuation pressures from the pandemic. Already in Q4 2020, ABB acquired hygienic robotics startup Codlan Robotics, demonstrating the gaps in industrial automation portfolios that have emerged as a result of shifting preferences. We believe new sources of demand will require acquisitions to keep up with the market.

**Smart metering to cede to asset tracking as sensors improve:** Smart metering has been the initial frontier of IIoT due to the clear use case for utilities to manage energy usage among their customers. Given the high penetration of smart meters, we expect the next growth opportunity in IIoT to be in asset tracking, where legacy technologies do not offer a sufficient ROI to drive growth, and more advanced supply chain tracking is required. Given the scale of physical assets in transit in fields such as healthcare, construction, and supply chain, we expect this industry could amount to a billion-dollar opportunity for startups in hardware, software, and connectivity.

### 3.2 Similar deals and recent M&As

We based our valuation on a top-down, market benchmark analysis for the last 3 years of M&As activity in the IIOT and supply chain tech domains. We analyzed several types of material marking solutions, such as Applied DNA's CertainT, iTRACE and SecureMarking. On the blockchain front, some of the most active startups are Netherlands-based Circularise, UK-based Circolor and Everledger. Circolor just announced a \$25 million funding, but it has numerous high profile clients, including Jaguar, Mercedes and Boeing. Also, Several incumbents are getting in on the act, such as GreenToken by SAP. And multiple Japanese industrial firms are using blockchain for plastic recycling, including Teijin, Mitsui Chemicals, Mitsubishi Chemicals, Asahi Kasei and others.

We estimated SMX's valuation based on similar competitors benchmarking (see appendix), using data from Pitchbook, a financial database. Based on these companies' last known average post-money valuation, we explore SMX's valuation benchmark at \$146.9M (N=46, a non-exhaustive list can be found at the appendix).

### 3.3 SMX recent capital raising

SMX recently merged on 28th February 2023 with Lionheart III Corp. The combined entity had a pro forma valuation of US\$360 with a valuation of \$200M for SMX.

We also explored SMX's past fundraising. SMX has launched its anticipated anti-fraud solution for gold, trueGold, a co-owned entity with The Perth Mint Australia (which is wholly owned by the Government of Western Australia). This is the world's first mine-to-marketplace ethical gold supply chain assurance solution. trueGold is the [world's first mine-to-marketplace ethical gold supply chain assurance solution](#).

**In Q4 2020, The Perth Mint invested in trueGold based on a \$80M post-valuation where SMX alone holds 47%. Besides gold, SMX's raised additional capital to support its diamond activity for a \$40M post-money valuation.**

SMX is focus on six different markets aligned with its business plan: Plastic, Fashion, Gold, Premium wine & spirits, Electronics, and Metals. However, we believe that SMX has the potential to expand into additional markets based on its unique platform.

### 3.4 Valuation summary

SMX recently merged on 28th February 2023 with Lionheart III Corp. The combined entity had a pro forma valuation of US\$360 with a value of \$200M for SMX. SMX began trading on Nasdaq on 8th March 2023 with share price of \$3.03 and closed with \$3.64 with total shares outstanding of 22,501,306 shares.

We based our analysis on:

- 1) Similar M&As deals that have conducted in recent years in the specific sub sectors and stages SMX is operating in, i.e. IIOT and supply chain tech. Our research indicates a range of \$142.2 to \$151.6M and on average of \$146.9M.
- 2) SMX entered into SPAC with a value of \$200M based on arm's length transaction value.
- 3) SMX recent capital raising for its subsidiaries (TrueGold, diamond firm) indicates additional value. Furthermore, SMX is a technology platform firm and in such it can generate more assets to all materials as it did for gold and diamond.

SMX, as of March 31<sup>st</sup>, 2023, has \$5.68M of cash and cash equivalents (including funds from its SPAC deal and other sources) and loans (long term loans until 2024) of \$3.86, i.e. net cash of \$1.82.<sup>3</sup> We assume quarterly burn rate of approx.. \$1.2M, thus, SMX will raise capital soon as to support its strategy for 2023 and beyond.

We conclude our analysis based on similar M&As deals that have conducted in recent years in the specific sub sectors and stages SMX is operating in with a range of \$142.2M to \$151.6M and on an average value of \$146.9M.

**Based on the above, we initiate our coverage with a price target range of \$6.3 to \$6.7 with an average of \$6.5.**

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<sup>3</sup> Company's prospectus.



## Appendix 1: Similar Deals Sample (non-exhaustive list)

Company Name	Description	Company Pre-money Valuation (million, USD)	Company Country
Vitaline	Producer of ready to eat food products and beverages intended to offer nutritional meal alternatives. The company's products are prepared with a blend of natural ingredients and served in formats of a bar, bottle and bag, enabling individuals to ensure dietary balance.	2.27	France
Ergos	Provider of agriculture supply chain consulting services intended to serve farmers. The company operates as a grain bank and offers storage, digitization, credit, and liquidation facility to farmers, enabling farmers to increase their income by focusing on optimizing input cost, reducing post-harvest loss, and enhancing price realization.	2.66	India
Telegrafik	Provider of an intelligent software platform intended to help the elderly to remain independent. The company's platform uses data from sensors positioned in homes or residences, provide activity monitoring, behavior analysis, anomaly detection and alert services, enabling users to get connected services to maintain elder autonomy and health.	2.91	France
Sixup	Developer of an online lending platform designed to lift up the next generation of high-achieving, low-income students in pursuit of a high-quality college education. The company's online lending platform combines community, finance and technology to deliver responsible and affordable loans, enabling low-income students to low-interest loans their higher education in colleges.	3.50	United States
Loch Duart	Operator of fishery farms intended to offer good quality salmon. The company's farms operate a salmon house and a wild salmon fishing station, enabling people to avail salmons of optimum quality, texture and goodness.	3.54	United Kingdom
Soko	Provider of an online marketplace designed to provide handcrafted jewelry and accessories online. The company's marketplace connects online consumers to global makers and handcrafted jewelry from the developing world, enabling them to discover designs made in communities that lie outside of the digital economy.	17.50	United States
EpiBone	Developer of a bone reconstruction technology intended to advance skeletal reconstruction through 3D design and living cells. The company's technology utilizes a scan of the bone defect and the patient's own stem cells to construct and cultivate a defect-specific autologous-like bone graft, enabling clinicians to provide patients with a bone graft through a simplified surgical procedure, improved bone formation, regeneration, and shorter recovery times.	20.00	United States
NexWafe	Producer of sustainable energy equipment designed to provide mono-crystalline wafers for the solar cell. The company's equipment offer equates training and demonstration regarding the equipment, as well as high potential for cost- reduction by minimizing energy and material consumption while improving capital efficiency, enabling clients to smoothly operate the equipment.	31.05	Germany
StreetShares	Operator of financial technology company intended to help financial institutions provide high-quality loans to small businesses. The company's Lending-as-a-Service (LaaS) platform allow community banks and credit unions to affordably make small business loans with a digital, omnichannel experience, with one-day underwriting, enabling lending companies to connect with borrowers in a hassle free manner.	40.00	United States
PresenceLearning	Provider of an online platform designed to offer speech therapy and diagnostic services. The company's platform offers access to a network of licensed clinical professionals, speech-language pathologists, occupational therapists, and behavioral and mental health professionals who work face-to-face with students	40.00	United States

	via secure, live, online video sessions, enabling educational institutions to provide therapy activities to special-needs children.		
Future Super	Provider of superannuation fund management services intended to invest in companies with a minimum carbon footprint. The company's fund diversified portfolio completely excludes fossil fuels or companies that pollute, addict, or harm the environment, thus providing investors with fossil-free investments that provide good returns.	70.91	Australia
Save Solutions	Provider of business correspondent network services intended to offer financial services in the rural areas of India. The company's services provide last-mile banking services to the unbanked through our extensive and effective customer service points, enabling customers to get access to financial inclusion services in unbanked rural geographies.	72.68	India
Soho Global Health	PT Soho Global Health Tbk is a healthcare company operating in the areas of natural/herbal health care products and services. The company manufactures and distributes pharmaceutical products to herbal cures, proprietary medicines and health foods under various brand names such as Curcuma Plus; Curcuma Plus Milk; Imboost; Fitkom; Diapet; Laxing; Lelap; Asthma Soho; and Sohobion.	87.65	Indonesia
Lessonly	Developer of an enterprise educational software designed to offer education and training services online. The company's platform offers enterprise educational software that assists companies capture information as step-by-step lessons to assign, measure, search and update, enabling teams to improve their new employee on-boarding and ongoing training.	120.00	United States
Migo (Financial Analytics)	Provider of a credit scoring and loan application platform designed to offer access to formal credit. The company's platform uses sophisticated algorithms to analyze multiple data sources and cost-effectively predict default risk, as well as offers an end-to-end platform to apply for loans through mobile, enabling both banked and retail consumers to receive instant loan approvals.	140.00	United States
Aye	Provider of financial services intended to sell customer-centric finance to micro and small businesses. The company's services consist of a category of loans and debt financing schemes, enabling small and micro enterprises (SMEs) to purchase fixed and working business assets, to renovate or construct business facilities or for debt consolidation.	222.50	India
Evidation Health	Provider of a health data analytics platform designed to collect and analyze continuous behavior data and healthcare information to create better health outcomes. The company's platform turns raw, high-frequency everyday behavior data from sensors, devices, speech, video and other sources into useful insights about health and diseases, thereby enabling individuals and companies to understand and influence the everyday behaviors that create better health outcomes.	270.00	United States
RefleXion Medical	Developer of biology-guided radiotherapy designed to create a new cancer treatment modality. The company's radiotherapy leverages positron emission tomography (PET) in a novel way and combines it with stereotactic radiotherapy for superior localization and tumor tracking at the time of treatment delivery, enabling physicians to reveal cancer cell location and then destroy it.	375.00	United States
Varo	Developer of a financial platform intended to improve mobile banking experience. The company's platform offers various services including financial insights and analysis of spending, real-time budgeting and predictive forecasts of cash flow, making a direct deposit, online bill payment and also offers access to other financial applications, enabling users to make smart financial decisions and make progress.	390.00	United States

Rupeek	Developer of an asset-backed online lending platform designed to offer gold loans. The company's platform provides simplified and affordable gold loans with minimal paperwork and fast processing, where consumers can apply for loans by providing details including identity and address proof in order to get their documents verified for the money to be credited to the applicant's bank account, enabling consumers to process and disburse the loan within an hour.	530.00	India
Vital Farms	Vital Farms Inc is an ethical food company. The company retails pasture-raised eggs and butter. Its products include Pasture-Raised Eggs and Pasture-Raised Butter & Ghee.	657.18	United States
Creditas	Developer of a digital secured lending platform designed to offer lending, investment, and financing services at lower interest rates. The company's platform offers Brazilian consumer loans at affordable rates by using borrower collateral like homes and automobiles from investors or through partnerships with other, traditional financial institutions, enabling borrowers to pay their loans in installments that fit in their pocket.	1,495.00	Brazil

### Similar capital raised deals sample (non-exhaustive list)

Companies	Deal Date	Deal Size
<b>Wiliot</b>	27-Jul-2021	200.00
<b>Addverb Technologies</b>	18-Jan-2022	132.00
<b>Nexxiot</b>	07-Jun-2022	107.72
<b>Absolute</b>	05-May-2022	100.38
<b>Orbital Insight</b>	19-May-2021	73.00
<b>Wiliot</b>	19-Jan-2020	70.00

<b>SkyCell</b>	11-Oct-2021	34.53
<b>ParkourSC</b>	03-Mar-2022	26.00
<b>Parsyl</b>	21-Jan-2022	25.17
<b>Controlant</b>	01-Jan-2020	24.74
<b>Addverb Technologies</b>	04-Nov-2020	18.15
<b>Ketos</b>	26-Oct-2020	18.00
<b>Roambee</b>	15-Jan-2020	15.20
<b>Absolute</b>	18-Aug-2021	12.61

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## Endnotes

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<sup>1</sup> Source: Gartner and PitchBook estimates | Geography: Global

<sup>2</sup> "Digital Twins in IoT: Vendor Strategies, Future Outlook & Market Forecasts 2020-2024," Juniper Research, June 2020.