Risk Factors Comparison 2024-03-05 to 2023-02-23 Form: 10-K

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The following risk factors apply to our business and operations. These risk factors are not exhaustive, and investors are encouraged to perform their own investigation with respect to our business, financial condition and prospects. We may face additional risks and uncertainties that are not presently known to us, or that we currently deem immaterial, which may also impair our business. The following discussion should be read in conjunction with the **consolidated** financial statements and notes to such **consolidated** financial statements included elsewhere in this Annual Report and the " Management' s Discussion and Analysis of Financial Condition and Results of Operations " section of this Annual Report. Risks Related to Our Business We are an early stage company with a history of losses and our future profitability is uncertain. We have had a history of net losses due to our primary focus on research and development, plant construction, capital expenditures and early- stage commercial activities. ~~Since our inception, we have not generated any revenue from product sales and have incurred significant net losses.~~ Substantially all of our net losses since inception have resulted from our plant construction, research and development, and general and administrative costs associated with our operations. ~~For the years ended December 31, 2021 and 2020, we had an accumulated deficit of $ 56. 8 million and $ 98. 9 million, respectively. For the year ended December 31, 2022, we had net income of $ 78. 6 million.~~ We **have only recently begun generating revenue, and we** expect that our net losses from operations will continue for the foreseeable future. Based on our estimates and projections, which are subject to significant risks and uncertainties, **we expect our commercial scale production to be limited for several years and challenges with the design, construction, funding, and labor and equipment supply for our plants may further delay this timeline.** ~~even~~ **Even** ~~if~~ **as** we ~~are able to~~ commercialize ~~our products~~ and **begin to** generate revenue ~~from product sales~~, we may not become profitable for many years, if at all. Our potential profitability is dependent upon many factors, including our ability to **effectively operate our current plants,** complete ~~construction~~ **development** of ~~current and~~ future plants, maintain an adequate supply chain, anticipate and react to demand for our products, manufacture our products on a commercial scale, secure additional customer commitments, and otherwise execute our growth plan. **The** ~~We expect the~~ rate at which we ~~will~~ incur losses ~~to~~ **may** be ~~significantly~~ higher in future periods as we: • **develop our all- PET cap and closure business; • increase our spending on strategic partnerships; • begin production at our OM1 plant; • increase our sales and marketing activities; and • decide to** expand our commercial production capabilities and incur ~~construction~~ costs associated with ~~building~~ **developing** our plants ~~; • increase our expenditures associated with our supply chain, including sourcing primary feedstock for our products; • increase our spending on research and development for new products; • begin full scale commercial production of our products; • increase our sales and marketing activities and develop our distribution infrastructure; and • increase our general and administrative functions to support our growing operations and to operate as a public company~~. Because we will incur the costs and expenses from these efforts before receiving meaningful revenue, our losses in future periods could be significant. We may find that these efforts are more expensive than we currently estimate or that these efforts may not result in revenues, which would further increase our losses. We may not manage growth effectively. Our failure to manage growth effectively could harm our business, results of operations and financial condition. We anticipate that a period of ~~significant~~ expansion ~~will~~ **may** be required to address potential growth. This expansion will place a significant strain on our management, operational and financial resources. To manage the growth of our operations and personnel, we must establish appropriate and scalable operational and financial systems, procedures and controls and establish and maintain a qualified finance, administrative and operations staff. We may be unable to hire, train, retain and manage the necessary personnel or to identify, manage and exploit potential strategic relationships and market opportunities. Our business plan assumes we can secure substantial additional project financing and government incentives, which may be unavailable on favorable terms, if at all. We ~~will~~ **expect to** need substantial additional project financing and government incentives in order to execute our growth strategy and expand our manufacturing capability **to advance our biomass conversion technology**. We have not yet secured such project financing and government incentives, and they may not be available on commercially reasonable terms, if at all. In particular, our ability to obtain financing for the construction of future plants may depend in part on our ability to first enter into customer agreements sufficient to demonstrate sufficient demand to justify the construction of such plants. If we are unable to obtain such financing and government incentives, or secure sufficient customer agreements, on commercially reasonable terms, or at all, we will not be able to execute our growth strategy. To the extent that we raise additional capital ~~in~~ through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of those securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making acquisitions or capital expenditures or declaring dividends. Debt financing could also have significant negative consequences for our business, results of operations and financial condition, including, among others, increasing our vulnerability to adverse economic and industry conditions, limiting our ability to obtain additional financing, requiring the dedication of a substantial portion of our cash flow from operations to service our indebtedness, thereby reducing the amount of our cash flow available for other purposes, limiting our flexibility in planning for, or reacting to, changes in our business, and placing us at a possible competitive disadvantage compared to less leveraged competitors or competitors that may have better access to capital resources. If we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or products, ~~or~~ grant licenses on terms that may not be favorable to us **, or make other**

concessions . If we are unable to raise additional funds through equity or debt financings or other arrangements when needed, we may be required to delay, limit, reduce or terminate our commercialization, research and development efforts or grant rights to third parties to market and / or develop products that we would otherwise prefer to market and develop ourselves. If we seek government grants, incentives or subsidies, their terms may be limiting or restrict certain of our planned operations, thereby requiring us to alter our operating plans and materially impacting our financial projections and projected results of operations. Government grants may also be terminated, modified or recovered under certain conditions without our consent .Our outstanding secured and unsecured indebtedness,ability to incur additional debt and the provisions in the agreements governing our current debt,and certain other agreements,could harm our business,financial condition,results of operations and prospects.Our debt service and similar obligations could have important consequences to us for the foreseeable future,including that our ability to obtain additional financing for capital expenditures,working capital or other general corporate purposes may be impaired and we may be or become substantially more leveraged than some of our competitors,which could place us at a relative competitive disadvantage and make us more vulnerable to changes in market conditions and governmental regulations.We are required to maintain compliance with **non- financial and other** covenants under our debt and similar agreements.There are and will be operating or financial restrictions and covenants in certain of our debt and similar agreements ~~,including the promissory notes and prepayment agreements we are party to~~ ,as well as certain other agreements to which we are or may become a party.These limit,among other things,our ability to incur certain additional debt,create certain liens or other encumbrances and sell assets.These covenants could limit our ability to engage in activities that may be in our best long- term interests.Our failure to comply with certain covenants in these agreements could result in an event of default under the various debt and similar agreements,allowing lenders to accelerate the maturity for the debt under these agreements and to foreclose upon any collateral securing the debt.Under such circumstances,we might not have sufficient funds or other resources to satisfy all of our obligations. ~~We are exposed to credit risk in our activities related to potential nonperformance by customers.In the normal course of our business,we provide payment terms to certain of our customers.As a result,our business could be adversely affected if our customers' financial condition deteriorates and they are unable to repay us.This risk may increase if there is a general economic downturn affecting a large number of our customers or if our customers fail to manage their business effectively or adequately disclose their financial condition to us.The Company manages the risk of customer default through a combination of due diligence,contractual terms,and a diversified customer base.The number of customers,as well as our ability to discontinue service,contributes to reduce credit risk with respect to accounts receivable.Despite such mitigation efforts,customer defaults may occur.~~ Risks Related to Our Operations and Industry Construction of ~~additional~~ **our** plants ~~beyond Origin 1~~ may not be ~~timely~~ completed **in the expected timeframe** or ~~completed~~ in a cost- effective manner ~~or at all~~ .Any delays in ~~or failure to finance and complete~~ the construction of ~~additional~~ **our** plants could severely impact ~~the implementation of~~ our ~~biomass conversion technology platform~~ **business,financial condition,results of operations and prospects** .Our **projected financial performance and results of operations,including our** ability to **achieve commercial scale production,** ~~implement our biomass conversion technology platform and to satisfy our customer demand and contractual obligations~~ depend on our ability to ~~secure financing for and complete construction~~ --- **construct** ~~of~~ several commercial scale plants.In particular,except for Origin 2,subject to finalization of economic incentives,we have not selected a site for any of our future planned plants,and may have difficulty finding a site with appropriate infrastructure and access to raw materials.With respect to these future plants,we also do not have agreements with engineering,procurement or construction firms.Consequently,we cannot predict on what terms such firms may agree to design and construct our future plants.If we are unable to construct these plants within the planned timeframes, ~~timeframes that are relevant to our customers' carbon reduction goals,or~~ in a cost- effective manner ~~,~~ or at all due to a variety of factors,including,but not limited to,a failure to acquire or lease land on which to build our plants,a stoppage of construction as a result of ~~epidemics~~ **the COVID- 19 pandemic** ,disruptions caused by the recent global sanctions imposed against Russia following its military intervention in Ukraine, ~~a major supplier of certain metals such as nickel used in materials of construction,~~ unexpected construction problems,permitting and other regulatory issues,severe weather,inflationary pressures,labor disputes, ~~or~~ **and** issues with subcontractors or vendors,including payment disputes,which we have previously experienced,our business,financial condition,results of operations and prospects could be severely impacted ~~,we may lose customers and customer demand,and we could face litigation~~ .The construction and ~~commissioning~~ --- **commission** of any new project is dependent on a number of contingencies some of which are beyond our control.There is a risk that significant unanticipated costs or delays could arise due to,among other things,errors or omissions,unanticipated or concealed project site conditions,including subsurface conditions and changes to such conditions,unforeseen technical issues or increases in plant and equipment costs,insufficiency of water supply and other utility infrastructure, **or** inadequate contractual arrangements ~~,or design changes and associated or additional technical development work related,for example,to new or different process steps or product streams,or changes in the scale of equipment or operations~~ .Should these or other significant unanticipated costs ~~or delays~~ arise,this could have a material adverse impact on our business,financial performance and operations.No assurance can be given that construction will be completed on time or at all,or as to whether we will have sufficient funds available to complete construction.We plan to rely on a limited number of plants **as our primary sources of revenue and** to meet customer demand ~~for our future intermediate chemical sales~~ .Our operating plan assumes that we will rely on a limited number of plants to meet customer demand and that these plants will supply most of our products until additional **world- scale** plants come online.Adverse changes or developments affecting these facilities could impair our ability to produce our products.Any shutdown or period of reduced production at these facilities,which may be caused by regulatory noncompliance or other issues,as well as other factors beyond our control,such as severe weather conditions,natural disaster,fire,power interruption,work stoppage,disease outbreaks or pandemics (such as COVID- 19),equipment failure or delay in supply delivery,would,among other things,significantly disrupt our ability to ~~recognize~~ **generate** revenue,execute our expansion plans,and meet our contractual obligations and customer demand.In addition,our plant equipment may be costly to replace or repair,and our equipment supply chains may be disrupted in connection with pandemics **(such as COVID- 19)** ,trade wars and sanctions (such as those **recently** imposed against Russia ~~following its military intervention in Ukraine~~),or other factors.If any material amount of our equipment is damaged,we could be unable to predict when,if at all,we could replace or repair such equipment or find suitable alternative equipment,which could adversely affect our business,financial condition,results of operations and prospects.Performance guarantees may not be sufficient to cover damages or losses,or the guarantors under such guarantees may not have the ability to pay. **Any** ~~We may be unable to obtain appropriate types or amounts of insurance,and any~~ insurance coverage we have may **not** be ~~insufficient~~ -- **sufficient** to cover all of our potential losses ~~or~~ **and may not** continue to be available to us on acceptable terms,or at all.We may be delayed in procuring or ~~be~~ unable to procure necessary capital equipment.While ~~much of~~ the equipment we use to produce our products is currently widely available,we rely on outside companies to continue to manufacture the equipment necessary to produce our products. ~~In addition,some equipment we use to produce our products requires significant lead time to manufacture.~~ If our suppliers of ~~manufacturing~~ **capital** equipment are unable or unwilling to provide us ~~,~~ **with necessary capital equipment to manufacture our products** or if we experience significant delays in obtaining the necessary manufacturing equipment, ~~or parts necessary to repair and maintain that equipment,~~ our business, ~~we may be unable to make our products and our~~ results of operations and financial condition could be adversely affected. ~~The repair~~ **In addition** , **the** ~~maintenance,or~~ construction of our **plants** ~~manufacturing equipment~~ may ~~also~~ require a substantial portion of certain materials and supplies relative to the overall global supply of such materials and supplies.If we are unable to secure an adequate supply of such materials and supplies on commercially reasonable terms,or at all, **the** ~~such repair,maintenance,or~~ construction **of our plants** may be delayed or terminated.We have not ~~yet~~ produced our products in large commercial quantities.We have no experience in producing large quantities of our products.While we have succeeded in producing small amounts of our products in our pilot ~~plants and Origin 1~~ plant for customer ~~evaluation~~ **trials and testing purposes** ,we have ~~only recently~~ **not yet** commenced ~~commercial~~ **large** - scale production.There are significant technological and logistical challenges associated with producing,marketing,selling and distributing products in the specialty chemicals industry,including our products,and we may not be able to resolve all of the difficulties that may arise in a timely or cost- effective manner,or at all.While we believe that we understand the engineering and process characteristics necessary to successfully build and operate our additional planned facilities and to scale up to larger facilities,we may not be able to cost ~~-~~ effectively manage **production** ~~such construction and operation~~ at a scale or quality consistent with customer demand in a timely or economical manner.Any decline in the value of carbon credits associated with our products could harm our results of operations,cash flow and financial condition.The value of our products may be dependent on the value of carbon credits,programs relating to low- carbon materials and products standards and other similar regulatory regimes or the implicit value of decarbonized materials.The value of these credits fluctuates based on market and regulatory forces outside of our control.There is a risk that the supply of low- carbon alternative materials and products outstrips demand,resulting in the value of carbon credits declining.Any such declines could mean that the economic benefits from our customers' efforts to decarbonize their operations might not be realized.Any decline in the value of carbon credits associated with our products could harm our results of operations,cash flow and financial condition.We **expect to** rely on a limited number of customers for a significant portion of our near- term revenue.We currently have ~~commercial~~ **offtake and capacity reservation** agreements with a limited number of customers **,** from which we expect to **generate most** ~~derive a significant portion~~ of **our revenues in the** near **future** ~~- term revenue~~ .The loss of one or more of our significant customers,a substantial reduction in their orders,their failure to exercise customer options to enter into new offtake agreements or purchase ~~commitments or to purchase~~ product,their unwillingness to extend contractual deadlines if we ~~fail~~ **are unable** to meet production ~~,product,or specification~~ requirements,their inability to perform under their contracts or a significant deterioration in their financial condition could harm our business,results of operations and financial condition.If we fail to perform under the terms of these agreements,the customers could seek to terminate these agreements and / or pursue damages against us, **including liquidated damages in certain instances,** which could harm our business **.Our offtake agreements with certain customers include termination,liquidated damages and / or advance repayment provisions that may be triggered if we fail to timely complete plant construction or commence our commercial operations.Our offtake agreements with certain customers allow those customers to terminate the agreements if specified construction and product delivery requirements are not satisfied.For example,under one of these agreements,if Origin 1 had not commenced commercial operation by December 31,2021 or we had not delivered specified product volume from Origin 1 by September 30,2022,then we could be required to pay liquidated damages up to an aggregate of $ 0.2 million.The customer may also terminate the agreement and any outstanding secured promissory note resulting from an advance payment made to us by that customer will become due immediately.These milestones have been deferred to 2023 in order to facilitate the negotiation of an amendment to the agreement,including the milestone achievement dates.As of the date hereof,the negotiation is ongoing.The outstanding obligations under that promissory note,together with accrued interest,totaled an aggregate of $ 5.4 million and $ 5.2 million as of December 31,2022 and December 31,2021,respectively.Our offtake agreement with a second customer is terminable by that customer if commercial operation or delivery of product from Origin 1 has not occurred by March 31,2023.In order to facilitate the negotiation of an amendment,this milestone has been deferred to March 2023.Our offtake agreement with a third customer previously required us to pay liquidated damages if Origin 1 had not commenced commercial operation by June 30,2022.On August 1,2022,both parties mutually agreed to amend the offtake agreement to eliminate the liquidated damages provisions and milestone dates,among other things (see Item 9B- Other Information).No liquidated damages were demanded or paid under the original offtake agreement including for the period between June 30,2022 and August 1,2022.Discussions to amend the first two agreements are ongoing but we cannot guarantee that the discussions will result in an extension or removal of the milestone dates and / or liquidated damages,as applicable.Accordingly,if these milestone dates are not extended or removed,we may be required to pay liquidated damages and repay the amounts outstanding under the foregoing**

promissory note and our offtake agreements may be subject to termination by our customers.If any of our offtake agreements are terminated or if we are required to pay liquidated damages or repay advances made under our offtake agreements,our business,results of operations and financial condition may be harmed .Our products may not achieve market success.We currently have a relatively small number of binding customer commitments for commercial quantities of our products.Some prospective customers are currently evaluating and testing our products prior to making large- scale purchase decisions.Other products we expect to develop have not yet started customer evaluation and testing.The successful commercialization of our products is dependent on our customers' ability to commercialize the end- products that utilize our products,which may gain market acceptance slowly,if at all.Furthermore,the technology for our products is new,and the economic performance and ultimate carbon footprint of these products is uncertain.The market for carbon- negative products is nascent and subject to significant risks and uncertainties.Market acceptance of our products will depend on numerous factors,many of which are outside of our control,including,among others:• public acceptance of such products;• our ability to produce products of consistent quality that offer functionality comparable or superior to existing or new products;• our ability to produce products fit for their intended purpose;• our ability to produce new products or customizations of existing products to match changes in public demand;• our ability to ~~timely~~ obtain necessary regulatory approvals for our products;• the speed at which potential customers qualify our products for use in their products;• the pricing of our products compared to competitive and alternative products,including petroleum- based plastics;• the strategic reaction of companies that market competitive products;• our reliance on third parties who support or control distribution channels;and • general market conditions,including fluctuating demand for our products.Our industry is highly competitive,and we may lose market share to producers of products that can be substituted for our products,which may have an adverse effect on our results of operations and financial condition.The specialty chemicals industry is highly competitive,and we face significant competition from both large established producers of fossil- based materials,recycled fossil- based materials and a variety of current and future producers of low-carbon,biodegradable,or renewable resource- based materials.Many of our current competitors have longer operating histories,greater name recognition,larger customer bases and significantly greater financial,sales and marketing,manufacturing,distribution,technical and other resources than us.Our competitors may be able to adapt more quickly to new or emerging technologies,changes in customer requirements and changes in laws and regulations.In addition,current and potential competitors have established or may establish financial or strategic relationships among themselves or with existing or potential customers or other third parties.Accordingly,new competitors or alliances among competitors could emerge and rapidly acquire significant market share.Our competitors may also improve their relative competitive position by successfully introducing new products or products that can be substituted for our products,improving their manufacturing processes,or expanding their capacity or manufacturing capabilities.Further,if our competitors are able to compete at advantageous cost positions,this could make it increasingly difficult for us to compete in markets for less- differentiated applications.If we are unable to keep pace with our competitors' product and manufacturing process innovations or cost position,it could harm our results of operations,financial condition and cash flows.Our commercial success may be influenced by the price of petroleum relative to the price of non- fossil feedstocks.Our commercial success may be influenced by the cost of our products relative to petroleum- based products.The cost of petroleum- based products is in part based on the price of petroleum,which is subject to historically fluctuating prices.Our production plans assume **the** use of ~~biomass feedstocks such as~~ timber and forest residues **as feedstock** ,which historically have experienced low volatility relative to petroleum.If the price of bio- based feedstocks increases ~~,~~ **and / or** the price of petroleum decreases ~~,or we use bio- based feedstocks such as sugars or starches that may have higher volatility or cost than timber and forest residues~~ ,our products may be less competitive relative to petroleum- based products.A material decrease in the cost of conventional petroleum- based products may require a reduction in the prices of our products for them to remain attractive in the marketplace and may negatively impact our revenues.Increases or fluctuations in the costs of our raw materials may affect our cost structure.The price of raw materials may be impacted by external factors,including uncertainties associated with war,terrorist attacks,weather and natural disasters,health epidemics or pandemics (such as COVID-19),civil unrest,the effects of climate change or political instability,plant or production disruptions,strikes or other labor unrest,inflationary pressures,breakdown or degradation of transportation infrastructure used in the delivery of raw materials or changes in laws or regulations in any of the countries in which we have has significant suppliers. **We currently** ~~Our technology is designed to~~ use ~~biomass such as~~ **and plan to use** local timber and forest residues as **our primary** raw materials.The cost of these raw materials is generally influenced by supply and demand factors,and our operating plans include assumptions that the timber and forest residues we intend to use as feedstock will be available at prices similar to historic levels with low volatility.As we continue to expand our production,we will increase our demand for timber and forest residues which may alter the anticipated stability in the costs of our raw materials and potentially drive an increase in the cost of such raw materials.Our results of operations will be directly affected by the cost of raw materials ~~and other inputs,like the amount and cost of steam in the manufacturing process~~ .The cost of raw materials ~~and energy to produce steam required during feedstock processing~~ comprises a significant amount of our total cost of goods sold and,as a result,movements in the cost of raw materials,and in the cost of other inputs,will impact our profitability.Because a significant portion of our cost of goods sold is represented by these raw materials,our gross profit margins could be adversely affected by changes in the cost of these raw materials if we are unable to pass the increases on to our customers.If our raw material prices experience volatility,there can be no assurance that we can continue to recover raw material costs or retain customers in the future.As a result of our pricing actions,customers may become more likely to consider competitors' products,some of which may be available at a lower cost.Significant loss of customers could adversely impact our results of operations,financial condition and cash flows. **Our** ~~We are dependent on third- party~~ suppliers ~~and service providers,some of which are sole source suppliers,who~~ may fail to deliver **components** ~~raw materials or equipment or fail to supply needed services at all or~~ according to schedules,prices,quality and volumes that are acceptable to us,or we may be unable to manage these supplies effectively. ~~Parts of our supply chain currently are dependent on a limited~~

~~number,and in some cases a single,third- party supplier or service provider for key inputs,equipment,and services including for conversion of our chemical intermediates produced by our Origin 1 plant into downstream derivatives and applications.We have not yet secured agreements with our preferred (or the only) supplier of some of these inputs,equipment,and services,and we may be unable to do so on a time frame or terms we find acceptable,or at all.Our reliance on few or single suppliers in a limited number of locations risks multiple supply chain vulnerabilities.The military conflict in Ukraine can exacerbate the risks to our supply chain to the extent our suppliers depend on raw materials,components,or parts from Russia or Ukraine including,for example,certain metals used in materials of construction.Finding substitute suppliers and service providers,to the extent they exist,may be expensive,time- consuming,or impossible and could interrupt or delay the supply of our products causing us to lose revenue and potentially harm our customer relationships or reputation and expose us to contractual remedies under our supply agreements.To the extent we do not have firm commitments from our third- party suppliers or service providers for a specific time period or capacity,quantity,and / or pricing,our suppliers may allocate capacity to their other customers,which could make that capacity unavailable to us when needed or at reasonable prices and prevent us from delivering our products on time or at all.For instance,if we are unable to timely obtain conversion services for some of our intermediates,those intermediates may need to be stored for extended periods and could degrade or become unusable,forcing us to dispose of the intermediates and / or replace them at additional cost.Any of these occurrences could adversely affect our supply chain and cause serious harm to our business.~~ Our manufacturing processes ~~are designed to~~ use ~~biomass such as~~ local timber and forest residues as our ~~preferred~~ **primary** raw materials.However,we may be unable to secure agreements with local suppliers for the necessary amount of raw materials in certain circumstances.Additionally,if our suppliers do not accurately forecast and effectively allocate sufficient materials to us or if they are not willing to allocate sufficient supplies to us,it may reduce our access to raw materials needed for our manufacturing and require us to search for new suppliers.The unavailability of any raw materials could result in production delays,idle manufacturing facilities,product design changes and loss of access to important residues supporting our production,as well as impact our capacity to fulfill our obligations under our offtake agreements.In addition,unexpected changes in business conditions,materials pricing,labor issues,wars,trade policies,natural disasters, **health** epidemics ~~or~~ **such as the global COVID-19** ~~pandemics~~ - **pandemic** ,trade and shipping disruptions,and other factors beyond our or our suppliers' control could also affect these suppliers' ability to deliver components to us or to remain solvent and operational.Additionally,we may be unsuccessful in our continuous efforts to negotiate with existing suppliers to obtain cost reductions and avoid unfavorable changes to terms,or source less expensive suppliers for certain materials,especially in light of the overall increases in supply and shipment pricing.Any of these occurrences may harm our business,prospects,financial condition and operating results.If we are required to obtain alternate sources for raw materials ~~,for example~~ because a supplier is unwilling or unable to execute or perform under raw material supply agreements,if a supplier terminates its agreements with us,if a supplier is unable to meet increased demand as our commercial scale production expands,if we are unable to renew its contracts or if we are unable to obtain new long- term supply agreements to meet changing demand,we may not be able to obtain these raw materials in sufficient quantities,on economic terms,or in a timely manner,and we may not be able to enter into long- term supply agreements on terms as favorable to us,if at all.A lack of availability of raw materials could limit our production capabilities ~~,require us to use alternate raw materials such as non- timber feedstocks that may be more expensive or have inferior carbon reduction or other performance characteristics,~~ and prevent us from fulfilling customer orders,and therefore harm our results of operations and financial condition.As the ~~scale~~ of our manufacturing increases,we will also need to accurately forecast,purchase,warehouse and transport raw materials at high volumes to our manufacturing facilities internationally.If we are unable to accurately match the timing and quantities of raw material purchases to our actual needs or successfully implement inventory management and warehousing systems,we may incur unexpected production disruption,storage,transportation and write- off costs,which may harm our business and operating results.Maintenance,expansion and refurbishment of our facilities,the construction of new facilities ~~and production lines,~~ and the development and implementation of new manufacturing processes involve significant risks.Our facilities may require regular or periodic maintenance,upgrading,expansion,refurbishment or improvement.Any unexpected operational or mechanical failure,including failure associated with breakdowns and forced outages,could reduce our facilities' production capacity below expected levels,which would reduce our production capabilities and ultimately our revenues.Unanticipated capital expenditures associated with maintaining,upgrading,expanding,repairing,refurbishing,or improving our facilities may also reduce our profitability.Our facilities may also be subject to unanticipated damage as a result of natural disasters,terrorist attacks or other events.If we make any major modifications to our facilities,such modifications likely would result in substantial additional capital expenditures and could prolong the time necessary to bring the facility online.We may also choose to refurbish or upgrade our facilities based on our assessment that such activity will provide adequate financial returns.However,such activities require time for development and capital expenditures before commencement of commercial operations,and key assumptions underpinning a decision to make such an investment may prove incorrect,including assumptions regarding construction costs and timing,which could harm our business,financial condition,results of operations and cash flows.The ~~development~~ **construction** of new manufacturing facilities entails a number of risks and assumptions,including the ability to begin production within the cost and timeframe estimated and to attract a sufficient number of skilled workers to meet the needs of the new facility. ~~For example,the anticipated costs of constructing Phase 1 of Origin 2 are far higher than initially estimated and timelines may be delayed due to higher material costs,supply chain issues,inflation and labor shortages.~~ Additionally,our assessment of the projected benefits associated with the construction of new manufacturing facilities is subject to a number of estimates and assumptions,which in turn are subject to significant economic,competitive and other uncertainties that are beyond our control.If we experience delays or increased costs,our estimates and assumptions are incorrect,or other unforeseen events occur,our business,ability to supply customers,financial condition,results of operations and cash flows could be adversely impacted.Finally,we may not be successful or efficient in developing or implementing new production processes.Innovation in production processes involves significant expense and carries inherent risks.Such risks may include difficulties in designing,developing,implementing,and scaling up new process technologies,development and production timing delays,lower than anticipated manufacturing yields,product defects,and inability to consistently meet customers ~~'~~ **'** product specifications,performance and carbon intensity,or cost requirements,among others.Errors,defects in materials,operating permit and license delays,customer product returns,interruption in our supply of materials or resources,and disruptions at our facilities due to accidents,maintenance issues,or unsafe working conditions,all could affect the timing,efficiency,or success of our production processes.Such production issues can lead to increased costs and may affect our ability to meet product demand,which could adversely impact our business and results from operations.We may not be successful in finding future strategic partners for continuing development of **additional offtake** ~~our manufacturing facilities~~ and feedstock opportunities ~~,~~ or tolling and downstream conversion of our products.We may seek to develop additional strategic partnerships to ~~develop our manufacturing facilities,~~ increase feedstock supply **and offtake amounts** due to manufacturing constraints or capital costs required to develop our products ~~and plants~~ .We may not be successful in our efforts to establish such strategic partnerships or other alternative arrangements for our products ~~,~~ **or** technology ~~,or plants~~ because our research and development pipeline may be insufficient,our products ~~or plant designs or manufacturing processes~~ may be deemed to be at too early of a stage of development for collaborative effort ~~,~~ or third parties may not view our products ~~or plants~~ as having the requisite potential to demonstrate commercial success ~~.In particular,if we are unable to develop strategic partnerships to fund our construction of Origin 2,we may be delayed in the completion of Origin 2 or may never be able to complete construction of Origin 2,which may adversely impact our operation and financial results~~ .If we are unable to reach agreements with suitable collaborators on a timely basis,on acceptable terms,or at all,we may have to curtail the development of our products,delay commercialization ~~or development of manufacturing facilities~~ ,reduce the scope of any sales or marketing activities or increase expenditures and undertake development or commercialization activities at our own expense.If we elect to fund development or commercialization activities on our own,we may need to obtain additional expertise and additional capital,which may not be available to us on acceptable terms or at all.If we fail to enter into collaborations and do not have sufficient funds or expertise to undertake the necessary development and commercialization activities,we may not be able to develop additional products ~~or plants,~~ and our business,financial condition,results of operations and prospects may be materially and adversely affected.We may rely heavily on future collaborative and supply chain partners.We have **has** entered into,and may enter into,strategic partnerships to develop and commercialize our current and future research and development programs with other companies to accomplish one or more of the following:• obtain capital,equipment ~~,~~ and facilities;• obtain funding for research and development programs,product development programs ~~,~~ and commercialization activities;• obtain expertise in relevant markets;• obtain access to raw materials;• obtain sales and marketing services or support;• obtain conversion services and other supply chain support;and / or • obtain access to intellectual property and ensure freedom to operate.We may not be successful in establishing or maintaining suitable partnerships,and we may not be able to negotiate collaboration agreements having terms satisfactory to us,or at all.Failure to make or maintain these arrangements or a delay or failure in a collaborative partner' s performance under any such arrangements could harm our business and financial condition.In addition,global supply chain disruptions have caused,and may continue to cause,delays in the shipment of goods,particularly those made in Asian countries.We have incurred,and may continue to incur,additional costs to expedite deliveries of such goods or to obtain substitute goods that are available to us sooner.Continued supply chain disruptions and our efforts to mitigate them may adversely impact our financial condition,results of operations,and cash flows.We have entered into and may in ~~the~~ future enter into collaborations,strategic alliances,or licensing arrangements,which expose us and our intellectual property to competitive risks and limitations associated with third- party collaborations and that may not produce the benefits we anticipate.We have entered,and may in the future enter,into license and collaboration arrangements for the development and production of some of our materials and products. **For example,in February 2023,we entered into a license agreement pursuant to which we intend to collaborate on the development of a plant to produce high- value derivatives of CMF.** In the future,we may enter into additional license and collaboration arrangements.Any collaboration we enter into is subject to numerous risks.Such risks may include,among others,collaborators ~~'~~ **'** significant discretion to determine the effort and resources they will apply to the collaboration,to delay or elect not to continue development of a product or process under the collaboration,or to develop,independently or with third parties,products or processes that compete directly or indirectly with our products or manufacturing processes.A collaborator' s development,sales,or marketing activities or other operations may not comply with applicable laws resulting in civil or criminal proceedings.In addition,we could grant exclusive rights to our collaborators that would prevent us from collaborating with others.Collaborators may not properly maintain or defend our intellectual property rights or may use our intellectual property or proprietary information in a way that gives rise to actual or threatened litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential liability.Our collaborators may own or co- own intellectual property covering products that result from our collaboration with them,depriving us of the exclusive right to develop or commercialize such intellectual property.Disputes may arise with respect to the ownership of any intellectual property developed pursuant to our collaborations.Disputes between us and a collaborator may delay or terminate the development or commercialization of our products or result in costly litigation or arbitration that diverts management attention and resources.Termination of a collaboration may also result in a need for additional capital to pursue further development of the applicable current or future products. ~~We~~ **Additionally,we** may seek to enter into additional collaborations,joint ventures,licenses and other similar arrangements for the development of our products,due to capital costs required to develop the product or potential manufacturing constraints.We may not be successful in our efforts to establish such collaborations for our products because our products may be deemed to be at too early of a stage of development for collaborative effort or third parties may not view our products as having the requisite potential to demonstrate a significant commercial opportunity.In addition,we face significant competition in seeking appropriate strategic partners,and the negotiation process can be time consuming and complex.Further,any future collaboration agreements may restrict us from entering into additional agreements with potential collaborators.We cannot be certain that,following a strategic transaction or license,we will achieve an economic benefit that justifies such transaction.Even if we are successful in our efforts to establish such collaborations,the terms that we agree upon may not be favorable to us,and we may not be able to maintain such collaborations.In addition,any potential future collaborations may be terminable by our strategic partners,and we may not be able to adequately protect our rights under these agreements.Furthermore,strategic partners may negotiate for certain rights to control decisions regarding the development of our products,and may not conduct those activities in the same manner as we do.Any termination of collaborations we enter into in the future,or any delay in the development of products under such collaborations,could delay the manufacturing and sales of our products,which could have a material adverse effect on our business,financial condition and results of operations.We may become subject to product liability claims that may not be covered by insurance and could require us to pay substantial sums.We are subject to an inherent risk of,and adverse publicity associated with,product liability and other liability claims,whether or not such claims are valid.In addition,our customers are subject to product liability claims,and could seek contribution from us.A successful product liability claim or series of claims against us could adversely impact the specialty chemicals industry,our reputation or our financial condition or results of operations.Product liability insurance may not be available to us on commercially acceptable terms,or at all.Even if such insurance is available,product liability or other claims may exceed our insurance coverage limits.A successful product liability claim that exceeds our insurance coverage limits,for which we are not otherwise indemnified,could require us to pay substantial sums and could harm our business,financial condition or results of operations.Climate change may impact the availability of our facilities and,in addition,we may incur substantial costs to comply with climate change legislation and related regulatory initiatives.Changing weather patterns and the increase in frequency of severe storms such as hurricanes and tornadoes could cause disruptions or the complete loss of our facilities or delay the construction of future facilities.In addition,climate change concerns,and changes in the regulation of such concerns,including greenhouse gas emissions,could also subject us to additional costs and restrictions,including increased energy and raw materials costs which could negatively impact our financial condition and results of operations.Climate change may also negatively impact ~~our labor force by,for example,reducing the hours during which construction or other outdoor work can be performed safely in extreme hit or under conditions of poor air quality.In addition,climate change may negatively impact~~ the availability of our feedstock ~~,for example,by increasing the prevalence of certain pests harmful to the growth or quality of the biomass we use in our processes~~ .The effects of climate change can not only adversely impact our operations,but also that of ~~our~~ **its** suppliers and customers,and can lead to increased regulations and changes in consumer preferences,which could adversely affect our business,results of operations and financial condition.Unfavorable global economic conditions could adversely affect our business,financial condition and results of operations.Our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets,including inflation and supply disruption.A domestic or global financial crisis can cause extreme volatility and disruptions in the capital and credit markets.A severe or prolonged economic downturn,which could result from an event like the COVID- 19 pandemic or the global sanctions imposed against Russia following its military intervention in Ukraine, **could result in a variety of risks to** ~~or~~ **our** ~~inflation~~ **business,including our inability to purchase necessary supplies on acceptable terms,if at all,and our inability to raise additional capital when needed on acceptable terms,if at all.A weak or declining economy could strain our suppliers,possibly resulting** in ~~fuel~~ **supply disruption,or cause delays in payments for our services by third- party payers or our collaborators.Any of the foregoing could harm our business and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.Our operating results may fluctuate significantly as a result of a variety of factors,many of which are outside of our control.We are subject to,among other things,the following factors that may negatively affect our operating results:• the announcement or introduction of new products by our competitors;• our ability to upgrade and develop our systems and infrastructure to accommodate growth;• our ability to attract and retain key personnel in a timely and cost- effective manner;• our ability to attract new customer and retain existing customers;• technical difficulties;• the amount and timing of operating** costs **and capital expenditures** ~~resulting~~ -- **relating to the expansion of our business,operations and infrastructure;• our ability to identify and enter into relationships with appropriate and qualified third- party providers of necessary testing and manufacturing services;• regulation by federal,state or local governments;and • general economic conditions,as well as economic conditions specific to the plastics and fuels industries,and other industries related to compostable or biodegradable substitutes for non- biodegradable plastics,as well as changes to commodity prices to which prices in some of our contracts are indexed.As a result of our limited operating history and the nature of the markets in which we compete,it is difficult for us to forecast our revenues or earnings accurately.We have based our anticipated future expense levels largely on our investment plans and estimates of future events,although certain of our expense levels will,to a large extent,become fixed.As a strategic response to changes in the competitive environment,we may** from **time** ~~regional instability due~~ to **time make certain decisions concerning expenditures,pricing,service or marketing that could harm our business,results of operations and financial condition.Due to the foregoing factors,our revenues and operating results are difficult to forecast** . Changes in tax laws or tax rulings could materially affect our financial position, results of operations, and cash flows. The tax regimes we are subject to or operate under, including income and non- income taxes, are unsettled and may be subject to significant change. Changes in tax laws, regulations, or rulings, or changes in interpretations of existing laws and regulations, could materially affect our financial position and results of operations. For example, the 2017 Tax Cuts and Jobs Act (the " Tax Act ") made broad and complex changes to the U. S. tax code. Future guidance from the IRS with respect to the Tax Act may affect us, and certain aspects of the Tax Act could be repealed or modified in future legislation. The Coronavirus Aid, Relief, and Economic Security Act (the " CARES Act ") has already modified certain provisions of the Tax Act. More recently, the Inflation Reduction Act of

2022 (the " IRA ") includes provisions that will impact the U. S. federal income taxation of corporations, including imposing a minimum tax on the book income of certain large corporations and an excise tax on certain corporate stock repurchases that would be imposed on the corporation repurchasing such stock. In addition, it is uncertain if and to what extent various states will conform to the Tax Act, the CARES Act, the IRA, or any newly enacted federal tax legislation. The issuance of additional regulatory or accounting guidance related to the Tax Act could materially affect our tax obligations and effective tax rate in the period issued. In addition, many countries in Europe and a number of other countries and organizations, have recently proposed or recommended changes to existing tax laws or have enacted new laws that could significantly increase our tax obligations in the countries where we do business or require it to change the manner in which we operate our business. The Organization for Economic Cooperation and Development has been working on a Base Erosion and Profit Shifting Project, and issued a report in 2015, an interim report in 2018, and is expected to continue to issue guidelines and proposals that may change various aspects of the existing framework under which our tax obligations are determined in many of the countries in which we do business. Similarly, the European Commission and several countries have issued proposals that would change various aspects of the current tax framework under which we are taxed. These proposals include changes to the existing framework to calculate income tax, as well as proposals to change or impose new types of non- income taxes, including taxes based on a percentage of revenue. ~~For example, several countries have proposed or enacted taxes applicable to digital services, which could apply to our business.~~ As we expand the scale of our international business activities, these types of changes to the taxation of our activities could increase our worldwide effective tax rate, increase the amount of taxes imposed on our business, and harm our financial position. Such changes may also apply retroactively to our historical operations and result in taxes greater than the amounts estimated and recorded in our financial statements. Unanticipated changes in effective tax rates or adverse outcomes resulting from examination of our income or other tax returns could adversely affect our operating results and financial condition. We are subject to taxation in Canada and **the** United States with increasingly complex tax laws, the application of which can be uncertain. The amount of taxes we pay in these jurisdictions could increase substantially as a result of changes in the applicable tax principles, including increased tax rates, new tax laws or revised interpretations of existing tax laws and precedents, which could have an adverse impact on our liquidity and results of operations. In addition, the authorities in several jurisdictions could review our tax returns and impose additional tax, interest and penalties, which could have an impact on us and on our results of operations. We have previously participated in government programs with the Canadian federal government and Canadian provincial governments that provide investment tax credits based upon qualifying research and development expenditures. If Canadian taxation authorities successfully challenge such expenses or the correctness of such income tax credits claimed, our historical operating results could be adversely affected. As a public company, we will no longer be eligible for refundable tax credits under the Canadian federal Scientific Research and Experimental Development Program (" SR & ED ") credits. ~~However, we are still eligible for non- refundable SR & ED credits under this program, which are eligible to reduce future income taxes payable.~~ Our future effective tax rates could be subject to volatility or adversely affected by a number of factors. Our future effective tax rates could be subject to volatility or adversely affected by a number of factors, including: • changes in the valuation of our deferred tax assets and liabilities; • expected timing and amount of the release of any tax valuation allowances; • tax effects of stock- based compensation; • costs related to intercompany restructurings; • changes in tax laws, regulations or interpretations thereof; or • future earnings being lower than anticipated in countries where we have ~~has~~ lower statutory tax rates and higher than anticipated earnings in countries where we have ~~has~~ higher statutory tax rates. We may conduct activities in other jurisdictions through our subsidiaries pursuant to transfer pricing arrangements and may in the future conduct operations in other jurisdictions pursuant to similar arrangements. If two or more affiliated companies are located in different countries, the tax laws or regulations of each country generally will require that transfer prices be the same as those between unrelated companies dealing at arms' length. While we intend to operate in compliance with applicable transfer pricing laws, our transfer pricing procedures are not binding on applicable tax authorities. If tax authorities in any of these countries were to successfully challenge our transfer prices as not reflecting arm' s length transactions, they could require us to adjust our transfer prices and thereby reallocate our income to reflect these revised transfer prices, which could result in a higher tax liability to us. Our ability to use net operating loss carryforwards and other tax attributes may be limited in connection with the Business Combination or other ownership changes. We have incurred losses during our history. To the extent that we continue to generate taxable losses, unused losses will carry forward to offset future taxable income, if any, until such unused losses expire, if at all. Under the Tax Act, as modified by the CARES Act, U. S. federal NOL carryforwards generated in taxable periods beginning after December 31, 2017, may be carried forward indefinitely, but the deductibility of such net operating loss carryforwards in taxable years beginning after December 31, 2020, is limited to 80 % of taxable income. In addition, our NOL carryforwards are subject to review and possible adjustment by the IRS, and state tax authorities. Under Sections 382 and 383 of the Code, our federal net operating loss carryforwards and other tax attributes may become subject to an annual limitation in the event of certain cumulative changes in the ownership of our stock. An " ownership change " pursuant to Section 382 of the Code generally occurs if one or more stockholders or groups of stockholders who own at least 5 % of a company' s stock increase their ownership (as measured by value) by more than 50 percentage points over their lowest ownership percentage within a rolling three- year period. Our ability to utilize our NOL carryforwards and other tax attributes to offset future taxable income or tax liabilities may be limited as a result of ownership changes, including potential changes in connection with the Business Combination or other transactions. Similar rules may apply under state tax laws. We have recorded a valuation allowance related to **the majority of** our NOL carryforwards and other deferred tax assets due to the uncertainty of the ultimate realization of the future benefits of those assets . Our outstanding secured and unsecured indebtedness...... and operating results are difficult to forecast . Risks Related to Government Regulation Compliance with extensive environmental, health and safety laws could require material expenditures, changes in our operations or site remediation. We use hazardous materials in our production process, and our operations also produce hazardous waste. The manufacture, transportation and sale of our products can present potentially significant health and safety concerns and are also under increased public and governmental scrutiny. Our products are also used in a variety of applications that have specific regulatory requirements such as those relating to products that have contact with food or are used for medical applications. Accordingly, our operations are subject to environmental, health and safety laws and regulations at the international, national, state and local level in multiple jurisdictions. These laws and regulations govern, among other things, air emissions, wastewater discharges, solid and hazardous waste management and disposal, occupational health and safety, including dust and noise control, site remediation programs and chemical use and management. Many of these laws and regulations have become more stringent over time and the costs of compliance with these requirements may increase, including costs associated with any necessary capital investments. In addition, our plants will require operating permits that are subject to renewal and, in some circumstances, revocation. The necessary permits may not be issued or continue in effect, and renewals of any issued permits may contain significant new requirements or restrictions. The nature of the specialty chemicals industry exposes us to risks of liability due to the use, production, management, storage, transportation and sale of materials that are heavily regulated or hazardous and can cause contamination or personal injury or damage if released into the environment. Compliance with environmental laws and regulations generally increases the costs of transportation and storage of raw materials and finished products, as well as the costs of storage and disposal of wastes. We may incur substantial costs, including fines, damages, criminal or civil sanctions and remediation costs, or experience interruptions in our operations for violations arising under environmental laws, regulations or permit requirements. In addition, the market for bioplastics is heavily influenced by applicable federal, state and local government laws, regulations and policies as well as public perception. Changes in these laws, regulations and policies or how these laws, regulations and policies are implemented and enforced could cause the demand for bioplastics to decline and deter investment in the research and development of bioplastics. Concerns associated with bioplastics, including land usage, national security interests, deforestation, food crop usage and other environmental concerns, continue to receive legislative, industry and public attention. This attention could result in future legislation, regulation and / or administrative action that could adversely affect our business. Furthermore, various petrochemical products, including plastics, have faced increased public scrutiny due to negative coverage of plastic waste in the environment, which has resulted in local, state, federal and foreign governments proposing and in some cases approving, restrictions or bans on the manufacture, consumption and disposal of certain petrochemical products. Although our products are intended to replace petrochemical products, increased regulation on the use of such products or other products in the specialty chemicals industry, whatever their scope or form, could increase our costs of production, impact overall consumption of our products or result in misdirected negative publicity. Any inability to address these requirements and any regulatory or policy changes could harm our business, financial condition and results of operations. We are subject to U. S. and foreign anti- corruption and anti- money laundering laws and regulations. We could face criminal liability and other serious consequences for violations, which would harm our business. We are subject to the U. S. Foreign Corrupt Practices Act of 1977, as amended, the U. S. domestic bribery statute contained in 18 U. S. C. § 201, the U. S. Travel Act, the USA PATRIOT Act and possibly other anti- bribery and anti- money laundering laws in countries in which we conduct activities. Anti- corruption laws are interpreted broadly and prohibit companies and their employees, agents, contractors and other collaborators from authorizing, promising, offering or providing, directly or indirectly, improper payments or anything else of value to recipients in the public or private sector. We can also be held liable for the corrupt or other illegal activities of our employees, agents, contractors and other collaborators, even if we do not explicitly authorize or have actual knowledge of such activities. Any violations of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm and other consequences. Our operating plan may require us to source feedstock and supplies internationally, and foreign currency exchange rate fluctuations and changes to international trade agreements, tariffs, import and excise duties, taxes or other governmental rules and regulations could adversely affect our business, financial condition, results of operations and prospects. Our expansion model is global and we ~~will~~ **expect to** need to source feedstock and supplies from suppliers around the world. In particular, our manufacturing process **is designed to** ~~uses~~ - **use** local timber and forest residues as our primary raw materials, which must be sourced locally. For the Origin 1 plant, this means we will need to source feedstock, as well as other supplies, from Canadian suppliers or arrange for transport of such feedstock and supplies into Canada. The U. S. federal government or other governmental bodies may propose changes to international trade agreements, tariffs, taxes and other government rules and regulations, and may impose sanctions limiting trade with other countries. If foreign currency exchange rates fluctuate or any restrictions or significant increases in costs or tariffs or sanctions are imposed related to feedstock and supplies sourced to our plants as a result of amendments to existing trade agreements or otherwise, this may increase our supply and shipping costs, resulting in potential decreased margins. We may expand our operations to countries with unstable governments that are subject to instability, corruption, changes in rules and regulations and other potential uncertainties that could harm our business, financial condition, results of operations and prospects. The extent to which our margins could decrease in response to any future tariffs is uncertain. We continue to evaluate the impact of trade agreements, as well as foreign currency exchange rate fluctuations and other recent changes in foreign trade policy on our supply chain, costs, sales and profitability. In addition, **pandemics such as** COVID- 19 ~~has~~ **may** ~~resulted~~ -- **result** in increased travel restrictions and the extended shutdown of certain businesses throughout the world ~~. The impact of COVID- 19 on our business is uncertain at this time and will depend on future developments; however~~ , **and** prolonged closures in Canada, Europe, Asia and elsewhere may disrupt the operations of certain suppliers of feedstock and other supplies, which could, in turn, negatively impact our business, financial condition, results of operations and prospects. Risks Related to Our Intellectual Property Our business relies on proprietary information and other intellectual property, and our failure to protect our intellectual property rights could harm our competitive advantages with respect to the use, manufacturing, sale or other commercialization of our processes, technologies and products, which may have an adverse effect on our results of operations and financial condition.

We intend to make significant capital investments into the research and development of proprietary information and other intellectual property as we develop, improve and scale our processes, technologies and products, and failure to fund and make these investments, or underperformance of the technology funded by these investments, could severely impact our business, financial condition, results of operations and prospects. If we fail to adequately protect our intellectual property rights, such failure could result in the reduction or loss of our competitive advantage. We may be unable to prevent third parties from using our proprietary information and other intellectual property without our authorization or from independently developing proprietary information and other intellectual property that is similar to ours, particularly in those countries where the laws do not protect our proprietary rights to the same degree as in the U. S or those countries where we do not have intellectual property rights protection. The use of our proprietary information and other intellectual property by others could reduce or eliminate competitive advantages that we have developed, potentially causing us to lose sales or actual or potential customers, or otherwise harm our business. ~~If it becomes necessary for us~~ **We are, and may continue** to **be, involved in** ~~litigate~~ **litigation and administrative actions** to protect these rights, ~~any~~ **and such** proceedings could be burdensome and costly, could result in counterclaims challenging our intellectual property (including validity or enforceability) or accusing us of infringement, and we may not prevail. Our patent applications and issued patents may be practiced by third parties without our knowledge. Our competitors may also attempt to design around our patents or copy or otherwise obtain and use our proprietary information and other intellectual property. Moreover, our competitors may already hold or have applied for patents in the U. S. or abroad that, if enforced, could possibly prevail over our patent rights or otherwise limit our ability to manufacture, sell or otherwise commercialize one or more of our products in the U. S. or abroad. With respect to our pending patent applications, we may not be successful in securing issued patents, or the claims of such patents may be narrowed, any of which may limit our ability to protect inventions that these applications were intended to cover, which could harm our ability to prevent others from exploiting our technologies and commercializing products similar to our products. In addition, the expiration of a patent can result in increased competition with consequent erosion of profit margins. The applicable governmental authorities may not approve our pending service mark and trademark applications. A failure to obtain trademark registrations in the U. S. and in other countries could limit our ability to obtain and retain our trademarks in those jurisdictions. Moreover, third parties may seek to oppose our applications or otherwise challenge the resulting registrations. In the event that our trademarks are not approved or are successfully challenged by third parties, we could be forced to rebrand our products, which could result in loss of brand recognition and could require us to devote significant resources to rebranding and advertising and marketing new brands. The failure of our patents, trademarks, trade secrets, or confidentiality agreements to protect our proprietary information and other intellectual property, including our processes, apparatuses, technology, trade secrets, trade names and proprietary manufacturing expertise, methods and compounds, could have a material adverse effect on our business and results of operations. Some of our intellectual property has been or will be discovered, conceived or developed through research funded by the Canadian government and thus may be subject to federal regulations providing for certain rights for the Canadian government or imposing certain obligations on us, such as limitations on exploiting such intellectual property outside of Canada. Compliance with such regulations may limit our exclusive rights and ability to commercialize our products and technology outside of Canada. We may face patent infringement and other intellectual property claims that could be costly to defend, result in injunctions and significant damage awards or other costs (including indemnification of third parties or costly licensing arrangements, if licenses are available at all) and limit our ability to use certain key technologies in the future or require development of non- infringing products or technologies, which may cause us to incur significant unexpected costs, prevent us from commercializing our products and otherwise harm our business. The various bioindustrial markets in which we plan to operate are subject to frequent and extensive litigation regarding patents, trade secrets and other intellectual property rights. Many of our competitors have a substantial amount of intellectual property. We cannot guarantee that our processes and products do not and will not infringe issued patents (whether present or future) or other intellectual property rights belonging to others. From time to time, we **may** oppose third- party patents that we consider overbroad or otherwise invalid in order to maintain the necessary freedom to operate fully in our various business lines without the risk of being sued for patent infringement. If, however, the oppositions are unsuccessful, we could be liable for infringement or have to take other remedial or curative actions to continue our manufacturing and sales activities with respect to one or more products. We may also be subject to legal proceedings and claims in the ordinary course of our business, including claims of alleged infringement or misappropriation of the patents, trademarks, trade secrets and other intellectual property rights of third parties by us or our licensees in connection with their use of our products. Intellectual property litigation is expensive and time- consuming, regardless of the merits of any claim, and could divert our management' s attention from operating our business. If we were to discover that our processes, technologies or products infringe or misappropriate the valid intellectual property rights of others, we might need to obtain licenses from these parties or substantially re- engineer our processes, technologies or products in order to avoid infringement. We may not be able to obtain the necessary licenses on acceptable terms, or at all, or be able to re- engineer our processes, technologies or products successfully. Moreover, if we or our licensees are sued for infringement or misappropriation and lose, we could be required to pay substantial damages, indemnify our licensees and / or be enjoined from using or selling the infringing processes, technologies or products. If we incur significant costs to litigate infringement or misappropriation claims or to obtain licenses, or if our inability to obtain required licenses prevents us from using or selling our processes, technologies or products, it could have a material adverse effect on our business and results of operations. We rely on trade secrets to protect our technology, and our failure to maintain trade secret protection could limit our ability to compete. We rely on trade secrets to protect some of our technology and proprietary information, especially where we believe patent protection is not appropriate or obtainable **. We have security measures in place to safeguard our trade secrets database and limit the access to a need- to- know basis** . However, trade secrets can be difficult to protect. The misappropriation or other compromise of our trade secrets may lead to a reduction or loss of our competitive advantages resulting from such trade secrets. Further, litigating a claim that a third party had misappropriated our trade secrets would be expensive and time consuming, and the outcome would be unpredictable. Moreover, if our competitors independently develop similar knowledge, methods and know- how, it will be difficult for us to enforce our rights and our business could be harmed. Our confidentiality agreements could be breached or may not provide meaningful protection for our trade secrets or proprietary manufacturing expertise. Adequate remedies may not be available in the event of an unauthorized use or disclosure of our trade secrets and manufacturing expertise. Violations by others of our confidentiality agreements and the loss of employees who have specialized knowledge and expertise could harm our competitive position resulting from the exclusive nature of such knowledge and expertise and cause our sales and operating results to decline as a result of increased competition. In addition, others may obtain knowledge of our trade secrets through independent development or other access by legal means. Other Risks Related to Our Business Our management has limited experience in operating a public company. Our executive officers have limited experience in the management of a publicly traded company subject to significant regulatory oversight and reporting obligations under federal securities laws. We may not have adequate personnel with the appropriate level of knowledge, experience and training in the accounting policies, practices or internal ~~controls~~ - **control** over financial reporting required of public companies in the United States. It is possible that we will be required to expand our employee base and hire additional employees to support our operations as a public company, which will increase our operating costs in future periods. We are dependent on management and key personnel, and our business ~~would~~ **could** suffer if we fail to retain our key personnel ~~and~~ **or** attract additional highly skilled employees. Our success depends on the specialized skills of our management team and key operating personnel. This may present particular challenges as we operate in a highly specialized industry sector, which may make replacement of our management team and key operating personnel difficult. A loss of our managers or key employees, or their failure to satisfactorily perform their responsibilities, could have an adverse effect on our business, financial condition, results of operations and prospects. Our future success will depend on our ability to identify, hire, develop, motivate and retain highly qualified personnel for all areas of our organization, particularly research and development, **engineering** ~~recycling technology~~ , operations **,** and sales. Trained and experienced personnel are in high demand and may be in short supply. Many of the companies that we compete with for experienced employees have greater resources than us and may be able to offer more attractive terms of employment. In addition, we invest significant time and expense in training employees, which increases their value to competitors that may seek to recruit them. We may not be able to attract, develop and maintain the skilled workforce necessary to operate our business, and labor expenses may increase as a result of a shortage in the supply of qualified personnel, which ~~will~~ **could** negatively impact our business, financial condition, results of operations and prospects. We previously identified a material weakness in our internal control over financial reporting that we have concluded has been remediated **. However** , ~~though~~ we may identify additional material weaknesses in the future or fail to maintain effective internal control over financial reporting, which may result in material misstatements of our consolidated financial statements or cause us to fail to meet our periodic reporting obligations. In connection with the audit of our consolidated financial statements for the fiscal years ended December 31, 2019 and December 31, 2020, during the course of preparing for the Business Combination, and during the second quarter 2021 and third quarter 2021 interim reviews, we identified a material weakness in our internal ~~controls~~ - **control** over financial reporting. We implemented and continue to employ measures designed to improve our internal control over financial reporting, which remediated this material weakness in the fourth quarter of 2021. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of its annual or interim financial statements will not be prevented or detected on a timely basis. If we are unable to successfully remediate any future material weaknesses in our internal control over financial reporting, or if we identify any additional material weaknesses, the accuracy and timing of our financial reporting may be adversely affected, we may be unable to maintain compliance with securities law requirements regarding timely filing of periodic reports in addition to applicable Nasdaq listing requirements, investors may lose confidence in our financial reporting and our stock price may decline as a result. We also could become subject to investigations by Nasdaq, the SEC or other regulatory authorities. As a public company, we are also required, pursuant to Section 404 of the Sarbanes- Oxley Act, to furnish a report by management on, among other things, the effectiveness of its internal control over financial reporting for ~~future~~ **our** annual reports on Form 10- K to be filed with the SEC. This assessment ~~will need~~ **needs** to include disclosure of any material weaknesses identified by management in our internal control over financial reporting. ~~Our independent registered public accounting firm will also be required to audit the effectiveness of our internal control over financial reporting in future annual reports on Form 10- K to be filed with the SEC.~~ We **are** ~~will be~~ required to disclose changes made in our internal control over financial reporting on a quarterly basis. Failure to comply with the Sarbanes- Oxley Act could potentially subject us to sanctions or investigations by the SEC, the applicable stock exchange or other regulatory authorities, which would require additional financial and management resources. In order to evaluate the effectiveness of internal control over financial reporting, as required by Section 404 of the Sarbanes- Oxley Act, management has conducted an assessment, including testing, using the criteria in Internal Control – Integrated Framework, issued by the Committee of Sponsoring Organizations of the Treadway Commission (" COSO ") using the 2013 framework. Our system of internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect all misstatements. We are subject to stringent and changing U. S. and foreign laws, regulations, rules, contractual obligations, policies and other obligations related to data privacy and security. Our actual or perceived failure to comply with such obligations could lead to regulatory investigations or actions; litigation; fines and penalties; disruptions of our business operations; reputational harm; loss of revenue or profits; loss of customers or sales; and other adverse business consequences. In the ordinary course of business, we collect, receive, store, process, generate, use, transfer, disclose, make accessible, protect, secure, dispose of, transmit, and share (commonly known as processing) personal data and other sensitive information, including proprietary and confidential business data, trade secrets, and intellectual property. Our data processing activities subject us to various data privacy and security obligations, which can include laws, regulations, guidance, industry standards, external and internal privacy and security policies, contracts, and other obligations that govern the processing of personal data by us and on our behalf. In the United States, federal, state, and local governments have enacted numerous data privacy and security laws, including data breach notification laws, personal data privacy laws, and consumer protection laws **(e. g., Section 5 of the Federal Trade Commission Act), and other similar laws (e. g., wiretapping laws)** . For example, the California Consumer Privacy Act of 2018 (" CCPA ") imposes obligations on businesses to which it applies, such as providing specific disclosures in privacy notices and affording California residents certain rights related to their personal data and applies to personal information of consumers, business representatives, and employees **who are California residents** . The CCPA provides for civil penalties of up to $ 7, 500 per violation and allows private litigants affected by certain data breaches to recover significant statutory damages. In addition, the California Privacy Rights Act of 2020 (" CPRA "), effective January 1, 2023, expands the CCPA, including by establishing a new California Privacy Protection Agency to implement and enforce the CPRA and adding a new right for individuals to correct their personal information. Other states have also enacted data privacy laws, including Virginia and Colorado. In addition, data privacy and security laws have been proposed at the federal, state, and local levels in recent years, which could further complicate compliance efforts. Outside the United States, an increasing number of laws, regulations, and industry standards apply to data privacy and security. For example, the European Union' s General Data Protection Regulation (" EU GDPR ") and the United Kingdom' s GDPR (" UK GDPR ") impose strict requirements for processing the personal data of individuals located in the European Economic Area (" EEA ") and the UK, respectively. For example, under the EU GDPR, government regulators may impose temporary or definitive bans on data processing, as well as fines of up to **€** 20 ~~. 0~~ million ~~euros~~ or 4 % of annual global revenue, whichever is greater. The GDPR also allows for private litigation related to processing of personal data brought by classes of data subjects or consumer protection organizations authorized at law to represent their interests. Additionally, in Canada, the Personal Information Protection and Electronic Documents Act (" PIPEDA ") and various related provincial laws, as well as Canada' s Anti- Spam Legislation (" CASL "), may apply to our operations. We also ~~target~~ **have** customers in Asia, and may be subject to new and emerging data privacy regimes in Asia, such as China' s Personal Information Protection Law ~~,~~ and Japan' s Act on the Protection of Personal Information. In addition, certain jurisdictions have enacted data localization laws and cross- border personal data transfer laws, which could make it more difficult to transfer information across jurisdictions (such as transferring or receiving personal data that originates in Europe or other jurisdictions). Existing mechanisms that may facilitate cross- border personal data transfers may change or be invalidated. We are also bound by contractual obligations related to data privacy and security, and our efforts to comply with such obligations may not be successful. We publish privacy policies, marketing materials and other statements, such as compliance with certain certifications or self- regulatory principles, regarding data privacy and security. If these policies, materials or statements are found to be deficient, lacking in transparency, deceptive, unfair, or misrepresentative of our practices, we may be subject to investigation, enforcement actions by regulators or other adverse consequences. Obligations related to data privacy and security are quickly changing in an increasingly stringent fashion, creating some uncertainty as to the effective future legal framework. Additionally, these obligations may be subject to differing applications and interpretations, which may be inconsistent or in conflict among jurisdictions. Preparing for and complying with these obligations may require us to devote significant resources (including, without limitation, financial and time- related resources). These obligations may necessitate changes to our information technologies, systems, and practices and to those of any third parties that process personal data on our behalf. Although we endeavor to comply with all applicable data privacy and security obligations, we may at times fail (or be perceived to have failed) to do so. Moreover, despite our efforts, our personnel or third parties upon whom we rely may fail to comply with such obligations, which could negatively impact our business operations and compliance posture. For example, any failure by a third- party processor to comply with applicable law, regulations, or contractual obligations could result in adverse effects, including inability to or interruptions in our ability to operate our business and proceedings against us by governmental entities or others. If we fail, or are perceived to have failed, to address or comply with data privacy and security obligations, we could face significant consequences. These consequences may include, but are not limited to, government enforcement actions (e. g., investigations, fines, penalties, audits, inspections, and similar); litigation (including class- related claims); additional reporting requirements and / or oversight; bans on processing personal data; and orders to destroy or not use personal data. Any of these events could have a material adverse effect on our reputation, business, or financial condition, including but not limited to: loss of customers; interruptions or stoppages in our business operations; inability to process personal data or to operate in certain jurisdictions; limited ability to develop or commercialize our products; expenditure of time and resources to defend any claim or inquiry; adverse publicity; or revision or restructuring of our operations. If our information technology systems or data, or those of third parties upon which we rely, are or were compromised, we could experience adverse consequences resulting from such compromise, including but not limited to regulatory investigations or actions; litigation; fines and penalties; disruptions of our business operations; reputational harm; loss of revenue or profits; loss of customers; and other adverse consequences. In the ordinary course of our business, we may process proprietary, confidential, and sensitive data, including personal data, intellectual property, and trade secrets (collectively, sensitive information). Cyberattacks,malicious internet- based activity,and online and offline fraud are prevalent and continue to increase.These threats are becoming increasingly difficult to detect.These threats come from a variety of sources,including traditional computer " hackers," threat actors,personnel (such as through theft or misuse),sophisticated nation- states,and nation-state- supported actors.Some actors now engage and are expected to continue to engage in cyber- attacks,including without limitation nation- state actors for geopolitical reasons and in conjunction with military conflicts and defense activities.During times of war and other major conflicts,we and the third parties upon which we rely may be vulnerable to a heightened risk of these attacks,including retaliatory cyber- attacks,that could materially disrupt our systems and operations,supply chain,and ability to produce,sell and distribute our products.We and the third parties upon which we rely may be subject to a variety of evolving threats,including but not limited to social- engineering attacks (including through phishing attacks),malicious code (such as viruses and worms),malware (including as a result of advanced persistent threat intrusions),denial- of- service attacks (such as credential stuffing),credential harvesting,personnel misconduct or error,ransomware attacks,supply- chain attacks,software bugs,server malfunctions,software or hardware failures,loss of data or other information technology assets,adware,telecommunications failures,earthquakes,fires,floods,and other similar threats.Ransomware attacks,including those perpetrated by organized criminal threat actors,nation- states,and nation- state- supported actors,are becoming increasingly prevalent and severe – particularly for companies like ours that are engaged in manufacturing – and can lead to significant interruptions in our operations,loss of data and income,reputational harm,and diversion of funds.Extortion payments may alleviate the negative impact of a ransomware attack,but we may be unwilling or unable to make such payments due to,for example,applicable laws or regulations prohibiting such payments.Additionally,remote work has become more common and has increased risks to our information technology systems and data,as more of our employees utilize network connections,computers and devices outside our premises or network,including working at home,while in transit and in public locations.Future or past business transactions (such as acquisitions or integrations) could also expose us to additional cybersecurity risks and vulnerabilities,as our systems could be negatively affected by vulnerabilities present in acquired or integrated entities' systems and technologies.A security incident or other interruption could result in unauthorized,unlawful,or accidental acquisition,modification,destruction,loss,alteration,encryption,disclosure of,or access to our sensitive information.A security incident or other interruption could disrupt our ability (and that of third parties upon whom we rely) to provide our products. We rely upon third- party service providers and technologies to operate critical business systems to process sensitive information in a variety of contexts, including, without limitation, third- party providers of cloud- based infrastructure, encryption and authentication technology, employee email, content delivery to customers, manufacturing processing, process orders and invoices, payments, inventory management and other functions. We also depend on these systems to respond to customer inquiries, support our overall internal control process, maintain property, plant and equipment records, and pay amounts due to vendors and other creditors. Our ability to monitor these third parties' information security practices is limited, and these third parties may not have adequate information security measures in place. While we may be entitled to damages if our third- party service providers fail to satisfy their privacy or security- related obligations to us, any award may be insufficient to cover our damages, or we may be unable to recover such award. In addition, supply- chain attacks have increased in frequency and severity, and we cannot guarantee that third parties' infrastructure in our supply chain or our third- party partners' supply chains have not been compromised. We may share or receive sensitive information with or from third parties. Cyberattacks, malicious internet- based activity...... rely) to provide our products. We may expend significant resources or modify our business activities in an effort to protect against security incidents. Certain data privacy and security obligations may require us to implement and maintain specific security measures, industry- standard or reasonable security measures to protect our information technology systems and sensitive information. While we have implemented security measures designed to protect against security incidents, there can be no assurance that these measures will be effective. We take steps to detect and remediate vulnerabilities, but we may not be able to detect and remediate all vulnerabilities because the threats and techniques used to exploit ~~the~~ **such** ~~vulnerability~~ **vulnerabilities** change frequently and are often sophisticated in nature. Therefore, such vulnerabilities could be exploited but may not be detected until after a security incident has occurred. These vulnerabilities pose material risks to our business. Despite our efforts to identify and remediate vulnerabilities, if any, in our information technology systems, our efforts may not be successful. Further, we may experience delays in developing and deploying remedial measures designed to address any such identified vulnerabilities. Applicable data privacy and security obligations may require us to notify relevant stakeholders of security incidents. Such disclosures are costly, and the disclosures or the failure to comply with such requirements could lead to adverse consequences. If we (or ~~a~~ third ~~party~~ **parties** upon whom we rely) experience a security incident or are perceived to have experienced a security incident, we may experience adverse consequences. These consequences may include: government enforcement actions (for example, investigations, fines, penalties, audits, and inspections); additional reporting requirements and / or oversight; restrictions on processing data (including personal data); litigation (including class claims); indemnification obligations; negative publicity; reputational harm; monetary fund diversions; interruptions in our operations (including availability of data); financial loss; and other similar harms. Security incidents and attendant consequences may ~~deter~~ negatively impact our ability to grow and operate our business. Our contracts may not contain limitations of liability, and even where they do, there can be no assurance that limitations of liability in our contracts are sufficient to protect us from liabilities, damages, or claims related to our data privacy and security obligations. We cannot be sure that our insurance coverage will be adequate or sufficient to protect us from or to mitigate liabilities arising out of our data privacy and security practices, that such coverage will continue to be available on commercially reasonable terms or at all, or that such coverage will pay future claims. In addition to experiencing a security incident, third parties may gather, collect, or infer sensitive information about us from public sources, data brokers, or other means that reveals competitively sensitive details about our organization and could be used to undermine our competitive advantage or market position. Risks Related to Ownership of Our Shares Our Certificate of Incorporation provides, subject to limited exceptions, that the Delaware Court of Chancery is the sole and exclusive forum for certain stockholder litigation matters, which could limit our stockholders' ability to obtain a chosen judicial forum for disputes with us or our directors, officers, employees or stockholders. Our Certificate of Incorporation requires, to the fullest extent permitted by law, that derivative actions brought in our name, actions against directors, officers and employees for breach of fiduciary duty and other similar actions may be brought in the Delaware Court of Chancery or, if that court lacks subject matter jurisdiction, another federal or state court situated in the State of Delaware. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and consented to the forum provisions in our Certificate of Incorporation. In addition, our Certificate of Incorporation provides that the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action under the Securities Act. This choice of forum provision may limit a stockholder' s ability to bring a claim in a judicial forum of its choosing for disputes with us or any of our directors, officers, other employees or stockholders, which may discourage lawsuits with respect to such claims. Alternatively, if a court were to find the choice of forum provision contained in our Certificate of Incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, operating results and financial condition. Our charter documents and Delaware law could prevent a takeover that stockholders consider favorable and could also reduce the market price of our stock. Our Certificate of Incorporation and Bylaws contain provisions that could delay or prevent a change in control of us. These provisions could also make it more difficult for stockholders to elect directors and take other corporate actions. These provisions include: • initially providing for a classified ~~board~~ **Board** ~~of directors~~ with staggered, three- year terms; • authorizing our Board ~~of Directors (the " Board ")~~ to issue Preferred Stock with voting or other rights or preferences that could discourage a takeover attempt or delay changes in control; • prohibiting cumulative voting in the election of directors; • providing that vacancies on our Board may generally be filled only by a majority of directors then in office, even though less than a quorum; • prohibiting the adoption, amendment or repeal of the Bylaws or the repeal of the provisions of our Certificate of Incorporation regarding the election and removal of directors without the required approval of at least two- thirds of the shares entitled to vote at an election of directors; • prohibiting stockholder action by written consent; • limiting the persons who may call special meetings of stockholders; and • requiring advance notification of stockholder nominations and proposals. These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our Board, which is responsible for appointing the members of our management. In addition, the provisions of Section 203 of the General Corporation Law of the State of Delaware (~~"~~ **“** DGCL ~~"~~ **”**) will govern us. These provisions may prohibit large stockholders, in particular those owning 15 % or more of our outstanding voting stock, from merging or combining with us for a certain period of time without the consent of our Board. These and other provisions in our Certificate of Incorporation and our Bylaws under Delaware law could discourage potential takeover attempts, reduce the price investors might be willing to pay in the future for shares of our Common Stock and result in the market price of our Common Stock being lower than it would be without these provisions. Claims for indemnification by our directors and officers may reduce our available funds to satisfy successful third- party claims against us and may reduce the amount of money available to us. Our Certificate of Incorporation and Bylaws provide that we will indemnify our directors and officers, in each case to the fullest extent permitted by Delaware law. In addition, as permitted by Section 145 of the DGCL, the Bylaws and its indemnification agreements that we entered into with our directors and officers provide that: • we will indemnify our directors and officers for serving us in those capacities or for serving other business enterprises at our request, to the fullest extent permitted by Delaware law. Delaware law provides that a corporation may indemnify such person if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the registrant and, with respect to any criminal proceeding, had no reasonable cause to believe such person' s conduct was unlawful; • we may, in our discretion, indemnify employees and agents in those circumstances where indemnification is permitted by applicable law; • we will be required to advance expenses, as incurred, to our directors and officers in connection with defending a proceeding, except that such directors or officers shall undertake to repay such advances if it is ultimately determined that such person is not entitled to indemnification; • we will not be obligated pursuant to our Bylaws to indemnify a person with respect to proceedings initiated by that person against us or our other indemnities, except with respect to proceedings authorized by our Board or brought to enforce a right to indemnification; • the rights conferred in the Bylaws are not exclusive, and we are authorized to enter into indemnification agreements with our directors, officers, employees and agents and to obtain insurance to indemnify such persons; and • we may not retroactively amend our Bylaw provisions to reduce our indemnification obligations to directors, officers, employees and agents. We do not intend to pay dividends for the foreseeable future. We have has never declared or paid any cash dividends on our capital stock and do not intend to pay any cash dividends in the foreseeable future. We expect to retain future earnings, if any, to fund the development and growth of our business. Any future determination to pay dividends on our capital stock will be at the discretion of our Board. In addition, our loan agreements contain restrictions on our ability to pay dividends. The market price and trading volume of our Common Stock **has been and** may be volatile and could decline significantly. The stock markets, including Nasdaq on which we have listed the shares of our Common Stock under the symbol " ORGN, " have from time to time experienced significant price and volume fluctuations. Even if an active, liquid and orderly trading market is sustained for our Common Stock, the market price of our Common Stock **has been and** may be volatile and could decline significantly **. Our Common Stock experienced such a decline in August 2023** . In addition, the trading volume in our Common Stock may fluctuate and cause significant price variations to occur. If the market price of our Common Stock declines significantly, you may be unable to resell your shares at or above the market price of our Common Stock at which ~~your~~ - **you** purchased our Common Stock. We cannot assure you that the market price of Common Stock will not fluctuate widely or decline significantly in the future in response to a number of factors, including, among others, the following: • the realization of any of the risk factors presented in this ~~Annual~~ Report; • actual or anticipated differences in our estimates, or in the estimates of analysts, for our revenues, results of operations, level of indebtedness, liquidity or financial condition; • additions and departures of key personnel; • failure to comply with the requirements of Nasdaq; • failure to comply with the Sarbanes- Oxley Act or other laws or regulations; • future issuances, sales, resales or repurchases or anticipated issuances, sales, resales or repurchases, of our securities; • publication of research reports about us; • the performance and market valuations of other similar companies; • commencement of, or involvement in, litigation involving us; • broad disruptions in the financial markets, including sudden disruptions in the credit markets; • speculation in the press or investment community; • actual, potential or perceived control, accounting or reporting problems; • changes in accounting principles, policies and guidelines; and • other events or factors, including those resulting from infectious diseases, health epidemics and pandemics ~~(including the ongoing COVID- 19 public health emergency)~~ , natural disasters, war, acts of terrorism or responses to these events. In the past, securities class- action litigation has often been instituted against companies following periods of volatility in the market price of their shares. This type of litigation could result in substantial costs and divert our management' s attention and resources, which could have a material adverse effect on us. **In addition, litigation, including securities class action litigation, has often followed announcements of significant business transactions, such as the sale of a company or announcement of any other strategic transaction, or the announcement of negative events, such as negative earnings results. We are, and may in the future be, the target of this type of litigation. These events may also result in investigations by the Securities and Exchange Commission.** Our quarterly operating results may fluctuate significantly and could fall below the expectations of securities analysts and investors due to seasonality and other factors, some of which are beyond our control, resulting in a decline in our stock price. Our quarterly operating results may fluctuate significantly because of several factors, including: • labor availability and costs for hourly and management personnel; • profitability of our products; • changes in interest rates; • impairment of long- lived assets; • macroeconomic conditions, such as inflation and increasing interest rates, which may increase the risk of a potential recession; • negative publicity relating to products we serve; • changes in consumer preferences and competitive conditions; • expansion to new markets; and • fluctuations in commodity prices. If securities or industry analysts do not publish or cease publishing research or reports about us, our business, or our market, or if they change their recommendations regarding our Common Stock adversely, then the price and trading volume of our Common Stock could decline. The trading market for our Common Stock will be influenced by the research and reports that industry or securities analysts may publish about us, our business, our market, or our competitors. Accordingly, we must maintain confidence among current and future analysts, ratings agencies and other parties in our long- term financial viability and business prospects. Maintaining such confidence may be particularly complicated by certain factors including those that are largely outside of our control, such as limited operating history, market unfamiliarity, any delays in scaling manufacturing to meet demand and our eventual production and sales performance compared with the market expectations. If any of the analysts who may cover us change their recommendation regarding our Common Stock adversely, or provide more favorable relative recommendations about our competitors, the price of our Common Stock would likely decline. If any analyst who may cover us were to cease coverage of ~~the~~ us **, which occurred in November 2023 and may occur again in the future,** or **if any analyst** ~~fail~~ **fails** to regularly publish reports on us, we could lose ~~visibility~~ in the financial markets, which could cause our stock price or trading volume to decline. Future issuances of debt securities and equity securities may adversely affect us, including the market price of our Common Stock and may be dilutive to existing stockholders. In the future, we may incur debt or issue equity ~~-~~ ranking senior to our Common Stock. Those securities will generally have priority upon liquidation. Such securities also may be governed by an indenture or other instrument containing covenants restricting its operating flexibility. Additionally, any convertible or exchangeable securities that we issue in the future may have rights, preferences and privileges more favorable than those of our Common Stock. Because our decision to issue debt or equity in the future will depend on market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing, nature or success of our future capital raising efforts. As a result, future capital raising efforts may reduce the market price of our Common Stock and be dilutive to existing stockholders. **We have failed, and may** ~~There can be no assurance that we will be able to comply with the continued~~ **continue to fail, to meet the** listing standards of Nasdaq **, and as a result our common stock may become delisted, which could have a material adverse effect on the liquidity of our common stock** . Our Common Stock and the public warrants that were issued in connection with Artius' initial public offering (the " Public Warrants ") are currently listed on Nasdaq **. If we fail to continue to satisfy the continued listing requirements of Nasdaq, such as the corporate governance or public float requirements, or the minimum closing bid price requirement, Nasdaq will take steps to delist our common stock. The per share price of our common stock has declined below the minimum bid price threshold required for continued listing. On January 4, 2023, we received a deficiency letter from the Listing Qualifications Department of the Nasdaq (the " Nasdaq Staff "), notifying us that, for the last 30 consecutive business days, the closing bid price for our Class A common stock had closed below the minimum $ 1. 00 per share required for continued listing on the Nasdaq pursuant to Nasdaq Listing Rule 5550 (a) (2) (" Rule 5550 (a) (2) "). If we do not regain compliance with Rule 5550 (a) (2) by July 2, 2024, we may be afforded a second 180 calendar day period to regain compliance. To qualify, we would be required to meet the continued listing requirement for market value of publicly held shares and all other initial listing standards for the Nasdaq Capital Market, except for the minimum bid price requirement. In addition, we would be required to notify Nasdaq of our intent to cure the deficiency during the second compliance period. There are many factors that may adversely affect our minimum bid price. Many of these factors are outside of our control. As a result, we may not be able to sustain compliance with Rule 5550 (a) (2) in the long term. Any potential delisting of our common stock from the Nasdaq would likely result in decreased liquidity and increased volatility for our common stock and would adversely affect our ability to raise additional capital or to enter into strategic transactions, in addition to adversely impacting the perception of our financial condition and could cause reputational harm to investors and parties conducting business with us. Any potential delisting of our common stock from the Nasdaq would also make it more difficult for our stockholders to sell our common stock** . If Nasdaq delists our securities from trading on its exchange for failure to meet the listing standards, we and our stockholders could face significant material adverse consequences including: • a limited availability of market quotations for our securities; • ~~reduced liquidity for our securities; •~~ a determination that our Common Stock is a " penny stock " which will require brokers trading in our Common Stock to adhere to more stringent rules and possibly result in a reduced level of trading activity in the secondary trading market for our securities; or • a decreased ability to issue additional securities or obtain additional financing in the future ~~. If we fail to satisfy the continued listing requirements of Nasdaq such as the corporate governance requirements or the minimum share price requirement, Nasdaq may take steps to delist our securities. Such a delisting would likely have a negative effect on the price of the securities and would impair your ability to sell or purchase the securities when you wish to do so. In the event of a delisting, we can provide no assurance that any action~~

~~taken by us to restore compliance with listing requirements would allow our securities to become listed again, stabilize the market price or improve the liquidity of our securities, prevent our securities from dropping below the Nasdaq minimum share price requirement or prevent future non- compliance with Nasdaq' s listing requirements~~ . Additionally, if our securities are not listed on, or become delisted from, Nasdaq for any reason, and are quoted on the OTC Bulletin Board, an inter- dealer automated quotation system for equity securities that is not a national securities exchange, the liquidity and price of our securities may be more limited than if we were quoted or listed on Nasdaq or another national securities exchange. You may be unable to sell your securities unless a market can be established or sustained. **In the event of a delisting, we expect we would take actions to restore our compliance with Nasdaq Marketplace Rules, but we can provide no assurances that the listing of our common stock would be restored, that our common stock will remain above the Nasdaq minimum bid price requirement or that we otherwise will remain in compliance with the Nasdaq Marketplace Rules.** The National Securities Markets Improvement Act of 1996, which is a federal statute, prevents or preempts the states from regulating the sale of certain securities, which are referred to as " covered securities. " Because Common Stock and Public Warrants are listed on Nasdaq, they are covered securities. Although the states are preempted from regulating the sale of our securities, the federal statute does allow the states to investigate companies if there is a suspicion of fraud, and, if there is a finding of fraudulent activity, then the states can regulate or bar the sale of covered securities in a particular case. While we are not aware of a state, other than the State of Idaho, having used these powers to prohibit or restrict the sale of securities issued by blank check companies, certain state securities regulators view blank check companies unfavorably and might use these powers, or threaten to use these powers, to hinder the sale of securities of blank check companies in their states. Further, if we were no longer listed on Nasdaq, our securities would not be covered securities and we would be subject to regulation in each state in which we offer our securities. Sales of a substantial number of shares of our common stock by our existing stockholders could cause the price of our common stock to decline. At any time, sales of a substantial number of shares of our common stock in the public market could occur, or there could be a perception in the market that the holders of a large number of shares of common stock intend to sell shares, and any such event could reduce the market price of our common stock. Substantially all of the shares of our common stock outstanding and shares issued upon the exercise of stock options outstanding under our equity incentive plans, subject to applicable securities law restrictions and excluding shares of restricted stock that will remain unvested, may be able to be sold in the public market. We are unable to predict the effect that sales may have on the prevailing market price of Common Stock and Public Warrants. To the extent our Warrants are exercised, additional shares of Common Stock will be issued, which will result in dilution to the holders of Common Stock and increase the number of shares eligible for resale in the public market. Sales, or the potential sales, of substantial numbers of shares in the public market by the selling securityholders could increase the volatility of the market price of Common Stock or adversely affect the market price of Common Stock. There is no guarantee that the Warrants will be in the money at the time they become exercisable, and they may expire worthless. The exercise price for our Warrants is $ 11. 50 per share of Common Stock. There is no guarantee that the Warrants will be in the money following the time they become exercisable and prior to their expiration, and as such, the Warrants may expire worthless. Our Warrants became exercisable on July 25, 2021. We may amend the terms of the Warrants in a manner that may be adverse to holders with the approval by the holders of at least 50 % of the then- outstanding Public Warrants. As a result, the exercise price of your Warrants could be increased, the exercise period could be shortened and the number of shares of our Common Stock purchasable upon exercise of a Warrant could be decreased, all without your approval. Our Warrants are issued in registered form under the Warrant Agreement between the warrant agent and us. The Warrant Agreement provides that the terms of the Warrants may be amended without the consent of any holder to cure any ambiguity or correct any defective provision, but requires the approval by the holders of at least 50 % of the then- outstanding Public Warrants to make any change that adversely affects the interests of the registered holders of Public Warrants. Accordingly, we may amend the terms of the Public Warrants in a manner adverse to a holder if holders of at least 50 % of the then- outstanding Public Warrants approve of such amendment. Although our ability to amend the terms of the Public Warrants with the consent of at least 50 % of the then- outstanding Public Warrants is unlimited, examples of such amendments could be amendments to, among other things, increase the exercise price of the Warrants, convert the Warrants into cash or stock (at a ratio different than initially provided), shorten the exercise period or decrease the number of shares of our Common Stock purchasable upon exercise of a Warrant. We may redeem unexpired Warrants prior to their exercise at a time that is disadvantageous to warrant holders, thereby making such Warrants worthless. We have the ability to redeem outstanding Warrants at any time after they become exercisable and prior to their expiration, at a price of $ 0. 01 per Warrant, provided that the last reported sales price of our Common Stock equals or exceeds $ 18. 00 per share (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations and the like) for any 20 trading days within a 30 trading- day period ending on the third trading day prior to the date on which we give proper notice of such redemption and provided certain other conditions are met. If and when the Warrants become redeemable by us, we may exercise our redemption right even if we are unable to register or qualify the underlying securities for sale under all applicable state securities laws. Redemption of the outstanding Warrants could force you (a) to exercise your Warrants and pay the exercise price therefor at a time when it may be disadvantageous for you to do so, (b) to sell your Warrants at the then- current market price when you might otherwise wish to hold your Warrants or (c) to accept the nominal redemption price which, at the time the outstanding Warrants are called for redemption, is likely to be substantially less than the market value of your Warrants. In addition, we may redeem your Warrants after they become exercisable for a number of shares of Common Stock determined based on the redemption date and the fair market value of our Common Stock. Any such redemption may have similar consequences to a cash redemption described above. In addition, such redemption may occur at a time when the Warrants are " out- of- the- money, " in which case, you would lose any potential embedded value from a subsequent increase in the value of our Common Stock had your Warrants remained outstanding. We may issue additional shares of Common Stock or other equity securities without shareholder approval, which would dilute ~~shareholder~~ **shareholders '** ~~' s~~ ownership interests and may depress the market price of the Common Stock. As of December 31, ~~2022~~ **2023** we have Warrants outstanding to purchase an aggregate of 35, 476, 627 shares of Common Stock. Pursuant to the Merger Agreement, we may issue up to 25, 000, 000 shares of our Common Stock as Earnout Shares. In addition, pursuant to the 2021 **EIP** Plan and the ESPP, we may issue an aggregate of up to ~~27~~ **30** , ~~846~~ **004** , ~~011~~ **203** shares of Common Stock, which amount is subject to increase from time to time. We may also issue additional shares of Common Stock or other equity securities of equal or senior rank in the future in connection with, among other things, future acquisitions or repayment of outstanding indebtedness, without stockholder approval, in a number of circumstances. The issuance of additional shares or other equity securities of equal or senior rank would have the following effects: • existing stockholders' proportionate ownership interest in us will decrease; • the amount of cash available per share, including for payment of dividends in the future, may decrease; • the relative voting strength of each previously outstanding **share of** Common Stock may be diminished; and • the market price of the Common Stock may decline.