

Trickle Research

Every raging river, every great lake, every
deep blue sea starts ... with a trickle



Initiating Research Coverage



Horizon Aircraft

New Horizon Aircraft Ltd.

(OTC: HOVR)

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Disclosure: Portions of this report are excerpted from New Horizon's filings, website(s), presentations or other public collateral. We have attempted to identify those excerpts by *italicizing* them in the text.

Company Overview

New Horizon Aircraft Ltd. (“Horizon” and “the Company”) is an advanced aerospace OEM that is designing a next generation hybrid Electric Vertical Take-Off and Landing (“eVTOL”) aircraft for the Regional Air Mobility (“RAM”) market. Horizon’s aircraft aims to offer a more efficient way to move people and goods at a regional scale (i.e., from 50 to 500 miles), help to connect remote communities, and advance the ability to address an increasing number of climate related natural disasters such as wildfires, floods, or droughts.

The product design is a hybrid electric 7-seat aircraft, called the Cavorite X7, that can take off and land vertically like a helicopter. However, unlike a traditional helicopter, for the majority of its flight it will return to a configuration much like a traditional aircraft. This would allow the Cavorite X7 to fly faster, farther, and operate more efficiently than a traditional helicopter. Expected to travel at speeds up to 250 miles per hour at a range over 500 miles, this aircraft is expected to be a disruptive force to RAM travel. The new and developing eVTOL aircraft market has been made possible by a convergence of innovation across many different technologies. Batteries, immense strength of light materials, computing power, simulation, and propulsion technology have all crossed a critical threshold to enable viable aircraft designs including the Cavorite X7. This has resulted in the establishment and rapid growth of the Advanced Air Mobility (“AAM”) market.

Morgan Stanley has projected that the eVTOL aircraft market could reach \$1 trillion (in the base case) by 2040 and \$9 trillion by 2050. The Cavorite X7 architecture is based on a patented fan-in-wing (“Horizon Omni-modal Vertical (HOVR) Wing” or “HOVR Wing”) technology, which has been developed and tested over the last several years. While most competitors rely on open rotor designs, the HOVR Wing uses a series of ducted electric fans located inside the wings to produce vertical lift. After a demanding vertical takeoff, the aircraft accelerates forward. At a safe speed the wings close to conceal the fans in the wings and the aircraft returns to a highly efficient configuration. The ability to take off and land like a helicopter but fly forward like a traditional aircraft is the key to its performance.

The aircraft is powered by a hybrid electric main engine. For vertical flight, electrical power for the powerful ducted fans in the wings and canards comes from two sources: an on-board generator driven by an internal combustion engine and an array of batteries. Augmenting the battery power with generator power allows us to reduce battery size, recharge the aircraft after vertical takeoff or landing, and increase safety. This aircraft is able to operate in austere locations without power, unlike other pure electric designs that will be forced to fly from charging station to charging station.

Horizon believes that the technology and configuration advantages of the Cavorite X7 aircraft will represent a significant market advantage. It is anticipated that the aircraft will be cheaper to own and operate than helicopters with similar payload characteristics and will travel approximately twice as fast. The specifications for the aircraft call for it to be able to carry seven people with a useful load of 1,500 lbs., almost twice the carriage capacity of many competitors. The combination of carrying more people or goods, traveling faster, and operating more efficiently may provide a strong economic model for broad adoption.

As generalists, we review companies across a wide variety of industries. In many cases, we have some prior exposure to the industry, which makes the process of understanding those underlying businesses less complex. Horizon is a bit of a mixed bag for us in that regard. While we have in the past provide research in the regional airline space, which was helpful, there are other portions of the Horizon industry that are new to us. That is largely the case because as we will try to delineate in the Industry Overview below, portions of the “industry” do not really exist yet. That by the way is the rub and the opportunity in Horizon.

To clarify, having dug into the issues, our view of Horizon’s opportunity today is measurably different today than it was when we first heard the story. Specifically, when we first heard the story, we thought Horizon was largely an Urban Air Mobility story. For those not familiar with the associated industries, we have provided some of that color below. In our view, while we believe Horizon is positioning itself to participate in the UAM space, which we might add, has attracted considerable investor “buzz” for a variety of reasons, we do not believe it is its most eminent, or perhaps even its biggest opportunity. In fact, some of our enthusiasm for Horizon is buttressed by some of our skepticism around challenges facing UAM. Succinctly, while their technology is still in the development phase, they believe they have a visible path to addressing remaining technical hurdles as well as achieving necessary certifications to manufacture, commercialize, and monetize their patented IP.

Given the early-stage posture of the business, we submit there are clear challenges and risks to the plan that we highlight throughout this report. Those include the customary lack of visibility as well as a continued reliance on public markets to finance ongoing technological development. That is not uncommon amongst many of the early-stage companies we cover. That said, we think Horizon’s team possesses a mix of aeronautic tribal knowledge that has already translated into technological advances on what we identify as a relatively modest investment thus far. We make that claim based largely on some of the information we have gathered around other investments into the UAM space, and the relative progress therein. To that end, and again, typical of our early-stage focus, our general view is that the current market capitalization of Horizon may provide markedly discounted exposure to the evolving and anticipated growth of the AAM/AM/UAM space.

Industry Overview

To be clear, while Horizon’s product is still in the development stage, the industry(s) in which it plans to compete is also still on the drawing board. In that regard, our basic thesis here is driven by the expectation that AAM and its associated categories will ultimately be bolted onto existing travel/transportation modes and infrastructure and will emerge as a significant contributor/substitute therein. Further, again as we will try to illustrate below, we expect that transition to include various technologies, form factors and approaches that will likely emerge as “best-fits” for portions of the emerging landscape. We believe Horizon’s platform may be able to carve out a spot in what many believe will be a substantial industry in and of itself.

From NASA Langley Research Center ([Considerations for Future Regional Air Mobility Aircraft](#)):

***Regional Air Mobility (RAM)** is becoming an increasingly popular term for air commerce that is accessible via underutilized airports in the current global air transportation infrastructure, many of which are not served today by commercial operations. A non-exhaustive search indicates that the RAM term entered the lexicon no later than 2019 with the launch of Georgia Tech’s Center for Urban and Regional Air Mobility. The term was used subsequently by Lilium and the Community Air Mobility Initiative. A group of individuals from NASA, industry, and academia used the term in a titular role for a paper released in 2021, stating that “RAM will increase the safety, accessibility, and affordability of regional travel while building on the extensive and underutilized federal, state, and local investment in our nation’s local airports.” RAM has also been described as “safe, sustainable, affordable, and accessible aviation for transformational intraregional missions” and a subset of **Advanced Air Mobility (AAM)**.*

The Advanced Air Mobility term has been used as an umbrella that includes both RAM and the Urban Air Mobility (UAM) concept, which came into prominence soon after the debut of Uber Elevate in 2016. Uber envisioned electric vertical takeoff and landing (eVTOL) aircraft operating within urban areas to catalyze a new era of on-demand air transportation and resolve issues associated with persistent ground traffic in cities. Although there are varying viewpoints, UAM tends to be synonymous with eVTOL aircraft operations within cities. The proposed UAM transportation networks can include existing landing facilities, including airports and heliports, but also tend to require new facilities, typically called vertiports, for passengers to embark or disembark close to dense urban areas. Conversely, a core tenant of RAM is the use of existing airports that are largely underutilized, which implies vertical takeoff and landing capability is not necessary for RAM aircraft.

Given the above overview, we will start at the top of the funnel and work our way down.

- Advanced Air Mobility (“AAM”)

Summarizing the above, Advanced Air Mobility is the umbrella to a host of emerging concepts, technologies, and infrastructure aimed at a variety of anticipated benefits. The emergence of AAM is being driven in part by Federal legislation.

Public Law No: 117-203 (10/17/2022) Advanced Air Mobility Coordination and Leadership Act (S.516 - 117th Congress (2021-2022): Advanced Air Mobility Coordination and Leadership Act | Congress.gov | Library of Congress) :

This act directs the Department of Transportation to establish an Advanced Air Mobility (AAM) interagency working group to plan and coordinate efforts related to the safety, infrastructure, physical security, cybersecurity, and federal investment necessary to bolster the AAM ecosystem, particularly passenger-carrying aircraft, in the United States. Advanced Air Mobility refers to an air transportation system that moves people and cargo between places using new aircraft designs that are integrated into existing airspace operations as well as operated in local, regional, intraregional, rural, and urban environments.

In response in part to the above legislation, consortiums of government agencies are collaborating to help integrate AAM technologies into existing the National Airspace System (“NAS”), as well as developing new infrastructure to interface with existing transportation assets. These agencies include the Federal Aviation Administration (FAA), NASA, the Department of Transportation (DoT), the Department of Defense (DoD), the Air Force Research Laboratory (AFRL), AFWERX, as well as other state and municipal stakeholders such as international and regional airports. To be clear, these collaborations and their goals are robust in terms of the planning and deployment of AAM technologies and platforms through the balance of the current decade and into the next. Below is some color around some of the specific collaborations, as well as some of the “vision” and opportunity that is emerging therein. Again, the efforts around framing an AAM environment that is safe, appropriately regulated, efficient and supportive of commercial participation and growth are well underway.

From the Federal Aviation Administration’s publication entitled **Advanced Air Mobility (AAM) Implementation Plan Near-term (Innovate28) Focus with an Eye on the Future of AAM** (*Advanced Air Mobility (AAM) Implementation Plan*):

Transportation is constantly evolving, and each step forward yields new opportunities that fundamentally change how people and goods are being transported. A new era of aviation once only portrayed in movies or science fiction is taking off. Advanced Air Mobility (AAM) is an emerging aviation ecosystem that leverages new aircraft and an array of innovative technologies to

provide the opportunity for more efficient, more sustainable, and more equitable options for transportation.

The FAA participates in several inter-agency AAM groups, including the DOT AAM Interagency Working Group, which was established by the AAM Coordination and Leadership Act. Much like the FAA iTeams' structure, the DOT AAM Interagency Working Group is coordinating efforts related to safety, operations, infrastructure, physical security and cybersecurity, and federal investment necessary for maturation of the AAM ecosystem in the U.S. They are focused on ensuring cohesive and consistent Executive Branch-wide policy through a collaborative and proactive approach that supports the FAA's integration of AAM into the NAS.

As defined in the AAM Coordination and Leadership Act (P.L. 117-203, 136 Stat. 2227), October 17, 2022, "AAM is a transportation system that moves people and property by air between two points in the United States (U.S.) using aircraft with advanced technologies, including electric aircraft, or electric vertical takeoff and landing (eVTOL) aircraft, in both controlled and uncontrolled airspace." For purposes of this Implementation Plan, however, the scope of AAM is limited to those engaging in passenger-carrying or cargo operations with a pilot on board.

The Federal Aviation Administration (FAA) has a long, successful history of bringing new technologies safely into aviation. The agency's role in integrating AAM into the National Airspace System (NAS) is to ensure this new generation of aircraft maintains the highest level of operational safety that defines commercial aviation today. The FAA's top priority and statutory responsibility are to ensure the safety of the traveling public. The agency is looking at every necessary aspect to support AAM flights: the aircraft itself, the framework for operations, access to the airspace, operator training, infrastructure development, environmental impacts, and community engagement.

As these aircraft are being developed, the FAA will amend, as appropriate, operational rules and pilot training requirements. Longer term, the agency will develop permanent regulations to safely enable powered lift operations and pilot training and certification.

The FAA is implementing a crawl-walk-run methodology that recognizes early opportunities to support Entry into Service (EIS) operations through existing services and infrastructure with minimal changes. The agency is doing this while developing a path to implementation of more advanced concepts and capabilities to support increasing scale and automation of AAM operations, as well as integration with other types of aircraft operating in the NAS.

To address the development of a near-term ecosystem, the FAA created Innovate28 (I28), a joint government and industry initiative that will culminate in integrated AAM operations at one or more key site locations by the 2028 timeframe. The FAA also recognizes and has begun executing the collaborative actions needed to mature AAM concepts, operations, and regulatory frameworks beyond initial operations and into the mid-term and mature state phases This Implementation Plan shows how the agency expects all these pieces to come together to allow the industry to scale safely.

From NASA ([Advanced Air Mobility Mission - NASA](#)):

NASA's work in Advanced Air Mobility will transform the way people and goods will move through the skies. This includes disaster, medical, and wildfire response. NASA's Advanced Air Mobility (AAM) research will transform our communities by bringing the movement of people and goods off the ground, on demand, and into the sky.

This air transportation system of the future will include low-altitude passenger transport, cargo delivery, and public service capabilities. NASA is delivering data to guide the industry's development of electric air taxis and drones and to assist the Federal Aviation Administration (FAA) in safely integrating these aircraft into the national airspace for routine use. This will set the stage for a flourishing industry by the 2030s.

NASA is researching many pieces of the Advanced Air Mobility system through modeling, simulations, and flights to see how these elements will work together in harmony. This includes research in airspace, aircraft, automation, safety management systems, and more.

The air taxi and drone industry is already using tools and lessons learned from this wide-variety of NASA research to their benefit. Some tools include noise modeling software, automation technology, electric battery development, and more.

*Advanced Air Mobility includes **regional air mobility**, which can connect travel more easily between cities and rural areas. NASA is informing industry and regulators as the FAA updates regulatory framework that will need to be met for these aircraft to fly. This will accelerate policy development and springboard the AAM industry forward to enable scalable, successful domestic industry business models.*

AAM will benefit the public in several ways. Passengers can travel more easily between cities and rural areas, packages can be delivered on demand, and drones can aid in emergency response like in fire operations or for the transport of medical supplies. NASA aims for these new services to be affordable and sustainable.

NASA partners with over 40 industry, academic and government entities to conduct research. See our partner list by visiting <https://www.nasa.gov/missions/aam/aampartners/>.

Aside from NASA and the FAA, the U.S DoD is also engaged in the development of AAM and largely through the Air Force Research Laboratory (“AFRL”), and its affiliate arm referred to as “AFWERX”. To edify, AFWERX describes itself as “*the innovation arm of the Department of the Air Force and powered by the Air Force Research Laboratory (AFRL). AFWERX brings cutting edge American ingenuity from small businesses and start-ups to address the most pressing challenges of the DAF*”.

From AFWERX ([AFWERX, NASA collaborate to develop digital Advanced Air Mobility operations center > Air Force > Article Display](#)):

“AFWERX is partnering with NASA to develop a digital operations center for future Advanced Air Mobility efforts through the Civilian Commercialization Readiness Pilot Program (“CCRP”) awardee, ResilienX.

With the fast-growing field of AAM technology, AFWERX’s Airspace Innovation and Prime Partnerships program has partnered with NASA and the Federal Aviation Administration to fill in technological and administrative gaps that present themselves. Earlier in 2023, AFWERX formalized these partnerships with a Memorandum of Understanding and participation in the AAM Interagency Working Group to plot the future of AAM.

The CCRPP is a NASA Small Business Innovation Research and Small Business Technology Transfer program which takes mission-relevant technologies in development and infuses them with funding intended to foster commercialization. This system is intended to enhance base security, special forces efforts, emergency disaster response, and passenger and cargo transportation planning. It is further being developed to include other technologies necessary for air domain awareness...”

This speaks to our point with respect to the attention that is being given to the development of AAM in the U.S. The links we have provided have considerable additional information regarding the work that is being done to prepare the U.S. for AAM. We would add, similar initiatives are afoot internationally as well, as other nations prepare to integrate new aircraft and associated technologies into their national airspace. The bullet points below reflect subsets of AAM and specifically Urban Air Mobility, which is the likely application for Horizon's technology (there may be others as well).

- **Regional Air Mobility (“RAM”)**

From NASA, (*Considerations for Future Regional Air Mobility Aircraft*):

Regional Air Mobility (RAM) is becoming an increasingly popular term for air commerce that is accessible via underutilized airports in the current global air transportation infrastructure, many of which are not served today by commercial operations. RAM can leverage the extensive network of airports that exists today, obviating the need to build new takeoff and landing infrastructure for its aircraft, or may be able to leverage new facilities built to accommodate other AAM users. RAM can utilize existing airspace operations and practices or leverage ongoing technology development that may increase access and throughput in future airspace scenarios. A non-exhaustive search indicates that the RAM term entered the lexicon no later than 2019 with the launch of Georgia Tech's Center for Urban and Regional Air Mobility. The term was used subsequently by Lilium and the Community Air Mobility Initiative. A group of individuals from NASA, industry, and academia used the term in a titular role for a paper released in 2021, stating that “RAM will increase the safety, accessibility, and affordability of regional travel while building on the extensive and underutilized federal, state, and local investment in our nation's local airports.” RAM has also been described as “safe, sustainable, affordable, and accessible aviation for transformational intraregional missions” and a subset of Advanced Air Mobility (AAM).

From McKinsey (*Regional air mobility: A short-range flight renaissance?* | McKinsey) :

We define RAM as the transportation of passengers and goods by air over about 150 to 800 kilometers on five to 50-passenger aircraft (or the equivalent size for cargo), primarily using smaller regional airports.

RAM is enabled by a broad range of modern technologies, such as green propulsion, digitization, and autonomy, which will reduce costs, boost reliability, and improve customer experience. RAM is adjacent to the more widely discussed urban air mobility (UAM) but is different in a few important ways. UAM is focused on shorter, intra-urban distances below 150 km and involves primarily electric vertical takeoff and landing (eVTOL) aircraft. RAM will primarily use runways, generally at smaller regional airports. It typically will not require new landing sites in or near dense urban cores, while UAM will. Similar to UAM, many RAM aircraft will require electric charging infrastructure. However, RAM will likely also include hydrogen-fueled aircraft, as well as hybrid aircraft, some of which can leverage existing ground infrastructure. Taken together, these factors could enable RAM to gain traction sooner than UAM.

The RAM market is already taking shape. More than 50 companies are developing battery-electric, hybrid, and hydrogen powertrains; new and retrofitted aircraft designs; advanced avionics; operations and booking platforms; and other important enablers of the RAM ecosystem. More than \$1 billion has been invested in these RAM start-ups to date and the first retrofitted aircraft are

slated to enter service in the mid-2020s. Simultaneously, an ecosystem of operators, consisting mainly of established airlines and regionally focused start-ups, is coming together to drive the industry forward.

In conjunction with the above, as noted by NASA as well below some of the infrastructure to accommodate the growth of RAM is already in place. From NASA ([Considerations for Future Regional Air Mobility Aircraft](#)) :

In September 2022, the United States was home to 13,112 airports (12,334 in the Continental U.S.), of which 4,909 (4,457 in the Continental U.S.) are designated as public use facilities. Only 504 (457 in the Continental U.S.) have Airport Operating Certificates issued under Title 14 of the Code of Federal Regulations (14 CFR) Part 139, which allows for a wider variety of commercial operations. In 2019, just 30 of these airports served over 73% of all enplanements, while only 98 airports accounted for 95% of enplanements. Similarly, 30 airports were responsible for almost 80% of all air cargo by weight, with 75 accounting for up to 95% of all air cargo.*

Table 1. below provides a graphic of the airport infrastructure in place across the Continental U.S.

Table 1.

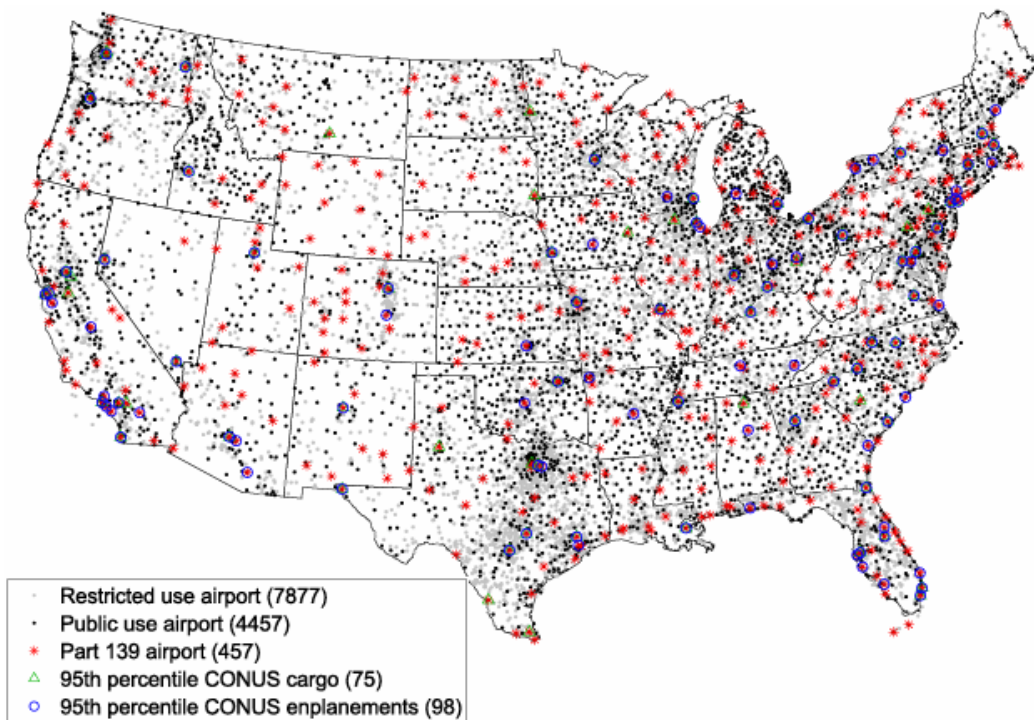
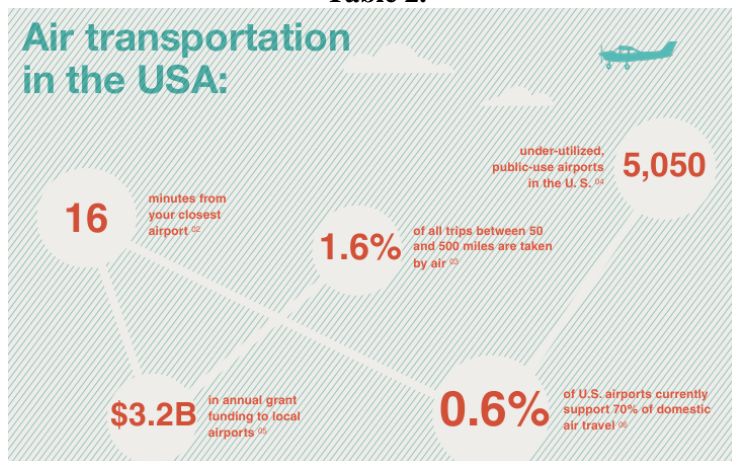


Fig. 1 Airports in the CONUS as of September 2022.

<https://sacd.larc.nasa.gov/wp-content/uploads/sites/167/2021/04/2021-04-20-RAM.pdf>

As the data above reflect, there is considerable airport infrastructure across the U.S., supported by marked financial funding, however, as **Table 2** below points out, most of it is vastly underutilized despite the fact that most of the U.S population lives in close proximity to at least one, but in many cases multiple airports.

Table 2.



<https://sacd.larc.nasa.gov/wp-content/uploads/sites/167/2021/04/2021-04-20-RAM.pdf>

Of course, the existence of literally thousands of underutilized airports scattered across the U.S. begs the question, if RAM is the wave of the future, how did we end up building so many airports that are not being utilized? That is a fair question, and the answer lies in some other trends that many believe will support the growth of RAM going forward. We will discuss some of those further below, but on the face, regional air travel has been under pressure for several years, which seems counterintuitive to the enthusiasm for RAM.

Succinctly, there are several reasons why smaller (under 50 seats) commercial aircraft have struggled. Some of those reasons include the impact of deregulation, pilot shortages, unit operating costs of smaller planes versus more efficient larger jets that entered the market, aircraft liability costs, general economies of scale and a host of others. From McKinsey (*Regional air mobility: A short-range flight renaissance? | McKinsey*):

The potential growth of RAM represents a departure from historical declines in the market for regional flights on small aircraft. Although air travel for trips between 150 and 800 kilometers has increased in recent years, with Available Seat Kilometers (“ASK”) rising by 55 percent from 2004 to 2019, much of this growth was driven by low-cost carriers using larger aircraft. For aircraft with six to 50 seats, ASKs declined by almost 60 percent in the same timeframe. In 2019, passenger revenues for air trips between 150 and 800 kilometers were almost \$50 billion, but only 11 percent (or \$5 billion) came from flights on aircraft with six to 50 seats, including non-scheduled flights and business jets. Airlines have gradually shifted toward bigger aircraft and have consolidated operations at larger airports. A shortage of pilots has also contributed to the phaseout of small regional aircraft from airline operations.

On the flipside of those challenges, the McKinsey study also includes the following narrative from NASA:

A recent NASA report studied this market extensively, including a look at the technology and market factors that could help restore this service. This study included sensitivity analysis of market conditions with respect to cost reductions. The study considered aircraft with seat capacities from 20 to 80 seats and concluded that a hypothetical 40% reduction in operating cost compared to today’s regional aircraft would push the market to a huge expansion in small regional flights serving far more airports.

To translate, much of the enthusiasm for the potential growth of RAM centers on that “hypothetical 40% reduction in operating cost”. In short, the thesis is that the emergence of electric and other hybrid propulsion technologies, which may ultimately also include things like hydrogen fuels, will reduce

operating costs of small aircraft and drive the expansion of small regional air services. Other technologies like next-generation guidance, navigation, and control, could make small aircraft more competitive as well. Further the (longer term) development of autonomous aircraft, could ultimately lower labor costs which “accounts for 20 to 30 percent of small aircraft operating costs”. From another perspective, legislative edicts around sustainable/renewable aviation solutions could also improve the cost profile of these offerings vis-à-vis legacy fossil fuel counterparts. For instance, we have seen the EU adopt rules around the increased use of sustainable aviation fuels (“SAF”s), other similar approaches appear likely.

Further, both RAM and (as we will illustrate below) UAM solutions are aimed at reducing road congestion, which is a growing problem throughout most urban corridors. Ostensibly, the time savings that RAM and UAM could create for travelers will likely yield measurable objective economic benefits. To that end, industry estimates suggest that “the typical driver in the United States loses 51 hours annually due to congestion”. Moreover, the RAM/UAM thesis also dovetails into the success of “mobility as a service” via companies like Uber Technologies, Inc. (NYSE:UBER), Lyft, Inc. (NASDAQ:LYFT) and others. As McKinsey notes, “...the past ten years have seen a rise in public appetite for mobility as a service, enabling people to search and book multiple types of transport in one place, reducing the need for individuals to own vehicles and allowing the sharing and thus better utilization of transportation assets. Consumer spending on shared ground mobility is forecast to grow to between \$500 billion and \$1 trillion by 2030”.

Lastly as the McKinsey report summarizes:

RAM brings together new aviation technologies and existing small airport infrastructure into a transportation model that is more equitable, more economical, and more environmentally friendly for air travel over short distances, compared to today’s status quo. If these changes materialize, the total addressable market (TAM) for small regional flights globally could be \$75 billion to \$115 billion by 2035, representing 300 to 700 million passengers annually.

- **Urban Air Mobility (“UAM”)**

As we noted above, UAM like RAM, is a subset of the Advanced Air Mobility framework and more accurately is probably a subset of RAM. However, unlike RAM, UAM has no historical precedence. Regional air mobility has been tried before and is ostensibly responsible for the buildout of thousands of airports across the country. On the other hand, UAM is a new(er) concept, and its emergence is a function of new and evolving technology that can make it viable. From another perspective, if RAM represents the medium haul (100 miles to 500 miles) connecting less dense population centers to other less dense population centers and/or to high density markets served by a major airports/airlines, then UAM may represent shorter flights that connect less dense populations to higher density populations. More likely, UAM will connect points within high density areas allowing passengers to speed commute times by avoiding traffic gridlock as well as perhaps mitigating other costs associated with driving an automobile into the city (parking for instance). Succinctly, we can envision scenarios where UAM may thrive while RAM struggles.

We believe Horizon’s current hybrid technology may include certain competitive advantages over other purely electric competitors that may enable it to apply to a wider range of applications largely because of its ability to travel longer distances. That may, for instance, allow them to compete in both the UAM and in some RAM markets. Further, it may provide them with an opportunity as a transitional technology that can bridge the gap from partially sustainable to fully sustainable power. We would add that we believe the Company is positioning the technology to make that transition to fully electric power when/if the markets dictate. Below is some additional color on UAM as it sits today.

From the FAA ([Urban Air Mobility \(UAM\) Concept of Operations 2.0 1.pdf](#))

Urban Air Mobility (UAM) enables highly automated, cooperative, passenger or cargo-carrying air transportation services in and around urban areas. UAM is a subset of the Advanced Air Mobility (AAM) concept under development by the Federal Aviation Administration (FAA), National Aeronautics and Space Administration (NASA), and industry. As a subset of AAM, UAM focuses on operations moving people and cargo in metropolitan and urban areas. The FAA's Concept of Operations (ConOps) provides an evolving vision that will help facilitate further research on how to best assist UAM operations in the National Airspace System (NAS) if demand and volume exceed current capabilities.

Transportation is constantly evolving. Each step forward yields new opportunities that fundamentally change the relationship that humankind has with distance and travel. While it may not significantly reduce surface traffic volume, UAM will provide an alternative mode of transportation that should reduce traffic congestion during peak times. For the UAM concept to mature to operational viability, it is important to understand stakeholder business models and operational needs, as well as their impact, for incorporation into the NAS. The FAA has collaborated with NASA and participated in a series of additional industry stakeholder engagements to identify examples of desired operations and environments for UAM aircraft.

The industry vision involves incorporating new aircraft design and system technologies. While some of the new designs may resemble traditional winged aircraft, some are anticipated to include powered lift and Vertical Takeoff and Landing (VTOL) capabilities that facilitate operations between desired locations (e.g., metropolitan commutes). Major aircraft innovations, mainly with the advancement of Distributed Electric Propulsion (DEP) and development of Electric VTOLs (eVTOLs), may allow for these operations to be utilized more frequently and in more locations than are currently performed by conventional aircraft.

From NASA ([Revolutionary Vertical Lift Technology Project Overview](#)) :

*With their unique ability to take off and land from any spot, as well as hover in place, vertical lift vehicles are increasingly being contemplated for use in new ways that go far beyond those considered when thinking of traditional helicopters. NASA's Revolutionary Vertical Lift Technology (RVLT) project is working with partners in government, industry, and academia to develop critical technologies that enable revolutionary new air travel options, especially those associated with Advanced Air Mobility such as large cargo-carrying vehicles and passenger-carrying air taxis. **These new markets are forecast to rapidly grow during the next ten years**, and the vertical lift industry's ability to safely develop and certify innovative new technologies, lower operating costs, and meet acceptable community noise standards will be critical in opening these new markets.*

Before we try to recap this, we have provided some illustrations from an industry publication/study in ScienceDigest ([Designing airspace for urban air mobility: A review of concepts and approaches - ScienceDirect](#)) that attempts to reflect how UAM might be managed in terms of airspace in and around Urban corridors. While these may be a bit redundant, we think they are helpful in terms of imagining how this might work, as they were certainly helpful to us. As these reflect (but we have not discussed), the planning requires airspace for drones and other similar unmanned aircraft. Certainly, recent events have shed light on the need for planning for those iterations as well.

Table 3.

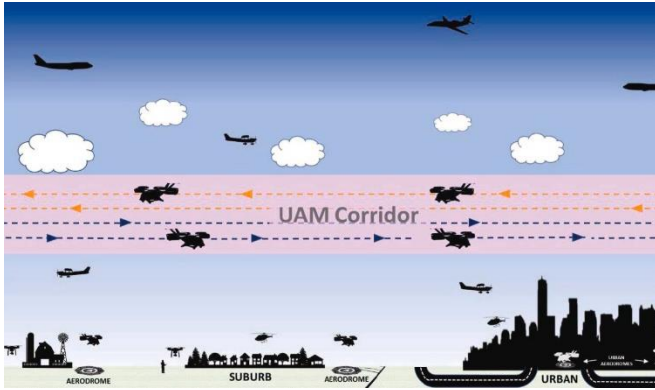


Table 4.

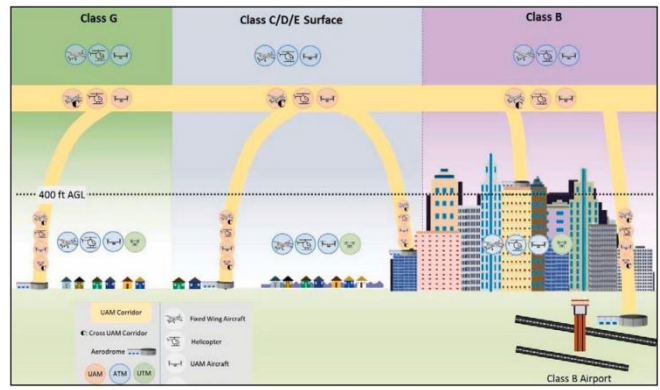


Table 5.

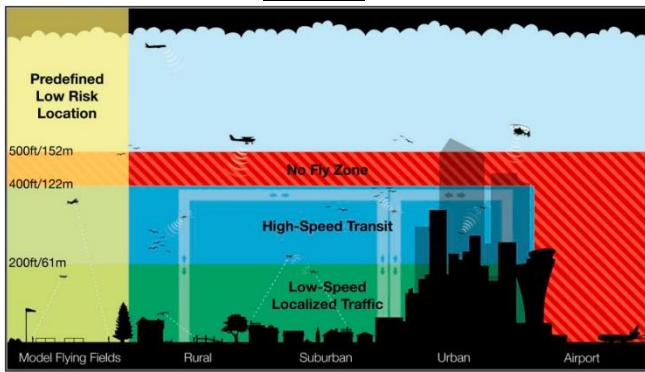


Table 6.



Clearly, UAM is in the nascent stage and there is much to be done for it to become a reality. As much as anything, although certainly not in entirety, part of the UAM story hinges on the development of aircraft that can be certified around various parameters including safety, emission profiles and noise parameters, can be manufactured and sold at competitive price points (which today may mean something close to those of helicopters), and operated within cost constraints that can allow them to effectively compete with legacy modes of transportation. We submit, to this point, we think it is fair to say that while there are several companies trying to get there, no one has reached commercialization yet, including Horizon. That said, as we have tried to illustrate above, there is considerable attention and resources being spent on developing the regulatory, infrastructure, communications and other associated platforms necessary to make AAM and its associated subsets a reality. As a result, we view the industry as being in a sort of “chicken-and-the-egg” posture, where those trying to work through the aforementioned regulatory and other platforms are waiting in part to see what the capabilities and requirements of future aircraft might be, while the developers of those aircraft are also perhaps trying to better understand and work towards regulations and other requirements that do not exist just yet. We think that view is supported by narrative from the FAA that we highlighted above – *“The FAA is implementing a crawl-walk-run methodology...”*.

Below are four high-level summaries as well as other industry-centric observations that we believe are particularly topical to Horizon and its technology that we expect may provide some competitive advantages within the foreseeable industry landscape.

Industry Expectations

We typically use some sort of industry estimates in our research, but we also often suggest that we use that analysis more to frame the potential of the market as opposed to suggesting that this is definitively where

the market is headed. In short, projecting markets, especially early stage developing markets like UAM, is unsurprisingly difficult which explains why the estimates tend to yield a fair amount of variance. That said, here are a few of the projections from familiar industry analysis companies. There are many others, and most we have identified include bullish anticipated trajectories.

- **Markets and Markets** projects the following ([Urban Air Mobility Market Size, Share, Industry Report, Revenue Trends and Growth Drivers](#)): *“The Urban Air mobility market is estimated to be USD \$4.59 billion in 2024 and is projected to reach USD \$23.47 billion by 2030 at a CAGR of 31.2% between 2024 and 2030, and USD \$41.48 billion by 2035 at a CAGR of 12.1% from 2030 to 2035. The platform volumes are expected to grow from 61,479 units in 2024 to 519,370 in 2030 and 875,438 units in 2035”.*
- According to **Prophecy Market Insights** (https://www.prophecymarketinsights.com/market_insight/Global-Urban-Air-Mobility-Market-4488): *“The global urban air mobility [UAM] market size and share value is projected to grow from USD 3.4 Billion in 2024 and is forecasted to reach USD 55.0 Billion by 2034, exhibiting a compound annual growth rate (CAGR) of 32.10% during the forecast period (2024 - 2034)”.*
- From **Grandview Research** ([Urban Air Mobility \(UAM\) Market Size & Outlook, 2030](#)): *“The global urban air mobility (uam) market generated a revenue of USD 3,580.2 million in 2023 and is expected to reach USD 29,188.5 million by 2030. The market is expected to grow at a CAGR (2024 - 2030) of 35% by 2030”.*
- From **Fortune Business Insights** ([Urban Air Mobility \[UAM\] Market Size & Forecast Report, 2032](#)): *The global urban air mobility (UAM) market size was valued at USD 4.21 billion in 2024. The market is projected to grow from USD 5.00 billion in 2025 to USD 14.64 billion by 2032, exhibiting a CAGR of 16.6% during the forecast period. North America dominated the UAM market with a market share of 40.61% in 2024. Rising urbanization and traffic conditions are pushing ground transportation networks to their limits. Bringing urban air mobility into the third dimension has the potential to develop a transportation system that is faster, cleaner, safer, and more interconnected. Autonomous aerial vehicles and flying cars are no longer science fiction as projects and tests are underway worldwide. The UAM sector, which is still in its early phases, saw significant growth, with over USD 1.00 billion invested in the first few months of 2020. The most notable investments being Toyota's USD 590.0 million in Joby Aviation and Guangzhou EHang Intelligent Technology Co. Ltd USD 650.0 million IPO value. Furthermore, the Federal Aviation Administration (FAA) works with more than 15 eVTOL aircraft manufacturers. Within the next three to five years, Uber Air, Guangzhou EHang Intelligent Technology Co. Ltd, Volocopter GmbH, Joby Aviation, and Lilium GmbH all plan to begin commercial passenger operations.*
- From **Morgan Stanley** via Horizon’s filings: *“The eVTOL aircraft market is a developing sector within the transportation industry. This market sector is dependent on the successful development and implementation of eVTOL aircraft and networks, none of which are currently in commercial operation. Morgan Stanley have projected that the eVTOL market for moving people and moving goods could be between \$1 trillion by 2040 and 9 trillion by 2050, as set forth in the “Morgan Stanley Research, eVTOL/Urban Air Mobility TAM Update” report released in May 2021 (the “Morgan Stanley Report”)”.*

-Technology

It is important to recognize that much of the enthusiasm around the potential for UAM stems from technological advances elsewhere that many industry stakeholders believe will transfer to the UAM market.

This includes a laundry list of technologies from EV battery/electronics technology, advances in lightweight high strength materials, new GPS and other communication and positioning technology, (which may or may not include autonomous alternatives) and a wide array of others. We do believe some of that enthusiasm is based on those technologies (EV battery technology for instance) *continuing to experience improvements to further advance the economic case for their adoption*. In the case of batteries, that means lighter, smaller, better density/range, lower prices or some combination(s) therein. Obviously, the pace of those improvements may dictate the pace UAM adoption.

-Regulatory environment

There is a considerable amount of work that remains to be done in terms of certifying new aircraft to ensure public safety, as well as other considerations like noise, environmental impact and others. As we illustrated above, the U.S. government, along with several other international counterparts, appear to be well engaged in moving those needles forward, some of which is being augmented by legislation. While again the FAA has described their approach as “*crawl-walk-run*”, the pace at which they are able to develop and deploy the elements necessary to safely and efficiently make UAM work will also impact the pace of the industry’s advance.

-Infrastructure development

Aside from the pace of government policy, UAM will also likely require considerable buy-in from other constituents. For instance, UAM infrastructure will require places for aircraft to be stationed and accessible to travelers (often referred to as “vertiports” or “vertistops” in UAM vernacular) and those stations will need to include electrified stations to charge eVTOL aircraft. It will also need to include places within urban environments where aircraft can land and deliver passengers or other cargo. Given the density and lack of available real estate in most urban areas, that could prove challenging. Certainly, rooftops like those at hospitals already receiving helicopter flights will be part of the solution; however, UAM will require significant planning and engagement from various collaborators including local governments, investors, and communities, amongst others.

Given the above, the potential from UAM is considerable but there are also many areas that need to be developed, financed, and implemented to be successful. We think that the process of getting there will not be easy or quick. Frankly, *that reality* encompasses a good part of our specific enthusiasm for Horizon. We will expand on this notion in the **Technology/Product Overview** below, but we think Horizon may be uniquely positioned to take advantage of the potential but also the challenges facing the UAM industry. In short, we think the Company’s hybrid (internal combustion *and* electric) platform may allow them some initial competitive advantages:

- Their internal combustion platform may allow them to address many markets that pure electric aircraft may not be able to address at least initially since charging infrastructure will need to be developed for pure eVTOL offerings to operate.
- Their hybrid platform should provide considerably better range than pure eVTOL counterparts, at least until battery and/or other associated technology advances come to pass. As a result, we believe their technology could find initial traction in existing markets. For instance, **from the broad view, Horizon is essentially building a helicopter that can travel faster and be operated at a fraction of the cost of legacy helicopters due to its hybrid nature**. As a result, we think they could generate initial commercial traction in legacy helicopter markets (medical flights, search and rescue, disaster response, military, remote access etc.). Further, because of its superior range (up to 500 miles) we also believe their aircraft may be applicable to some RAM applications that will not require the UAM infrastructure we alluded to above.

- While the Company’s current design includes internal combustion, they have developed the platform to be adaptable to all electric as well hydrogen iterations. Again, we think that may help them to take advantage of the nascent/early stages of UAM but also adapt their product offerings to versions that will apply to the market as it matures.
- Perhaps the simplest way to view Horizon is as a technology company that has applied certain technologies with its own IP to develop a faster, more efficient helicopter platform that can ultimately also be adapted to utilize other types of increasingly sustainable energy.

Technology/Product Overview

Horizon is developing a new aircraft identified as the “Cavorite X7”, which hereafter we will refer to as “X7”. The X7 fits into a category of emerging aircraft designs referred to as Electric Vertical Takeoff and Landing or “eVTOL”. Recognize, there are several companies attempting to develop aircraft that they hope can be certified and commercialized to address these emerging opportunities. However, in the context of our narrative above regarding the emerging AAM market and more specifically its subsets of RAM and UAM, our belief is that as we understand that development landscape, there are limitations/capabilities that may ultimately define how/where many of these new aircraft can compete assuming they can achieve certification. We will unpack that below.

As previously noted, the “RAM2.0” market is generally defined as a market that will be served by aircraft carrying 5 to 50 persons over distances of 150 to 800 kilometers (100 to 500 miles). The bull case for RAM is based on a handful of pillars. Most notably there are literally thousands of airports in the U.S. collectively in close proximity to the vast majority of its citizens that are underutilized mainly because the costs associated with serving travelers with smaller aircraft through these regional/local airports are generally economically untenable. As the RAM bull case envisions the use of next generation aircraft enabled by a host of new technologies including electric/battery powered propulsion systems, high-strength lightweight materials and advanced communications, amongst other factors, are expected to significantly reduce the operating costs of regional aircraft making them economically viable and elevating the RAM market by providing air service to travelers in much closer proximity than their closest major airport.

At the same time, the bull case of UAM has some similar elements to that of RAM. For instance, the case for UAM is also largely predicated on these and other new technologies that can lower aircraft unit operating costs, but unlike the RAM case, which boasts the existence of necessary infrastructure (5,000+ airports across the country), UAM will require marked upgrades and additions to existing infrastructure (as well as considerable regulatory oversight) in order to be successful. Here again, the limitations/capabilities of particular new aircraft designs will likely determine which of these markets they can address. For example, an aircraft operating in the UAM market will almost certainly require vertical takeoff and landing capability, but their limited range may not be as prohibitive. Conversely, a new design operating in the RAM space may not require specific vertical takeoff/landing capabilities, but it will need to be able to achieve a range in the realm of that which defines RAM (100 to 500 miles). Horizon believes its X7 design can do both.

In addition to the above, the bull cases for both RAM and UAM depend on the addition of electric charging infrastructure to recharge these new aircraft. As we will delineate, while Horizon has designed their technology to transition to all electric or even hydrogen fuel iterations in the future, and while its current platform does use battery/electric power, it does not require external battery charging. We believe that capability may provide opportunities for Horizon as the industry wrestles with the development and installation of required infrastructure.

Much of the narrative below is taken from the Company’s filings (because they can describe it better than we can) and we have delineated that by *italicizing* those entries.

The X7 is a hybrid electric 7-seat aircraft that can take off and land vertically like a helicopter. However, unlike a traditional helicopter, for the majority of its flight it will return to a configuration much like a traditional aircraft. This would allow the Cavorite X7 to fly faster, farther, and operate more efficiently than a traditional helicopter. The Company believes the X7 will be able to travel at speeds up to 250 miles per hour at a range over 500 miles. The X7 is currently in the detailed design and prototype flight testing phase of operations and is currently protected by 22 issued and allowed patents, the oldest of which expires in 2035. The patent portfolio includes US non-provisional utility patents and design patents, and they have additional IP around various portions of their platform. That said, perhaps some history regarding how they got here might be topical.

The Company was founded over a decade ago *“by a team with deep experience in the aerospace industry. Our team boasts individuals who have led the design, construction and testing of clean sheet aircraft and have a combined industry experience of over 200 years”*. Many of our principal engineers and technicians are active pilots and have significant operational experience allowing the team to visualize operating this unique aircraft in the real world. Design considerations for easy field repair, safety, performance, and a focus on lowering operational costs has been foundational to the X7 concept and development. We believe this deep operational experience and design consideration has led to a machine concept that will support for-profit operators, thereby increasing demand for the aircraft”.



The Company’s original mission was to create an amphibious aircraft, but with the emergence of certain technological advances they redirected their research toward what is today the X7. That endeavor has since inception included a variety of iterations: *“we have built many sub-scale prototype aircraft. Starting with a smaller 1/7th-scale aircraft, we are now flight testing a half-scale prototype (“X5”). This large prototype has a 20-foot wingspan, weighs almost 500 lbs., and is roughly 15*

feet long. This aircraft has thus far been through successful testing, and the team is planning forward transition flight in the near-term, an outcome that only a small subset of organizations have successfully achieved with a large-scale prototype. Testing to-date has yielded positive results, and the aircraft is performing significantly above initial expectations for both power and stability. Based on positive initial testing results, the team is actively improving the design of a full-scale technical demonstrator aircraft. For example, the aircraft will be designed to hold seven (7) people: six (6) passengers and one (1) pilot.



Updated performance estimates from early sub-scale testing indicate that the full-scale hybrid electric Cavorite X7 will be able to travel at speeds up to 250 mph and carry 1,500 lbs. of useful load over 500 miles with the appropriate fuel reserves. The team has identified and began negotiating with key suppliers globally to meet the specifications of the Cavorite X7, and has begun detailed design, construction, and testing of critical full-scale aircraft systems.

The Company believes its current design includes a variety of positive attributes that will provide a viable path to both certification and successful commercialization. These attributes include their proprietary Fan-in-Wing design, which they refer to as “HOVR Wing”. (The graphic above of their X5 prototype reflects the in-wing IP.) The Company believes their HOVR Wing provides marked efficiencies over more traditional “open propeller” designs. More specifically, the in-wing fans provide thrust for vertical takeoff; however, once the aircraft reaches 115 kilometers per hour the wings slide closed and the X7 flies like a

traditional airplane – more than twice as fast as a helicopter. When it's time to land, the X7 can transform back into vertical mode and can safely touch down like a helicopter. In essence it is both a helicopter and an airplane on a single platform.

In addition to performance, the HOVR-Wing includes several safety redundancies aimed at mitigating failure. The Company notes, *“the 50%-scale aircraft is able to hover with 20% of its fans disabled. Furthermore, there are two sources of electricity for the fans: an onboard generator and a battery array. Even at moderate forward speed the generator can support the full electrical power requirements in the event of a dramatic full battery array failure. For increased durability, each fan unit is electrically, mechanically, and thermally isolated from the others, reducing the chances of cascading failure”*.

We would add, the Company also believes the in-wing design will significantly reduce noise, which is a factor that applicable government agencies note will need to be mitigated for any successful implementation of AAM in general and therefore for any aircraft operating within the market. Further, the Company’s hybrid (as well as aerodynamic) design will have a much cleaner environmental footprint than legacy helicopters.

Lastly, as we addressed above and central to our thesis, we believe the Company’s hybrid approach may provide them some additional advantages beyond those addressed above. We submit, some of those advantages are *enabled* by the hybrid platform, for instance as company collateral reflects, *“the system will provide two sources of electrical power during demanding vertical takeoff and landing operations and will allow the battery array to re-charge in flight and after a mission. The batteries will be designed for high power draw, so they will naturally support quick charging”*.

In addition, because of the current in-place charging infrastructure (or lack thereof), we believe the internal combustion + electric approach may also allow the Company to compete in *existing markets* while the necessary regulatory, technological, infrastructure and other frameworks necessary to enable RAM and UAM markets are being established. In case we have not made it clear, in our view the establishment of robust, regulated, functioning RAM and UAM markets is years away. In contrast, Horizon believes it can (with further access to capital) continue to advance the development of their Cavorite X7 platform through certification and into commercialization and scale manufacturing **over the next 36 - 48 months**. To put that into perspective, if that timeline proves reasonably accurate, Horizon could arrive at a point where they have a commercial product before they have an established market to sell it to. That brings us to the *existing markets* we believe the Company may be able to address in the meantime. Below are some of the markets the Company has readily identified as potential targets for their first commercial product. We have included some of the Company’s applicable renderings to help illustrate the opportunities.

- *Medical Evacuation: Able to travel approximately twice the speed as a traditional helicopter and at significantly lower operating costs. Delivering people or other time sensitive materials to a hospital in half the time of current helicopters has the potential to save many lives;*



- *Remote Resupply: Many remote communities around the world suffer from anxiety about delivery of critical goods. Without the runway infrastructure to support traditional aircraft remote deliveries, the Cavorite X7 will be able to deliver critical medical supplies, food, and other important goods directly to these areas;*



- *Disaster Relief: As global climate conditions become more extreme, a hybrid electric eVTOL like the Cavorite X7 offers a unique way to save lives when a weather disaster strikes. Able to land almost anywhere and operate without power infrastructure due to its hybrid electric architecture, the Cavorite X7 could help people when climate disaster strikes; and in those instances, the aircraft effectively becomes a power generation station. For example, in a disaster relief mission the Cavorite X7 could land in a parking lot and provide charging and/or power for communications that has been disrupted.*

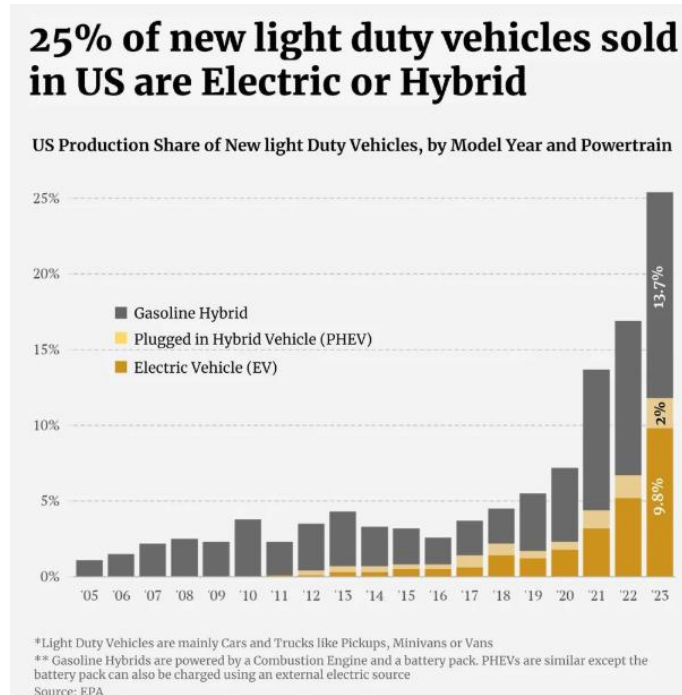
- *Military Missions: An aircraft capable of travelling at speeds almost twice that of a traditional helicopter offers unique military capability. Casualty evacuation, forward operating base resupply and other Special Operations will help Allied Servicepeople around the world.*



To summarize, while we understand the draw and the enthusiasm around technologies aimed at addressing the sustainable, zero-emission goals being championed by governments, industries, corporations and others, we also think there are economic, practical, logistic and other constraints that may challenge at least the pace of these industries and the constituent pieces they rely on. To that end, we would again revisit the

FAA’s “crawl-walk-run” methodology. In that case we would suggest that the Company’s approach to developing a hybrid platform that could potentially participate along the path of AAM’s evolution could prove prescient. We would submit that **Table 7.** may support that view.

Table 7.



Operating Overview






To reiterate, Horizon is a pre-revenue Company in the development stage of an aeronautical/technology platform they expect to commercialize over the next 36 to 48 months. Clearly that timeline could be a moving target. As such their “Operating Overview” initially comes down to how much capital it will take to get the technology through certification and commercialization (assuming they can get there) and what impact raising that money may have on the Company’s cap table and/or share counts, assuming they will continue to be able to raise capital.

While there is some historical data that can be gleaned from the Company’s prior filings regarding operating expense levels, we have tried to focus our projections therein around discussions with management about where they see some of these rolling out, most notably on the R&D front since getting the platform through development is the paramount priority. In short, we have developed an operating model around our sense of those outlays, and in turn we have made further assessments around the estimated dilution necessary to support them. Those items are reflected in the attached Projected Operating Model, but in addition to that, some of the narrative below will help frame the basis for some of those model assumptions.

First, for fiscal 2026 (year-ended May 31, 2026) we have modeled quarterly cash requirements in line with recent prior periods. Recognize, the Company spent some of the prior period(s) getting to and maintaining its public listing status et al. which likely provided *some* extraordinary expenses, but we also believe they

will see R&D tack higher as they move forward; accordingly, we are projecting similar comparable aggregate outlays. Beyond fiscal 2026, we have modeled increasing amounts of overhead, preponderantly accelerating R&D and in conjunction with the following timeline:

Table 8.

Summer/Fall Calendar 2025		<p>Demonstration of 1st "Full Transition Flight" of the X5 half scale prototype. (Full Transition Flight means lift-to-hover-to-forward flight, then back to hover and back to landing). If achieved, this will be a major technical milestone for the Company and could provide a catalyst for new strategic relationships and/or investments.</p>
Summer/Fall Calendar 2026		<p>Completion of Test Ready Full Scale X7 prototype. This will be another defining milestone for the Company. We anticipate this phase of development to require additional R&D layers and outlays, which we have built into our model. Those outlays could certainly outrun our estimates.</p>
Fall 2026 through Q427/Q128		<p>Extensive flight testing of Full Scale X7 and (assuming technical success) preparation for Commercial Certification. This phase will also likely require additional R&D which we have attempted to model. We believe successful testing/demonstration of the full-scale X7 would be a transformative event and could lead to definitive financial agreements with customers.</p>
Calendar 2028 thru 2029		<p>Execution and completion of Certification and preparation for initial manufacturing of initial units.</p>
2029 through 2035		<p>Scale manufacturing sequentially with a goal of reaching annual unit manufacturing capacity in the 300 to 400 unit range by 3035.</p>

Our model and subsequent valuation assumptions are based on a handful of assumptions around the timeline above. With that in mind, delays in the timeline would likely (negatively) impact those valuation/price target assumptions. Here are some of the more cogent of those assumptions we have built into the model:

- An important distinction between Horizon and others in the AAM space is the Company's sole focus on aircraft manufacturing. While many of its competitors are uniquely positioning themselves in the aerospace community to act as both manufacturers and operators, at significant cost and regulatory challenges, Horizon intends to exclusively sell the X7 to third party existing operators and lessors.

Having said that, the Company will still need considerable capital to execute through the entirety of the timeline above. Our approach to that has been to assume that they will raise that capital through the sale of equity (or other vehicles that eventually turn into equity), and we have staged those raises around the assumed ongoing working capital requirements. To translate, when the model reflects a negative cash balance, we assume a capital raise that will carry them until the model reflects another deficit, then we assume another. To that end, our model assumes \$206 million of additional capital to execute the above timeline.

- We have made assumptions about the prevailing share price at the time of fundraising. We assume modest increases in the share price one quarter to the next, with larger increases around the catalysts we have identified above. For instance, we are assuming a capital raise around mid-2027 following milestones around the X7 testing. (Incidentally, our assessment of the pricing of that raise corresponds closely with our 24-month price target, which would be around the same time frame). This approach assumes our model also proves relatively accurate with respect to milestones, share prices, and Horizon's ability to raise capital. To put this iteration into perspective, we are assuming the Company will have outstanding share counts in the 132 million range by the end of the above timeline.
- We believe the Company envisions a selling price for the X7 in the \$6 million range, with COGS in the 50% range, consistent with margins across aircraft manufacturers. We have used these numbers to generate assessments about future revenues and unit sales volumes commensurate with those indicated in the timeline above.
- We have assumed the sale of straight equity to fund the business through the timeline above. However, we believe the Company will likely be able to attract additional non-dilutive financing along the way, which would have a positive impact on our assumptions. These could come in the form of grants or other similar programs that the Company has had success attracting in the past. We have not modeled those types of cash infusions, but again, we think events of that nature are more likely than not, as long as they continue to reflect progress towards commercialization. Along similar lines, the Company currently has a strategic investor that recently put another (roughly) \$8 million into the Company. We do not know how likely it is that this existing investor will/can continue to help provide funding (again assuming continued technical success). However, we would note that several of the high-profile enterprises in the space have attracted major investments from large strategic multinational companies including Embraer S.A. (NYSE:ERJ), United Airlines Holdings, Inc. (Nasdaq:UAL), Toyota Motor Corporation (NYSE:TM), BlackRock, Inc. (NYSE:BLK) and others. To that end, our assessment is that Horizon is today largely undiscovered, but achieving some of the aforementioned milestones could put them in the crosshairs of (another) strategic investor or partner, which could significantly and positively impact our capital (and cap table) assumptions.
- Obviously, there is very poor visibility around these assumptions, in terms of both timing and magnitude. Moreover, even small adjustments therein can have a meaningful impact on other assessments throughout the model. As a result, we have applied steep discounts to our DCF analysis to reflect these risks and uncertainties. The attached model reflects the impact of these assumptions, but it will almost certainly require marked modification as new data points emerge.

Management Overview

- *Executive Officers*

Brandon Robinson. Age 46, Chief Executive Officer and Director

Brandon Robinson has served as the Chief Executive Officer and as a member of the Board of New Horizon since the Business Combination and previously served as the founder and Chief Executive Officer of Horizon and led the Horizon team since its inception in 2013. He has dedicated his life to aviation, initially

as a CF-18 pilot in the Canadian Armed Forces (CAF) before moving into large scale military capital projects. Upon leaving the CAF, Mr. Robinson discovered his passion for the Advanced Air Mobility movement. Mr. Robinson serves on the Board of Directors of the Ontario Aerospace Council. Mr. Robinson has a Bachelor of Mechanical Engineering from Royal Military College, an MBA from Royal Roads University, has co-authored several successful aerospace patents, and holds an Airline Transport Pilots License. His deep operational experience alongside a passion for technical innovation has propelled Horizon to the forefront of the Advanced Air Mobility movement. We believe that Mr. Robinson, given his extensive experience as a front-line fighter pilot, mechanical engineering knowledge and adept managing acumen, is qualified to serve as a member of our Board due to his unique combination of skills he brings as our co-founder and Chief Executive Officer. Mr. Robinson is an employee of the Company and has entered into a non-competition or non-disclosure agreement with the Company.

Jason O'Neill. Age 47, Chief Operating Officer and Director

Jason O'Neill has served as Chief Operating Officer and as a member of the Board of New Horizon since the Business Combination. Mr. O'Neill previously served as Horizon's Chief Operating Officer since January 2019. Mr. O'Neill has more than 20 years of experience in senior roles scaling tech-based start-ups. Prior to joining Horizon, Mr. O'Neill worked at Centric as the Director of Product and Strategy for 13 years. Most recently he served as the Director of Product and Data for Thoughtwire for nearly 10 years. Mr. O'Neill's previous organizations were focused on problem solutions, leveraging leading-edge computer-based technologies. Mr. O'Neill has attended the University of Toronto and the University of Waterloo. Mr. O'Neill is qualified to serve on our board based on his operational experience scaling businesses, as well as his historical experience as Chief Operating Officer of Horizon. Mr. O'Neill is an employee of the Company and has entered into a non-competition or non-disclosure agreement with the Company.

Brian Merker. Age 47, Chief Financial Officer

Brian Merker has served as Chief Financial Officer of New Horizon since the Business Combination. Mr. Merker has more than 20 years of senior financial management experience including 10 years serving in the Aviation sector, most recently as Chief Financial Officer of Skyservice Business Aviation from 2018 to 2022, supporting growth efforts in aircraft management, maintenance, fixed-based operations, charter, and brokerage. Prior to Skyservice Business Aviation, Mr. Merker served as Vice President of Finance from 2015 to 2018, with Discovery Air, a publicly traded organization that includes a diverse range of aviation related services including fighter jet pilot training, rotary-wing services, a commercial fixed-wing airline, fire suppression support, as well as aircraft engineering and maintenance. Prior to his time at Discovery Air, Mr. Merker served as Vice President of Finance from 2007 to 2012 at Score Media, a publicly traded company focused on sports broadcast and technology innovation. Mr. Merker began his career in the KPMG audit practice, where he served from 2003 to 2006. During this time he gained significant exposure to SEC registrants at the commencement of the Sarbanes-Oxley legislation. Mr. Merker obtained his Honours Commerce degree in Economics from Guelph University before attending Queen's University to complete his Chartered Professional Accounting academia requirements. Mr. Merker is an employee of the Company and has entered into a non-competition or non-disclosure agreement with the Company.

- **Non-Employee Independent Directors**

Trisha Nomura. Age 44, Director

Trisha Nomura has served as independent director and chairperson of the Audit Committee of New Horizon since the Business Combination. Ms. Nomura served as an independent director of Pono and was the chairperson of Pono's Audit Committee prior to the Business Combination. She currently serves as an independent director of Pono Capital Two, Inc. (Nasdaq: PTWO). Since July 2018, Ms. Nomura has owned a consulting firm, Ascend Consulting, LLC. Prior to opening her own firm, Ms. Nomura worked in both public accounting and private industry. Ms. Nomura was the Chief Operating Officer of HiHR from July 2015 to December 2016, and the Vice President of Strategic Services from May 2014 to July 2015. Ms. Nomura also served as the Chief People Officer of ProService Hawaii from January 2017 to June 2018. Ms. Nomura began volunteering with the HSCPA since 2010 through the YCPA Squad, has been the Treasurer of Kaneohe Little League since 2013, and is a member of the AICPA, where she was selected to attend the Leadership Academy, has served as an at-large Council member and also served on the Association Board of Directors. Ms. Nomura is a CPA, not in public practice, and a CGMA. She is a graduate of Creighton University, where she obtained her Bachelor of Science in Business Administration in accounting, and of the University of Hawaii at Manoa, where she earned her Master of Accountancy degree. Ms. Nomura's consulting, accounting and management skills and knowledge make her an important addition to our Board.

John Maris. Age 66, Director

John Maris has served as an independent director of New Horizon since the Business Combination. Dr. Maris has served as the Chief Executive Officer of Advanced Aerospace, a privately held business that provides consulting services in the aerospace industry, since 2008. At Advanced Aerospace, Dr. Maris has served as the principal flighttest investigator and test pilot for NASA's Traffic Aware Strategic Aircrew Request (TASAR) technology. Since 1995, Dr. Maris has also served as President and Chief Executive Officer of Marinvent Corporation, a company established to develop procedures and technologies to increase the efficiency and reduce the risk of aeronautical programs, including the Electronic Flight Bag (EFB) technology. Dr. Maris also founded Maris Worden Aerospace in 1986. From 1993 to 1995, Dr. Maris served as the Mobile Servicing System Control Equipment Manager for the International Space Station for the Canadian Space Agency. From 1983 to 1993, Mr. Maris was a project officer and experimental test pilot for the Canadian Department of National Defense. In 1983, Dr. Maris enlisted in the Royal Canadian Air Force and graduated from the United States Air Force Test Pilot Course at Edwards Air Force Base in California in 1989. Dr. Maris subsequently served four years as Project Officer and Experimental Test Pilot at the Aerospace Engineering Test Establishment at Cold Lake, Alberta. In 1995, holding the rank of Major, Dr. Maris retired from the Canadian Forces to devote full-time to Marinvent Corporation. Dr. Maris earned a B.Sc. in Aeronautical Engineering at the Imperial College of Science and Technology at London University in 1979, and subsequently earned a Master of Aeronautical Science degree in 1982 and a Master of Aviation Management degree in 1983, both with Distinction from Embry-Riddle Aeronautical University (ERAU) at Daytona Beach, Florida. In 2017, Dr. Maris received his Ph.D. from ERAU, earning his doctorate in Aviation Safety and Human Factors. In 2018 he was granted Affiliate Professor status at Concordia University in Montréal. Dr. Maris sits on a number of the Concordia University's boards and is also on the Centre technologique en aérospatiale board. John Maris' vast experience in the aerospace industry, both as a pilot and entrepreneur, makes him an important addition to our Board.

John Pinsent. Age 64, Director

John Pinsent has served as an independent director of New Horizon since the Business Combination. In 2004. Mr. Pinsent founded SPS, a chartered professional accounting firm based out of Edmonton, Alberta, Canada. Before founding SPS, Mr. Pinsent worked for ten years at Ernst & Young LLP, earning his Chartered Accountants designation in 1996. From 1986 to 1994, Mr. Pinsent served as the Controller and Vice President Finance of an Alberta based international retail organization. Mr. Pinsent earned his Bachelor of Education and Bachelor of Commerce (AD) degrees at the University of Alberta, has an ICD.D designation from the Institute of Corporate Directors and became an FCPA in 2013. Mr. Pinsent serves as a board member of Enterprise Group, Inc., a Toronto Stock Exchange listed company that provides specialized equipment and services in the building of infrastructure for energy, pipeline, and construction industries. He also sits on the board of directors of several private companies and supports numerous non-profit and philanthropic initiatives. He has experience serving as board and audit committee chairs and has extensive experience in compliance and corporate governance in the public markets. Mr. Pinsent's experience providing accounting, audit, tax and business advisory services, along with his public company and board experience, make him an important addition to our Board.

Risks and Caveats

We believe that Horizon has made marked progress towards the development of an aviation platform that could effectively compete in the emerging AAM/RAM/USM industry. Despite that progress, the Company still faces several risks that could keep it from succeeding and/or make that path significantly more difficult, costly and lengthier than some might anticipate or hope. Those risks include technical risks that may prevent them from developing a viable commercial product, capital risks, regulatory risks and a host of others. Any *one* of these (or other) risks could irreparably impair the Company's success.

While we believe Horizon has and will continue to make technological progress, they are unprofitable and will remain so well into the foreseeable future. As a result, the Company will likely continue to rely on the capital markets to fund deficits. If they are unsuccessful in those capital pursuits, even in the face of technological advances, it will markedly impair the business and their associated opportunities.

For small emerging companies, operating visibility is often poor, and Horizon is certainly no exception at this stage. Financial markets place marked premiums on visibility so in contrast, a lack of visibility generally leads to marked associated valuation headwinds until visibility improves. Given the combination of the Company's ongoing capital requirements in the face of those valuation headwinds, the prospect of substantial dilution to shareholders is high.

As we noted above, the U.S. federal government as well as other governments around the world, are trying to address the regulatory, infrastructure and other associated requirements of the AAM/RAM/UAM space. The organizations best suited to capitalize on this evolution will depend on how one believes that process is evolving, and in our view, it is not clear what that framework looks like or when it will be implemented and or practically functional. We think that poses risks for those like Horizon looking to capitalize on its evolution.

As we have noted above, the emerging AAM space, and perhaps more specifically the UAM subset has attracted the attention of many new technology enterprises that may ostensibly be competitors of Horizon. Some of these enterprises have managed to attract considerable and even controlling investments from some of the world's largest Company's, several of which are well known, well capitalized and entrenched aerospace or related players. That access to capital and for that matter that access to the influence those

investment partners have on various associated industry constituents poses a formidable challenge for Horizon vis-à-vis those potential competitors. We are not sure we can overstate that challenge.

We have argued that with currently available technology, the Company's hybrid approach provides them advantages over all electric platforms. That said, the sustainable "green" technology movement has gathered substantial traction and momentum over the years. Frankly, we think that movement has played a major role in the emergence of UAM on the face. Some may see the Company's hybrid approach as incongruent with that sustainable/green approach, which could create headwinds for the Company on multiple fronts.

We have provided a considerable amount of industry related information above indicating the enthusiasm that many associated stakeholders have for the emergence of AAM. That enthusiasm translates into robust assumptions about adoption and ultimately the aggregate growth and monetization of the industry. That enthusiasm could prove to be substantially overstated with respect to timing, magnitude or both.

Currently, the Company relies on a relatively small number of people to operate the business. That posture carries obvious risks with respect to the performance and continued employment of those individuals.

Up to this point Horizon's shares have been thinly traded and that may be the case for the foreseeable future. Those characteristics may involve additional risks beyond those associated with equities in general.

These are just a few of the more visible risks associated with Horizon. There are likely others we have missed and/or are others that may not be apparent at this time.

Summary and Conclusion

The Advanced Air Mobility (AAM) and its associated subsets Regional Air Mobility (RAM) and Urban Air Mobility (UAM), are emerging notions that are garnering attention and resources from governments, large corporations, scientists, entrepreneurs, investors and a host of other current and ostensibly future stakeholders. While we are not sure we can attribute *all of this* attention to new and/or emerging sustainable technologies like rechargeable batteries, strong lightweight composite materials and others, or in conjunction, the sustainable movement in general, they have certainly coalesced to underpin these emerging ideas. For instance, from the more conceptual view, Urban Air Mobility is seen as a way to alleviate both traffic congestion and CO2 emissions along and within crowded urban corridors while also saving participating consumers considerable travel time. However, from a perhaps more practical view, the new technologies that have emerged from the sustainable energy movement may in fact enable the revitalization of regional travel and regional travel infrastructure by driving down the unit operating costs of smaller (non-jet) aircraft. In that case, the regrowth of regional air travel has the potential to drive down collective air travel CO2 levels but also create more and better air travel connections and options for consumers.

Again, we understand the enthusiasm around AAM, as well as the vision for some of its more nascent subsets such as UAM. However, we also think the industry is more likely to roll out more along the lines of the FAA's "*crawl-walk-run methodology*", than some may be anticipating. Along those lines, we also remain skeptical of the assumed continued *robust* support of sustainable technologies for the sole purpose of attaining sustainability. To translate, in our view, for AAM and its associated subsets to thrive they will need to be able to demonstrate economic as well as environmental benefits for its collective stakeholders. Put another way..."*crawl-walk-run*". In our view, that may provide an opening for Horizon's initial hybrid technology approach that we believe may allow them to address markets along the evolution of AAM, and

more specifically, the front end. To that end, we would refer back to **Table 7**, reflecting the pace of Hybrid car sales relative to all electric counterparts.

We recognize that Horizon has considerable work to do before it can deliver a commercial aircraft into the market and that endeavor may be challenged by technological, financial, regulatory and other factors. Obviously, we are constructive on their ability to do that, as well as for the prospects that *their* aircraft will provide competitive advantages and differentiations that will allow it to compete with other aircraft companies that are in the process of seeking commercialization as well. Further, while our enthusiasm for Horizon is built in part on our belief that they can ultimately deliver and sell a commercial offering, that enthusiasm (albeit on some levels guarded) is also supported by industry estimates around the emergence and establishment of Advanced Air Mobility (“AAM”) in general.

To reiterate a point we made at the top of this analysis, our general view is that given the relative progress the Company has made (and we think will continue to make) towards demonstrating a scalable prototype capable of full transition flight, the current market capitalization of Horizon may provide markedly discounted exposure to the evolving and anticipated growth of the AAM/RAM/UAM space. As a result, we are initiating our coverage of New Horizon Aircraft Ltd. Shares with an Allocation of 4, and a 12-24 month price target of \$1.60 based on our assumptions that they will be able to achieve technological milestones in reasonable proximity to the Timeline laid out in **Table 8** above. We will revisit these assessments as the Company provides additional data points.

Projected Operating Model

New Horizon Aircraft Ltd.							
Projected Operating Statement							
By: Trickle Research							
	(Actual)	(Actual)	(Estimate)	(Estimate)	(Estimate)	(Estimate)	(Estimate)
	<u>8/31/24</u>	<u>11/30/24</u>	<u>2/28/25</u>	<u>5/31/25</u>	<u>Fiscal 2025</u>	<u>Fiscal 2026</u>	<u>Fiscal 2027</u>
Net Revenues			\$ -	\$ -	\$ -	\$ -	\$ -
Operating Expenses:							
Research and development	\$ 297	\$ 427	\$ 500	\$ 600	\$ 1,824	\$ 5,000	\$ 10,800
General and administrative	2,408	2,847	\$ 2,000	\$ 2,000	\$ 9,255	\$ 8,000	\$ 8,900
Total operating expenses	2,705	3,274	\$ 2,500	\$ 2,600	\$ 11,079	\$ 13,000	\$ 19,700
Loss from operations	(2,705)	(3,274)	\$ (2,500)	\$ (2,600)	\$ (11,079)	\$ (13,000)	\$ (19,700)
Other income	29	(47)	\$ -	\$ -	\$ (18)	\$ -	\$ -
Interest expenses (income), net	(11)	(13)	\$ -	\$ -	\$ (24)	\$ -	\$ -
Change in fair value of Warrants	5	(2,035)	\$ -	\$ -	\$ (2,030)	\$ -	\$ -
Change in fair value of Forward Purchase Agreement	183	557	\$ -	\$ -	\$ 740	\$ -	\$ -
Termination of Forward Purchase Agreement		(21,400)	\$ -	\$ -	\$ (21,400)	\$ -	\$ -
Total other expenses	206	(22,938)	\$ -	\$ -	\$ (22,732)	\$ -	\$ -
Income (Loss) before income taxes	(2,911)	19,664	\$ (2,500)	\$ (2,600)	\$ 11,653	\$ (13,000)	\$ (19,700)
Income tax expense					\$ -	\$ -	\$ -
Net Income (Loss)	\$ (2,911)	\$ 19,664	\$ (2,500)	\$ (2,600)	\$ 11,653	\$ (13,000)	\$ (19,700)
Income (loss) per share:							
Basic: (in Dollars per share)	\$ (0.15)	\$ 0.83	\$ (0.07)	\$ (0.08)	\$ 0.42	\$ (0.30)	\$ (0.33)
Diluted: (in Dollars per share)	\$ (0.15)	\$ 0.80	\$ (0.07)	\$ (0.07)	\$ 0.41	\$ (0.30)	\$ (0.32)
Shares used in computing Income (loss) per share:							
Basic: (in Shares)	19,246,089	23,599,144	34,599,144	34,599,144	28,010,880	42,762,409	59,814,444
Diluted: (in Shares)	19,246,089	24,574,247	35,599,144	35,599,144	28,754,656	43,762,409	60,814,444

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Rating System Overview:

There are no letters in the rating system (Buy, Sell Hold), only numbers. The numbers range from 1 to 10, with 1 representing 1 "investment unit" (for my performance purposes, 1 "investment unit" equals \$250) and 10 representing 10 investment units or \$2,500. Obviously, a rating of 10 would suggest that I favor the stock (at respective/current levels) more than a stock with a rating of 1. As a guideline, here is a suggestion on how to use the allocation system.

Our belief at Trickle is that the best way to participate in the micro-cap/small cap space is by employing a diversified strategy. In simple terms, that means you are generally best off owning a number of issues rather than just two or three. To that point, our goal is to have at least 20 companies under coverage at any point in time, so let's use that as a guideline. Hypothetically, if you think you would like to commit \$25,000 to buying micro-cap stocks, that would assume an investment of \$1000 per stock (using the diversification approach we just mentioned, and the 20-stock coverage list we suggested and leaving some room to add to positions around allocation upgrades. We generally start initial coverage stocks with an allocation of 4. Thus, at \$1000 invested per stock and a typical starting allocation of 4, your "investment unit" would be the same \$250 we used in the example above. Thus, if we initiate a stock at a 4, you might consider putting \$1000 into the position ($\$250 * 4$). If we later raise the allocation to 6, you might consider adding two additional units or \$500 to the position. If we then reduce the allocation from 6 to 4 you might consider selling whatever number of shares you purchased with 2 of the original 4 investment units. Again, this is just a suggestion as to how you might be able to use the allocation system to manage your portfolio.

For those attached to more traditional rating systems (Buy, Sell, Hold) we would submit the following guidelines.

A Trickle rating of 1 thru 3 would best correspond to a "Hold" although we would caution that a rating in that range should not assume that the stock is necessarily riskier than a stock with a higher rating. It may carry a lower rating because the stock is trading closer to a price target we are unwilling to raise at that point. This by the way applies to all of our ratings.

A Trickle rating of 4 thru 6 might best (although not perfectly) correspond to a standard "Buy" rating.

A Trickle rating of 7 thru 10 would best correspond to a "Strong Buy" however, ratings at the higher end of that range would indicate something that we deem as quite extraordinary..... an "Extreme Buy" if you will. You will not see a lot of these.