LRAPA BOARD OF DIRECTORS
AGENDA ITEM SUMMARY

AirMetrics Business Plan

Meeting Date: November 10, 2022 **Agenda Item No. 6**
Department: Director's Office **Staff Contacts: Steve Dietrich, Julie Lindsey**
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ISSUE STATEMENT AND SUMMARY

The Board as asked to see a current business plan for AirMetrics, LRAPA's enterprise fund that focuses on the production and sales of the MiniVol TAS air monitoring system. Since 2019, AirMetrics has seen a reduction in sales mainly due to the worldwide COVID pandemic. Currently, sales have started to rebound, but at a very slow pace. LRAPA's management has several options to consider to ensure viability of the enterprise fund.

BACKGROUND

AirMetrics is accounted for as an Enterprise Fund within a governmental agency. For the State of Oregon, Enterprise Fund is defined as a fund that provides "goods and services to the general public where all or most of the costs involved are primarily paid for in the form of charges to the users of such services." For LRAPA, this means that the costs associated with AirMetrics are expected be covered by sales and services offered by the business activity.

The objectives of the fund include increasing awareness of AirMetrics and availability of its products by increasing the number of active distributors, increasing MiniVol TAS sales and services, increasing product visibility by expanding marketing efforts, managing costs, and meeting LRAPA's strategic goals for maintaining a balanced enterprise fund. Achieving these objectives is dependent upon an effective marketing effort and continuous improvement in the product, operations, and management of the enterprise fund.

AirMetrics' strategy is to focus on offering specialized products and services at a lower price to a relatively narrow target market. To implement this strategy, AirMetrics needs to continuously monitor and control costs while simultaneously investing in innovating research and development, while at the same time providing excellent customer service to current customers. In addition, investment and attention to the marketing efforts must be consistent and sustained for the strategy to be effective.
AirMetrics operates under internal and external constraints. Internal constraints consist of LRAPA's expectation that at a minimum AirMetrics covers its operating costs and maintain

appropriate reserves. Additionally, as an enterprise fund, general fund resources are not available to AirMetrics.

External constraints include market vulnerability; changes local, national, and international regulations; manufacturing challenges including availability of parts and components; distribution including shipping; technology; ability of customers to upgrade equipment on location, if needed; and new competitors. Additionally, some parts and components are specialized and only available through a sole source agreement, which could create concerns of pricing and availability. At this point, the sole source company has been able to meet supply needs timely.

The Board of Directors has asked for a review of the current business plan for AirMetrics. The attached business plan provides detail on the goals, objectives, and future for the enterprise. As discussed, AirMetrics is currently at a business crossroads. The sales of the MiniVol TAS have reduced to unprecedented low levels. For the second consecutive fiscal year, FY23 budget is projected to result in a reduction of reserves to cover expenses, unless sales start to rebound. Management is starting the process of consider the future of this business activity. There are several options that affect the future of this enterprise fund that management is exploring.

BOARD ACTION
None

2022

BUSINESS PLAN

UPDATED 2022

AIRMETRICS

LANE REGIONAL AIR PROTECTION AGENCY
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TABLE OF CONTENTS

INTRODUCTION

Global awareness and concern over the adverse health effects of elevated levels of air pollutants continues to be a major concern in most areas of the World. AirMetrics' primary product, the MiniVol Tactical Air Sampler (TAS), is a useful tool that can relatively easily and inexpensively, help measure the geographic extent, magnitude, and changes of the levels of these pollutant concentrations within a given area of concern.

The MiniVol TAS is a device that has a demand in a niche market. Prior to 2020, this demand remained strong, and it continued to attract new customers, distributors, and market segments. However, the worldwide COVID pandemic has had a negative effect on the long-term success of this product. AirMetrics has experienced a dramatic decrease in sales, especially in the international markets. To date, sales have not rebounded to pre-pandemic levels, though, currently in FY23, sales are starting to increase and are cautiously projected to increase in the coming years. To meet projected demand, AirMetrics must be willing to address market concerns, production expectations, and consider long-term viability of the enterprise. This business plan is intended as a guide and a benchmark for future performance as well as a reference document of company information and past performance.

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The **objectives** of the fund include increasing awareness of AirMetrics and availability of its products by increasing the number of active distributors, increasing MiniVol TAS sales and services, increasing product visibility by expanding marketing efforts, managing costs, and meeting LRAPA's strategic goals for maintaining a balanced enterprise fund. Achieving these objectives is dependent upon an effective marketing effort and continuous improvement in the product, operations, and management of the enterprise fund.

AirMetrics’ **strategy** is to focus on offering specialized products and services at a lower price to a relatively narrow target market. To implement this strategy, AirMetrics needs to continuously monitor and control costs while simultaneously investing in innovating research and development, while at the same time providing excellent customer service to current customers. In addition, investment and attention to the marketing efforts must be consistent and sustained for the strategy to be effective.

GOALS AND MEASURABLE OUTCOMES

- Revenues cover annual direct and indirect expenditures
- Innovation investment funds included in the budget
- Maintain required reserves
- MiniVol TAS sales goal: average 11 per month
- Annual market review & adjustment
- Controlled growth through increased sales and services

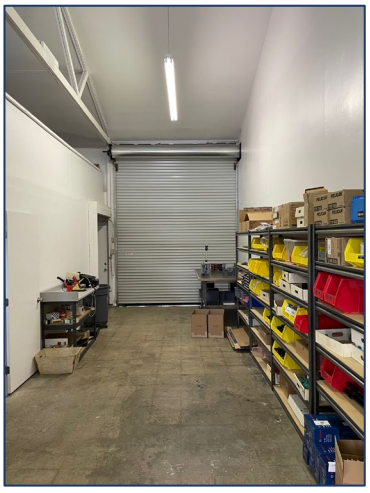
KEYS TO SUCCESS

- Continued research and development
- Investment in innovation, technology, and new or improved products
- Consistent and sustained marketing efforts
- Continuous improvement in operations
- Controlled growth
- Cohesive and effective management
- Increase revenue resources such as grants or increased services

OWNERSHIP

AirMetrics is an enterprise fund under the management of Lane Regional Air Protection Agency (LRAPA), a local government agency responsible for air quality in the Lane County. The fund is responsible for covering the cost of direct and indirect personnel, as well as materials and supplies directly used by the fund.

AirMetrics is located at a separate facility located at 2787 Olympic Street, Suite 7, Springfield, OR. The fund and the Agency utilize shared staff, including those in management and administration.



Management: AirMetrics is part of the Administrative Division within the Agency. There is 1 FTE, AirMetrics Sales Manager, assigned to the day-to-day operations of the fund's activities. The AirMetrics Sales Manager reports to the Administrative Manager, who reports to the

Executive Director. Additionally, technical advice comes from the Technical Services Manager and financial support comes from LRAPA's financial staff. Under the current configuration, the AirMetrics' Sales Manager is charged with sales, production, and administrative functions of the fund. To ensure the fund meets its objectives of innovation and growth, staffing levels will need to be reviewed and optimized.

CONSTRAINTS

AirMetrics operates under internal and external constraints. Internal constraints consist of LRAPA's expectation that at a minimum AirMetrics covers its operating costs and maintain appropriate reserves. Additionally, as an enterprise fund, general fund resources are not available to AirMetrics.

External constraints include market vulnerability; changes local, national, and international regulations; manufacturing challenges including availability of parts and components; distribution including shipping; technology; ability of customers to upgrade equipment on location, if needed; and new competitors. Additionally, some parts and components are specialized and only available through a sole source agreement, which could create concerns of pricing and availability. At this point, the sole source company has been able to meet supply needs timely.

AIRMETRICS' HISTORY

In the early 1990's, LRAPA, through contractual agreements, supported the development and field testing of the first prototype of the MiniVol to assess the local airshed. The MiniVol sampler was a filter-based, battery powered air sampler capable of sampling for Particulate Matter (PM), both $PM_{2.5}$ and $PM_{10,}$ and Total Suspended Particulates (TSP). The MiniVol enabled users to obtain baseline data where permanent reference method monitoring sites have not been established, as well as obtain supplemental data to evaluate existing air monitoring networks coverage.

The field test results were positive and garnered interest of the U.S. Environmental Protection Agency (EPA), which later funded production of additional units for further research and development. In the early 90's, encouraged by national interest in the MiniVol, LRAPA created AirMetrics as a government enterprise fund to manufacture and distribute the portable air sampler.

In 1993, the EPA established the Saturation Monitor Repository to make saturation samplers more widely available to state, local, and tribal agencies. The repository consisted of 115 saturation samplers and support equipment, which agencies could borrow to conduct special field studies. AirMetrics initially acted as the Repository for EPA Region 10. This repository has since been discontinued.

In 2002, the enterprise fund experienced lagging sales, while fixed costs continued to increase, forcing AirMetrics to re-think and re-tool the manufacturing strategy. AirMetrics implemented a lean manufacturing model allowing the fund to reduce personnel costs through transfers and layoffs and create manufacturing flexibility based on orders. The change also allowed the fund to keep the price point of the product, allowing the sampler to remain in its niche target market. The strategy switch yielded a small but reasonable profit in FY02.

Throughout the years, the MiniVol has been updated and improved due to market needs and customer requests. The updates also ensured the product remained competitive. Major redesign improvements included design of a high efficiency pump, a more compact and rugged enclosure, advanced lithium–Ion battery technology, reducing size and weight of the sampler by over 50%, improved omni-directional inlet, more versatile mounting brackets, a compact collapsible tripod, improved particle separator design; as well as added a rugged transport case for the sampler and accessories, low maintenance impactors, and upgrading electronics from analog to microprocessor control.

In January of 2008, AirMetrics began selling the new hybrid version of the MiniVol incorporating all the above improvements. This newer version of the MiniVol was named the MiniVol TAS (Tactical Air Sampler), which is the current offering. To date, AirMetrics has sold over 8,200 MiniVol and MiniVol TAS air samplers. Worldwide customers include environmental equipment distributors, government agencies, private consultants, mining companies, environmental justice groups, industry, military, and universities.

Today, there are no licensing agreements or patents restricting the fund from continuing to look for ways to innovate the MiniVol TAS to remain viable. However, innovation comes with a cost during a time of where the international market continues to deal with the COVID pandemic and manufacturers are dealing with long wait times for raw materials and specialized electronic components to complete orders in a timely manner. Further, finding innovative developers for improving the product has been difficult in the current market.

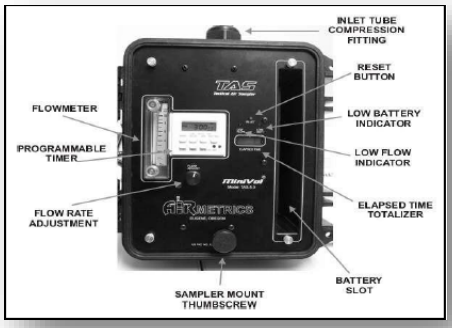
PRODUCT

Global concern over the adverse public health effects of air contaminants has mobilized governments to develop air quality standards enforceable by law. The EPA operates a national air monitoring network to measure six criteria pollutants: carbon monoxide, lead, sulfur dioxide, ozone, nitrogen dioxide and particulate matter. To support monitoring efforts, EPA scientists develop and evaluate methods for accurately and reliably measuring these pollutants in outdoor air. These methods, called Federal Reference Methods (FRMs) are used by states and other monitoring organizations to assess implementation actions needed to attain the federal Clean Air Act's National Ambient Air Quality Standards (NAAQS). FRMs are the gold standard of air pollution monitoring systems. FRMs ensure air quality data collected at different sites are gathered and reported in the same manner and are considered accurate. Due to maintenance, size, and cost of FRMs, in many areas it can be difficult and expensive to obtain representative air quality data, resulting in an unmet need.

While not an EPA reference method sampler, the MiniVol TAS fills this unmet need. Data obtained with the MiniVol TAS closely approximates EPA's federal reference method data. The MiniVol TAS is instrumental in evaluating existing monitoring networks and establishing new networks using saturation sampling techniques. The samplers are small, portable, and easy to set up and operate. Because of the low cost and ease of operation, it is customary to saturate a geographical area with the samplers to assess the air quality in areas where high concentrations of pollutants are possible. The data collected are helpful to control agencies in evaluating their ambient (air the public breathes) air monitoring networks for consistency with the 40 CFR Part 58 air quality surveillance regulations. Common users of the MiniVol TAS include federal, state, and local air quality control agencies, foreign government agencies, mining and gravel operations, indoor air quality and industrial hygiene specialists, researchers, universities, and environmental consultants.

PRODUCT DESCRIPTION

The MiniVol TAS is pump controlled by a programmable timer that can be programmed for up to six runs within 24 hours or throughout a week. When used outdoors the sampler can hang from a bracket and be mounted on a variety of structures such as utility poles, trees, fence



posts, etc. The sampler may also be sited on a tripod, the standard mounting option. The sampler is equipped to operate by either AC or DC power sources. In DC mode, the sampler operates from a Lithium-Ion battery pack, independent of line power. The MiniVol TAS kit includes two battery packs and one charger to accomplish field sampling. A battery pack can operate the sampler for 24+ hours on a single charge. In AC mode the Lithium-Ion battery charger may be plugged directly into the power jack on the side of the sampler. This configuration trickle-charges the battery while supplying AC power to the sampler.

The sampler is equipped with two fault circuits:

- A **low battery circuit** that automatically shuts the sampler down should the Li-Ion battery fail to supply sufficient voltage (above 13.0 volts) to the pump. This feature helps protect the battery which could be damaged if used continuously at low voltage. A **low battery** indicator light alerts the operator of this condition.

- A **low flow circuit** that monitors the flow rate. Should excessive accumulation of particulate matter or restriction in the tubing cause the air flow to fall below approximately 10% of the set flow rate, the sampler shuts down and a **low flow** indicator light alerts the operator.

In particulate matter (PM) sampling mode, air is drawn through a particle size separator and then through a filter medium. Particle size separation is achieved by impaction. The correct flow rate through the impactor is critical for collection of the desired particle size. For the MiniVol TAS, the actual volumetric flow rate must be 5L/min at ambient (standard temperature and pressure) conditions. To assure a constant 5L/min flow rate through the size separator at differing air temperatures and atmospheric pressures, the sampler must be adjusted for each sampling project. Impactors are available with a 10-micron cut point (PM_{10}) and a 2.5-micron cut-point ($PM_{2.5}$). Operating the sampler without an impactor allows for collection of total suspended particulate matter (TSP). The inlet tube downstream from the filter takes the air to the twin cylinder diaphragm pump. From the pump, air is forced through a standard flowmeter where it is exhausted to the atmosphere inside the sampler body. The programmable timer will automatically turn the pump off at the end of a programmed sampling period. The sampler must then be serviced and set up for the next sampling period. Servicing includes removing the filter holder with the exposed filter inside of the sampler and attaching a new filter holder with a fresh filter and replacing the battery pack with a fully charged pack. The standard sampling duration is 24 hours. Exposed filters are sent to a

laboratory for post-sampling analysis. The exact volume of sampled air is critical for accurate calculations. In air toxics sampling mode, the particle size separator and filter holder assembly are replaced with an adapter and adsorbent cartridge selected by the user. A wide variety of sampling media are available.

FEATURES & BENEFITS

The following table highlights the features of the MiniVol TAS:

Product Features	**Customer Benefits**
Compact, Lightweight	Highly portable, easy to site, reduced shipping costs.
$PM_{2.5}$, PM_{10}, TSP, Air Toxics Sampling	Sample for multiple pollutants with a single pump module by changing the filter holder configuration / sampling media.
Programmable Timer	Easy to use interface enables manual or continuous unattended operation.
AC or DC Operation	Remote sampling via DC or connect to main power if available.
High-Capacity Li-Ion Battery	Increased sampling duration and reduced number of site visits
High Efficiency Double Diaphragm Pump	Low power consumption extends sampling duration. Service life more than 10,000 hours continuous operation.
Low-Flow Technology	Low volume throughput will not overload the sampler in areas with high particulate concentration.
Low-Flow and Low-Battery Indicator	Makes end user aware of incomplete sampling cycles that would affect data accuracy.
All-Weather Design	Sample in all conditions without compromising data.
Microprocessor Controlled	Automatically maintains a constant volumetric flow rate to accurately calculate particulate concentrations.
Elapsed Time Totalizer	Records duration of each sample for accurate volume measurements.
Aerosol Filter Holder w/Filter Cassette	Utilizes standard FRM cassettes compatible with other devices.
Cost Effective	High value product bundle at a fraction of competitor pricing.

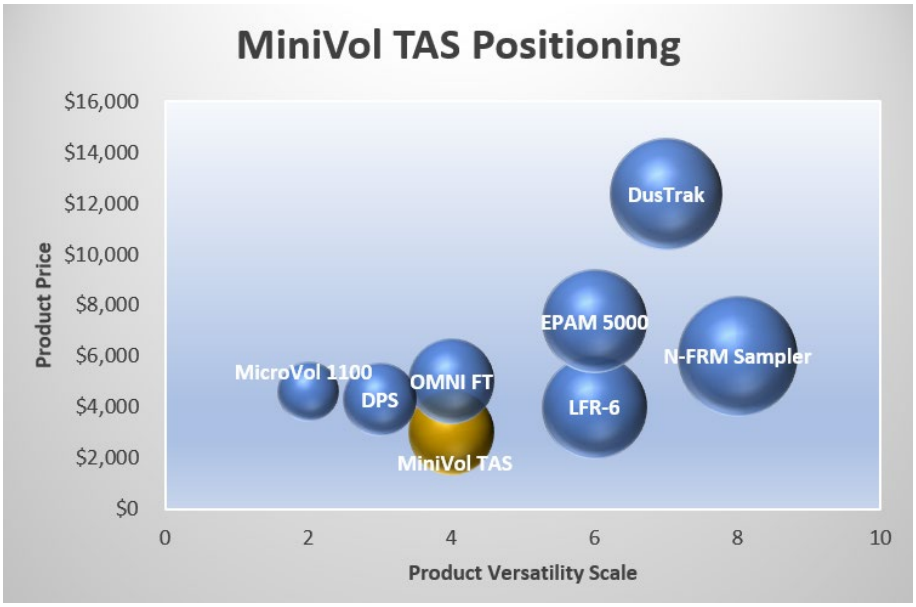
DISTRIBUTION

Direct sales are transacted by AirMetrics' sales manager. Indirect sales are transacted through fifteen global distributors. In the US, all sales are processed as direct sales through AirMetrics. International sales are a combination of distributor and direct sales transactions. However, the advantage of using distributors is that key distributors possess expertise in the local environmental protection industry and have access to various market segments within a given region. As local representatives, distributors are charged with promoting the AirMetrics brand,

negotiating prices, installing equipment, and providing after-sales-service. The current breakdown of sales is approximately 30% in the United States, and 70% international sales.

COMPETITIVE COMPARISON

The low-flow sampling market niche has grown since the original MiniVol was launched in the early 1990's. Customers in the low-flow market select the product based on the intended application, required features, available budget, and how easy it is to deploy. Features that were once exclusive to FRM samplers are now included in non-FRM samplers. Competitors have gained traction in this market by building on a platform that was created by the original MiniVol. Additionally, new entrants to the market have reduced equipment size, combined traditional filter-based sampling techniques with real-time sensors, improved telemetry, and increased flow capacity. To remain competitive in this niche market, AirMetrics will need to invest in innovative components and technology to upgrade and/or redesign the MiniVol TAS. One option being discussed is to retrofit the MiniVol TAS or develop a second air monitor that can monitor for specific air toxics in real time. Currently, air toxics is monitored by lumping all the toxins in a single sample. However, this is a growing niche market that could provide AirMetrics a growth opportunity. The below chart highlights market positions for the MiniVol TAS and potential substitute products.



Versatility Scale:

1. Portability
2. Telemetry
3. Datalogger
4. 16.7+ L/min Flowrate
5. Real-Time Sensor
6. Gravimetric Method
7. Weatherproof
8. Cost Effectiveness

The MiniVol TAS is positioned in a cluster of products that have similar features and a lower price point than samplers with higher technology. However, the MiniVol TAS offers the highest value by selling complete product bundles, individual pump modules, and customized sampling configurations.

When purchased brand new, a MiniVol TAS PM10 Portable Air Sampler comes equipped with the following:

(1) – MiniVol TAS Pump Module Control Unit
(2) – Filter Holder w/ Cassette Assemblies
(2) – Rechargeable Li-Ion Batteries and (1) Battery Charger
(1) – Collapsible Tripod ***OR** mounting bracket
(2) – Louvered Inlets
(2) – PM10 Impactors
(1) – Transport Case
(1) – Operation Manual

The PM2.5 configuration includes all the above in addition to (2) PM2.5 impactors and (2) Multiple Impactor Adapters. Total Suspended Particulate (TSP) sampling does not require particle separation, so this configuration does not include PM10, PM2.5 Impactors or Multiple Impactor Adapters.

PRODUCT DIFFERENTIATION

AirMetrics differentiates the MiniVol TAS based on:

- *Performance* - easy to transport, set-up, and operate anywhere.
- *Features* - every feature is designed to provide ease of operation, versatility, and accuracy of data collection.
- *Reliability* - the MiniVol TAS is designed to ensure consistent and accurate air samples and to warn the operator when problems arise that may affect the quality of the samples.
- *Durability* - the MiniVol TAS is constructed to ensure long life in a multitude of harsh operating environments.
- *Serviceability* - the MiniVol TAS is designed with simplicity in mind to both speed up the sampling time and reduced cost of service repairs.

SERVICE DIFFERENTIATION

AirMetrics service differentiation is based on:

- *Technical Support*- personnel are highly knowledgeable and provide quick technical support and services regarding the operation, construction, and applications of the MiniVol TAS.

- *Applications Engineering* - personnel are knowledgeable air quality professionals and field users that can provide assistance with customized applications. They have extensive problem-solving capability through their ready access to knowledge and information on the latest air-monitoring techniques and requirements from a network of agencies and air quality professionals.

- *Parts/Accessories Availability* – locally, there are vendors that have specialized parts available. However, there are other parts and components supplied by international suppliers, which have been affected by the current market distribution issues.

- *Repair Service* - AirMetrics provides courteous technical support and timely repair services whenever a problem arises.

- *Warranty* - The MiniVol TAS is warranted by AirMetrics against defects in materials and workmanship for a period of one year from the date of original purchase except for the rechargeable Lithium-Ion batteries which are warranted for a period of six months from the date of purchase. During the warranty period, we will repair or, at our option, replace at no charge a sampler or battery that proves to be defective, provided you return the sampler or battery, shipping prepaid to AirMetrics.

SOURCING

Sourcing is extremely important to AirMetrics because vendors ultimately determine the standard cost of the MiniVol TAS, affecting the pricing structure. It is key for AirMetrics to maintain a low price point to maintain its market positioning strategy. Multiple sourcing concerns stem from AirMetrics' small size, which does not lend itself to volume buying, bargaining power, or a formalized internal purchasing function. Additionally, the MiniVol TAS consists of components that are specialized and are only available from one sole source supplier. Further, vital components such as batteries that come from an international supplier, resulting in increased shipping costs and timeframes. These factors contribute to paying premium prices, obsolescence of inventory components, and increased delivery time.

TECHNOLOGY

The original MiniVol was developed using, at the time, a patented low-flow technology platform that was considered proprietary technology. The current model, the MiniVol TAS, represents a refined and improved sampler that enables increased versatility in sampling routines. The proprietary technology was once a competitive edge for AirMetrics, but the patent expired in 2011.

The main technological threat to AirMetrics and the MiniVol TAS comes from the introduction of real time monitoring equipment. This equipment continuously measures particulate concentrations in ambient air, providing short-term concentration averages in as little as a minute for some instruments. There are a variety of methods for real-time measurements, including the use of sensor-based devices, which are useful for providing a relative measurement of particulate concentrations, but are unable to provide the absolute values yielded through gravimetric methods; beta attenuation monitors (BAMs) use the principal that a certain amount of beta radiation is absorbed by particulate; and the Tapered Element Oscillating Microbalance (TEOM), which uses the principle that if a filter is attached to a tapered shaped element, the natural frequency of oscillation of the element and filter will depend on the mass change of the filter due to particulate collected on the filter.

Sensor-based instruments are useful for providing a relative measurement of particulate concentrations but are unable to provide the absolute values yielded through gravimetric methods. The next generation of instruments have bridged the gap by combining traditional filter-based methods with sensor-based monitoring. Four of the substitute products from the competitive comparison feature gravimetric and sensor-based methods: the DusTrak™, EPAM 5000, LFR-6 and N-FRM sampler.

The principle behind beta attenuation particulate sampling instruments (beta gauge) is that energy is absorbed from beta particles as they pass through particulate matter (PM) collected on a filter media. Beta gauge instruments have been designed to take advantage of this scientific principle to monitor/measure PM concentrations. The attenuation due to only the PM is measurable if a baseline beta count through just the filter can be established prior to sampling. The difference between the baseline beta count and the beta count after sampling is directly proportional to the mass of PM in the sample.

Another method is the Tapered Element Oscillating Microbalance (TEOM). An instrument used for real-time detection of aerosol particles by measuring their mass concentration. It makes use of a small vibrating glass tube whose oscillation frequency changes when aerosol particles are deposited on it increasing its inertia. TEOM-based devices have been approved by the U.S. Environmental Protection Agency for environmental air quality monitoring.

MARKETING STRATEGY

Achieving a certain level of sales and market share is the key determinant in the success of the marketing strategy and is directly dependent on the strength of AirMetrics' product positioning and marketing effort.

AirMetrics tactical marketing strategy is twofold. The first part of the strategy is to strengthen the product *positioning* of the MiniVol TAS through service quality, product differentiation, and price. The goal of the first part of the strategy is to position the MiniVol TAS at the top of the versatility scale, featuring a combination of practical and innovative

technology at an excellent value. Tactics under this section of the strategy are formalizing the service policy and investing in research & development focused on innovation and product development to enhance differentiation, as well as implementing cost monitoring and control systems to maintain the MiniVol TAS's price position.

The second part of the strategy is to further develop the marketing efforts through additional media advertising, increased visibility through website development, sales promotion, and physical distribution including adding more distributors in key markets. The objective of the marketing effort is to increase awareness, comprehension of benefits, and highlighting the availability of the MiniVol TAS. Tactics in this section of the strategy include increasing awareness of the MiniVol TAS through media advertising and sales promotions emphasizing versatility, value, superior technical expertise, and customer support. Also, AirMetrics will increase the number of MiniVol TAS distributors and add other new channels to enhance availability. For example, AirMetrics is in the process of upgrading its website, giving the business a fresh, new look. Additionally, the new website will showcase distributors, products, offer tutorials, request for quote, and the ability for customers to pay online. Marketing is also part of the current distribution agreements. The expectation is for the distributor to attend trade shows, have our product on display, and to provide vital information to potential customers. The advantage of using distributors to market the product is the distributors' understanding of the local market.

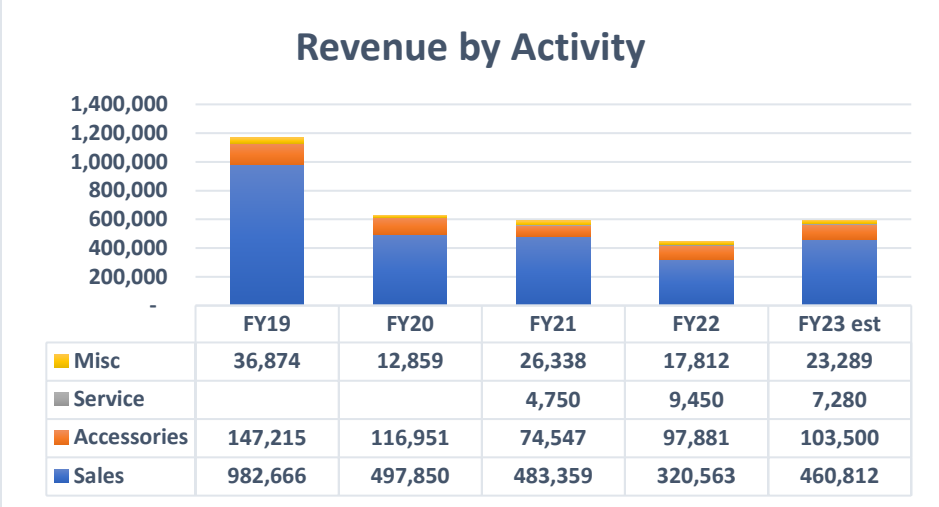
Another marketing strategy is to expand the use of a lead generating website called Environmental XPRT. Environmental XPRT is a global environmental industry marketplace and information resource where online product catalogs, news, articles, events, publications, and more are available to potential customers. There are ten categories to refine product searches including: Air & Climate, Monitoring & Testing, Environmental Management, and others. When users find a product that they are interested in, the site links them directly to a company for a quote request. AirMetrics takes advantage of this lead generating site with a free user profile. However, the free profile does not actively promote AirMetrics' products or ensure that inquiries are specific to AirMetrics' offering, meaning that not all inquiries are relevant. Service packages are available to promote individual brands, products, and services as well as refines inquiries that are received. Entry level packages for this service starts at approximately $2,500 and is an opportunity for AirMetrics to increase its marketing profile.

FINANCIAL REVIEW

Revenue

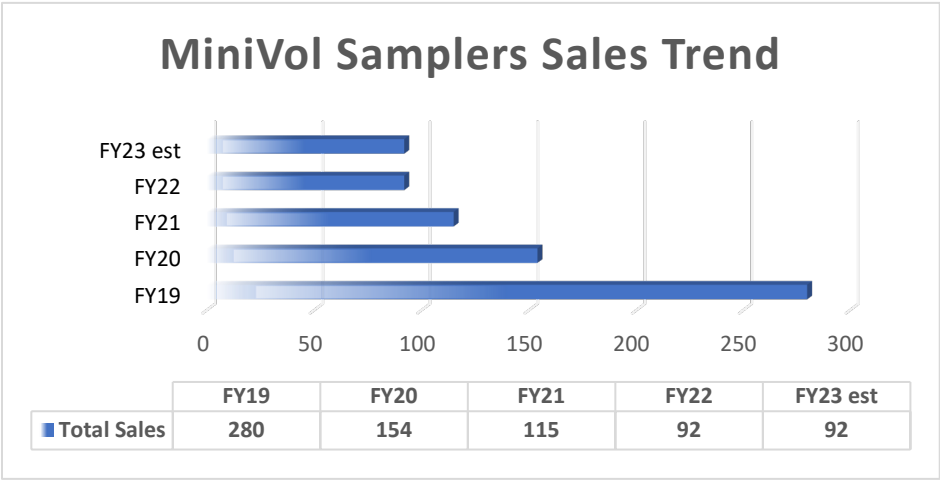
The fund receives revenue from multiple sources including sales of the MiniVol TAS air sampler, calibration services, freight services, interest earnings, sampler rental income, and sales of parts and accessories. As the below graph illustrates, sales and services have dramatically decreased mainly due to the COVID pandemic beginning in FY20. However, the global market is still experiencing COVID issues and are holding off

placing new orders. As presented in the FY23 budget, AirMetrics is estimating a slow but steady rebound in sales and services based on current interest and requests for quotes. However, management has concerns that a simple rebound will happen timely, and that innovative updates to the MiniVol TAS will be needed to ensure market recovery as well as future growth in the brand.



	FY19	FY20	FY21	FY22	FY23 est
Misc	36,874	12,859	26,338	17,812	23,289
Service			4,750	9,450	7,280
Accessories	147,215	116,951	74,547	97,881	103,500
Sales	982,666	497,850	483,359	320,563	460,812

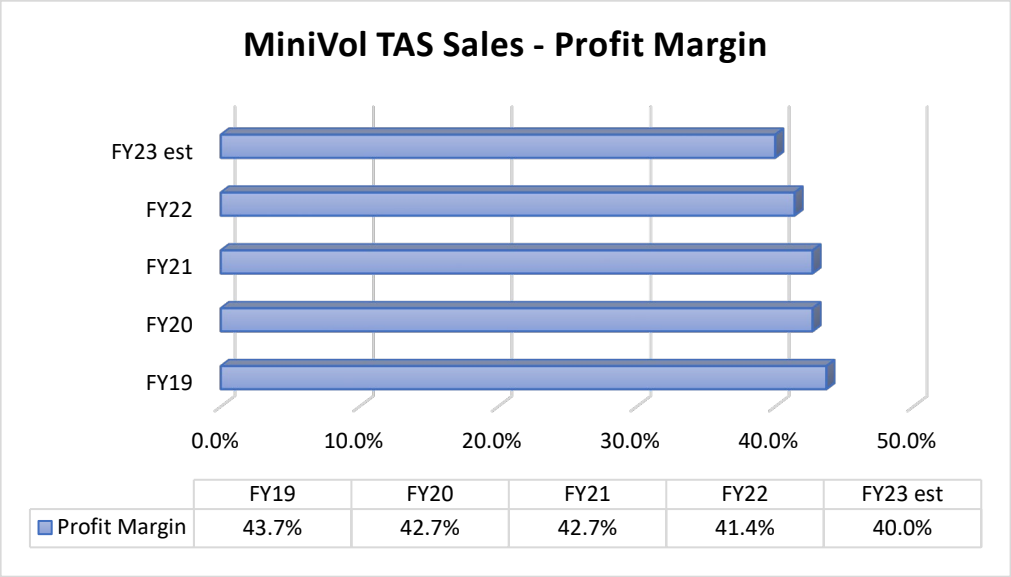
In line with reduced overall revenues, the number of MiniVol TAS samplers purchased has dramatically decreased since FY19. Due to the worldwide pandemic, requests for quotes that turn into actual sales have dropped. It is projected that sales are at the bottom of the decline and are starting to slightly rebound. There has been additional interest in FY23, and staff is working on increasing the number of distributors to increase visibility. Additionally, staff is researching other ways to increase marketing as well as direct sales options.



	FY19	FY20	FY21	FY22	FY23 est
Total Sales	280	154	115	92	92

Profit Margin: MINIVOL TAS

The MiniVol TAS is available in several kit configurations including but not limited to the MiniVol TAS $PM_{2.5}$, MiniVol TAS PM_{10}, and MiniVol TAS Total Suspended Particulate (TSP). The main difference in the kits is what is included as part of the individual packages. AirMetrics applies a cost-based pricing strategy, with a desired unit gross profit margin of 40%. Gross profit margin is calculated by dividing net sales less cost of goods sold by net sales. With a cost-based pricing strategy for sales of the MiniVol TAS, it is important to monitor costs closely to ensure accurate reflection of costs in the pricing model. As shown in the below graph, even though sales have dropped, gross profit margin has remained relatively consistent with the goal.



	FY19	FY20	FY21	FY22	FY23 est
Profit Margin	43.7%	42.7%	42.7%	41.4%	40.0%

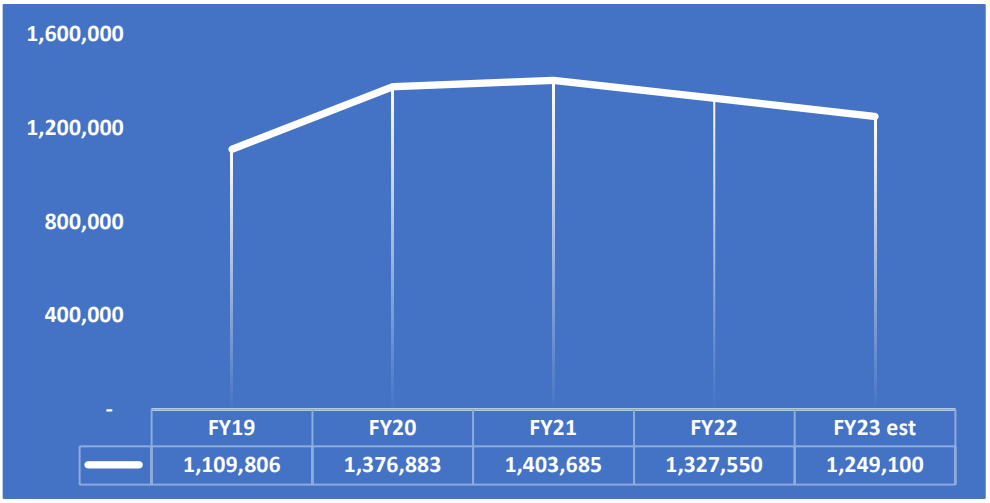
Expenditures

The AirMetrics fund is charged with covering production and sales costs, direct wages, general office expenses, and overhead costs. Production costs including purchases of parts and components, freight, and contractual services. The MiniVol TAS is a specialized technical product that is time intensive to build and due to the small size of orders, production does not lend itself to economies of scale or quantity discounts on purchases. Cost reduction and improved monitoring efforts are underway including upgrading of the accounting software, researching additional suppliers, and product design improvements.

In addition to manufacturing costs, the fund supports 1.0 FTE (sales manager), portions of the management and finance staff of the agency, direct costs including rent, utilities, miscellaneous expenses, and research & development, as well as pays for indirect costs through a direct transfer to LRAPA's general fund. In FY23, the total general fund reimbursement for use of staff and indirect from AirMetrics totals approximately $62,000.

Balance Available (Reserves)

For the FY23 budget, AirMetrics has an estimated balance available of $1.3 million dollars, which is an appropriate reserve based on LRAPA's financial goals. However, the balance available has slightly been reducing since FY20 mainly due to the reduced sales revenue. Beginning in FY22 and projected in FY23, the fund has seen slight reductions in the balance available, which highlights the importance of implementing strategic initiatives to ensure the balance available remains above the set reserve level and that fund remains viable. The graph below illustrates changes in balance available from FY19 through the estimated FY23.



Breakeven Analysis for the MiniVol TAS

One question that is commonly asked is how many air samplers need to be sold to break even. For AirMetrics, this is not a simple answer due to the varying sources of revenues for the fund. The fund derives revenues from selling samplers as well as providing services such as rental, calibration, and maintenance services. This revenue is used to cover direct and indirect expenses.

For the purposes of this discussion, AirMetrics recognizes all revenue sources. The following breakeven analysis focuses on the production and sale of the MiniVol TAS. The cost of goods sold (COGS) applied to the calculation is specifically related to the production of the MiniVol TAS. Overhead assigned to the calculation is an estimated average based on percentage of revenues. Overall, the breakeven analysis shows that AirMetrics needs to produce and sell on average 11 air monitors per month. For the past three years, as well as for FY23, sales are slightly below this threshold. However, the fund has other sources of revenues that have increased and as well as the ability to us the reserve fund to balance. The reserve fund is currently above required reserves allowing AirMetrics to manage the current downturn in the worldwide economy.

STRENGTHS, WEAKNESSES, OPPORTUNITIES, AND THREATS (SWOT) ANALYSIS

Strengths	**Weaknesses**
▪ Brand recognition ▪ Price ▪ Customer retention ▪ Capital ▪ Agency affiliation ▪ Service ▪ New website	▪ Outdated technology ▪ Single primary product ▪ Production capacity ▪ Lack of staffing for key roles
Opportunities	**Threats**
▪ Research & development ▪ Grants ▪ New distributors ▪ Partnerships ▪ Community engagement ▪ Marketing	▪ Ongoing threat of COVID-19 ▪ Expired patent ▪ Component availability ▪ Competitors with new technology ▪ Li-Ion battery transport regulations ▪ Global economy ▪ Shift toward Volatile Organic Compounds (VOC)/Toxics monitoring

How can we use our strengths to take advantage of the opportunities identified?

- Brand recognition helps attract new distributors and new customers within its niche market. AirMetrics has a long history of providing high quality instrumentation and service.

- One marketing strategy that has worked well for AirMetrics is word of mouth. End users share product information and experiences with colleagues at conferences, exhibitions, and out in the field during research. This type of marketing is invaluable and triggers the interest of brand distributors, consultants, and international organizations.

- Price plays a significant role in the ability to attract distributors and customers. By keeping prices low, distributors can expect reasonable profit margins, while ensuring return customers.

- The available capital is perhaps the greatest untapped strength. Funds can be allocated to research & development to focus on upgrades and, possible, new products. However, this would require dedicated staff or contractors with extensive knowledge and experience. Currently, there is an opportunity to partner with a local company to increase product offerings. The company has tentatively agreed to modify a product based on AirMetrics' needs.

- Agency affiliation means that AirMetrics has extensive air sampling knowledge and can offer expert technical support and customer service.

- AirMetrics in is the process of updating its website that will offer extensive product information, allow for online ordering, and eventually, online payments.

How can we use these strengths to overcome the threats identified?

- Customer retention helps mitigate the threat of COVID-19. The disruption to sales caused by lockdowns is expected to lessen and customers familiar with AirMetrics' products are expected to return.

- Component availability has also been affected by COVID-19. Factory lockdowns have disrupted production and logistics, but these lockdowns are slowly reducing. Lead times are also starting to reduce from multiple months to a matter of weeks.

- New competitors will continue to pose a challenge as long as AirMetrics' technology remains outdated. AirMetrics has capital to invest in research & development. Additionally, it is possible that a competitor could turn into a partner with a mutually beneficial agreement.

- The International Air Transport Association (IATA) regulates the transport of Lithium-Ion (Li-Ion) batteries. Due to the possibility of spontaneous combustion, Li-Ion batteries are classified as a Dangerous Good when shipped alone. Dangerous Goods shipments are prohibited into numerous countries. This regulation limits the service AirMetrics can offer customers located in countries where Dangerous Goods shipments are prohibited. Ocean freight may be the way to overcome this threat. However, distributors must be willing to make bulk purchases and keep batteries in stock.

- The global economy continues to be affected by COVID-19. Reserves can help insulate AirMetrics from losses while the economy continues to rebound.

- The shift toward toxics monitoring is a threat as well as an opportunity for AirMetrics. A threat to the MiniVol TAS because of outdated technology, but an opportunity that can be harnessed through partnerships either with an existing company or product designer.

What do we need to do to overcome the identified weaknesses to take advantage of the opportunities?

- AirMetrics should continue to offer the MiniVol TAS even though it is old technology. The sampler should be discontinued only after a suitable replacement has been established.

- Production capacity and staffing can be overcome by allocating funds to payroll. This should include a specialist in instrumentation design if there is interest in creating a sampler specific to AirMetrics.

NEXT STEPS

Today, AirMetrics is at a business crossroads. The sales of the MiniVol TAS have reduced to unprecedented low levels. For the second consecutive fiscal year, FY23 budget is projected to result in a reduction of reserves to cover expenses, unless sales start to rebound. Management is starting the process of consider the future of this business activity.

Considerations for the enterprise fund could include:

- **Continue operating the fund as is and focus on recovering lost sales lost within current markets -**
    a. Pros:
        i. Current customer base
        ii. Economy slowly recovering
        iii. International orders starting to increase
    b. Cons:
        i. Limits growth
        ii. Succession planning

- **Invest in development for the MiniVol TAS, which, if the price can remain stable, could help maintain or increase competitive edge -**
    a. Pros:
        i. Proprietary product
        ii. Customization
        iii. Name recognition
        iv. Ability to service inhouse
    b. Cons:
        i. Costs – 1x investment needed
        ii. Time to market
        iii. Limited specialized market for developers

- **Enter into a partnership agreement that allows AirMetrics to add developed products under the AirMetrics' name -**
    a. Pros:
        i. Market ready product
        ii. Can allow LRAPA to customize
        iii. Possible local vendor
        iv. Increased versatility
    b. Cons:
        i. Cost – 1x investment needed
        ii. Not a proprietary product
        iii. Partnership longevity
        iv. Future development concerns

- **Dissolve the Enterprise -**
    a. Pros:
        i. Reduces LRAPA's focus
    b. Cons:
        i. Liquidation of business
        ii. FTE concerns
        iii. Vendor relationships
        iv. Long term customer relationships