



MDI

By

AVL
Air Volution Ltd



4th December 2018

Air Volution Directors' Report AGM December 2018

I am pleased to report that the future of Air Volution looks very encouraging. However it is essential that shareholders appreciate the quantum of the undertaking and the support required to achieve the considerable tasks ahead.

Air Volution Ltd and for that matter all the Air Future Group is dependant on the progress of MDI and their ability to deliver product for us to commercialise. The focus for Air Volution, particularly since the restructuring of Air Future Ltd, has been not only principally for Air Volution to remain in tact in order for it to obtain the advantages of the commercial rights agreements it holds with MDI but also to support MDI wherever possible.

The activities of the Company have been progressed through our parent company, Air Future Ltd.

This address will cover:

i) MDI activities, ii) Executive activities during the year and iii) our intentions for the next year and beyond.

MDI activities and progress.

MDI in their May newsletter to their shareholders said:

“The most important topic is of course the progress of our flagship product the AirPod2. Creating a new concept of clean mobility is a complex affair and takes time. We would like to be able to present it to you already but the practical realities have made us more pragmatic.”

Despite these limitations MDI’s achievements are impressive.

MDI Networking achievements.

MDI has put a lot of effort into establishing their presence as an ‘essential technology to provide clean energy and transport that is affordable to all.’

On the back of their 2016 award in the United Nations competition entitled “Powering the Future we want”, MDI has continued to receive notable respect. Cyril Negre was invited to attend the World Economic Forum in Davos in January 2018 and thereafter attend the ‘SDG lab’. The SDG lab is a high level organisation ‘committed to improving the state of the world’ to achieve the 17 Sustainable Development Goals (SDG) of the United Nations. These MDI / United Nations associations provide valuable credibility and contacts for MDI and thereby their licensees, implementation activities particularly within those countries whose sustainable objectives align with the United Nations 17 SDG goals – such as in our case countries within the Pacific Islands.



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In addition MDI attended a number of Industrial Fairs, Expos' and auto showcasing events in, Luxembourg, France and Germany. These all provide MDI the opportunity to publicise their technology and projects and widen the MDI scope with investors, engineers, top level deciders, creating contacts and strengthening links for today and future projects throughout the world.

Graphic Charter and cohesion of communication tools.

MDI also have started to implement their 'Graphic Charter', which is a component of the structuring work to harmonise the MDI visuals on all media. This will include how we are obliged to present the MDI logo and accompanying material, for example. 'MDI by Air Volution' on our letterheads, websites, and presentation material. We are expecting to have to make changes to our website to achieve an MDI section controlled by MDI that would include such matters as the MDI vehicle range and vehicle specs.

Product Progress.

On the technical and product front it has been a good year for MDI.

AirPod2.

MDI focus has been to prepare three prototypes. One to ride in 'camouflaged version' as do all manufacturers and two for the vehicle launch in Luxembourg.

I am pleased to report the two prototypes were presented in Luxembourg in November and the 'camouflaged' AirPod2 is now undergoing its preliminary road testing 'burn-in' that attends to removing minor design and riding defects in order to launch it in the streets of Nice as a high quality product in the next few weeks. AirPod2 certification is to follow with this process taking place at the end of January or early February 2019.

Sardinia and AirMobility.

As part of the installation of the production line at the Italian licensee for the AirPod, Air Mobility Ltd, MDI has supplied molds from their Carros factory. AirMobility workers were trained in Resin Transfer Molding (RTM) technology and have now begun manufacturing AirPod 2.0 body parts. MDI is pleased with the quality of the panels Air Mobility are producing and some are being delivered back to Carros for the manufacture of further AirPods some of which will be available for showcasing including to ourselves.

AirOne.

MDI reported in their October newsletter: "After the AirPod2 will come the development of the AirOne which has reached the validation stage for the design. MDI will continue to work on this vehicle as soon as the first AirPod is on the road. Then after 12 to 18 months you will be able to see rolling an AirOne in the final version"



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Veolia.

MDI partner Veolia has reiterated its confidence in MDI. Veolia uses the MDI engine in the AirBom Light; an operational garbage and service vehicle specially designed for the Veolia operational requirements within the AirBus factory in Hamburg. Following very satisfactory trialling and relationship building Veolia have placed further orders for this type of vehicle.

Tata.

MDI's partners, Tata Motors bought the 'master licence' for the use of the MDI technology for India in 2007. As part of this partnership MDI and Tata are working on the motorisation of various compressed air vehicles. The work is in the final stages and MDI reported in their September newsletter that several Tata vehicles are running with their latest engine. As part of their contract with Tata, MDI are not authorised to disclose any information on this subject.

[https://www.tatamotors.com:press:m-dis-air-engine-technology-tested-on-tata-motors-vehicles:](https://www.tatamotors.com:press:m-dis-air-engine-technology-tested-on-tata-motors-vehicles)

In November 2016 the director of R & D announced the start of the industrialisation of compressed air vehicles by Tata in 2020. This was reported by Autocarpro on 14 February 2017: <http://www.autocarpro.in/news-national/tata-motors-air-powered-car-project-launch-23659>

We understand that MDI and Tata are co-operating to achieve the joint Tata/MDI objectives.

The engine.

Already a revolutionary engine MDI work continues to achieve optimal air expansion performance. By trying to improve its performance MDI can reduce air consumption thus achieve further distance from an air cylinder or reduce the time taken and therefore electricity used when refuelling at home. MDI have recently confirmed such further improvements.

Mr Christophe Hurth is the R & D engineer responsible for overseeing the engine's evolution. In the May MDI Newsletter he acknowledges that MDI technology "has gained a simplicity and allows us to achieve a flexibility never reached within piston engines. The latest advances we have made allow us to simplify the reversibility of the engine to proceed with the refilling of the air tank."

"Work progressing includes electronic management to further improve the efficiency of the engine over its operation cycle. Braking energy recovery that will generate an improvement



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of autonomy of 5 to 10%. The implementation of mode 2, providing an energy adjuvant that heats and expands the air to multiply the autonomy by 3.”

Christophe says: “With compressed air we (MDI) are on a 100% ecological concept, there is not a single phase where we are not environmentally friendly. Further more it is very rational in the sense that the price of the vehicle makes it very accessible.”

These advances also enable us to anticipate other developments for the future..... after the AirPod2 has been launched.”

MDI and Electric vehicles and refuelling

Mr Christophe Hurth: “Currently people are choosing electricity because they think it does not pollute – that there is no CO2. However we also know that everything is not so rosy in the electric vehicle. It must be seen in its entirety, including its extraction of resources, its production, its consumption of energy. Soon we’ll say that batteries are not so environmentally friendly and then there is going to be a real problem.”

“And even if we accept the high cost of batteries we are still facing recharging problems that take time. If everyone starts buying electric cars, how will users recharge all together for several hours. How can the electricity grid cope - and we cannot put a terminal next to each car.”

MDI also provides their refuelling technology which allows for the refuelling of their vehicles with compressed air as is currently done at the petrol station for fuel. So it will take 2 to 3 minutes to refill your tank not one hour waiting for your battery to recharge to deliver maybe a lesser distance than what an MDI vehicle may achieve.

The MDI AirWall.

We are pleased to see the MDI commitment to 100% clean home energy with its new product the AirWall. The AirWall is a clean electricity generator. Coupled with a photovoltaic system it is capable of storing and delivering power of up to 7kW at night. It can extend its power capacity or duration by adding further storage tanks. Advantages over such products as the Tesla PowerWall are that you don’t have a wall of lithium batteries using rare earth for storing green energy at home.

When used as part of a Solar PV system, our estimates are that costs are approximately equal to a Tesla PowerWall at 7 kWh effective storage. At 30 kWh the MDI system is less than half the cost of batteries. For off grid systems, where storage required is far greater than grid connected systems the MDI AirWall system advantages make batteries uncompetitive.

Currently existing Air Volution shareholders have a long standing interest in the MDI energy products. These are likely to be separated into separate divisions during 2019.



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AVL Activities during the year.

2017 & 2018 Activities

The team overall progressed many essential activities internally that may not be immediately obvious to an outsider, but will provide the foundation and mainstay as our business ramps up. These included the team's working visit to MDI in January 2017 advancing our commercialisation understanding, MDI granting further exclusivity for energy and transport applications, progress of the Corporate Group operating and funding design (AFL/AVL/ATE), New Zealand partner discussions for energy storage pilots, and corporate activities (website developments, audits, and HR team development).

During the year we developed dialogues ranging from Ghana in Africa, to South Korea, to links to China, and of course business development and contacts within our own region to be ready for the commencement of pilots and demonstrations in 2019.

The AFL visit to MDI in January 2017 put us in a very good understanding with MDI. This is extremely valuable and through this visit and the further support Air Future has provided to MDI, Air Future has received enhanced exclusivity rights. These rights will provide considerable benefits to AVL by redefining the licence area to include the French speaking countries (New Caledonia and Tahiti etc.) and importantly to be able to undertake our commercialising for the next five years under the protection of exclusivity.

Personnel.

To achieve the various company executive responsibilities and also carry out the principal business of funding, Air Volution has relied upon the assistance of Air Future.

During the 2017 year our CEO John Mennega was appointed CEO for Air Future as well, expanding his existing role and enabling a close continuity between the three Group companies AFL, AVL, and ATE (the energy division). This move reflects the positioning of Air Future as an active commercial entity giving the Company more scope to participate alongside MDI on a global basis.

On our team front it is with great sadness that we report that our accountant of twelve years, Phillip Foubister, died suddenly in July. As well as losing a good friend this is a tragic loss to our Company and he will be missed both personally and via his contribution. The AFL Board has sought the services of a highly respected consultant to maintain all the financial and commercial functions performed by Phill as seamlessly as possible.

2019.

AVL's mission is to provide emission free vehicles much more cheaply and with much cleaner manufacture and disposal. We will manufacture locally as opposed to large



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centralised factories. And we will provide home and business energy storage more cheaply to benefit both one's own home and selling back to the grid.

Our immediate focus for 2019 is to raise AU\$10M to establish an AirPod vehicle manufacturing factory.

To achieve this and the ongoing expansion of the air car business and factories we partition the business into the following projects.; Markets; Zones; Sales; and Funding.

Markets.

This project is about analysing the markets within our license area and also looking at possibilities within SE Asia and elsewhere.

At the moment the initial MDI vehicle, the AirPod2 does not have a category for road certification in New Zealand or Australia but it does so in the Pacific Islands. The New Zealand Ministry of Transport is undertaking a review of this category and the signs of a favourable change are good. The situation in Australia is similar. In the meantime we are also looking at the potential for markets outside of our licence area.

Funding.

This is the major task facing your Company at the moment. Funding is currently in two parts.

First a current AFL PledgeMe crowdfunding of up to NZ\$2M for such as showcasing, Australasian business development, field pilots etc

This is in order to achieve the second part being the AU\$10M factory funding.

The factory funding is targeting larger parties who may have a particular reason to be involved in a factory. Because the business model is for local manufacture then it is likely that those wishing to fund a factory will have a local view and only wish to be shareholders of the factory itself and not shareholders in Air Volution. This allows Air Volution to separate out the factory funding into its stand alone joint venture type companies and therefore isolate the risk and at the same time reduce the need to dilute shareholdings in Air Volution itself.

AVL Factory Model Financials

For the current capital raising to allow for uncertainty in projections we have in the crowdfunding offer provided only a 'one-factory model' as the base. Shareholders and investors can then judge the business potential conservatively. Should they wish we have also made it easy for them to see the upside potential.



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Assumptions being for either an energy or transport factory at full production by year 5. So assumptions for year 5 show that a factory with sales of 5,300 vehicles or 15,000 energy storage units, would attribute to AVL applied cash of EBITDA \$24.1M and valuation (8x multiple) of \$193M. The current AVL valuation prior to current capital raising is approximately \$9.0M.

PROFIT AND LOSS ('000)	Y/E Dec-01	Y/E Dec-02	Y/E Dec-03	Y/E Dec-04	Y/E Dec-05
One Factory NPAT	-1,318	982	3,938	15,711	16,132
PROFIT AND LOSS ('000)	Y/E Dec-01	Y/E Dec-02	Y/E Dec-03	Y/E Dec-04	Y/E Dec-05
One Factory EBITDA	-1,394	1,756	6,041	23,674	24,083

Number of factories.

We have budgeted for only one factory funded in 2019 and two in 2020. To revise the projections one simply replicates the return. Based on these assumptions and projections if we are successful in establishing a number of vehicle factories the potential increase in value of Air Volution based on an 8x multiple of the 5 year EBITDA of \$24M is considerable.

Liquidity.

We see liquidity (ability to trade shares) as all-important and we are aiming for such an event between years 3 and 5. This might be via a stock market listing or a major trade deal or some other mechanism. We cannot promise that this will occur, and you should treat your investment as illiquid.

Conclusion.

With the growing public interests in renewable energy and the importance of alternatives to fossil fuels that are clean, affordable and available now, MDI with its motto of "Sustainability for all" is the technology for our times.

We impress on shareholders the value we see in Air Volution Ltd through the commercialisation of the MDI technology. In spite of the time taken we are very confident of the prospects for AVL.



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Currently existing Air Volution Shareholders have a long standing interest in the MDI energy products. The Board has long considered that the value of the energy component is as great if not greater than the transport.

With Air Future Ltd undertaking the support and marketing and financing on behalf of Air Volution it is very important that AVL shareholders recognise the importance of providing working capital and support the Air Future crowd funding and our efforts to establish an AirPod manufacturing plant in our locality in 2019.

END.