

Masan High-Tech Materials: making growth through sustainability

Masan High-Tech Materials (MHT) has asserted its position in the industrial mineral and metal processing lines as a trailblazer in sustainable development through its tireless efforts in adopting the three R's of reduce, reuse, and recycle on both a national and global scale. **Craig Richard Bradshaw**, CEO and **Hady Seyeda**, deputy CEO of Masan High-Tech Materials, shared with *VIR's* **Le Luu** on how the corporation is moving forward on its sustainability journey with its innovative solutions in line with the circular economy.



Craig Richard Bradshaw
CEO, Masan High-Tech Materials



Hady Seyeda
Deputy CEO, Masan High-Tech Materials

The company has experienced the most successful business year in its history, with tungsten output and recycling rate both reaching record highs, contributing to the company's revenue in 2021. What do you think has brought about this success?

Bradshaw: There is a combination of factors. When we set strategies, we had all of our leaders come together for two days to talk about what is going to happen over the next five and 10 years, and how we ensure that we're going to have a winning formula to stay relevant.

Our success in 2021 was not a result of what we did in 2021, but of what we have been doing over the past three or four years. It's an outcome of the hard work and efforts of the 2,500 staff members that are dedicated to delivering our vision of ensuring our focus on innovation and our customers' happiness. I think as long as we continue to do that, we will be successful.

Could you provide further information on your company's recycling efforts?

Bradshaw: In the recycling space, we are working on two projects. One, specifically to Vietnam, is tungsten. We are currently working on a feasibility study to get the government's approval to install tungsten recycling facilities. We would like to have that project operational by 2025, which will be incorporated into our existing factories in Vietnam. That will enable us to take tungsten scrap from anywhere in Asia and reprocess that back into ATP. We have already got the technology, now we're just going through the approval process.

Separate to that, we're also working on a cobalt or a battery black mass recycling process. The pilot plans and test work will be completed by the end of 2022. After that, we will be working on pre-feasibility and business cases to set up recycling hubs in Vietnam, North America and Europe, for battery black mass. The government is providing incentives for companies to invest in renewables and recycling.

We've got the skill sets to make projects like this possible. Therefore, there are a lot of elements available right here to make it effective. The difficult part is to develop our own

technology, because the existing technologies in the world use a lot of power and water. Our technology uses less power and less water, and therefore is more environmentally sustainable.

The goal is to collect batteries and black mass from the Asian region, recycle them here in Vietnam, and turn them back into battery precursor materials – lithium sulphates, cobalt sulphates, and other precursors required for battery manufacturing. At MHT, we place a major focus on the cost-effective and efficient use of energy, as well as the ability to produce electricity from other sources.

As one of the country's largest materials providers, how has MHT contributed to Vietnam's sustainability journey?

Bradshaw: We are confident to say that MHT already went down the sustainability path before the prime minister made an announcement for Vietnam to embark on the net-zero emission journey. Today, we recycle around 78.5 per cent of the water used in our processes in Vietnam is from recycling. We aspire to be a global leader in every aspect. Over the past few years, we have had a look at what other countries are doing and applied cutting-edge technology to our business in Vietnam.

Furthermore, we have learned precious knowledge from our colleagues over in Germany, who have been applying sustainability and energy reduction measures for more than 20 years.

Our Vietnam's team here seeks to be the gold standard in Vietnam in terms of sustainability and work with global companies to implement best-in-class practices, so we are not



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simply a follower but a leader.

Moreover, we are among a few firms in Vietnam that include our sustainability report in our annual report. I'm not sure how many other Vietnamese firms do. We are proud to say that our report is another considerable milestone illustrating our concerted commitment to responsibility, transparency, and sustainability.

Plastic pollution is wreaking havoc on our environment. As a part of the net-zero emission commitment, the government is promoting solving this complex plastic challenge. How has your company been involved in this process?

Bradshaw: To reduce plastic, we have to work with our suppliers and our customers, to limit plastic both into our operation and into our customers operations. In some cases, we reuse some of the materials that customers send us. We espouse Reduce, Recycle and Reuse through our business.

We do this with material bags where possible. If we buy a new bag, it will cost us \$15. If we keep using the same bag multiple times – some can be used for different purposes up to 10 times, we just saved \$150. So it's all about efficiency. And the more people get their heads around this and communicate it through their organisation the better. Sustainability is not a cost - it is about efficiency in your business.

The most crucial element in the sustainability puzzle is to raise awareness of all relevant stakeholders, including suppliers, customers, your staff, among others. When shifting the perspective, people will see sustainability as an opportunity to improve.

Seyeda: Easier said than done. So, we have formed our joint Global Sustainability Committee, and every side has set up their own team, which is dedicated to this topic. They spend time in their day pondering how they might do things better. How can they enhance our ecological footprint in terms of carbon neutrality, green electricity, and anything else?

Our procurement department, for example, must study whether there is a more ecologically friendly option to purchase. Thus, everything has been implemented and will be executed over the next several years with dedicated resources. The Global Sustainability Committee gets together on a monthly basis to talk about what they're doing in Germany, so that Vietnam, China and Canada can learn from a proven track. Since its inception, MHT has been embracing the merits of a circular economy via recycling.

What is your take on AI and its implications on your production?

Seyeda: AI is commonly implemented whenever there is an automated processing procedure, such as in robotics and automotive. We believe AI-enabled technology boasts multiple opportunities, in our production and in the way we do business.

So we started in a pilot product and in our Research & Development department. And we said, we have millions of data which we collect every day when the machines are running. And our engineers and our scientists are attempting to extract knowledge out of this data to optimise the process, but it is a timing consuming, daunting task. Notwithstanding, AI-enabled algorithms significantly speed up this process, with greater accuracy. We have applied this on a pilot scale, and it yielded excellent results.

We could increase throughput of the machines without having to make any additional investments, resulting in more stable production because the entire production process ran more smoothly, resulting in better quality. Better throughput also means better efficiency, resulting in less energy consumption and lower cost. ■

