

Designing Motorbikes In-house gives Dat Bike a Competitive Advantage in Vietnam

Dat Bike differentiates itself in Vietnam by designing and manufacturing its own motorbikes. Backed by investments from large VCs, it plans to scale up in the huge motorbike market in Vietnam and then expand throughout Southeast Asia.

Dat Bike Seeks to Reduce Carbon Emissions Dramatically

In Vietnam, and in many other countries in Southeast Asia, gasoline-powered motorbikes are the predominant mode of transport and a major source of greenhouse gas emissions. “I have always thought about what will improve the air quality for future generations,” said Dat Bike founder and CEO Son Nguyen, and “a solution to replace all gasoline motorbikes. Our mission is to convert all gasoline-powered motorbikes in Vietnam and Southeast Asia to electric.”

Dat Bike’s electric motorbikes produce no emission and no noise. Its lithium-ion batteries are up to 80 percent recyclable. Its supply chain has a relatively low carbon footprint.

Local Design and Production of Motorbikes

Dat Bike designs most of its parts itself, including mechanical components such as the frame, seat, suspension and electric drivetrain. It also manufactures battery packs in-house using a proprietary method and says they are the highest energy batteries in the industry. The output feeds into a motor controller fine-tuned for the battery pack.

Dat Bike says its vertical integration gives it more control, which enables it to achieve higher efficiency than its competitors. “We own the speed controller and battery pack,” Nguyen explained, “which are two of the three main components on the electric drive system.”

Another key to success is the software. “Dat Bike needs to be a software-powered company,” Nguyen said. “Everything has to be very efficient, and software can help greatly.”

Nguyen said its Weaver 200 and Weaver++ have the fastest charging rates and the longest range of any motorbike in Vietnam. Customers get 100 kilometres of range by charging them for one hour or 200 kilometres in three hours.

Vertical Integration delivers a Competitive Advantage

Nguyen said Dat Bike is the only motorbike company in Southeast Asia that runs its own R&D, manufacturing and direct-to-consumer distribution. Vertical integration makes its motorbikes better, cheaper and faster than competitors. It released its first Weaver product within 15 months, has made hundreds of iterations and is developing its fourth model. Nguyen said its direct sales model is a fast feedback channel, allowing it to make continuous improvements.

For comparison, Nguyen said a typical gasoline-powered motorbike would have R&D in Japan, manufacturing in Vietnam and distribution through a dealership network. The average product development timeline is 5 years, and other firms usually rely on imported parts and an electric drivetrain from a third-party.

Nguyen, a graduate of the University of Illinois Urbana-Champaign (BS, MS CS '14) [told](#) his school that “motorcycles are just as common in Vietnam as cars are in the United States, with most homes having at least one or two of them. Our products have gained respect from the local authorities and customers because we do it on our own.”

Direct Sales, Online and Partnerships drive Volume

“Our customers want to make a huge impact by their choices,” Nguyen said. “Customers demand access to the latest technologies and convenience, to make their lives more comfortable.”

Dat Bike [sells](#) its motorbikes to those customers at stores in Ho Chi Minh City, Hanoi and Da Nang as well as online, and it is expanding to at least five other cities. The Weaver motorbike, different from a scooter, cost about US\$1,700 as of 2022.

Nguyen said Dat Bike piloted a program starting in May 2023 to build a network to provide free charging and has partnered with businesses such as restaurants and coffee shops to install fast charging stations.

Dat Bike also partnered in May 2023 with [Gojek](#) to pilot electric motorbikes for transportation, logistics and food delivery. Gojek drivers who use Dat Bike Weaver++ bikes can save up to four times on fuel compared to internal combustion engine motorbikes, Technode [reported](#), which enables them to save on operating costs and reduce carbon emissions. Drivers can charge their battery for free at dozens of community charging points in Ho Chi Minh City.

The Motorbike Market is Huge

Vietnam has the fourth largest two-wheeler market in the world, [according](#) to Motorcycles Data, with more than 60 million vehicles. After falling significantly in 2020, sales of motorbikes staged a sharp recovery and reached about 3.38 million units in 2022. While the market is mature, new rules to reduce CO2 emission are pushing manufacturers to produce electric vehicles.

Although Honda and Yamaha have been the market leaders, they and third-place firm Pega have lost market share recently to specialist electric motorbike firms including Vinfast, Yadea, Dibao and Sym. There is some competition from lower-end scooter firms as well. Selex Motors, for instance, launched electric scooters in late 2022, sells them for about US\$1,000 and says it will create an ecosystem with battery-swapping systems.

While Dat Bike currently focuses on a niche part of the adult segment rather than students or e-moped and scooter users, it plans to expand to mass customers. Dat Bike has a 10 percent share of the classic design market for adult e-motorcycles and targets a 20 percent market share within 5 years. Its revenue in 2022 was twelve times higher than in 2021.

Dat Bike says the Vietnam Ministry of Transportation certified it as the only electric motorbike that originated from Vietnam, so it has lowest cost-performance ratio in the industry. Nguyen [told](#) TechCrunch “there are also huge tax advantages for being local, as import tax for bikes is 45 percent and for bike parts ranging from 15 percent to 30 percent. Trade within Southeast Asia is tariff-free, which means that we have a competitive advantage to expand to the region compared to foreign bikes.”

TechCrunch said Dat Bike announced in November 2022 that it had raised an \$8 million Series A led by Jungle Ventures, bringing total funding since it was founded in 2019 to \$16.5 million. It is using the new funding for product development, hiring, support, the R&D and product teams, and building capacity.

Dat Bike Seeks to become a Major Player in Southeast Asia

Nguyen’s key goal is to become a huge brand in Southeast Asia and to have a major role in mitigating climate change. “Vietnam and Southeast Asia have great potential for this product,” he said. “In Southeast Asia, there are no local electric motorbike companies dominating the market. We aim to become a Vietnamese company well-known in the region for electric motorbike manufacturing.”