

AROUND THE WORLD

CAN A FAMILY VENTILATOR COMPANY SAVE ITALY?

WHY YOU SHOULD CARE

Because small medical device companies are springing into action around the globe.

By Anna Volpicelli
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Coronavirus Central: OZY looks at the virus sweeping the planet and its impact.

Before that fateful phone call, Gianluca Preziosa was the mostly anonymous head of a small company outside Bologna, started by his father. But Siare Engineering suddenly became critically important: It's the only company in Italy that manufactures "lung fans," or ventilators, a medical device now desperately needed around the globe to [treat patients with COVID-19](#). So at noon on March 6, Preziosa picked up the phone to hear Prime Minister Giuseppe Conte on the line. Italy needed 2,000 ventilators in four months — quadruple what Siare would normally produce. "They gave us just four hours to think about it and respond," says Preziosa.

The 46-year-old CEO responded with a request of his own: Ground troops. The company's [war against the coronavirus](#) is now being fought with the help of 25 Italian army soldiers, redeployed from manufacturing armaments. The reasoning? These soldiers were used to working on complex machines and wouldn't require much time to train. "In 48 hours, we were ready to act," Preziosa says.

Siare is now churning out 125 ventilators per week, and it hopes to accelerate production with the help of much bigger Italian manufacturers such as Fiat Chrysler and Ferrari. Amid a crisis that has brought a higher death toll to Italy (about 14,000 so far) than any country on Earth, the 35-person company has become essential. "We have to fight for our country and save it," Preziosa says.



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GIANLUCA PREZIOSA

Growing up in Crespellano-Valsamoggia, the small town where the company is based, Gianluca spent his summers working at Siare, which his father, Giuseppe, founded a year after Gianluca was born. The production department became his playground; his toys were the broken components of lung fans that he had to fix and assemble together. “Since I was a child, I have eaten bread and Siare,” Gianluca says.

He officially joined the company after earning an accounting degree from the Minerva Institute in Bologna at age 19. He thought he would start in the sales department, but his father had other ideas. “I was a warehouse worker, switchboard operator, bag holder and secretary,” Preziosa says. “My father had given precise orders to my bosses, asking them to treat me like the others, and sometimes even worse than them.” Gianluca thought it was a form of punishment for not continuing his studies, and he had a “stormy relationship” with his father. But he came to appreciate the “tough love,” which prepared him to take the reins as CEO in 2018. (Giuseppe Preziosa remains president of the company.)



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...ing and, ... the gross, the industry typically produces somewhere between 50,000 and 50,000 ventilators per year — but that number would be woefully inadequate to treat a spiraling number of severe COVID-19 patients who need them, given how the disease attacks the lungs. In the U.S., General Motors is starting to produce ventilators in an emergency joint venture with the small manufacturer Ventec Life Systems. In the U.K., Airbus, Rolls-Royce and other big manufacturers are teaming up with ventilator makers to ramp up capacity.

The devices are in such high demand that companies are refraining from exporting them: 90 percent of Siare's roughly \$12 million in annual sales had come outside Italy, but now everything they make is going to domestic need — including 320 machines that were ready to be shipped abroad, but were redirected to the hardest-hit parts of Italy, Preziosa says. His research and development team has also been working with Professor Marco Ranieri at Policlinico Sant'Orsola hospital and medical device maker Intersurgical on how to ventilate two patients with a single respirator, a potential breakthrough in stretching scant resources.

“Establishing good collaborations with employees, as well as with industry experts, has always been very important in Preziosa's business model,” says Fabio Martelli, head of device distribution, who has worked for the company for 13 years. “Teamwork is essential to him, especially at the current moment.”



Gianluca Preziosa, the CEO of the only company in Italy that makes ventilators, has been pressed into service to arm the war against coronavirus.

The CEO now works from 7:30 a.m. until 9 p.m., when he returns home for dinner with his wife and 16-month-old daughter. He then works until midnight — typically including a late call with Domenico Arcuri, the government minister in charge of the coronavirus emergency, about the next delivery. “This operation is psychologically very challenging,” Preziosa says. “But we did not even think for a moment that we could not try.” He muses about wanting to “disappear for two weeks” for a family vacation in Sardinia when this is all over. But no one knows when that will be.

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The atmosphere is tense as the company races ahead to meet the government's request. But the virus is outrunning them. As opposed to just ventilators, Alessandro Vergallo, president of the Association of Italian Medical Doctors of Anesthesiology and Intensive Care Units, says the country's health system now most needs more nurses and other staff for ICUs.

"It is great that the Italian government is working to help the production of more lung fans; the problem, however, is that we have a shortage of staff able to use them, because specialized personnel are needed along with these ventilators," Vergallo says. "We are now adopting provisional solutions by teaching five-year specialists how these machines work. This is what you do when you are at war."