

Pro Bono Project of the Year: Peru's Masi ventilator

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Luis Carlos Rodrigo, Carlos Carpio, Raúl Hidalgo and Maritza Reategui

Latin Lawyer speaks to Rodrigo, Elías & Medrano Abogados partners Luis Carlos Rodrigo Prado, Carlos Carpio and Raúl Hidalgo about the firm's advice on the development of crucial mechanical ventilator technology currently being used to save lives amid the covid-19 pandemic. The Masi ventilator initiative wins this year's Pro Bono Project of the Year Award.

Rodrigo Elías advised local innovation company Brein, which developed the ventilator in collaboration with Peruvian electrical engineering company Diacsa, US technology group Energy Automation Technologies and Lima-based design business Zolid, as well as the Pontifical Catholic University of Peru (PUCP).

The mechanical ventilator is called Masi, which is the Quechuan word for companion. Using a manual resuscitator bag and electronic paddles, the device supplies oxygen to covid-19 patients. A digital screen allows doctors to monitor and adjust the pressure, flow and volume of the oxygen system.

It is a lifeline to patients who cannot access conventional mechanical ventilators in Intensive Care Units (ICUs). The Masi ventilator is also designed to function 4,000 metres above sea level, catering for the high altitude areas of Peru's mountainous Andean region.

In covid-19 wards operating above capacity, demand for oxygen tanks often exceeds supply. Masi ventilators are helping to reduce that deficiency. So far, they are being used by at least 16 hospitals in Peru. The country's Ministry of Health (Minsa) has commissioned 275 ventilators to be made and distributed throughout Peru.

Partners Maritza Reátegui and Julio Guadalupe and associates Augusto Effio and Francisco Baldeón all worked on the Masi ventilator project along with the rest of the team.

How did you get involved with the Masi ventilator project?

Carlos Carpio: At the start of the pandemic, Peru was one of the countries most gravely affected by the covid-19 crisis. Several initiatives were conjured up to help combat the devastatingly high death toll. As we know, coronavirus attacks the respiratory system, but there weren't enough ventilators to help in the country's battle against the disease. Nor did we have enough beds. The project posed a transitory solution – it works as an emergency ventilator for covid-19 patients experiencing a shortage in their air supply.

The Masi ventilator was created as an innovative solution to prevent unnecessary deaths of patients that had a dose of covid-19 that was treatable with the right medical help, but struggled to gain access to traditional ventilators in crowded ICU units. The ventilator project called on mechanical expertise that has never been exercised on a project of this scale in the healthcare industry before.

Luis Carlos Rodrigo Prado: The initiative was initially launched and supported by Brein, a company that deals with all types of innovation. They are a client of ours. It was a natural step for us to get involved in a project like this, with most of the legal team involved being former PUCP students too.

What kind of legal services did you provide?

Luis Carlos Rodrigo Prado: We worked on all angles of the project. Carlos [Carpio] advised on contractual issues, while life sciences partner Maritza Reategui helped on all the biomedical aspects of the deal. Julio Guadalupe provided international trade expertise, while Raúl Hidalgo supplied tax counsel. Several tax and customs issues arose, while our trade legislation was initially not prepared to deal with imports of medical goods that have been donated. Therefore, we also helped to pass a law expediting the approval of medical permits and authorisation of the contracts with the Ministry of Health. The Peruvian navy got involved too, importing ventilator equipment from all over the world.

What were the toughest challenges you faced?

Carlos Carpio: Like many countries, we did not have the resources to begin with, so we had to find a way to quickly import everything we needed. The first challenge was to create legislation that allowed us to expedite the

importation process, while the second obstacle was to speed up the process of acquiring a health certificate for the companies involved, so that equipment could be rapidly developed across the country. Exceptional legislation was passed for us to be able to import those supplies.

Luis Carlos Rodrigo Prado: The approval process of both importing and producing the ventilators was very long, but all parties understood the urgency and importance of the situation and worked incredibly fast compared to the usual timeframe. Naturally, public officials are concerned about approving matters regarding public health on a tight deadline, but authorities were very understanding.

How did you get the ministry of health to expedite the process?

Luis Carlos Rodrigo Prado: At first, because the equipment was so complex authorities were hesitant to approve it straight away. However, the firm worked with engineering companies to communicate to the government all the technical information that they needed about the device to approve it and reassure them around how it would work. Since then, the device has been used by 16 hospitals, with around 225 ventilators being produced for ICU units across the country. At first, it was seen as a temporary solution, but as the pandemic continues more devices are being produced to help prevent fatalities.

Raúl Hidalgo: In this case, private companies had to collaborate with public bodies over material affecting public health. A healthcare project tied to government funding of this magnitude has not been done to date and the regulation for it did not exist before this. The closest example is legislation that was passed around the *fenómeno de niño* flooding crisis, during which time special laws were passed to allow emergency funding from the government.

Carlos Carpio: There was a willingness on both sides to help and move forward. At the end of the day, this device could be the difference between life and death and offers hope for survival.

What has been the wider impact of this project in Peru?

Luis Carlos Rodrigo Prado: The [legislation](#) we helped prepare to expedite both the imports and production of the ventilator has helped not only this project but many similar initiatives. The same expedition law was used to help import oxygen from Chile to Peru earlier this year, which would not have been possible without this landmark legislation.

At the beginning of the pandemic, the idea was to increase the country's [healthcare] capacity. [Before the pandemic, Peru counted an average of 0.6 ICU beds per 100,000 people, giving it one of the largest ICU shortages in the world]. Since then, the project has created a precedent for how private and public sectors can collaborate to provide emergency assistance and import essential equipment.

Carlos Carpio: The pandemic posed problems that could be resolved not only by the public sector but with the expertise of private companies. We expect to see that same level of collaboration with the vaccination programme too, with the two sectors interacting in solidarity.

What’s your advice to firms who want to get more involved in pro bono?

Luis Carlos Rodrigo Prado: One thing I would say is, if you hear about a specific cause or issue you are interested in helping with, just try and get involved in any way you can and as soon as possible. There are always opportunities to find pro bono work to get involved in, and there is so much we can take away from these projects. Being involved in the Masi project has been one of the most gratifying experiences for us as a firm, it has made a difference not only on a national level but the lawyers involved have truly felt the personal benefit.

Raúl Hidalgo: There is a truly rewarding experience to gain from pro bono work and seeing the benefits first-hand. Witnessing people who have survived covid-19 thanks to the ventilator project after Peru suffered from such a high quantity of cases really brought home the impact of the non-profit work we do.

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