



# Solidarity Fund

Unity in action

## SOLIDARITY FUND SUPPORT OF NATIONAL VENTILATOR PRODUCTION SUMMARY REPORT

(LOCALLY MANUFACTURED VENTILATORS)

SEPTEMBER 2020

DESCRIPTION	BENEFICIARY	FUNDING ALLOCATED	FUNDING DISBURSED
Prototype development	National Ventilator Project (NVP)	R11,3 million	R5,8 million (completed)
Manufacturing of 18,000 ventilators	Council for Scientific and Industrial Research (under NVP)	R212,1 million	R37,4 million
Manufacturing of 2,000 ventilators	South African Emergency Ventilator Project (SAVE-P) (under NVP)	R37,3 million	R19 million
<b>Total amount</b>		<b>R260,7 million</b>	<b>R62,2 million</b>

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#### SOLIDARITY FUND'S HEALTHCARE MANDATE

Ensuring that hospitals have an adequate supply of ventilators is crucial to fighting the Covid-19 pandemic. Under its **Care Pillar**, the Solidarity Fund seeks to improve access to ventilators for those who need them.

South Africa has been unable to source a sufficient number of ventilators from global markets to meet local demand. As a result, the Minister of Trade, Industry, and Competition initiated the National Ventilator Project (NVP). Under the guidance of the Cabinet and the National Command Council, the NVP looks to engage local manufacturers to produce fit-for-purpose, non-invasive ventilators. This effort is overseen by the Department of Trade, Industry and Competition (DTIC) and implemented by the South African Radio Astronomy Observatory (SARAO).

## PRINCIPLES THAT GUIDED THE FUND'S SUPPORT OF THE NATIONAL VENTILATOR PROJECT

The principles listed below are based on the Fund's Impact Framework. They have been adapted to guide the Fund's contribution within the **Care Pillar**.



### Alignment with national strategy:

The Fund works closely with relevant Government entities, particularly the National Department of Health (NDOH) and DTIC, to ensure that ventilators are given just priority in the health response to the pandemic.



### Impact additionality:

The Fund deploys its resources for maximum impact. A clear 'addition' to existing efforts around ventilation procurement must be observable.



### Speed:

One of the Fund's guiding principles is to address critical medical equipment needs at speed.



### Agility:

The Fund adjusts quickly to the changing needs of the health system as it grapples with the pandemic.



### Price competitiveness:

The ventilators have been procured at an average cost of R12,500 per device which compares favourably to international procurement alternatives.



### Supporting sustainable local manufacturing:

Resources from the Solidarity Fund will support the establishment of sustainable, local manufacturing capacity for ventilators.



### Retention of Intellectual Property Rights by the Solidarity Fund:

The Fund has retained the IP rights arising from funding the development of ventilator prototypes under the NVP and will have the option of donating these to the appropriate public institution in due course.

## SUPPORT FOR THE NATIONAL VENTILATOR PROJECT (NVP)

To date, the Fund has committed a total of R260,7 million in support of the National Ventilator Project (local manufacturing) under the implementation of the SARAO.<sup>1</sup>

Both globally and locally, ventilators have been in high demand. As a result, medical facilities have struggled to treat Covid-19 patients suffering respiratory difficulties. To reduce the local supply shortage, Government set up the National Ventilation Project (NVP). The primary concern of the NVP is to support the local manufacturing of non-invasive ventilators. The Solidarity Fund has worked closely with the NVP and the National Government to reduce the ventilator shortage.

These locally produced ventilators are expected to play a critical role in providing care to hospitalised COVID-19 patients. In addition, they will be used in medical facilities beyond the COVID-19 pandemic. A further anticipation from the NVP is that these manufacturers will have developed sustainable capacity for the production of medical equipment. Such capacity could be used to service both domestic and international demand in the future.

The Fund's commitment to the NVP has been split into three grants:

- 1. R11,3 million to fund the development of prototypes** that forerun the large-scale local production of ventilators.
- 2. R212,1million to fund the manufacturing of up to 18,000 CPAP ventilators.** The CSIR mandate is to provide 18,000 CPAP ventilators.
- 3. R37,3million to fund the manufacturing of up to 2,000 CPAP ventilators.** SAVE-P is mandated to provide 2,000 CPAP ventilators.

To date, four companies have been successful in developing ventilator prototypes that meet all necessary health standards, using R5,8 million of the R11,3 million allocated to prototype development. The residual amount of R5,5 million has been returned to the Fund for alternative use. Of the four companies that were approved, the fund paid for only three companies as the fourth company elected to self-fund its development costs due to IP considerations.

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<sup>1</sup>It should be noted that the Fund also donated 200 invasive ventilators to the NDOH. Details of this donation can be found in a previous report ([https://solidarityfund.co.za/media/2020/07/924551\\_SF\\_Health\\_Report\\_Updated\\_new\\_hr-2.pdf](https://solidarityfund.co.za/media/2020/07/924551_SF_Health_Report_Updated_new_hr-2.pdf))

**ANTICIPATED IMPACT OF UP-SCALING VENTILATOR PRODUCTION**

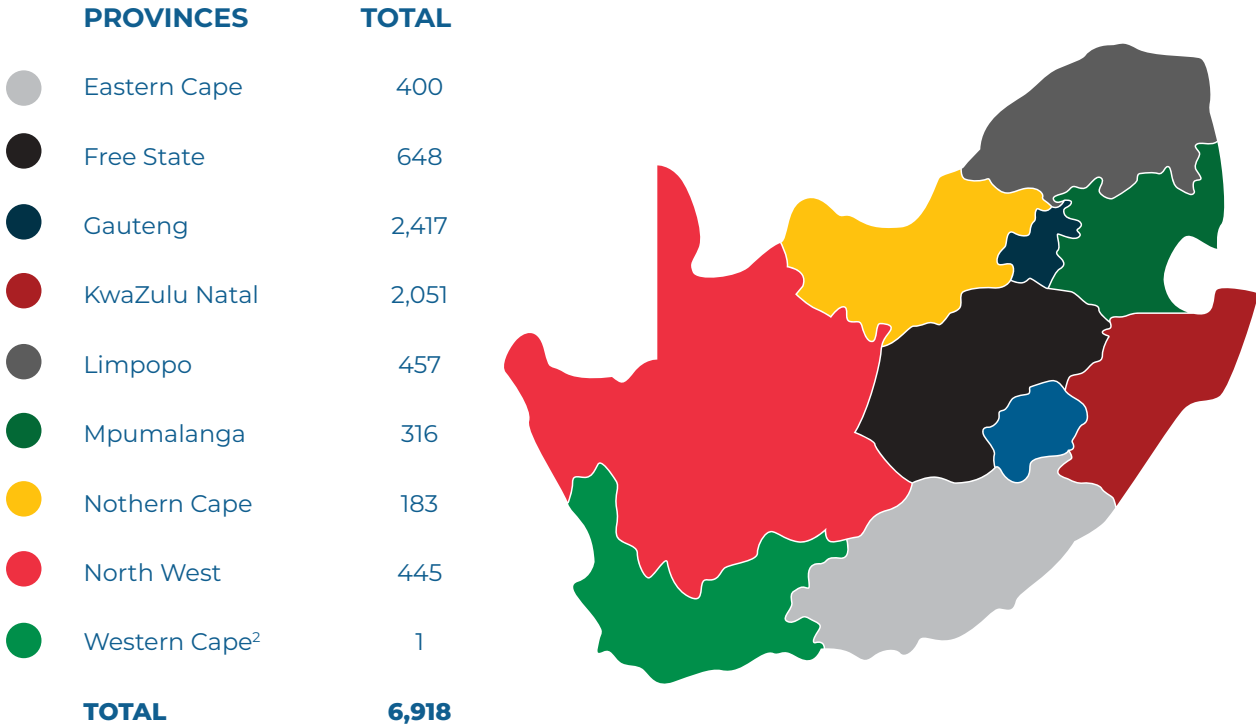
Following successful prototype development, the NVP has estimated that a further 50,000 ventilators can be produced locally. The cost of each device is approximately R12,500, which compares favourably to similar products that could have been imported. The Fund took a decision to support the local production of up to 20,000 ventilators, which will then be used in public hospitals to provide ventilation support to hospitalised COVID-19 patients.

The Fund has contracted CSIR and SAVE-P, two of the successful prototype developers, to produce up to 18,000 and 2,000 ventilators, respectively.

CSIR has also begun manufacturing and has produced 10,000 ventilators to date with 6,918 distributed to various hospitals across the country with the help of the NDOH.

SAVE-P has just produced 1,500 ventilators to date and the ventilators will be distributed in conjunction with the National Department of Health.

Through this initiative several hospitals across the country managed to receive the ventilators that they were in need for to assist the Covid-19 patients. The 6,918 ventilators from CSIR were distributed as per the diagram below.



<sup>2</sup>Please note that WC only received 1 ventilator as their peak period had passed by the time the ventilators were distributed.



## IMPACT STORY

Earmarked to be delivered by the end of August, the first batch of ventilators have been handed over ahead of schedule.

The Fund's investment to support the local manufacturing of ventilators has received wide press coverage. Charlotte Maxeke Johannesburg Academic Hospital has received 35 ventilators out of nearly 1,000 earmarked for other hospitals around the country.

The Solidarity Fund Chairman of the Board and the interim CEO attended the handover ceremony to the Department of Health's MEC - Dr Oliver Smith. The doctor said the introduction of these machines will play a major role in treating and managing the disease. "Invasive intubation, while effective, is not always necessary. Intubating a patient when they may not need it, denies another patient potentially life-saving treatment in resource-limited settings. These non-invasive ventilators will go a long way in relieving the pressure on stretched resources, while giving patients the necessary care for their recovery." Charlotte Maxeke is one of approximately 60 medical facilities across the country that have received ventilators so far.



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## KEY LESSONS LEARNT AND CHALLENGES

The collaboration between different entities has managed to ensure that the country could source the ventilators locally as this was overseen by the Department of Trade, Industry and Competition (DTIC) and implemented by the South African Radio Astronomy Observatory (SARAO). The project also showed the capabilities of local manufactures to produce medical equipment for the country.

Peak periods within the provinces varied and affected the initial allocations to the different provinces.

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## NEXT STEPS

The fund will continue to distribute in line with the demand. Clinician experts believe that there is wide-ranging use for the CPAP ventilators. As there are ventilators that are still to be distributed to the provinces, the fund will ensure that the ventilators are distributed to other medical facilities, particularly clinics and hospitals that do not have the most sophisticated equipment in the rural areas. This will ensure that other medical facilities across the country also benefit from the National Ventilator Project.