

<b>ACADEMIC INSTITUTION</b>	British Columbia Institution of Technology	<b>PROJECT NAME</b>	Ra Solutions
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**NEED AND AUDIENCE**

According to the United Nations Food and Agriculture Organization, every year, 1.3 billion tonnes of food is going to waste. So around 33 percent of the food produced for human consumption ends up rotting away. Our project Ra Solutions addresses this crop waste in developing countries. The project was originally started back in late 2018 upon discovering that up to 50 percent of crops produced in developing countries like Guatemala, Uganda and Ethiopia were going to waste. This was a result of extreme weather conditions and inadequate agricultural infrastructure. Our project, Ra Solutions is able to reduce carbon emissions by reducing food waste in these countries. Our solar dehydrator will be sold to NGOs in partnering countries where they distribute them to farmers either partially or fully subsidized.

**ACTION TAKEN**

To get to where we are today, our team conducted various rounds of prototyping and testing. The first prototype was tested by Okanagan College in 2018. Through our connection with Enactus Okanagan College, we were introduced to the Gleaners: a non-profit organization that sends millions of dehydrated meals around the world to help combat world hunger. The Gleaners were already dehydrating produce on a large scale and sending their dehydrated meals to countries like Guatemala. They agreed to take our dehydrator down to Guatemala on one of their shipments for testing and agreed to purchase 20 of our dehydrators once the design is finalized. The Gleaners also introduced us to Denis the Co-founder of Seeds to Harvest, a charity based in Guatemala helping to feed orphanages, public schools, and old age homes. Denis agreed to test the dehydrator for us. We've received promising video footage detailing the importance of improving the temperature control function, upgrading the bug screen, and strengthening the trays. We have also connected with a potential manufacturing partner and are awaiting quotes for the manufacturing of more units.

**IMPACT**

One dehydrator can offset **4 kg** of otherwise wasted produce every day. Therefore, a conservative 60-day harvest projects a collective **240 kg of saved waste**. Ra Solutions current impact this year occurred in Guatemala as it was being tested by Denis from Seeds to Harvest. Enactus BCIT can confirm that at least one pineapple was dehydrated using our dehydrator. This pineapple that would have otherwise gone to waste equates to 0.0025 tonnes of waste diverted.

<b>STANDARD METRICS</b>			
(These metrics are related only to the project presented and represent work done since May 2020)			
Litres of water conserved	-	Metric tonnes of waste diverted	-
GHG emissions diverted	-	Dollar value of waste diverted in CAD \$	3 CAD

<b>PROJECT START DATE</b>	October 31 <sup>st</sup> 2018	<b>IS THIS PROJECT WHOLLY-OWNED AND OPERATED BY THE TEAM?</b>	yes
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