

STEP 1. Identify Challenges

Read the Future Scene carefully and generate ideas for challenges, concerns, and possible related problems. Choose the 16 most important challenges and write them in the space provided

<p>As stated in the FS, Tasmania is the only place in the world where the cherries grown there have not been infected with antibiotic resistant bacteria. This could mean that many places around the world may have their cherry industry damaged because of how their cherry farms may have also been infected with the resistant bacteria. This could mean that businesses depending on cherry farming around the world could be impacted by this negatively because of how their farms may not be able to produce as many cherries since the resistant bacteria <i>Pseudomonas Avium</i> may be damaging their crops. Those farms, exporting businesses relying on cherry exports may all be negatively affected.</p>
<p>As stated in the FS, Tasmania is the only place in the world where the cherries grown there have not been infected with antibiotic resistant bacteria but the rest of the world's cherry trees are infected and destroyed.. This could lead to the market for cherries to be negatively 2 impacted because of how the demand could be high, and the supply of cherries could be low. This could lead to the cherry economy to drastically drop since many big cherry producers may not be able to produce any more cherries.</p>
<p>As stated in the FS, Tasmania is the only place in the world where the cherries grown there have not been infected with antibiotic resistant bacteria but the rest of the world's cherry trees are infected and destroyed.. This could lead to the market for cherries to be negatively 3 impacted because of how the demand could be high, and the supply of cherries could be low. This could lead to the cherry economy to drastically drop since many big cherry producers may not be able to produce any more cherries.</p>
<p>According to the FS, the technology of stopping the AB-resistance is not working or mostly unclear. This could mean that because of how the success rate of stopping the resistance could be unclear, it could lead to many investors in the antibiotic or pesticide technology to back out 4 of it because of how they may not be sure if the technology could work. This could lead to the funding of the technology to be slowed down because of the possible lack of investors. This may lead to the technology to possibly not be viable.</p>
<p>As stated in the FS, these antibiotic resistance diseases are spreading rampantly throughout Cherry Blossom Trees globally. This could mean that cherry blossom trees may become 5 infected with <i>Pseudomonas avium</i>. This could mean that these cherry blossom trees that may be considered beautiful may become infected and may lose their aesthetic touch. This could harm the aesthetics of cherry blossom trees.</p>
<p>As stated in the FS, <i>Pseudomonas Avium</i> may be spreading rampant throughout cherry blossom trees. This could mean that <i>Pseudomonas Avium</i> may spread to other plants and animals in the 6 surrounding environment. This could mean that these plants and animals may become ill or potentially die. This could cause the environmental sustainability of these ecosystems to crash. This could harm the environmental sustainability of ecosystems.</p>
<p>As stated in the FS, <i>Pseudomonas Avium</i> is plaguing the cherry blossom trees. According to research, ABR infections can spread from plants and animals to humans. This could mean that 7 <i>Pseudomonas Avium</i> can spread to humans. According to research, children are more susceptible to ABR infections since their immune system may be weaker. This could mean that children may get infected by <i>Pseudomonas</i>, which could cause them to have to stay home from school. This could harm these children's education negatively.</p>

<p>8 As seen in the FS, Cherry Blossom Trees are becoming infected by Pseudomonas Avium all over the world and are being sprayed with antibiotics. This could mean that naturalists and organic activists that consider cherry blossom trees highly may feel antibiotics are being overused. This could mean that these activists and naturalists who may respect nature and the work of god may disagree with the artificial use of pesticides and antibiotics on cherry blossom trees. Also, some cultures such as the Japanese who give a lot of importance to cherry blossom trees may be deprived of that due to death of so many cherry trees. This could harm the cultural and religious significance of these cherry blossom trees for many groups of people.</p>
<p>9 As stated in the FS pseudomonas avaim is a resistant disease that is spread in Cherry blossom trees, this could mean that eventually it could spread to other plants, animals or humans and since it is resistant to antibiotics it could take many lives in a couple days of being transformed into humans. This could mean that people may start becoming sick because they have the antibiotic resistant disease.</p>
<p>10 As stated in the FS farmers are needing a cure to the pseudomonas avaim because it is spreading real quick this could mean that people could become sick if they get pseudomonas avaim and they may lose all their trees and their money this could mean that they may stop making money. This could lead to them not being able to afford food and other basic necessities for their family.</p>
<p>11 According to the FS Cherry Blossoms are being infected by pseudomonas avaim. This could mean that the Cherry Blossoms Tree defense system may become weaker from the pseudomonas avaim to attack them; this could mean that the pseudomonas avaim could kill the tree faster and easier and can maybe spread to other species of trees. This could mean that whole forests of Cherry Blossom Trees could be infected and die because of the Cherry Blossom Trees lack of defense system.</p>
<p>12 According to the FS, pseudomonas avaim are infecting Cherry Blossoms Trees. This could mean that part of their culture might have a day that they eat cherries, but they may not eat the cherries because they may be worried that they may get sick. This may mean that people may be disobeying their culture because they may not be eating the cherries due to the bacteria.</p>
<p>13 The FS says that family farm and corporations went into bankruptcy. This may mean that the owners of the farm may be put under a lot of stress since their orchards may be dying due to the bacteria. This stress may soon start to worsen over time because the disease may be affecting the orchards. This may only start to grow worse and worse. This may affect the farmers and their family's psychological health because of this stress and anxiety.</p>
<p>14 The FS says that a bacteria is affecting cherry trees. Since the farmers may be working around and with the cherry trees most of the time. This may mean that the farmers may get sick with the same the bacteria the tree may have. This may mean that people may not be able to go out and meet their friends and family due to this sickness.</p>
<p>15 According to research during the Covid-19 pandemic when people got desperate for different items many people tried illegal ways to get the things they were desperate for. This may mean that the farmers may also try different ways to get the cherry trees back to normal. But some of the ways the farmers may be using may be illegal. This may break many laws.</p>
<p>16 The FS says that bacteria is affecting the cherry trees around the world. But since the farmers may be working around the trees most of the time, they may contract the disease from the tree. This may make the farmers sick because of being near the trees most of the time. This may not allow people to go outside and do recreational activities like running and jogging. This may affect people recreational activities.</p>

STEP 2. Identify the Underlying Problem

Using the challenges listed in Step 1, identify a problem of major importance to the Future Scene

situation. Write your Underlying Problem making sure your question clearly explains the action that will be taken and the desired results/goal of that action.

Recently, *Pseudomonas Avium* has been infecting Cherry Blossom trees around the world and has been spreading fast causing destroyed orchards and farmers losing their livelihoods. However, Tasmanian trees are the only ones that have not been infected by ABR yet. But farmers like Matilda in Tasmania are concerned about their future. How might we increase the protective measures for Tasmania's Cherry Trees against *Pseudomonas Avium* so that Tasmania's cherry blossom orchards can continue to thrive in 2042 and beyond?

STEP 3. Develop Solutions

Generate solution ideas to the Underlying Problem in Step 2. Choose the 16 most effective solutions and write the elaborated ideas in the space provided.

TAR (Tracking Antibiotic Resistance) will be a tracking system and a supercomputer that will track the development of *Pseudomonas Avium* in the world and Tasmania. TAR will work by having scientists around Tasmania to monitor and track cases of *Pseudomonas Avium* happening in different parts of the world and monitor their area. TAR will have the scientists give weekly updates about the area they were assigned on how much the area had *Pseudomonas Avium* infecting the cherry farms in a rating scale out of 10. 1 being low amounts of *Pseudomonas Avium*, and 10 being high amounts of *Pseudomonas Avium*. TAR will then take advantage of the fast processing capabilities of their supercomputer and have it process all the information they have received about *Pseudomonas Avium*. The processed information will be able to determine how close the resistance was to Tasmania and if there was bad resistance in the areas close to Tasmania. This will help improve the protective measures of Tasmania's trees against *Pseudomonas Avium* because of how Tasmania will be able to know with the help of their supercomputer about when, where and if the resistance is close to Tasmania.

FS (Funding Security) will be a website where it will be updated daily by health specialists and scientists. FS will be updated by these health specialists on ways to have good hygiene to avoid antibiotic resistance, while the scientist will update the website daily about new scientific research on antibiotic resistance, which will further expand the audience of FS. FS will be created with CAD to help make the website look more inviting and aesthetically pleasing. FS will be powered by ads which they will get from the Australian government because of how FS will be raising awareness about new developments of technology that will be able to stop *Pseudomonas Avium*. FS will also be able to gain money from grants they will get from health agencies such as the CDC since FS will help with efforts against *Pseudomonas Avium*. FS will also be able to receive money from donations that they will be open to. People who want to donate money will be able to be shown daily updates from the health specialists and scientists. FS will then donate most of the money made from their website to improving the protective measures against *Pseudomonas Avium*. This will help improve the protective measures of Tasmania's cherry trees against *Pseudomonas Avium* because of how Tasmania will be able to have more funds to help stop *Pseudomonas Avium* from affecting them.

IC (Implementing CRISPR) will work by helping to implement CRISPR in Australia to help counter *Pseudomonas Avium*. IC will work by utilizing CRISPR-Cas9 on trees that have been infected with *Pseudomonas Avium* to edit the genes of the bacteria to essentially eliminate it. IC will then implement this around Australia to eliminate the threat of *Pseudomonas Avium* in Tasmania because of how the threat of *Pseudomonas Avium* will be eliminated from Australia, meaning that Tasmania has a low chance of getting *Pseudomonas Avium* from other areas in Australia. This will help improve the protective measures of Tasmania's cherry trees against *Pseudomonas Avium* because of how the biggest threat of getting *Pseudomonas Avium* from other areas of Australia will be completely eliminated.

PCT (Protecting Cherry Trees) will make a task force that will be able to help protect cherry trees in Tasmania by making sure that no fruits or vegetables will be transported into Tasmania. PCT will work by making it so that if anything is imported into Tasmania, then fruits or vegetables will both be prohibited. PCT will also enforce this by making a penalty of \$5,000 for anyone who is found importing any fruits or vegetables. PCT will have a quarantine building⁴ for anything imported into Tasmania to be searched by a robot for any fruits or vegetables. PCT will then burn any fruits or vegetables in a chamber to make sure that if any Pseudomonas Avium is on the vegetable then it will die before it can infect Tasmanian cherry trees. This will help improve the protective measures of Tasmania's cherry trees against Pseudomonas Avium because there will be a very small chance of any strains of Pseudomonas Avium to infect Tasmanian cherry trees after PCT will be put into action.

WTB(Within Tasmania's Borders) will create a 3 pillar approach that will ensure that Tasmania's Cherry Trees will have protective measures against Pseudomonas Avium so that Tasmania's cherry blossom orchards continue to thrive in 2042 and beyond. This 3 pillar approach will be called 3PF (3 Pillar Foundation). This first pillar will be prevention and control of Pseudomonas. The first pillar will utilize more advanced nanobots that will be able to navigate inside the bark of the trees. The second pillar will be monitoring and surveying⁵ Pseudomonas Avium. The second pillar will function by using antibiogram tests to monitor if the trees have been infected. The third pillar will be cultivation and farming. The third pillar will function by using a plot manager that will see how the farming and cultivation of the cherry blossom trees are going. These 3 pillars will insure that Tasmania's Cherry Trees will have protective measures against Pseudomonas Avium so that Tasmania's cherry blossom orchards will continue to thrive.

True-D UVLight will create a UV light generator that will be able to be used inside farms around trees to kill bacteria growing on the trees. This will mean that Tasmania's Cherry Trees will have protective Measures against Pseudomonas Avium so that Tasmania's cherry blossom orchards continue to thrive. First, True- D UVLight will create a UV light generator that when⁶ paired with natural herbicides. Second, True-D UVlight will utilize this UV light generator to stop the growth of bacteria thus improving the safety measures used against Pseudomonas Avium. This will ensure that Tasmania's Cherry Trees will have protective measures against Pseudomonas Avium so that Tasmania's cherry blossom orchards will continue to thrive.

CE(Communication Extension) will create an extension that will utilize advanced communication technology that will be able to allow for advanced communication between different farmers and agricultural experts to discuss the protective measures of Tasmania's cherry blossom orchards. By utilizing this communication Extension, CE will be able to improve⁷ the protective measures of Tasmania's cherry blossom orchards so that Tasmania's cherry blossom orchards will continue to thrive. First, CE will utilize 7G communication and internet to increase the speed. Second, CE will utilize this speed to improve the effectiveness of the communication thus ensuring that Tasmania's Cherry Trees will have protective measures against Pseudomonas Avium so that Tasmania's cherry blossom orchards will continue to thrive.

OHFA(One Health For all) will utilize a one health approach that will utilize data from plants and animals in the Tasmanian environment and data analysis from experts from multiple sectors to increase the protective measures that the Tasmania's Cherry Trees have against Pseudomonas Avium so that Tasmania's cherry blossom orchards can continue to thrive. First,⁸ OHFA will use advanced data collection that will be able to collect data from plants and animals in the surrounding environments to create multiple data sets. Second, OHFA will create a committee of experts such as microbiologists, engineers, scientists, and biologists to give data based scientific insights on ABR infections. This means that OHFA will be able to increase Tasmania's cherry blossom orchard's protective measures against Pseudomonas Avium so that Tasmainia's cherry blossom trees will continue to thrive in 2042 and beyond.

MyTree'sVaccine will make vaccines that will be adapted and make vaccines that will be made into sprays that the farmers can order online and spry the soil around the tree to make the defense part of the tree stronger and make the defense system of the tree stronger so that it can fight pseudomonas avium with no problem so that Tasmania's cherry blossom orchards can continue to thrive in 2042 and beyond.

LFS (Laboratory for Scientists) The simulator will make a simulator that will simulate the expertise of the Cherry Blossom Tree when Pseudomonas Avium gets into Tasmania. First, the simulator will show how Pseudomonas Avium infects the cherry trees. Then, it will show how antibiotics react to Pseudomonas Avium. This will show the scientists how the disease got resistance to the antibiotics and what they can do. They will at the end of the simulator that will let the scientists experiment with the molecules in the simulator to see if they may actually come up with a new antibiotic. This will help improve the protective measures of Tasmania's cherry trees against Pseudomonas Avium because of how LFS will help scietnis find a cure against Pseudomonas Avium.

GGR (Government Ground Rules) will make ground rules that will be that the stuff that is being delivered in Tasmania will be checked closely so that it doesn't carry any antibiotic resistance or diseases that could affect the ecosystem, if it has been tested that it has antibiotic resistance or any other diseases they will not be able to go to tasmania. This will make sure that Tasmania's cherry blossom orchards can continue to thrive in 2042 and beyond

SI (Suitable Insurance) will make insurance plans for all the farmers that will be needing it to be protected from the bacterial infection. because they will not want to continue putting in the money in maintaining the Trees without insurance that will cover them if they might need it if they may lose their whole forest because of pseudomonas avium. This will make farmers want to keep their farms and make them less worried about losing their farms. Tasmania's cherry blossom orchards will continue to thrive in 2042 and beyond.

RVG(Recreational Video Game) will create a video game that will focus on raising awareness about Pseudomonas avium.In RVG people will race to defeat antibiotic resistance and while they are learning about what Pseudomonas avium.And every time you catch a bactrim the game will show you a brief summary of what the bacterium is and what it is retante to.In RVG the game will have three levels for different age groups.For children the will focus more on the education side of the game.The game will teach kids on what ABR is and what an antibiotic is.The game will also teach children to maintain hygiene.And all of this will happen while the kid is playing.Then for the level for adults the game will focus more on the recreational part.The adult will do different types of exercises in order to destroy bacteria and create antibiotics.And last the level for seniors.The game will be calm and soothing.The gamer will also play classical music and the game will have high infographics so that the seniors understand everything the game is saying.protective measures for Tasmania's Cherry Trees against Pseudomonas Avium so that Tasmania's cherry blossom orchards can continue to thrive in 2042 and beyond?

STT Social TED Talk) will create a live stream that will raise awareness about Pseudomonas avium. There will be a TED talk that is posted every week.In these TED talks there will be different experts every week.On the first week there will be a scientist that is an agricultural expert and they will share on how Pseudomonas avium is affecting the cherry trees in Tasmania.On the second week farmers from around the world like Matilda will join on an online meet platform and will share on how ABR is affecting their crops.Then after the live stream is over there will be an open chat and a Q and A section that will allow people to ask questions to the TED talkers.Then in the open chat people chat people will be able to talk about what they understood from the TED talk.And people can also friend people they may be getting along with.

PHPCF(Psychological Health Platform for Cherry Farmers) will create a platform where cherry farmers with psychological problems can come to. This platform will have psychologists and psychiatrists that will help console the cherry farmers so that they do not feel alone. The platform will also allow people to to friend other people. But while they are talking to different people they will be anonymous so that other people don't make fun of them .

The cherry farmers Association will come together to encourage proper trade practices among the farmer and create awareness among other businesses to understand the farmer's problems. They will help the famers to This will increase the protective measures for Tasmania's Cherry Trees against Pseudomonas Avium so that Tasmania's cherry blossom orchards can continue to thrive in 2042 and beyond.

STEP 4. Generate Criteria

Generate criteria to determine which solution idea does the best job of solving the Underlying Problem and/or addressing the Future Scene situation. Select the 5 most important criteria for measuring solution ideas and write them in the spaces provided.

- 1 Which solution will improve the effectiveness in increasing the protective measures for Tasmania's Cherry Trees against Pseudomonas Avium to the greatest extent?
- 2 Which solution will be the fastest in ensuring Tasmania's cherry blossom orchards can continue to thrive?
- 3 Which solution will be the most accepted by the Tasmanian farmers such as Matilda in reducing the concerns about ABR infections?
- 4 Which solution will be the cheapest in reducing the negative impacts of the worldwide cherry shortage?
- 5 Which solution will be the most beneficial in improving the economic status of the cherry industry?

STEP 5. Apply Criteria to Solutions

From the solution ideas written in Step 3, select the 8 ideas with the most potential to solve the Underlying Problem and list them on the grid. Use each criterion to rank the solutions on a scale from 1 (poorest) to 8 (best). The numerical ranking for one important criterion may be doubled.

Rank solutions.

							Criteria
#	Solution	1	2	3	4	5	Total

	<p>TAR (Tracking Antibiotic Resistance) will be a tracking system and a supercomputer that will track the development of Pseudomonas Avium in the world and Tasmania. TAR will work by having scientists around Tasmania to monitor and track cases of Pseudomonas Avium happening in different parts of the world and monitor their area. TAR will have the scientists give weekly updates about the area they were assigned on how much the area had Pseudomonas Avium infecting the cherry farms in a rating scale out of 10. 1 being low amounts of Pseudomonas Avium, and 10 being high amounts of Pseudomonas Avium. TAR will then take advantage of the fast processing capabilities of their supercomputer and have it process all the information they have received about Pseudomonas Avium. The processed information will be able to determine how close the resistance was to Tasmania and if there was bad resistance in the areas close to Tasmania. This will help improve the protective measures of Tasmania's trees against Pseudomonas Avium because of how Tasmania will be able to know with the help of their supercomputer about when, where and if the resistance is close to Tasmania.</p>	<p>1 1 6 8 6</p>	<p>22</p>
<p>2</p>	<p>FS(Funding Security) will be a website where it will be updated daily by health specialists and scientists. FS will be updated by these health specialists on ways to have good hygiene to avoid antibiotic resistance, while the scientist will update the website daily about new scientific research on antibiotic resistance, which will further expand the audience of FS. FS will be created with CAD to help make the website look more inviting and aesthetically pleasing. FS will be powered by ads which they will get from the Australian government because of how FS will be raising awareness about new developments of technology that will be able to stop Pseudomonas Avium. FS will also be able to gain money from grants they will get from health agencies such as the CDC since FS will help with efforts against Pseudomonas Avium. FS will also be able to receive money from donations that they will be open to. People who want to donate money will be able to be shown daily updates from the health specialists and scientists. FS will then donate most of the money made from their website to improving the protective measures against Pseudomonas Avium. This will help improve the protective measures of Tasmania's cherry trees against Pseudomonas Avium because of how Tasmania will be able to have more funds to help stop Pseudomonas Avium from affecting them.</p>	<p>6 6 2 1 5</p>	<p>20</p>

3	<p>True-D UVLight will create a UV light generator that will be able to be used inside farms around trees to kill bacteria growing on the trees. This will mean that Tasmania's Cherry Trees will have protective Measures against Pseudomonas Avium so that Tasmania's cherry blossom orchards continue to thrive. First, True- D UVLight will create a UV light generator that when paired with natural herbicides. Second, True-D UVlight will utilize this UV light generatore to stop the growth of bacteria thus improving the safety measures used against Pseudomonas Avium. This will ensure that Tasmania's Cherry Trees will have protective measures against Pseudomonas Avium so that Tasmania's cherry blossom orchards will continue to thrive.</p>	4 4 8 5 2	23
4	<p>WTB(Within Tasmania's Borders) will create a 3 pillar approach that will ensure that Tasmania's Cherry Trees will have protective measures against Pseudomonas Avium so that Tasmania's cherry blossom orchards continue to thrive in 2042 and beyond. This 3 pillar approach will be called 3PF (3 Pillar Foundation). This first pillar will be prevention and control of Pseudomonas. The first pillar will utilize more advanced nanobots that will be able to navigate inside the bark of the trees. The second pillar will be monitoring and surveying Pseudomonas Avium. The second pillar will function by using antibiogram tests to monitor if the trees have been infected. The third pillar will be cultivation and farming. The third pillar will function by using a plot manager that will see how the farming and cultivation of the cherry blossom trees are going. These 3 pillars will insure that Tasmania's Cherry Trees will have protective measures against Pseudomonas Avium so that Tasmania's cherry blossom orchards will continue to thrive.</p>	8 8 7 6 7	36
5	<p>MyTree'sVaccine will make vaccines that will be adapted and make vaccines that will be made into sprays that the farmers can order online and spry the soil around the tree to make the defense part of the tree stronger and make the defense system of the tree stronger so that it can fight pseudomonas avaim with no problem so that Tasmania's cherry blossom orchards can continue to thrive in 2042 and beyond.</p>	3 7 5 3 4	22
6	<p>GGR (Government Ground Rules) will make ground rules that will be that the stuff that is being delivered in Tasmania will be checked closely so that it doesn't carry any antibiotic resistance or diseases that could affect the ecosystem, if it has been tested that it has antibiotic resistance or any other diseases they will not be able to go to tasmania. This will make sure that Tasmania's cherry blossom orchards can continue to thrive in 2042 and beyond</p>	7 2 1 2 1	13

7	<p>STT Social TED Talk) will create a live stream that will raise awareness about Pseudomonas avium. There will be a TED talk that is posted every week. In these TED talks there will be different experts every week. On the first week there will be a scientist that is an agricultural expert and they will share on how Pseudomonas avium is affecting the cherry trees in Tasmania. On the second week farmers from around the world like Matilda will join on an online meet platform and will share on how ABR is affecting their crops. Then after the live stream is over there will be an open chat and a Q and A section that will allow people to ask questions to the TED talkers. Then in the open chat people chat people will be able to talk about what they understood from the TED talk. And people can also friend people they may be getting along with.</p>	5 5 3 4 8	25
8	<p>IC (Implementing CRISPR) will work by helping to implement CRISPR in Australia to help counter Pseudomonas Avium. IC will work by utilizing CRISPR-Cas9 on trees that have been infected with Pseudomonas Avium to edit the genes of the bacteria to essentially eliminate it. IC will then implement this around Australia to eliminate the threat of Pseudomonas Avium in Tasmania because of how the threat of Pseudomonas Avium will be eliminated from Australia, meaning that Tasmania has a low chance of getting Pseudomonas Avium from other areas in Australia. This will help improve the protective measures of Tasmania's cherry trees against Pseudomonas Avium because of how the biggest threat of getting Pseudomonas Avium from other areas of Australia will be completely eliminated.</p>	2 3 4 7 3	19

STEP 6. Develop Action Plan

Develop your top-scoring solution idea into an Action Plan. Thoroughly explain how the Underlying Problem is solved, how the plan will be implemented, and how the Future Scene will be affected.

We the FPS'ers will invite WTB to increase the protective measures for Tasmania's Cherry Trees against Pseudomonas Avium so that Tasmania's cherry blossom orchards can continue to thrive in 2041 and beyond. First, WTB will create 3PF (3 Pillar Foundation). The first pillar will be prevention and control of ABR. The second pillar will be monitoring and surveying ABR. The third pillar will be cultivation and farming.

WTB will have many staff:

- 1 - Scientists
- 2 - Engineers
- 3 - Biologists
- 4 - Microbiology
- 5 - Biotech experts
- 6 - Bioengineers
- 7 - Health Care workers
- 8 - Nanoengineers
- 9 - Farmers
- 10 - Agriculturists
- 11 - AG (Agricultural Grant)

3PF will have many different pillars that will function in many different ways but will collaborate together to increase the protective measures for Tasmania's Cherry Trees against Pseudomonas Avium. 3PF's first pillar will be prevention and control of ABR. 3PF will utilize advanced nanobots that will use advanced nanotechnology that will be able to be implemented onto the cherry blossom trees and will be able to view the surrounding trees and detect if there are any signs of ABR infections such as Pseudomonas Avium. These nanobots will be able to detect different types of infections and will be able to puncture the cell wall and kill these bacteriums. These nanobots will be able to work in mass quantities. 3PF's second pillar will be monitoring and surveying ABR. 3PF will utilize antibiogram tests that will be able to get samples from cherry blossom trees and detect what bacteria are on the sample and which ones pose a threat and if there are any signs of Pseudomonas Genus that could mutate into Pseudomonas Avium. Then, 3PF will implement nanobots into those areas where Pseudomonas is located. 3PF will utilize a priority system that will detect which bacteria are resistant and sort which bacteria are occurring. First, places that are found with high amounts of ABR will be placed high on the priority to get nanobots. Second, places that are found with medium amounts of ABR will be placed medium on the priority to get antibiotics. Third, places that are found with low amounts of ABR will be placed low on the list. 3PF's third pillar will be farming and cultivation. 3PF will utilize a plot manager that farmers and agriculturists will be able to use to organize information on what areas are in high likelihood of infection and what is low likely for infection. This plot manager will utilize the antibiogram tests to sort the areas and the nanobots will be able to detect the situation of the cherry blossom trees in Tasmania. This is how 3PF will function.

3PF will improve the protective measures for Tasmania's Cherry Trees against Pseudomonas Avium so that Tasmania's cherry blossom orchards can continue to thrive. By utilizing this 3 pillar plan by using nanobots to kill bacteria, the antibiogram tests to monitor, and plot manager to find out which fields are infected another protection measure. This is why it scored high on criteria 1 & 2

3PF will positively impact the FS in many ways. First, 3PF will positively impact Tasmianians' cherry

blossom orchards because 3PF will implement protection measures. Second, 3PF will positively impact the cherry blossom economy by protecting the cherry blossom industry. Third, 3PF will positively impact farmers because it will ensure the sustainability of the cherry blossom industry. This is why it scored high on criteria 4

3PF will have support from farmers because it will ensure their farms will be safe from ABR infections. 3PF will also have support from the government because 3PF will reduce the burden from them in the agricultural industry. This is why it scored high on criteria 3

3PF may have an opponent from other agricultural industries such as the mango industry.

3PF scored low on criteria for cheapest, which may be an obstacle in cost; however, Agricultural Grant by the government will help support the economic aspect of WTB.

WTB will begin 3PF in January of 2043 at Tasmania with a facility to start 3PF's first pillar: utilizing advanced nanobots that will be able to navigate inside the bark of the trees. 3PF will study this technology at their facility, which should take around 2 months. In April of 2043, 3PF will implement their second pillar, monitoring and surveillance over Pseudomonas Avium. 3PF will achieve this pillar by collecting samples from cherry trees around Australia for Pseudomonas Avium. In August of 2043, 3PF will implement their third pillar - cultivation and farming. In September of 2043, 3PF will be able to complete its operation. This is why it scored high on being fastest in criteria 2

In conclusion, will increase the protective measures for Tasmania's Cherry Trees against Pseudomonas Avium so that Tasmania's cherry blossom orchards can continue to thrive in 2041 and beyond. First, WTB will create 3PF (3 Pillar Foundation). The first pillar will be prevention and control of ABR. The second pillar will be monitoring and surveying ABR. The third pillar will be cultivation and farming.