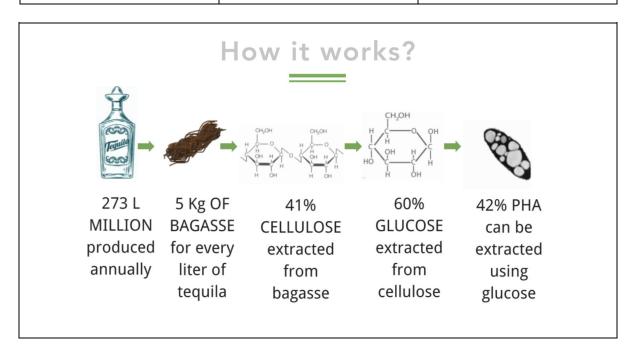


Preview of our landing page: <a href="https://contactoelielville.wixsite.com/phagave">https://contactoelielville.wixsite.com/phagave</a>

### **About Us**

MISSION	VISION	VALUES
"Revolutionize the plastic industry with a quality material that generates a low environmental impact, with a circular model that seeks to redefine how we consume plastics"	"To satisfy the plastic demand of restaurants in Guadalajara with our high quality material that has low environmental impact"	- Leadership - Compromise - Responsability



### **Executive Summary**

PHAgave as an enterprise, has a strong commitment with our society, that's why we focus on generating win-win situations with our stakeholders.

The plastic production industry is well established, which means they are accustomed to do the things the old fashion way. To disrupt this industry, we are going to enter with the actors that already have the infrastructure, offering pay-per-sale contracts, so they are going to pay us for the bioplastic they sell. This way, we are going to produce just what they need, lean manufacturing. By this, we are going to save costs for the stock and the equipment necessary to process the plastic.

This structure will allow us to capitalize us with a low risk and gradually buy the necessary equipment to process the PHA we generate.

The final objective is to satisfy the demand of two very important zones of restaurants in our city by the use of the bioplastics, because of its quick degradation characteristics, to make food packaging materials such as bags and even forks and spoons. This is interesting for restaurants because after using PHA's they could show themselves as environmentally responsible enterprises which basically is having a good image.

THE FACTS				
9 Months working on the project	14 People working in the project	11,111 (approx) USD invested on the project	3 Validations with tequila enterprises	3750 Cups of coffee
Marketing/Brand/Image				

### 1.- PHAgave Logo and Branding

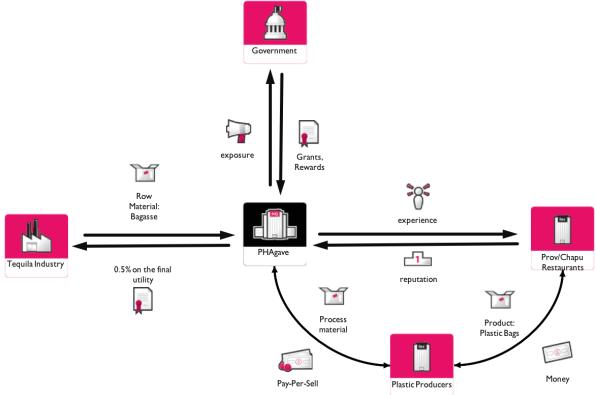
#### 2.- Website Construction

- 3.- Participation in the 2017 International Genetically Engineered Machine (iGEM) competition, where the best universities around the world compete. This will help us validate the quality of our project. In addition, we could received feedback from judges that are experts on the topic and from people from different countries and backgrounds that could enrich our project.
- 4.- Lean Prototyping: Once we defined our problematic, we created a quick solution after speaking with a tequila enterprise named "Tromba". They told us, in their experience, what

could be the possible challenges, and in which numbers/details we should work more from their perspective as part of the tequila cluster. They also told us the important and the main questions we have to answer in order to make our product successful. After that, we worked and advanced with research and development and we presented our project to the enterprise "Tequileño", they gave us some feedback to finally be able to see the enterprise "Tequila Camarena". They show us the whole process of tequila production and bagasse obtention and gave us some tips to scale up our process from the lab to a massive production.

5.- We are planning to pitch for different competences and people with background in business and investment, in order to receive feedback regarding our numbers, financial plan and business model. The idea is to make sure that the project is viable and in which conditions, before looking for an investment.

# Business Model



Using business model blocks we structured our business model, which basically tells us to whom we are going to generate value. Of course, PHAgave as an enterprise, has a strong commitment with our society, that's why we just focus on generating win-win situation with our stakeholders. We achieved to mapped 7 actors in this kind of relationship, but for practical uses we are going to use the diagram above.

Basically our business model works like this: the tequila industry generates a waste, bagasse. They give us the bagasse for PHA production, which we use as raw material. In

order to save money, we want the factories to send it to us, taking advantage that they already pay for managing that waste. They will investment in transportation costs but with the difference that we are going to offer a profit from the final utility, that would be very interesting for the tequila industry because they are going to be able to generate a passive income from an actual cost. They are going to generate money from their garbage, who wouldn't be interested in doing that? I would!

After that, we have another important actor: our plastic producers. Something really interesting happens here, the plastic production industry is a well established industry, so they are accustomed to do the things the old fashion way, so, in order to disrupt this industry, we are going to enter with the actors that already have the infrastructure, offering pay-per-sale contracts, so they are going to pay us for the bioplastic they sell. This way we are going to produce just what they need, lean manufacturing. By doing this we are going to save costs for the stock and the equipment necessary to process the plastic.

This will allow us to capitalize us with a low risk and gradually buy the necessary equipment to process the PHA we generate.

The final objective is to satisfy the demand of two very important zones of restaurants in our city by the use of the bioplastics, because of its quick degradation characteristics, to make food packaging materials such as bags and even forks and spoons. This is interesting for restaurants because after using PHA's they could show themselves as environmentally responsible enterprises which basically is having a good image.

Lastly, the government is supporting this kind of initiatives. In Mexico there is a law that textually says "Avoid that in the transportation, containment and packaging of materials, as well as in the management of solid waste, non-biodegradable materials are used" so we could interact with them and work together to help them achieve their environmental objectives, in exchange of exposure or grants for the project.

### Potential obstacles

Tequila industry is a well established industry, so it's very difficult to enter to that cluster, and they are our providers. We didn't have any problems to get some samples of bagasse from them, but there is a high possibility that they will get jealous with the bagasse if they see we are making business with their waste. We need to have good problem solving skills to avoid this scenario. In addition, biotech entrepreneurs are not usually supported, because high-impact/high-technology business are high risk/high benefit and a run for a long term.

In addition, industries in México are not prepared at all to make the whole jump from plastics to bioplastics, even though there is a law, it is not mandatory for industries to use bioplastics in their products and they are not so environmentally conscious to take that marginal cost/opportunity cost, so probably we would need to sell our product in countries like Singapore or Turkey, where they have zero tolerance in their laws for plastics, this until the industry evolves in México.

## Comments

"The solution is well established, they aim to attack an environmental problematic with another problematic, that's clever! "	"This kind of projects are what biotechnology needs to push the entrepreneurial ecosystem in Mexico"	"Working in the Environmental Ministry in Pánama, i realized that applied projects like this, which take out a benefit from a waste of a major industry, are the best way to generate a direct positive change in the environment. Good project"
Dra. Maria Mercedes Roca	Luis Garcia	Ediner Fuentes
Founder of Consult MRS	CTO in Spirax	Regional Chief in Ministry of Environment in Pánama

# **Sponsors**



















## **NEED MORE INFO?**

investor	Customer	Partner	Press
https://drive.google.co m/open?id=0Bwa46fr- uATac0dKdzFYX3pFZ k0	https://drive.google.co m/open?id=0Bwa46fr- uATac0dKdzFYX3pFZ k0	contactoelielvillegas@gmail.com	https://www.facebook. com/IGEM-TEC-GDA- 807301782767980/?h c_ref=ARQxllehaXC8p x7TZnIVCMOE4rnqu3 q_YNVmfTyz5w0naAb c2SxYmIH_norqcImrBf l