The submitted projects will be evaluated based on the following criteria:

* **Innovation**: How innovative is the project? Is there a comparable solution on the market already or is the idea brand new?
* **Sustainability**: How sustainable is the implementation of the project itself? What impact does the project have in our goal to raise sustainability?
* **Social relevance**: How big is the social benefit of the project?
* **Presentation**: How is the project presented overall?

**Tell our story:**

After working in restaurants for years, we’ve noticed a problem. After every shift, we would personally have to throw away buckets and buckets of food.

**Problem**

Why is this? It’s because making smart food purchasing decisions is time consuming and confusing. Overordering in restaurants leads to food waste, a lot of food waste. In Europe we throw away 240.000 tons of food waste daily which costs us almost 400 million euros daily. Food waste has a huge environmental and economic cost.

**Solution**

To help prevent food waste we developed GreenBytes. We tell restaurants how much food to order to reduce food waste. We have developed a progressive web application that breaks down menus, tracks inventory, and predicts future food consumption using machine learning algorithms. More specifically we use a recurrent neural network that inputs past sales to predict future sales. Once we predict future sales, we suggest how much of each raw ingredient the restaurant should order in the upcoming days. If the restaurant agrees with our suggestion, they can approve the order and we will automatically send out the order to all of their distributors.

**How do we make predictions?**

To predict future food sales in restaurants we consider past sales, weather data, and COVID-19 statistics.

**What are our current results?**

We ran some tests about the difference our predictions would make in a local restaurant. The waste for three days of operation without predictions in a local restaurant would be 187 kilos but with our predictions we would waste negative 2 kilos of food. The negative meaning we underpredicted by 2 kilos.

**Environmental impact**

Understanding trends in restaurant sales by looking at past sales and various weather patterns we are able to reduce almost 2 tonnes of food waste in one month in just one restaurant.

This is important because food waste produces a huge amount of greenhouse gases, impacts our land, our water, our biodiversity, and our fellow man.

Worldwide approximately 3.3 billion tonnes of co2 are released into the atmosphere due to food waste each year. Food waste emits more ghg emissions than any country other than China and the U.S.

The water foot print of food waste is 250 km 3, which is larger than that of any countries’ agriculture sector

Mammals, birds, fish and amphibians all lose their natural habitats when agriculture expands its land use. The area of land required to grow all the food we through away is larger than the size of canada

**Competitive advantage**

There are many companies working to fight food waste. Food waste is complex and happens for different reasons across the food supply chain. Other solutions often focus on redirecting food surplus. GreenBytes is unique from other food waste solutions because we prevent food waste before it happens in restaurants in a way that benefits restaurants economically.

**Our team**

Our team has backgrounds is science, engineering, forecasting, and computer science. Along with our strong technical backgrounds we have a combined 10 years' experience in the food service industry. This puts us in a unique position, because we have a tangible understanding the problem of food waste in restaurants and are equipped with the technical know-how and problem-solving skills to help address it.

**Next steps**

Our next steps are to further analyze our algorithms, conduct LCA analyses, and run full-service tests in restaurants.

GreenBytes is done with food waste and you should be too.