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 Sponsor: a leading airline catering company

Trash or Treasure: Airline Catering Food Waste

Motivation / Background

1/3 of food
produced in
the world
either lost or
wasted

Air **passenger**
traffic
expected to
double next
two decades

Highly
regulated &
complex
aviation
operations



200+
OPERATING UNITS IN 60+
COUNTRIES/TERRITORIES



700+
MILLION PASSENGERS
SERVED ANNUALLY

Key Question / Hypothesis

- What are the **primary contributors** to **organic waste** in airline catering kitchens?
- How can **innovative solutions** improve the sponsoring company's performance?

Relevant Literature

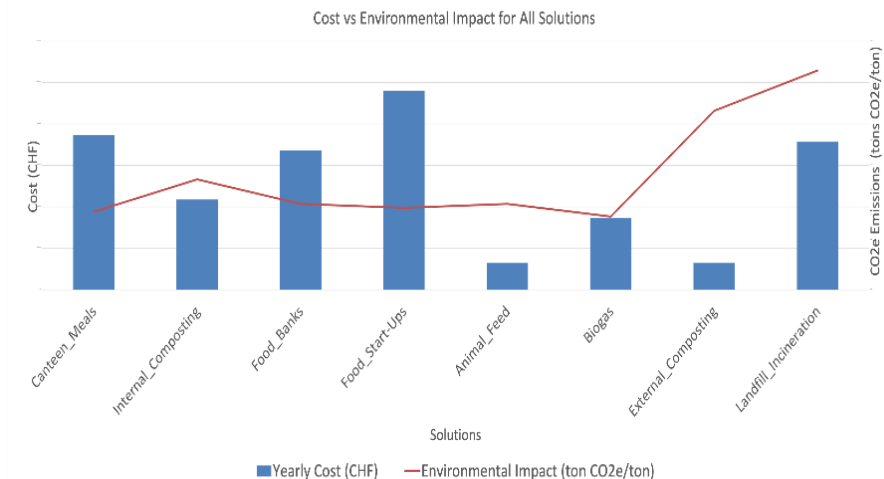
United Nations Environment Programme. (2014). Worldwide Food Waste | thinkEatsave-UNEP. Think Eat Save-Reduce Your Footprint. Retrieved November 4, 2021, from <https://www.unep.org/thinkeatsave/get-informed/worldwide-food-waste>.
 Parfitt, J., Barthel, M., & Macnaughton, S. (2010). Food waste within food supply chains: quantification and potential for change to 2050. Philosophical Transactions of the Royal Society B: Biological Sciences, 365(1554), 3065–3081.



Methodology

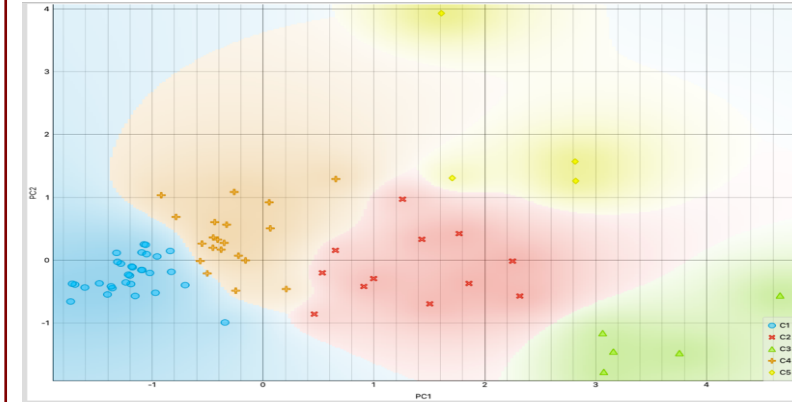


Results



Biogas: best solution but not widely available

Results



K-means clustering to extrapolate results

Contribution

- ✓ Innovative **organic waste solution matrix** from both financial & environmental perspective
- ✓ Identified **five distinct clusters** that allows the company to craft a global strategy
- ✓ Data-driven recycling targets for optimal cost and environmental impact – **45% of all waste produced**



Meiling Chen



Joaquin Hidalgo