

04

## CULINARY COACH

Autonomous food truck concept



## Meet The Team

Obviously...



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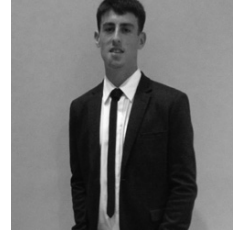


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## Designing the future of mobile food

**We were tasked with rethinking and redesigning the entire idea and concept of mobile food from the ground up; to be the architects of the entire experience.**

Whether serving at city centers or catering to working people at office buildings, food trucks are moving to the forefront of the food industry. Although they've existed since the 1800's in various forms, in past years the market has grown exponentially; in 2017 food trucks are slated to bring in 1.2 billion in the US alone.

Our group decided to consider what roadside cuisine would look like if multi-billion dollar companies decided to try their hand at the market.



## 5 weeks of deep research and analysis

**Designing a food truck requires extensive knowledge of all aspects related to the industry and users.**

We researched laws and regulations regarding autonomous vehicles, mobile food, culinary standards, etc, as well as ways that these laws might change in the conceptual timeline of our vehicle.

We talked with users, sent out surveys, researched interviews with people in the field, investigated emerging technologies, and caught up on the latest in the automotive world.





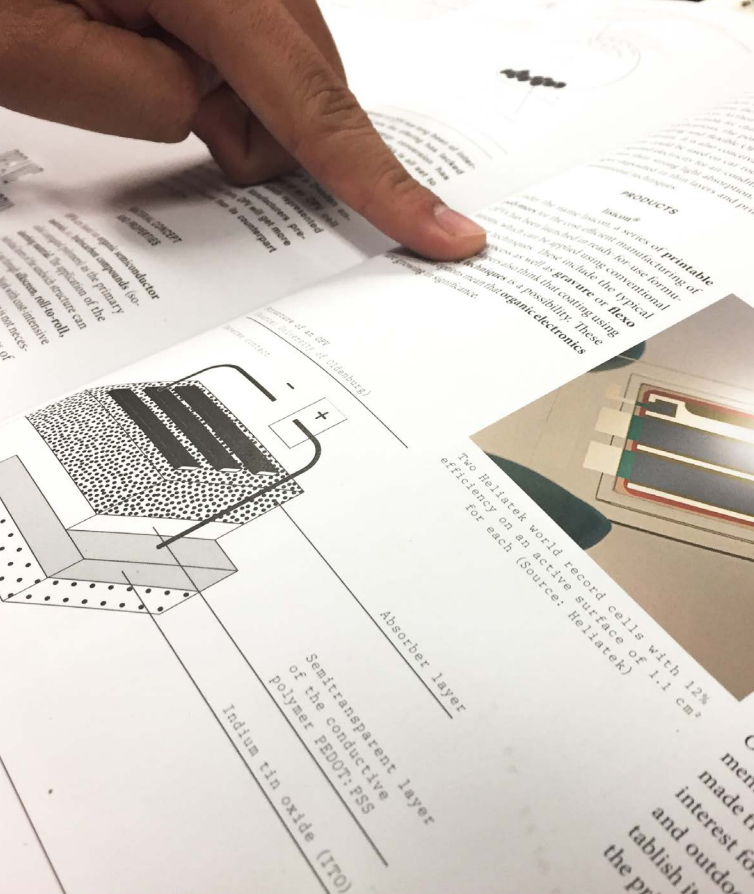
## Combining vending machines and cars

### A mixture of autonomous technology and full food preparation vending machines

There is a brand of vending machine in Italy and other countries that creates a whole fresh pizza from scratch. Seconds after placing your order, the machine mixes the dough, rolls out the pizza, spreads on the sauce, and cooks the entire meal in only 3 minutes. This technology, applied to a food truck and a limited menu, would be groundbreaking.

This, combined with self-driving technology, could create a completely autonomous vehicle that serves a limited menu without the size of a conventional kitchen





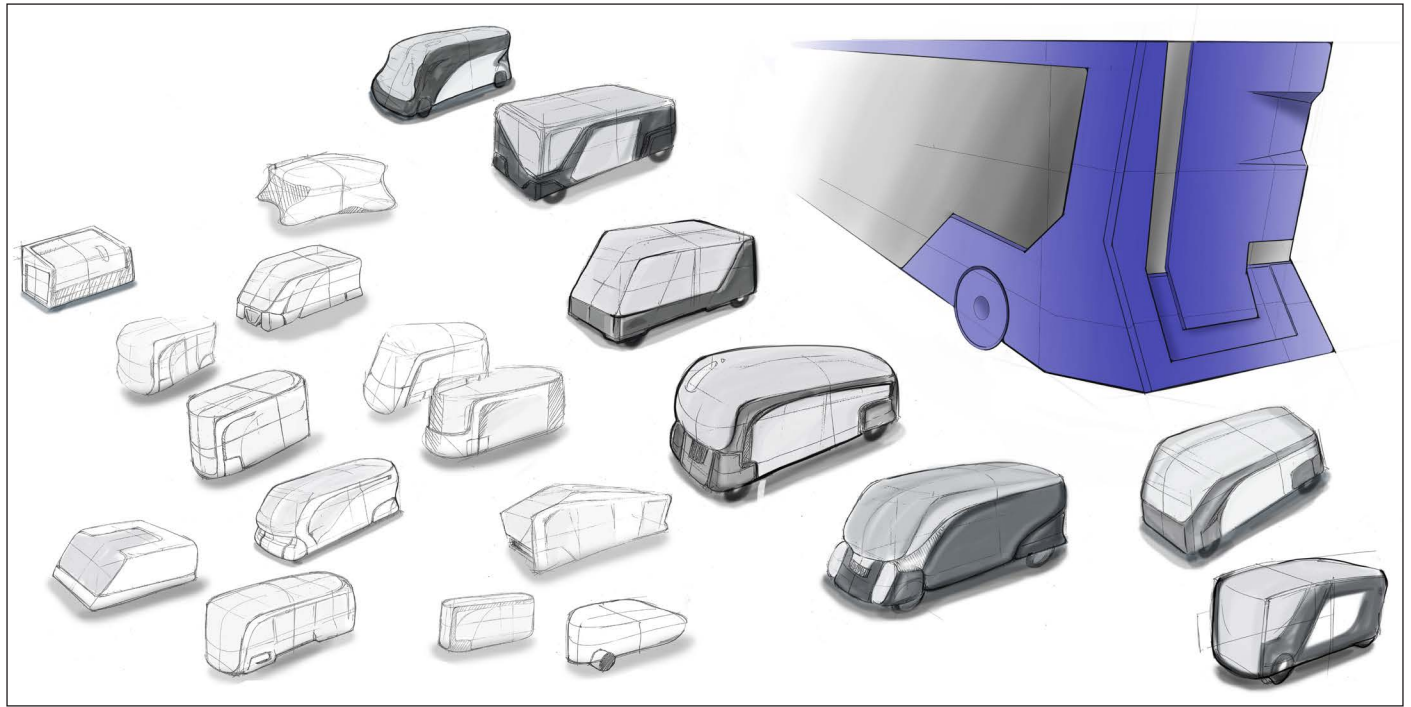
## Careful consideration of materials and manufacturing

**Food trucks, even those designed for large companies, are low production; therefore the per-unit price and cost of creation needs to be considered extensively.**

We chose a fiberglass exterior to reduce weight and limit the tooling that the vehicle panels would need. In addition, we incorporated many pre-manufactured parts such as the base chassis, engine, drivetrain, and wheels.

Strength and durability were also key in the material choice for the interior and exterior, as these vehicles would be designed to last for the entire lifetime of the business model that included them.

My contribution to the form studies



## Full scale interior user testing and mockup

**Vehicle design feedback and advice via walk through cardboard models.**

To best design and customize the customer experience, we spared no time in creating a full scale cardboard mockup of the interior of the truck.

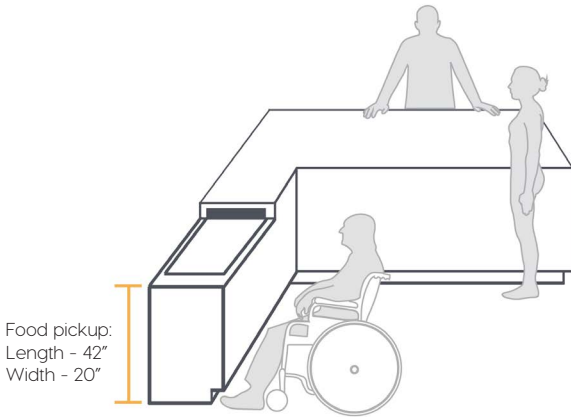
The feedback was incredibly positive, as the majority of users appreciated the approach that we took towards the interior.

We incorporated some advice from user feedback, such as the addition of a “barista” and improvements to the overall design and heights of the tables.

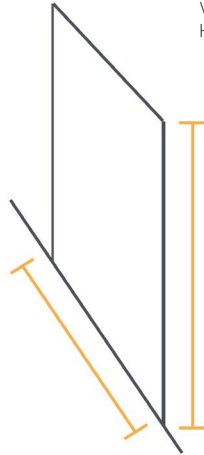




# User feedback and human factors



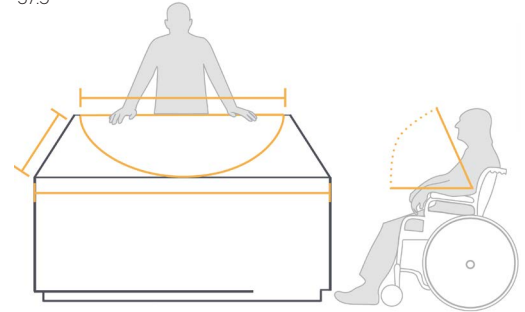
Standard accessibility height: 31"



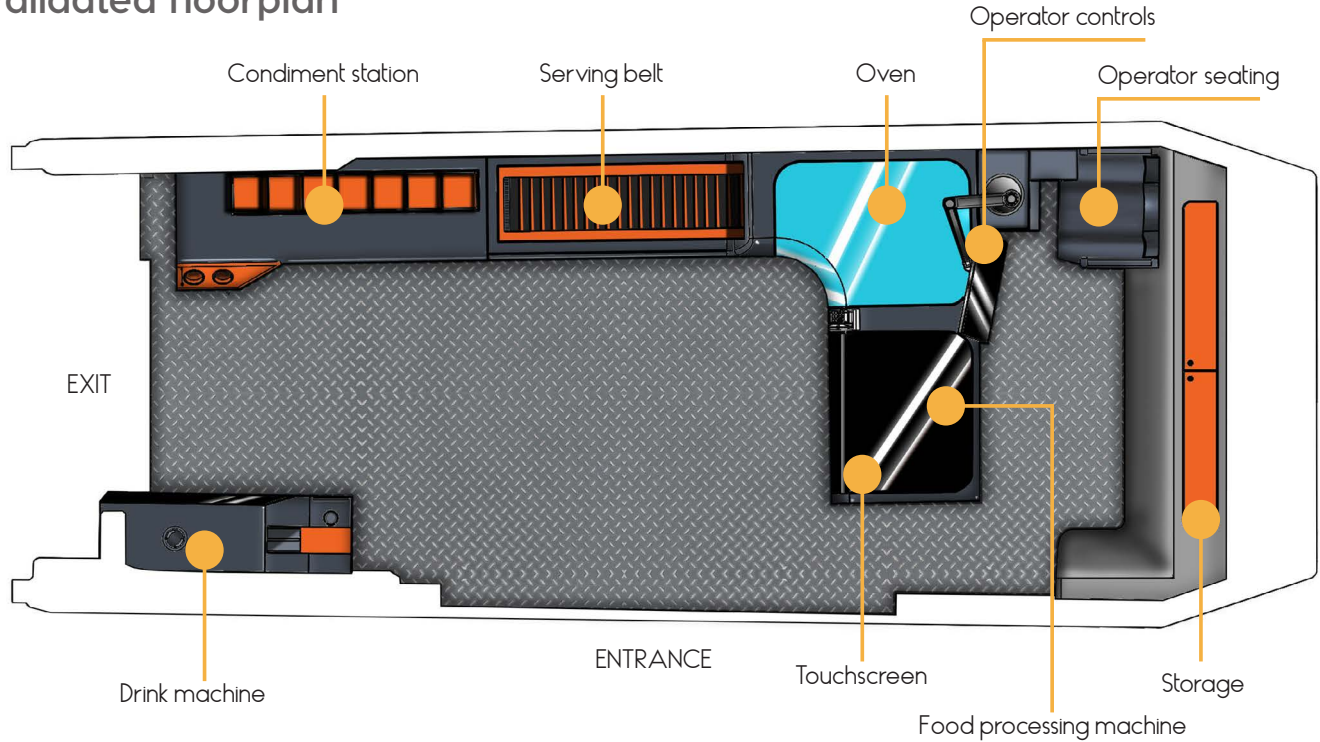
Server Counter  
Length - 49"  
Width - 29"  
Height - 37.5"

Standard Reach:  
Male - 18"  
Female - 16"

Standard Span:  
Male - 62.5"  
Female - 57.3"



# Validated floorplan




CULINARY  
COACH



**The coach pulls up to a popular area and opens its doors to the public.**

Customers enter the Culinary Coach® through the wide doorway into the open interior space using the fold down ramp.





A top view through the solar glass, where a man ascends the ramp into the vehicle and walks up to the interior counter.

**The sunroof charges a battery that provides backup power to many of the trucks functions.**

**Here the customer is choosing toppings for his meal.** The touchscreen, which is a variant of Pizza Hut's conceptual UI, allows him to swipe toppings right on to a virtual Pizza.


This experience would be completely custom.





The operator of the vehicle assists the customer through their journey and controls the vehicle through a touch monitor.

The operator functions as more of a “barista” than a cook, as at no point do they touch food.

A black food service counter with orange circular openings. A recycling symbol is visible on the counter's surface. In the background, a person's legs in grey pants and yellow shoes are visible on a green carpet.

**With food in hand the customer moves to the  
condiment station to complement their meal.**


Being a green vehicle, it comes equipped with recycling and eco-friendly packaging, utensils, and napkins.





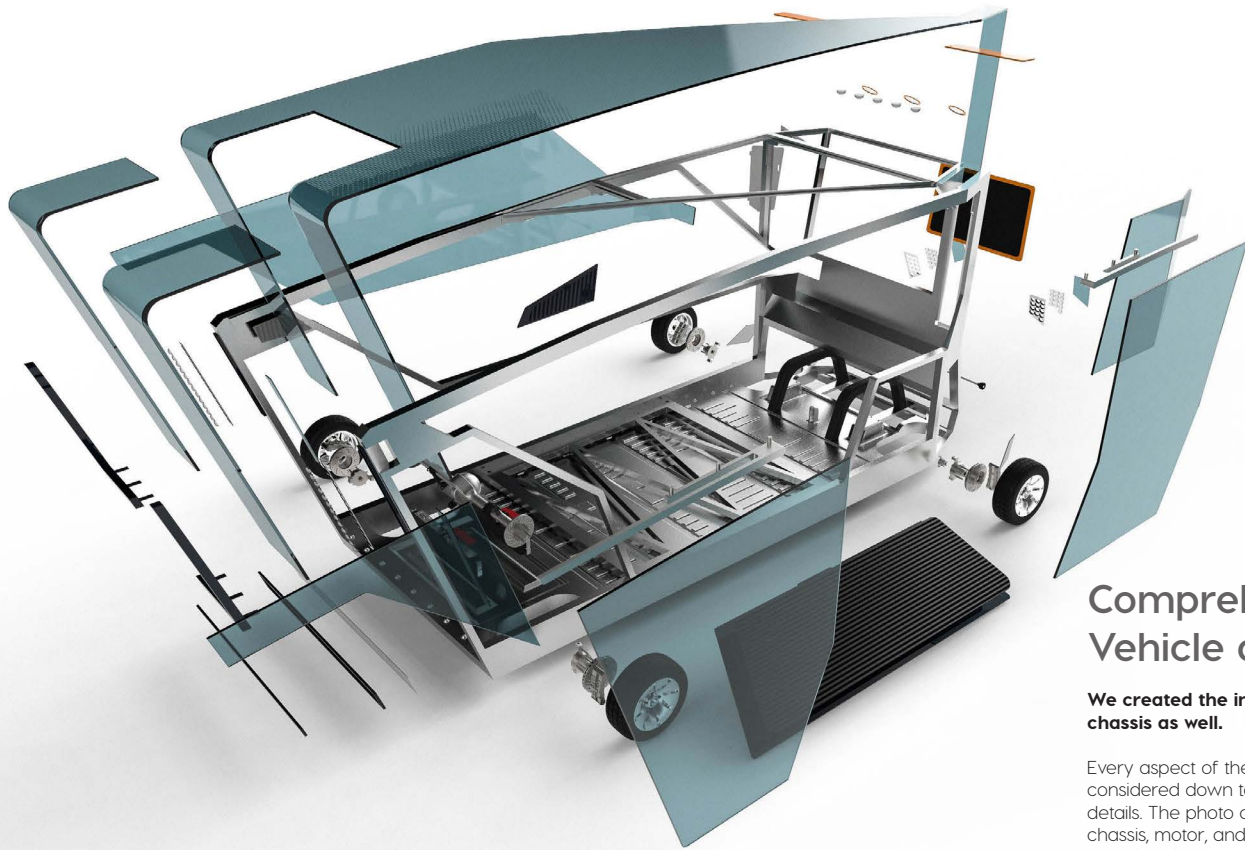
**The customer places their cup on the belt and uses the touchpad to choose their drink.**

The cup moves inside the machine, fills, and then rises out of the center of the machine. This design lowers the center of gravity to assist with vehicle stability.

The image shows the interior of a modern food truck. A menu board is mounted on the wall, displaying "PIZZA A LEGNA" and "Panini / Subs" with their respective prices. Below the menu is a control panel with buttons for "PAY NOW", "ADD DRINK", "RESET", and "NEW ORDER". A small potted plant sits on a counter to the right. The floor is dark with a white arrow pointing forward. The truck is parked on a city street at night, with buildings and streetlights visible through the windows.

**Arrows and signs guide the customer through the vehicle smoothly from entrance to exit.**

In addition, the vehicle is designed that someone moving backwards doesn't disrupt traffic flow.



## Comprehensive Vehicle design

**We created the interior components and chassis as well.**

Every aspect of the vehicle was carefully considered down to the most inessential of details. The photo above demonstrates the chassis, motor, and wiring workup that we completed.

