

A Trial for the adjustable open food service on the Shodoshima island using original food truck “TRACK/TRUCK”

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Abstract

It is a report of the trial for designing, making and operating a food truck, TRACK/TRUCK, on Shodoshima island, Japan during the period of the Setouchi Art Triennale 2022. It was designed as a combination of a minimal “kitchen unit” which has only 2.5 sqm on the platform of the mini truck to satisfy the equipment of the restaurant license by the public health center and “outdoor dining” which is both a dining space and a space for displaying data tracking the origins of food. They were also designed to be constructed using only materials that could be purchased at home centers on the island, and especially the surface of “outdoor dining” consisted of fishnets that we could see often on the local residents' courtyards to dry seafood in the island. The combinations of “kitchen units” and the “outdoor dining” allow us to be movable and adjustable in different situations of the island, which is the small street, a plaza in front of the port, parking area in the ferry terminal, in front of cafe terrace or the courtyard of the festival. It was a trial to understand how the new type of food service works and contributes to the community on the island in the practice.

Keywords: Food Truck, Temporary Use, Adjustable Design

1. Introduction

1.1. Background of the project

The use of outdoor space in Japan is subject to several legal regulations and operational issues, making it difficult to use each public space, such as parks with building restrictions, station plazas with traffic priority, and roads that require an application to be submitted to the police before use. In recent years, in anticipation of regional revitalization and a lively atmosphere, the Urban Renewal Special Measures Law and other laws have revised the criteria for permission for the 'occupation' of the street. Emergency measures have been adopted to allow roadside restaurants to use the streets in response to COVID-19, and the Ministry of Land, Infrastructure, Transport, and Tourism established the 'hokomichi (pedestrian-friendly street)' system to continue using outdoor space.

Even though eating and drinking in outdoor spaces has been relatively widespread, they are only permitted in seating areas. Most kitchen cars only cook and sell food, and most do not have eating and drinking spaces. However, urban eating and drinking spaces can only

lead to a food-based community if people's dining spaces are integrated with cooking and selling spaces. The success or failure of markets and event spaces also depends on the presence of management staff, who act as a link between the location manager, stall holders, and consumers. For large-scale events, the organizers can shape, manage, and enliven the place, but for small-scale events with a few food trucks, it is not easy to carry out administrative procedures and commit to the event's management, which is not easy due to operational costs and operational challenges.

This paper reports on an attempt to design, produce, and operate a food truck comprising a kitchen unit and dining space on Shodoshima Island during the Setouchi International Art Festival 2022.

1.2. Truck/Track

The proposal required both 'flexibility', which can be applied to any theme or type of operation, and 'locality', which is unique to Shodoshima Island. The food truck features a combination of a remarkably compact 'kitchen unit' of only 2.5 square meters, ingeniously designed to fit on a light truck platform with 'outdoor dining,' which serves as both a dining space and a platform to display data tracking the origin of the food,

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and which combination, kitchen units can be used in various situations, such as island paths, the square in front of the harbor, the ferry terminal car park, in front of a café terrace, or in the courtyard of a festival.

The various foodstuffs we eat in our daily lives are produced, processed, transported and consumed through retail outlets and restaurants in all parts of the world. This process involves not only material, labor, and transport costs but also various other costs such as water consumption, CO2 emissions, feed, and waste in the production process, which are systemized so that we do not have to be aware of them in our daily lives. An 'outdoor dining' space was designed to showcase food tracking data, allowing visitors to enjoy and experience the hidden data that has been black boxed in modern society.

2. Production Content and Production Process

2.1. Consideration of Business Form

Operating a food business requires a permit from the health department of the local government. In addition to the usual "restaurant permit" for regular store operations, we had to consider various types of business forms such as "stall business" or "short-term business" for selling yakisoba at festival stalls, the "short-term seasonal business" like seaside huts, "mobile sales" without cooking, and "vehicle business" with modified kitchen cars.

"Stall business" type of operation involves a simple stall with a counter and a tent-like roof, which does not require strict partitioning, making it easy to set up. However, it does not allow for any preparation, only a single step of "passing heated food over the counter just before serving," limiting the variety of food that can be served. Because of it, we decided not to adopt this plan. Meantime, the "short-term business" type has the same restrictions as "stall business" and it is limited to operations within 10 days, thus not applicable either.

"Short-term seasonal business," like a seaside hut, has slightly relaxed conditions compared to the above two operational models, but requires the same facility standards as a general restaurant and it cannot be moved, so we also avoided this direction. We also considered "mobile sales," which only allows selling food. This method involves customers cooking the purchased food by themselves as in BBQ, but the food provided will need to be in sterilized package, jarred, or canned, requiring more stricter facility standards for producing the products than for normal restaurant permits, leading us to abandon this option as well.

Ultimately, the project adopted "vehicle business," which refers to a typical kitchen car, allowing a small hut to be built on the truck or trailer for cooking. The kitchen must have "designated area" and "easy-to-clean interior," but does not require hot water facilities, and water supply and drainage can be managed with onboard tanks. Depending on the water tank capacity, the number of dishes sold and cooking steps allowed can vary. For this project, we chose an 80 liters tanks for acquiring permit to sell two dishes / two steps of cooking, which translate to providing one food dish and the drinks.

2.2. Food Truck

Due to the fact, that the roads in wide area of Shodoshima Island are all very narrow, the locals predominantly use small sized vehicles. For this reason, we decided to load a kitchen unit onto the bed of a small light-weight pickup truck for this project. The truck's bed measures 1.4m in width, 1.9m in length, and the total height must be kept under 2.5m in height from the ground. The maximum load allowed is limited to 350kg, requiring necessary kitchen equipment and the unit itself to be within this range. Additionally, we planned to create an "outdoor dining" space where visitors could view tracked information about the food ingredients while dining the purchased dish and drinks (Fig.1).

1) Kitchen Unit : The area of the truck bed (1,900×1,400mm) were divided into two counter-tops and a central space for the cook to stand. The spaces below and above the counters are kept for two water tanks for supply and drainage, a small refrigerator, two coolers, and storages. One of the counters has a sink embedded with a foot pedal faucet, and the other counter-top has an IH stove. The total electrical capacity was set within 1600W, based on the standard generator output. The kitchen unit can be opened from three sides with lifting doors for ventilation and servicing the customers. Each opening is equipped with screens to prevent insect entries. For the unit's structure, it uses SPF lumbers (2x2, 2x4) and structural plywood panels. Hollow polycarbonate panels are used for the roof and exterior walls. To keep within load limits, the structure was designed to be sturdy yet lightweight, minimizing material usage and keeping the plywood panels to the lower part of the unit. At the end, the unit can be lifted by 5-6 people, enough to place it on the truck bed. Most materials were locally sourced from the island's hardware store, together with some materials purchased online. Self-building process

allowed for on-site adjustments, material cutting, processing, painting, and assembly, while simultaneously studying details and checking mockup strength. The design of the kitchen unit was aiming for simplicity and practicality but designed to open on three sides with pop-up windows, allowing the shop to open up towards all three sides, instead of typical one side. This is essential in an environment with narrow alleys as in Shodo Island. We believe this flexibility in servicing sides was considered important. Eventually, the kitchen unit, fixed to the truck bed, passed required health department inspections, and safely obtained the needed restaurant business permit.

2) Outdoor Dining Pavilion : The outdoor dining space was created by utilizing the hanging nets typically used for drying fish, and simple wooden frames made of multiple SPF lumber pieces (2x3, 2x4). The space was designed to resemble the large size truck

bed, ensuring sufficient width and height for the kitchen unit to merge into it. Six sets of gate-shaped unit with hanged drying nets were created, each suspending a set of 16 drying nets. Furthermore, since the dining pavilion was designed for easy assembly and disassembly, foldable frames and easily removable drying nets were designed. The blue colors of the drying nets can be seen everywhere on the island and therefore the pavilion made from the same material fits right into the context's sceneries.

2.3. Track food

In response to the making of the food truck, we also tracked the food and exhibited its findings in the dining pavilion. The food truck was serving "Fish & Chips" using local seafood and vegetables, and therefore the idea was to research about the behind-the-scenes information and data about these local foods and their ingredients, usually overlooked by or hidden from the

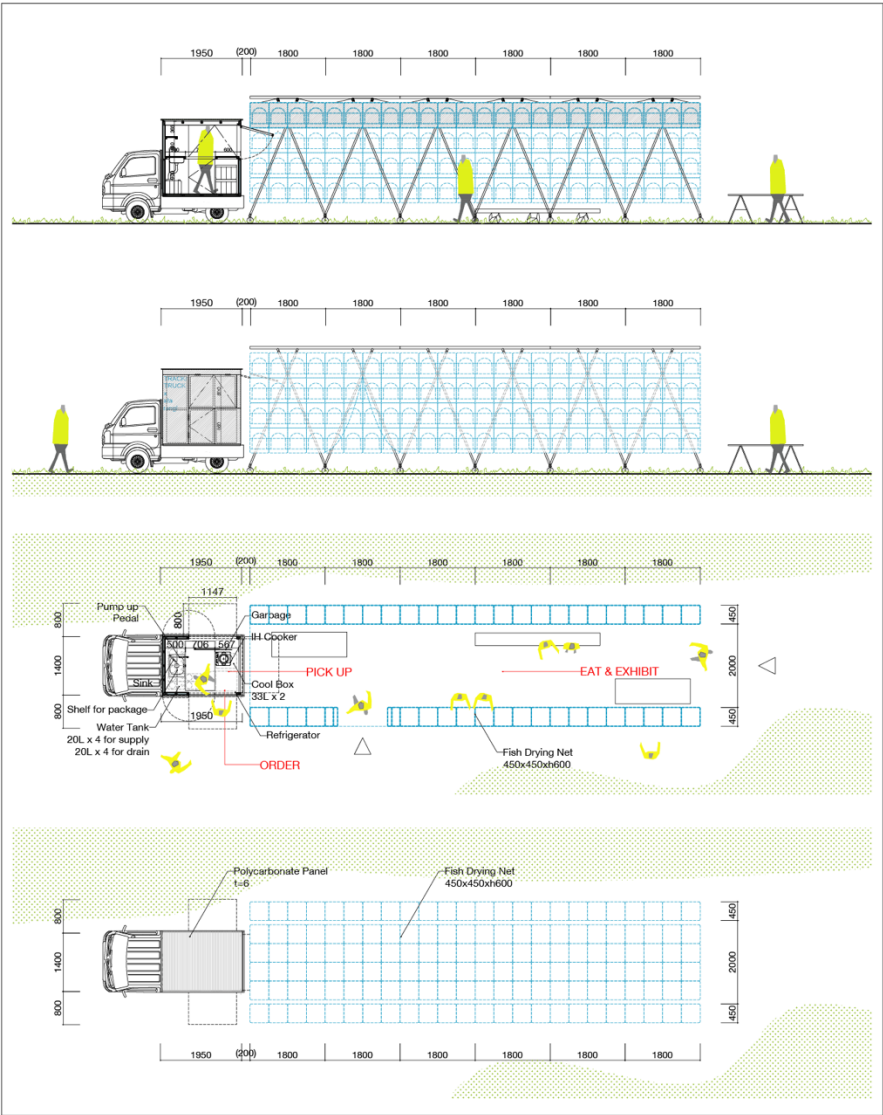


Fig.1 Floor plan, elevation



Fig.2 photos of outdoor dining

customers. For example, there were information such as CO₂ emissions generated in transporting raw materials, the energy required for food processing, and the reality of declining fish catches in the area, etc.

3. Future possibilities and importance

The person in charge of planning menus and cooking dishes was a young couple who had moved to the Shodoshima Island about a year ago. They have a future plan to open a restaurant, serving seafood from the Setouchi area and New Zealand wine. Therefore, by offering their prepared menu to the locals in this food truck, they were able to test the feel of the food, getting to know many locals, and local food producers/fishermen. Furthermore, by moving around the island while selling their products, they can gather information to consider where to set up their future restaurant in the future. In addition, in speaking with a person from the island's town hall, it appears that this project is an interest to the island's local government as well. As the island population ages and the birthrate declines, securing young immigrants into the island is one of the most important policies of local governments. One could imagine that the local government can rent

out these food trucks to the new commers, and they can test their business on the island, establishing contacts with a wide range of local residents. It may also provide an opportunity for the local people to discover new ways to utilize their commonly harvested or produced products. During the days of the construction on site, various local people brought us and shared with us many local harvests and food. Also, after the food truck was completed, many people, including local residents, tourists from Japan and abroad, and the students who were involved in this projects, all met, talked, and shared the same time gathered around the food provided by the food truck. Although the self-built kitchen and pavilion we created were extremely minimal and simple, it became a catalyst for the creation of a community, even if only temporarily. It's equally important to realize that we are also a member of the larger community, connected globally through food to their producers and the land where they are harvested, sharing limited amount of resources on this planet, and we believe this Truck/Track project could provide us with some hint for the better future at various scales.



Open the left side of the kitchen car's window and set the entrance in the middle of outdoor dining at the original site.



Open the right side of the kitchen car's window and set the entrance in front of the outdoor dining area at the Sakate port festival.



The kitchen car moves from place to place where the event is held.



Open the right and the back side of the kitchen car's window without the outdoor dining at the Sakate port.

Fig.3 Variation of the Food truck in response to each site.