hybrid FUTURES

OVERHAUL

Designing service stations of tomorrow

https://**competitions**.uni.xyz

Img 1: The first "drive-in" station, Gulf Refining Company, opened in Pittsburgh in 1913,

Premise

Replacing animal drawn carriages and carts, the first modern car was invented by Karl Benz in 1886. It became accessible to masses in 1909s by American manufactured *Ford Motor Company*. Automobile ownership increased after Henry Ford started to sell it at cheaper price for the middle class, which led to an increased demand for service stations.

The first 'drive in' **service station**, (also known as petrol station, gas station and gasoline stand in different cultures) was opened to public in 1913. Stations besides pumping fuel into tank, also calculates the financial cost of the amount transferred. Besides fuel dispensers - *air compressors to inflate car tires, convenience stores and washrooms* are also part of the layout.

But it's **demand has changed** over the past few decades.

Img 2: Recharging points of many prototypes being installed in service stations.

Today

Population is directly proportional to the number of vehicles on the road. In lieu, city fabrics are being designed to facilitate vehicular circulation. They also contribute significantly to increased density and pollution. Alternatives are being implemented to displace the traditional prototype.

Since the last few decades, the **total number of service stations is decreasing**. Be it in UK, from 18,000 in 1992 to 8386 in 2019 or 60,000 in 1994 to 40,000 in 2009 in Japan. **Mass consumption and sustainability** has replaced the trend of consumer consumption everywhere.

With better **public transit incentives**, there has been a shift from private ownership. Paris made its public transport free for children under 11 while Luxembourg made it free for all its citizens. For efficient urban transportation, services such as Uber are providing shared mobility.

Accelerating the decline is the **rise of electric cars**. There was an increase of 2 million cars from 2017, with service stations now slowly integrating electric charging points. With solar city venture, there is a possibility wherein cars will become **heavily dependent on solar energy**.

Img 3: A service station becoming a 'ruin of modernity' relics the gap between urbanism and automobiles.

Issue

With technology and a shift from private to public mobility, it will be hard for service stations to be profitable. BCG, a global consulting firm reports that If **fuel retailers don't adjust their model,** it will render 45%-60% of service stations unprofitable by 2035. Many lack a convenience store component and therefore depend completely on fuel sales.

Service stations are only used by public when their vehicle needs to be serviced. A **desolate space,** that becomes an urban void once it's dependency on fuel dispensers is completely removed. There are **no edges designed for social or community activity,** that could garner density of people. This results in decreased number of **'eyes on the street'** and makes such a space **less safe**. Infact im South Africa, fuel stations are a popular destination for vehicle theft and car hijackings.

Img 4: Service station by Khmaladze Architects in Georgia

Brief

With the transformation of fuel consumption, how will service stations look like in future?
How may they adapt to the shifting landscape, public transportation and shared mobility?

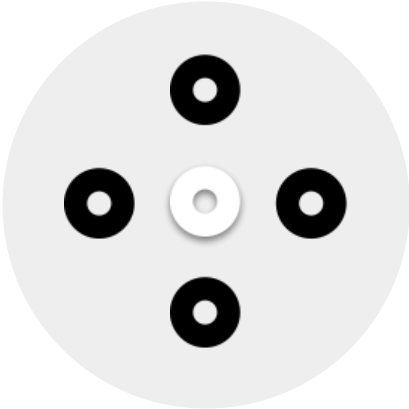
Stations can no longer be dependent on its service of pumping fuel to earn commerce. To be a profitable, it needs to open to other avenues. Recently, Elon Musk floated the idea of building retro drive cinemas at Tesla charging points. Intent to holistically integrate the public and provide services for all possible modes of transit. Equally embrace user experience as well as commerce.

Brief is to choose an existing service station and redesign it to facilitate vehicles driven (diesel, gas, hybrid, electric, autonomous). A public space where all forms of technology that will drive transportation in future coexist.

Form
Reinvent the visual form and experience of a conventional service station

Technology
The design must represent what the station would look like in future

Public
Allow an array of activities and functions, thus meeting all the needs of the community



Context
Respond to buildings, demands and needs of user group present in context

Objectives

The station will aim to service vehicles of different types while offering commercial spaces (depending on the user) like coffee shops, supermarkets, lounges with high-speed internet. Focus is not on technicality of automobiles but on spatial functioning and design conceptualization.

Area

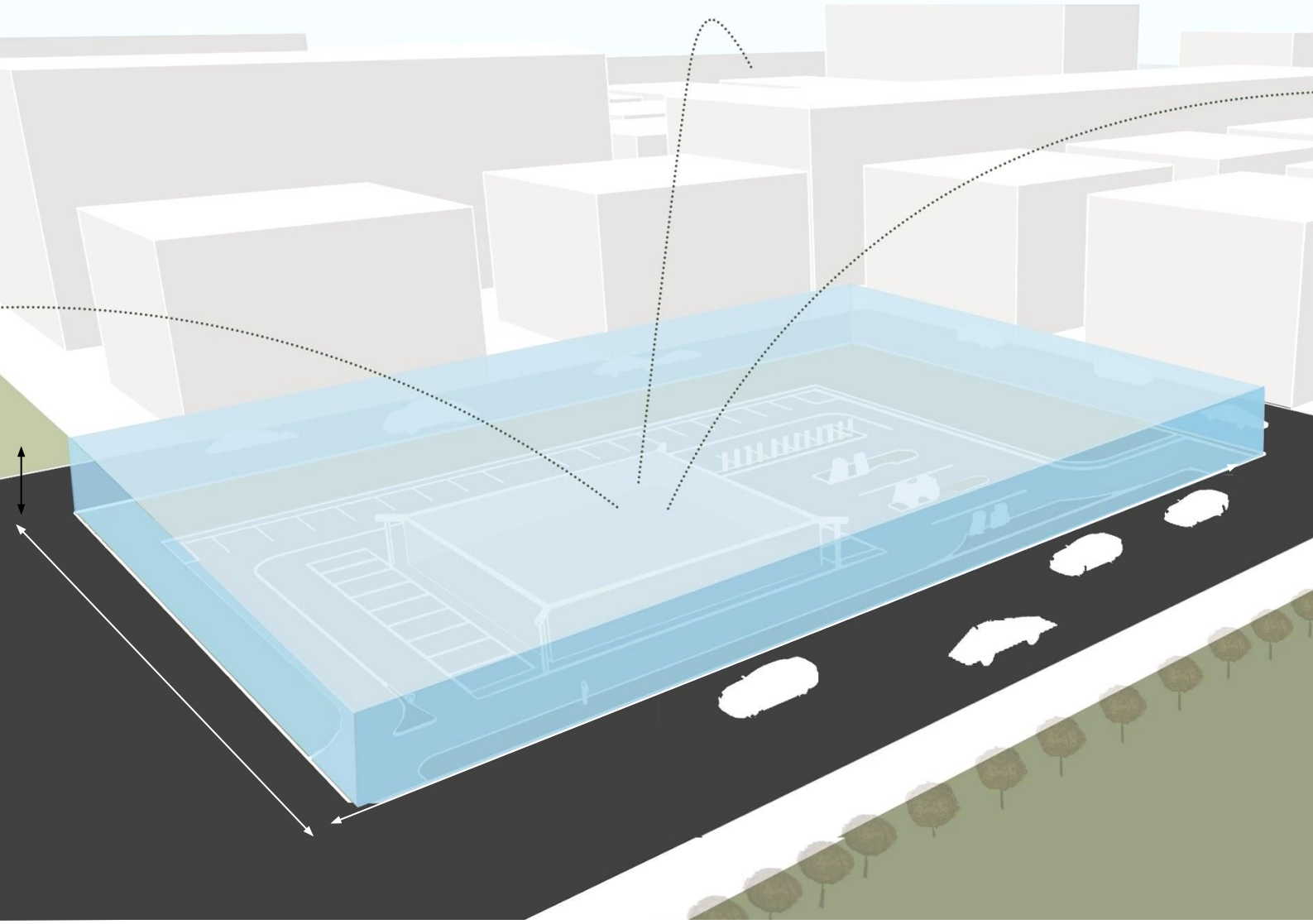
Gas station of atleast 1000 sqm

Location

Inside the urban limits of a city. Shouldn't be along the highway

Intervention

Besides a functioning station, an abandoned or under construction site can be selected.



Criteria

Competition assumes that in future, dependence on fuel will decrease. And service station will provide services for electric, hybrid and autonomous, as its demand increases. Hence, criteria should be irrelevant of the number or size of fuel dispensers present/absent. *Size of same will be given in additional resource.*

Scale of the intervention chosen can vary depending upon the need.

Maximum Ground Coverage - 60%

sERVICES

Services required by the station to cater to the changing automobile business.

20%

Filling Stations, Charging stations, Automated fuel and payment area, Station where customers can mix to create their own fuel, compressors to inflate car tires

Space for Public

Spaces that engages public while they service their vehicles and also deems profitable for the service station

30%

Restaurants, Retail stores, Cafes, Gym, Fitness center (Subject to participant), Toilets

Space for Awareness

Need for the public to be aware and undertake green, sustainable practices

10%

Education hubs for the exploration of electric vehicle solutions

Minimum Landscaping - 10%

Circulation - 30%

Vehicular and Pedestrian Mobility

Programmatic Outline

The participants are free to add other programmatic facilities and change the percentage depending on their design. Participants don't have to necessary detail out individual spaces.

Only regulations to be followed
Height restrictions - 20m | FAR - 1.5 |
Service atleast 12 cars at any moment

Guidelines

You have to deliver an architectural outcome on the following site, based on the given outlines.

• Recommended number of sheets/presentation images/boards:

5 (Five) of size **[2362px** x **3544px]** or **[400mm x 600mm** in **150 dpi]** in portrait digital format (**JPEG only**).

Minimum 3 (Three) & **No maximum sheet limit.** Each image should be less than **15MB.** (Do not submit PNG format)

Minimum requisite submission are sheets/boards + Cover image containing:

• Site plan (Compulsory)
• Key conceptual sections x 1 (Minimum)
• 3D views x 4
• Cover image / Thumbnail of size 2000px x 1000px or larger in aspect ratio 2:1.
• Answering 6 FAQ's #

#The FAQ's have to be answered as instructed in the FAQ document in the 'additional resources folder'.

Deadlines

Discover the competition schedule and deadlines on the competitions page or on this link - Schedule.

Resources

This competition contains additional resources that contains a set of files useful to complete the competition submission. This folder is made available on your profile dashboard automatically as soon as you register.

This additional resources folder of this competition contains: Submission Format files in PSD | AI | InDD, FAQs, Sketchup Model of the fuel dispensers and charging points to be considered.

Rules

+ The competitions is open for **students and professionals** from all the disciplines of design.

+ The team limit for this competition is **4 members maximum per team.**

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+ You can register more than one team but they have to be registered separately.

+ Ensure that the final sheets submitted **do not include your name or any other mark of identification**. Your submission is linked to your user account which stands as your identification.

+ This is a design **ideas challenge only.** There is no built commission/realization associated with the problem.

+ In case of publication in yearbook we will reach out separately for selected entries.

Pro-Tips

+ Use exploded views to discuss multi levelled conceptual models better.

+ Mention sheet number on corner of every sheet.

+ Plagiarism of any idea / form / design / image will be disqualified with a notice.

+ All the sheets or images will be viewed on a digital device. **e.g.** Laptop screen or projector. Uploaded sheets or images will not be physically printed for evaluation. The submission hence should be prepared for digital viewing only.

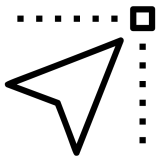
+ Submit JPEG images only. (PNG will not function)

+ Learn

Awards

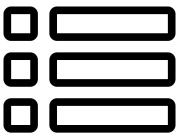
Grants of up to a total of **20,000$** can be won on this challenge. Learn more about the full conditions on the competition page here.

The entries will be judged by an international jury of the competition on the following criterions:

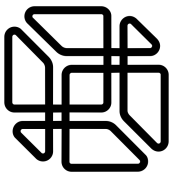


Presentation
The fundamental to a good entry is a good presentation.

Concept/Idea
Quality of thought and intent in pre-design phase.



Spaces/Programme
How the spaces are calculated and ordered.



Design Outcome
The final architectural outcome of the solution.

Judging Criteria

The judging panel can also add other criterions based on their internal discussions - which will be in line with the problem statement. Participants are advised to fulfil above given criterions first in their design.

About

Hybrid Futures is a unit block for UNI in the field of Architecture that covers the field of near future architectural thought. It intends to break the barriers of design ideologies that are short sighted and aligns itself to futuristic thought. This arm of Uni banks on growing technological advancements to frame architecture in the megacities of tomorrow. It is a research initiative dedicated to providing opportunities for designers from all domains to explore ideas that go beyond the boundaries of architectural discipline and enrich our built environment; thereby opening up possibilities for promotion of design thought process at a global level.

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