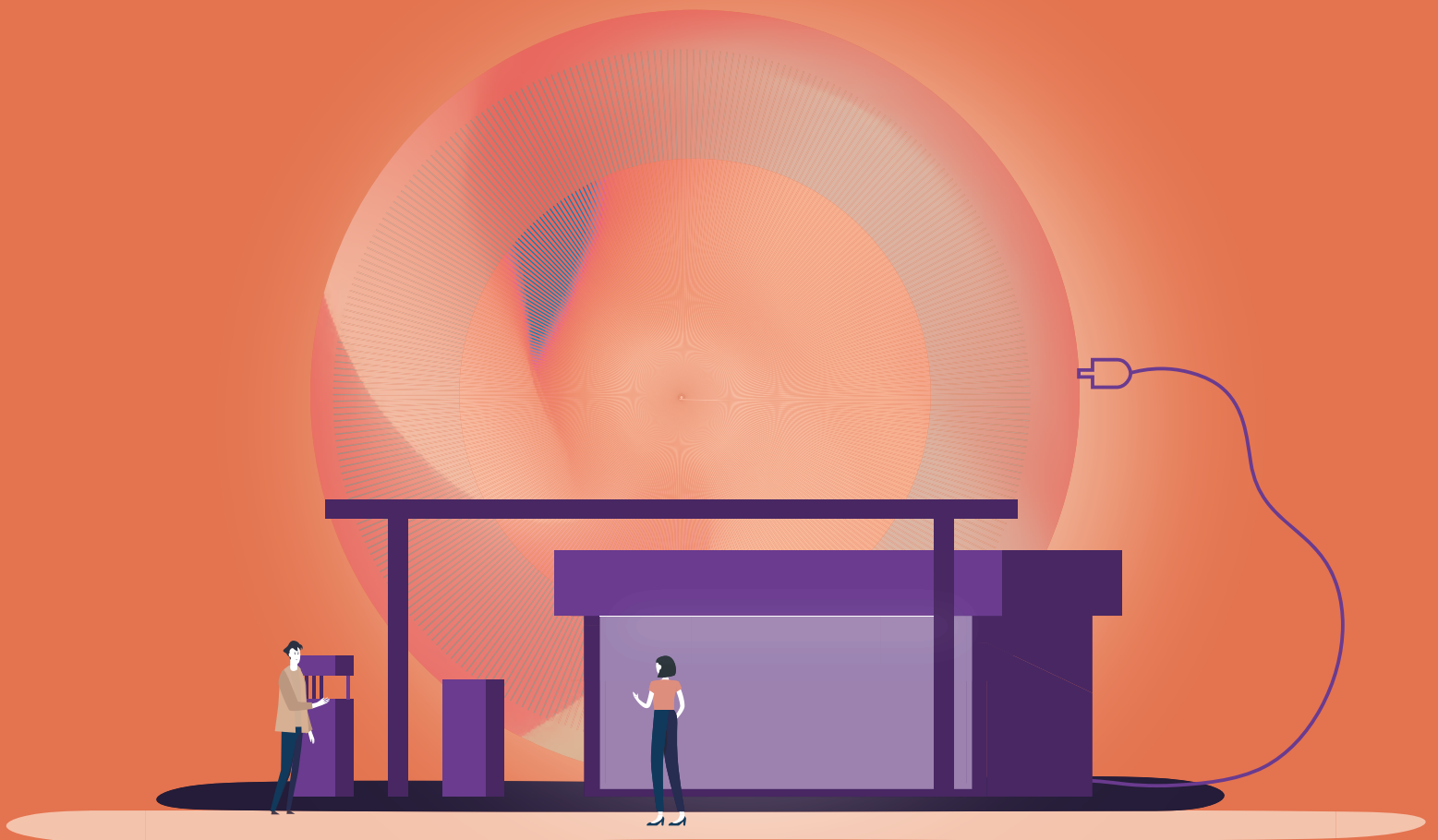


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DESIGN HUMAN LIFE

GAS STATION: TOWARDS A MORE CONNECTED FUTURE



TOOL ISSUE 004

BY GIULIA BIGARO, EXPERIENCE DESIGNER
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AT IL PRISMA

Gas station: towards a more connected future

Fuel-retail is a sector in constant change subject to numerous future visions and experiments and, given the period of sanitary emergency triggered by the spread of Covid-19, its evolution is increasingly determined by new environmental implications, new advanced technologies, and new needs and behaviors of an increasingly aware, evolved and demanding consumer.

All these aspects contribute to the growing necessity to renew retail services and spaces that today focus on an obsolete service model, based purely on the sale of fuel and car-related products and services, but which in the future will have to cope with diversified, customized and sustainable needs.

The Covid-19 emergency, which has been the protagonist of the last few months, has had a great impact in terms of perception of environmental issues; the clear and strong link between the damage to ecosystems and the pandemic has significantly increased the urgency to achieve the United Nations' sustainable development goals identified in the Agenda 2030. Today people pay more attention to the issues of health and well-being, besides being more conscious of the importance of implementing virtuous behaviors in order to promote sustainable development in social, economic and environmental fields.

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Gas station: towards a more connected future

Not only the link between viruses, ecosystem and climatic changes, but also the **possible correlation between pollution and the spread of Covid-19** is being investigated.

Some research shows that atmospheric particulate matter could be a transport vector of the virus, in addition to the fact that greater air pollution increases the risk of respiratory pathologies and thus a greater presence of subjects more vulnerable towards the virus. The eventual scientific confirmation of the studies could lead to an even more marked acceleration in consumer trends in the area of environmental sustainability and psychophysical well-being.

(further information: Italian network Environment and Health)

The oil crisis, caused by the collapse of demand and the price war, also contributes to this scenario.

It is expected that if there is no recovery in the oil sector (which was already under pressure due to the regulations introduced by governments, aimed at reducing emissions) and prices will continue to fall, investors will tend to consider solutions that are more stable and profitable, even if from a long-term perspective.

A plausible consequence could be the accelerated growth of investments in renewable energies, and a greater adhesion by the consumer to alternative forms of mobility and refueling because they are less polluting, with a minimal impact on the environment and the well-being of citizens.

(further information: wallstreetitalia, ilsole24ore, internazionale)

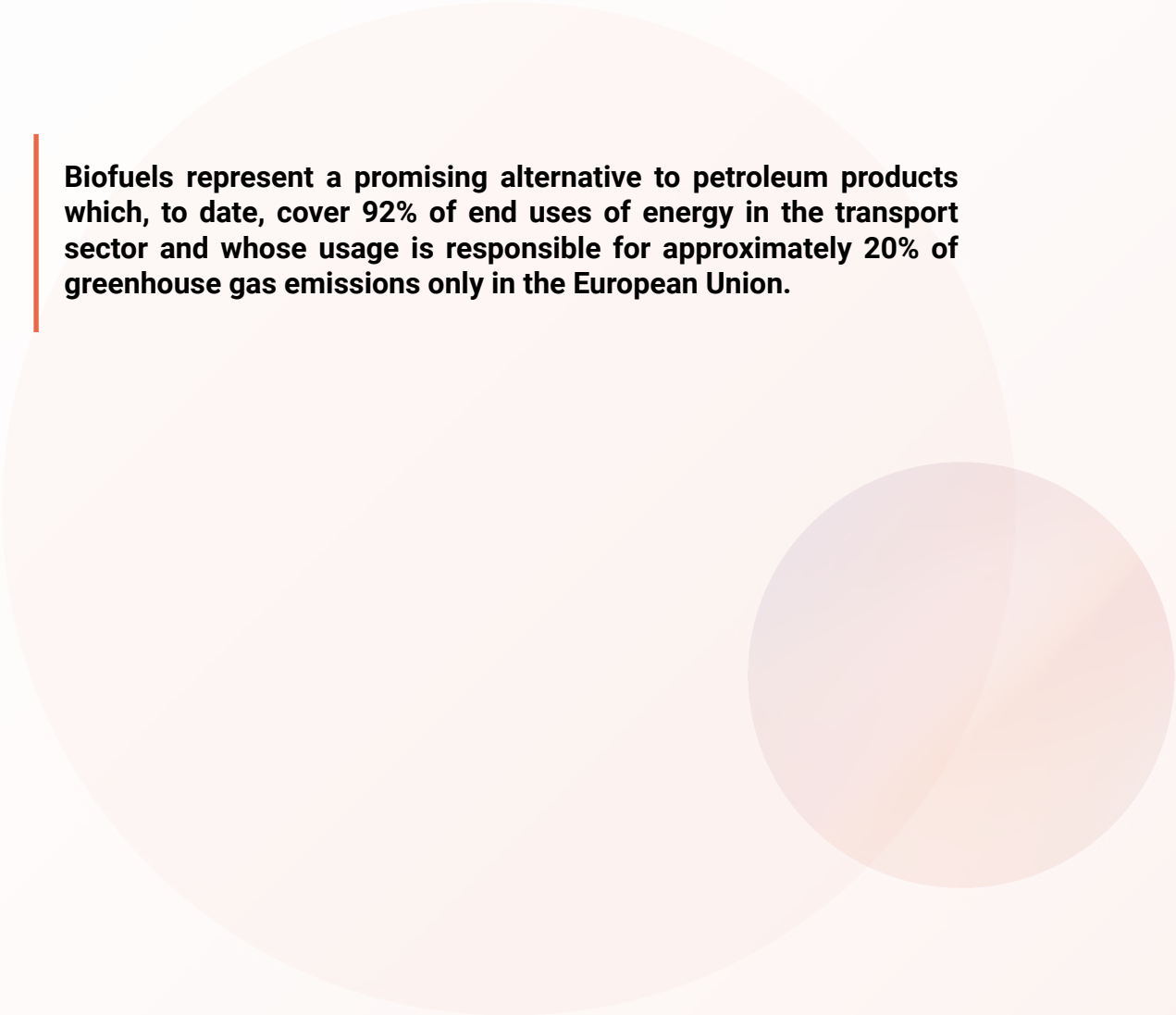
Gas station: towards a more connected future



CONTEXT AND NEW ENERGY PROPOSALS

In the oil field and specifically in the fuel retail, solutions alternative to the use of highly polluting fossil fuels, the usage and consumption of which contribute to environmental degradation, are being sought and launched.

The Italian national plan Energy and Climate, a governmental measure that aims to guide the country's energy and environmental policy towards decarbonization, favors alternative fuels with special attention to **advanced biofuels, electrification and shared mobility**, in order to “clean up” the transportation from polluting emissions.



Biofuels represent a promising alternative to petroleum products which, to date, cover 92% of end uses of energy in the transport sector and whose usage is responsible for approximately 20% of greenhouse gas emissions only in the European Union.

CONTEXT AND NEW ENERGY PROPOSALS

At present, the biofuels produced on a large scale are biodiesel (the most used: it covers 97% of consumption), bioethanol and biomethane. The advantages of their use are mostly environmental, given the use of organic or recycled raw material as well as the reduced emission of polluting agents in its usage.

However, sustainability has also an economic meaning, so companies whose core business is based on the production and distribution of fossil fuels, will be subject to a transition. Therefore, the actions envisaged by the Agenda 2030 (UN sdg) also include the conversion of industrial sites into biorefineries for producing advanced ecological fuels with high environment compatibility.

While biofuels represent the evolution and the alternative to fossil fuel market, on the other hand, the electricity sector is the one towards which many car companies are investing more and more in order to ensure advanced mobility with almost zero impacts on the environment we live in.

CONTEXT AND NEW ENERGY PROPOSALS

In Italy, funding and short-term programs have been allocated for the intensification of the charging network on the national territory, currently not widespread (1 charger per 80,000 inhabitants). For example, only Enel Energias EVA+ project aims to reach 14,000 fast charging stations on Italian soil by 2022. In addition, several companies are investing in light of battery enhancement, to increase the autonomy of the vehicle BEV.

The new ways of “refueling” the electric vehicle imply new technologies and new charging times, therefore the service station can no longer be a quick stop, but will have to focus on **new consumer needs**.

Today's vehicle-centered service model will have to evolve to a user-centered model, where placing the customer at the center means understanding his/her needs and preferences, knowing how to predict them and exceed his/her expectations through authentic and tailor-made experiences.

Thanks to technology, retailers will be able to monitor what users are looking for, what they buy and where they buy it, so they can predict their preferences and personalize the experience by loyalizing them, creating adhesion and return to the store.

(source: www.pwc.com_consumer-markets-retail-evolution)

The concept of convenience also evolves and is reflected in three main needs: **ease, utility and simplicity.**

Therefore, it is necessary to ensure simplified services supported by technology, phygital experiences and frictionless trade in order to give shape to new shopping experiences.

(fonti: [ford_trends report](#), nielsen.com_the-quest-for-convenience)



What are the new needs/wants of the consumer?

1. Sustainability

The user, driven by the growing awareness that his/her purchase choices can define a certain social and environmental impact, makes choices that respect the planet and adopts sustainable behaviors.

*He/she therefore has a greater **interest in what is not visible of the product**, such as production methods, raw materials used, employee treatment and safety at work, and the impact it has on our planet.*

(source: Ford)

Therefore, the consumer is more oriented towards the purchase or use of low-impact means, and to adhere to brands that respond to concepts of both environmental as well as social and economic sustainability through products/services and retail space.

Companies will have to adapt by becoming as transparent as possible to the consumer and capable of showing their ethical values in an authentic way (from product-focused to values-focused).

The consumer today is oriented towards regenerative approaches: the growing need to take care of himself/herself, of others and of the planet we live in, and aims to achieve a high-level quality of life for everyone.

(source: Forbes)

*The term regenerative means adopting approaches and behaviors that give **positive contributions** to the planet and to various ecosystems that make it up, for example by restoring biodiversity, helping combat poverty or other actions that, in a chain, generate well-being and better quality of life for everyone.*

(source: Lsn)

*In addition, the consumer prefers the **localness** to hyper-consumerism, to support the identity of local communities.*

Consumers prioritize responsible consumption, helping local businesses to become more prosperous and to reconnect with communities.

This trend is reflected in the behavior and choices of the user, who prefers local products and brands because he/she considers them more authentic and representative in terms of individuality. It is therefore important for companies to remodel products and services on the basis of local tastes and preferences (proudly local, going global).

(source: researchworld.com)

What are the new needs/wants of the consumer?

2. Wellness

The user also seeks experiences based on psychophysical well-being. In fact, he/she pays great attention to the quality of the product in terms of freshness, origin and use of healthy ingredients; he/she is aware that physical activity is a good tool for keeping fit and healthy; he/she supports safe, comfortable means of transport, where the journey becomes pleasant and relaxing, promoting relaxation and rest for passengers, and calm and concentration for the driver.

Advanced mobility such as electric vehicles or autonomous means of transport are shaping the needs of the consumer, who is beginning to reflect on the real need to have his/her own means of transport such as the car.

Therefore, today's user prefers to use shared mobility services, which in turn must ensure punctuality, accessibility, real-time updates on traffic conditions, safety and wellness even while traveling.

Following these last two trends, Uber, the emblem of the shared modality of our days, improves its service by going beyond the choice of car comfort and by stimulating the psychophysical well-being of the user who is offered the "passage" service. In England, the company announces the partnership with the Calm app and offers the passenger a relaxation service through meditation and breathing sessions, thus allowing the user to use the travel time in order to regenerate.

(source: Uber+Calm / Lsn)

What are the new needs/wants of the consumer?

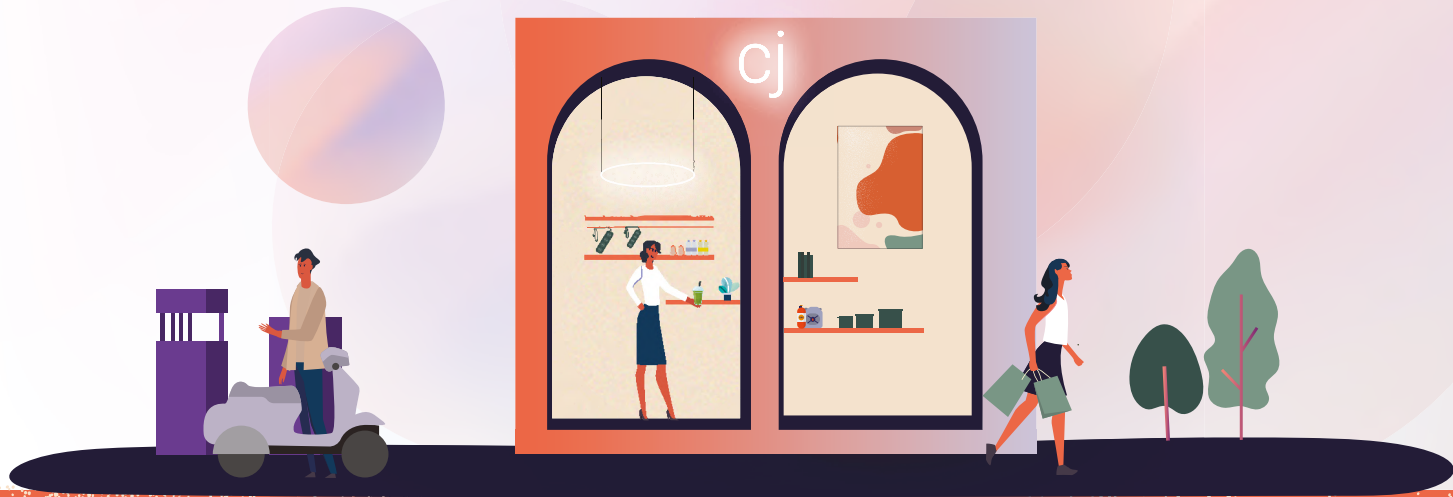
3. Experiences

The advanced user, accustomed to the use of technology, demands frictionless experiences: thanks to the advanced technology integrated in the means of transport, and to the apps that support the mobility service (personal, shared, public), experiences become increasingly connected and “frictionless”. For example, navigation apps that guide us step by step, updating in real time on the best solutions to reach a destination in terms of route and vehicle availability: from the car to the scooter, from the scooter to alternative services of sharing mobility.

(euromonitor international mobility trends 2020)

Service stations should also evolve and integrate digital systems capable of extending the experience beyond the point of sale, ensuring continuous mobility even while waiting for “refueling”, and allowing the customer to use the different services simply and efficiently.

Customization is another great request of the consumer, who is no longer satisfied with knowing where to find what he/she is looking for, but wants to be ***pleasantly surprised in being anticipated*** according to his/her needs through a hyper customization of the product/service offered. The data collected regarding consumer choices, thanks to the new technological systems integrated into the system-service, help create increasingly customized experiences, creating value of uniqueness for the customer.



INNOVATE RETAIL TO CREATE VALUE

Present-day service stations

Service stations, as we have known them up to the present date, are transit places where people go for refueling, washing the car, taking a quick break and buying items of first necessity as well as car care products.

The Italian state of affairs in the field of fuel retail shows that the first evolutionary approach has been implemented and it considers the rethinking of the offer of services and products according to the new needs of the consumer and the new needs of the market.

**The transformations taking place
address the following issues:**

1. Food & beverage

The point of sale associated with the service station, especially inserted in the urban context, has evolved into a proximity shop and the food & beverage offer has been implemented with fresh, organic and healthy products to meet new consumer needs, as he/she is no longer oriented towards caloric and low-flavored snacks. In fact, the bar-shops of the service station network have started to introduce organic, local and quality products.

(source: Lsn)

*For example, Eni in the **Cafè & Shop** format offers Italian products guaranteed by selected partners, and Total Erg, in the **Istante** bar-shop format, offers products representative of Italian excellence, considering local specificities as well.*

(further information: enistation.com, gruppoapi.com)

2. Smart payments

In order to guarantee a seamless and continuous experience, the oil companies have introduced cashless payment methods, using one's smartphone.

For example, Eni uses its own app, the Gruppo Api allows you to pay with Apple Pay or with the Tinaba app and finally, Q8, in the Q8Easy format, using Telepass Pay or the app by choosing Paypal as the payment method.

(sources: enistation.com, gruppoapi.com)

**The transformations taking place
address the following issues:**

3. Loyalty and convenience

Customer retention is the primary objective in the field of fuel retailing and the consumer is oriented towards a choice of retail based on convenience, not only in terms of time spent, but also in terms of the offer of products and services.

(source: pwc_consumer-markets-retail-evolution)

When it comes to loyalty, the collection of points promoted by the loyalty programs allows easy access, especially in economic terms, to quality products and services. The loyalty program is also useful for stimulating positive behavior. For example, Q8 has launched an initiative in favor of the environment, inviting customers to recycle plastic bottles and cans in order to receive in return a discount on re-fueling.

(source: Q8)

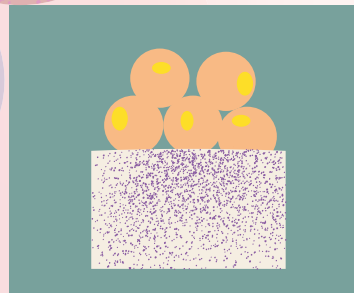
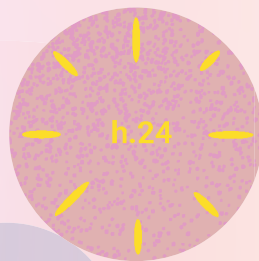
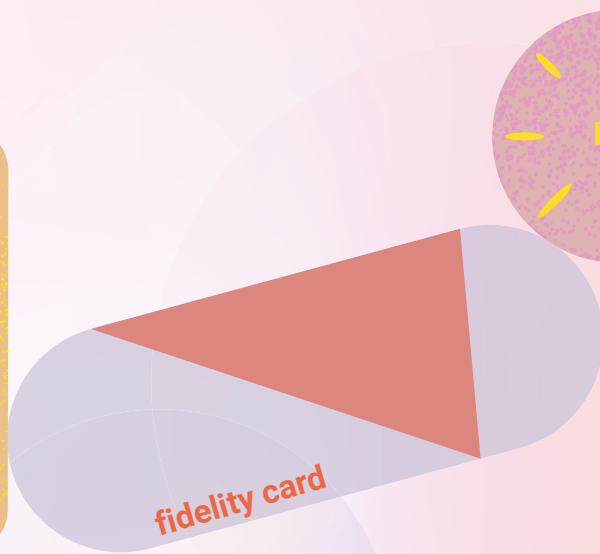
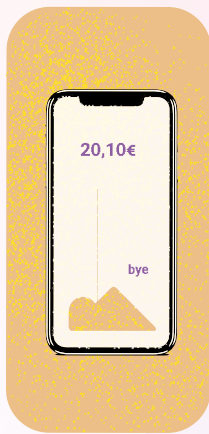
Finally, the wealth of information deriving from this type of program is useful for predicting the user's needs and promoting his/her adhesion to the brand.

4. Click & collect

Taking advantage of the benefits of proximity and 24-hour service, the service stations are able to offer click & collect services to the customer, allowing him/her to receive and return products at any time.

For example, Eni has already activated a parcel delivery and collection service, where the user saves and optimizes time and does not have to worry about timetables and stocks.

(source: enistation.com)



INNOVATE RETAIL TO CREATE VALUE

Service stations: towards tomorrow

Fuel retailers will have to take into account the future of mobility and the rise of alternative fuels, especially electricity, and understand how to adapt their business and service model to these changes. In particular, electric cars will bring significant transformations in the field of refueling: recharge time will be more extended and consequently the stopover will be longer than it is today.

(source: bcg.com)

Service station: recharging car, body and mind

The service station will evolve into a **charging point** for electric vehicles and a refueling point for those fueled with biofuels, at the same time it will be a **point of reference for the psychophysical well-being** of drivers and passengers.

For example, the “Get Pumped” concept, the result of a collaboration between the architecture and design firm Gensler and Reebok, imagines the refueling station as “fuel” for our body and envisages a network of fitness oases, where it will be possible to stop and recharge not only one’s car, but also the body and mind.

Going into detail of the concept, three scenarios have been identified: the network, the oasis and the community center. The first, the network, imagines the rest areas of the main highways as the “electricity network of the future”, a place where travelers will generate energy by exercising; the oasis, along the local highways, is designed as a mental and physical “recharge area”.

There will be yoga and meditation courses, a range of healthy food and drinks, an aromatic garden and spaces for running in the open air. And last, the community center, in small local towns, will be a place where one can recharge his/her car and, in the meantime, attend nutrition lessons, buy healthy and local food and practice fitness lessons.

Clever, the Danish e-mobility provider and COBE design studio have also defined a new format of service station that offers a pleasant and relaxing break along the route: the possibility of recharging not only the car batteries, but also one’s own mental batteries in a Zen environment, pleasant and restful.

Service station: multiservice Hub and shared mobility

*The service stations are not meant to remain only a place to refuel, but will evolve into **multi-service interchange centers** of urban mobility.*

For example, the Mobility Hub model imagined by Eni implements the sharing service of electric vehicles and spaces for social and commercial activities. In this way, the extension of the stopover, due, for example, to the recharging of electric cars, will no longer be a problem because it will be possible to shop in ecommerce stores, pick up parcels at the pick-up points, work in the areas dedicated to coworking while children will be entertained in the kids' areas.

*This will encourage the concept of **social sustainability** and will reduce the phenomenon of commuting. From an architectural point of view, the service station will not emit CO2 and will be **self-sufficient**: the roof will be topped with solar panels, the floor will store kinetic energy and rainwater will be recovered and reused.*

The vision of the German oil company Aral is also positioned on the line of the transition into multiservice Hubs.

Referring to the problem of urban overpopulation, to the big cities that with the passage of time will become increasingly dense with traffic and people, in large cities Aral imagines a service station for the rapid recharge of electric vehicles, located at the gates of the city, capable of evolving into a point of reference for collective and shared mobility, involving e-scooters but also autonomous means of transport and drones for the transport of passengers.

Whereas in less developed and populated areas it will convert into a key point of access to the services of the big city.

Service station: multiservice Hub and shared mobility

In the field of sustainable development that takes into account the environment and well-being of citizens, the reduction of traffic and the use of alternative vehicles will be an incentive in terms of environmental sustainability.

(source: Aral)

In the face of innovation regarding the introduction of autonomous vehicles as a new on-demand retail model, the service station will be able to integrate short-range sales and delivery services, to satisfy the consumer's need for convenience and immediacy.

Some scenarios, such as the Moby project by Wheelys, assume that an autonomous vehicle both from the point of view of driving as well as energy, equipped with delivery drones, can go directly to the customer when he/she requests it, wherever he/she is. The user thus will be able to access the store through the app and, by scanning the objects with the smartphone, will purchase them by charging the cost directly to the connected payment system.

(further information: Fast Company / Lsn)

The concept of "distributed convenience store" is positioned on the same line, but with smaller and more agile means. For example, Robomart and Auto X are small autonomous vehicles designed for the distribution of products on request or for the direct purchase of a selection of fresh products as a kind of convenience store; the delivery will be dynamic and automated.

(source: Lsn)

From a logistical point of view, the IDEO Future of Automobility project envisages self-driving vehicles that track the customer's movements in order to deliver orders wherever they are.

(source: Lsn)



CONCLUSIONS

Observing how the fuel retail service model has evolved over time up to the present day, one notices greater necessity for listening and attention to the consumer's needs and to his/her desire for convenience and immediacy by offering differentiated services that go beyond the automotive world.

Probably the multiservice Hub format, an interchange point of the city mobility within an interconnected ecosystem that takes into account the needs of the user and the environment by reducing its impact, will guide the future evolution of service stations.

For a more sustainable future, urban planning will also have to take into account the use of renewable energies, the integration and regeneration of green spaces, and the implementation of technologies to create increasingly connected systems that ensure efficient, safe and frictionless experiences. Evolving into a Smart City, the city of the future will be intelligent, safe and sustainable.

SUMMARY NOTES:

1. The fuel retail market is evolving according to the new forms of mobility and refueling. In addition, it is important that the new service models take into account the emerging trends dictated by an **increasingly evolved consumer**.
2. The service stations have started an evolution that shifts the **attention from the vehicle to the user**, therefore fuel retail will also have to innovate in order to encourage customer adhesion, involvement and loyalty, foreseeing the different needs and necessities.
3. The concept of convenience, and therefore the idea of convenience store, has also changed its meaning by focusing more on **simple, useful and customized** purchasing methods; the interest is directed to the ethical commitment shown by companies, and the user, through his/her purchasing choices, wants to contribute to environmental, social and local sustainability.
4. The service stations of the future will evolve into multi-service Hubs and interchange centers of the city mobility, migrating from simple reference points for refueling the car to **regenerative recharging points** for the body, mind and mobility.
5. The retail world is already tracing an evolutionary path towards new models of on-demand commerce and dynamic delivery. The mobility, in an evolved urban context, will therefore acquire a wider meaning of a **system of services regarding not only the automotive world**.
6. The new mobility will be the project theme for the new Smart Cities of the future.

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