

**THE FUTURE**



**IS ELECTRIC**

# ROAD MAP

Team



Our Goal



Secondary Research

Primary Research

Framework

Concepts



Insights

Synthesis

Data & Affinitization



# MEET the TEAM



**Bree Mitchell**  
BFA UX Design



**Devyn Brown**  
BFA Industrial Design



**Kuo Tso-Yun**  
BFA Industrial Design



**Jacob Perrone**  
BFA Industrial Design



**Emilee Foster**  
BFA Advertising



**Jun Ryu**  
BFA Industrial Design



**George Ye**  
BFA Industrial Design

# OUR GOAL

*To educate and develop a proposal that will lead to a higher adoption rate of electric vehicles for the Gen X generation.*

## **Project Overview**

*Electric Vehicles are on the rise, growing in popularity as well as becoming a more ethical means of transportation. Yet, people still have their worries, and are set on their favorable means of transportation. Our team explores and does extensive research on how we can create a solution for more people, specifically Gen X, to adopt into electric vehicles.*

AN EV SAVES YOU...

**\$2190 / YEAR**

\$2769 / Year



\$694 / Year



**Fuel\***

\$767 / Year



**Maintenance\***

\$652 / Year



To put the amount in perspective, \$2190 can get you...

5 Sony 55" UHD Smart TVs.

12 years of Netflix subscription.

438 Big Macs.

5.5 Months of groceries.\*

**SECONDARY  
RESEARCH**

\* Comparison between 2023 Volkswagen Atlas and 2023 Volkswagen ID.4

# STAKEHOLDERS.

## DATA.



## Users

Average automotive user, everyday driver.  
A person that regularly uses their vehicle for varying tasks.

Possible reasons switching to an EV. fuel efficiency, comfort, tax incentive, tech.

## Developers

Professional in the automotive industry with, at least ten years experience. Knowledgeable about the automotive field and is up to date on current innovation

Possible experience in marketing, maintenance and repair, sales, or design.



## Experts

Leader in the automotive industry. A Professional with at least twenty years of experience in the field. Is future oriented and capable of futurecasting what the industry may look like in five to ten years.

Possible insight into market trends and future innovation.



We searched for honest feedback towards electric vehicles. We looked to understand the pain points and their ideal vehicle experience. Our data collection consists of interviews, cultural probes and sensory cues.

“ A vehicle is more than a tool for transportation...

It is an experience „

Jacob



# INTERVIEWS

## 2 EXPERTS

Industry expert with 20+ years experience



Prof. Rafael Corazza

// To appeal Gen X and older Millennial. EVs will need to be more unconventional in exterior design. To appeal Gen Z and Gen Alpha, more customization and modify possibility. //



Sunil Prakash

// Gen Xers don't account for most EV adoption, but are the ones with the means to buy them //

## 2 DEVELOPERS

Industry employee and developer



Uni Lin



Tricia Toussaint

// Convenience of maintenance is crucial to encourage more EV sales. //

## 7 USERS

Automotive users, average consumer



Jason Nadaev



David Mitchell



Brian Foote



Charlotte Bible



Riley Puckett



Jaquan Nowell



Jacob Winkler

In under 1 week we interviewed over 10 individuals and gained deeply valuable insight from candidates with a range of experience in automotives.

// Autonomous driving is worrying and I am unsure if I can trust the technology yet //

# CULTURAL PROBE

We interacted with local populus at Forsyth Park, Savannah, Georgia as an on ground survey. Looking to get unfiltered feedback over public opinion on electric vehicles .

# 70 + DATA POINTS

Which is better? Why?	
EV	ICEV
Other	

A chart we designed to collect individuals opinions towards electric vehicle. we asked candidates to write their feedback and place it in the corresponding sector.

Different answers from our interviewees give insight into different perspectives and opinions toward electric vehicles and possible pain points

Which is better? Why?	
EV	ICEV
Other	

Which is better? Why?	
EV	ICEV
Other	

Which is better? Why?	
EV	ICEV
Other	



# 370 DATA POINT

## SYNTHESIS

Save time by not having to change oil unlike gasoline cars

Charging while shopping can save time.

"My car looks similar to a gasoline car."

Save time by not having to change oil unlike gasoline cars

Electric cars are more sustainable.

Insufficient charging equipment

I would not get a Tesla personally.

Not having to get gas is perfect for my day to day tasks.

Electric. Gas is a finite resource.

"Amazon will only switch to electric if they're really comfortable with the infrastructure, so to me it's a sign that our infrastructure is getting really good and those kinds of companies have the kind of influence to push for more

Gasoline don't understand EV enough.

I have been in many cars in my lifetime and I believe electric cars are the future of the world.

*We collected data from people about electric vehicles and internal combustion engine vehicles. We identified the problem and Benefit of two different types of cars. Provide consumers a way to focus on the problems and development potential of EVs.*

Got the car for the autopilot for the commute from palm coast to orlando

Electric means of creating power source isn't good yet.

willing to buy an electric car again.

Had more space than expected.

repurchase an electric car

I want to buy Tesla again.

I want to buy Tesla again.

Prefers UI to be mainly tactile with diagnostics being digital

Another reason is the charging system, which if improved upon would help further adoption rates.

The technology inside the vehicle has a lot of influence when purchasing a vehicle.

"that one issue (charging infrastructure) is holding them back"

"now that they adopted evs the technology is fully completely different"

The design and technology of the car greatly influence the choice of the vehicle

Insufficient charging equipment

the adoption of Evs is easier for people in europe than it is for people in the united states

would be incentivized to switch with a tax break

I like EV because save money on gas.

More reliable and well handling vehicle

"companies, especially in europe, are going all in on ev"

# 40 THEMES

Data Point → Themes

Battery lifetime and issues with replacement	Issues with Batteries and their impact on the Environment	Holding cost of EVs is smaller than that of ICEV.	Users feel influenced by these common factors when making a	Wants to learn more and understand how far they can drive (Range)	Users enjoy UI/UX in EVs with their cutting edge technology like
Users are uncomfortable and feel concerns for long distance	The Environment Impact of ICEVs?	User feels as though the cheap material and manufacturing makes them feel uneasy and uncomfortable.	Electric vehicles benefit users by allowing them to save time.	Users feel public transport as a viable option	Users are happy and comfortable with the longevity of distance driving in an electric vehicle.
Technology of EVs as influence to potential consumers	The impacts of technology innovations because of electric vehicles.	Built quality of EVs is fine and the technology adds to the overall quality	Materials need to be replaced because of low quality manufacturing.	Incentives and their effects on EV Adoption/-Sales	Energy cost for electric vehicles are smaller than gas
The Environment Impact of ICEVs?	Trusting safety features of EVs.	Users celebrates the technological advancement EVs offer.	Direction for industry's future	The Net Neutrality on EV's Environmental Impact	Concern of electric vehicles being too small and not suitable



Themes → Insights

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# INSIGHTS

# INSIGHTS



- ⚡ Consumers feel electric vehicles need more space
- ⚡ Consumers feel that the repair/ maintenance of EV is more difficult than IECV
- ⚡ Consumers feel their environmental impact from disposing batteries is worse than simply using IECV
- ⚡ Consumers feel a increase in charging infrastructure will allow users to trust in ev reliability the same way they can trust on a gas station.

# INSIGHTS



- ⚡ Consumers feel there is a disparity between the quality of hardware and quality of technology
- ⚡ Users are concerned about the safety of batteries
- ⚡ The consumers feel there is a gap to switch from ICEVs to EVs
- ⚡ Tax incentives make consumers more likely to switch to EV

# FRAMEWORK

Using our research, we were able to create a framework of:

## FEATURES



key benefits delivered.  
The features of a product,  
service, or system.

## BENEFITS

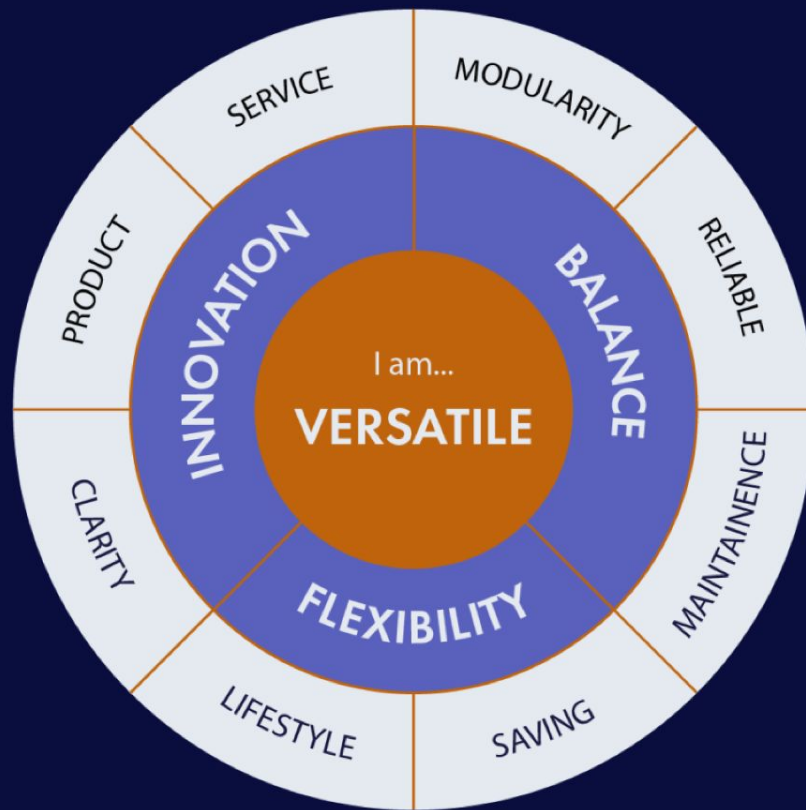


the direct tie between  
the product, service, or  
system and the  
emotion.

## EMOTIONS



At the core of the  
experience. Any  
interaction with the  
product, service, or  
system results in an  
emotion.

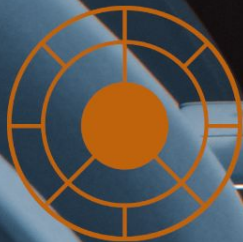






# I am... **VERSATILE**

The environmental benefits, technological advancements,  
and the unique driving characteristics of EVs contribute to  
the feeling of versatility when driving them.







/Common  
/Battery  
/Navigation  
/Ecology

Self-Driving

48  
mph

EVs are...  
**INNOVATIVE**

# PRODUCT



*EVs revolutionize our daily commutes, making life more convenient, efficient, and enjoyable.*

EVs are transformative in the way they simplify and enhance our daily lives. Their intuitive design and reduced maintenance requirements make them exceptionally user-friendly.

// The technology is terrific! //

-Sunil Prakash

**INNOVATION**



# SERVICEABILITY

*EVs advanced serviceability makes owning an EV more convenient and cost-effective.*

EVs are redefining the concept of serviceability in the automotive industry.

Fewer oil changes, no exhaust system repairs, and minimized brake wear due to regenerative braking all contribute to lower servicing costs.



“ I save time by not having to change oil. ”

-Eunji Choi

**INNOVATION**





# CLARITY



*EVs bring clarity with clear communication between manufacturers and customers, that allow a sustainable and technologically advanced path forward.*

The technology within EVs offers a clear vision for the future of transportation, with advancements like autonomous driving, smart grid integration, and over-the-air updates. This is possible with the transparency between manufacturers and users.

**// Companies, especially in Europe, are going all in on EV. //**

-Sunil Prakash

**INNOVATION**





I am...

**BALANCED**





# MAINTENANCE



// Updating my car from home is a perfect type of maintenance for me. //

-Brian Foote

**BALANCE**

*All these factors contribute to reduced maintenance costs and a more hassle-free ownership experience for EV drivers.*

Electric vehicles offer an enticing advantage in their ease of maintenance. Unlike traditional internal combustion engine vehicles, EVs have fewer moving parts, which means there is less wear and tear and, consequently, lower maintenance requirements.





# RELIABILITY

*Electric vehicles are highly dependable, promising a reliable and consistent driving experience for their owners.*

With fewer components to wear out or break down, EVs tend to experience fewer mechanical failures, resulting in reduced maintenance costs and more worry-free ownership.



*“ I feel safe when I drive. ”*

-Yoomic Choi



**BALANCE**

# MODULARITY



*EV modularity underscores how the marriage of hardware and software enhances user convenience.*

EVs represent a remarkable synergy between hardware and software technologies. Unlocking an electric vehicle with your phone exemplifies the harmonious blend of hardware and software technologies.

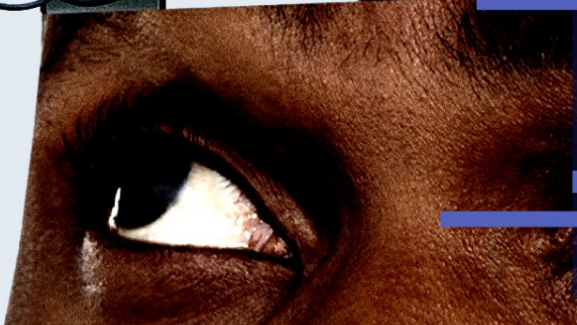
“ The software updates are improving it. ”

-Jason Winkler





I am provided...  
**FLEXIBILITY**



# SAVINGS



// **Extreme incentives mean more  
robust sales.** //

-Sunil Prakash

***Owning an EV is a cost-effective choice that ultimately helps individuals keep more money in their pockets.***

The lower cost of electricity compared to gasoline means that EV owners typically spend significantly less on fuel. Moreover, governments and utility companies often offer incentives, tax credits, or rebates to encourage EV adoption.

**FLEXIBILITY**





# LIFESTYLE

*EVs empower individuals to make choices that benefit their lifestyle.*

Electric vehicles are catalysts for promoting a family-friendly lifestyle. Their commitment to environmental sustainability sets a positive example for future generations, teaching children the importance of responsible choices and caring for the planet.



“ The kids like the fact you can set the turn signals to be fart noises. ”

-Jason Winkler

**FLEXIBILITY**



# SOLUTIONS



## I. PRICE

Our research recommend to **promote the collaborations** between government and enterprices to lower the cost to make electric vehicle affordable.

## II. POLLUTION

The battery recycling system is advised to be **eco-friendly and transparernt** to people to reduce their battery concerns related to the negatively environmental impact.

## III. SAFETY

The safety deserves full attention, **innovative approaches are recommended** to make people feel at ease without worrying about fire hazard.



## IV. REPAIR

As a subversive product, electric vehicle enterprises are advised to **develop approachable and acceptable** instructions to reduce people's self-repair worries.

## V. CUSTOMIZE

We recommend more designs that can **fit various needs**, like bigger space for family size, the style is advised to be either approachable or novel.

## VI. CONVENIENCE

We suggest the infrastructure related to electric vehicles to be **evenly distributed to cater** the instant needs without waiting time.



# SOLUTIONS

