

**Key Features:**

- Registration / Account System: to verify the identity of the users
  - Online Payment via mobile: allowing users to purchase addition socket if they needed
  - Push Notification: Keeping the client up to date on electricity usage is extremely important because our service is aimed to reduce the utility cost. Therefore, we will send notification to the client when the electricity usage approach to the 95 percent of the limit usage that client
  - Electricity usage of each socket: provide detail data to users so they can reduce their electricity on specific electronics
  - Total consumption
  - organized chart to show the trend of the electricity fee: letting users see the long-term trend of the electricity fee
  - Problem report → Possible Solutions/Suggestions:
  - Feedback System: evaluate the satisfaction of users for our service, therefore, we can make improvement on our platform and policy
- Registration / Account System Push Notification data Electricity usage of each socket  
Total consumption organized chart to show the trend of the electricity fee Feedback  
System

**Top ten state in electricity rate**

State	Avg Electric Rate: January 2019 (cent)	Avg Electric Rate: January 2018 (cent)	% Change	\$ Monthly Electric Cost (dollars)
Hawaii	32.09	31.16	2.9	\$287.85
Rhode Island	22.67	22.24	1.9	\$203.35
Massachusetts	22.57	21.53	4.6	\$202.45
Alaska	21.74	21.66	0.4	\$195.01
Connecticut	21.56	19.98	7.3	\$193.39
New Hampshire	19.91	19.23	3.4	\$178.59
California	18.32	19.11	-4.3	\$164.33
New York	17.29	17.75	-2.7	\$155.09
Vermont	16.73	17.36	-3.8	\$150.07

Maine	16.49	16.01	2.9	\$147.92
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## Business Plan:

Key Partner	Key Activities	Value Propositions	Customer Relationships	Customer Segments
<p><b>Taiwan Power Company</b></p> <p>We could work with national electricity providers in order to better calculate the amount of electricity. We could also provide anonymous information to the national electricity companies for additional revenue.</p>	<p><b>Production of product</b></p> <p>Initial productions could be done by hand whereas mass-productions could be further implemented in factories on later stages of the venture.</p> <p><b>Development:</b></p> <p><b>Software:</b></p> <p>Short-term goal: to make a website/online store</p> <p>Long-term goal: develop different platforms app includes: (Android/iOS).</p> <p>The software will calculate the energy consumption and generate a user-friendly graph to display the data. The app could also limit the usage of every smart power outlet in order to accommodate the goals set by the user. Notifications could be sent to phones once the limit have been reached, suggesting the user to turn off the power supply for an estimated period of time.</p> <p><b>Hardware</b></p> <p><b>Arduino UNO:</b></p> <p>The board is equipped with sets of digital and analog input/output pins that may be interfaced to various expansion boards and other circuits.</p> <p><b>Arduino (SCT-013):</b></p> <p>We can use these sensors with a processor, like Arduino, to measure the intensity or power consumed by a load.</p> <p><b>Arduino(ESP8266):</b></p> <p>The ESP8266 WiFi Module is a self-contained SOC with integrated TCP/IP protocol stack that can give any microcontroller access to your WiFi network. We will analyze the data from the measurement and send back to our APP/website.</p> <p><b>Marketing</b></p> <p>Utilize online advertisements to increase the number of people that come into contact with the service that we provide.</p>	<p><b>Provide vital household to house-owners.</b></p> <p>House-owners usually lack the information needed in order to reduce the monthly utility fees. House-owners oftentimes are left in the dark as to ways to effectively reduce the usage of energy. We sought to provide a clear and transparent line of communication that the utility companies fail to establish by presenting a service that installs smart outlets within houses in so that data could be collected, analyzed, and given to the users.</p> <p><b>Propose feasible solutions for goals set by home-owners.</b></p> <p>Another functionality that could also be implemented within our service is personalized goal settings. The app that our service provides could also have the ability to suggest how to reduce energy consumption based on the desires of the user. The suggested plan could then adjust itself based on the user response from alerts and monthly reports.</p>	<p><b>Customer Services</b></p> <p>Customer services could be provided within the app so that troubleshooting could be easily solved. Additionally, monthly surveys and on-demand personnel check-ups could provide the customers with a friendly and convenient relationship</p> <p><b>Tutorials</b></p> <p>Tutorials could be posted online on a section of our online store in order to teach our users how to interpret their data. Benchmarks and national averages could also be listed in order for our users to have an idea of how much they are spending.</p>	<p><b>Homeowners</b></p> <p>When the households are paying their utility fee, they only know the total amount of fee they need to pay in a month. By using our service, they can clearly access to the cost of each electronic device that they used. With this information, it is much easier for them to reduce the utility fee of costly products in order to reduce the monthly fee as a whole.</p> <p><b>Factory Owners</b></p> <p>Suffering from the high cost of machinery and electricity, company and factories will do anything to reduce their production costs. Companies usually cannot effectively manage their usage of electricity of machinery, limiting their abilities to maximize their profit. Therefore, the service that our company provides analyzes the usage of each machinery and equipment so that factory-owners could efficiently reduce their electricity bills.</p>

Key Resources	Channels
<p><b>Physical Resources</b></p> <p><b>Machine</b></p> <ul style="list-style-type: none"> <li>Machines will be needed to produce our the modules of our product at a fast scale.</li> </ul> <p><b>Systems</b></p> <ul style="list-style-type: none"> <li>Systems are needed to continuously develop our product in both hardware and software.</li> </ul> <p><b>Transportation</b></p> <ul style="list-style-type: none"> <li>Transportation is needed in order to transport our people to the place of installation.</li> </ul>	<p><b>Self-created online store.</b></p> <p>Build a website for customers to subscribe to our service and also provides an online tutorial and statistics for the users to compare.</p> <p><b>Social Media</b></p> <p>Advertise our service via social media such as facebook, intagram, etc.</p>
Cost Structure	Revenue Streams
<p><b>Material Cost:</b></p> <p>Material costs would initially be the costliest part of our company as our services rely on the reliability of our products. Material costs would include the money needed to buy the components and the money needed to transport our employees and products to said location for installation.</p> <p><b>Development Fees</b></p> <p>Development fees would mainly derive from revenue we earned from past purchases. These development fees would be relocated into sectors of hardware development and software development. Hardware development would improve the current modules that we have by adding different sensors to include different functionalities in the future. Software development would be used to fix bugs and add more functions to the app and website.</p> <p><b>Advertisement Fees</b></p> <p>Advertisement fees would also derive from revenue made with previous purchases. These fees would be used to advertise on social media and on real life in order to maximize our contact with all types of people</p> <p><b>Employee Wages</b></p> <p>Employee wages would be the type of fees needed when the company has grown to a certain size. By then, employees need to be hired in order to continue our services to a large number of people. Thus, some fees would be allocated for paying the employees that we hire.</p>	<p><b>Service Fees</b></p> <p>Service fees will be our main source of income. These are one time fees that are paid to our company before we install the smart outlets into the users' homes. This fee will vary depending on the number of sensors needed to be implemented.</p> <p><b>Basic and Premium Plans</b></p> <p>Basic and Premium Plans are mainly targeted at factories or buildings that require large scale reduction of electric fees. These plans would include regular check-ups and maintenance that would not be available to regular household owners. This could also be part of our gross revenue.</p>

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Professor Tyler Wry

Introduction to Venture Creation

26 June 2019

### **Our Website Link:**

<http://8ec8908a.ngrok.io/wego/ico/> (If cannot open the website, please look at the video of our website, since we haven't bought the domain )

### **Video Link:**

<https://www.youtube.com/watch?v=XvjpQ3LoVHs>

### **Summary**

Our venture, WeGo, is focused on alleviating the transparency issues that plague the utility industry today. With the installation of smart homes on the rise and accessibility to information being one of the most important aspects in our modern society, homeowner's accessibility towards their own utility information is as important as it could be. WeGo plans on providing a service we will help homeowners install sensors at various electrical hotspots around the house including power outlets and breaker boxes. These sensors would help detect and transmit electrical information towards our central database for it to be analyzed. Then, by also providing an app for friendlier user interactions, the homeowners would have full access to all the information that the utility companies fail to provide to their consumers. Suggested plans and limited electricity usages could also be custom set by our users, allowing for utmost user-customizability. Maintenance and further upgrades could also be provided via customer

service. Moreover, by further integrating our technology to already existing smart home electronic applications such as Google Home and Amazon Echo, we could further integrate our service into already existing services, making our service more widespread.

We believe that by providing homeowners with the information that they deserve, they would have the ability to reduce their utility fees in the most effective way that they desire. Information and data is an important aspect of the technology industry today. With the price of electricity on the rise with political instability in America, homeowners have an ever-growing incentive to purchase our service. Additionally, reducing utility fees will always be something that homeowners struggle with throughout their lives. With all of these factors, we believe that it is now the perfect time to launch our service in order to provide the public with an opportunity that is greatly desired.

### **What We Want to Learn from the Interviews**

Interviews with people who are not involved with the development of this venture would bring new perspectives, ideas, and issues that were not considered before. By conducting these interviews, we hope to learn whether or not the issue that was described in the assumptions are as great as we presume it to be, general comments and concerns that they have about the product and service that we provide and the effects that they think this product would have on their daily life.

One main aspect that needs to be comprehended is the degree of demand. While it is true that people do have problems handling and reducing their utility bills, there is no way of knowing the magnitude of the problem. It could be a problem that is somewhat annoying but

tolerable or a problem that people are willing to pay money to solve. This essential question is fundamental to the existence of our venture as we are assuming that people will be willing to pay for our services in order to reduce their utility bill. If the issue does not really pose a big of an issue as we think it is, there is no money to be earned in this particular market. By interviewing a variety of people about the current problems that they have with reducing their utility bills, we could better understand the situation that the general public is in while also finding different functionalities that our service could provide in order to accommodate the true needs of the public; thus, allowing us to build our venture on a service that is actually desired.

Another important reason why we need to interview people outside of our venture creation is that they provide us with perspectives that differ from ours. A new pair of eyes is important in creating a service or product because there might be unexpected issues or problems that could not be thought of during the brainstorming process. By elaborating the ideas of our product and service to experts in different fields, we could have the opportunity to troubleshoot problems. For instance, during one of our interviews with Dr. Ka from the National Taiwan University of Science and Technology, he questioned whether or not the electricity consumption of the sensors that are installed will counteract the energy that is being reduced. This particular point gave us great insight into the main issue that our venture needs to solve before we start providing our service: how to find the balance between energy reduced and the extra energy consumed. While the only way to find out is to set up experiments and test the electricity usage of our sensors over time, this question would have gone unnoticed if not for the questioning of Dr. Ka. Interviews from network professors such as Dr. Liu also gave us insight into possible network issues that might occur in the user households. A long term power shortage could easily

cause a backlog of data within our sensors and could interfere with the user-friendliness that our service is supposed to provide. New opinions, no matter good or bad, will always help us improve the quality and functionality of the product. Thus, in these interviews, we hope to gain as many opinions about the service that we provide in order to further improve it.

The last important thing that we want to learn from these interviews is how much are people willing to pay for this particular service. In a free market, the cost of a service or product is always determined by how much people are willing to pay for it. Thus, by asking a variety of people on the price that they are willing to pay for the service that we provide, we could get a broad idea about how much money we could theoretically charge a customer. Additionally, along with data gathered from MVP tests, we could have an accurate guess of how much the market is willing to pay for our service and could skip the awkward phase of constantly changing the price point during the first few months of the initial launch.

### **Business Interviews:**

Our first interview would mainly focus on the business aspect of our venture. We want to get different perspectives on the feasibility and well-roundedness of our entire business plan and structure. We also want their opinion on the best ways to provide our service in the real market. Because of this, we interviewed two university professors who have knowledge in this particular field.

- **Dr. Long Lee Ke**, a current business professor at the National Tsing-Hua University who had also overseen several venture start-ups.

- **Dr. Ka**, a current professor at the National Taiwan University of Science Business Department.

**1. Given the current growth of the smart home industry, what is your perspective on the further integration of technologies into homes that do not have these technologies implemented?**

Dr. Ke: Although the smart home industry is indeed growing in countries in North America and Europe, the fad has yet to hit developed countries in Asia and Africa like Taiwan and China. Because of this, the current market is very limited to a western audience. In regards to the further integration of technology into homes, I am assuming that you are talking about old homes “upgrading” into smart homes. I believe that the presentation of this particular service is lacking in the market right now. People are usually not willing to upgrade their houses into smart homes as they see no incentives to do so. Because of the promotion of smart home devices such as Alexa, smart homes are advertised as sort of a “fun” way to interact with your house and thus, a lot of the older folks do not see any reason why they should upgrade. If a service that solves a common issue that all age-groups faces could be solved using a smart home device, I believe that there would be great incentives for people of all age-groups to purchase this service or product.

Dr. Ka: The smart home industry has not been innovating in the past few years. The concept of smart homes was initially thought of decades ago, but the idea, despite its usefulness, is still not completely realized. As of now, smart home technology is considered as a service for the rich as



the services that smart home devices provide serve non-essential roles in the daily lives of people. For instance, the ability to access electronic devices from outside the house has been one of the key features of a smart home. However, this feature is not necessary in the daily lives of people and really does not have a big impact on people's daily lives. Additionally, turning on the air conditioner after the temperature exceeds a certain level and closing the curtains when it is night time is really just extra functionalities. It is because of these factors that the smart home industry, as it exists now, is most appealing to young, moderately wealthy homeowners. I believe that a huge marketing campaign and the additional functionalities that everyone could relate to is the only way to integrate the neglected part of the homeowner base.

## **2. What is your opinion on the different revenue streams like subscription fees and one time purchasing fees?**

Dr. Ke: I mean each business should use the model that fits the service or product they provide. The more controversial part of this question is whether or not software or online services should charge a one time fee or a subscription fee. Hardware products do not have an option. They have to sell their products with a one-time fee because that is how buying a physical product works. However, people are now realizing that software is an entirely different situation. Many entrepreneurs are finding out that subscription fees or even in-app purchases are more economically viable than models that use one time fees. This is because people are more attracted to low costs. One example that I often give is if Spotify or KKBox charges one time fees instead of subscription fees. Sure they can charge \$200 for a life-long subscription, but in

the process, they would lose all the potential money that they could gain by utilizing a subscription model and also they would lose many customers who think that \$200 is too much just for a music streaming platform. By having a subscription fee of \$5 a month, they could take money from their customers indefinitely. The low cost will attract the public and the monthly revenue guarantees that they will have a constant flow of money. In conclusion, however, I still believe that it depends on the context of the business.

Dr. Ka: I really think that the subscription model is now catching on in regards to software and services. The success of subscription revenues in streaming services and the success of in-game purchases in a variety of online games have really displayed the potential that alternative purchasing methods have. Regarding the subscription, I really think that this type of revenue stream is best served when there is not a constant need for said service. If there is a constant demand for a service, such as fixing the computer, subscription fees are not needed as people who naturally come find the service when the computer is broken. If the service is not constantly needed, however, a subscription model would ensure a constant stream of revenue. That being said, it also varies based on the nature of the business and the type of service it is providing.

**3. Because the main purpose of our business is to help people save money, would a subscription revenue work better or would a one-time purchase be better for the overall revenue stream?**

Dr. Ke: It really depends on the amount that you are planning to charge your customers. If the charge is minuscule relative to the amount of money that they are going to save, I believe that a subscription revenue would work the best for your business. However, if the subscription fee is a significant fraction of the money that they will save, I think that it is best to stick to one-time purchases. This would not be the case, however, if the marketing is done right. People would want to save money no matter what, so if your marketing strategies are successful, I believe that the subscription model would still work. Regardless, based on the information that you had told me about your venture, I think that one-time purchasing fees would still work in your favor as there is the cost of maintenance that needs to be considered. These sensors that you want to install in the power outlets of homes need to be repaired at some point in time. Malfunction is always an issue for new technologies. Therefore, this could be one of your additional streams of revenue.

Dr. Ka: I really think that the subscription fee model would not work for your particular business because the service you provide is essentially a product. Your business helps people install technology that would make their traditional houses more “smart.” This, I believe, does not require a subscription fee. If it is implemented, I think that it would drastically hurt the public interest in your product as no one wants to constantly pay money in order to reduce the money spent. That sounds like an oxymoron and the public will reflect on that.

**4. What do you think are the proper responses to the threat of competition and tech giants entering the same market-space as the one our service provides.**

Dr. Ke: Competition is always going to be a problem in a free market. I am not sure of the companies that are in direct competition with the venture that you want to create as of now, thorough market research is needed in order to identify all possible competitors. Once you have identified them, you have to think about ways that you could stand out. By distinguishing your service from what they provide, your venture would have an actual chance to succeed. You could also do research on the problems that they have encountered since their conception. By doing so, you could prevent yourself from making the same mistakes. Therefore, the key thing that you should do is extensive market research and opposition research. That way, you will know who you are up against and how to defeat them in the market.

Dr. Ka: Regarding your business, I am most concerned about the immediate competition rather than a tech giant's introduction in the market. This is because tech giants have little to no incentive to actually enter the market unless it is proven to be extremely profitable. Even if your venture eventually becomes very successful, companies like Google would have the ability to buy your entire company. Because of the huge power that they hold, I am more concerned about companies that are already in direct competition for your service. What you have to do to combat that is marketing. The smart home industry, especially the energy reduction department, has been highly neglected by people today. People really do not see the need to implement these technologies. Thus, I think that extreme marketing strategies will be needed if you want to distinguish yourself from all the other existing competitors that already have the technology.

## Technology Interview

This interview would mainly focus on the technological feasibility of our product/service and whether or not the technology is easily accessible and readily available for mass production. Because of this, we interviewed experts in the technology field in order to gain a better understanding.

- **Dr. Ka**, a current professor at the National Taiwan University of Science Business Department.
- **Dr. Liu**, a current professor at the National Tsing Hua University Electrical Engineering Department.

### **1. Do you think that there are any technical hurdles regarding the sensors and the apps that we propose?**

Dr. Ka: I believe that the technology that we have today is more than enough to complete the goals that you want to accomplish. The sensors that you need are all readily available even in local electronic shops. The hard part of your venture would probably be the connection of the sensors to a central database and the solution proposition. The analysis part would be relatively easy as it is just a compilation of data collected from each individual household, but the recommendation of a solution may require a neural network that could analyze the inputted data and propose a plan. Other than the solution proposition, I think that the technology for hardware is technologically feasible.

Dr. Liu: Regarding the technological aspect of your venture, I really think that all of the technology needed is already present in society today. Your service is essentially a unique combination of all the technologies. The hardware is absolutely not a problem in the development process as all the sensors already exist in the market. The hard part of this venture would probably be the size constraints. Since I do not know how much space you are working with, I do not really know whether or not you will have enough space for all the functions that you propose. If, however, size is not really an issue, I think that the hardware aspect is set. The software part of your service is also relatively simple to create. You can utilize Swift in order to code your apps on the IOS store and use HTML or other website programming languages to build your own website. Power computer languages such as Python could also help code your solution suggesting process. Overall, I think that all the technology is already here to allow you to create your service.

**2. What, in your opinion, is the best way to detect electric usage? Do you think that kWh is the best way to represent the data or should we just display them in a user-friendly way, such as using money?**

Dr. Ka: Well it is really up to you. No matter what you do, you will need to measure the kWh of power that is used up in each power outlet. However, how you present the data to the user is all up to you. I would suggest you display both data. That way, it would improve your venture's core message of transparency while also allowing users who do not understand kWh to comprehend the results in a more tangible way by helping them convert kWh to currency using

local electricity rates. However, this will pose another challenge. How are you going to gather the electricity rates of every country/state? These things are vulnerable to change and by exchanging the rates for them proactively, it may cause some errors in calculation that you could be blamed for. That is something to be careful about.

Dr. Liu: I really do think that you should help the users change their kWh into the local currency that they use because it would help improve the trust between your customers and your company. Since you have stated that the main goal of your company is to improve the non-existent transparency between the homeowners and utility companies, it would be a shame if you could provide a step further by helping the users transfer the data that they might not understand into a more useful value. I regarding the issue of changing electricity rates, I really do not think that this is a big problem as you are simply giving an estimate of what proportion of the electricity bill is each one of the outlets/electronic devices contributing. Even if the rates are changing, the ratio between the electricity usage of different parts of the house would not. Therefore, I do not think that the changing rates are a big issue.

### **What We Learned From the Interviews**

We have organized our interviews into two categories: business and technology. By interviewing professors with different expertise in different fields, we were able to get all the answers and explanations that we wanted prior. We learned that there were many issues to our technology that we have not previously discovered such as networking, electrical usage, etc.. We

asked for some advice from some business professors and they have given us lots of insight knowledge into the smart home industries and the ways we should approach our venture.

### **Key Assumption**

1. We are assuming that people have a general desire to reduce their utility fees.
2. We are assuming that the market for the energy consumption of smart homes would continue at the same rate and that the current market would not drastically shift in the following few years.
3. We are assuming that the cost of our product would be minimal so that the cost of our service would not supersede the reduction of utility fees.
4. We are assuming that our users have the ability to use the data that we provide them to effectively reduce their own utility bills.

### **Assumption to Hypothesis**

In order to validate our assumptions, we have to create different ways of testing these assumptions in real life in order to come to a conclusion. These assumptions need to be answered before the launch of our venture in order to ensure that we are not building our venture on invalid assumptions. Thus, testable hypotheses are needed in order to test these assumptions.

One of the key assumptions that are made during our brainstorming process is that the general public has a need to reduce their utility bills. Although it is obvious that everyone wants to save money, what is not obvious is whether or not people are so desperate that they are willing to spend their hard earned money in order to reduce more. This assumption is key to the viability



of our venture and must be tested before proceeding into other developmental stages of the venture such as prototyping. One such way that we could test this hypothesis is through a survey. By sending out surveys to a variety of people regarding their desires to alleviate the problem, we could get a better understanding of the true demand of the public.

Another key assumption that needs to be tested is how much is the public willing to pay for our services. At this point in time, we are boldly assuming that the public has a high demand for this particular type of service, allowing us to create price points that are fit the market's demand. However, if the demand was not as high as we think it is, we could be creating a service that is destined to lose money. Thus, we believe that by having a variety of plans available for selection at different price points that reduces different amounts of money, we would be able to record the data of the number of unique clickers which could help us determine which price point is the most popular.

### **MVP Test Gathering Approach**

We believe that our gathering approach is suitable for the hypothesis that we want to be tested as our landing page simulates the core website that we will be using to sell our service. By creating a viable front-end with no back-end, we would be able to simulate the public's initial reaction with different aspects of our product such as purchasing and interacting with our landing website. Additionally, we would be able to collect statistics such as clicks on different options in order to improve our understanding of the desires of the customers.

One section of our landing page lists out the different purchasing plans that the users could choose based on their own desires. The four different plans that we want to test consists of

prices we consider the individual buying option, the basic plan, the standard plan, and the premium plan. The following plans that we provide are depicted in the table below.

Individual Plan	Basic Plan	Standard Plan	Premium Plan
Base price of \$0	Base price of \$50	Base price of \$70	Base price of \$100
One smart adapter for \$10.00	\$5.00 per additional smart adapter	\$3.00 per additional smart adapter	\$3.00 per additional smart adapter
1 Year Warranty	2 Year Warranty	3 Year Warranty	3 Year Warranty
Plan Suggestion Not Available	Plan Suggestion Not Available	Plan Suggestion Not Available	Plan Suggestion Available

We believe that this method of gathering user data is one of the most efficient ways to do so as we are utilizing the “Wizard of Oz” technique where we only present the front-end but not the back-end. By doing so, we could truly gauge the willingness for the customer pay for our service while also determining the best price point to sell our products. While it may seem obvious for all users to choose the cheapest option, we counteracted that intuition by suggesting that the more they spend on the service, the greater the bill reductions could be. This will offset the urge of the customers to choose the cheapest plan and allow them to make a decision not depending on the monetary cost, but on their true needs.

Another gathering approach that we want to test is the implementation of the Contact Us section at the bottom of our landing website. Although the FAQ section is able to answer the most basic questions that customers usually have, the Contact Us section allows us to directly communicate with the users who visit our landing site. Even though the products are not readily

available, general questions that the customers might ask before buying the service helps us determine the different aspects that need to be further elaborated within our website. Thus, we believe that the method of gathering allows us to obtain the personal opinions of genuine customers that are interested in the product.

The last thing that we want to test with our MVP test is whether or not the users could actually use the data that is provided and make a reduction plan themselves. The results of this test are very important as it would drastically change the way our platform (the app) should present the information to our users. If our customers could not effectively make their own plans to reduce their utility use, we would have to further design algorithms that suggest plans to them based on the usage of electricity. We want to test this on our landing site by also incorporating the service within the different service options that we propose. By separating the standard and premium plan and distinguishing them based on the availability of a suggestion service, we would be able to know whether or not the public really wants to use this particular service. Moreover, by having additional statistics for people to compare their monthly fees with the state average, there would be greater incentives for our customers to switch to the premium plan, allowing us to determine whether people want this type of service.

## **Results and Implications**

Despite the fact that our landing site was only launched for a few days, we did collect substantial amounts of data that have huge implications on our entire business model. We collect the data mainly through user traffic and through monitoring the buttons they clicked on our website. By doing so, we could know which plans they actually desired.

The most valuable information that we gathered from our launch site is the popularity of the different plans presented to viewers of our website. By monitoring the clicks, we found out that the basic plan is by far the most popular purchasing option followed up by the premium plan and the standard plan. Although the accuracy of this information is questionable due to the small amount of website traffic, we must assume that this data is representative of the current market given the time constraints that we have. From the data gathered, we are able to conclude that the consumers would still prioritize the cost of the service above the additional benefits that are provided. While this does have implications that the demand for energy reduction smart home devices is definitely lower than we expected, we are still optimistic about the market as there is still a variety of people who are willing to buy the premium plan. Another implication that this test insinuates is the lack of popularity regarding the individual product itself. The individual product is only clicked on by one unique user. This indicates that the public does not really want to use the smart adapter on its own. The public would rather pay more for a more well-rounded service than less for individual smart adapters. This strengthened our assumption that the service that we provide is actually demanded by the public. In conclusion, we believe that our data gathering regarding the demand of the market is very successful. The data generated by our landing site allows us to understand what the public really wants. While it may be somewhat different than we had expected, it still points us in the right direction.

Individual Plan	1 unique click
Basic Plan	22 unique clicks
Standard Plan	10 unique clicks
Premium Plan	15 unique clicks

Unfortunately, after several days of being online, the Contact Us section of our landing site remained untouched by any user. While it is rather disappointing, it is not really a surprise seeing that we do not actually have a product as of right now. Thus, while we did not successfully gather comments from people who visit our landing site, we did gather valuable information regarding the trend of the market, the pricing that the public really wants, and the demand of the energy reduction industry.

### **Prototype- Smart Adapter**



When we designed the smart adapter, we decided not to put too much indicators or monitors because every data will be shown in the app. Plus, we are also concerned that the adapter will trip the circuit breaker, causing detrimental harm to the electric circuit. As you can see above, there are three photos of our prototype with different color of indicator: green, orange and red. When the green indicator is shown, the smart adapter is connected to the app perfectly. When the orange indicator is shown, the adapter is still connecting to the app. And when the red indicator is shown, the adapter is not working and not connected to the app. Unlike the other company who also made smart plug, the clients who use our smart adapters will never need to

struggle to insert an unfitting plugs because just like a universal plug adapter, we support a variety of plugs and switch into three most common plugs: USA, England, and Europe plugs. Our smart adapter also come along with four usb slots so that our adapter can also collect the data when clients use those four usb slots.

### **Prototype- App**

The following picture depicts a prototype of what our app is going to look like. The first picture depicts the usage of a particular device within the home. The menu will display the percentage that is over the limit and the actual amount of power that is used. It also gives the estimated amount each day and the approximated amount spent. Each adapter will have its individual menu so the homeowner can monitor the usage.

The second screen contains the default screen for the app. It allows you to upload the picture of the position of the smart adapter so it indicates which adapter it is referring to. It also allows the user to set a plan and connect to the wifi.

The third picture actually allows the user to set the plans that they want to abide by. As can be seen by the picture, various pieces of data is displayed on the app for the user to modify in order to ensure full customization.

WEGO12:30

DEVICE NAME

130%

Current Usage :260(KWH)

Current Plan :200(KWH)

Days Left :5(Days)

AVG Each Day: 5.2(KWH )

Estimate Fee: \$95

Compare to Previous: 150%

DEVICE

PLAN

WEGO12:30

Upload Picture

Name Your WeGo

Enter Name Here

Set Your Plan

Click to Start Setting

Connect to WIFI

Search for WIFI

NEXT

Fluid UI12:30

Usage Plan Setting

Limit:100(KWH)

Change

Period: By Month

Change

Fee Rate: \$0.3(KWH)

Change

Connected Device: 52

Change

Schedule

Change

DONE