

Project Deliverable F - Business Model

GNG2101

Professor Mana Azarm

Group E14 - SensAct User Interface

Anika Prottasha 300119095

Fiona Chau 300132210

Omar Sherif 300127063

Joshua Ekwueme 300117661

William Wang 300128012

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Introduction

In this deliverable, we are assuming that we have completed our final prototype and we are prepared to sell our product. In this deliverable, our objective was to choose a business model that best suits the commercialization of our product. The business model canvas will allow us to familiarize ourselves with the purpose this product will serve for our target users. We have developed an outline on the services we offer, costs and potential revenue, channels of delivering our product and our major partners for the product development. To test the assumptions made in our Business model canvas, we have created a survey and distributed it to potential customers. How our product assumptions correlate with our potential customers and users will be further discussed in this deliverable.

Business Model Type:

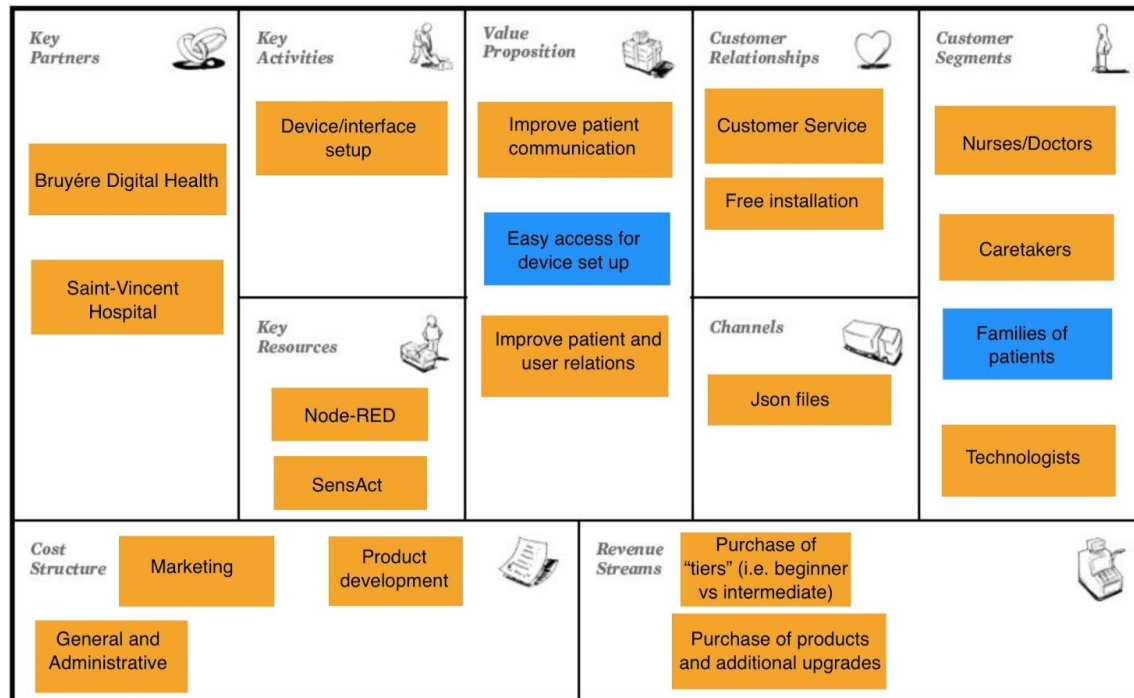
Concierge/customization

The type of business model that is best suited to commercialize our team's product is the concierge/customization model. This business model focuses on customizing and adding elements to an existing product, our interface, to satisfy our customer's needs with a unique product. This model was picked for the purpose of advertising our product to different hospitals and care centers with patients who would have different types of needs, allowing us to customize the product to fit their needs and sell to them. Our user interface revolves around simplicity, meaning that the options included are not many and diverse. The product is created for giving the user a few simple options that were tailored to their needs based on ability, allowing for a comfortable and stress-free stay at the hospital. However, this business model increases our clientele and allows us to advertise to a much more diverse group of users who are in need of our product.

Business Model

Business Model Canvas

Business Model Canvas. What's Your Business: SensAct Setup User Interface



Our Business Model revolves around the fact that we are selling highly accessible, configurable and easy to use SensAct User Interfaces to customers in need. These would be sold in a way that customers will make a purchase for the User Interface and will have access to the basic settings of the interface and SensAct control, but they can purchase more tiers (being intermediate and advanced) if they require it to have more functions of devices. This will make it cheaper for clients and more affordable since many clients might not require higher tiers. We will be partnering with Bruyere Digital Health and SVH Hospital which is a hospital that highly uses the SensAct devices for its patients. Clients would need a running SensAct device before they can run our interface, and most of our services for clients would be helping them set up the interface on their SensAct device. Clients would want to buy our product because they would want to improve their patients communication ability, and in turn improve their quality of life, and because this User Interface will help improve patient and user relations since their communication is better. Most of our expenses would come from marketing our product and future developments of our product to make it even better than it currently is. Our primary mode of delivering this service would be through Json files which is what Node Red files are called, and would be sent online for more efficiency and to reduce physical contact which is needed due to COVID-19. Our main customers we tend to sell our products to would be Doctors and other

hospital caretakers and staff, families of disabled patients, and technologists working for hospitals and aid centers.

Core Assumptions

- Our first main assumption is that professionals in the medical field would want to purchase our product to make it easier for them to communicate with patients, or to allow them to have another means of communication that is completely personalized. Although families of patients are also a possible customer as they can also use this, we are assuming our main customers will be medical professionals.
- Our entire program for the User Interface can be stored on a single Node Red file(Json) which can be emailed when purchased (contactless delivery).
- That the purchase of the base products/tiers will be enticing to customers because it allows them to buy only what they need. Instead of having to pay for a whole product with multiple aspects, they are essentially only paying for what they want/need.
- That the customers will have a compatible device. Specifically, our interface runs with SensAct and with some sort of a computer, therefore, we are assuming that customers already have access to those and would like our interface to make using the SensAct easier.
- An assumption is that the customer will have all the required additional files and programs (or are willing to download any additional programs) to run both the SensAct device and our interface. This could include downloading a java program as well as the Node-RED interface.
- Another assumption is that our interface will allow customers to save time and effort setting up their communication devices for patients. This is an assumption, because until validated, we will not be sure if this is better than alternatives or the current java program that the SensAct currently uses.
- We also assume that hospitals will have enough funding to spend on our user interface for better communication with their accessibility patients.

Feasibility Study

In order to test how feasible our business plan is and to validate our core assumptions we conducted a survey. The results of our survey were varying, however, one reason to this is that we were not able to mainly reach our demographic group. The first section of the survey was “demographic questions” simply asking the person a bit about themselves. This included their age and field of study or work. This was done so that further analysis of the results may be conducted based upon the varying results. For example, of our 71 responses, 76.1% [54 people] of respondents expressed interest in our interface, and of 8.7% of respondents that stated they are in the field of medicine they all expressed interest in the interface and they all stated “maybe” or “yes” in purchasing a SensAct device to purchase our interface. Results of the survey that are in relation to the feasibility of our business plan can be seen in Figures 1,2 and 3.

Would an interface that allows for patients with disabilities to more easily communicate be of interest to you?

71 responses

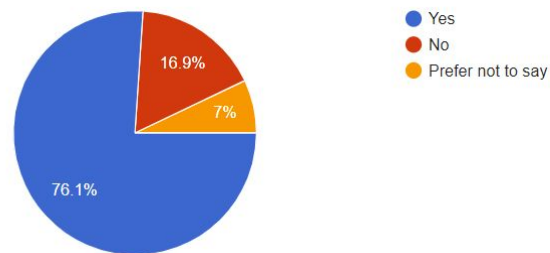
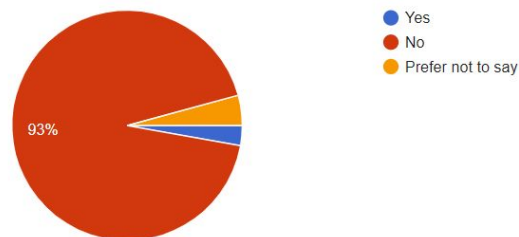


Figure 1: Responses for Interest in Our product

Do you currently own a SensAct device/or already plan on purchasing one?

71 responses



If not, would you consider buying one as to help someone in your life that has difficulty with mobility, such that they are able to communicate easily.

71 responses

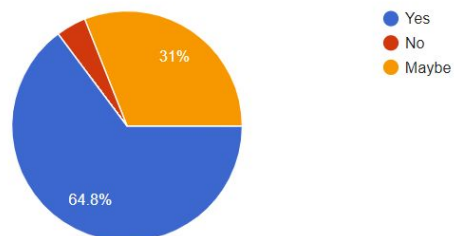


Figure 2: Responses to Gauge if Potential Customers are Willing to Purchase the SensAct Device

If yes, what is your preferred sales option:

64 responses

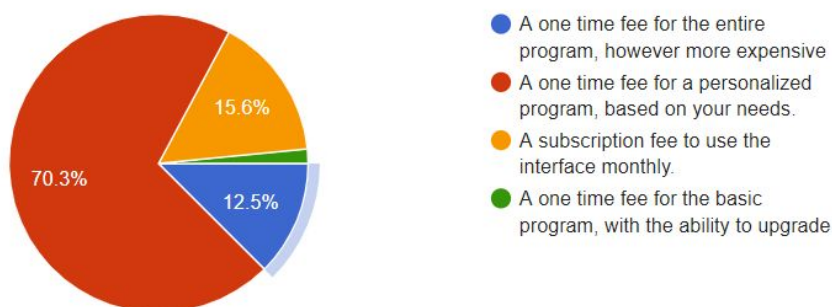


Figure 3: Responses to See Which Sales Method is Preferred

Specifically, Figure 2 validates the core assumption that the customers already own the device and if not they are willing to purchase the SensAct device. This was an important assumption we made for our business model, because if potential customers were not willing to purchase the SensAct then our interface has no use since that is the device our interface is compatible with. Figure 1 provides us with information that there are potential customers in this market that are interested in our product. Figure 3 validates that our planned business model would be best. As seen in Figure 3, 70.3% voiced interest in a “more personalized program, based on your needs” and 1.6% were interested in “a program that has a one time fee for the basic program and allows for upgrades”. Both of these options were essentially the same, where the customer is only buying what they want from the interface instead of paying for more functions than they desire. Furthermore, the second option was actually changed to the first one to make the options more clear.

One of our core assumptions is that our main demographic for customers would be those in the medical field, which we were able to validate, as well as family members. We were unable to confirm that a customer would be buying our interface specifically to help a family member, however, we did confirm that people outside of the medical field would also be interested in it. We were unable to verify core assumptions that depend on how Node-RED functions, such as all files being able to be sold as one file and that customers would have the required programs. We were unable to validate this because we are not too well versed in Node-RED and are currently working on the functionality of the SensAct and its Java program. Also in terms of how easy our interface to use versus the current Java program is not something that could have been tested at the moment. Despite this, we are still confident that those core assumptions will not affect the feasibility of our interface. Finally, we were unable to validate that long-term care homes or hospitals would have the funding for our interface and/or the SensAct device, however, we do not believe that this will change the feasibility of our business plan.

Project Plan

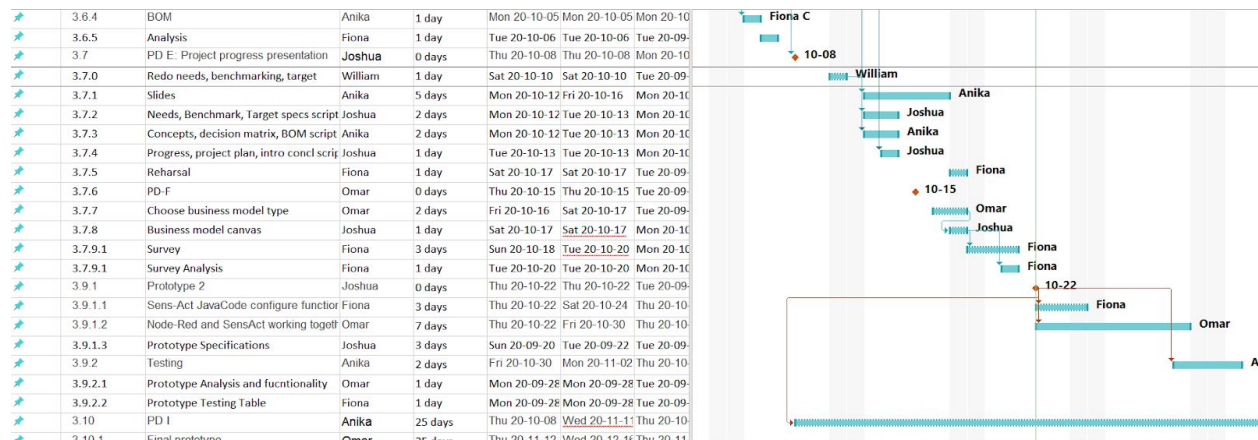


Figure 1: Project Plan of actual task completion, PDF also available in submission

Task Breakdown

Task/Report/Project/Topic	Description	Due Date	Team Member
PD-E Project Progress Presentation	Prepare a powerpoint slide for project presentation.	Oct 18, 2020	William, Anika, Fiona, Omar, Joshua
	Redo benchmarking and target specs according to updated design criteria	Oct 10, 2020	William
	Write script for needs, benchmarking, target specs	Oct 12, 2020	Josh
	Write script for Decision Matrix, Concepts, feasibility, final concept	Oct 12, 2020	Anika
	Script for Project plan progress, future plans, Prototype 2 plans	Oct 14, 2020	Anika, Joshua, Fiona, Omar, William
	Design the slides	Oct 17, 2020	Joshua, Anika
PD-F Business Model	Group meeting for discussing business	Oct 19, 2020	William, Anika, Fiona, Omar, Joshua

	model.		
	Choose suitable business model	Oct 16, 2020	Omar
	Fill in Business model canvas	Oct 17, 2020	Fiona, Anika, Josh
	Core assumptions	Oct 18, 2020	Fiona, Josh, William
	Survey and Analysis	Oct 21, 2020	Fiona, Omar
	Submit PD-F	Oct 22, 2020	Anika
Prototype 2	Group meeting to discuss steps for prototype 2	Oct 24, 2020	William, Anika, Fiona, Omar, Joshua
	Run SensAct Java code and configure the sensors	October 25, 2020	Fiona
	Connect Node-Red to SensAct using Serial Nodes	October 30, 2020	Fiona, Omar, Josh, Anika
	Get Node-Red and SensAct to function together on a Raspberry pi	November 1, 2020	Fiona, Omar
	Write the prototype specifications	October 30, 2020	Joshua
	Test Prototype functionality	November 3, 2020	Fiona, Anika
	Write analysis on prototype's functionality	Nov 4, 2020	Omar
	Create a Prototype Testing table	Nov 4, 2020	Joshua, William
	Submit PD-G	Nov 5, 2020	Anika
Client meeting 3	Prepare a presentation for the	Nov 3, 2020	William, Anika, Fiona, Omar, Joshua

	client meeting as a powerpoint.		
Review of client feedback	Look back at client meet notes	Nov 4, 2020	William, Anika, Fiona, Omar, Joshua
	Note the changes requested	Nov 4, 2020	William, Anika, Fiona, Omar, Joshua
	Benchmark and analyze the logistics of these changes	Nov 4, 2020	Anika, Joshua
	Implement changes to the current design	Nov 5, 2020	Fiona
PD H Economics Report and 1 min. Pitch	Economics report	Nov 17, 2020	William, Anika
	Make a powerpoint presentation with key points so far	Nov 4, 2020	William, Anika, Fiona, Omar, Joshua
	Practice presentation and Begin Economics report	Nov 6, 2020	William, Anika, Fiona, Omar, Joshua
	Submit Economics report and await presentation queue	Nov 18, 2020	William, Anika, Fiona, Omar, Joshua
PD I Design day pitch and final prototype evaluation	Prepare a 2min pitch	Dec 3, 2020	Fiona, Joshua
PD J User manual	Begin work on user manual	Nov 24, 2020	William, Anika, Fiona, Omar, Joshua
	Submit user manual	Dec 10, 2020	Anika
PD K Final presentation	Begin work on the presentation	Nov 28, 2020	William, Anika, Fiona, Omar, Joshua
	Complete presentations	Dec 2, 2020	William, Joshua
	Submit all relevant work	Dec 3, 2020	Anika

	Run through presentation multiple times for practice	Dec 6, 2020	William, Anika, Fiona, Omar, Joshua
PD L Intellectual property search	Explore intellectual property databases	Nov 24, 2020	William, Anika, Fiona, Omar, Joshua
	Describe the relationship that exists between products	Nov 26, 2020	Omar, Joshua
	Explain the importance of these intellectual properties	Nov 28, 2020	William, Fiona
	Explain the importance of intellectual properties	Dec 1, 2020	William, Anika, Fiona, Omar, Joshua
	Submit the deliverable	Dec 10, 2020	Anika
Design Day	Final product must be completed	Dec 3, 2020	William, Anika, Fiona, Omar, Joshua

Conclusion

In conclusion, the study of our business model clarifies who our main customer is and how we plan on selling our product. It is important for us to prioritize our customer's experience. Our main users are professionals in the medical field, while hospitals, long term care centers and other large corporations may be the ones purchasing our products. One of the issues is that we cannot consider all types of clients, for example, the patient's family may need our product but they need to buy additional devices and software to run our interface, which can bring difficulties to our customers. We conducted a survey to test assumptions we made about our product, and based on the results, we were able to confirm that a one time fee for a personalized program based on the patients needs would be the most appealing to our target demographic. We have also seen a positive response on whether potential customers would be inclined to purchase our product to help out disabled members, hence concluding that our product is marketable. Unfortunately, we were unable to get representatives from hospitals and long term care centers to partake in our surveys and therefore we could not test whether hospitals and large corporations would be willing to spend their funding on such an interface. Overall, we have developed a potential marketing strategy that appeals to our target demographic and tested our assumptions regarding the marketability of our product.

Appendix

Age Range

71 responses

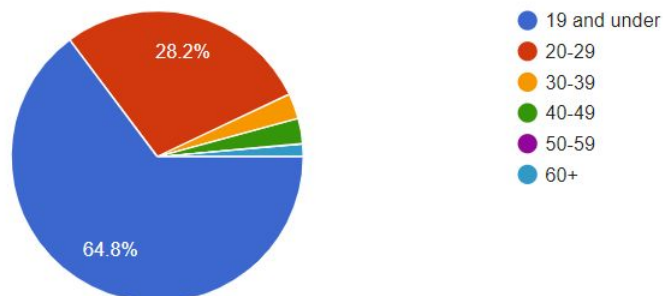


Figure 1: Age Range of Respondents

Gender

71 responses

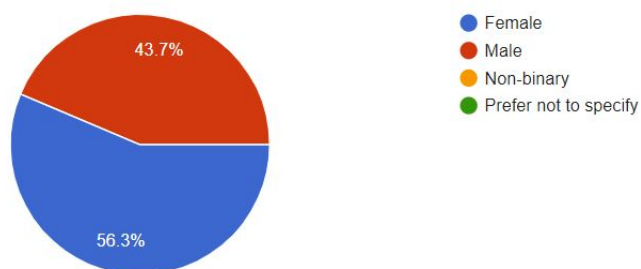


Figure 2: Gender of Respondents

What is your field of study or work

69 responses

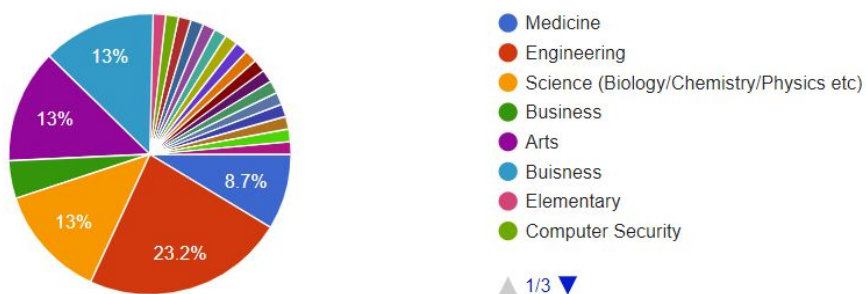


Figure 3: Field of Study/Work of Respondents

Do you know anyone with limited mobility or a disability

71 responses

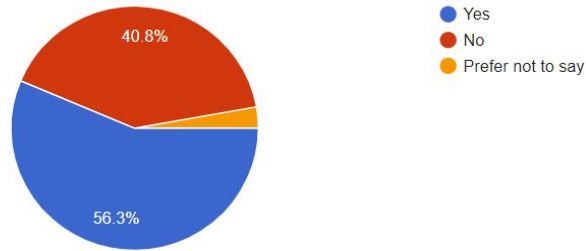


Figure 4: Information on if Respondents Know Anyone With Limited Mobility/a Disease

On a scale of 1-5 (one being no knowledge, 5 being very knowledgeable), how would you rate your background in electronics

71 responses

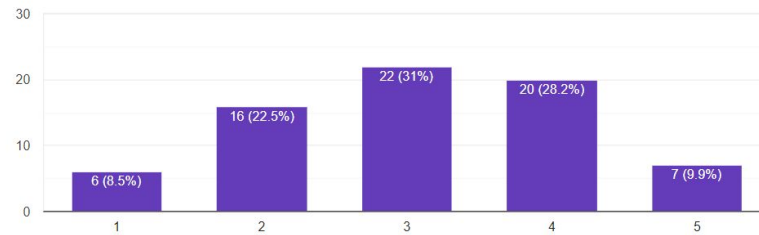


Figure 5: Respondents Ratings on Backgrounds in Electronics

On a scale of 1-5 (one being no knowledge, 5 being very knowledgeable), how would you rate your background in programming

71 responses

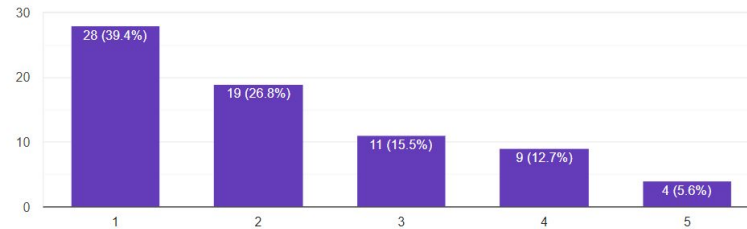


Figure 6: Respondents Rating on Backgrounds in Programming

On a scale of 1-5 (one being no knowledge, 5 being very knowledgeable), how would you rate your background in technology

71 responses

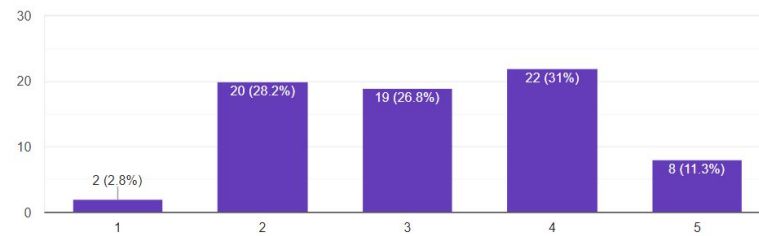


Figure 7: Respondents Ratings on Backgrounds in Technology

Would an interface that allows for patients with disabilities to more easily communicate be of interest to you?

71 responses

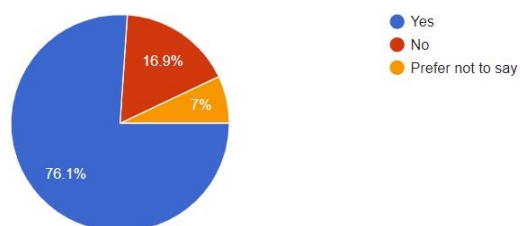


Figure 8: Respondents Interest in Our Interface

Do you currently own a SensAct device/or already plan on purchasing one?

71 responses

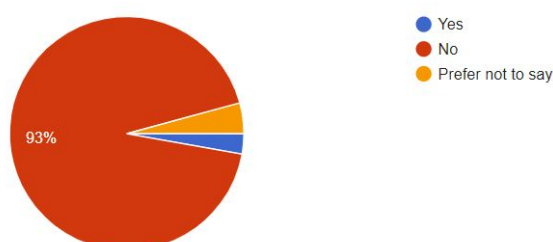


Figure 9: Information on if Respondents Own or Already Plan on Purchasing a SensAct Device

If not, would you consider buying one as to help someone in your life that has difficulty with mobility, such that they are able to communicate easily.

71 responses

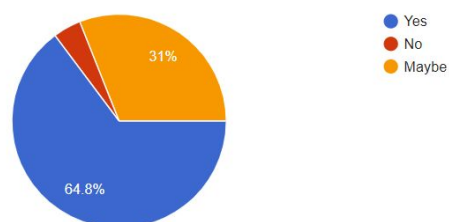


Figure 10: Information on if Respondents are Willing to Purchase a Sensact Device

If yes, what is your preferred sales option:

64 responses

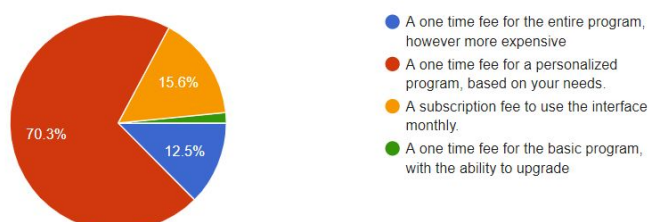


Figure 11: Respondents Preferred Sales Option