**Audience Analysis**

Our target audience is men and women ranging from ages 21 through 85 because this is the age group who are at a higher risk of both contracting and spreading the virus. Our secondary audience will be those individuals who are not directly affected but come in contact but those who make COVID-related materials such as doctors and scientists who make vaccines (Pfizer, Moderna, Johnson and Johnson, etc.), mask manufacturers, and even anti-maskers. Finally, we think this will be beneficial as we are at a stage in this pandemic where we are trying to take preventative measures to minimize contracting the virus; or limit the spread if we find ourselves positive and get access to the resources and support that we may need.

**Cover Letter**

We are TAP-in, a North American-based, public-serving online platform dedicated to helping the fight against the COVID-19 pandemic and contribute to accelerating our path to state-wide recovery. Our team consists of both senior and junior undergraduate students at the University of the District of Columbia. We are a bright group of motivated individuals invested in joining the sprint to recovery.

The founding members of our group include Jermel Watson who is a second-semester junior majoring in Computer Science. He has a background of being a student researcher and a community workshop instructor and he is also a start-up entrepreneur with the desire to help others achieve success. Secondly, we have Demario Asquitt, who is a senior Computer Science major with an avid interest in leveraging technological solutions to combat issues in healthcare. Thirdly, there is Steffi Graham, an Information Technology senior, who is passionate about regaining our lives from the COVID-19 pandemic. She believes with our business platform we will be able to contribute tremendously towards the road to recovery. Finally, there is Allan Muir. He is a senior Information Technology major who aspires to revolutionize a space where people may help fight COVID-19.

We, the TAP-in family, saw the need for a platform where the public could become directly involved in the efforts for combating COVID-19. Resources such as real-time data tracking of the progression of the virus, critical information on avoidance methods and strategies, and provision of tools and information that supports prevention will be openly provided to the public. Not only will one be able to access real-time information as it relates to the progress and presence of COVID-19 cross state lines, but they will also be able to purchase items such as masks, sanitizers, disinfectants, and COVID-19 tests kits, as well as scheduling vaccination and testing appointments. We plan on building a system that is user friendly, interactive, and most importantly, applicable. We want to thank you for your interest and consideration in our proposal.

**Senior Project I Final Proposal**

Team Name: TAP-in

Group Members:

* Jermel Watson
* Allan Muir
* Steffi Graham
* Demario Asquitt

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**Introduction and Context**

The fight against COVID-19 is still a very active one with reports of rising numbers as recent as April 14, 2022. The Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. Most people infected with the virus will experience mild to moderate respiratory illness and recover without requiring special treatment [1]. However, some will become seriously ill and require medical attention. Older people and those with underlying medical conditions like cardiovascular disease, diabetes, chronic respiratory disease, or cancer are more likely to develop serious illnesses. In the wake of this pandemic, there was a worldwide lockdown on all non-essential entities including public and private businesses. This also led to the public being cut off to important resources and life-aid services. The public has been forced to operate off the bits and pieces of information provided by news networks and information broadcast across several media platforms. The issue with these sources is that they provide overwhelming amounts of data, portray information out of context and solemnly provide action taking information [8].

The purpose of this proposal is to promote a platform that empowers the public to take control of their interactions with COVID-19. As we tackle this pandemic, people are looking for reliable sources of information in which they can find security as well platforms through which they can protect themselves and their families from this deadly virus. In this current generation, the first thing that someone would do when they are looking for information is to turn to social media. However, often, the information on social media platforms is either incomplete, biased, or completely inaccurate.

Information is vital for acting and being able to receive accurate real-time information allows you to make the best decisions to protect yourself and your family. For this reason, we have decided to create an online platform that would help the fight against the spread of COVID-19 namely, “TAP-in", which means Tracking, Avoidance and Prevention, as these are the services that we are aiming to provide. We will serve the purpose of being that central destination to access COVID-19 related resources as it relates to tracking, avoiding, and taking the necessary preventative measures to combat the spread of COVID-19.

Not only will one be able to access real-time information as it relates to the progress and presence of COVID-19 cross state lines, but they will also be able to purchase items such as masks, sanitizers, disinfectants, and COVID-19 tests kits, as well as schedule vaccination and testing appointments. When this project is completed, we will have successfully streamlined the process of OCIVD-19 prevention and avoidance by building a platform uniquely for this purpose, providing real-time tracking and image data relating to the current progression of the virus and creating a platform where both vendors and customers alike can exchange vital resources and information.

This work is significant as it provides a way of contributing to the COVID-19 combat community. It provides a hub for the public to receive important information which may ease the public’s frustration and possibly decrease public pressure on the government. We are currently believed to be in a time of deceleration of this pandemic, however, it is still being reported that new variants are emerging at random and posing an even greater threat. We the public are the ones who will really determine how fast or slow we overcome this pandemic. Using these features, we can not only identify the areas in which the virus is, but take the most effective actions, but we can also provide them with these tools and watch the numbers of infections decrease. We need to incorporate every individual, so putting a platform out there that will give each person an equal opportunity to protect themselves and their families with the same level of information that the government and other agencies have will greatly improve our fighting chances. We are putting the power in the hands of the public and giving them back control over their lives.

The COVID-19 pandemic first showed up on December 12, 2019, in Wuhan, Hubei Province when a cluster of patients began to experience shortness of breath and fever. Since then, the number of cases began to increase, then on January 7, 2020, Chinese authorities identified and isolated a novel coronavirus as the causative agent of the outbreak. COVID-19 is the disease caused by SARS-CoV-2, the coronavirus that emerged in December 2019 can be severe and has caused millions of deaths around the world as well as lasting health problems in some who have survived the illness. The coronavirus can be spread from person to person. It is diagnosed with a test. It is advised that the best way to protect yourself is to get vaccinated and boosted when you are eligible, follow testing guidelines, wear a mask, wash your hands, and practice physical distancing [1].

This led to increased use of online and eCommerce businesses and platforms. As this crisis grew on a global scale it forced most countries to retreat to a state of lockdown. Public and private companies and organizations alike were closed, and only essential workers were permitted to continue operation. This lockdown pushed even more U.S. consumers online, contributing an additional $105 billion in U.S. online revenue in 2020, and accelerating eCommerce by two years, Digital Commerce 360 estimates. Online sales hit $791.70 billion in 2020, up 32.4% from $598.02 billion in the previous year, according to Commerce Department figures. Ecommerce thrived in 2020 because of store closures and shoppers’ fear of contracting the coronavirus in public. With these two factors in mind, we believed that an online platform directly targeting this crisis would be extremely effective. We also acknowledge that the federal government, the World Health Organization (WHO) and respective private pharmaceutical entities are fighting against this pandemic, and we feel duty bound to our part and help the rest of the world do their part.

**Literature Review and Available Models**

*Report: CDC Not Publishing Large Amounts of COVID-19 Data* [4]. This article is about how the CDC has been criticized for lack of transparency. Last year, the CDC released information on breakthrough cases but only when a person was sufficiently sick for hospitalization. Inoculated individuals who tested positive and isolated at home were not included in the count. This made the efficacy of the vaccine debatable. *Streamline bulk purchasing of PPE, medical and COVID-19 supplies for work* [5]. This article is published on the Amazon website which deals with purchases of COVID material. The only such site that we found with a significant amount of similarity to our products. In *COVID-19 supplies for healthcare and government organizations*, it lists professional medical supplies to help health facilities protect patients and staff, maintain clean facilities, conduct medical testing, and implement social distancing. *PPE and workplace essentials for COVID-19 and flu season* advises business leaders to keep their businesses safe with cleaning, safety, and healthcare supplies, including protective apparel, safety displays, waste management and more. “There is so much we will need to tackle in the days, weeks, and months ahead – for our patients and their families, for our community and for our care providers and other critical staff who are working so tirelessly to stem the tide. Amazon Business’ support is a bright light in this time of crisis.” Julie S. Butler, Vice President, Children’s Hospital Foundation states. Jamie Rossman, Assistant Director, Contracts & Procurement, Washington State Department of Enterprise Services states, “The Washington State Department of Enterprise Services (DES) appreciates the lengths Amazon Business has taken to provide a portal that government agencies can use to seek needed supplies during the COVID-19 response."

*Creating a Post-Covid Business Plan* [9]. In planning for a post-pandemic world, businesses must understand what your investors’ behaviors will look like after the COVID-19. Some behaviors will return to their pre-crisis state; others will be transformed; and others will disappear entirely. The article draws on research into habit formation, technology adoption and behavioral economics. The authors offer a framework to help companies make reasonable predictions on what happens next.

The article *Guidance for Businesses and Employers Responding to Coronavirus Disease 2019 (COVID-19)* [2]introduces a key part of what we are tackling which is prevention. It states an early guideline of COVID-19 transmission*. “*This guidance is based on what is currently known about the transmission of SARS-CoV-2, the virus that causes coronavirus disease 2019 (COVID-19). COVID-19 is a respiratory illness that can spread from person to person, especially between people who are physically near each other (within about 6 feet). People who are infected but do not show symptoms can also spread the virus to others. Implementing this guidance may help prevent workplace exposures to SARS-CoV-2 in non-healthcare settings; separate guidance is available for healthcare settings. CDC also has guidance for critical infrastructure work settings. Unless otherwise specified, this interim guidance for businesses and employers applies to critical infrastructure workplaces as well.”

**Analysis and Synthesis**

Having identified the issue of inadequate representation of reliable services needed to track, avoid, and prevent the spread of COVID-19. We decided that the TAP-in platform would empower the public to take control of their interactions with COVID-19 in their own hands both from the Customer and Vender Perspective. Analyzing how TAP-in would be successful and where our competitors fall short would produce comparisons and differences.

TAP-in is the first website of its kind where a customer can track COVID-19 cases, read information about the virus and about testing site information, and buy test kits. The competitors of TAP-in include a website by the Government of the District of Columbia led by Mayor Muriel Bowser located at *coronavirus.dc.gov.* It is used for tracking COVID-19 similarities, provides detailed location and business hours of available testing sites, provides vaccine information and vaccination locations and websites, provides information on financial recovery, and presents graphical data of variants and tracking information. The only differences noted are that it provides pick up and drop off for self-testing kits and that it does not provide information on health recovery, does not provide clear mental health services in form of recovery and it has a unique COVID tracking API.

Another website that was found that a similar approach to confronting the COVID-19 pandemic is coronavirus.jhu.edu. The website hosted by Johns Hopkins University presents graphical data and tracking information and provides statistics of confirmed cases and deaths. The differences include that it provides information about testing but does not connect people to testing sites or provide testing kits, it also provides information about vaccines but not how to get access to them.

TAP-in has pros and cons that would contribute to the revolutionary idea. TAP-in pros include the fact that TAP-in has the potential to be the best place to track COVID-19 cases, gain insight and knowledge and learn how one can avoid this virus now, and share the information to its potential carriers. TAP-in will also host as a shopping safe heaven where customers will be able to purchase preventive products such as mask that are recommended by the CDC Test kits that also meet the CDC requirements also other products that a needed in the fight against COVID-19. Another pro is the fact that TAP-in will also be a place where all business owners that want to help in the preventing of the further spread of COVID-19, will have the opportunity to sell their products that they made, and we will show case and help with shipping and marketing their products and brands for them. These businesses will be held accountable by TAP-in will they community terms and polices. Now when come on to the cons of TAP-in, our research we realize there are sites such as the CDC official website that provides tracking of the COVID-19 which is one of or main features on our website. The last con is one in buying and selling of COVID-19 related products to consumers places such as Amazon has widened their market to accommodate every product that is in demand.

Despite the cons of having other known competitors in individual areas such as tracking, avoidance, and prevention of the COVID-19 virus, TAP-in has no rivals when it comes to having a website where all three areas are combined. TAP-in will be the first of its kind and would attract traffic from users as customers and vendors. Instead of going to three different websites, users will be able to come to one central location a platform that is dedicated to focus on not just tracking information or ways to avoid the virus and a place where one can just simply shop for preventive products but a Mecca for all three areas.

**Proposed Solution**

As stated in the introduction, as a group, we saw the need for a reliable platform that empowers the public to take control of their interactions with COVID-19. As we tackle this pandemic, people are looking for reliable sources of information in which they can find security as well as platforms through which they can protect themselves and their families from this deadly virus. After thorough research, we then decided to create a platform that we saw fit to address the issues by focusing on three very important aspects associated with targeting the spread of the COVID-19 virus and eliminating the spread [1]. These three important factors are tracking, avoidance, and prevention.

Research [3] has proven that by developing on these three aspects, it will help to counter the smaller causes of the spread of the virus. Therefore, helping to stop the spread. After thorough research, we have seen it proven that it is now the norm for us humans to run to and depend on social media for just about any bit of information we need, and truth be told the data given on social media is always more than 60 percent inaccurate. After we realized this trend and inaccuracy, we knew the public needed a reliable platform that sells products to help the fight against the COVID-19 virus and gives accurate information.

We decided to let our platform focus on tracking the virus and the reason for this feature was to help especially those regular travelers across the country keep up to date with the spike levels in each state across the country including what states or areas are safe and recommended for travel and which should be avoided. Our next feature is avoidance and the reason we thought this was a solution to the problem was the need-to-know of what measures to take to avoid contracting the virus as best as possible, for example, recommending our users to take an Uber instead of the bus or train at a given time of the day when public transportation may be crowded.

Finally, our other target feature is prevention. What led us to include this feature on our platform was the fact that prevention is always said to be better than cure, we thought we stood a better chance at fighting the virus if we made the public know what preventative measures to take to not catching the virus, as both avoidance and prevention are different. We have lost the battle if we are focusing on what to do after you have contracted the virus [11]. Our platform will help save our users time as they will be accessing our variety of features in just one area. Users will get their updates, tracking and tips; sell their products; and purchase their products instead of having to visit several websites or platforms to perform each task.

We are using one stone to kill two birds or in this case several birds. Who does not like convenience and saving time? Regarding developmental costs, we will have to offset the start-up from self-funding and eventually seeking investors. The team at TAP-in knows our product will be lucrative and should have us in profit within months of launching, having our business paying for itself and funding its own upkeep.

**Conclusion**

As we conclude, we can boldly say that this platform will be a unique way to track, avoid, and prevent COVID-19 by offering services that cover all those areas and opening a marketplace where customers can buy and sell materials dedicated to those three features. COVID-19 is an unfortunate issue that humanity must coexist with, but like our handling of past pandemics like Ebola, Spanish Flu and Swine Flu, we can overcome it by making a multi-pronged approach to keeping ourselves, family, and others safe.

Our next steps include creating a minimum viable product (MVP) and getting user feedback for it in a process of improving over several iterations. We will work closely with COVID-19 experts and users alike to bring to fruition the best product out there. Afterwards, our team can seek investor help to fund our product as it scales.

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**Appendices**

Diagram

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Figure 1 New Customer Interaction Chart

Diagram

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Figure 2 Vendor Chart

Graphical user interface

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Figure 3 TAP-in Informational Poster