# ***whoosh*** **pitch** (*Group 8: Ho Hol Yin, Liu Zechu, Ong Yan Chun*)

We've all been there. Hungry, sweating, fidgeting, waiting in a queue for what seems like hours before finally entering a restaurant. What's worse: seeing queuers who were behind pass you by just because seats matching their group size opened up. It's absolutely exasperating. We've all seen many different queuing systems. For one, our team has witnessed Genki Sushi changing through 3 different systems, none really for the better. We are huge lovers of Genki Sushi, but the ridiculously long queues and unhelpful queuing system is a huge deterrent. So, we decided that queuing cannot stay in its current form.

*whoosh* takes a group of diners into a queue upon their arrival, and maintains a digital representation of the queue. Diners enter the queue by scanning a unique QR code for the restaurant. Diners can then view the queue in real time and are notified when they should enter. Restaurant managers can manage the waitlist, alerting and removing queuers as necessary.

Let's briefly explore why *whoosh* improves greatly upon current queuing systems. The 3 common queueing systems (as per Genki Sushi) are: 1) Physical queues, 2) Restaurant staff record phone numbers and manually call diners, 3) Ticketing system where diners input their information and wait until the ticket number is called.

For diners, physical queuing is tiring and a waste of time. The phone number waiting list provides no feedback as to how long more they need to wait. The ticketing system requires diners to wait at the restaurant or frequently check the machine so as to not miss their entry. For restaurants, it is troublesome to manage a physical queue due to designating extra physical space and utilising extra manpower. Due to the COVID-19 pandemic, restaurants need to enforce social distancing, causing the queues to take up a lot more space. The phone number waiting list is time-consuming and inefficient due to the process of calling diners one by one. It is possible that they make a mistake in recording information as well. The ticketing system requires a huge investment into a physical machine for each outlet.

*whoosh* solves all these problems. There is no physical queue. Diners get exact feedback on their waiting time because *whoosh* visualises the actual queue and provides time estimates. Diners can shop or walk around without stress because they will be prompted by the app and by SMS that they are to enter the restaurant. The waitlist management is easy for restaurants because diners enter their own data and restaurants just need to alert the diners to come. *whoosh* also does not require monetary investment into purchasing any machines or devices.

We thought very carefully about how to bridge the gap between the system and the real world. We think our current solution is pretty cool. First, we realised the best interface for diners to enter a restaurant's queue is through QR codes. SafeEntry has made QR scanning natural for most diners. *whoosh* automatically generates QR codes for restaurant managers to use. Second, we included queue sharing. Diners can share a link with friends so all can access the same queue information simultaneously. The link is embedded with a group key so only people who received that exact link can access their place in the queue. Third, we implemented an SMS system that automatically texts diners once the waitlist managers choose to alert them. We considered push

notifications, but as they are still limited for iOS users, we did not want to alienate one of the biggest user bases. SMS allows users who have closed the website or are not checking their phone to still be alerted without worry. No one will miss their entry time. Fourth, restaurants can display their menu and advertise their promotions to those in their queue. Diners can decide on their order before even entering the restaurant, and this saves time on all ends.

*whoosh* was designed to be whimsical to produce interest and distinguish itself from current boring queuing systems. Instead of queue numbers, we have group names that are based on different foods and ingredients. We found that group names tend to be easier to recall than numbers, making it more easily managed by the waitlist managers. We knew that we wanted to have a line of characters in a queue to match the physical queue that diners cannot see. Not only does this match the mental model of a queue, but it also provides users with a better understanding of the wait time that they cannot get otherwise. However, conventional avatars tend not to be inclusive. When human-like iconography is used, it is usually very male and often white-typed. In order to maintain gender and racial inclusivity, platforms either opt for a grayscale “gender-neutral” default which ends up being male or end up trying to design an avatar for each group they can think of, leading to potential caricatures and more alienation.

We chose to design a set of monsters to humanise the avatars while feeling very separate from individual human identity. The monsters work as inclusive design--and small acts of inclusion can sometimes make a large impact. The colourful and vibrant monsters also work as a delightful way to increase engagement and give personality. They enhance the experience of something even as mundane as queuing up. Furthermore, they contribute to brand identity in a fun and memorable way. We believe that users will love the cast of monsters we have designed.

Because the monsters are meant to represent the diners, we wanted to produce a huge variety in possible monster designs. Due to our small designer team size, we resolved this by creating the monsters dynamically from modular parts. Users can randomise the style of their group until they find something that represents them. Because of the many components and potential variations in colour, there are over a million possible different monster avatars. The sheer customisability leads to a vibrant and lively queuing experience. Because of the way the modular components are set up, it is simple to design and add more parts in the future, so making billions of monster avatars is attainable.

What is most exciting about the monsters is that they are animated, blinking and fidgeting uncomfortably as though they are actually in the queue. Besides the interactive fun of finding a set of monsters that represent your group, the monsters themselves can be interacted with. By tapping on your own group, different interactions like popping hearts and confetti can appear. These animations are also easily extensible in the future to include more dynamism and interactivity, even with other groups.

Speaking of extensibility, *whoosh* was designed such that it can be extended to other queuing systems in the future, for example at a pharmacy or a concert. We began with restaurants so as to limit the scope, however we can definitely see *whoosh* changing how we see queues in all sorts of industries and applications.