

## **London Bike Share User Analysis**

### **Problem Overview:**

London bike stations face the challenge of not allocating bikes where they are most needed. As of March 30, 2020, among 778 bike stations in London, there are 11 empty stations and 2 out-of-service stations. However, among the few 11 empty stations, there are highly popular stations, including Broadcasting house at Marylebone, Prince Consort Road at Knightsbridge, Bayley Street at Bloomsbury.

Not only do the inefficient bike station capacities cause a distressful experience for bike-share users, they also cause traffic inefficiencies that could have been offloaded by bike as a sustainable transit.

### **Insight 1 – Peak Usage at Rush Hour Commutes**

At empty stations, the most popular trips are short trips under 12 minutes. When we look into the peak hours when popular bike trips leave empty start stations, we further identified that the top five popular trips with empty start stations are 10 minutes or less, occurring between Bayley Street at Bloomsbury and Belgrove Street at King's Cross on weekday evenings between 5-6 pm. We can extrapolate that during rush hours, people get off of work and need bikes to commute.

### **Insight 2 – Power Users Cycle to Parks as a Sport**

At the sufficiently stocked stations, the most popular trips are round trips from 45 to 60 minutes, typically located at parks. In particular, Hyde Park Corner round trips are at usage peak on Mondays and Sundays from 12-5pm. We can extrapolate that those are a different user group from the commuters; this user group use shared bikes to exercise in a scenic environment for longer trips around an hour.

### **Recommendation:**

To address the rush hour bike shortage problem, London bike share should consider ramping up the capacity level for popular rush hour bike stations, especially Bayley Street at Bloomsbury from the current dock count of 25. Top popular round trips at parks do not currently face a shortage problem and no immediate action is required. However, it is valuable to conduct market research, investigate the user persona of this group of bike users and explore better user experiences for people who are biking as a sport.