

Customer Case for Transportation Hubs

The Customer: A Major Transportation Hub in Stockholm City

The customer is a major transportation hub that lies in the heart of Stockholm, through which over 200,000 commuters travel daily. The hub houses over 60 restaurants and shops, connecting all of Stockholm with its surrounding suburbs as well as the whole of Sweden via metro, train and buses.

With so many travelers venturing through the station, understanding visitor behaviour is crucial as it allows for the improvement of comfort, convenience and security as well as allowing the hub to offer the best commercial environment for shops and restaurants. A transportation hub is a complex operation, usually with an extraordinary amount of visitors - with many operational challenges and questions that need answers.

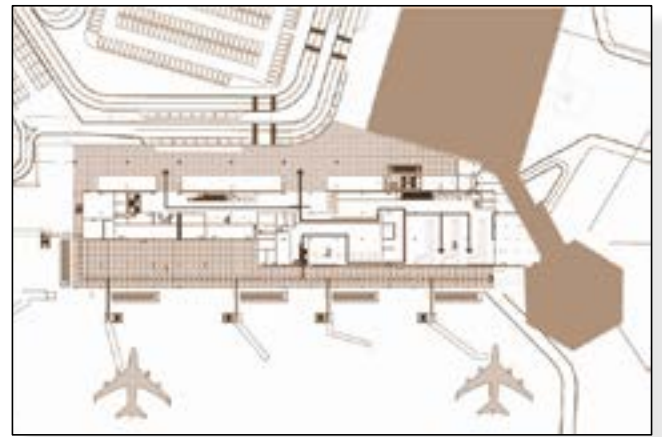


Fig 1: Floor Map of Transport Hubs

Objectives and Challenges: “Zone Analytics”

Since a transportation hub can be divided into distinct sectors and areas, each one operating in different ways with varying goals, zone analytics is critical to examine the interdependence of each zone. It enables monitoring of how visitors move within buildings as well as providing accurate statistics on the number of visitors and their dwell times - in total giving an understanding about visitor behaviour and their “journey” in a similar way to how online visitors of an online store or home page can be tracked and analysed.

After evaluating the market, its available technologies and providers of footfall analytics, the customer chose Bumble Labs’s footfall analytics service for its high accuracy, trustworthy data collection, well documented GDPR compliance and a robust set of partner/resellers who offer a wide range of Wi-Fi and analytics services.

The customer was interested in understanding the behaviour of their visitors (and how it changes depending on various activities). Some of the many and diverse questions asked were:

- How does the flow of visitors vary between days and times, and how is the facility as a whole best managed because of this?
- Where do people spend most of their time? Which areas may be underutilised?
- Which stores create business also for surrounding stores (anchor points) and where are those stores best placed?
- What advertising events and marketing screens have an effect on passers-by; which screens are people stopping at and for how long?

Operationally, the customer wanted to make use of statistics to predict when maintenance needs to be done on the infrastructure used by the visitors (such as escalators, doors etc), and to predict when deliveries should be made to specifically which entrances in order to limit the amount of interruptions.



Fig 2: Zone Analysis: Path & Flows

The customer also wanted to calculate and optimise the conversion rates of restaurants and shops inside the hub i.e. percentage of people who walk past as compared to the percentage of people who enter. This conversion rate would stand out to be a useful metric for establishing the success of advertising campaigns.

Lastly, the customer also wanted to make use of our data to value their own internal advertising spots. By using metrics such as visit count and dwell time, the customer would be able to value areas and leverage on the insights gained from our data to determine the best placement for their own ads. This data could also be used as a currency to negotiate rent for tenants.

The Solution

In the initial meetings with the customer, Bumble Labs (BBL) received a range of floor plans of the installation area as well as information on existing Wi-Fi hardware and network equipment. Recommendations were provided to the customer on which access points were best used for the analytics service in each zone as not all deployed access points were needed for accurate data. Some of the sectors needed an additional 1 or 2 access points deployed - typically where data on people passing by outside the stores were of interest. These (few) additional access points were the only hardware investments needed to roll out the analytics functionality.

The installation was configured in the Backoffice system of Bumble Labs, and the flow of data verified, data from the stores starting to accumulate. After a period of 1-2 weeks, depending on the number of visitors in each zone, the data output was validated by the customer and BBL's staff jointly using a range of different datasets such as cashier data, cameras and manual counts. Once validated, customised dashboards were made available to the different stakeholder groups (users) in the customer organisation, delivered to the customer's own BI system through Bumble Labs well documented API.

The enormous amounts of foot traffic moving through the spacious buildings on a daily basis makes this transportation hub an excellent location for advertising events and pop up stands. Equipped with Bumble Labs data, the best time and day for these events can be predicted, and a similar calculation as the conversion rate can be applied to evaluate the event's success - making a strong foundation for the value (and rent levels) for such marketing spots.



Fig 3: Dashboard: Zone Analytics

The Results

Through use of the footfall analytics of Bumbee Labs, the customer was able to optimise its business operations in several ways:

- 1. Staff Scheduling.** By knowing the peak and non-peak hours, the customer was able to re-plan his staff's schedule and optimise the amount and allocation of staff at different times on different days.
- 2. Increased** visitor count and dwell time in spending areas (shops and F&B's) by managing the conversion funnel better (increasing the ratio of passers-by to visitors and customers) improved the profitability of many businesses in the measured area.
- Enhanced **customer experience** for travelers and consumers by minimising disruptions from maintenance deliveries and safety related activities.
- Identification of **zone hotspots** made possible better use of those areas for marketing and campaign messages, also providing insights valuable in rent setting and negotiations.
- 5. Understanding visitor counts and flows/ paths** during different times and days proved crucial to reduce **bottlenecks**, queues and risks of overcrowding.
- Using our data as a currency to **negotiate rent** for tenants

After receiving the footfall data, the customer was able to optimise its own business and that of many of its tenants. Newsletters and reports are created regularly sharing the results, trends, insights and advice to all tenants and co-dependent businesses in the area.

"With the help of reliable data from the new crowd insights system from Bumbee Labs, we can plan the location of both service functions and shops in a better way and we adjust doors and passages in order to avoid bottlenecks"

-Head of Marketing, Region Stockholm, anonymous Transportation Hub customer of Bumbee Labs

Bumbee Labs

WHO WE ARE:

Bumbee Labs was established in 2011 in Stockholm, Sweden. Today, Bumbee Labs is the proud global leader in intelligent footfall data and analytics using Wi-Fi to measure visitor count, dwell times, as well as visitors movement and behavior. Bumbee Labs provides valuable analytics, business intelligence and predictions on footfall traffic and visitor behavior. Bumbee Labs works with global partners in a wide range of end user verticals where business intelligence on large amounts of visitors is important for successful operation of a business.

Key customer industries are retail, transport, smart cities and city centers, food & beverage and hospitality. The service works by collecting the probes sent out by visitors smart phones and filtering and processing the incoming data to produce metrics made available in Bumbee Labs API. The API and the metrics in it are used to create customized dashboards where the end user can track the performance of their business, work to increase revenues and reduce costs in their business, and avoid risks of crowding.

WHY US?

Privacy. We hold to the highest privacy standards and have confirmed GDPR compliance in a European court of Law.

Accuracy

- Large sample collected (>80% of visitors).
- Robust data filtering & extrapolation.

Trust

- Thousands of installed access points
- Validated by customers and partners
- Statistically robust approach
- Competent global network of Partners
- Validated privacy compliance in European court of Law
- Proven high value of the services and intelligence provided
- Wide range of customer references available

