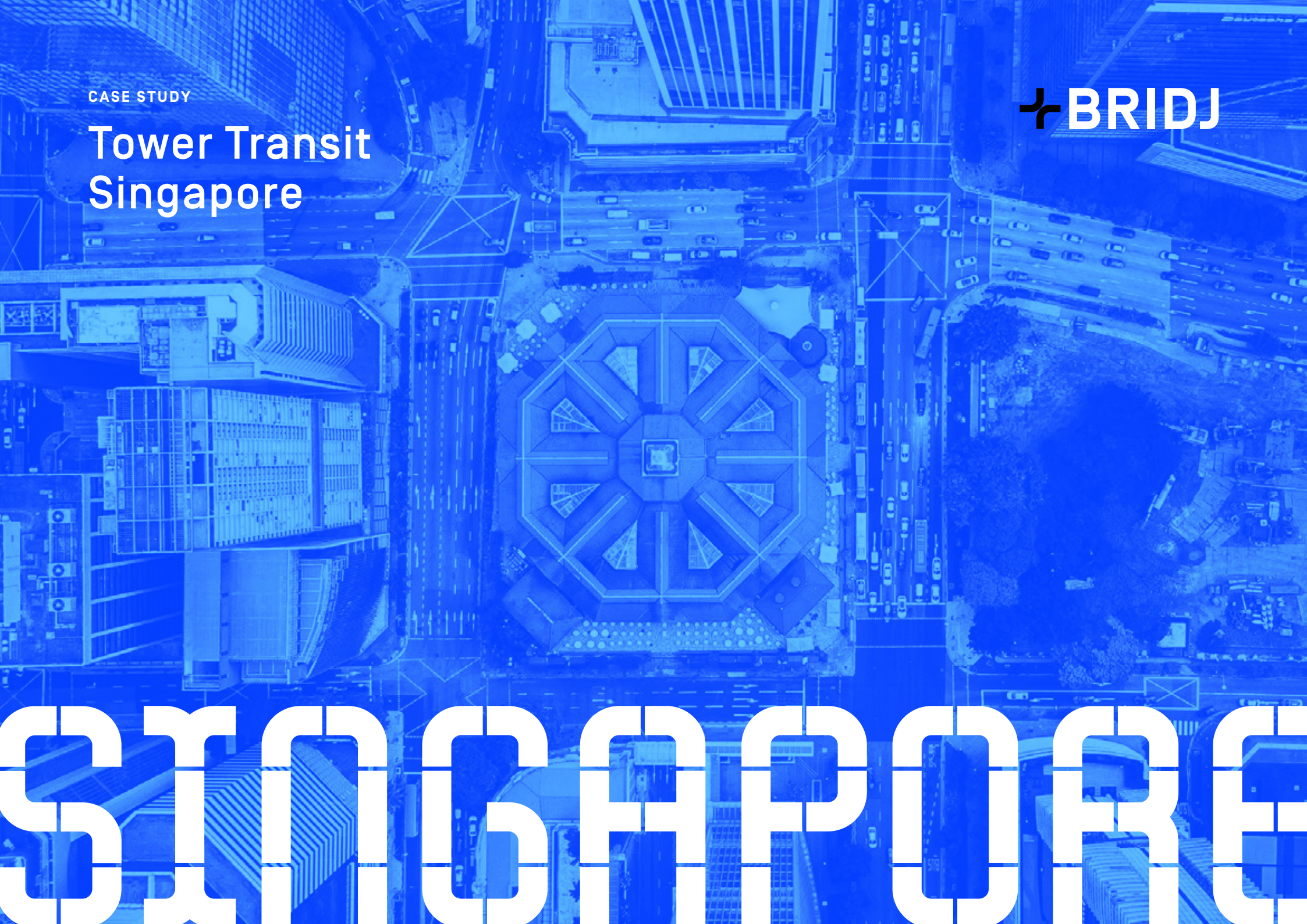
CASE STUDY

Tower Transit Singapore

BRIDJ



CASE STUDY

Tower Transit Singapore

Tower Transit Singapore ("TTS") operates more than 700 buses and 57 service routes on behalf of Singapore's Land Transport Authority. In early 2020, Bridj was contracted to deliver a solution to TTS that enabled them to replace their fixed-route services that transferred their Bus Captains to and from the Bulim Bus Depot for night shifts.

The fixed-route employee services were running inefficiently and even empty in some areas. The use of analogue operational systems and manual work processes offered limited insight into usage patterns, reducing the opportunity for TTS to make the efficiency improvements they desired.

OUR GOAL

Three Core Objectives

Bridj was brought onboard and set the challenge of providing a solution that focused on three core objectives:

EXPERIENCE

Improve the customer experience of their employee transport services by reducing wait times, journey times, walking distance to ‘stops’, and allowing TTS Bus Captains to plan their journeys in advance.

PUNCTUALITY

Making sure that their Bus Captains arrived on time for their shifts, so that the public bus services operated by TTS would be delivered on time.

EFFICIENCY

Improve the operational efficiency of the services, reduce operating hours, distance travelled, vehicle utilisation and break times.

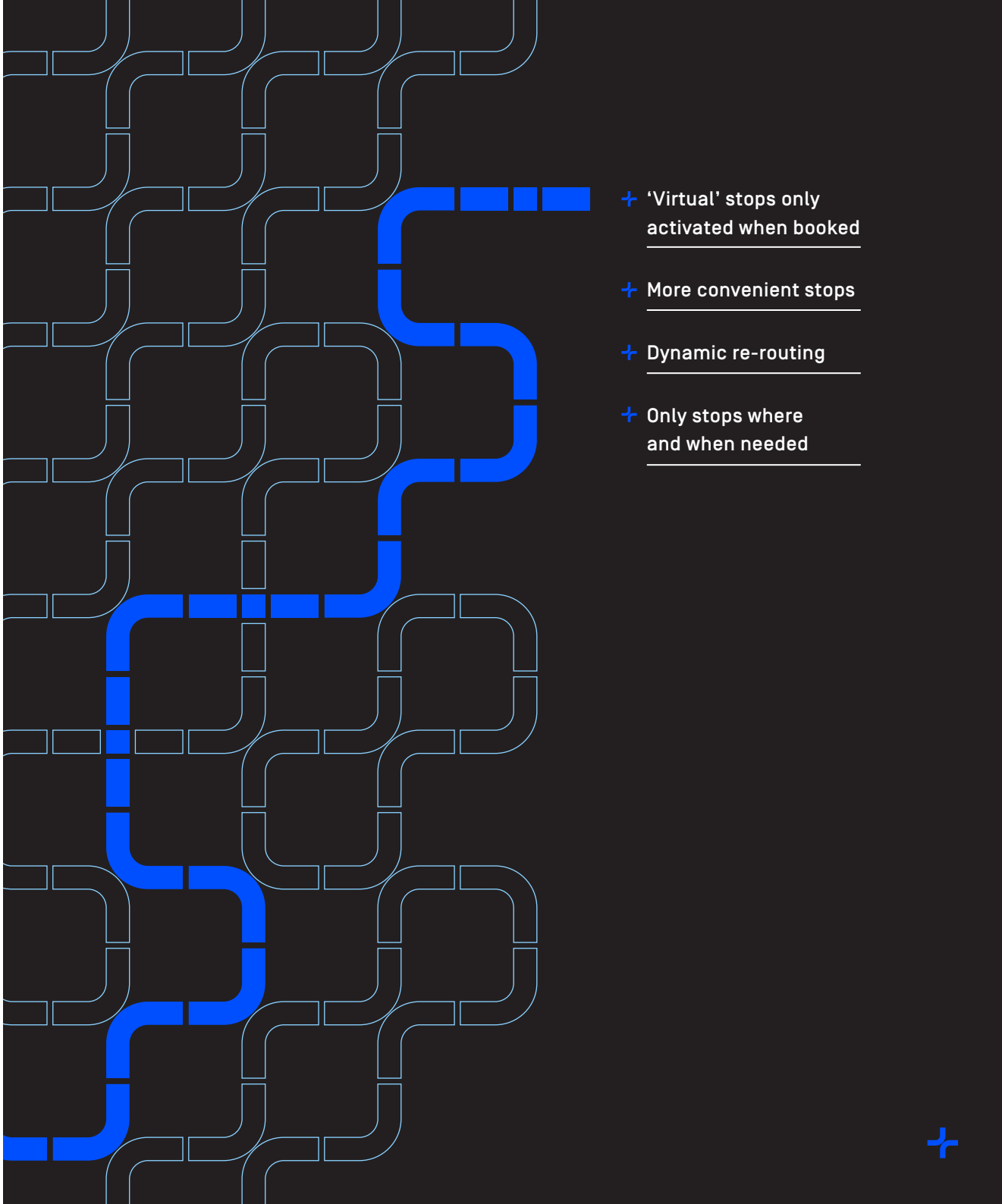
NEW

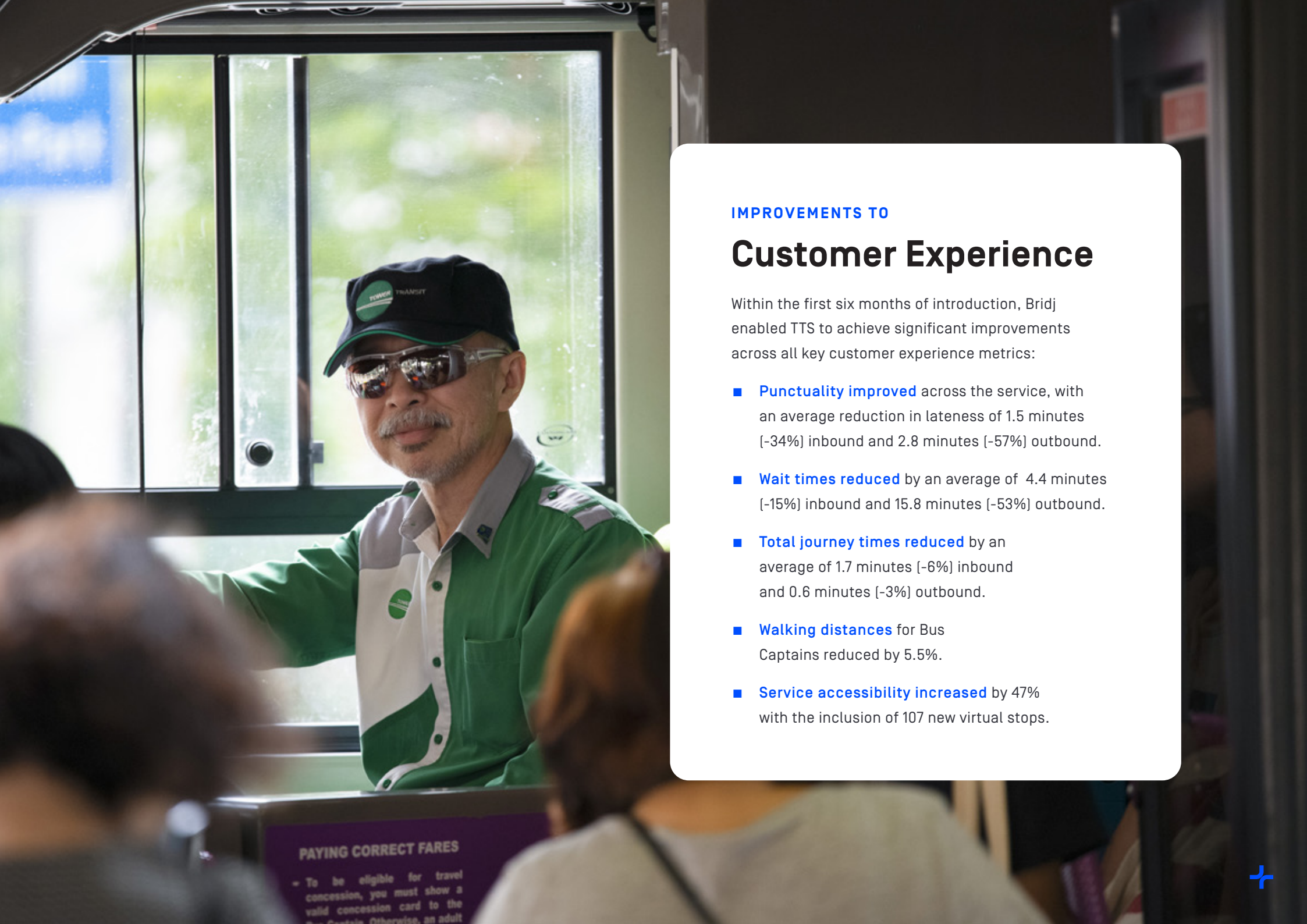
Service Planning & Solution Design

To deliver TTS' objectives, Bridj initially worked to identify areas of inefficiency by deploying the Bridj Passenger Application on TTS's existing fixed-route services to gather up-to-date data to provide insight on demand patterns.

Using this data, Bridj was then able to design a solution that:

- Enabled TTS to add new 'virtual' stops closer to their Bus Captains, without the need for additional roadside infrastructure, and that would only be 'activated' once a booking was received;
- Configured business rules into the optimisation that provided stable, pre-optimised pick-up times and encouraged on-time arrivals at the depot; and
- Leveraged Bridj's optimisation engine to match TTS's vehicle resources to where and when they were needed, transforming the former fixed-routes into the new, improved demand-driven routes.





IMPROVEMENTS TO

Customer Experience

Within the first six months of introduction, Bridj enabled TTS to achieve significant improvements across all key customer experience metrics:

- **Punctuality improved** across the service, with an average reduction in lateness of 1.5 minutes (-34%) inbound and 2.8 minutes (-57%) outbound.
- **Wait times reduced** by an average of 4.4 minutes (-15%) inbound and 15.8 minutes (-53%) outbound.
- **Total journey times reduced** by an average of 1.7 minutes (-6%) inbound and 0.6 minutes (-3%) outbound.
- **Walking distances** for Bus Captains reduced by 5.5%.
- **Service accessibility increased** by 47% with the inclusion of 107 new virtual stops.

Annual kilometres reduced by 25% relative to the fixed routes, which equate to a saving of approximately 175,000+ km per annum.

Fleet utilisation improved, with TTS able to reduce the size of their fleet by two vehicles, with no detrimental impacts on their service, resulting in a saving of approximately $400k per annum.

[1] Estimate using $100 cost per operating hour.

VERSATILE SOLUTIONS

What the Bridj Platform brings

The Bridj platform is extremely adaptable and can be used to accommodate any number of operator rules and configurations. For example, in the case of TTS the key back-end rule configurations used for the service included:

1. The outbound service operates from 12:15am-3:15am and the inbound service from 3:45am-7am to match rosters, 7 days a week.
2. Bus Captains can book a service from the closest stop to their home address. Note: TTS wanted to retain the use of virtual stops (as opposed to a door-to-door service), to control the efficiency of the service and achieve greater aggregation on the limited available fleet.
3. At 7pm each day, Bridj's Operator Portal runs and allocates every inbound booking with a fixed pick-up time depending on when they need to arrive for their shift.
4. For inbound services, Bus Captains are required to book by 7pm the night before. They were also required to choose an arrive-by time, as opposed to a pick-up time, such that the optimisation could prioritise the arrival times at the depot for shift starts.
5. Travel is limited to and from a single depot location.
6. Outbound services run purely on-demand as Bus Captain's end their public transport route shifts. As an innovative solution to this particular service type, the optimisation engine was configured to ensure adequate aggregation through a frequency rule. This avoids two buses going in the same direction from leaving a few minutes apart, allowing TTS to make better use of the available fleet and to serve more Bus Captains.

BRIDJ

For more information please contact our team at connect@bridj.com or register your interest on our website at www.bridj.com

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