

Executive Summary

Commute experience is an important determinant of employee satisfaction. According to a 2017 research report by UWE, adding 20 minutes to one's commute time creates as much dissatisfaction as receiving a 19% pay-cut. This is especially true for Samsung China Semiconductor. Due to the factory's remote location, almost all employees require commute assistance. However, Samsung Semiconductor has over 30,000 employees who work in a dynamic shift schedule, and it can be challenging to offer a satisfying solution to their diverse, ever-changing commute needs.

In response, Pandabus offers an intelligent system that translates work schedules and employee demands into well-managed shuttle buses, with dynamically-optimized routes, minimized wait times, real-time monitoring of shuttle locations, and full tracking of service quality. This one-year partnership has increased employee satisfaction by 30% and has improved time-efficiency for all shuttles by over 50%.

Challenge: How can Samsung Semiconductor provide employees with first-class commute assistance that attracts and retains talents?

Samsung China Semiconductor, a manufacturing site for smartphone parts including processors and RAM chips, is located outside of Xi'an city, in a suburban hi-tech development zone. Due to the remote location, commute experience heavily influences employee satisfaction and has become a key factor in attracting and retaining talents over other competitors in the region.

In an effort to offer quality commute support, Samsung Semiconductor provides shuttle buses to transport employees to and from work. Nevertheless, the following problems arose:

- Employees at Samsung Semiconductor work in dynamic shifts. The size and schedule of these shifts often vary, depending on the manufacturing goal of the day. How can Samsung Semiconductor arrange its shuttles so that wait time for buses is reduced, average commute duration is decreased, and employee satisfaction is ensured?
- Employees from nearby factories sometimes fake identities to take advantage of the shuttle service that are meant for Samsung Semiconductor employees only. How can Samsung efficiently identify the free-riders to preserve spots for Samsung employees?
- Samsung Semiconductor orders shuttles from a local company on demand. However, these

shuttles can vary in driving manners and punctuality. How can Samsung better track these shuttles to improve service quality and employee satisfaction?

Solution: An intelligent system that translates work schedules and employee demands into dynamically-optimized routes and trackable shuttle service.

Pandabus offers systematic solutions for shuttle management through real-time monitoring of shuttle locations and passenger demands. In response to the needs of Samsung Semiconductor, Pandabus has provided the following plan:

- ▶ Each day before 4 pm, Samsung Semiconductor uploads its work schedule to a Pandabus system, which includes the pickup and drop-off locations desired by each employee. After analyzing the data, Pandabus automatically generates an optimized plan and send orders to the shuttle company accordingly.
- ▶ The shuttle company is required to install a Pandabus tracker on each shuttle it sends to Samsung Semiconductor. Enabled by face recognition technology, each tracker scans passengers to verify their employee status, records the list of passengers taking the bus, provides corresponding route direction to the driver, and tracks shuttle location.
- ▶ Using an application that Pandabus tailor-made for Samsung Semiconductor, the employees get to see the real-time location of their shuttles and can adjust departure time from home accordingly. They can also rate the shuttle service and request additional pickup and drop-off locations.
- ▶ Pandabus provides a real-time report to Samsung Semiconductor, covering expenses, employee feedback, and occupancy rates of shuttles. Accordingly, Samsung Semiconductor can choose to adjust its budget, open up or cancel routes, and coordinate with shuttle companies to improve service quality.

Results: 30% increase in employee satisfaction, 50% increase of shuttle time-efficiency.

One year into the partnership, Samsung Semiconductor has:

- ▶ Increased employee satisfaction by 30%¹,
- ▶ Improved the time-efficiency for all shuttles by over 50%,
- ▶ Decreased costs incurred by shuttle expenses by 10%; and

¹ According to surveys independently conducted by Samsung China Semiconductor, before and one year after the partnership.

- Maintained a shuttle occupancy rate of over 80%.

Meanwhile, management and accounting hassles disappeared as Pandabus handles most coordination with the shuttle company and offers detailed, evidence-based expense reports.

