Engineering Road Safety into Mobile Applications

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Abstract

This year marks 10 years since the iPhone launched and it's hard to think of an aspect of life that it hasn't changed. Smartphones and apps have brought information, convenience and choice to everyday life and are credited with products and services becoming easier to access and increasingly tailored to customers' individual needs. Transurban saw an opportunity to apply the latest smartphone and GPS technology to enhance customers' experience and the way they interact with Transurban. Transurban has launched an innovative new tolling approach using a GPS-enabled app, allowing motorists to drive on any Australian toll road without the need for a tag. Recognising that mobile phones and driving do not mix, Transurban designed LinktGO to ensure user interaction is not required while driving. In addition to safety warnings, LinktGO has built-in safety features that leverage a phone's core motion technology.

LinktGo puts flexibility and control into the hands of Transurban's customers

Since the opening of CityLink in 1999, e-Tags have worked well for regular users. However, recent customer research indicated that 50 per cent of Transurban customers are occasional toll road users, meaning they typically use Transurban's roads less than four times a year. The research also indicated that these customers want flexibility, control and easier ways to manage their toll road travel, with many just wanting to pay for their toll road use without committing to an account. While occasional toll road users may not to have an e-Tag in their car, most have a smartphone in their pocket. To reach these customers and improve their experience Transurban focused on the driver, rather than the vehicle, and created a new way to pay for tolls.

LinktGO is a GPS-enabled mobile app that allows drivers to see their toll travel in real time and pay trip-by-trip using their smartphones, with no ongoing commitment. Customers can start driving just by registering their vehicle and a credit card to the app – no paperwork, no start-up costs and no tag needed. Using LinktGO, customers pay trip-by-trip, with trip details and associated costs displayed in real-time and prompts to indicate when payment is due. Trips are recorded even if the phone battery dies or data connection is lost.

Recognising that mobile phones and driving do not mix, Transurban designed LinktGO to ensure user interaction with the app is not required while driving. LinktGO has built-in safety features that leverage a phone's core motion technology, suppressing notifications until the phone senses that the customer is no longer moving at speed. If the customer tried to access the app while driving they would find it temporarily disabled.

LinktGO has been developed in collaboration with award-winning app developer Outware and Bluedot who provide expertise in precision location technology. By incorporating lean start-up and design-thinking methodologies into the development process, the team released the app on Android and iOS in under 12 months.

Initial feedback has been positive, and Transurban will continue to listen to customers to find ways of improving their LinktGO and toll road experience.