TfL Go — a new, innovative travel app for London

TfL Go is Transport for London's innovative new travel app. The flagship product introduces a new, carefully crafted, inclusive design language and a bold innovative approach to digital mapping. Since its launch in 2020, the app has been adopted by millions of Londoners and added new features, such as live busyness.

The challenge was developing a product that works for all, including customers with significant challenges. TfL Go is designed for everyone. The live step-free mode includes detailed information for wheelchair users. The design language is clear, calm, reassuring, taking neurodiversity and anxiety into account. It works well in large type, landscape and as a voice experience for blind customers.

The design builds on the typography, iconography and elements of TfL's iconic brand and wayfinding system, while introducing new digital behaviours. The live map feels responsive and tactile, shows live updates, and easily changes to a live step-free mode.

The experience feels familiar, yet completely new and sets the foundations for the design of all our future digital products.

Innovation

To create a product like this, TfL Digital introduced a strategic, design-led approach, focused on innovation and craft. We built a team to rethink TfL's digital service and to look at how we approach emerging technology, innovation, and design for an iconic, well-loved brand, essential for London's culture, economy, and sustainability.

Our strategy is to create digital products that fully integrate with the experience of travelling in London — a new platform that makes it swift and easy to plan and go, for everyone.

— Ben Gammon, Head of Digital

TfL Go provides a live view of London – something that would have been impossible with conventional maps. The app easily changes to a step-free mode and includes innovative new live busyness.

As you pinch and swipe, TfL Go's live map responds to touch, allowing users to adapt the map quickly and transition between live map views —

rather than a geographically accurate map — it helps to make sense of a complex London.
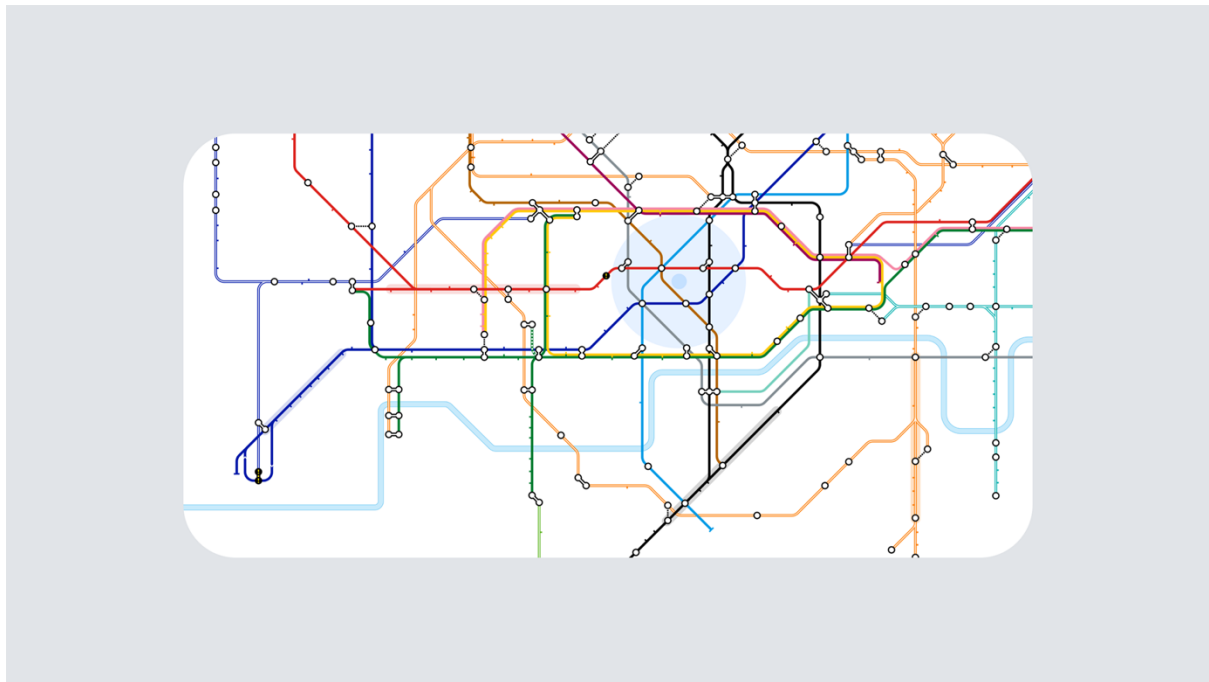

A live map of London

Until now, transit maps had been constrained by paper, far removed from a digital world, built on geographic data. With the release of TfL Go, we are closing the gap, turning the Tube map into a modern and inclusive tool for all Londoners.

"We need to keep rethinking how maps can adapt to new technologies and help us make sense of a constantly changing world"

— Hanna Kops, Head of Experience, TfL Digital

The map focuses on what's important, it removes all stations that are not step-free when in step-free mode, providing a clear view of the step-free network and creating space for information, such as whether a

station is step-free in one direction, or only step-free when interchanging, such as at Oxford Circus.
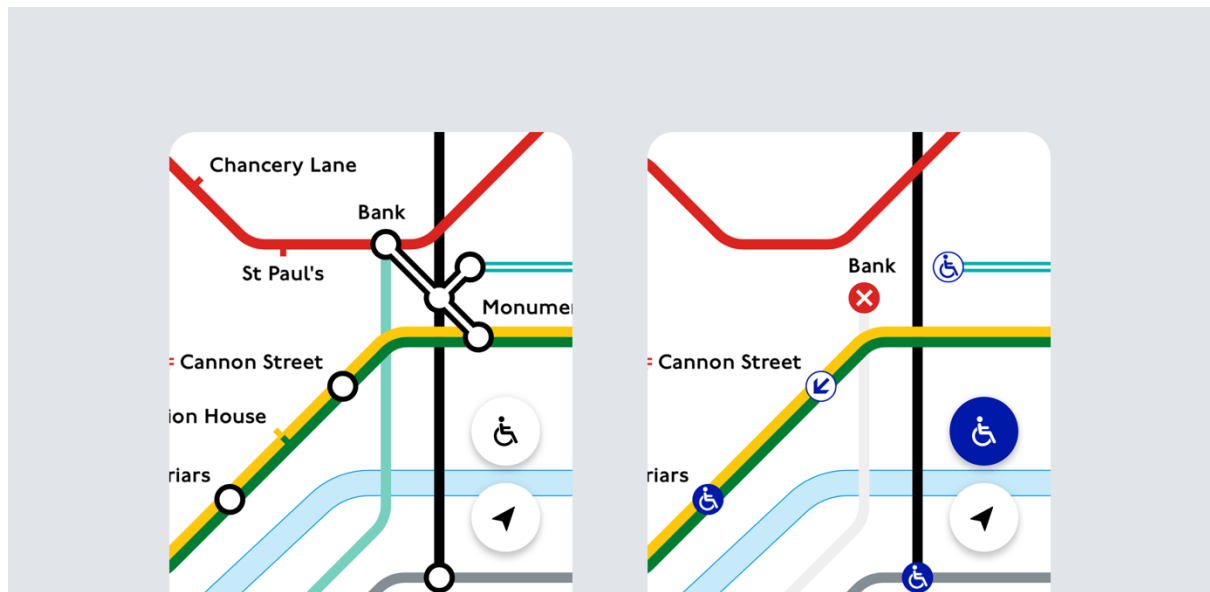
Switching to step-free mode

With over 2+ million downloads, customers are adopting TfL Go as part of daily life. Feedback has been incredibly positive, and we are looking forward to continuously innovate as the product and digital service evolve.

Craft

Most transit maps are still created manually by cartographers and often contain little quirks and workarounds. With TfL Go – we have created everything in code and moved away from manually fine-tuned maps, without losing the craft.

By adapting the existing map's elements, we have produced the building blocks for a new tactile, adaptive mapping language.

$$z = \tan 45° \times \text{radius}$$
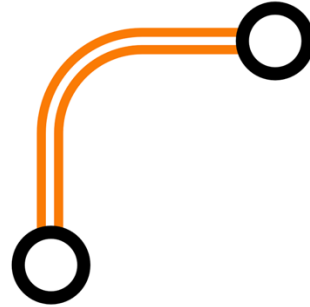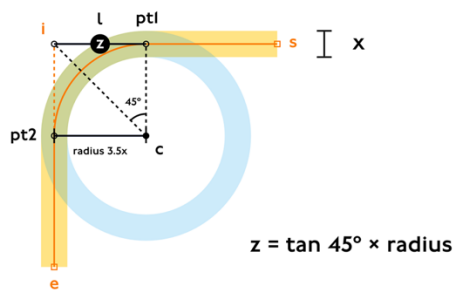
The new map introduces carefully crafted digital behaviours — the ability to adapt to live data and to respond to touch. Little details, like slightly moving labels or light feedback on touch, turn the map into something tactile. Transitions between views are thoughtfully designed to not distort proportions.

Live data flows in and out, highlighting disruptions in subtle ways and acting as one with the digital map rather than being an overlay or afterthought.

Interacting with the map reveals additional layers of information — the names of Tube lines appear as you look closer — only the main interchanges and airports show when looking at London as a whole.

"By drawing the Tube map with code, we can easily switch between live, data-driven versions of the map, such as the new step-free map, while keeping the essence of Harry Beck's original idea."

— Rowan Jones, Development Lead

To show your location — the blue dot — we developed a new in-house iPad app that links geographical data points with the dynamically generated schematic map.

To ensure the design remains true to the Beck's design, the code uses algorithms to generate curves at different angles and to keep the weight of lines consistent. This helps ensure the map doesn't lose its iconic design.

"We've shaped a new digital wayfinding system that feels familiar and instantly recognisable."
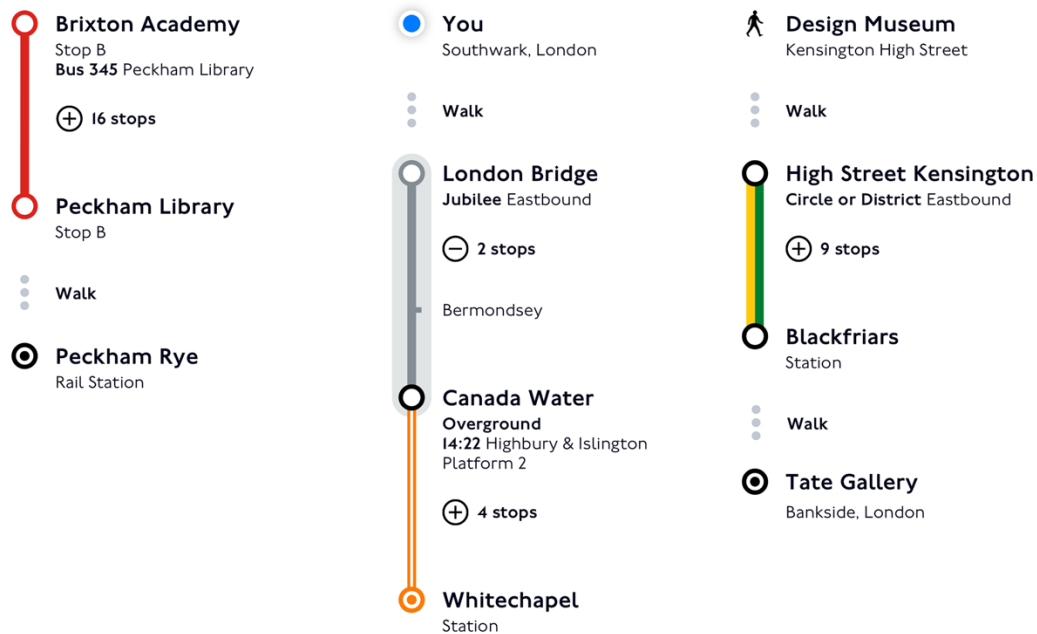
— Alex Gray, Lead Product Designer

The TfL Go team also crafted the app to work exceptionally well with OS-level assistive features, such as VoiceOver, TalkBack and Dynamic type.

Voice directions have been enhanced with words making them clearer and more human. Key features are highlighted, so blind users can swiftly

find what they need. For example, for the first time, a blind user can easily find and hear Tube arrival times, while standing on a platform.

Brixton Academy
Stop B
Bus 345 Peckham Library

⊕ 16 stops

Peckham Library
Stop B

⋮ Walk

◉ **Peckham Rye**
Rail Station

● **You**
Southwark, London

⋮ Walk

○ **London Bridge**
Jubilee Eastbound

⊖ 2 stops

Bermondsey

○ **Canada Water**
Overground
14:22 Highbury & Islington
Platform 2

⊕ 4 stops

◉ **Whitechapel**
Station

🚶 **Design Museum**
Kensington High Street

⋮ Walk

○ **High Street Kensington**
Circle or District Eastbound

⊕ 9 stops

○ **Blackfriars**
Station

⋮ Walk

◉ **Tate Gallery**
Bankside, London

Journeys using the same design language as the live map

Impact

Since its launch, TfL Go has been downloaded over 2+ million times. Ratings are persistently high on iOS and Android.

The design and features of TfL Go stand out as a new and unique experience. This has been reflected in customer feedback, reviews, and multiple design awards.

"Clean and simple — please keep it that way", "Great simple UI", "Really easy to use and intuitive.", "A thing of absolute beauty. Clean, clear, simple to use." (Source: iOS App Store reviews)
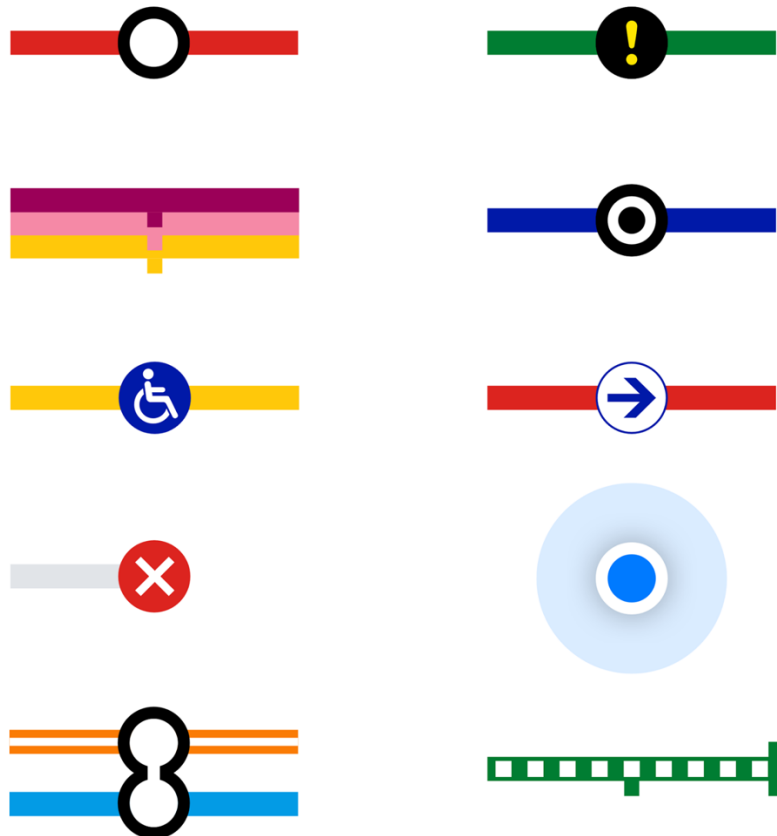
Modular live map elements

The simplicity of the app disguises the complexity of information we were able to introduce, which had a profound impact on customers travelling with luggage, small children and in wheelchairs.

The Tube is the fastest way to travel in London. Initial in-depth qualitative insight revealed that navigating it with a wheelchair is daunting and often avoided, resulting in significantly limited options. Many of our research

participants never travelled the network. Making it possible to use the Tube more independently, with confidence is life changing.

"From the beginning, it was clear that what is the norm in static map design would not be enough. Our new approach has made it possible, to engage with a real diverse set of Londoners. Inclusion has been a driving factor for innovation."

— Vanessa Uvoni, Design Lead, Inclusion

An early prototype

About the team

We are TfL Digital, the team re-inventing Transport for London's digital service. TfL Go is our first product, alongside new digital displays in stations. We are building a new digital platform, contributing to an inclusive, sustainable, thriving, and growing London.

We work across design, product, insight, data and development. Many great people have worked on TfL Go over the years. Here the list of the core team in July 2022.

Alex Gray, Design Lead — Product

Vanessa Uvoni, Design Lead — Research and Inclusive design

Daniela Barbeira, Design Lead — Plan & Travel

Chloe Davies, Senior Product Manager — Digital Platform

Daniel Bean, Senior Product Manager

Rowan Jones, Development Technical Lead

Parit Shah, Application Development Manager

Justin Scott, Scrum Master

Petr Krojzl, Senior Developer

Elliott Grimes, Developer

Hamza Patel, Developer

Dionne Condor Farrell, Agile Development Lead

Tiago Almeida, Senior Developer

Leon Todd, Development Technical Lead

Dan Fahey, Senior Test Analyst

Benson Akinsola, Technical Test Lead

Jon Boulton, Digital Analytics Manager

Joaquin Vildosola, Digital Insight Analyst

Simon Evans, Project Manager

Sarah Brown, Product Manager

Darren Wilders, Technical Delivery Analyst

Felice Hawley, Digital Editor

Nick Moulton, Digital Editor

James Evans, Service Performance Manager

Gerard Butler, Service Performance Manager

Rebecca Florence, Privacy

Neaman Shafiq, Application Engineer

Harika Vegi, Senior Test Analyst

Harish Pulimi, Senior Developer

Nikhil Shah, Senior Developer

Venkata Kari, Senior Test Analyst

Shaddy Bourazza, Developer

Thomas Clarke, Agile Development Lead

Kabir Patel, Senior Developer

Ben Gammon, Head of Digital

Hanna Kops, Head of Experience

Awards

In 2021, TfL Go was recognised for inclusive design and shortlisted for a D&AD Award for Inclusive Design. In 2022 TfL Go won a Drum Award and Design Week Award for best mobile app and The Drum Chair's Award. In 2022 we won a BIMA Award.

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Apple App Store

Google Play