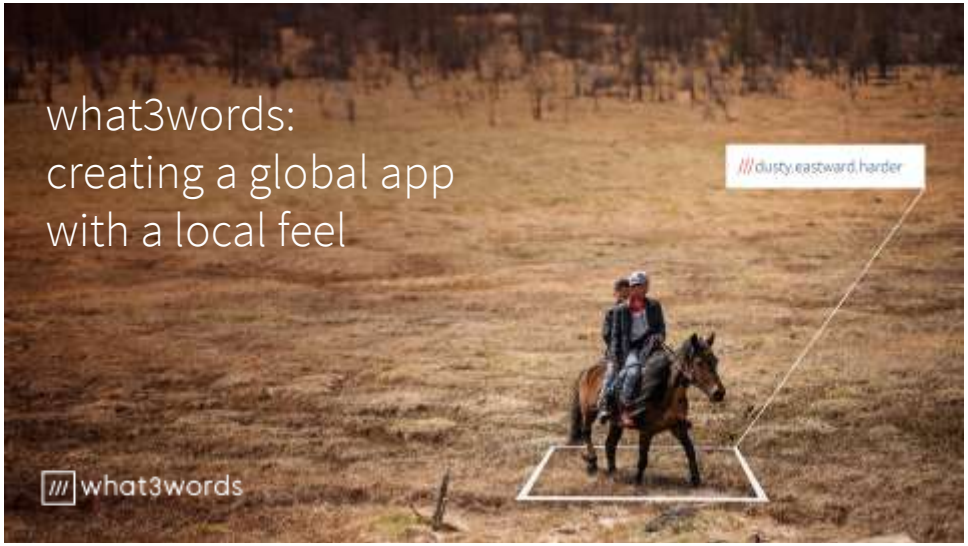
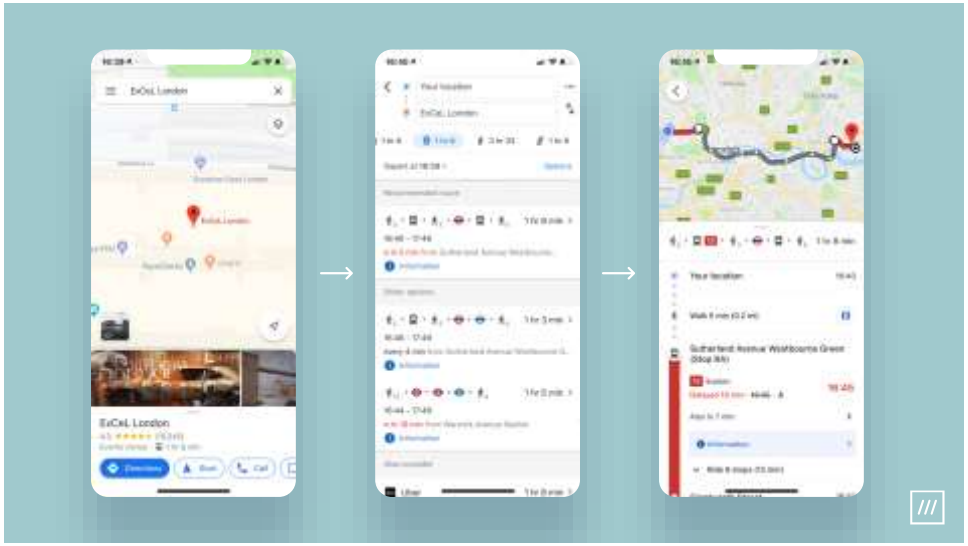
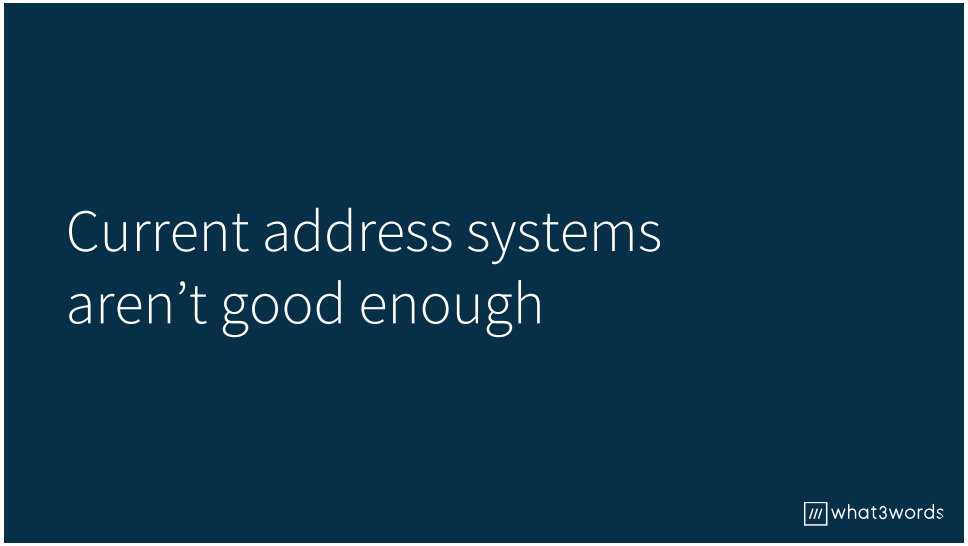

what3words:
creating a global app
with a local feel
///dusty.eastward.harder
what3words



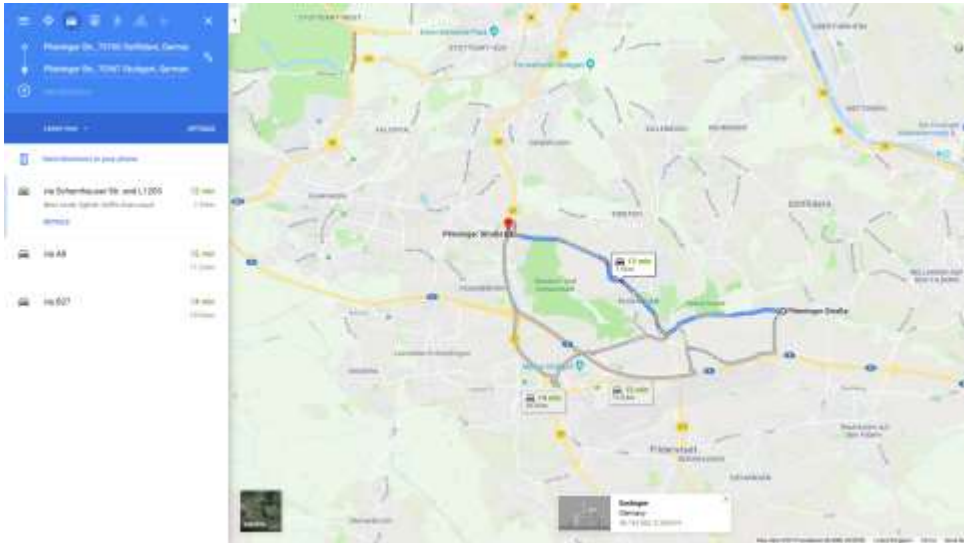
How many of you did this on your way to the Excel?
Searched for it on Google Maps, chose your route, and followed it to the destination?
It’s beautiful and seemless UX, until… you reach the venue.

Lea Valley

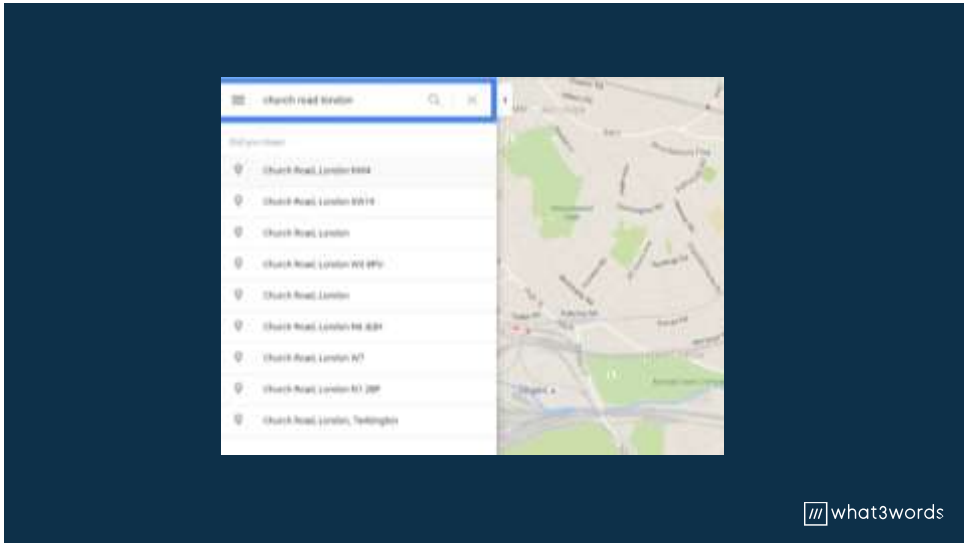
Lee Valley



The reason this happened is because current address systems aren’t good enough. I’ll explain…



Many locations have almost identical addresses – for example 2 Plieninger Strasse’s only a 12 minute drive away.



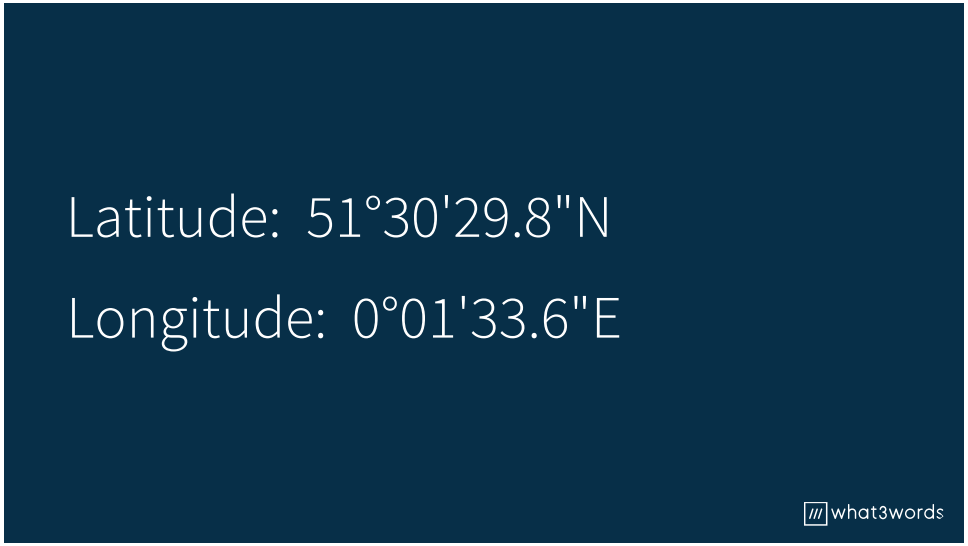
There’s over 12 different Church Roads in London, all located very close together.

Excel Arena

700m between 2 entrances. Both entrances have same address.

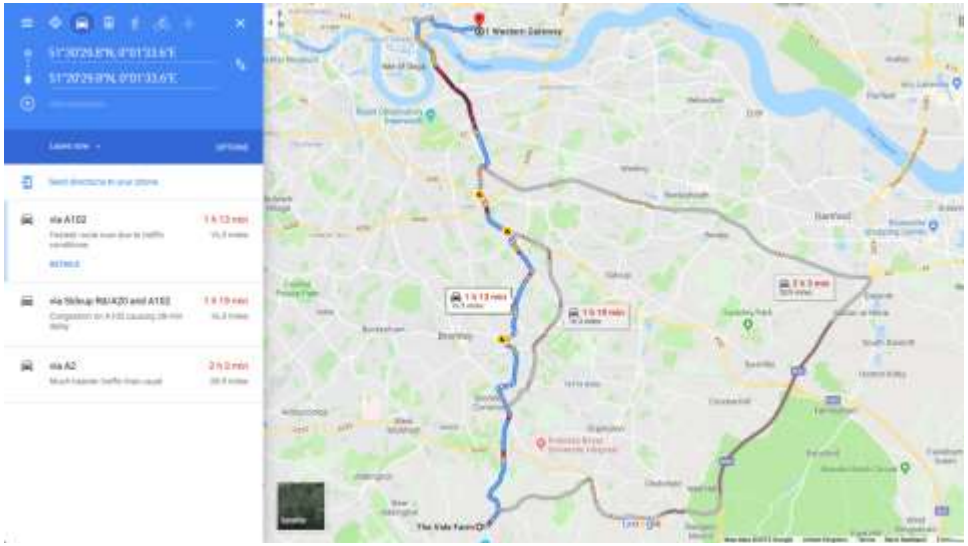
700m

When you’re travelling and can’t even read the language, address systems are completely unaccessible.



An alternative is GPS coordinates, they’re very accurate, and easy to translate as it’s mostly numbers. However they only work well when it’s a computer talking to another computer, without human involvement For example when you share your location with a friend on WhatsApp. It uses GPS but as a user, you don’t even see the

coordinates, so it works really well. But this isn't always possible, for example, you're in a remote location, there's an emergency, and you need to call the emergency services. So you tell the call handler you're at… 5 1 3 0 2 9 . 8 North, and 0 0 1 3 3 .6 East (First of all, how long that took to say) But the problem is they mishear just 1 coordinate, and end up going an hour in the wrong direction.



Just one coordinate is misheard and the system falls a part.

However the main issue with current addresses is this. Most of the world doesn't have a proper address. This is a street view of Soweto – a township in South Africa. As you can see in this enormous residential area there are actually only 2 streets with names. The majority of the area doesn't have a street name. If you don't have a street name,

how can you have a street address?

However the main issue with current addresses is this. Most of the world doesn't have a proper address. This is a street view of Soweto – a township in South Africa. As you can see in this enormous residential area there are actually only 2 streets with names. The majority of the area doesn't have a street name. If you don't have a street name,

how can you have a street address?

If you live somewhere like this, your address would be something like this. In the UK we have one of the best addressing systems in the word, so it's hard for us to really understand the issue. But just think, if you have an address like this, it's almost impossible to get deliveries, it's incredibly difficult to register for a bank account, and it's life threatening in

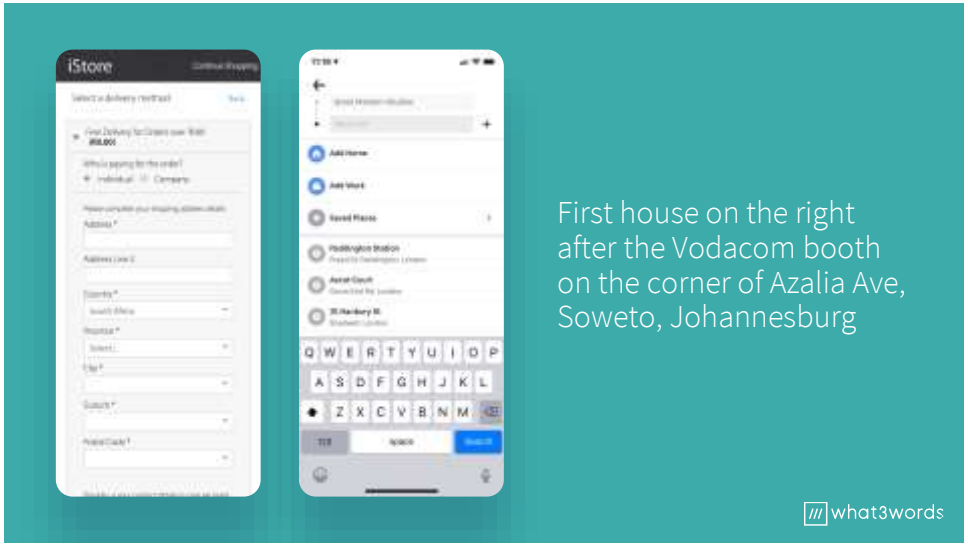
emergencies.

Chingeltei District, 5th microdistrict, 6th apartment- 12 storey red brick building behind Tengis Cinema

MONGOLIA

In King Abdullah road, 2nd right turn after passing King Fahad Road, 2nd tower after the roundabout, floor 14, flat 1409

SAUDI ARABIA

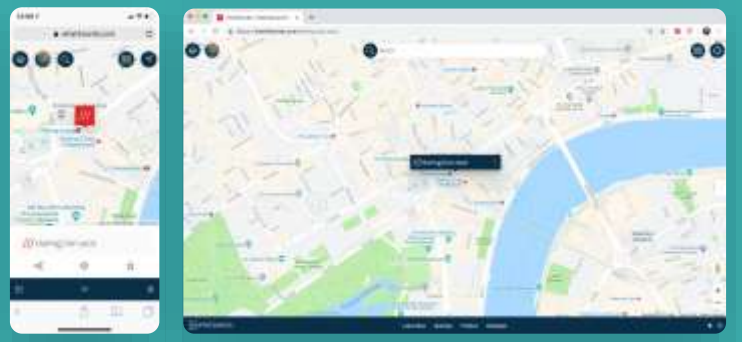


This is obviously a major issue now, but just think how much more difficult it’s going to become when we become ever more reliant on technology. How do you put an address like this, into an ecommerce form? How do you tell Uber where you want to be dropped off at?

So, what3words has come up with a solution. We've divided the world into 57 trillion squares and given each one a unique address made up of 3 words from the dictionary list of 40,000 words.

2 things to note about this system, first of all it's words, not coordinates, numbers or codes. Words. And the reason behind this is that words is how

humans (not computers) choose to communicate with each other. It’s natural and it’s intuitive.
Second of all it’s only 3 words. Just three simple things to remember, in order to refer to an incredibly specific location. It’s just that simple.



To find a 3 word address, we've created a map website (available at what3words.com), and a native iOS and Android app. I'll come back to these later….

Big use case for what3words is when you're travelling. We've partnered with Lonely Planet guide in Mongolia, so each listing in it now has a 3 word address. Just think how easy it will now be to find the remote street food stall, or that located down the hidden alley way.

In the UK we have a very good addressing system, so the biggest use case for us here is in emergencies. The idea is that if you come across a road accident in the middle of no where, you'll be able to call up and tell the call handler that you're at coining.hillsides.forge and they'll be able to find you straight away.

We’re currently integrated with 15 different services and counting. As you can see, it’s already saving lives.

This is what is sounds like in action…

The business plan in a nutshell… We are a business, we have to make money, and we do this by charging corporate clients to use our API and SDK. We want to do good, but in order to do good we need to do business. For example, we've partnered with Mercedes, and now all the A Class models coming off the line have what3words built

into them, so you can tell it to take you to movies.viola.blueberry and it was navigate you there.

We want to be a global standard, and as a result we have an very international, and a very diverse userbase

Disaster relief

Postal services

Travel

Humanitarian

Logistics & deliveries

UAVs

Automotive

Navigation

Residential addressing

But before that, the first thing anybody asks about what3words is ‘sounds great, but how do you use it in other languages?’. So, it would have been very easy for us to just create the system in the 5 biggest languages, because most of the world speaks one of those languages to some extent. However it was so important to us that this doesn’t feel like a foreign

system enforced upon people, we want them to choose to use it, and so they need to feel comfortable using it which would only be possible in their home tongue. Therefore we've undertaken the pain staking task of trying to create a word list of 40,000 words, in every single language. We're currently at 36, and working on the remainder. Quick note is that due to the complexities of translation, the words are not a translated, they're completely different for each language.

Our *hunch* is that we're available in the most amount of languages for any app of our size.

- 36 languages complete
- 9 more scheduled for 2019
- NOT translated – each word list is created from scratch

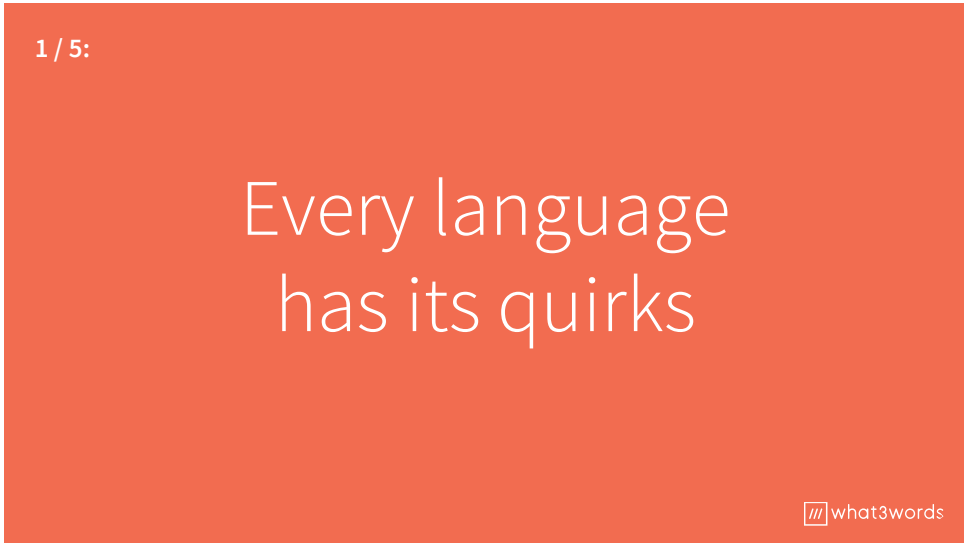
ARRIVE ONE AFTER THE OTHER

ENGLISH	FRENCH
snowman	bonhomme de neige
swimming pool	piscine
sunset	coucher du soleil

ARRIVE ONE AFTER THE OTHER

- 36 languages complete
- 9 more scheduled for 2019
- NOT translated – each word list is created from scratch
- 25,000 words to cover land
- 40,000 words to include oceans
- 50 native speakers to validate wordlist for each language
- 6 months average to create each word list

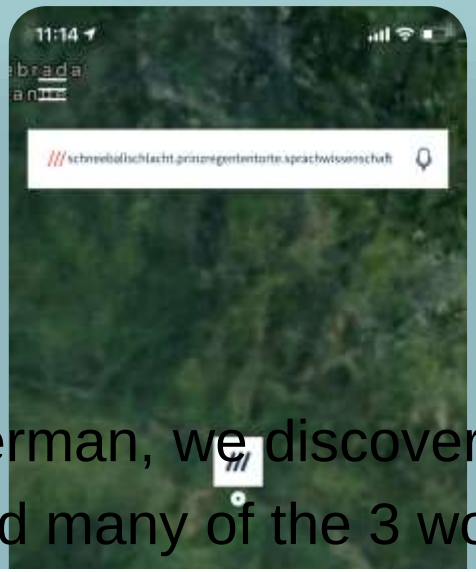
ARRIVE ONE AFTER THE OTHER



Every language that we've added, has has it's own quirks and nuances that have resulted in tweaks and updates to the system. Here's a few of key ones…

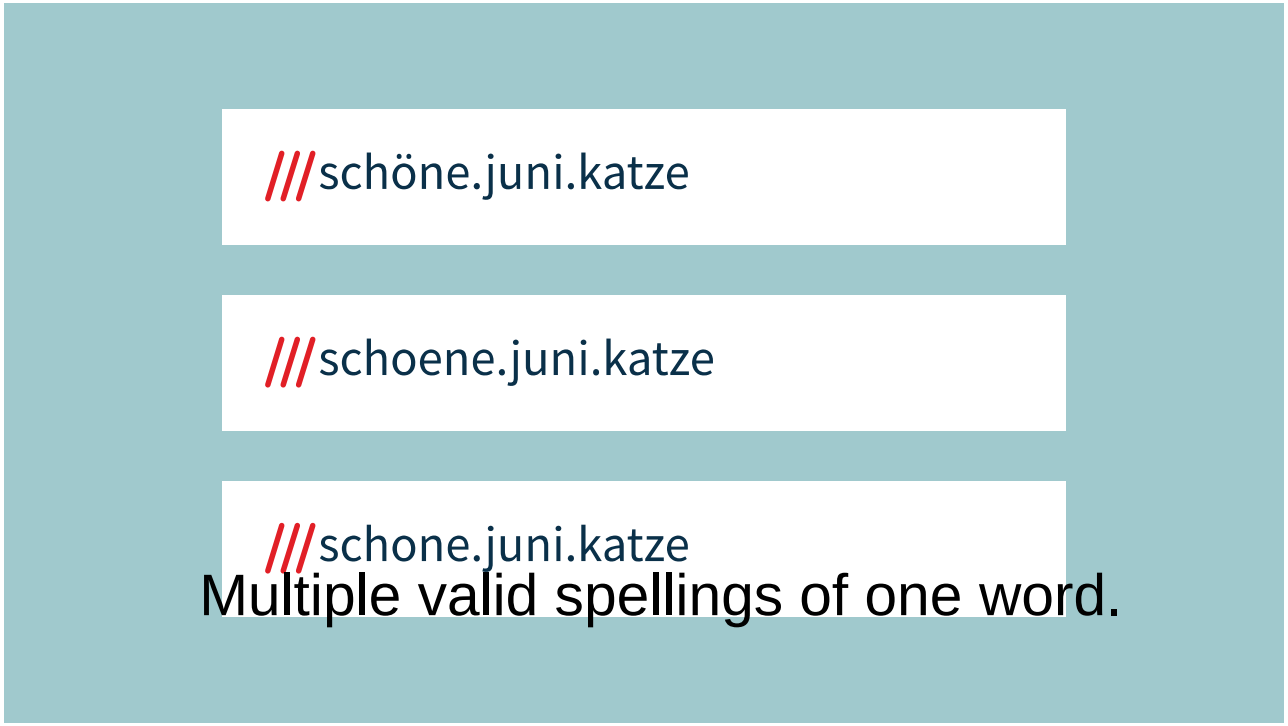
ENGLISH

GERMAN



When we added German, we discovered a world of very long words, and many of the 3 word addresses were too long to fit into the tool bar. Therefore we had to update the system to detect the length of the 3 word address, and adjust the font size accordingly. For most of the 3 word addresses this works fine, but as we've looked into this in more detail we've

discovered that some of them are sooo long it actually causes accessibility issues because the text is so small, so we're currently working on a system to cater for this. One idea is to click on the words to enlarge them, or to stack them so its one word on each line. We don't have the solution just yet, this is something we're still working on.

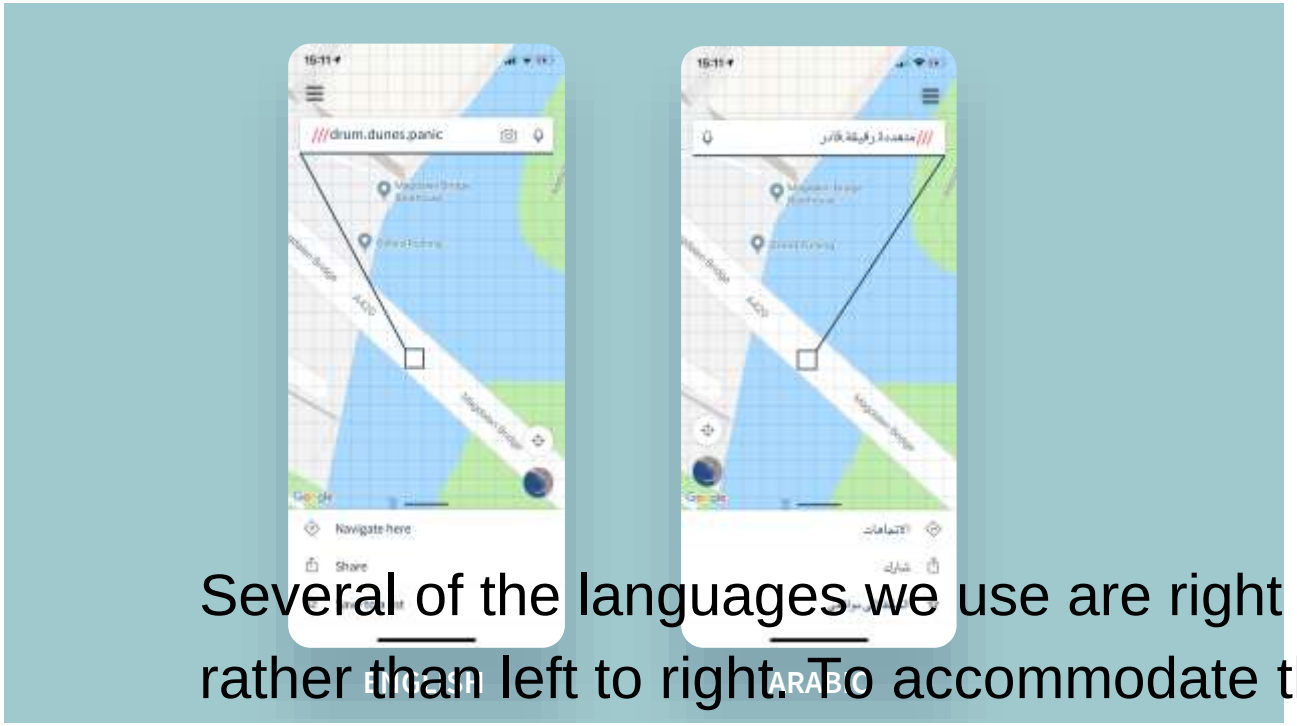


Multiple valid spellings of one word.

///schoene.juni.katze

///schöne.juni.katze

///schone.juni.katze



Several of the languages we use are right to left, rather than left to right. To accommodate this, the entire UI has to flip when one of those languages is selected to make it more intuitive and work well for these langauges.

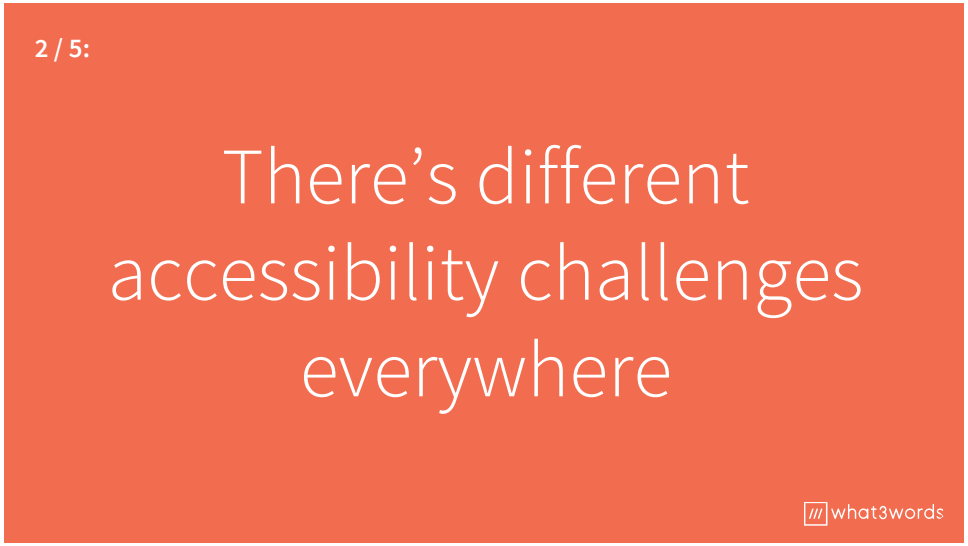
ENGLISH KOREAN

Localising the word list is obviously one challenge, but there's no point going to the effort or doing this if the UI isn't also translated. Luckily, there's not a lot of text in the app so this isn't too much of an issue but one of the things that we have learnt is the difficulty of translating what we'd envisioned as pretty standard text .

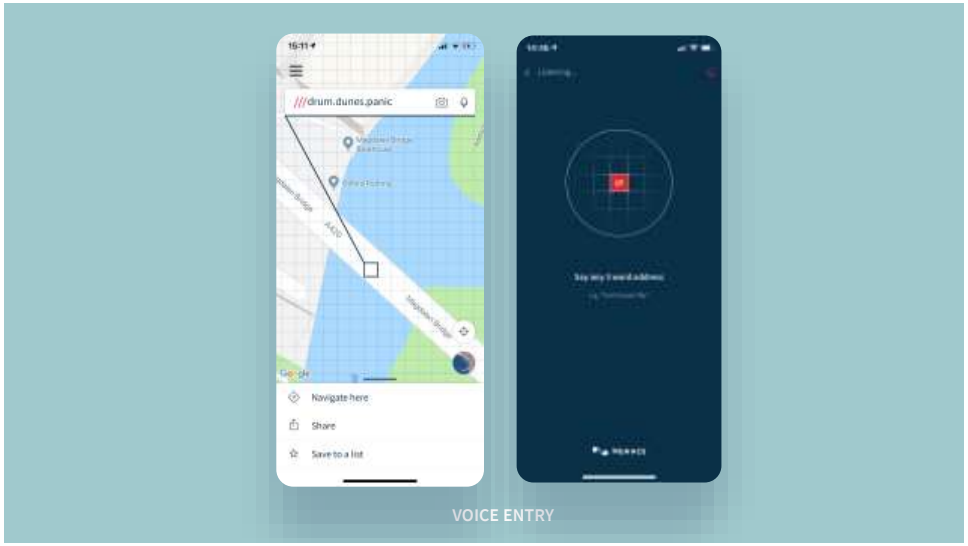
For example not all cultures are comfortable with using first names, so in English where we'd say 'Welcome back Niki', in Korean it would be 'ForeacastNiki welcome back', which is obviously changing the strings on input text, which adds complexities to the system. One of the problems with the system at the moment is that we don't know the gender of our user – it's not something we ask for in sign up. The spelling of 'Welcome' in Spanish for example is different based on whether Niki is a male of female name. Currently we resort to the neutral form, but this obviously isn't ideal, and it's something we're working on.

¡Bienvenida de nuevo, Niki!

¡Bienvenido de nuevo, David!



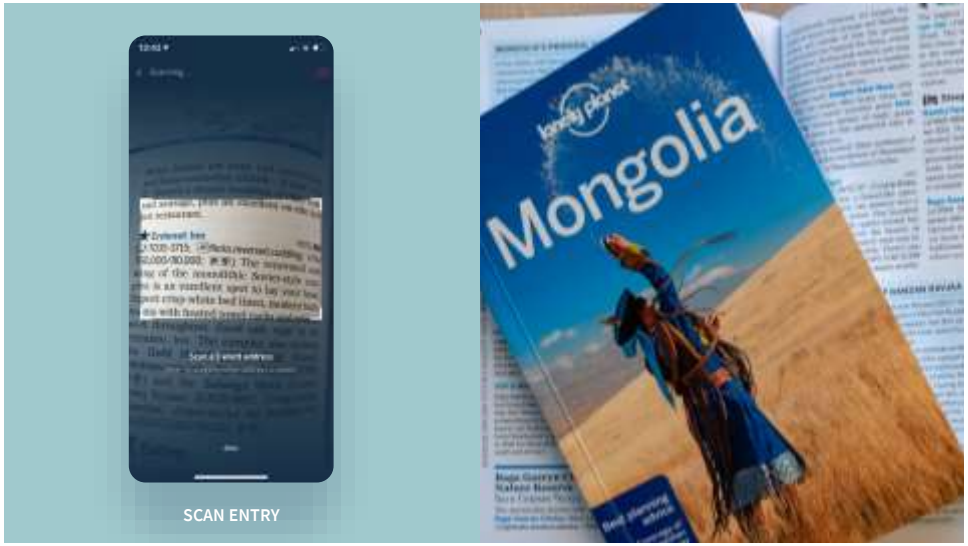
This is all part of lesson no.1, that sometimes a more slower, guided experience is best.



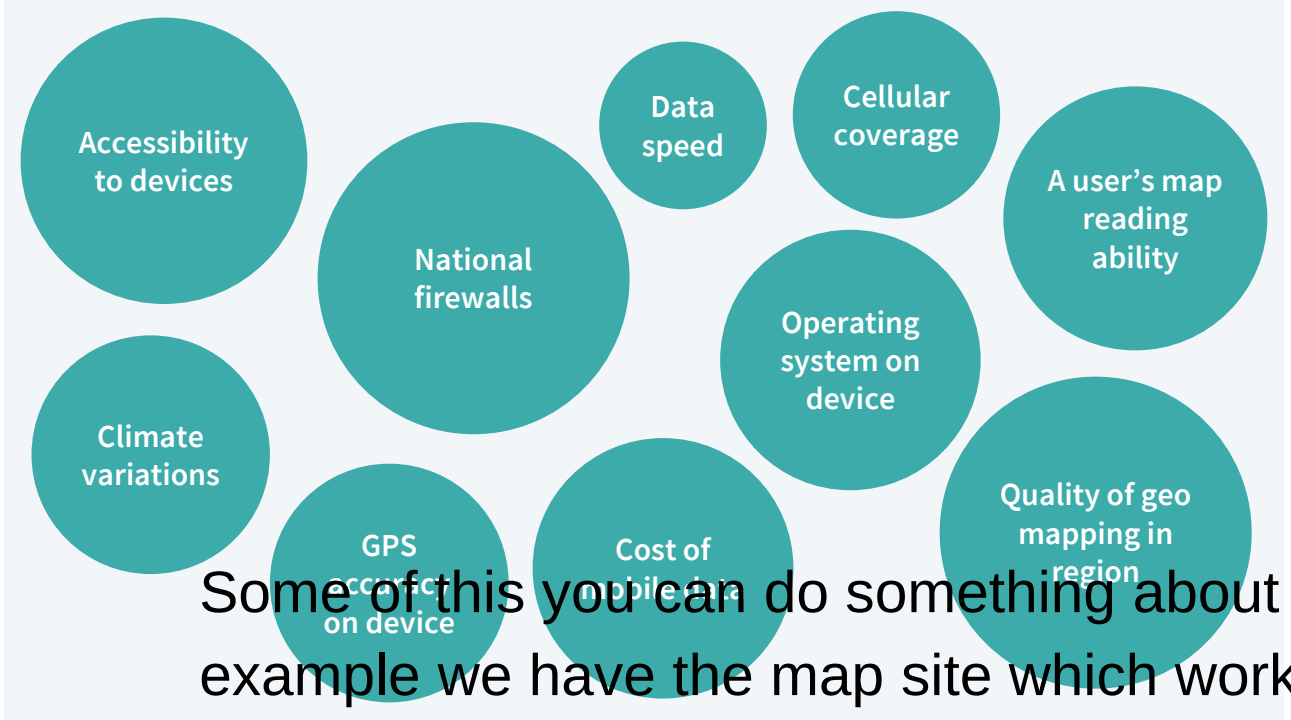
The voice feature is amazing, because 3 words are so quick to say, and very easy to detect (compared to coordinates and codes). It’s great not only for people when driving etc, but anyone who doesn’t like typing, spelling, etc. Massively improved accessibility of app.

We use Nuance as it's available in the most amount of languages, and **it's available offline**. Teams of language consultants recorded more than 5,000 voice samples per language of 3 word addresses – noisy environments, different accents & dialects, used this to **achieve more than** 97% accuracy in 3 word address recognition. We have control over the word list which is why we can tweak and improve detection so well.

Created for voice.



To support voice, we’re also introducing OCR – scanning functionality. This means that you can now scan a 3 word address, and it will send you straight to it. This combined with voice, means that you never need to type in a 3 word address which massively increases the accessibility of what3words.

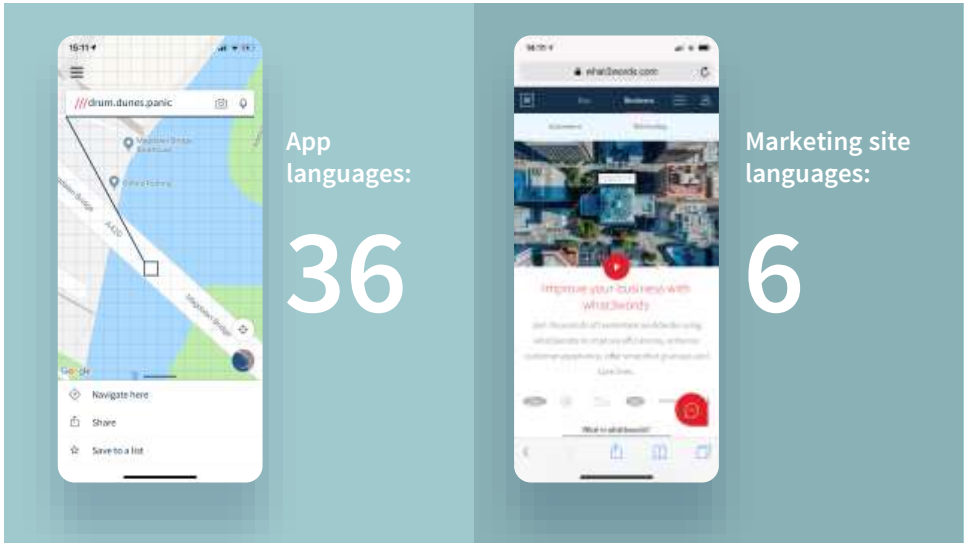


Some of this you can do something about – for example we have the map site which works for people that don't want to / can't download the full app, but you do have to accept that a lot of this is out of your control.

3 / 5:

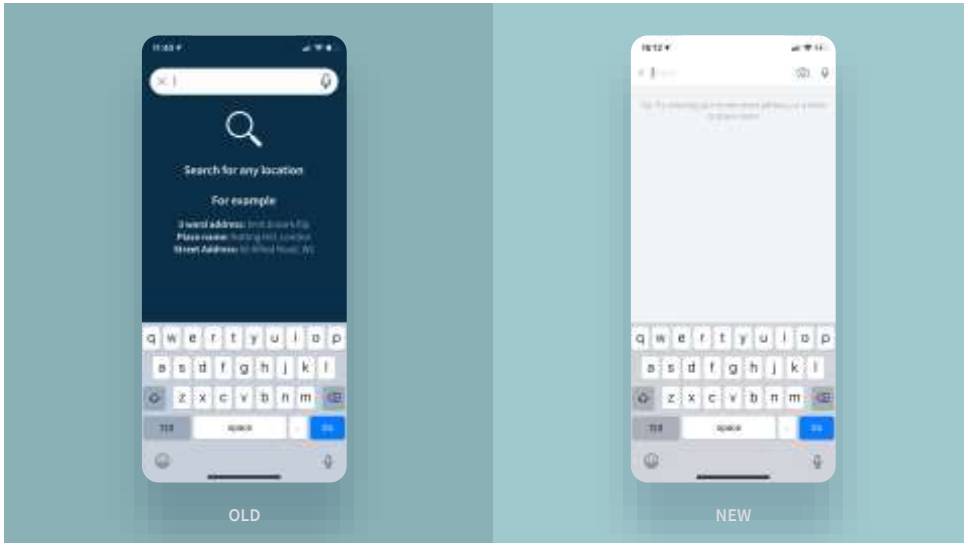
Localisation can be an expensive rabbit hole

what3words



App is available in 36 languages, marketing site only 6. This is because our app we want to be used and accessible to everyone with a smartphone, and we want them to use.

Cost + value added; works well for app, isn’t justifiable for marketing website.

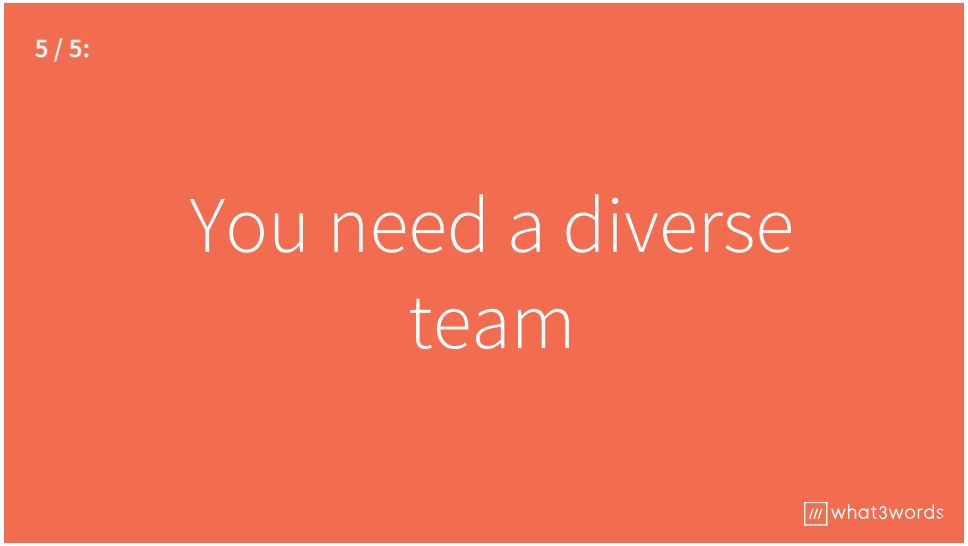


A smaller update - but an interesting lesson - is the update to the page that’s displayed when the user clicks the search bar. The previous design (1) was a bit cluttered, so we created a stripped back version (2) that just showed examples of different addresses that could be entered, working on the assumption that this was the most useful information. However

we soon realised that we only ever showed examples of London addresses, which wouldn’t feel very relevant to those living in different regions, or in different countries. We were suddenly staring down a massive rabbit hole faced with a challenge of coming up with different examples addresses for every single region, in every single country, in every single language…. So instead, we just came up with a single line of explanative copy that was just as effective, and was easy to translate.

This is all part of lesson no.1, that sometimes a more slower, guided experience is best.

ECO SYSTEM – ANYWHERE YOU CAN USE A NORMAL ADDRESS YOU CAN HAVE A 3 WORD ADDRESS



As I said earlier, most people at what3words speak more than one language – the workforce is really diverse; we've got people from all over the world. We also have a language consultants that we get in to work on the words lists and they are very much part of our community. This is vital for localization, as there are so many hidden sensitivities and issues

that would be almost impossible to discover without people that genuinely know the region. You need a diverse team working on it.

We’re on a mission to change the world 3 words at a time. Join us