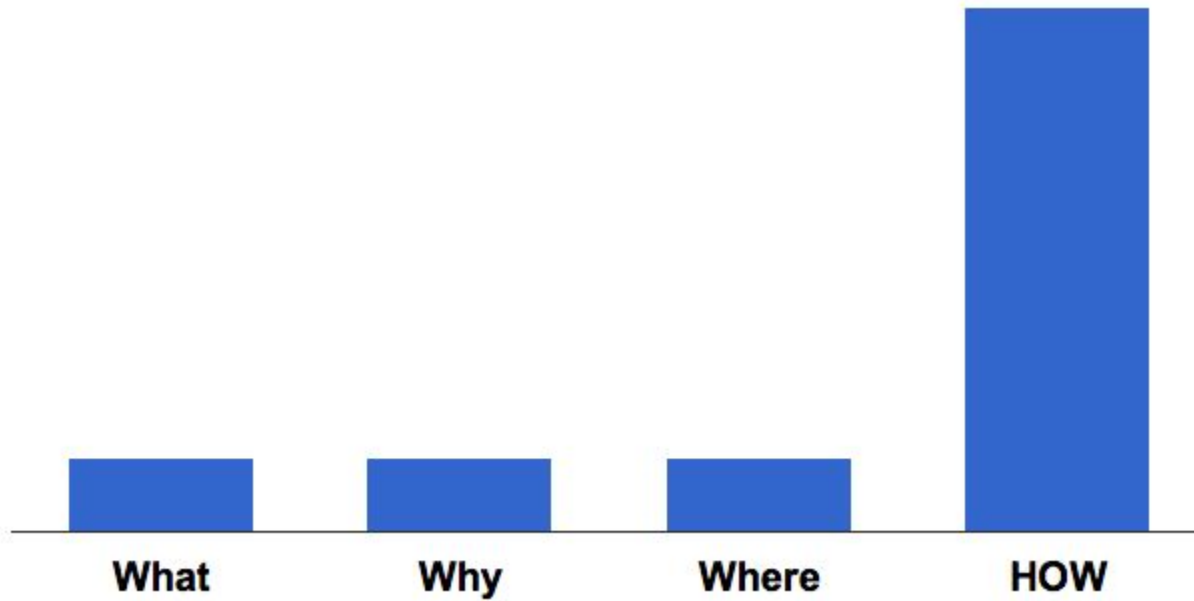
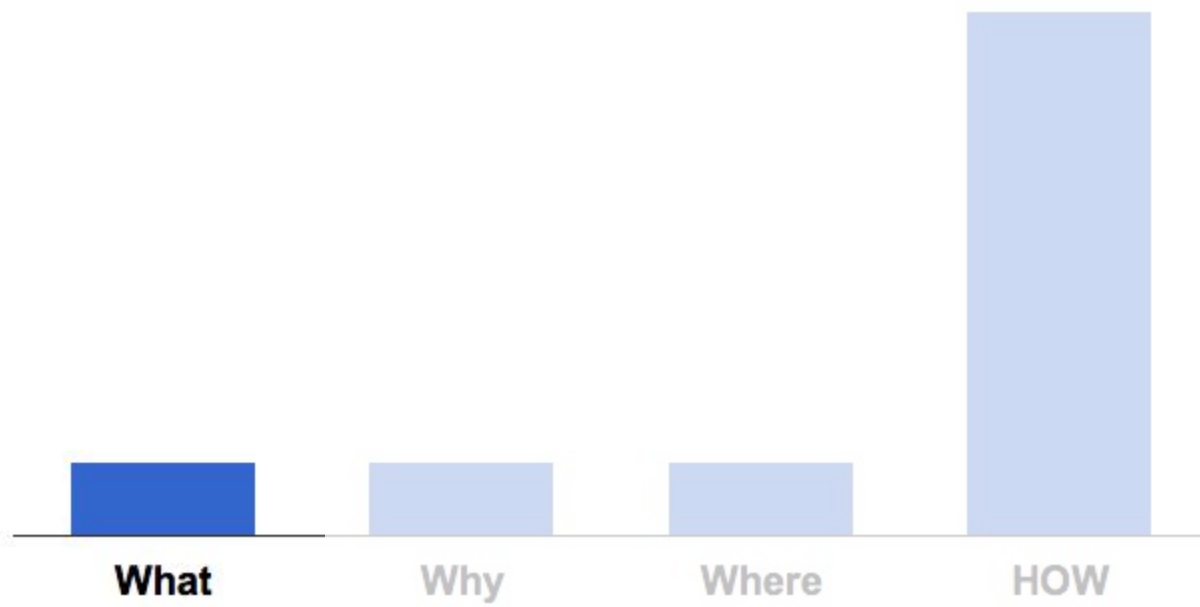


Project Ground Truth: Accurate Maps via Algorithms and Elbow Grease

Megan Goddard

Contents of this presentation:





WHAT Is Ground Truth?

*A project to create accurate and comprehensive **map data**,*

by conflating authoritative source data with Google's internal data,

via algorithms and elbow grease.

WHAT is map data?

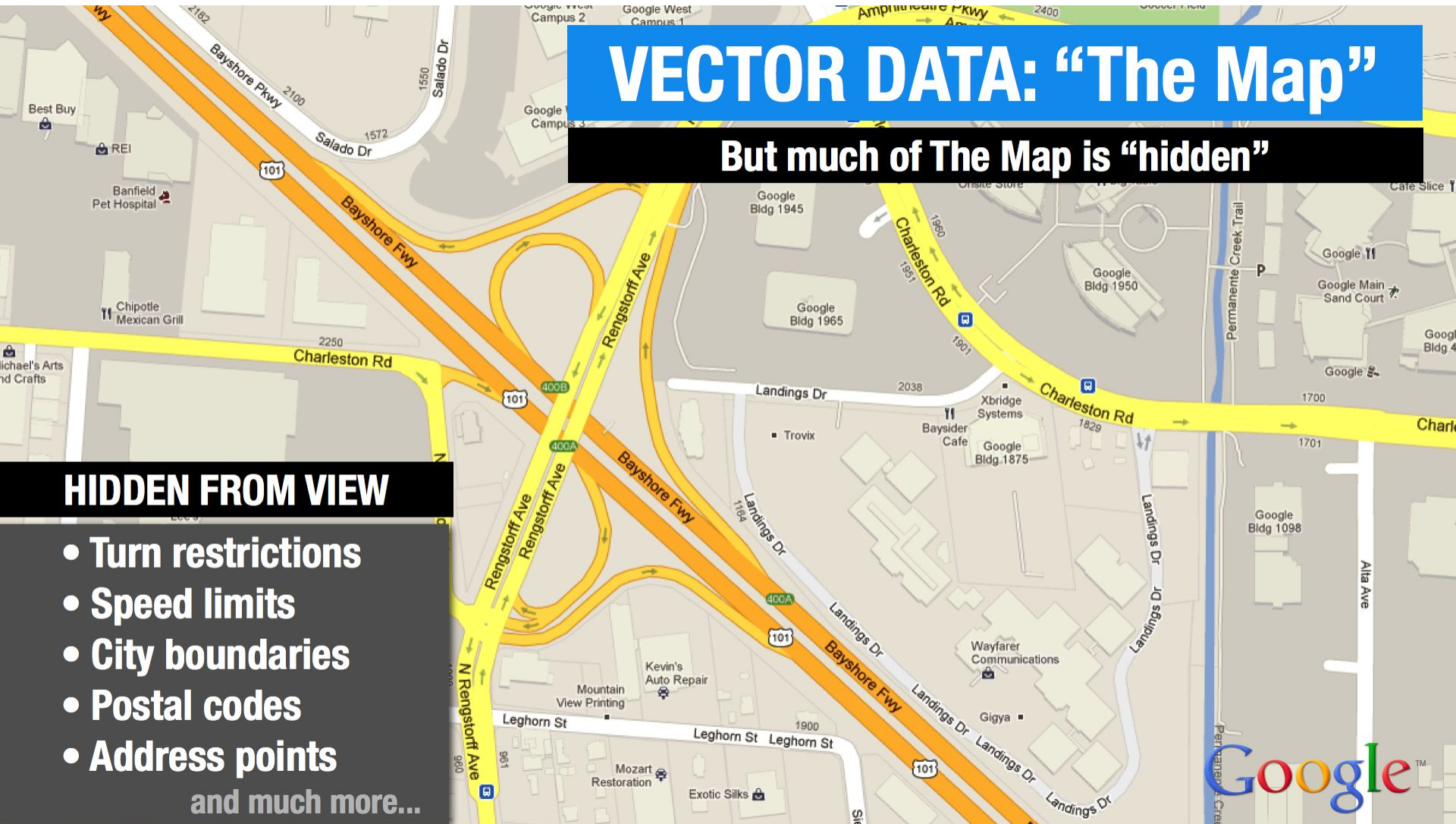
VECTOR DATA: “The Map”

But much of The Map is “hidden”

HIDDEN FROM VIEW

- Turn restrictions
- Speed limits
- City boundaries
- Postal codes
- Address points

and much more...



...back to...

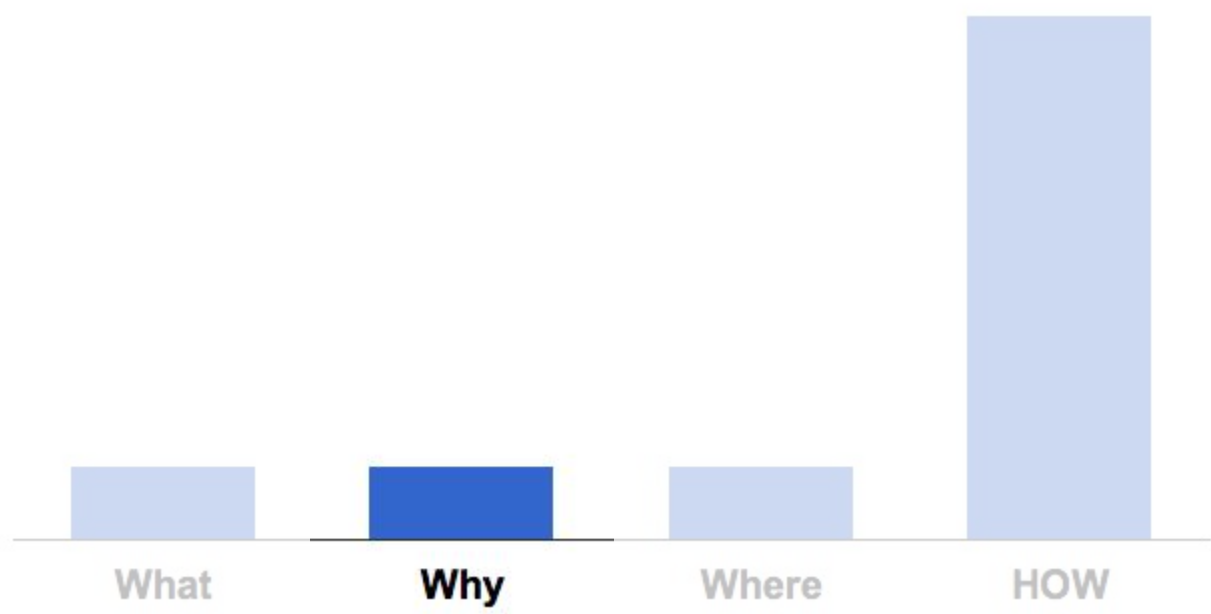
WHAT is Ground Truth?


How Google previously
got map data:



How Google gets map
data with Ground Truth:

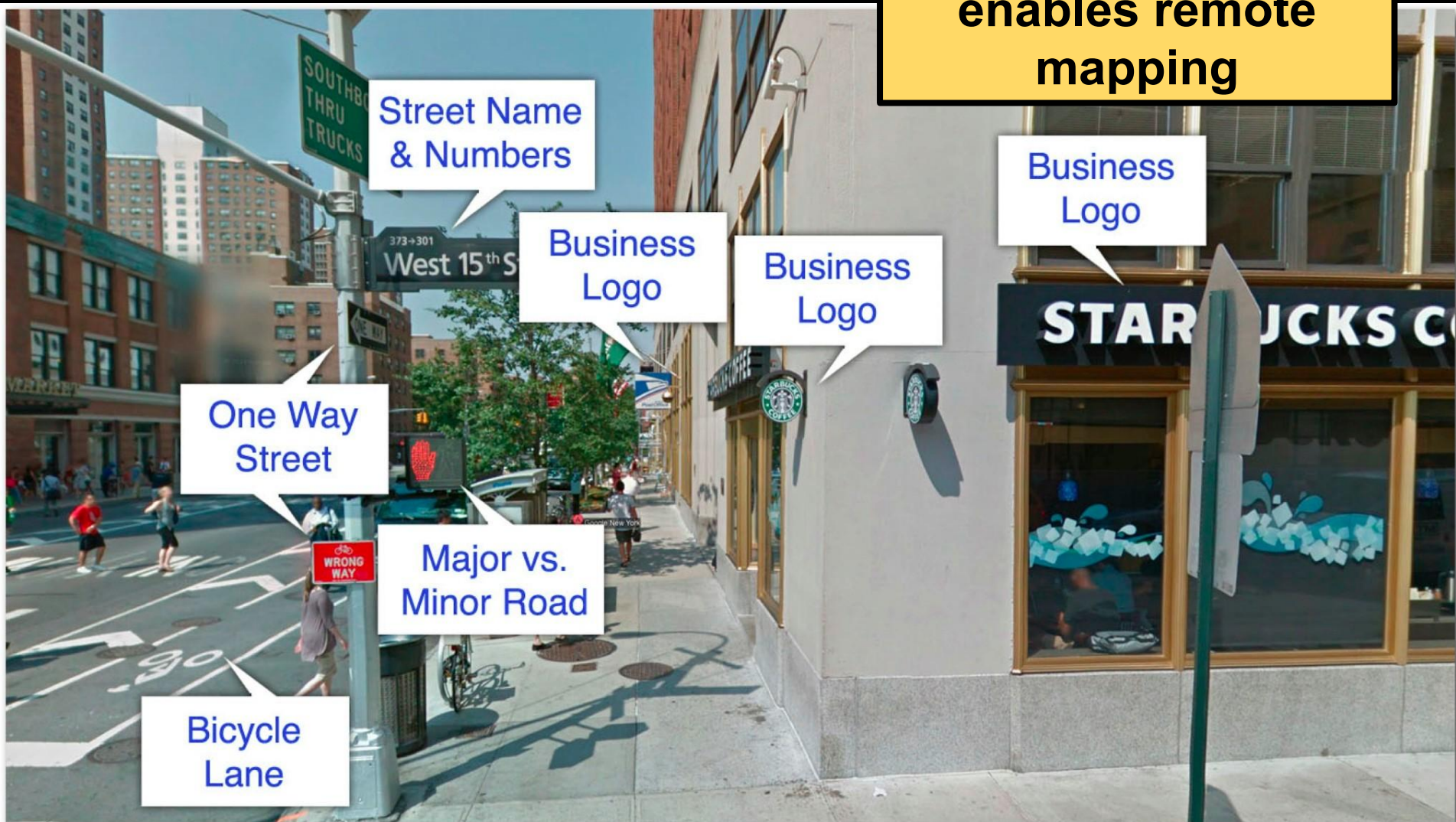




An aerial photograph of a residential neighborhood. The houses have prominent red-tiled roofs. There are several swimming pools, some with blue water and others with greenish water. The area is surrounded by green lawns and trees. A road runs along the bottom and right side of the image. A yellow text box is in the top right corner.

**Hi-res imagery
enables remote
mapping**

**Hi-res imagery
enables remote
mapping**



WHY is Ground Truth?

Because it benefits our users:

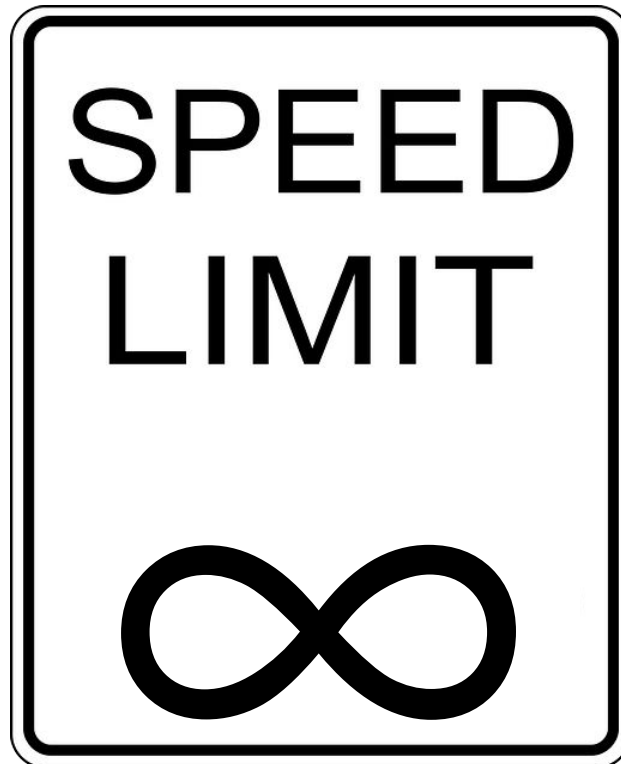
- Authoritative data providers.

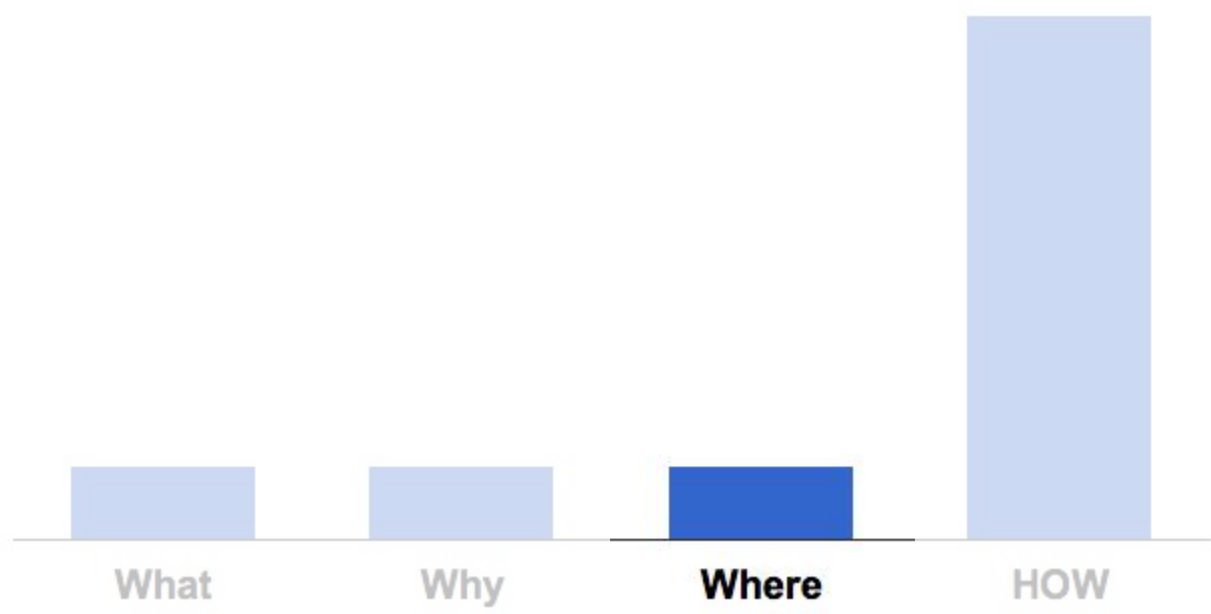


WHY is Ground Truth?

Because it benefits our users:

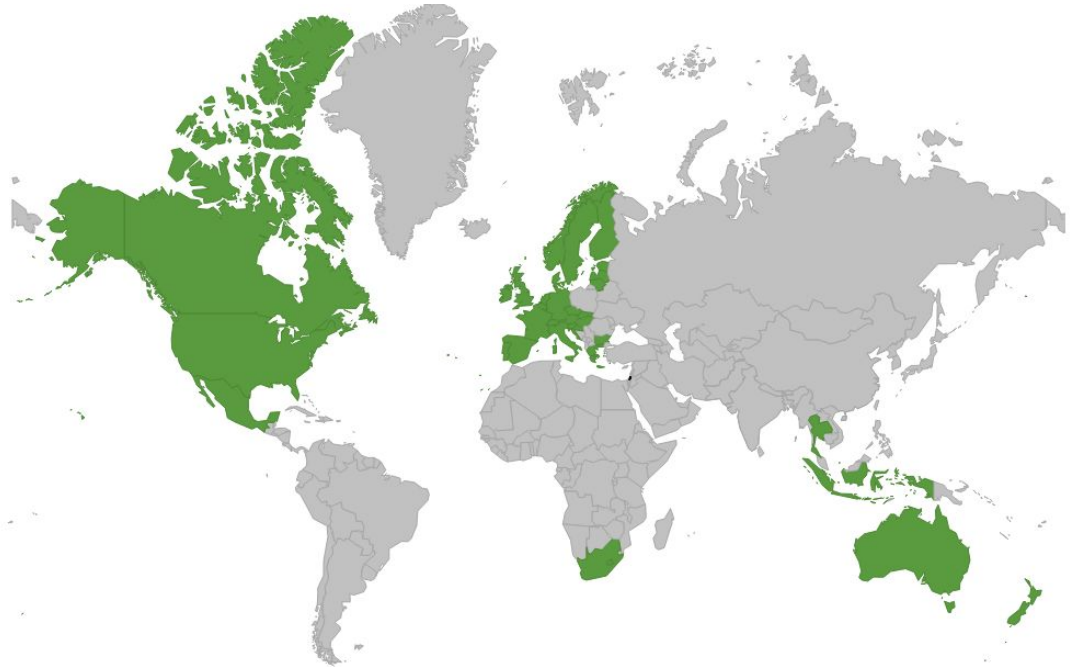
- Allows us to implement updates quickly.





WHERE is Ground Truth?

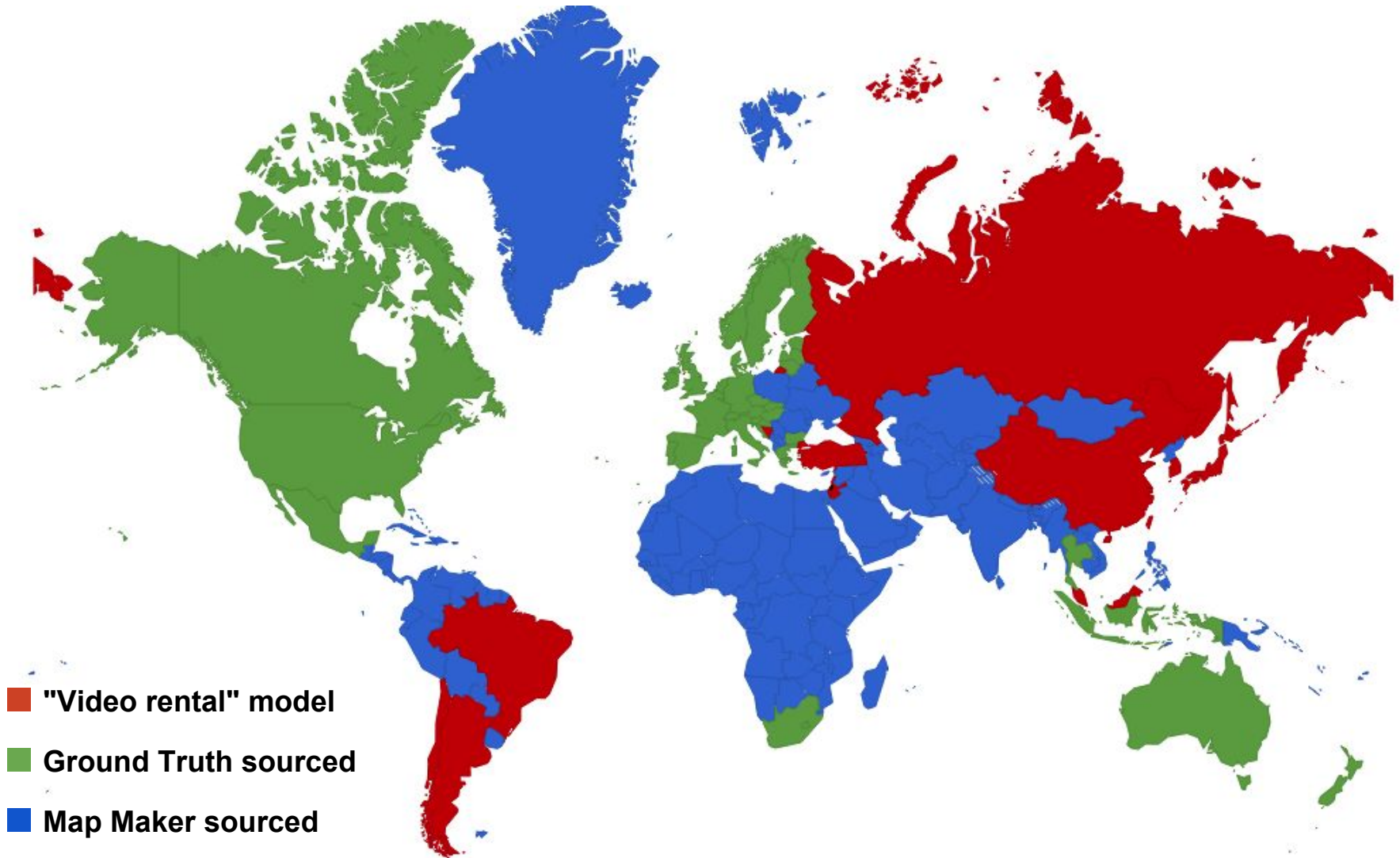
43 countries
and regions:



Past 5 years:

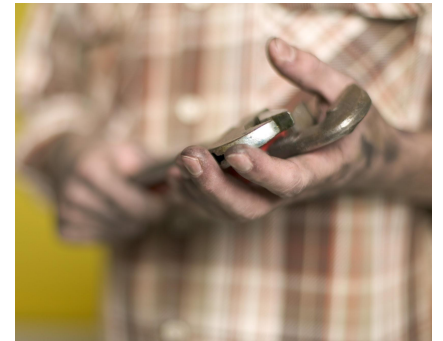
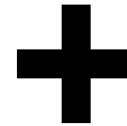


WHERE is ~~Ground Truth~~? Google Maps?

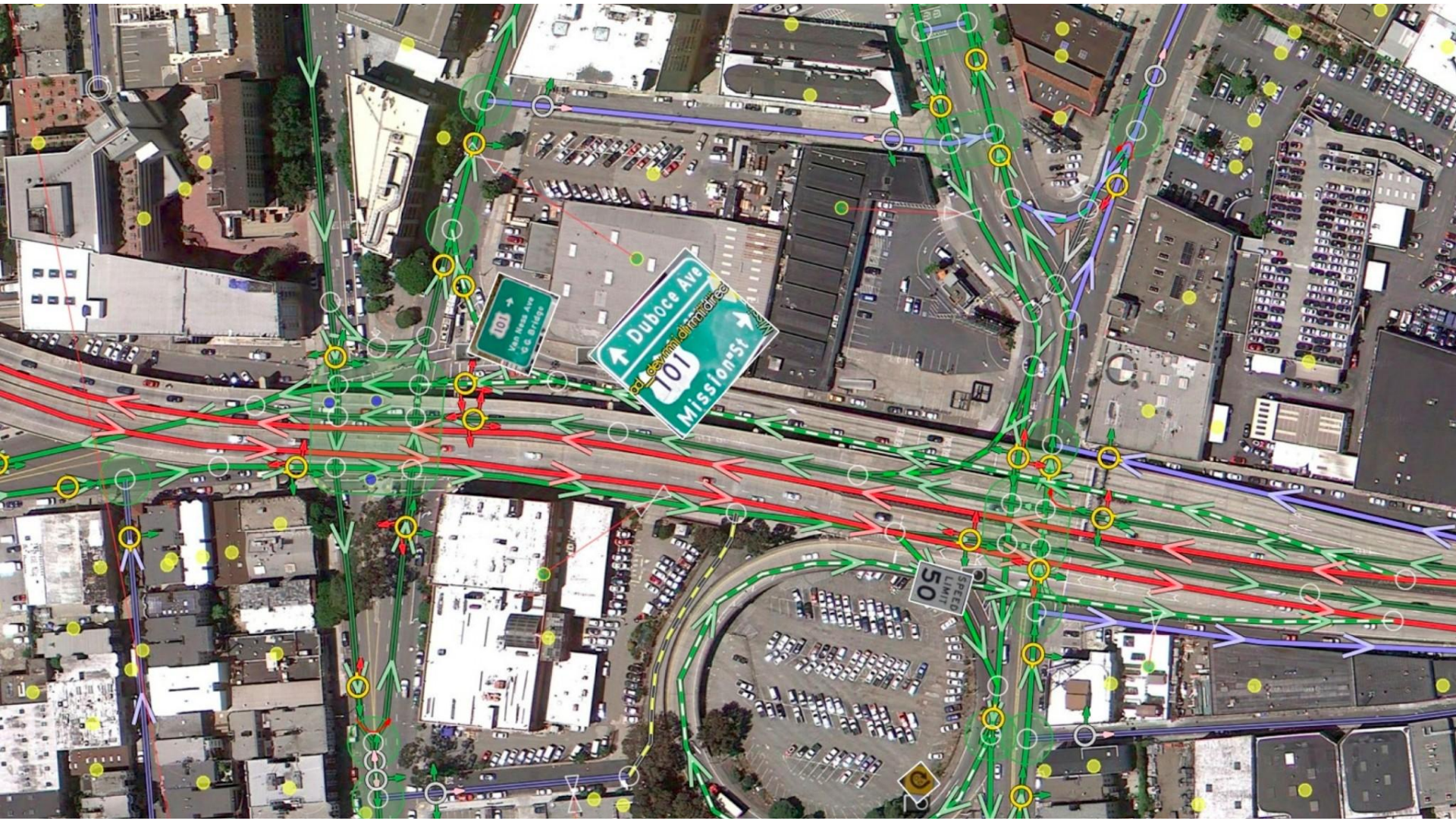




HOW does Ground Truth work?



Algorithms and elbow grease: **Atlas**



Algorithms and elbow grease

Atlas:

- Internal tool
- Home-brewed

... used by...

Ground Truth Operators:

- Internal workforce
- Heavily trained

US TIGER - BEFORE & AFTER

**Road geometry and connectivity fixed,
speed and other attributes set, etc...**



Thank you!

