

Success Stories - MoDOT Traveler Information Mobile Application

Timmons Group |
MoDOT

the agenda

- What is Timm?
- Why was it developed?
- What does it do?
- How popular is it?
- How was it developed?
- Next steps with TIMM?
- Q & A



what is TIMM?

why was it developed?

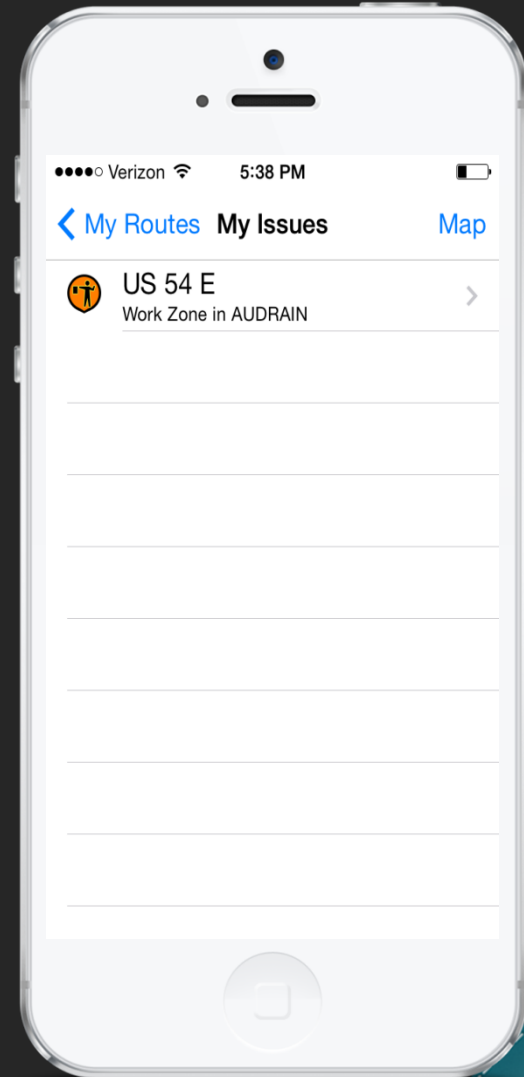
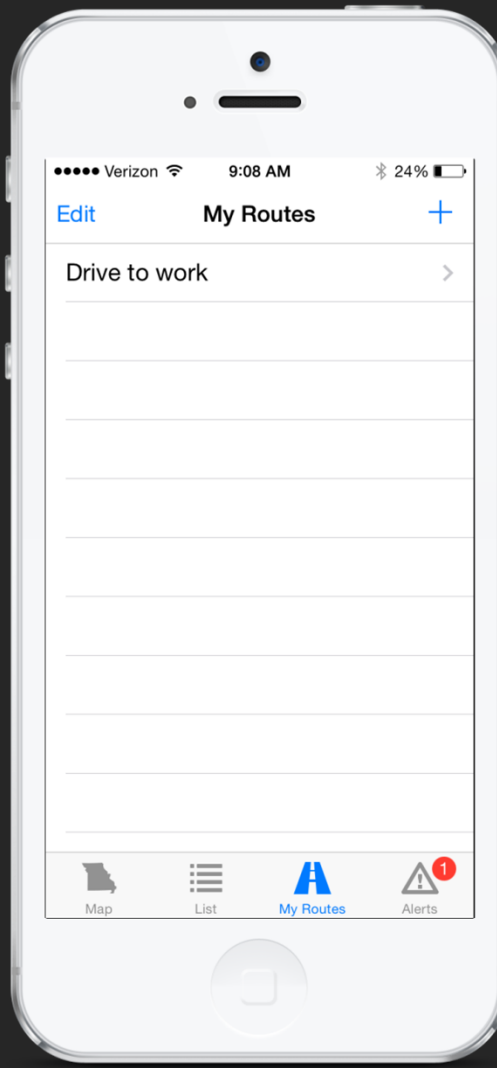
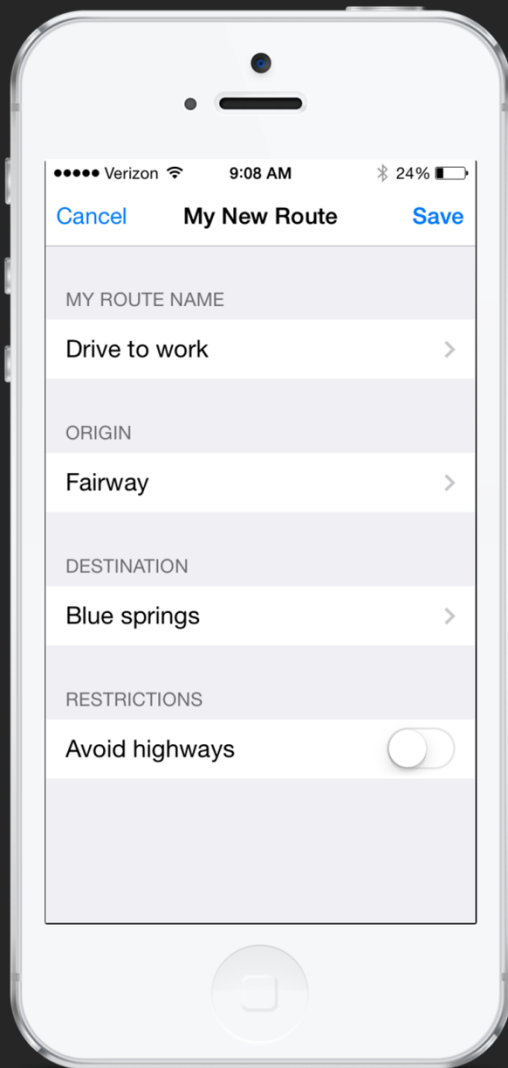
The challenge

- Web-based desktop traveler information Map did not translate well to mobile
- Modot does not have traditional 511 telephone service
- Growing demand from mobile users (especially during winter weather season)

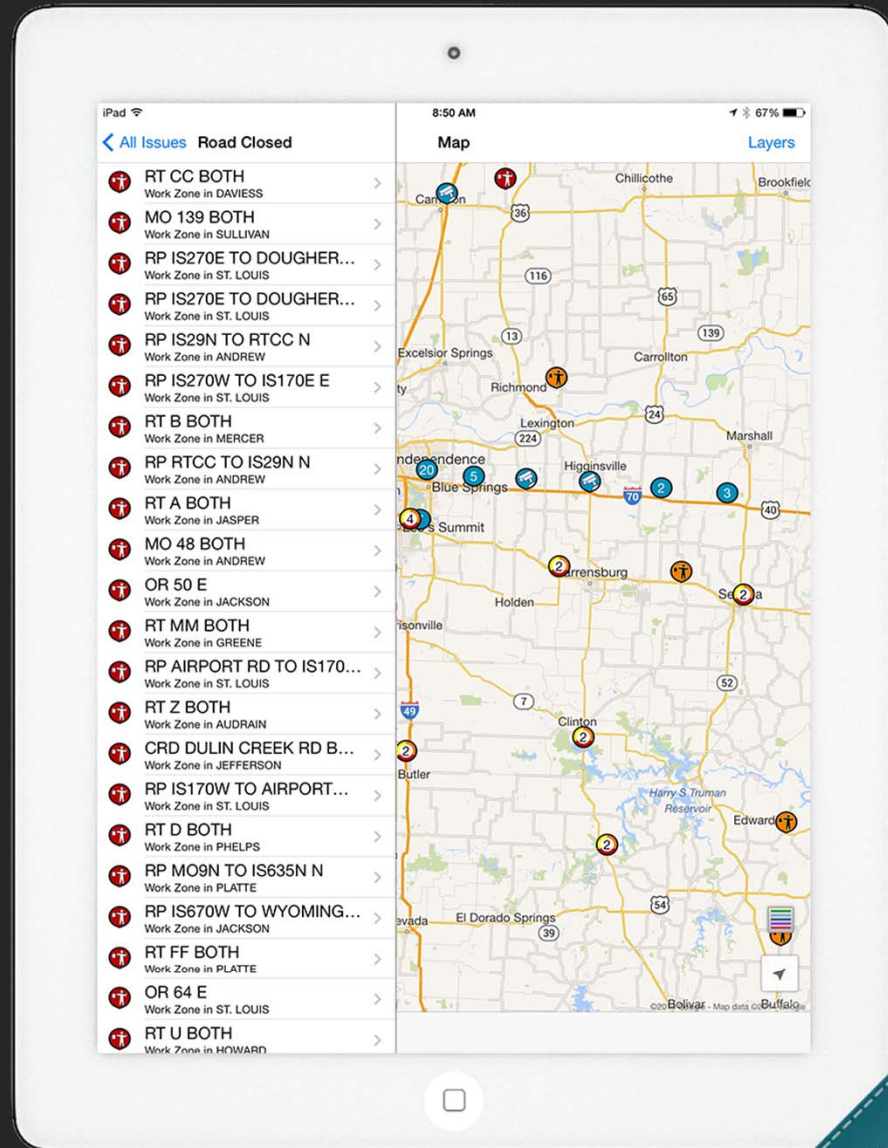
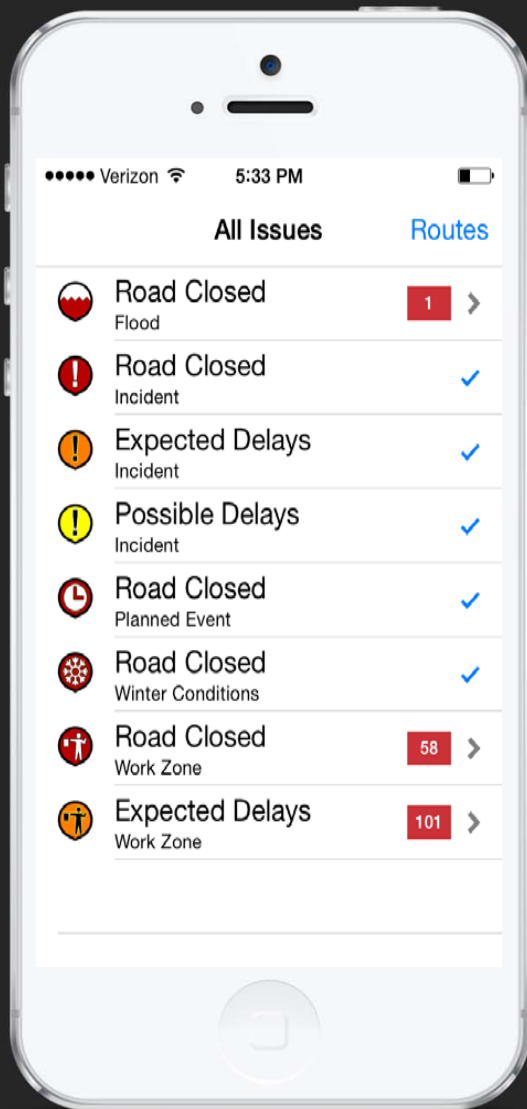
The opportunity

- Modot had feedback based on desktop TIM
- Data / services available
- Time - Started v1 of mobile apps in august / winter weather season in october

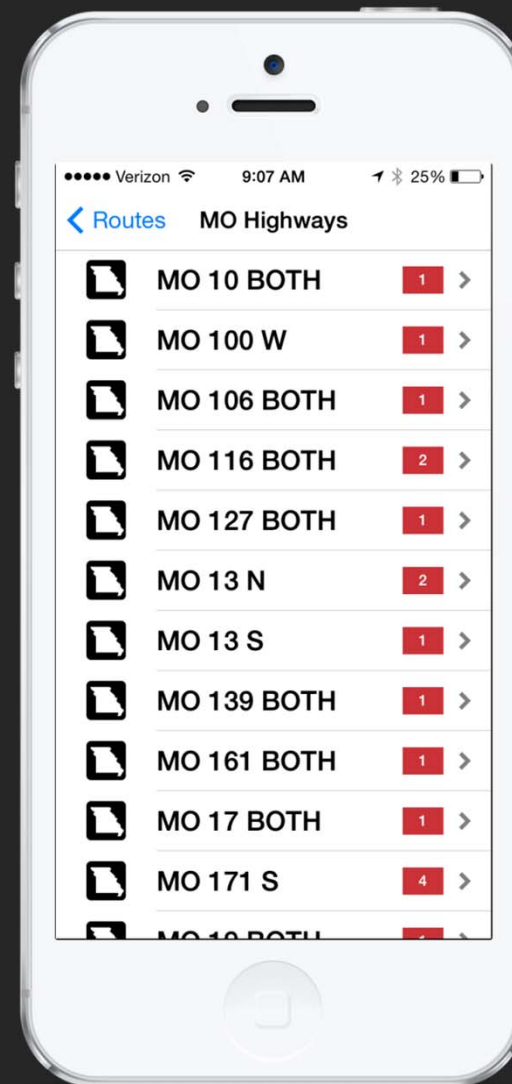
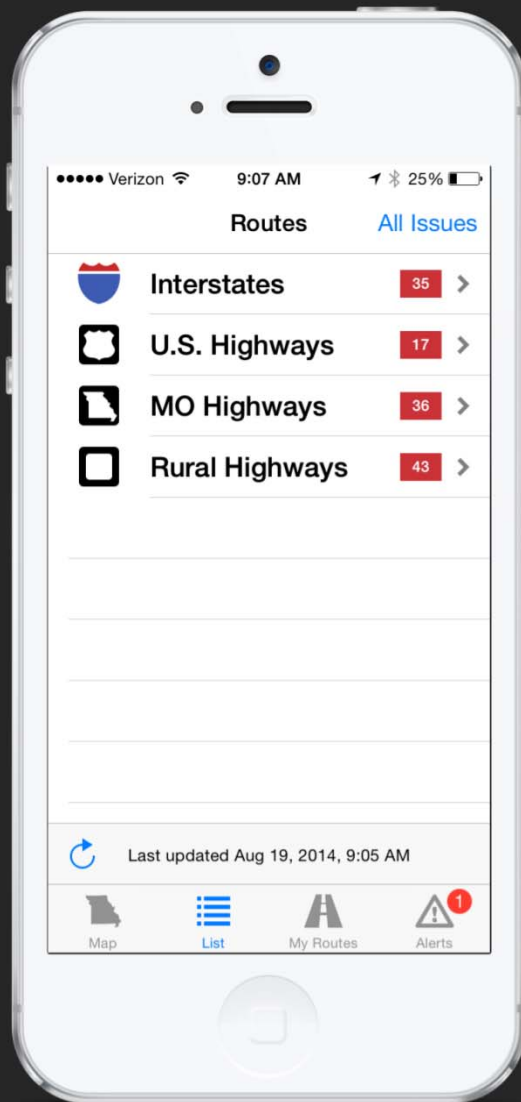
what does it do?



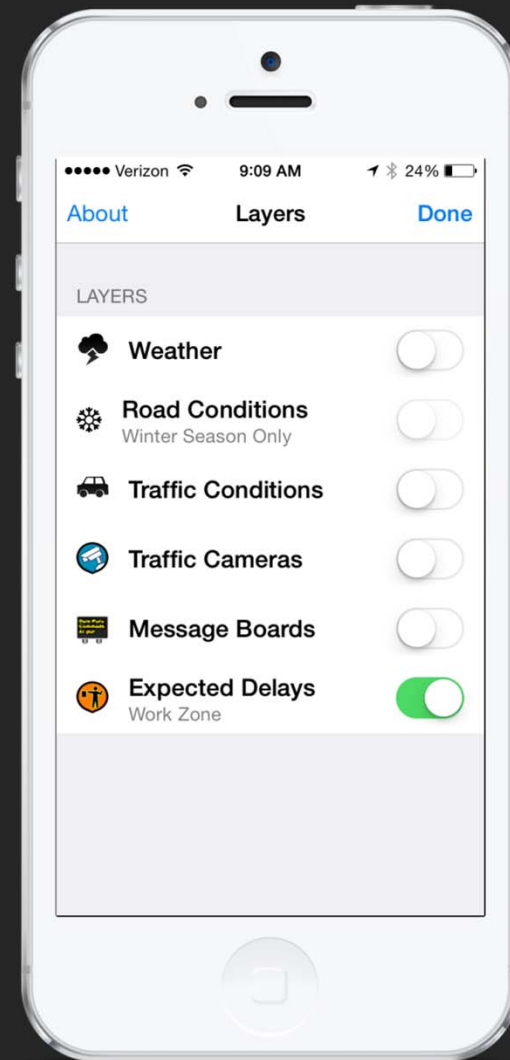
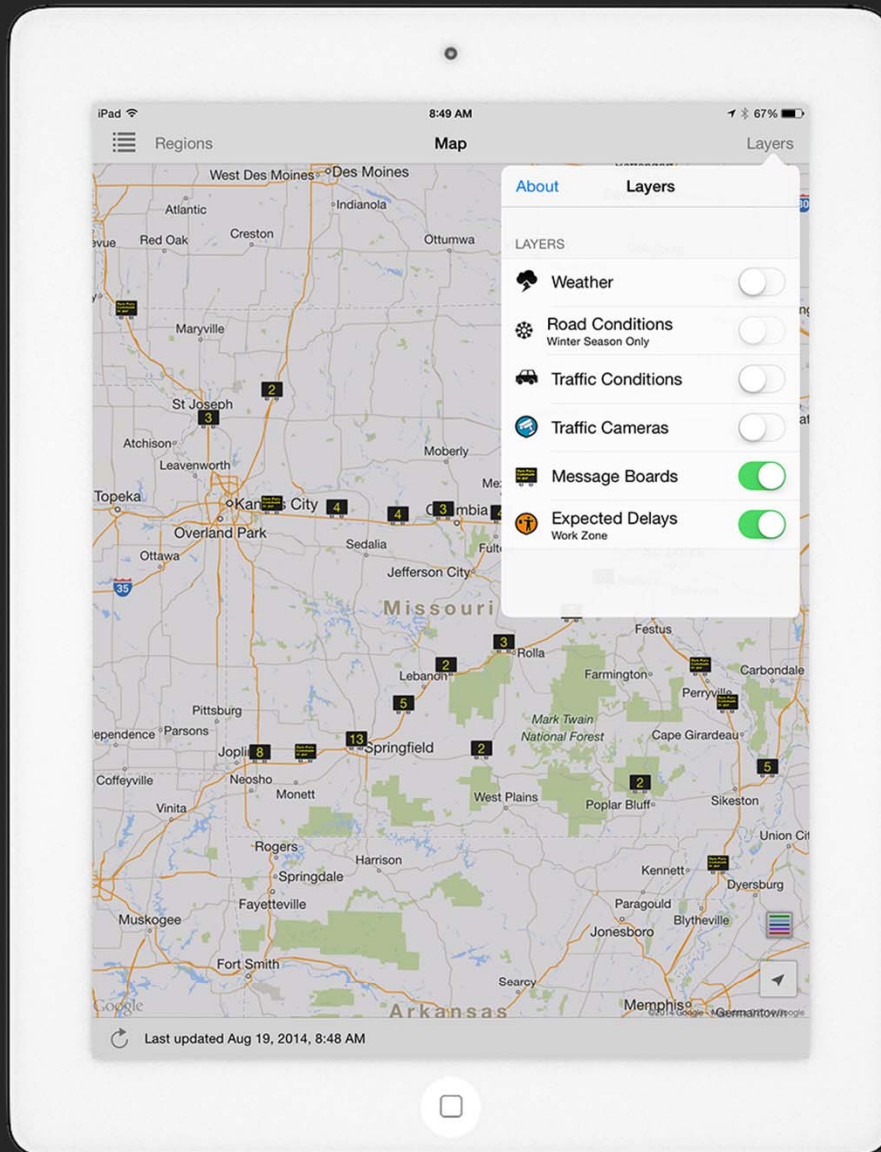
My
Routes



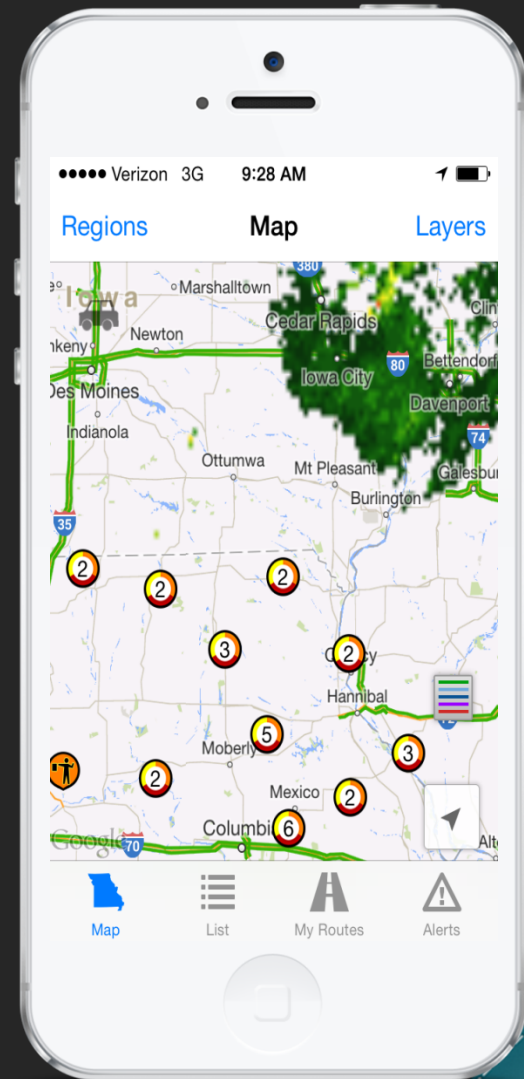
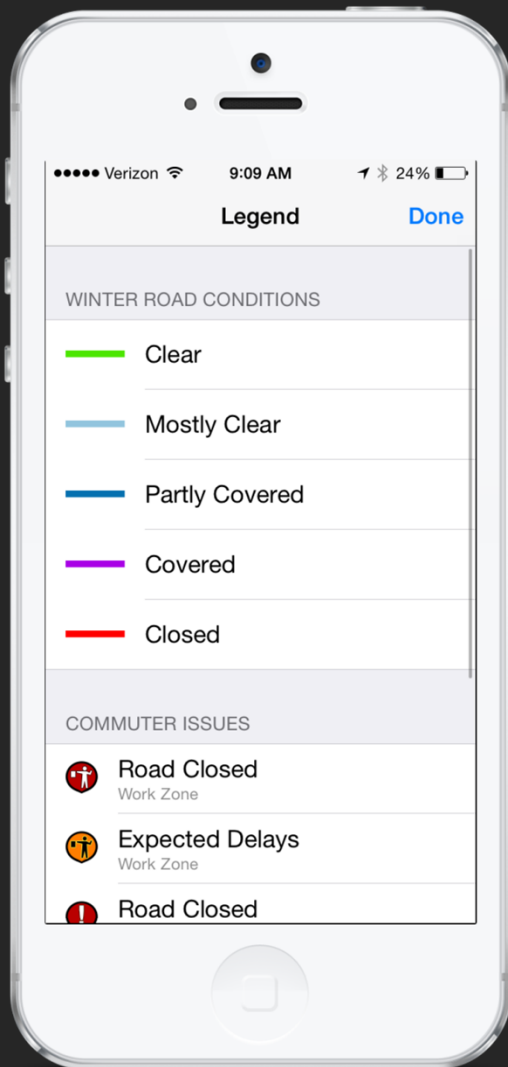
By Issue Type



By route

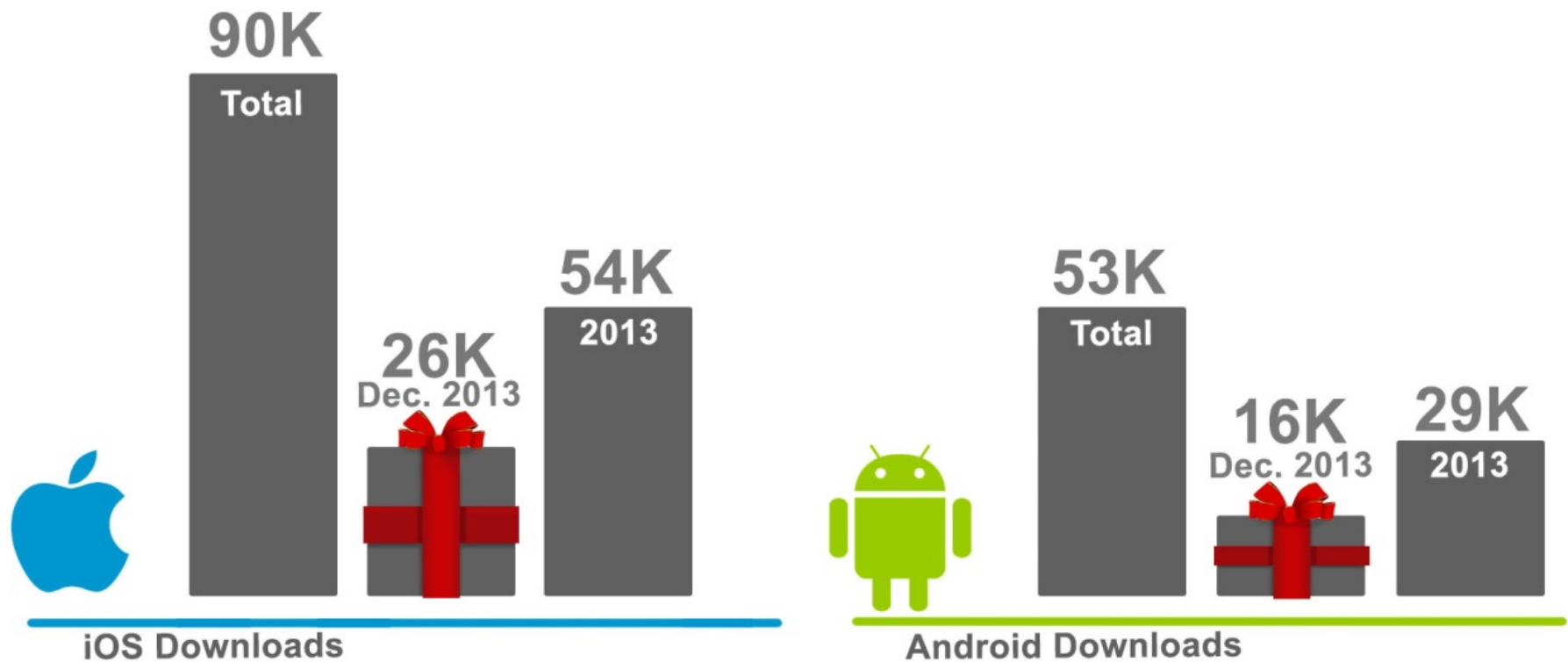


Layers



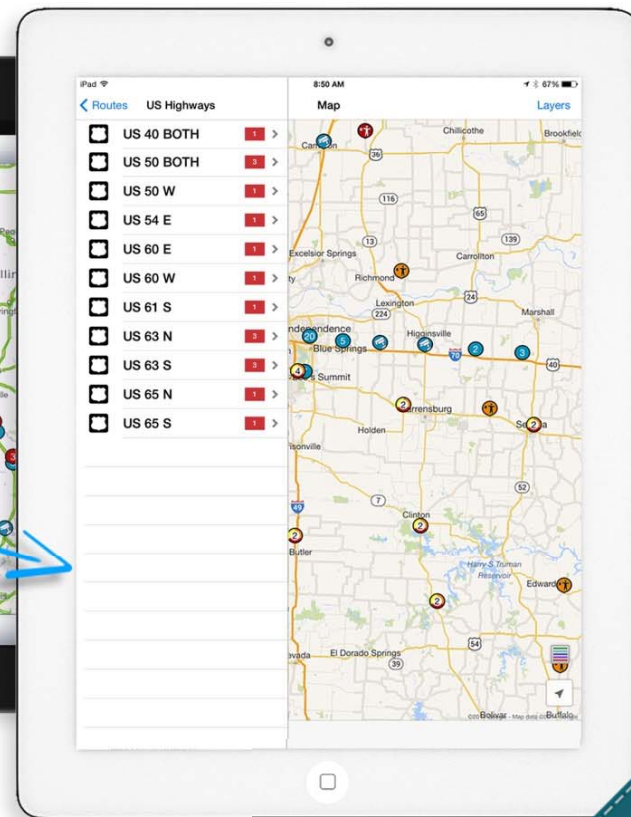
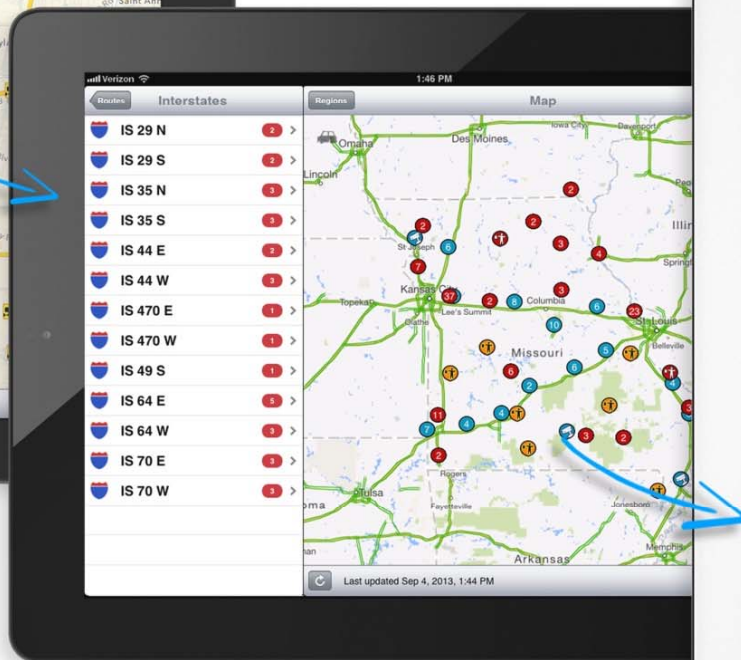
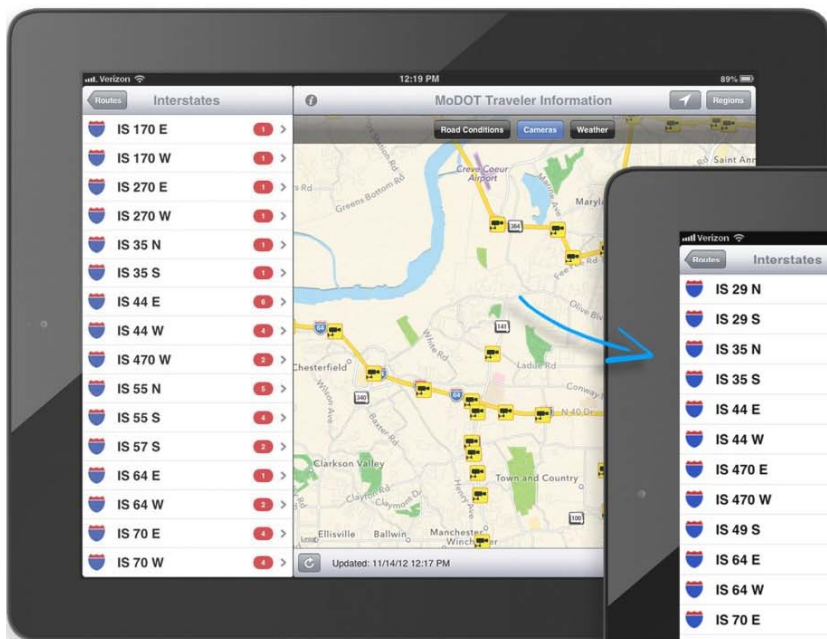
how many people are using it?

MoDOT TIMM app downloads



* released to itunes and google play in october 2013

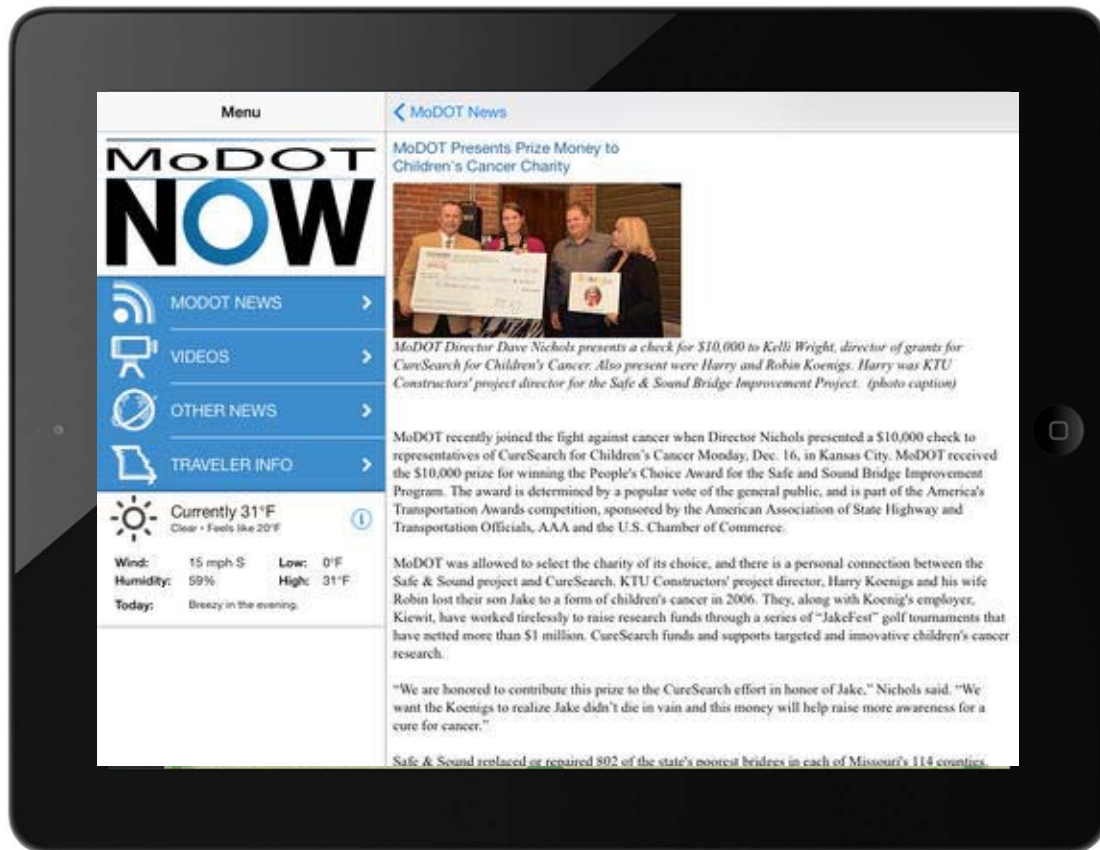
how has it changed?



Versions

9 versions (10 - upcoming) of both iOS and Android

- iOS 7 compatibility
- Google Maps SDK upgrades
- Enhancements
 - Google traffic integration
 - Dynamic message signs
 - Expected delays – floods
 - Alerts
 - New legend
- Enhanced my routes
- iOS and Android new device support
- UI improvements
- MoDOT NOW integration
- Bug fixes
- Performance improvements
- Responses to store feedback



what drove the changes?

User feedback / reviews

User reviews



Douglas Chastain July 4, 2014

★★★★★

Could be better Make traffic cams larger so you can actually see them, remember we're on cell phones. :-)



Wendy Truckerchickie August 6, 2014

★★★★★

Awesome As a truck driver I travel thru MO almost twice a week, wish more states would provide an app period let alone one that is easy and smooth as this one to use.... Thanks!!!



Sean Hill August 9, 2014

★★★★★

Great for EMS As a paramedic, I use this app often when weather causes road conditions to change. I find that MODOT does a good job of updating it quickly as conditions change.



bob nestle May 7, 2014

★★★★★

I travel a lot for my job and it is good to be able to plan your trip ahead of time and provide for enough travel time.



Rebecca Dunger Peak August 19, 2014

★★★★★

Helpful This was especially helpful in winter to learn of road conditions. We also keep an eye on traffic with this app.



Doug Holland May 1, 2014

★★★★★

Mo DOT Very helpful info to keep informed on upcoming road trip.



Zach Green June 10, 2014

★★★★★

MoDot app Great app. Allows you to see most up to date roads conditions as well as weather!



Curtis Colbert April 6, 2014

★★★★★

Love this app Easy to use and very helpful.



Gregory Evans March 28, 2014

★★★★★

Maps Love this app. So easy to use



Tara Hamnersmith February 22, 2014

★★★★★

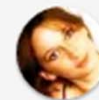
Galaxy 3 When i open it its slow to show anything also gives a notification of an alert than forces close.



Malcolm Lutman March 2, 2014

★★★★★

Ok so far Just downloaded the app an so far it's pretty good!keep getting an app update notice though an can't see where play store has an update available!



Sonia Dea March 2, 2014

★★★★★

Best emergency road map Don't leave home in Missouri w/o this priceless App!!!

76 reviews on itunes
607 reviews on Google

User feedback / reviews



John T December 6, 2013



Not working Winter Storm Cleon 12/5/13 - Freezing rain started around 0700 Hrs, sleet around 0800 and turned into snow in the afternoon. App from yesterday afternoon, through the night. 12/6 - This morning - app shows clear roads. I'm looking out the door at 8-10" of snow, on top of ice, with more snow to come.



Brandy Holtsclaw December 6, 2013



Really Downloaded so I could see road conditions. Doesn't show any bad weather going on all roads clear.



Jason Fraggetta October 25, 2013



Love Love the fact that its updated so now it works on newer android. But one downfall is when I look at the streetcams the image is so small. Any chance to update and make images larger, maybe like before or better like full screen. I enjoy watching the traffic cams



Heather Spurling January 6, 2014



Select weather overlay and region people! Be sure to select Weather overlay and your Road Region, can even add your route. Shows weather conditions, just need to use correctly. Select your region people!



John Hinck December 20, 2013



Must turn on road conditions layer I'd recommend the road conditions layer be turned on by default. Other than taking a bit too realize that it wasn't on initially, once I found the control to do that (colored lines in the upper left corner) out came up quickly. I was also happy to see there was a weather (radar) layer available. I want a nap like this for the whole U.S.



Ronald Young January 7, 2014



Reasonable info. Would like to see road camera images like Iowa includes. Also it is very difficult to discern closed roads. The color red is hard to see on interstates that are orange. Hard to tell if red or purple.



Austin Green January 12, 2014



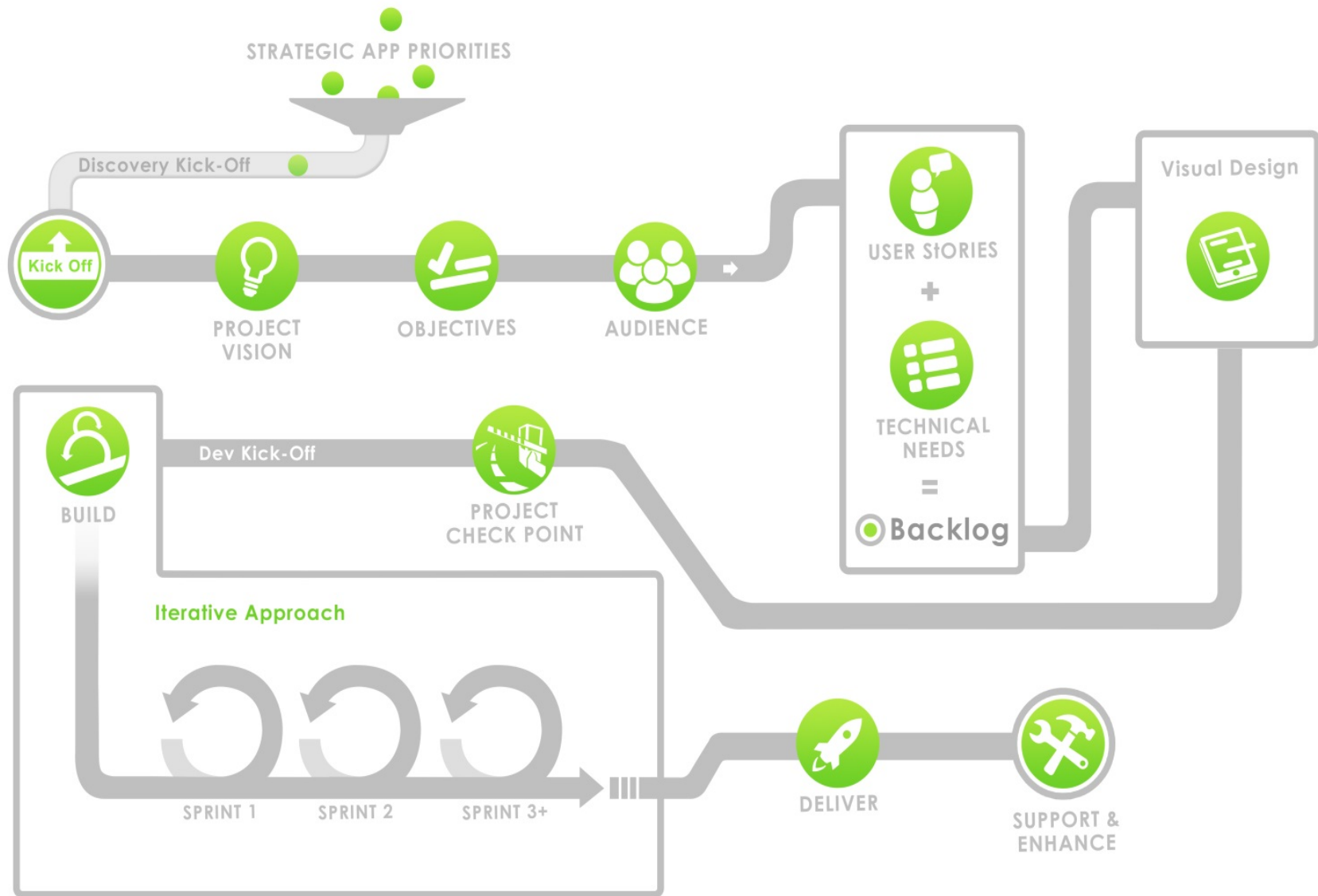
Great app This is a great app for those who are on the roads in Missouri a lot accurate weather and travel it is good on the Samsung galaxy S4 and om the iPhone 5 and iPhone 5s good for making your own route and it will help you get where you want to go as fast as possible and as safe as possible and it is nice to see the live feed from the cameras on the roads so you can what is going on before you leave the house and it will let you read the sighs that are on the roads great app.

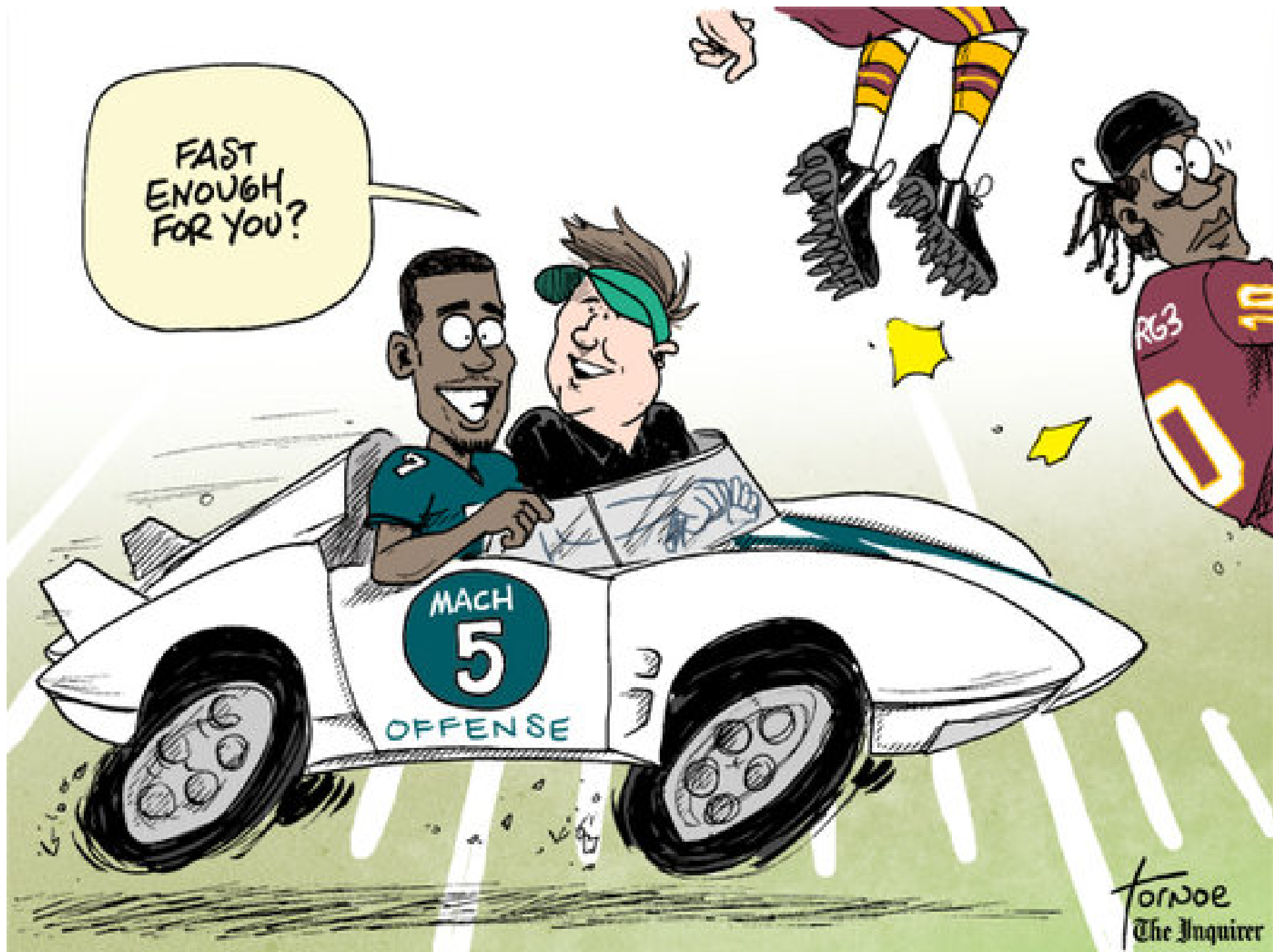
76 reviews on itunes
607 reviews on Google

how was it developed?

Iteratively

Sketch → develop → deploy → test → discuss until it works.





Tornoe
The Inquirer

HOCKEY KIT



Jenkins

Verizon 11:28 PM



MoDOT Map RC5

Version: Missouri Department of
Transportation (2.0)
Size: 4.4 MB
Released: 09/15/2013 23:22:52

Install Profile

Install Application

What's New:

- Updated cluster marker titles
- Added winter road conditions legend
- Added empty list text for commuter issues
- Fixed My Routes edit button functionality
- Updated My New Route hint text
- Updated issue cluster and flood marker

iPad

My Issues

SS TO MEMORIAL...
in ST. LOUIS CITY

in ST. LOUIS CITY

in ST. LOUIS CITY

in ST. LOUIS

in ST. LOUIS CITY

Regions

8:52 AM

66%

Map

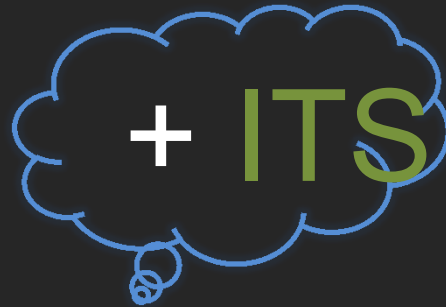
Layers



Last updated Aug 19, 2014, 8:51 AM

iOS and Android

User experience (UX) focused



geo + mobile + UX = challenge

us·er ex·pe·ri·ence

Noun

the overall experience of a person using a product such as a website or computer application, esp. in terms of how easy or pleasing it is to use.

"if a website *[or app]* degrades the user experience too much, people will simply stay away"



“To provide the best user experience (UX) for rating things, you should present the user with a small set of clear-cut actions.”

Updates to the map interface

In order to accommodate the new functionality and increase map real estate we are replacing the standard header bar with a custom control. We are also moving all layer toggling functionality to a separate layers view.



Clustering

Clustering will greatly reduce map clutter. When zoomed out, users will see aggregate information rather than stacked symbology. As users zoom in, the data on the map becomes more detailed.

We would treat "Commuter Issues" as a single layer that gets clustered (even though users can turn off individual layers). Traffic Cameras and Message Boards would be clustered as separate layers.

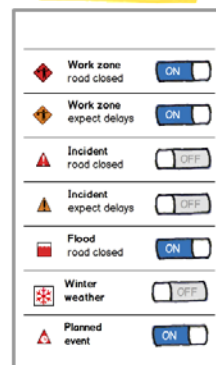


The Layers View

The layers view allows users to toggle layer visibility and serves as a legend for the map symbology. We recommend keeping this as simple and streamlined as possible for commuters.

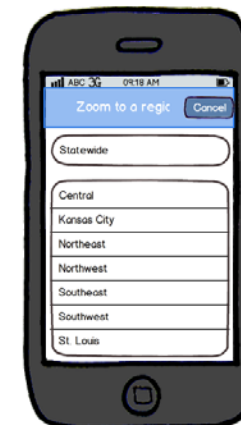


If granular control over individual layers is something that will be beneficial for commuters, this is how we would handle the UI.



Zoom To a Region View

This view will function as it does currently, but we will update the header to be consistent with the layers view.



Updates to the list interface

We recommend not including a list view of commuter issues in the application. Commuters will be able to find issues impacting their travel by viewing the map or using the route list interface. However, this is how we would handle the user interface if this functionality were to be included.

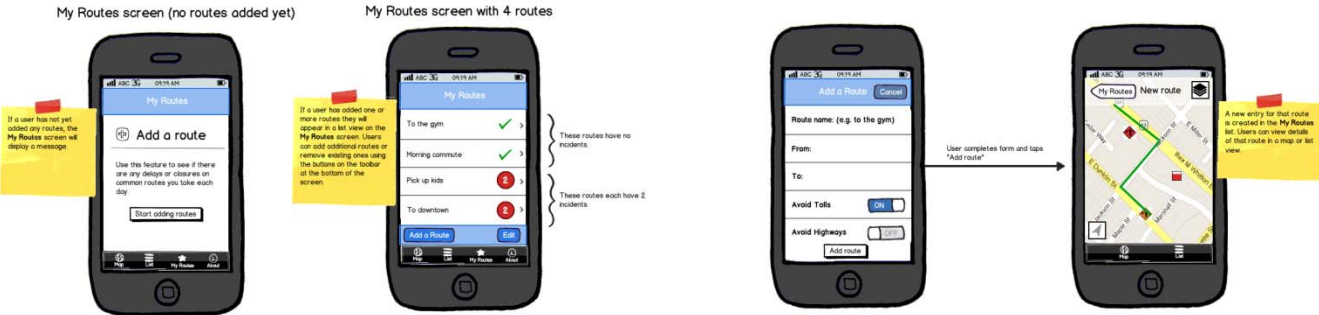


Updates to the My Routes interface

The My Routes feature will be moved to a separate tab as it's not really part of the list, but it's own distinct application view.

Adding a new Route

Rather than having users select sections of a series of a roadways to compose their route, we suggest delegating the routing to the Google's Directions service. This would work much like the directions feature in Google maps. Users would enter a start and end point, and the service would return the route.



Route detail interface

Tapping on a route in the list on the My Routes screen opens the route detail view. Users have the option of viewing a list of incidents along that route, and viewing the route and incidents on a map.

Preserving existing functionality

If it is necessary to preserve the existing My routes, we would allow the user to choose between using the Google service and selecting a travelway from a list.



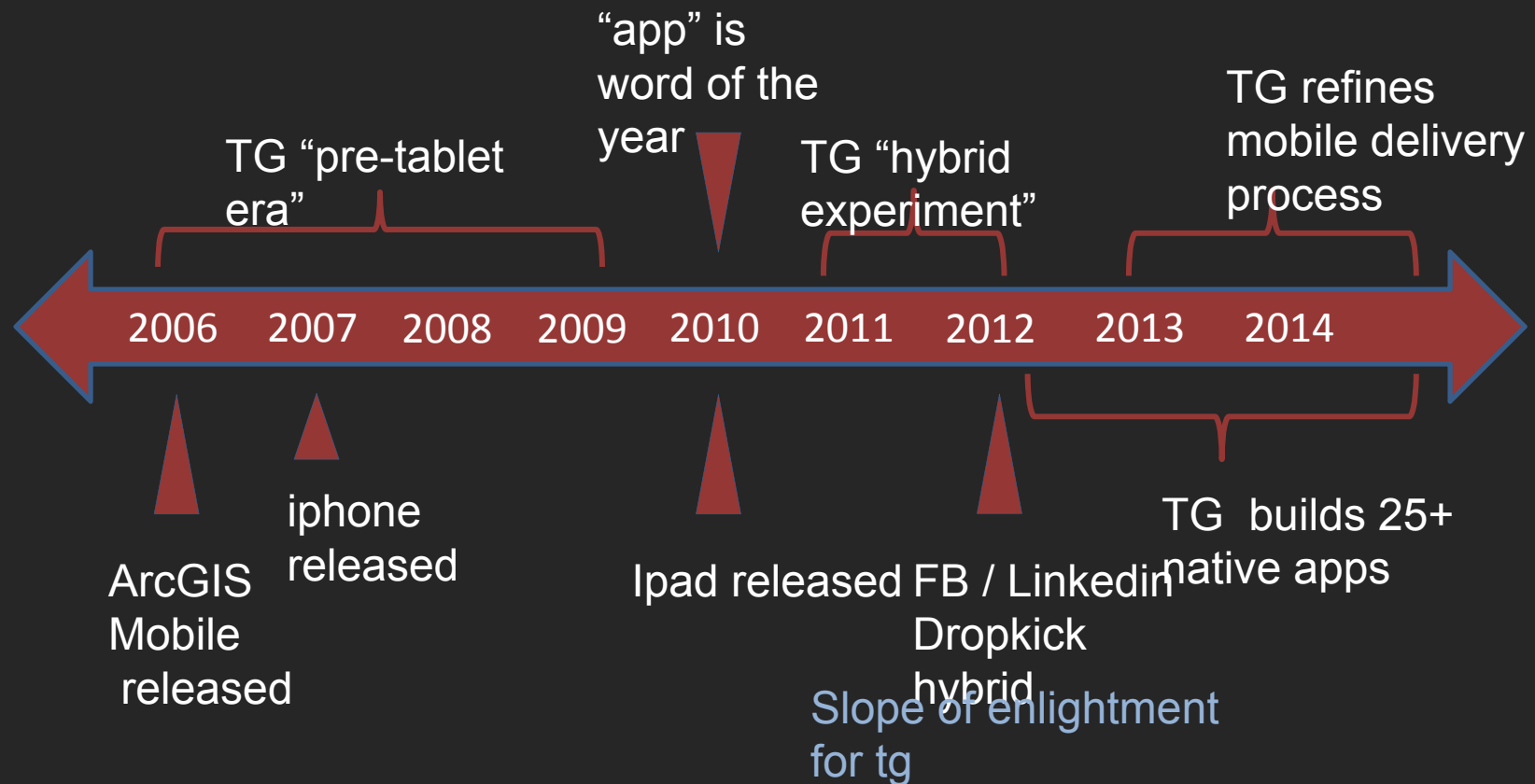
what do our users expect
today?

focused
intuitive
self-explanatory
workflow based
real-time updates
integrated

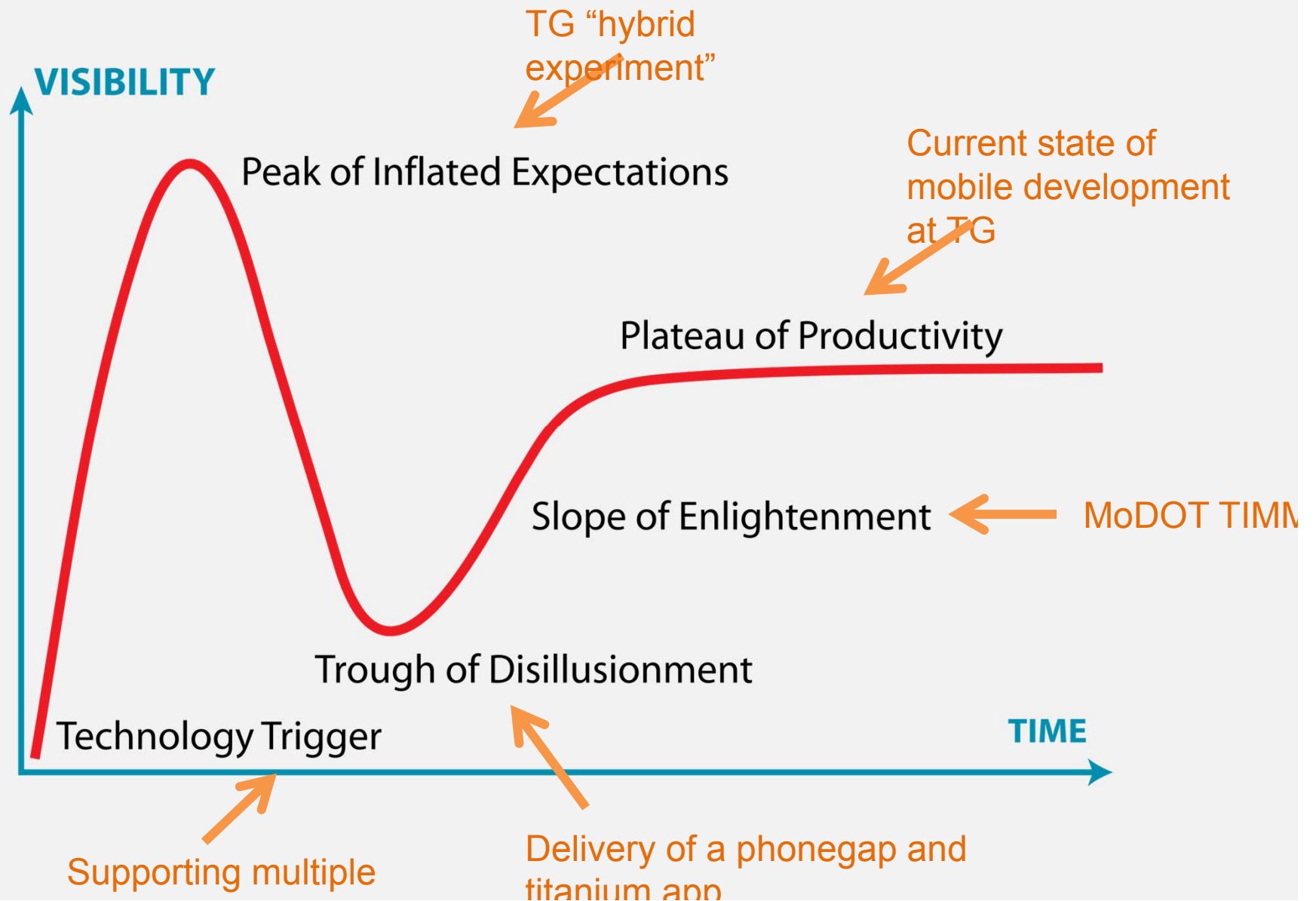
native

Approach	Pros	Cons
Native	<ul style="list-style-type: none"> • Full Access to Device/Platform/APIs • Best Performance (esp. with UI concerns) • App Store Discoverability 	<ul style="list-style-type: none"> • Different skills/languages/tools for each target platform • Tend to be most expensive-to-develop, with thin margin • Client code not re-usable between platforms (of course)
Mobile Web	<ul style="list-style-type: none"> • Arguably the broadest reach • Can re-use existing, responsively designed sites • Code base is re-usable between platforms • Finding necessary skills isn't difficult 	<ul style="list-style-type: none"> • Extremely limited access to device APIs • Limited discoverability (no app store presence) • Tend to be more difficult to monetize
Hybrid (CPT)	<ul style="list-style-type: none"> • Natively-installed & run, but built with JavaScript, HTML & CSS • Code base is re-usable between supported platforms • App Store Discoverability • Access to many device APIs (& extendable via plugins) 	<ul style="list-style-type: none"> • UI Performance affected by native webview implementation & (potentially) poorly written JavaScript/HTML • Differing webview implementations per platform
Cross-Compiled (CPT)	<ul style="list-style-type: none"> • Can re-use existing skills if source language matches team skills • Code base is re-usable between supported platforms • Access to many (if not all) device APIs 	<ul style="list-style-type: none"> • May not support all target platforms • Can be difficult to debug

the tg timeline



Gartner hype cycle



next steps with TIMM

the 3 to 5 year cost



users expect updates



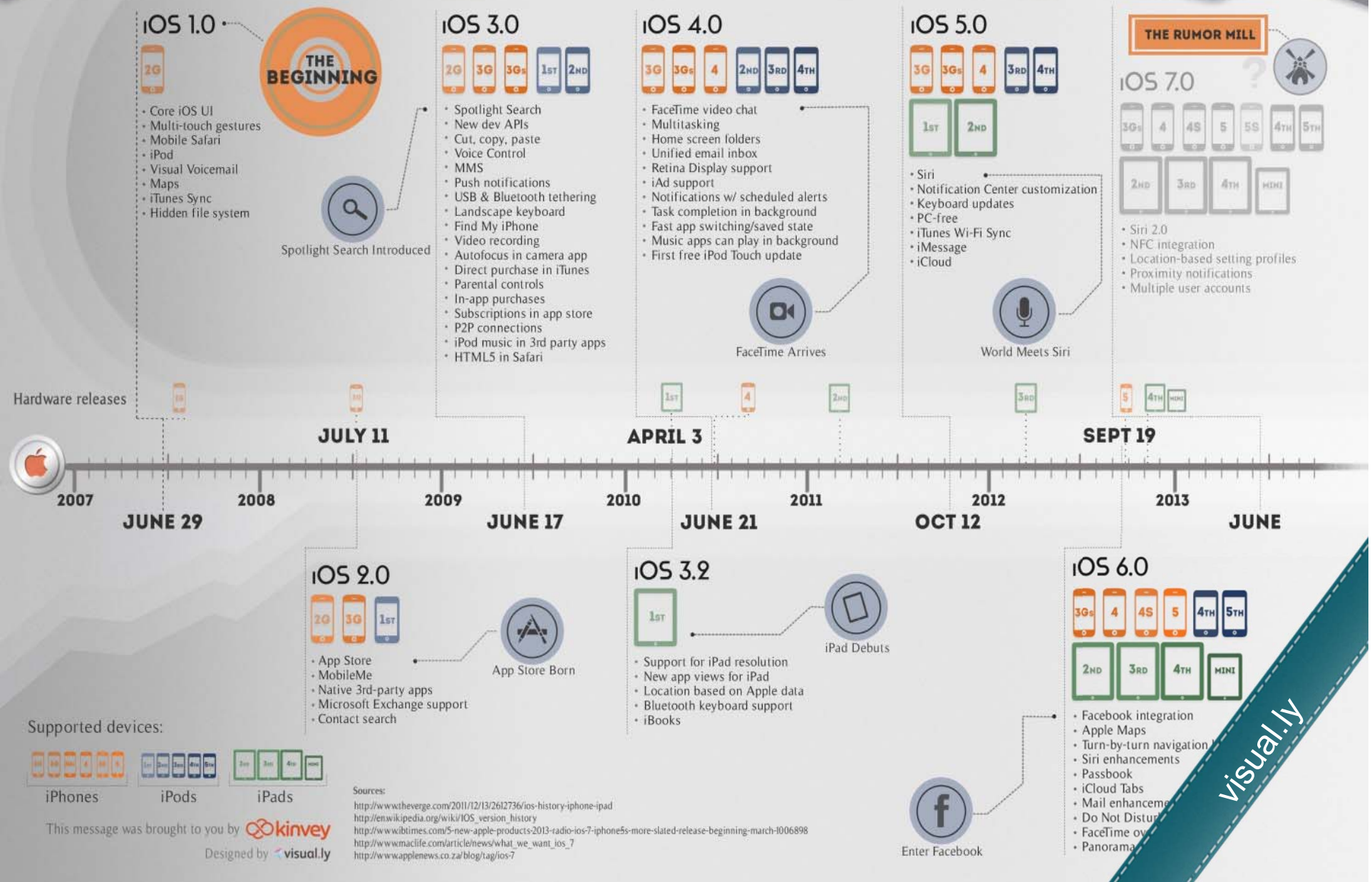
push-y upgrades

Venturebeat.com

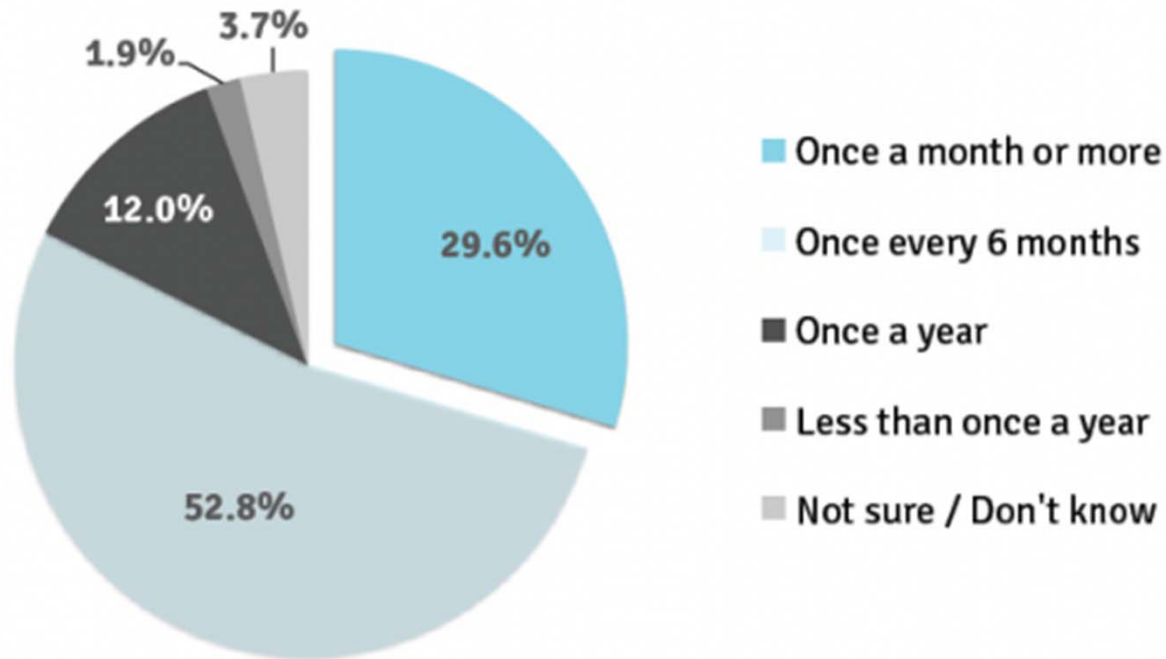


iOS Version History: A Visual Timeline

In 5 1/2 years, Apple has released 9 hardware devices and 51 total iOS version updates. Here we've captured the major milestones.



How frequently, on average, are your mobile apps updated or enhanced?



Forrester

Potential future Enhancer



- Validating / disputing incidents
- Rating work zones
- Geo-fencing
- Push notifications
- ???





THANK YOU!

chris.gerecke@timmons.com