

How iOS apps are actually built

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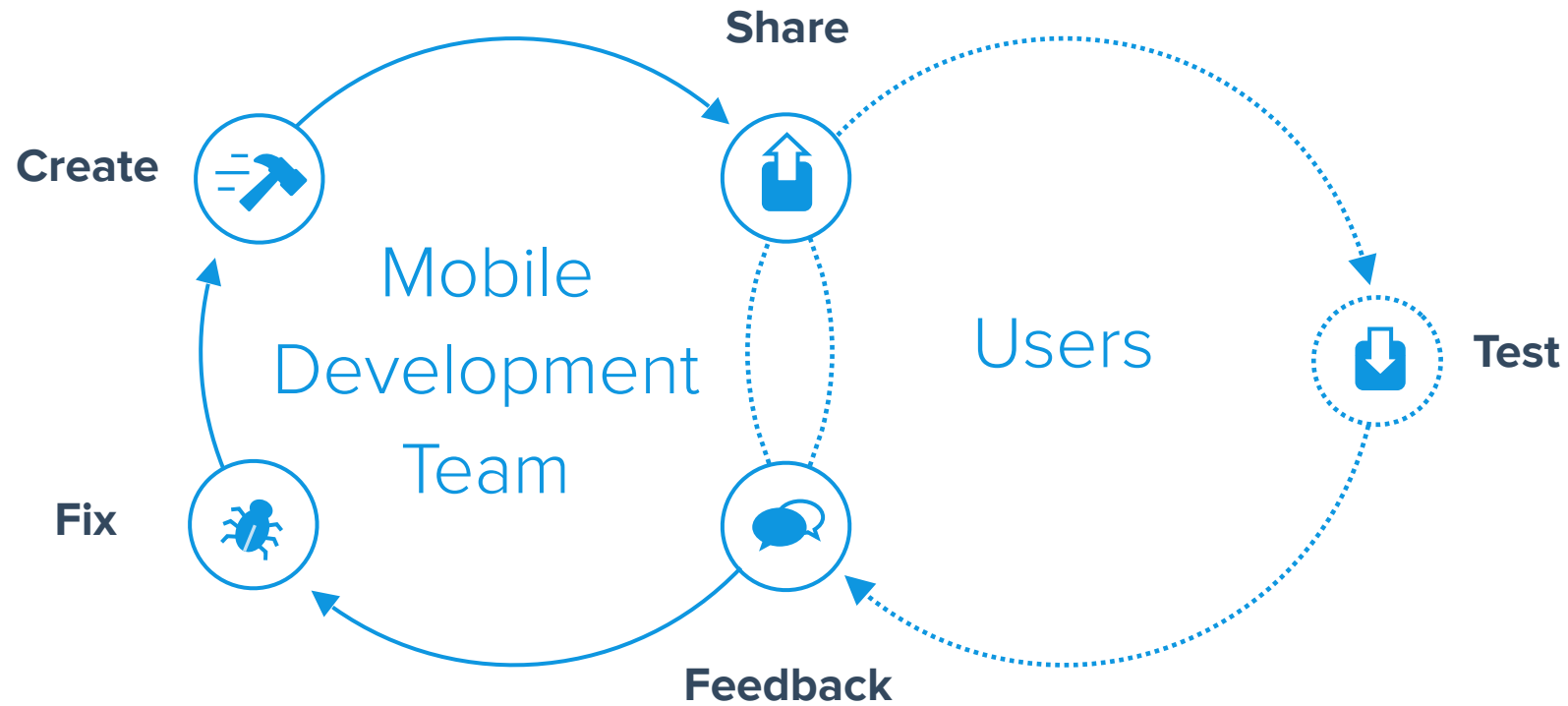
@palleas

buddybuild

Lessons from building 1000s of iOS apps in the cloud

Common software development practices

Developers and users working together to build great applications



Throughout this lifecycle your teams
have to make 1000s of decisions

Systems and workflow

The systems required to build great software

Continuous Integration

Complex & Cumbersome

Analytics & Crash Reporting

Incomplete & Lacking Context

Continuous Deployment

Difficult to Provision Users

Feedback

Inefficient & Ambiguous



An “ecosystem” one-off solutions

Too much time is spent connecting disparate tools

Continuous Integration

 Travis CI  circleci

 Jenkins

Crash Reporting

 crashlytics

 instabug



Continuous Deployment

 HOCKEYAPP

 TestFlight

Feedback

Test Fairy

Paid user testing

19 pages just to get your app built and deployed

when using traditional CI and deployment tools



Jenkins

Conclusion

Wow. That has been quite a journey.

Now that you've got a running config, play a



TestFlight

"I spent **about 10 hours googling cryptic error messages**, when trying to configure the build."

"...in other words: **it sucks** at building and testing software."

"...if you haven't got a few years of linux admin under your belt, you can **write off the rest of the week.**"

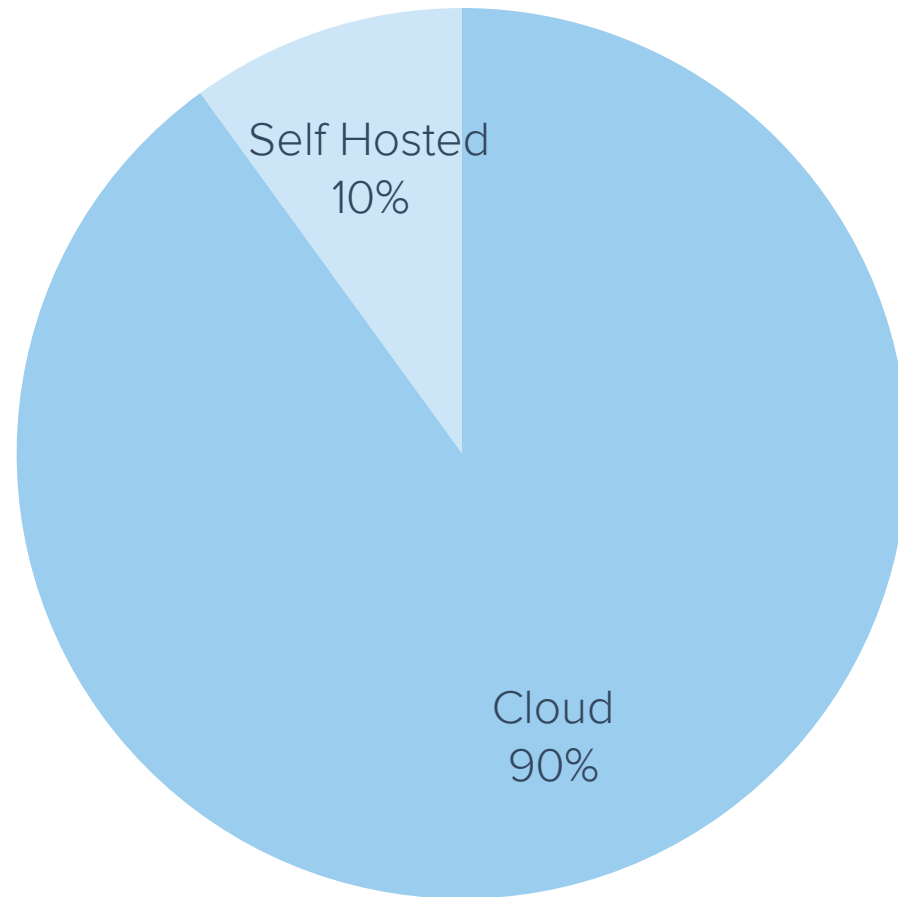


- Zero configuration ci
- Automatic UDID management
- Crash Reports with context
- Frictionless deployment
- Feedback from your testers

Let's look at the data

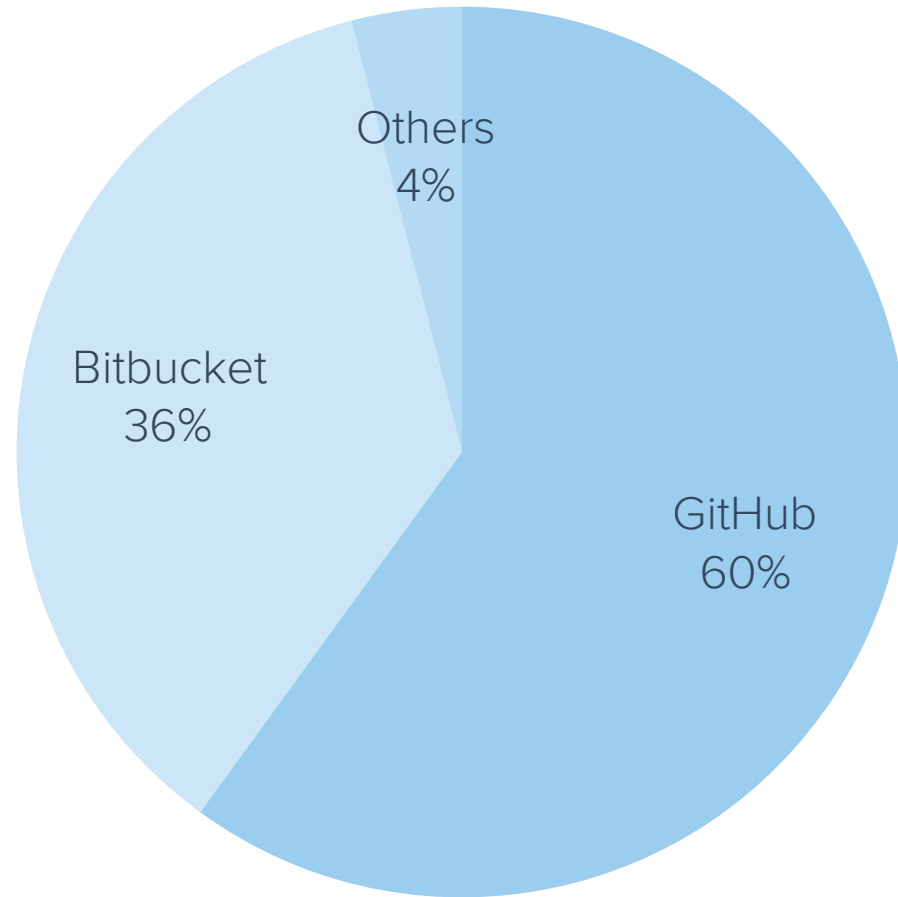
Cloud hosted vs self hosted git

Do teams host themselves?



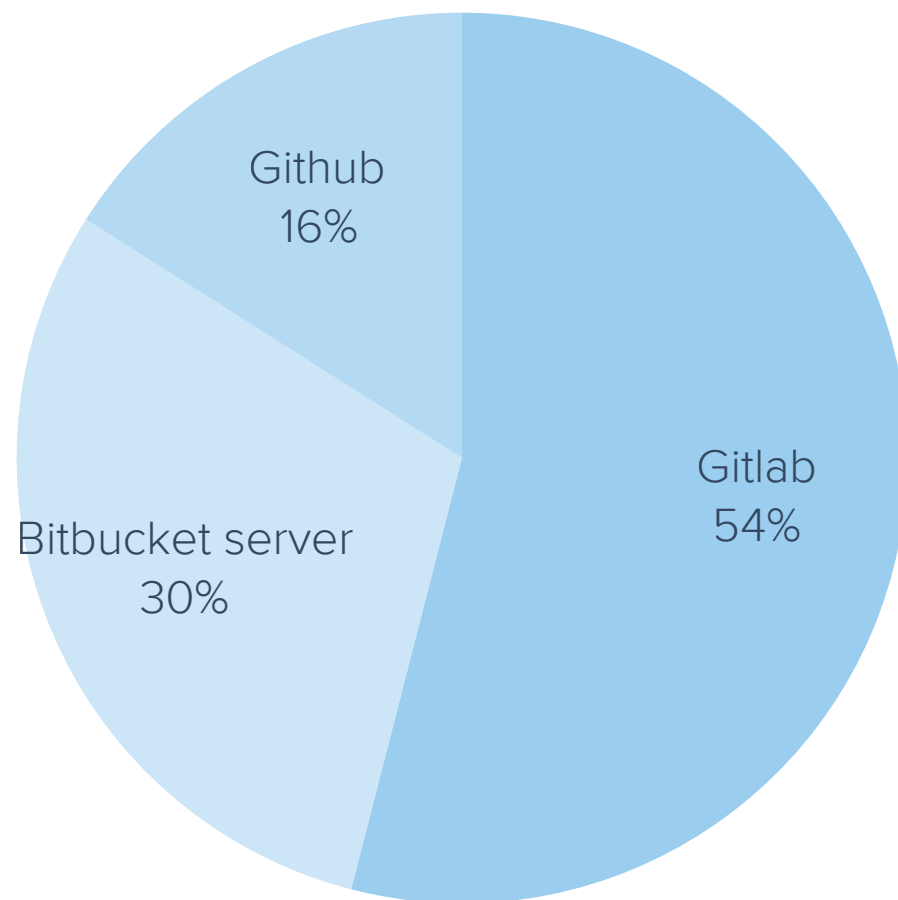
In the cloud, where is the code?

GitHub, Bitbucket, Gitlab, Beanstalk,



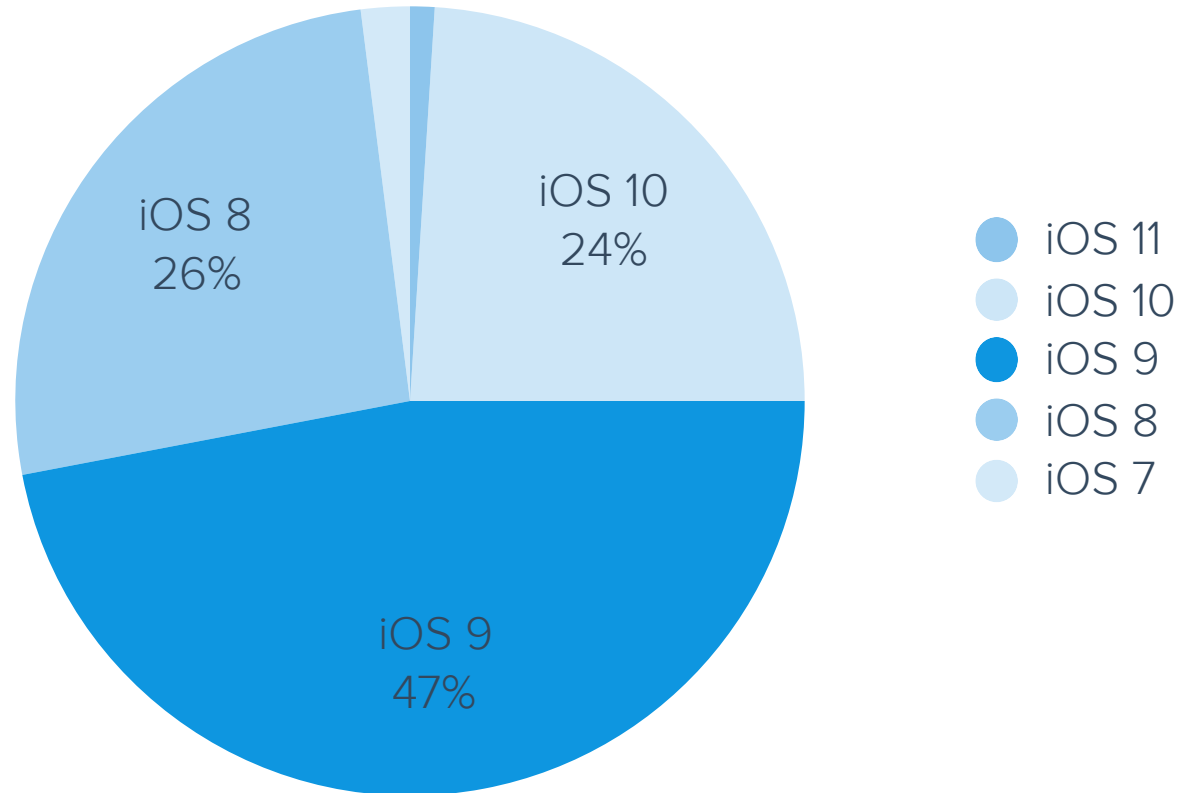
What do teams use to self-host?

Gitlab, Bitbucket Server/Stash, GitHub Enterprise



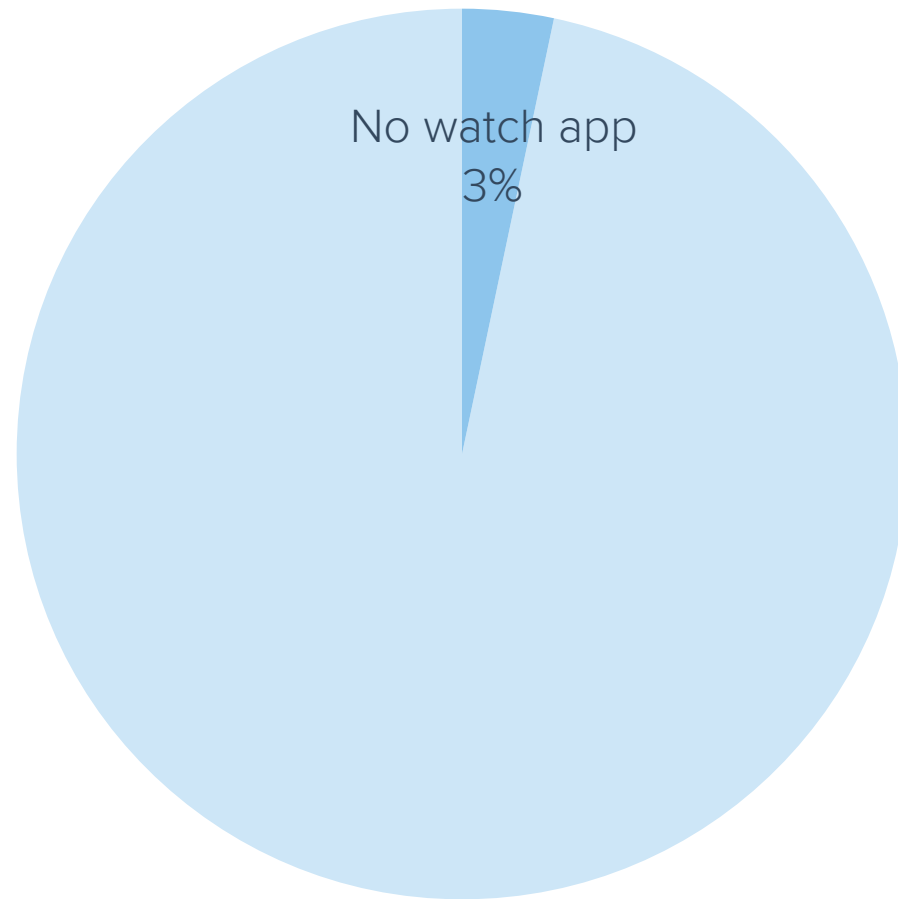
Minimum supported iOS versions

Most apps support iOS 8 and up, but a meaningful number still support lower versions



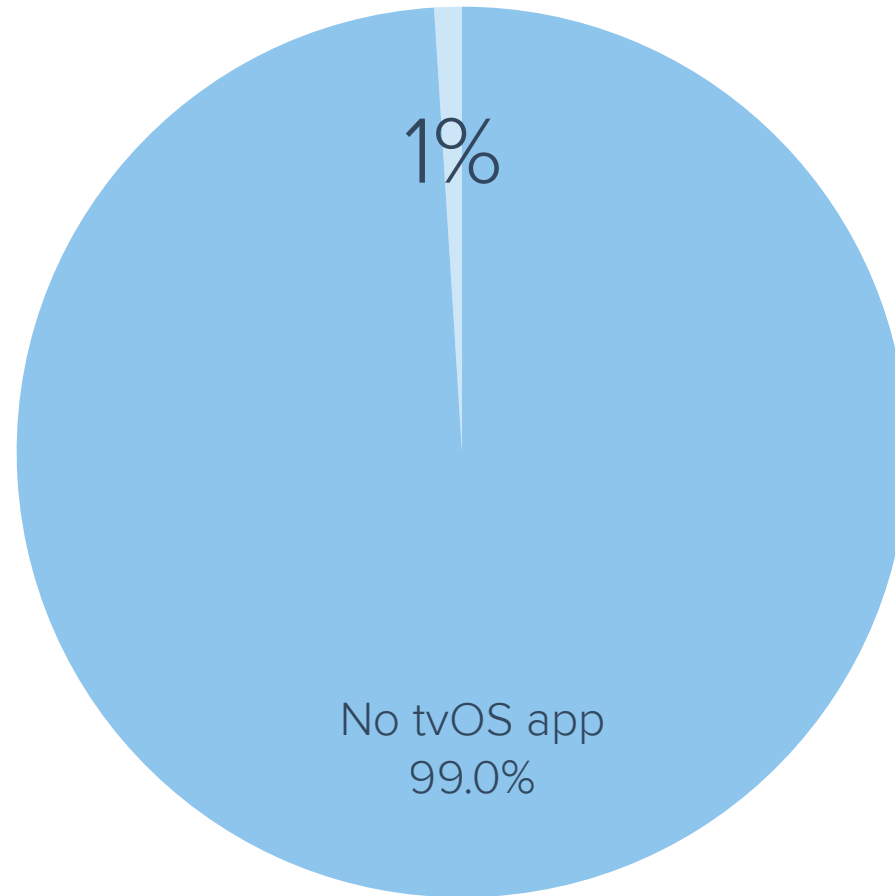
Are people developing watchOS apps?

Vast majority of apps don't include Apple watch apps



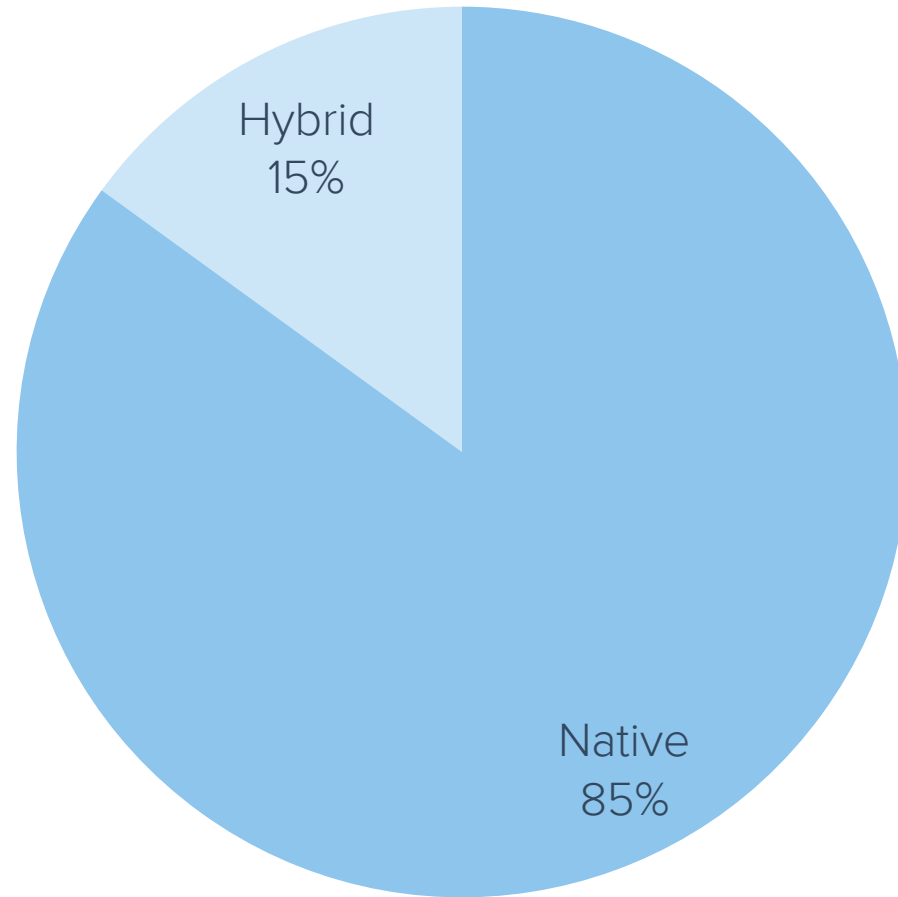
Are people developing tvOS apps?

Relative to iOS apps in development, tvOS is vanishingly small

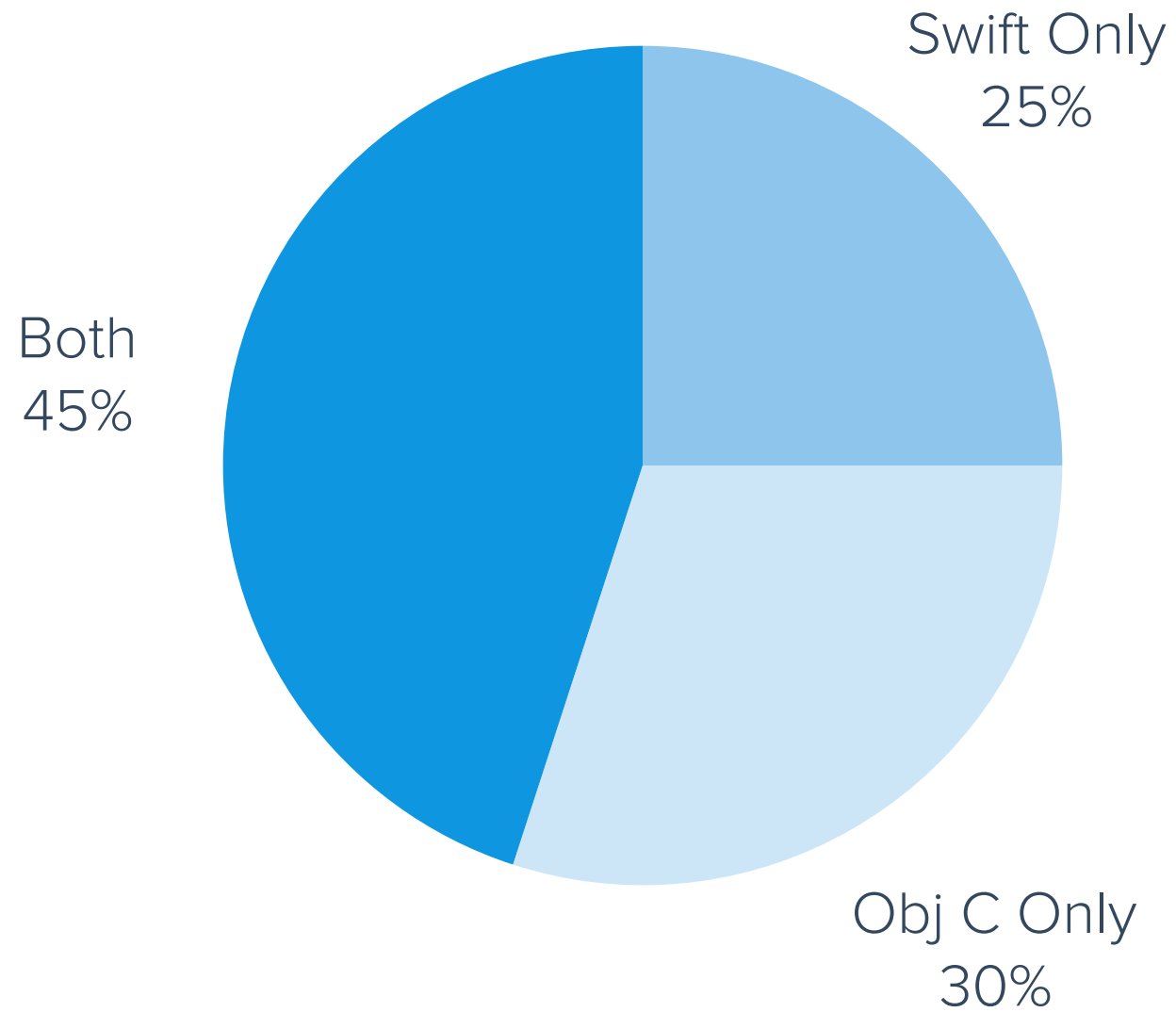


Hybrid App Usage

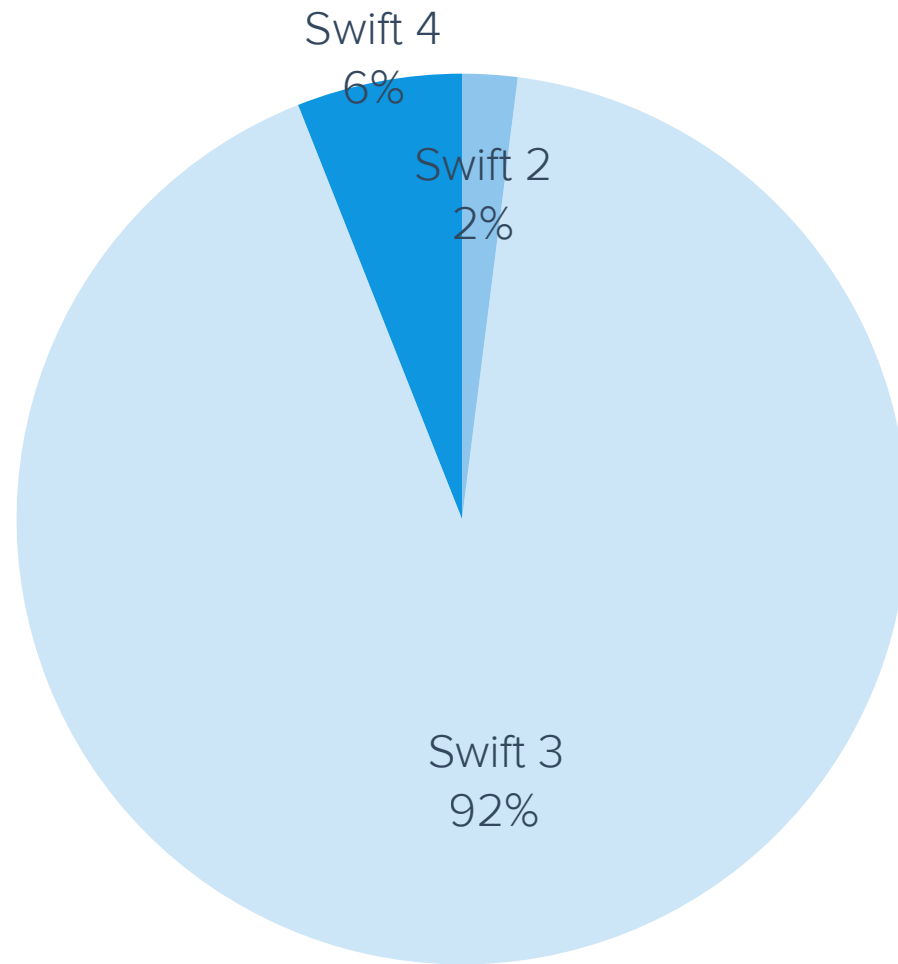
Still a number of apps built with non-native tech



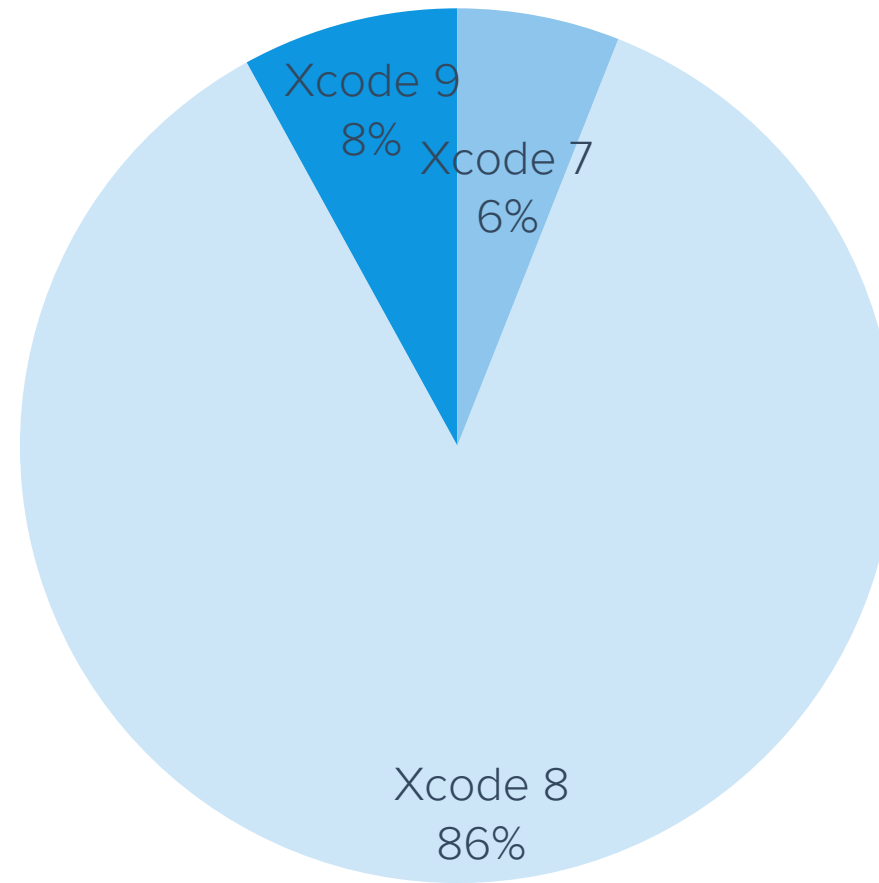
Swift vs Objective C



Swift versions

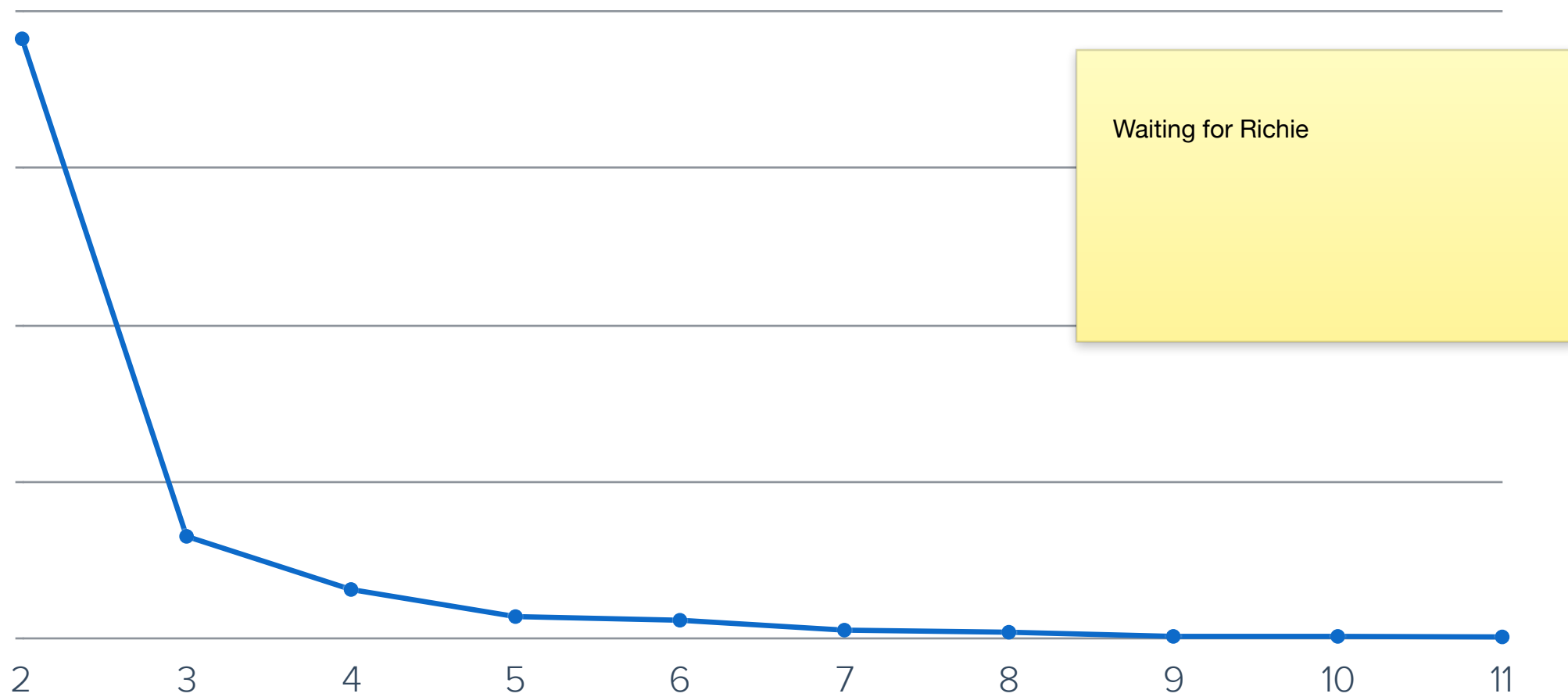


Xcode Adoption

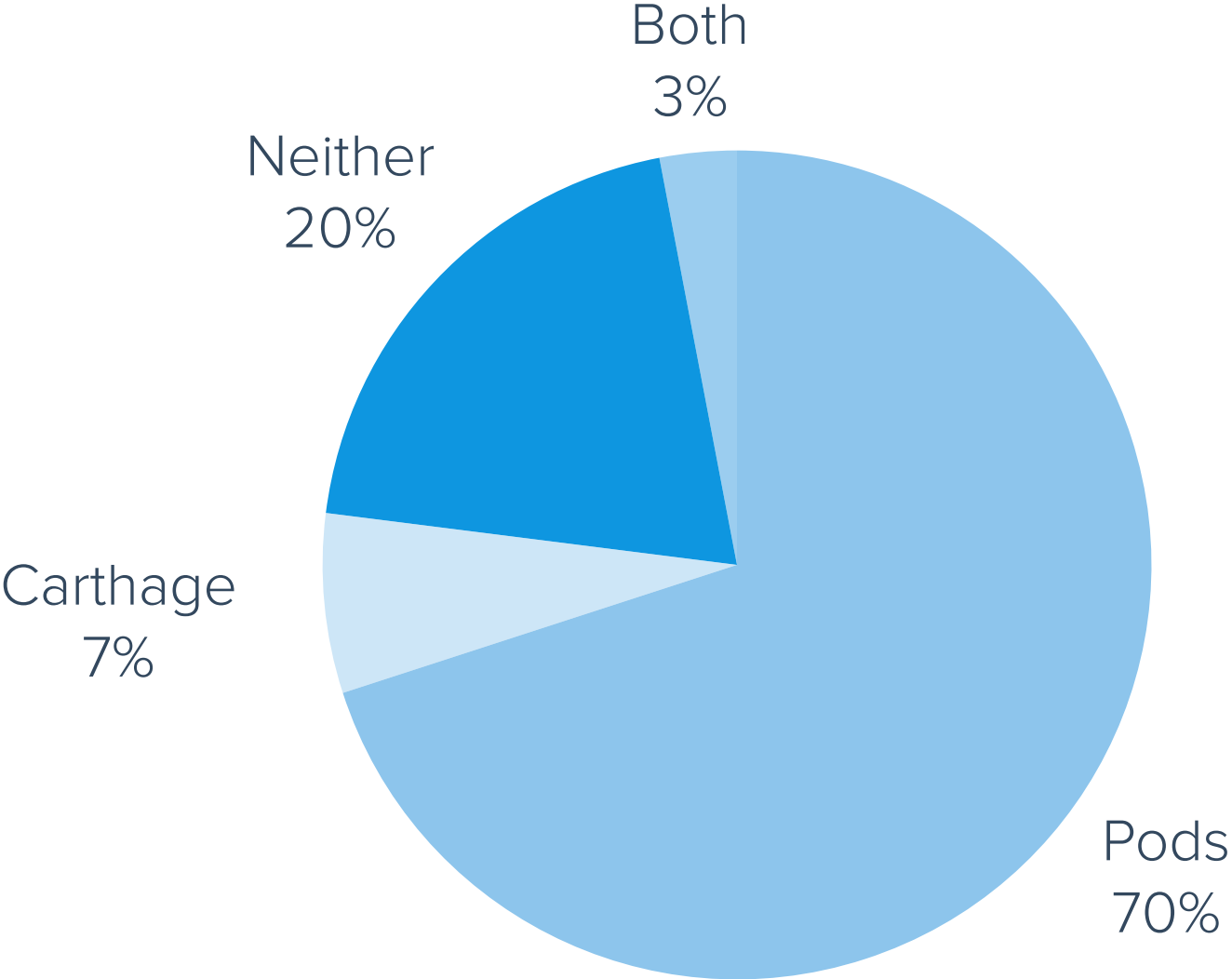


Number of build configurations

Vast majority of teams stick with the simple Release vs Debug build configurations

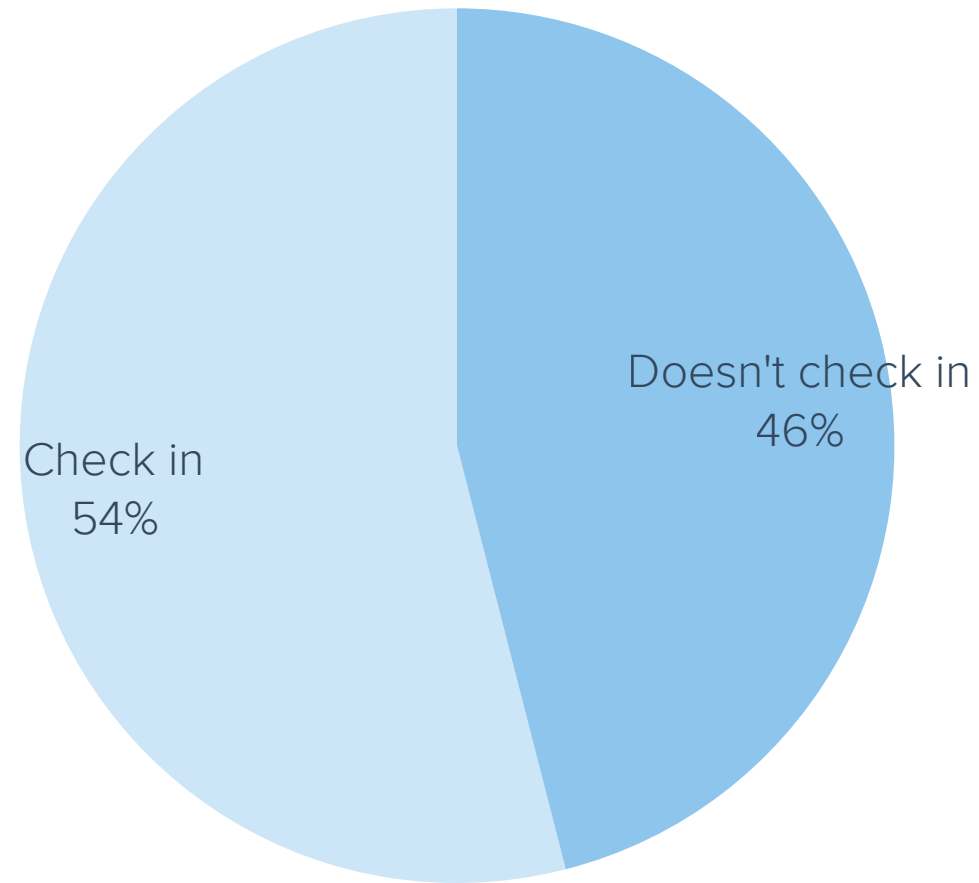


Cocoapods & Carthage



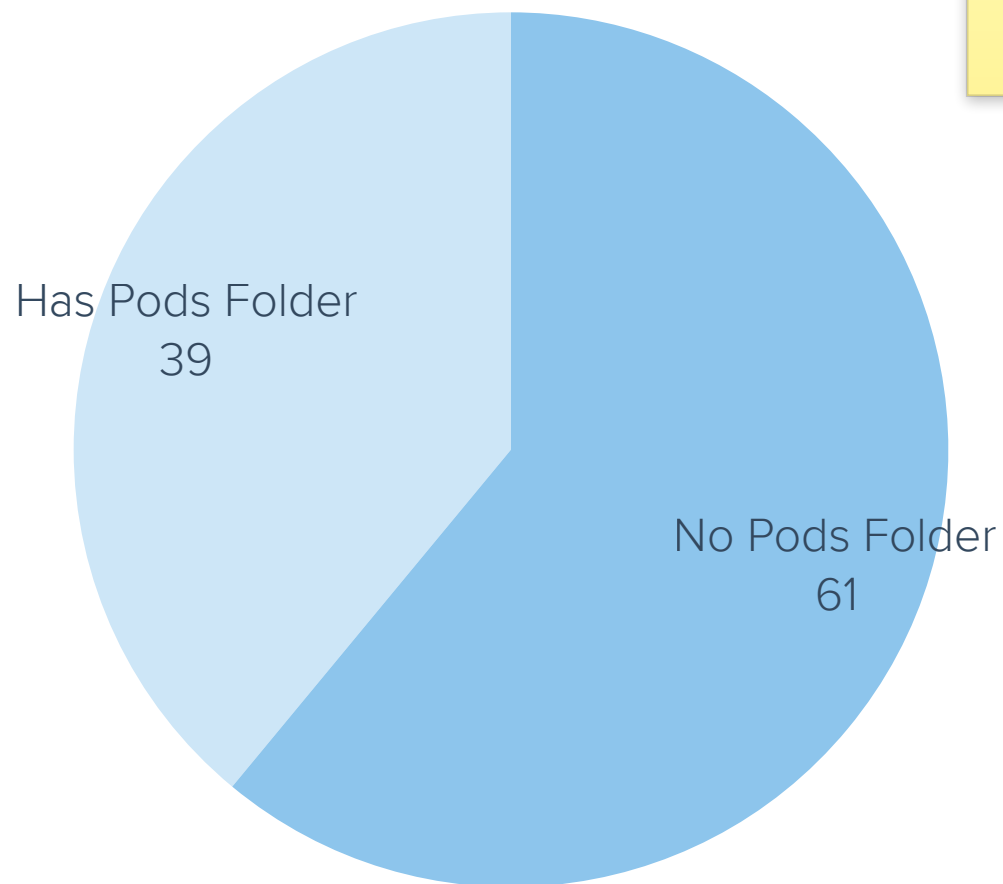
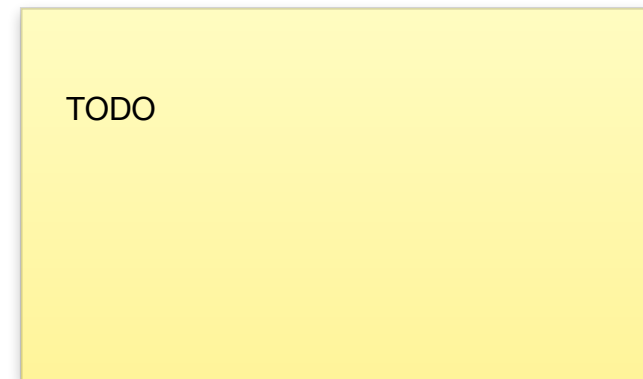
Do teams check in the Pods folder?

- Gives more control, but can cause more difficult merge conflicts



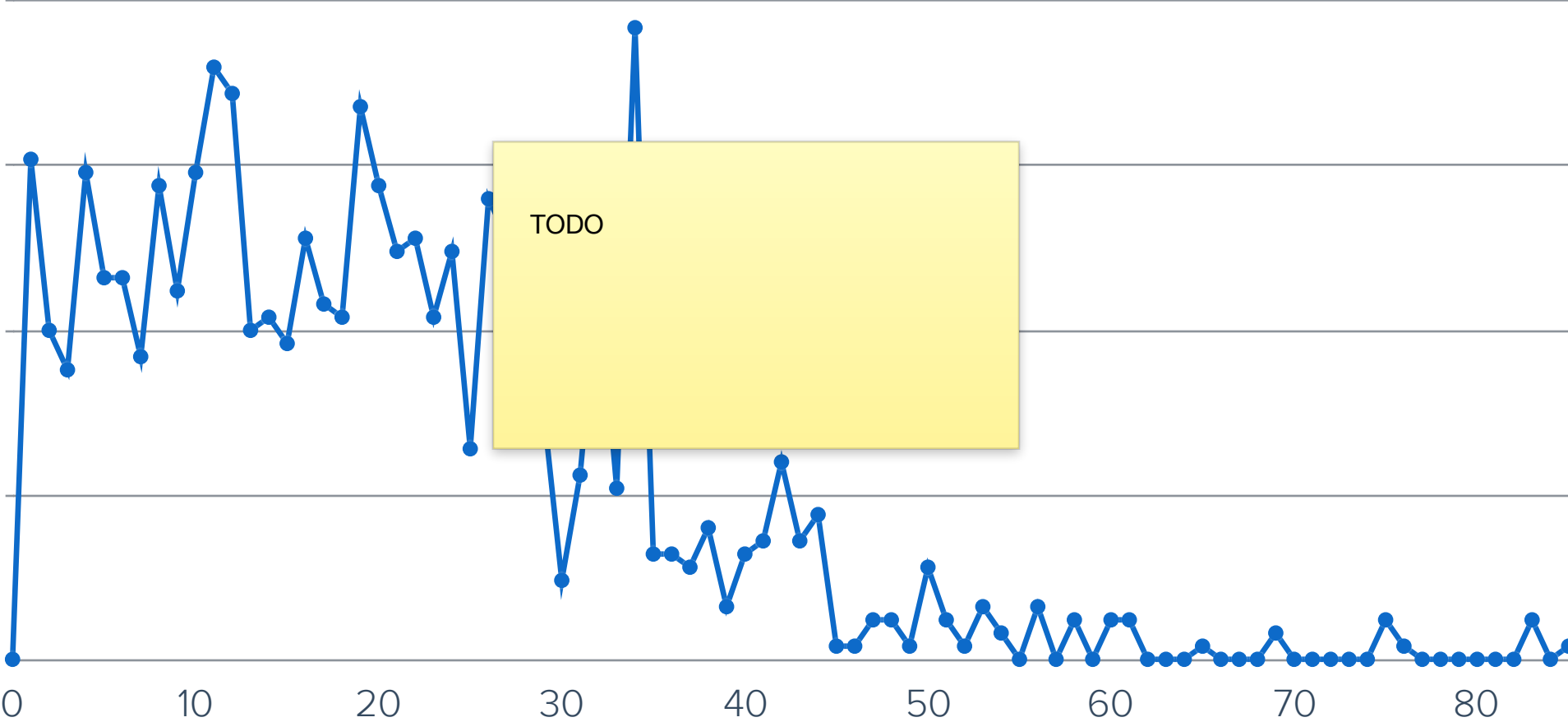
What about **big** teams (> 5 devs)

- Gives more control, but can cause more difficult merge conflicts



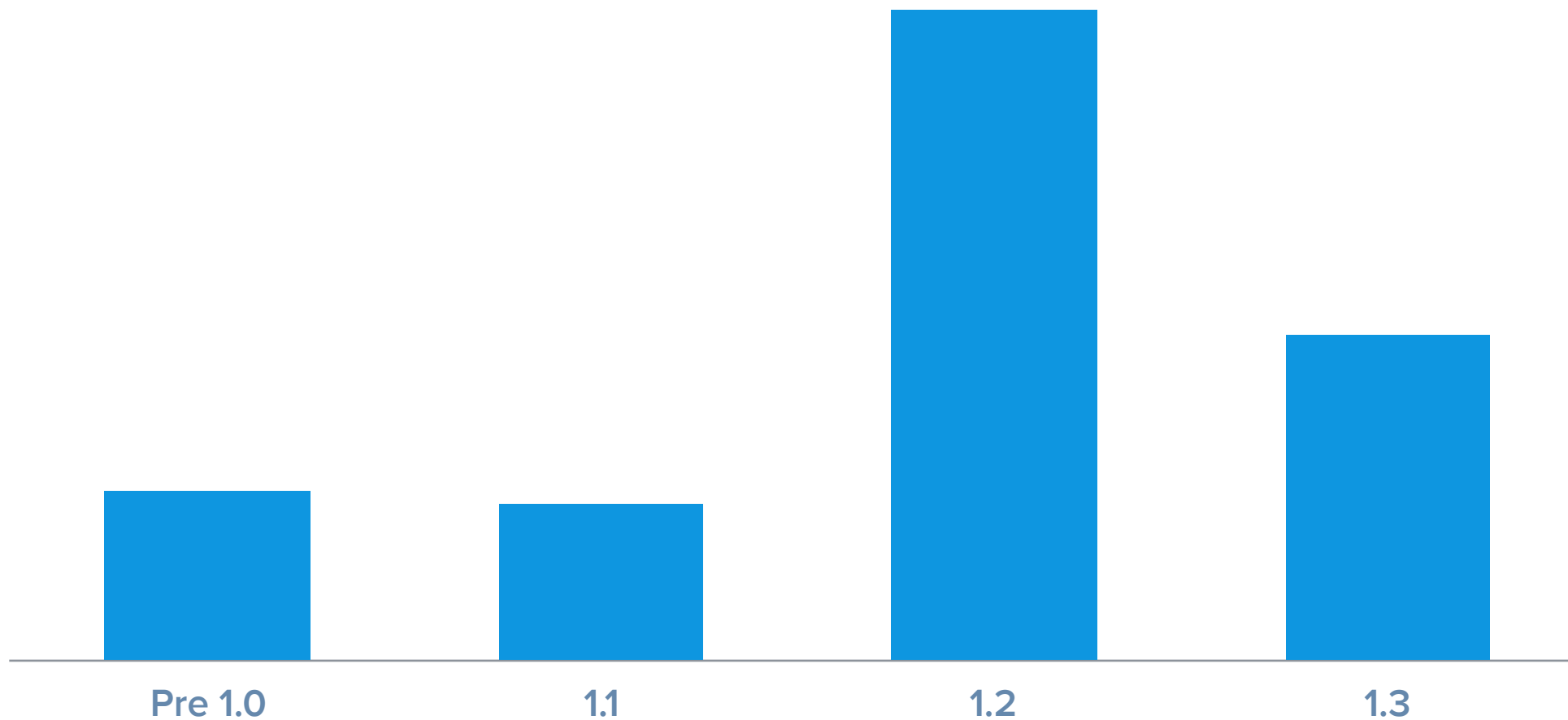
Pods listed in the Podfile

Many apps depend on many Pods



What version of cocoapods do teams use?

Gitlab, Bitbucket Server/Stash, GitHub Enterprise



5% of apps are missing the Podfile.lock from repo

CocoapodsMetadata
is_pod_folder_in_git_ignore

2660 Uni

TODO

erenced

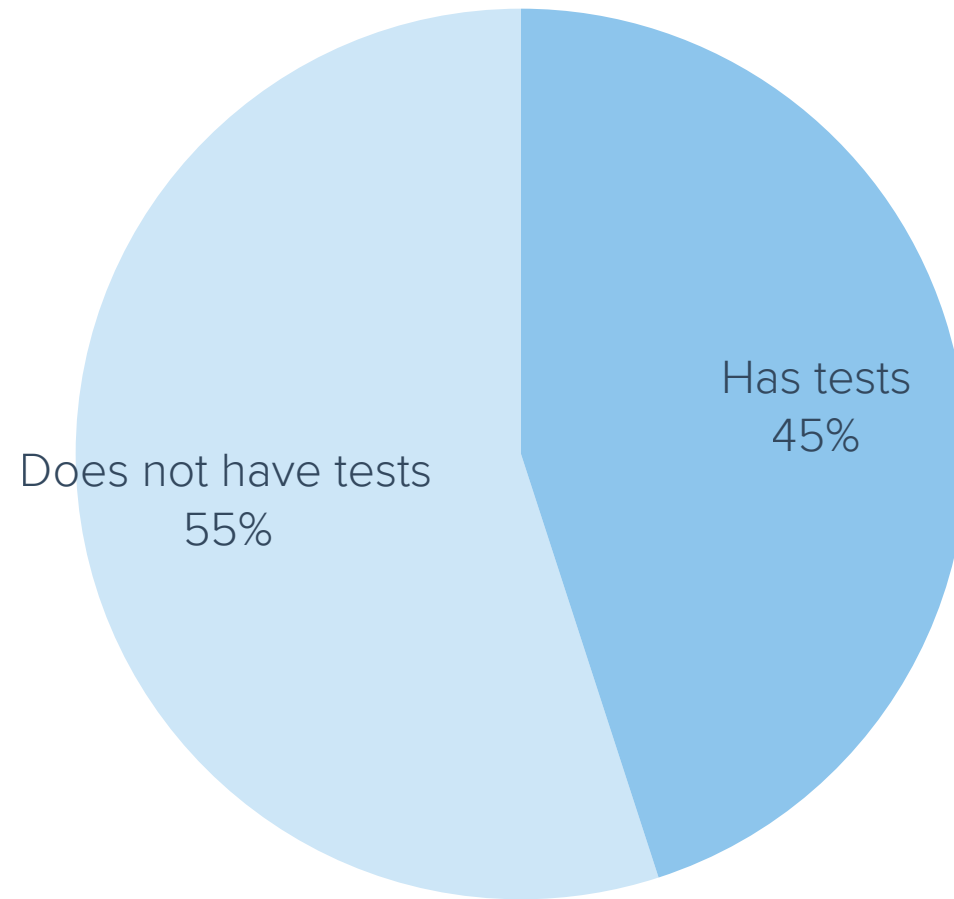
Pods used in more than 15% of apps

Dominated by Twitter, Facebook, Google, Realm along with a number of interesting community projects

| | | | |
|----------------------|-----|------------------------|-----|
| Fabric | 49% | GoogleSymbolUtilities | 27% |
| Crashlytics | 47% | ExchangeUtilities | 25% |
| Alamofire | 41% | Analytics | 21% |
| AFNetworking | 40% | InstanceID | 21% |
| Bolts | 38% | AV | 20% |
| SDWebImage | 37% | UIKit | 18% |
| FBSDKCoreKit | 36% | RealmSwift | 16% |
| FBSDKLoginKit | 31% | SVProgressHUD | 17% |
| GoogleAnalytics | 29% | Google | 17% |
| MBProgressHUD | 28% | CocoaLumberjack | 16% |
| GoogleUtilities | 28% | | |

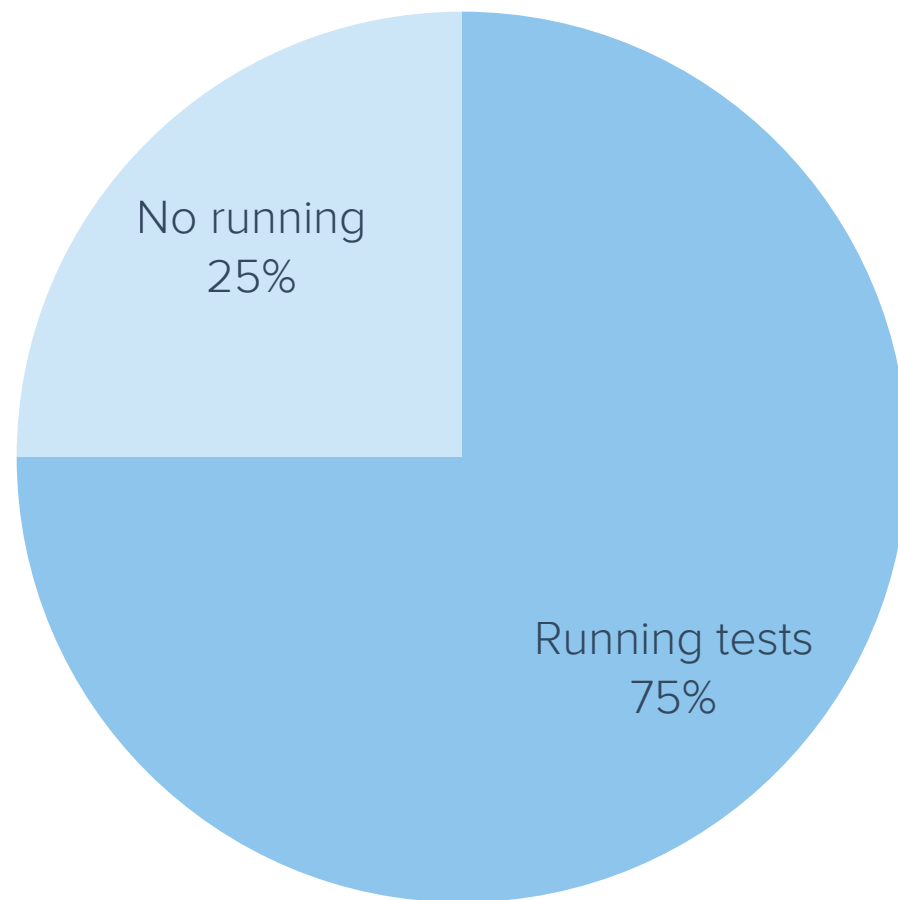
Tests

Which Xcode projects contain tests?



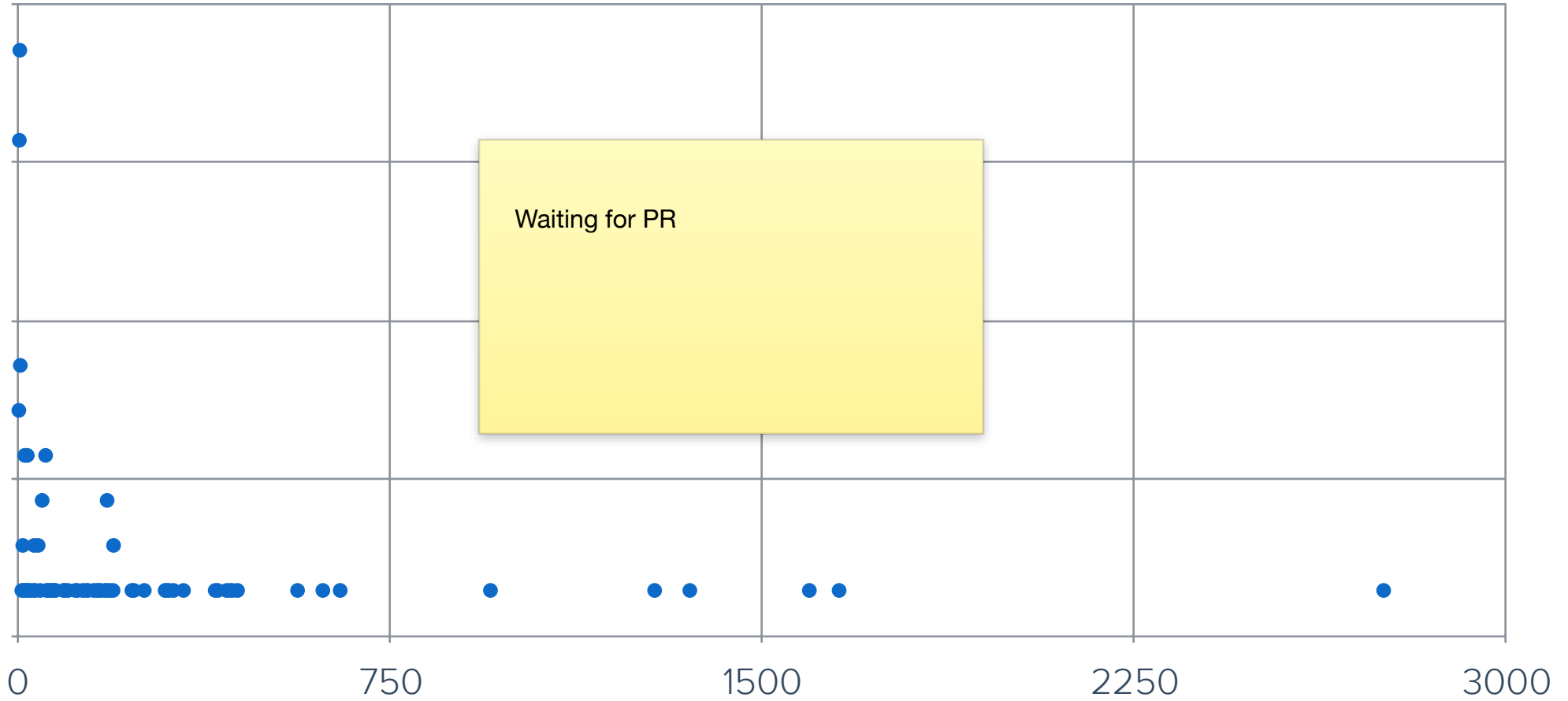
Do people actually run tests?

Most projects don't run tests in CI



How many tests do teams actually have?

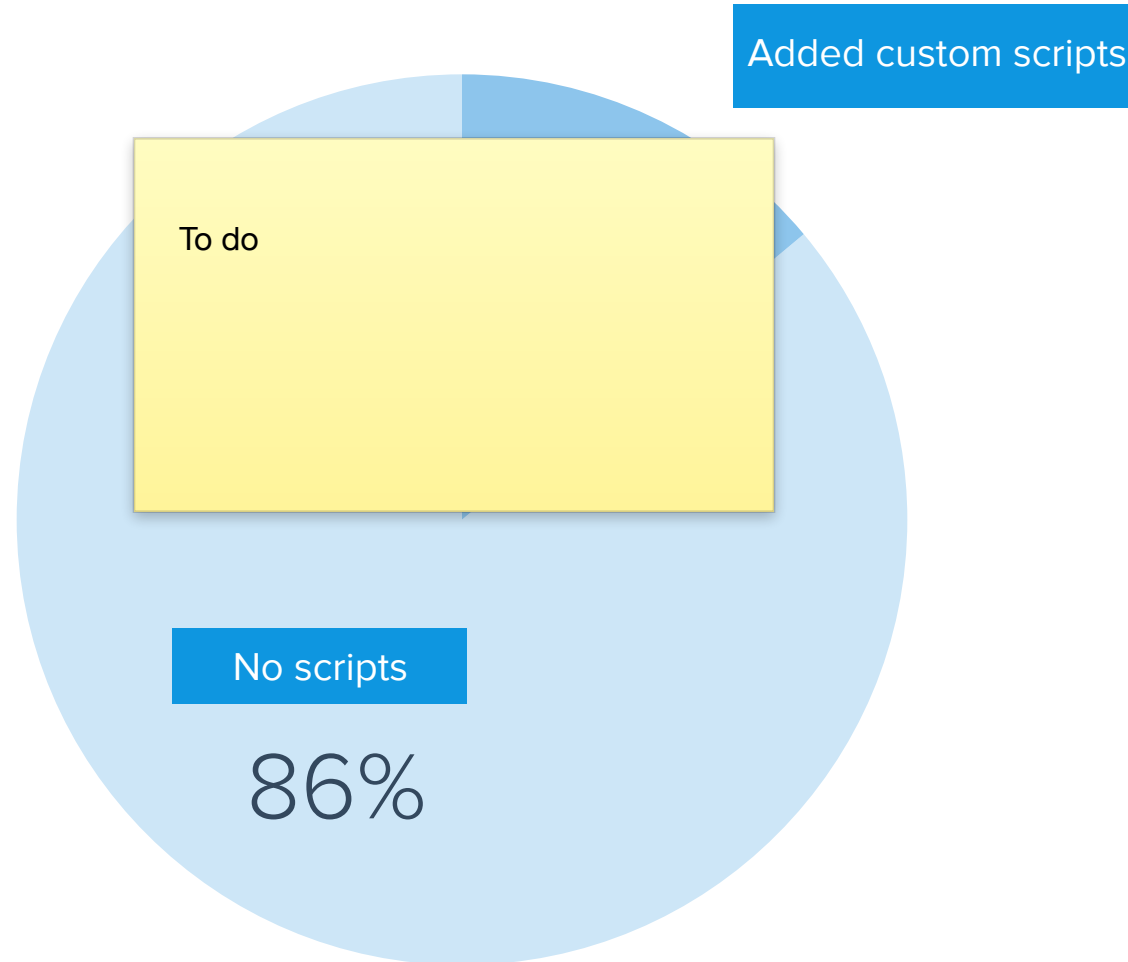
Number of tests vs frequency of teams. Vast majority of teams have under 100 tests



Custom Scripting

Custom Scripts

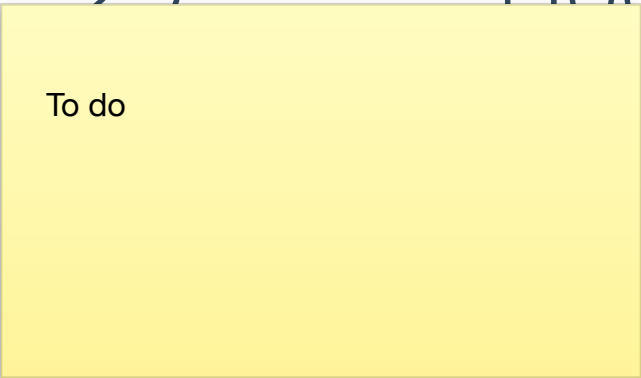
How many people add custom scripts to get something done in buddybuild?



What are people doing in custom scripts?

Out of a 1000 app sample in buddybuild

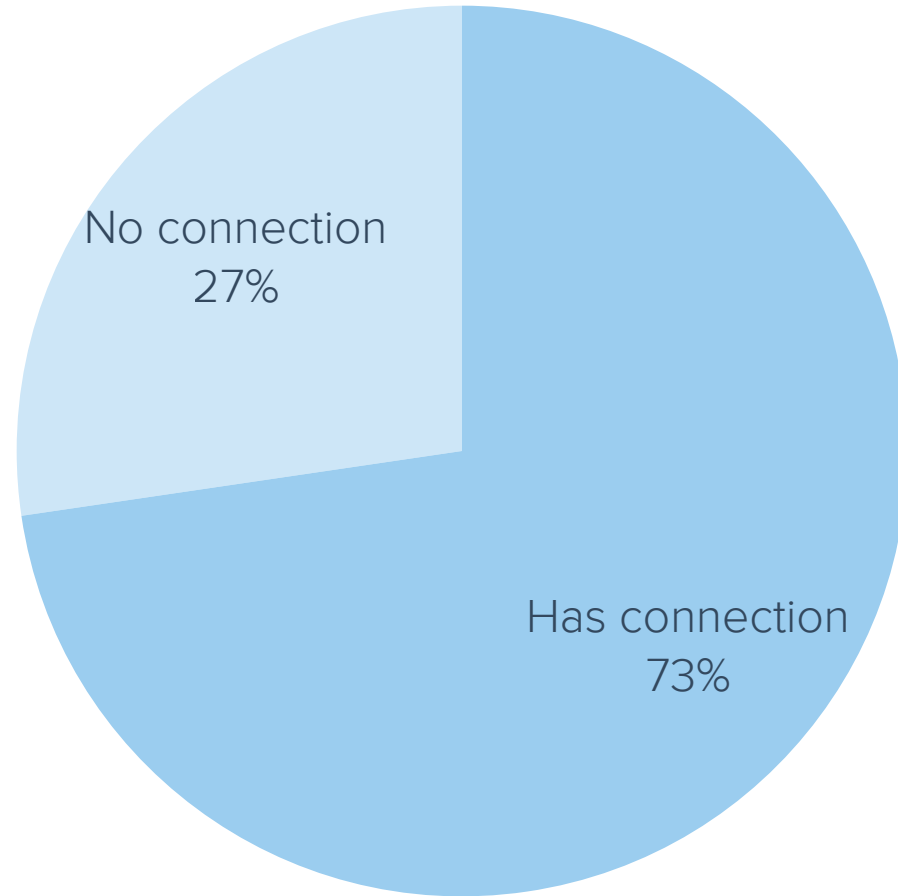
| | | | |
|-----------------|----|--------------|---|
| npm | 37 | brew install | 7 |
| fastlane | 29 | HockeyApp | 4 |
| curl | | lecov.io | 4 |
| pod | | shlytics | 4 |
| S3 | | ftgen | 1 |
| git clone | 8 | | |
| gem install | 8 | | |
| CFBundleVersion | 7 | | |



Apple Developer Portal

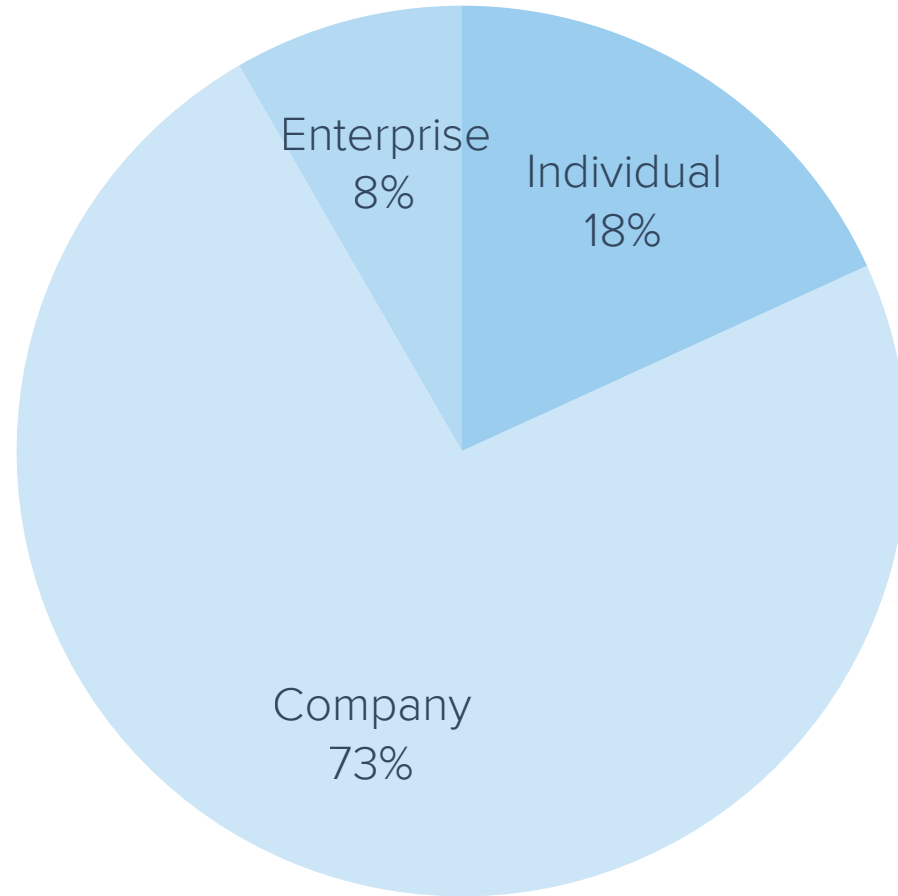
Apple Developer Connections

Apple Developer Connections allow automatic provisioning profile management, UDID management, and uploading to iTunes Connect



What type of Apple accounts do developers use?

Check dashboard



Who is using buddybuild?

