

No	Consider	Notes	Remarks React Native	Remarks Flutter	React Native	Flutter
1	Performance		<p><b>React Native</b></p> <p>For default react native can achieve smooth performance 60fps+ but in some case developers needs to pay attention to rendering method to prevent excessive memory and calculations (<b>Pure.component / useCallback / useMemo</b>)</p> <p><b>React Native</b></p> <p><a href="https://microsoft.github.io/react-native-windows/">Mobile (Android, iOS), Desktop (https://microsoft.github.io/react-native-windows/), Web</a></p>	<p><b>Flutter</b></p> <p>Generally, Flutter applications are performant by default, so you only need to avoid common pitfalls to get excellent performance</p> <p><b>Flutter</b></p> <p><a href="https://flutter.dev/multi-platform">Mobile (Android, iOS), Web, Linux, Windows, MacOS https://flutter.dev/multi-platform</a></p>	Yellow	Green
2	Cross Platform		<p><b>React Native</b></p> <p>Use popular javascript language thus it has an extensive base package, if you're react developer you can easily learn to react native, here developers have freedom of choice because it facilitates code reuse and cost-saving</p>	<p><b>Flutter</b></p> <p><a href="https://docs.flutter.dev/get-started/flutter-for/react-native-devs">Using Dart. Most of the Dart features are similar to that of static and dynamic languages, and it makes it easy for developers to learn and understand Dart, easily and quickly, even flutter provides documentation for developers of other programming languages</a></p>	Green	Yellow
3	Language	learning curve ?	<p><b>React Native</b></p> <p>Fully Customable</p> <p><b>React Native</b></p> <p>Has many package that utilities UI based on Material UI Component (https://www.react-native-material.com/)</p>	<p><b>Flutter</b></p> <p>Fully Customable</p> <p><b>Flutter</b></p> <p><a href="https://docs.flutter.dev/get-started/flutter-for/react-native-devs">We can enable it from pubspec.yaml file if we want to use Material Design in flutter. (By default value is true) https://docs.flutter.dev/development/ui/widgets/material</a></p>	Green	Green
4	Customable component		<p><b>React Native</b></p> <p>Smooth scrolling because rendered component is native and have same mechanism like native android or ios (<b>Flatlist: based on viewport</b>) (<b>Flashlist: based on recycleview</b>), transition smooth as long developer pay attention to performance best practice</p>	<p><b>Flutter</b></p> <p>The standard ListView constructor works well for small lists. To work with lists that contain a large number of items, it's best to use the ListView.builder constructor.</p>	Green	Green
5	Material UI	what the theme using Material UI?	<p><b>React Native</b></p> <p>Can use many development pattern (Atomic Design, MVC, OOP etc)</p> <p><b>React Native</b></p> <p><a href="#">Possible for healthy apps, in general healthy apps use internal sensor from device and RN has package to access that.</a></p> <p><a href="#">(Accelerometer, Barometer, Gyroscope, Magnetometer, MagnetometerUncalibrated, Pedometer, GPS)</a></p> <p><a href="#">Hearth BPM Without Integrated Sensors (Flashlight &amp; Camera.)</a></p> <p><a href="#">Oxygen Meter Without Integrated Sensors (Flashlight &amp; Camera.)</a></p> <p><a href="#">Local Notification and Scheduling Notification (https://docs.expo.dev/versions/latest/sdk/notifications/) (https://github.com/wix/react-native-notifications)</a></p>	<p><b>Flutter</b></p> <p>We can implement any architectures like (The Clean Architecture, MVVM, MVC, Repository Pattern, Bloc Pattern, etc)</p>	Green	Yellow
6	Smooth scrolling & transition		<p><b>React Native</b></p> <p>Update SDK Easy With Expo-CLI just one command</p>	<p><b>Flutter</b></p> <p>Need to riset about healthy apps</p> <p><b>Flutter</b></p> <p><a href="https://fvm.app/">Sometimes for major update it will impact to our latest code, but we can use FVM to helps us with the need for consistent app builds by referencing the Flutter SDK version used on a per-project basis https://fvm.app/</a></p>	Green	Yellow
7	Structure Boilerplate (development pattern)		<p><b>React Native</b></p> <p>Can use npm package like React Query, Moment.js etc</p> <p><b>React Native</b></p> <p>Can Update Over The Air With Codepush or with Expo-Update, or downloading assets remotely with Expo-Assets</p>	<p><b>Flutter</b></p> <p>Currently flutter doesn't have feature for upate in over the air like codepush</p> <p>But we can handle it with playstore in app update for android</p>	Green	Yellow
8	Rich Features	future will go for healthy apps	<p><b>React Native</b></p> <p>Same as React, and for performance react native need pay attention to rendering method or how react rendering works</p> <p><b>React Native</b></p> <p>Can build from internal device (Xcode, Android Studio), VM or Cloud (Expo EAS)</p>	<p><b>Flutter</b></p> <p>Flutter is powered by Dart, a language optimized for fast apps on any platform <a href="https://docs.flutter.dev/deployment/ios">There are many options for CI/CD that we can implement to build our flutter apps https://docs.flutter.dev/deployment/ios</a></p>	Green	Yellow
9	Age of Technology		<p><b>React Native</b></p> <p>Stable, if there's any update it's major and opt-in-out and not breaks many change</p> <p><b>React Native</b></p> <p><a href="https://reactnative.dev/showcase">Facebook, Discord, Microsoft Word, etc (https://reactnative.dev/showcase)</a></p>	<p><b>Flutter</b></p> <p><a href="https://flutter.dev/showcase">Ebay, Google Pay, Google Ads, Alibaba, etc https://flutter.dev/showcase</a></p>	Green	Yellow
10	Rich Library Support	npm should be consider about severly packagase, flutter OK	<p><b>React Native</b></p> <p>for logic we just need to copy paste and done, but for UI there's some extra effort to change the web component to native react native component</p> <p><b>React Native</b></p> <p><a href="https://docs.expo.dev/guides/testing-with-jest/">React native can use jest for testing component (https://docs.expo.dev/guides/testing-with-jest/), and use Detox for E2E testing (https://docs.expo.dev/build-reference/e2e-tests#writing-e2e-tests)</a></p>	<p><b>Flutter</b></p> <p>Absolutely we cannot use our code running in the our React code</p> <p>Flutter has 3 types of test</p> <ol style="list-style-type: none"> <li>1. Unit Test ( tests a single function, method, or class.)</li> <li>2. Widget Test (in other UI frameworks referred to as component tests) tests a single widget.</li> <li>3. Integration test tests a complete app or a large part of an app.</li> </ol>	Green	Yellow
11	Update packages inside apps		<p><b>React Native</b></p> <p>React Native With Expo default for android around 15mb and for ios 15mb too in production build, and can be compressed again with some config in native code</p> <p><b>React Native</b></p> <p><a href="https://docs.expo.dev/versions/latest/sdk/imagepicker/">Easy permission access especially with expo maintained SDK, each feature that need have permissions have easy method to request permission for example, ImagePicker (https://docs.expo.dev/versions/latest/sdk/imagepicker/) you just need invoke ImagePicker.requestMediaLibraryPermissionsAsync() method and it will return value granted or not or if you dont want expo there's package that handle it independently (react-native-permissions)</a></p>	<p><b>Flutter</b></p> <p><a href="https://medium.com/android-news/comparing-apk-sizes-a0eb37bb330f">if we compare to native's one the flutter app size is much bigger https://medium.com/android-news/comparing-apk-sizes-a0eb37bb330f</a></p> <p><b>Flutter</b></p> <p><a href="https://pub.dev/packages/permission_handler">we can use this (https://pub.dev/packages/permission_handler) package for handling permission in flutter</a></p>	Green	Yellow
12	Complexity code	extra to enhance performance for react native			Green	Yellow
13	Building Apps	EXPO reactnative, flutter with VM			Green	Yellow
14	Stable Version	Flutter to much update			Green	Yellow
15	Client use				Green	Yellow
16	Reusable Component with FE				Green	Red
17	Unit Testing				Green	Yellow
18	File size application				Green	Yellow
19	Permission Access				Green	Yellow