

# Craving a slice of Pie?

Nokia smartphones served a generous helping of Android™ 8 Oreo™ and are set to stay in the lead with eight Nokia smartphones already running Android™ 9 Pie and many more in the Pie kitchen.

Let's find out what it takes to serve a perfect slice of Pie on your Nokia smartphone



## Recipe for Pie:

### Step 1 Android 9 Pie OS code SW delivery

Google releases an OS code to chipset vendors – a collection of source files and platform development kits.

**Chef's Tip:**

Google's early release to preferred partners helps



### Step 3 Nokia phone-ification

This is where we integrate special Android One features and exclusive experiences for Nokia smartphones in the software.

**Chef's Tip:**

No bloatware and skins ensure your Nokia smartphone is among the first on that chipset to upgrade to Android 9 Pie.



### Step 2 Chipset vendor release

HAL, or the Hardware Abstraction Layer gets the platform to work seamlessly with each chipset.

**Chef's Tip:**

Why does a certain model get upgraded before the other? This is based on the chipset vendors' prioritized list of chipsets chosen for upgrades.



IF TESTING FAILS

## Testing:



### Step 4a Field testing across the world

We hit the road with the builds and test on live networks. Everything the Operators support is tested, including voice calls, web browsing, VoLTE, SMS and more.

### Step 4b Lab testing across all areas

In parallel, the software build is passed on to our engineering and testing team for manual hands-on testing, subjecting the smartphone to literally thousands of programmable test cases.

### Step 4c Beta testing

Enter Nokia Fans! If the device is selected as a "lead program", we invite our Fans to evaluate and help us improve on the pre-official builds in one of our programs- "Nokia phones beta labs" or it's sister site "Nokia phones Android Developer Preview"

**Chef's Tip:**

Over 120,000 beta lab users have helped us in maturing every software build.



## Garnishing and final touches:

### Step 5b Quality checks

We double-check everything to ensure your Nokia phone works just fine when you upgrade it!

### Step 5a Conformance standards test

No build can be released without ensuring it passes a mandatory set of conformance standards. These can vary throughout the world, with the most familiar being Bluetooth and Wi-Fi.

### Step 5c Operator tests

We're on the home run where Operators and regions check that everything/verify/check that testing/verify/their markets and customers work.

**Chef's Tip:**

Every Operator and region follows a different testing schedule. Some may take longer to approve, have different test criteria or preference of features they want to test. If an Operator specific error is discovered, we may need to roll out the fix the next release. It is faster to move the upgrades in non-operator markets.



## Time to serve:

Once we finally receive the "stamp of approval", we release the new Android build as early as possible.



## Welcome to your new Android release- pure, secure and up-to-date

The journey is long, but we don't stop! Our drive is to continue working on new releases and upgrades to ensure your Nokia only runs on pure and up-to-date Android and only gets better over time!

IF TESTING FAILS