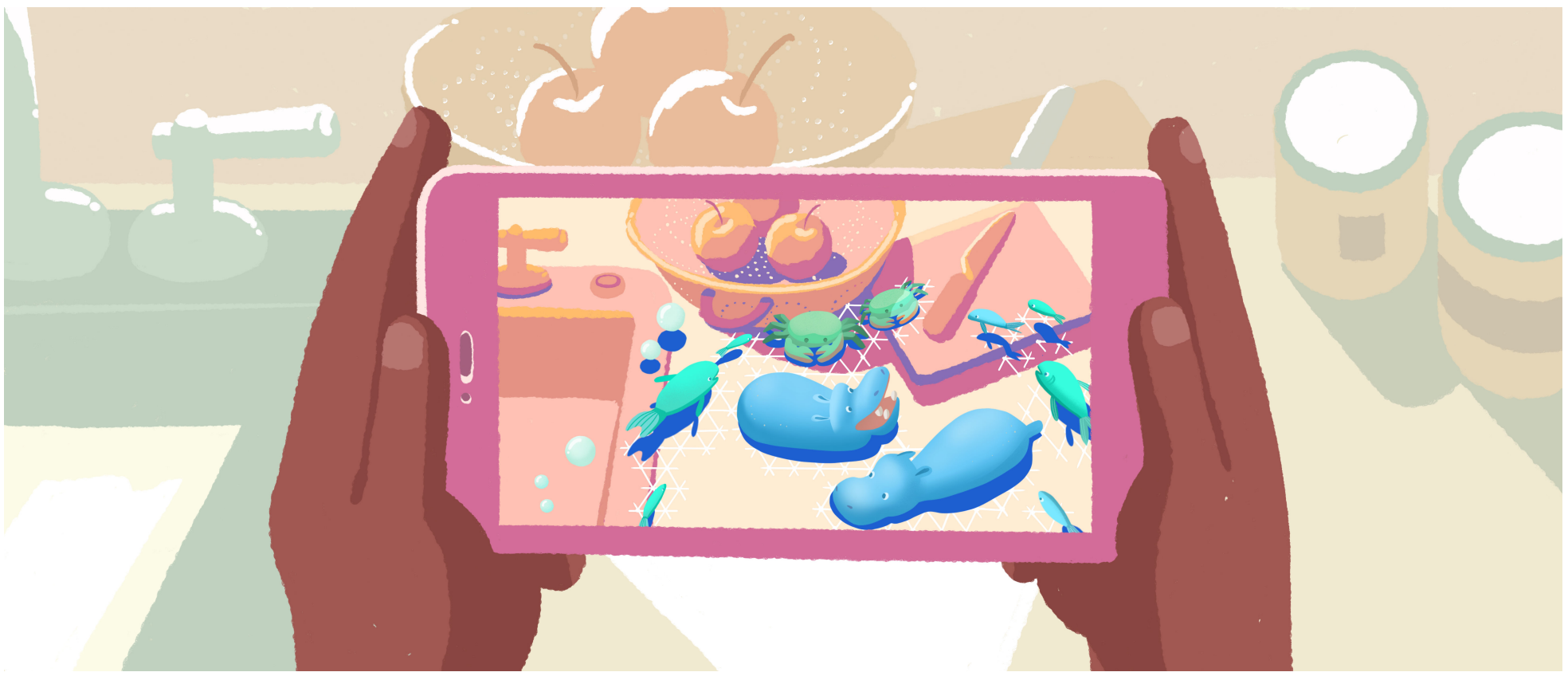
ARCore Overview



ARCore is a platform for building augmented reality apps on Android. ARCore uses three key technologies to integrate virtual content with the real world as seen through your phone's camera:

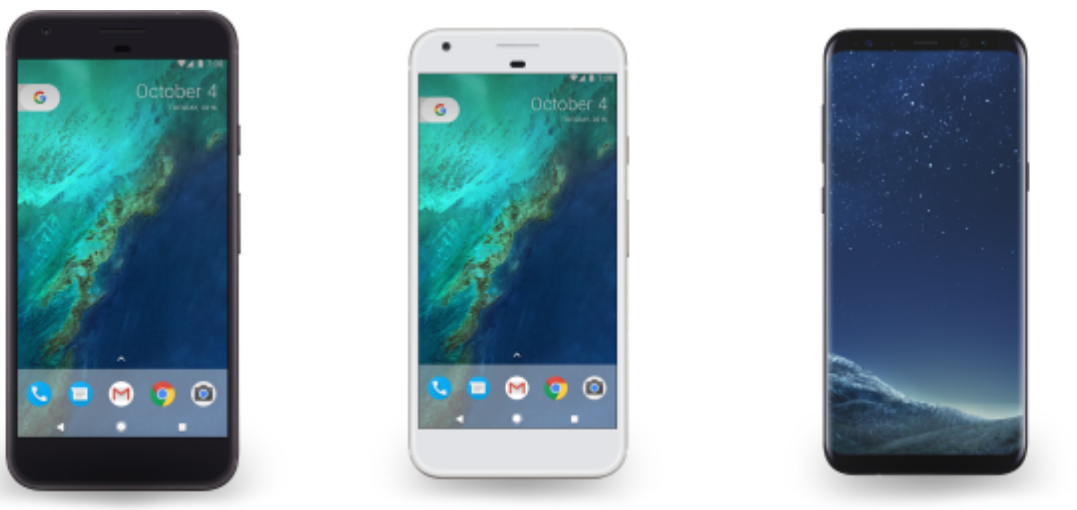
- **Motion tracking** (https://developers.google.com/ar/discover/concepts#motion_tracking) allows the phone to understand and track its position relative to the world.
- **Environmental understanding** (https://developers.google.com/ar/discover/concepts#environmental_understanding) allows the phone to detect the size and location of flat horizontal surfaces like the ground or a coffee table.
- **Light estimation** (https://developers.google.com/ar/discover/concepts#light_estimation) allows the phone to estimate the environment's current lighting conditions.

Note: ARCore is being offered as an **early preview** so that you can start experimenting with building new AR experiences. It's also an opportunity for you to give feedback on an early version of the API. This preview is the first step in a journey to enabling AR capabilities across the Android ecosystem.

Supported Devices

ARCore is designed to work on a wide variety of qualified Android phones running N and later. During the SDK preview, ARCore supports the following devices:

- Google Pixel and Pixel XL
- Samsung Galaxy S8 (SM-G950U, SM-G950N, SM-G950FD, SM-G950FD, SM-G950W, SM-G950U1)



How does ARCore work?

Fundamentally, ARCore is doing two things: tracking the position of the mobile device as it moves, and building its own understanding of the real world.

ARCore's motion tracking technology uses the phone's camera to identify interesting points, called features, and tracks how those points move over time. With a combination of the movement of these points and readings from the phone's inertial sensors, ARCore determines both the position and orientation of the phone as it moves through space.

In addition to identifying key points, ARCore can detect flat surfaces, like a table or the floor, and can also estimate the average lighting in the area around it. These capabilities combine to enable ARCore to build its own understanding of the world around it.

ARCore's understanding of the real world lets you place objects, annotations, or other information in a way that integrates seamlessly with the real world. You can place a napping kitten on the corner of your coffee table, or annotate a painting with biographical information about the artist. Motion tracking means that you can move around and view these objects from any angle, and even if you turn around and leave the room, when you come back, the kitten or annotation will be right where you left it.

For a more detailed breakdown of how ARCore works, check out fundamental concepts (https://developers.google.com/ar/discover/concepts).

Learn more

Take a look at our guides below to get started with the SDK on the platform of your choice.

- Getting started with Android Studio (https://developers.google.com/ar/develop/java/getting-started)
- Getting started with Unity (https://developers.google.com/ar/develop/unity/getting-started)
- Getting started with Unreal (https://developers.google.com/ar/develop/unreal/getting-started)
- Getting started with Web (https://developers.google.com/ar/develop/web/getting-started)

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