

Animating Drawables



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What is Drawable?



Animate Drawable Graphics

AnimationDrawable

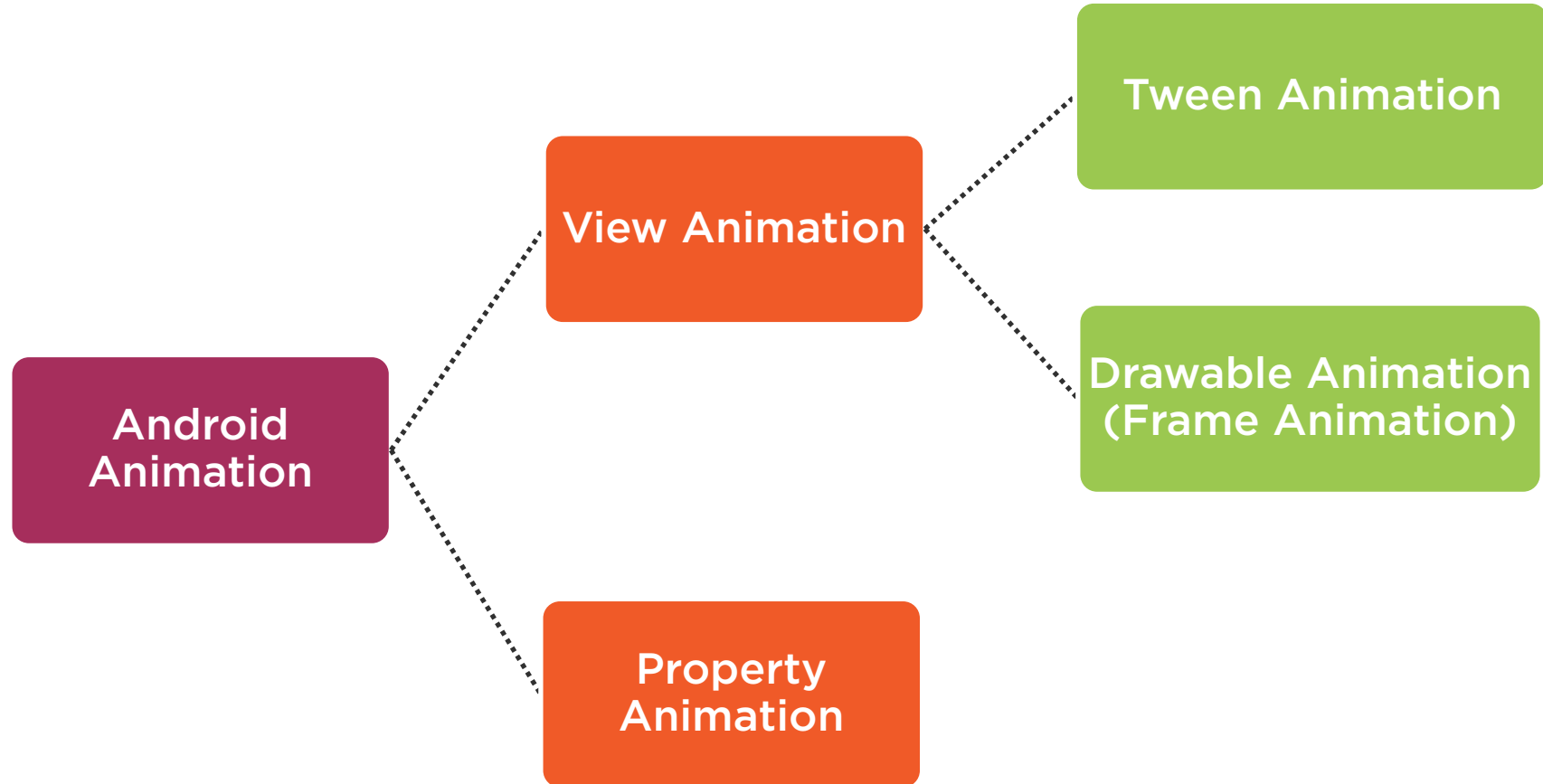
Frame Animation

AnimatedVectorDrawable

Using Vector Drawables



Animation Resources

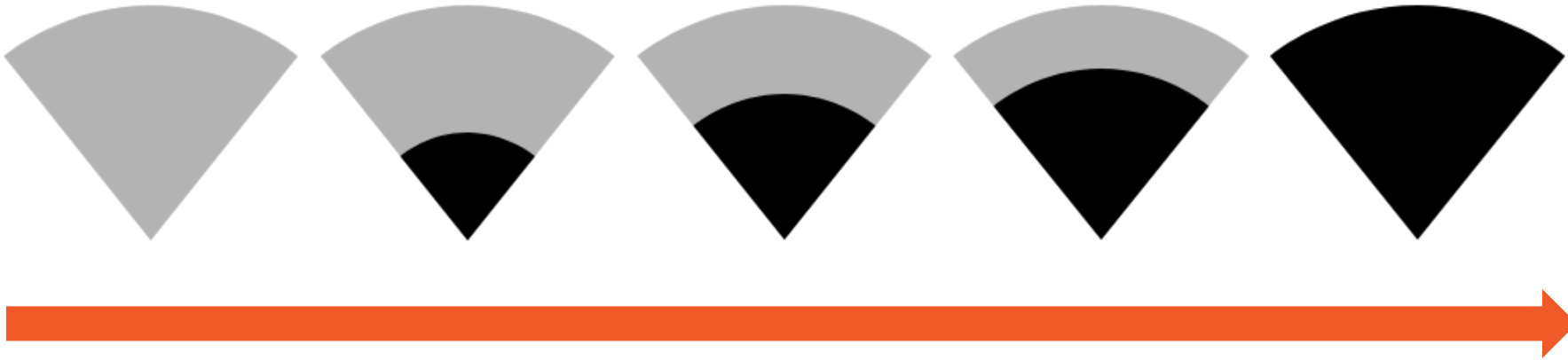




What Are Vectors/Animated Vectors?



Frame Animation



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AnimatedVectorDrawable



Introduced in API 21 and is used to animate the properties of a **vector drawable**.



Perform **rotate**, **scale**, **translate**, **draw paths**, and do **path morphing**.



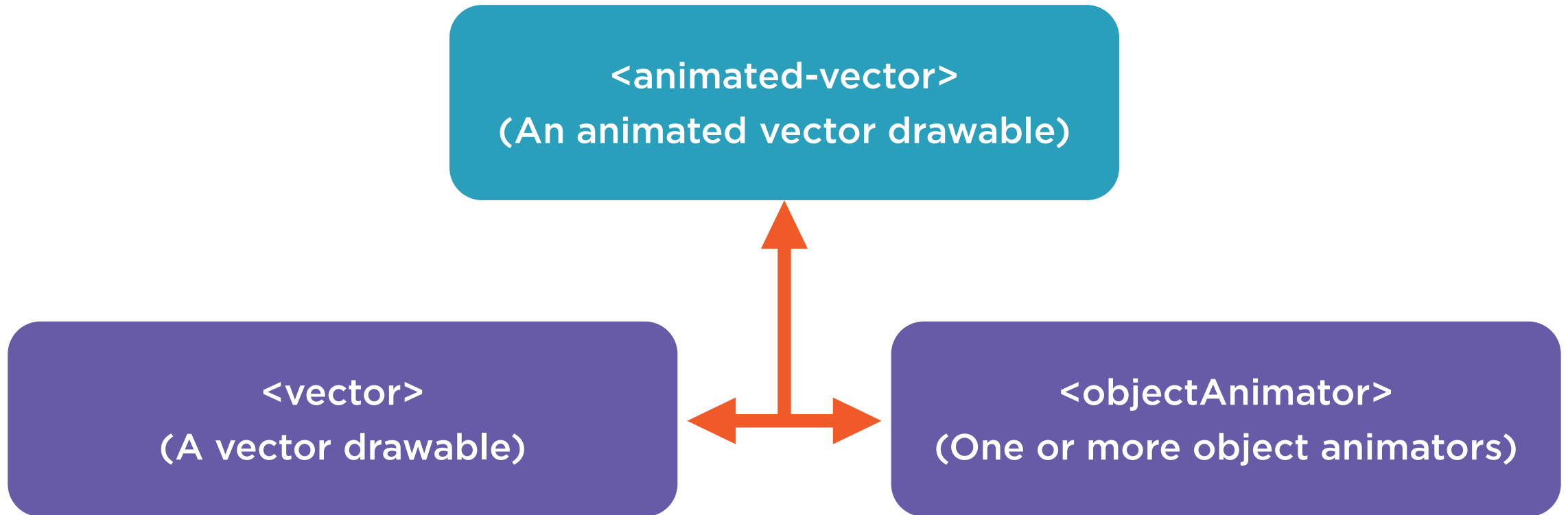
From API 25 onwards, it runs on RenderThread



Use **AnimatedVectorDrawableCompat** on devices running on API 11 (Android 3.0) or higher.



AnimatedVectorDrawable



AnimatedVectorDrawable

Multiple XML file

```
<!-- res/drawable/ic_cross.xml -->
<vector>
    <path
        android:name="crossIcon" />
</vector>

<!-- res/animator/rotation.xml -->
<objectAnimator
    android:propertyName="rotation" />

<!-- res/drawable/avd.xml -->
<animated-vector>
    <target
        android:name="crossIcon"
        android:animation="@animator/rotation" />
</animated-vector>
```

Single XML file

```
<!-- res/drawable/avd.xml -->
<animated-vector>

    <aapt:attr name="android:drawable">
        <vector>
            <path
                android:name="iconCross" />
            </vector>
        </aapt:attr>

        <target android:name="iconCross">
            <aapt:attr name="android:animation">
                <objectAnimator
                    android:propertyName="rotation" />
            </aapt:attr>
        </target>
    </animated-vector>
```





Sketch or
Illustrator



Vector Asset
Studio

<vector>
(A vector drawable)



Backward Compatibility



Summary



Animate drawable graphics

- AnimationDrawable
 - Frame animation
- AnimatedVectorDrawable
 - Animate vector graphics

