

Avijeet Thakur

My View & Detailed Teardown on

New



Android 16

**Update on
Smartphone**

www.avijeetthakur.com





Overview

New Features



Android 15 vs. 16



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Future Scope & Conclusion



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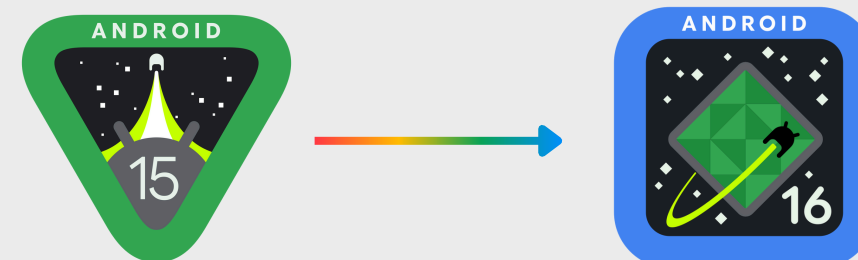
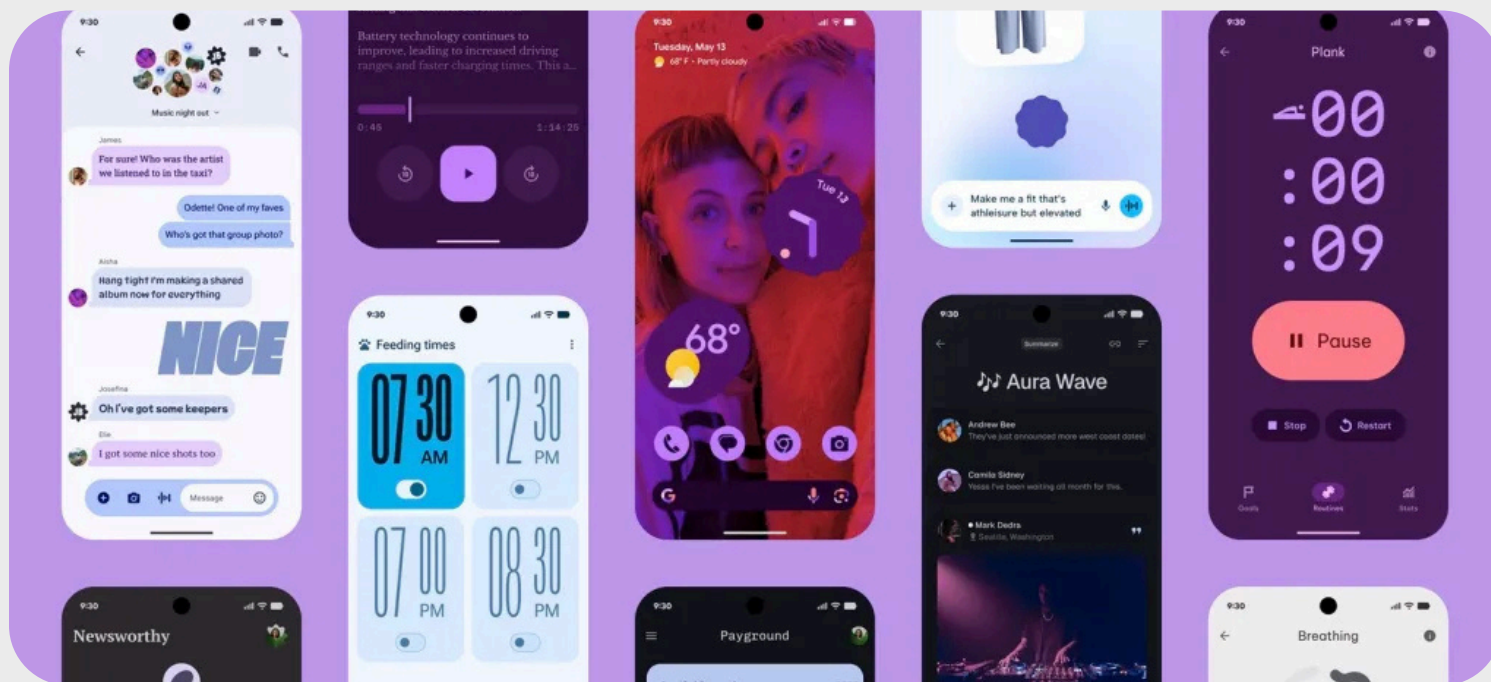
Introduction

Android 16, codenamed Baklava, is Google's next major smartphone update, launching in June 2025—earlier than usual. Unlike past versions, it's no longer tied to Pixel hardware releases, allowing Pixel phones (6/7/8/9 series and a-series models) to update independently. The initial rollout will happen through the Android Beta Program, with other brands to follow. Android 16 focuses on improving the core smartphone experience—prioritizing UI polish, privacy, and everyday convenience over foldable or tablet features.

Key Themes and Focus Areas

Let me tell you what really stands out in Android 16—it's the fresh new look. Google's introducing a UI revamp called Material 3 Expressive, building on the Material You design we already know. It's more playful and dynamic, with lively animations, updated color palettes, blurred backgrounds for depth, new icon shapes, and better layouts for the home screen and Quick Settings. It actually feels more alive and personal. Though the beta looks a lot like Android 15 right now, these UI changes are rolling out to Pixel phones later in 2025 after the initial June release.

But it's not just about looks—Android 16 also gets smarter. One of my favorite features? Progress-Centric Notifications. Apps like Uber or Zomato can now show real-time journey steps right in your notification bar or lock screen—with progress bars and updates. Super handy. You'll also see handy touches like double-tap to sleep, new lockscreen widgets (in a later update), and deeper health and privacy upgrades—like support for medical data in Health Connect and better ad privacy through Privacy Sandbox.





New Features

User Interface and System UI Enhancements

Material Expressive

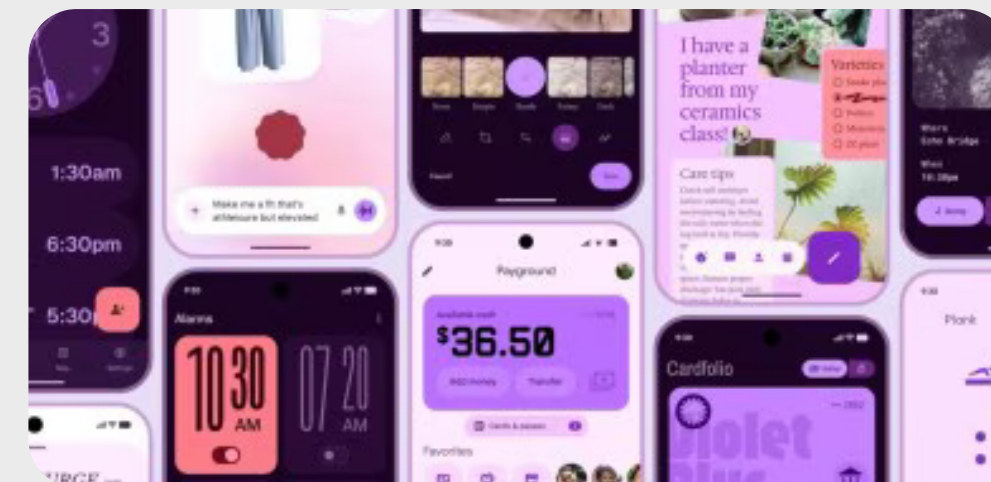
Android 16 introduces Google's new Material 3 Expressive design—a lively upgrade to Material You. Expect more blur effects, playful icon shapes, cleaner text, and smoother, springy animations that bring the interface to life. Just a heads-up: these changes won't all be live at launch. Google says they'll start rolling out to Pixel phones later in 2025, after the initial release.

Quick Settings and Notification Panel

Leaked code shows a revamped notification shade in Android 16—now with a bold clock at the top (matching the lock screen) and a top bar for “Clear all,” settings, and history. Notifications get opaque tiles, and there's a new gesture: swipe from the top-left for notifications, top-right for Quick Settings—very iOS-style.

Resizable QS Tiles & Edited Layout

Android 16 beta teases a new Quick Settings editor—tiles can be resized, and the picker is now grouped into categories, much like iOS 18. You might also be able to pin extra controls and rearrange tiles more freely. These tweaks are expected to arrive in a post-launch Pixel update.



Status Bar Icons (leaked)

(These UI refinements appear in developer betas, but may roll out gradually.)

Volume Slider Update (leaked)

Android 16 is getting a new volume slider—now vertical with a dual-color fill and a dot showing the volume level. It's a small but sleek change that aligns better with Material design. (Spotted in the beta code!)

Lock Screen & Interaction (leaked)

Pixel phones are set to get handy new lockscreen features in Android 16. A much-awaited double-tap-to-sleep gesture is finally here—just tap the screen to turn it off, like on Samsung and OnePlus. The beta also hints at custom clock styles, weather effects, and lockscreen widgets, which Google says will land in the QPR1 update.

Progress-Centric Notifications (confirmed)

Android 16 introduces a new progress-style notification format for ongoing tasks like rideshares, deliveries, and navigation. These high-priority notifications feature a progress bar and milestones, and can appear on the lockscreen or notification shade. Example: “Arrive in 1 min – 100 m” with a live progress indicator.

Predictive Back Gesture (confirmed)

Android 16 introduces predictive back animations for smoother swipe transitions. New APIs like On Back Invoked Dispatcher help apps sync with system gestures. It's now default for gesture and 3-button navigation. Apps must migrate, as On Back Pressed is ignored by default.

Privacy and Health Features

Health Connect Updates (confirmed)

Android 16 upgrades Health Connect with a new `ACTIVITY_INTENSITY` data type to track moderate and vigorous activities, based on WHO guidelines. It also adds support for standardized health records using the FHIR format—letting apps securely read and write medical data with your consent. These changes boost privacy and make health apps smarter.

Privacy Sandbox on Android (confirmed)

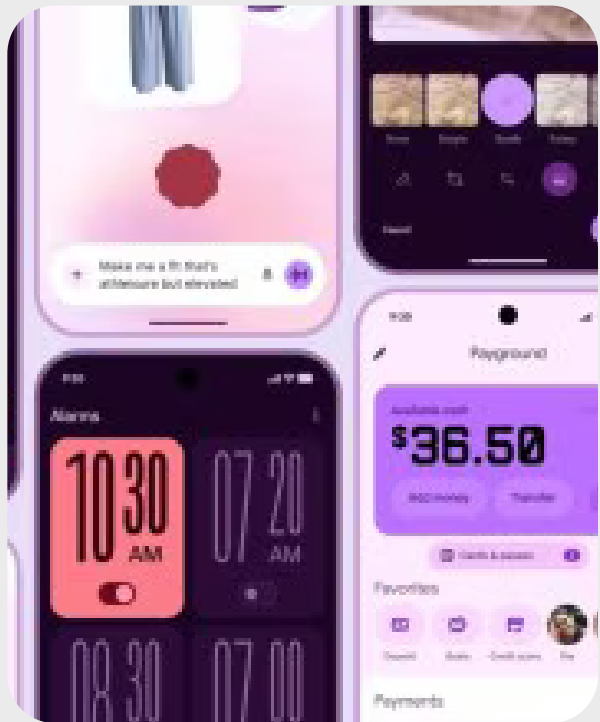
Android 16 includes the latest Privacy Sandbox tech, which isolates ad and tracking SDKs in a separate runtime. This means third-party SDKs have limited access to your data, helping protect your privacy while developers work with updated APIs.

Key Sharing API (confirmed)

Android 16 now makes it easier for apps to securely share keys using the new Key Store Manager API. Basically, one app can give or take away access to its Keystore keys from another app—without exposing any secrets. It's super useful for businesses that need to share credentials safely across their own apps.

Security Hardening (confirmed)

With Android 16, apps targeting API 36 get extra protection against intent-redirection attacks. It now checks Intents more strictly and gives each app its own version of MediaStore to help prevent file leaks. Developers should definitely check the release notes to make sure their apps keep working smoothly.



Connectivity and Media Features

Advanced Wi-Fi Ranging (confirmed)

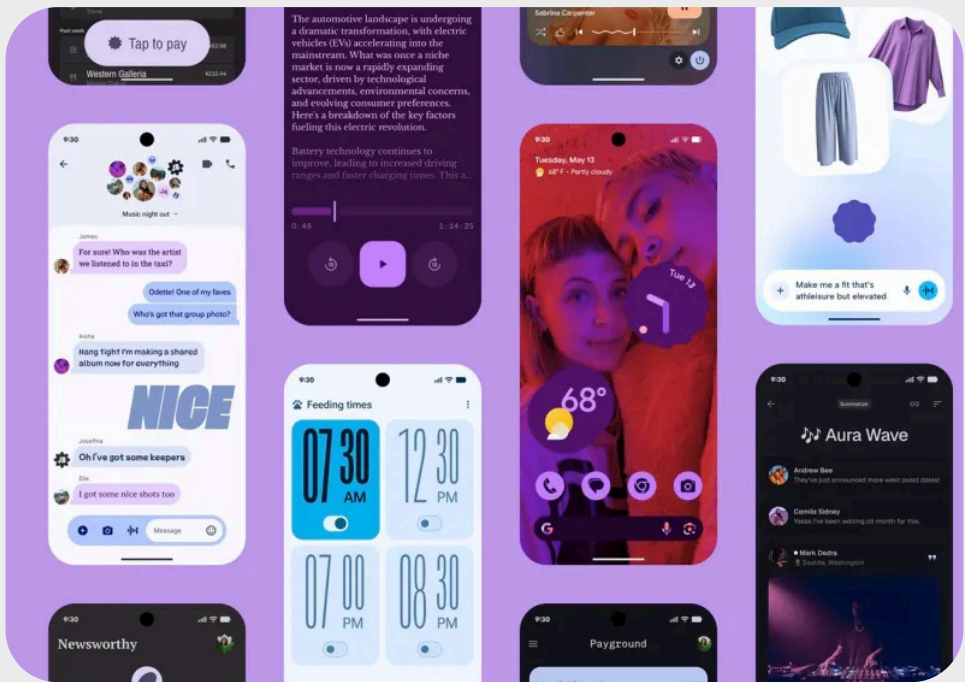
Android 16 brings upgrades for Wi-Fi 6 (802.11az). If the device supports it, apps can now use new APIs to get secure and accurate distance or direction to other devices. This means better location-based features like indoor navigation—with stronger security built in.

Bluetooth Bond Handling (confirmed)

Bluetooth pairing gets a boost in Android 16. It now handles unexpected disconnections (called “bond loss”) better and adds new tools for managing them. The result? A more reliable connection with your Bluetooth devices.

Media and Audio

Android 16 doesn't bring big audio updates for users, but developers get better tools to check and fine-tune JobScheduler performance. It's all about smoother, more efficient apps behind the scenes.



Notification and Communication Features

Notification Summaries (leaked)

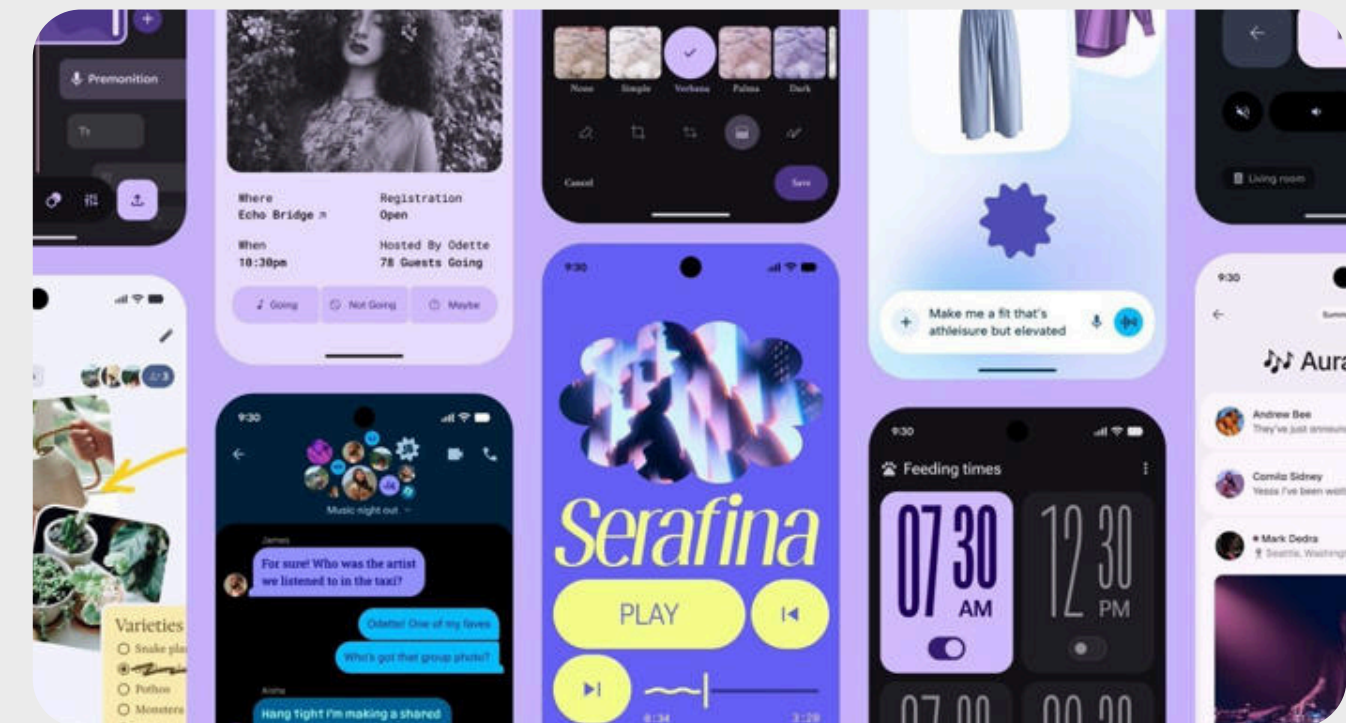
Android 16 might be getting a new notification summaries feature. It groups chat notifications into a neat summary panel, and users can turn it off for specific apps. It's focused on conversations to avoid the mess seen in other systems. It's not live yet, but could roll out in a future update.

Live Activities (rumored)

Android 16 is expected to bring Live Updates—kind of like iOS Live Activities. Think real-time stuff like your Uber ride status or Google Maps updates showing right in your notifications. Google already demoed it, but it's not out yet. Looks like it'll arrive later with Material 3 Expressive.

New Quick Settings Tile for Video Calls (leaked)

In Android 16 Beta 4, there's a new "Video Chat" quick settings tile in the code. Tapping it could turn on features like background blur, portrait lighting, and noise suppression for any video call. Looks like Android is gearing up to offer system-wide support for better video call effects. It might show up soon in Pixel QPR updates.



Customization and Personalization

Custom Icon Shapes (confirmed)

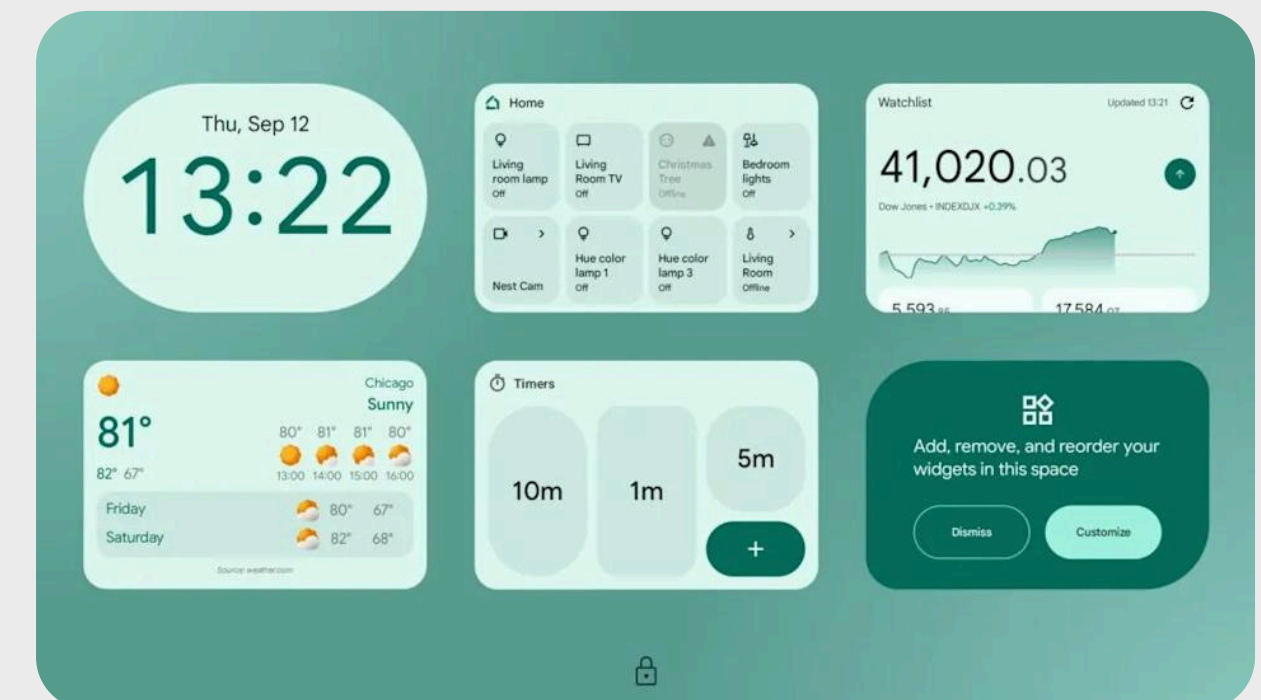
Android 16 brings back the option to change app icon shapes—a feature many users missed since it was removed after Android 12. You'll be able to choose from shapes like circles, squares, or even the quirky "four-sided cookie." Google might also add lock screen icon shapes and animated weather effects, making customization fun again.

Wallpaper and Themes

Android 16 gives Material You a nice upgrade. Colors pulled from your wallpaper now have better contrast and clearer separation between primary and secondary tones. Plus, new background blur effects—like in the app drawer or multitasking view—add a subtle depth. The result? A cleaner, more vibrant look that's easier on the eyes.

Home Screen & Lock Screen

Android 16 brings some subtle design updates. The Settings screen now has colorful icons and card-style sections for a cleaner look. A new swipe gesture is being tested—swipe from the top left for notifications and from the top right for Quick Settings. Features like stacked notifications and lock screen widgets are also in the works, though some may arrive in future updates.



Android 15

V S

Android 16

Home / Lock Screen

- Material You theming - Basic lock screen widgets

- New clock styles - Animated wallpapers - Double-tap to sleep - Lockscreen widgets (QPR)

Status Bar Icons

- 5-bar Wi-Fi indicator - Battery icon: static, single color

- 3-bar Wi-Fi - Battery icon color-coded (white/red/green) - Icon flipped, % text bold

Notification Shade / QS

- Swipe-down opens unified QS/notifications - Blurred background

- Split swipe (top-left for notifications, top-right for QS) - Opaque top bar - Resizable tiles

Gestures & Navigation

- OnBackPressed (basic) - Simple “back” behavior

- Predictive back animation - OnBackPressed API - 3-button nav with gesture matching

Volume & Controls

- Horizontal volume slider - Uniform QS tiles

- Vertical volume slider (Material 3 style) - New tile shapes & categories - Video call tile (leaked)

App Overview (Recents)

- Square cards, minimal layout

- Background blur (leaked) - Multitasking tweaks for depth

Animations & Haptics

- Basic animations - Standard vibration feedback

- Springy, expressive animations - Richer, customizable haptic feedback

Overall, Android 16’s visual changes are an evolution of Android 15’s Material You. For example, Android 15 already applied wallpaper-based theming and dynamic coloring, but Android 16 will use those colors with stronger contrast and add playful motion. The Quick Settings overhaul (iOS-style splitting and pinning) is a major new departure from Android 15’s single-swipe design[9to5google.com](https://9to5google.com/2024/05/01/android-16-features/)[9to5google.com](https://9to5google.com/2024/05/01/android-16-features/). In essence, Android 16 refines and expands upon Android 15’s styles, adding more personalization and polish.

Performance and Under-the-Hood Improvements

ART (Android Runtime) Updates

- App launch is faster thanks to new optimizations.
- Supports newer Java features.
- Delivered via Google Play, so Android 12+ devices benefit immediately.

Graphics & Gaming

- Adaptive Refresh Rate (ARR) Improvements
- Android 16 brings simpler APIs like has Art Support and get Suggested Frame Rate.
- Apps can better adjust refresh rates to save power smoothly.

System Profiling Tools

- New “system-triggered profiling” via Perfetto for cold starts or ANRs.
- CPU/GPU “headroom” data helps games fine-tune performance.

Battery & Efficiency

- Background Work Optimization
- Smarter Job Scheduler quotas that adapt to app usage.
- New APIs let dev’s check and diagnose pending jobs.

Battery Drain Fixes

- Beta 4.1 addressed a major drain issue—highlighting Google’s focus on efficiency.

Overall

- Android 16 builds on Android 15’s performance push with smoother apps, smarter power use, and tools that make it easier for developers to deliver great experiences.

Developer and OEM Implications

For App Developers

Predictive Back is Default

- Apps targeting API 36 must use On Back Invoked Callback.
- Legacy on Back Pressed no longer works — migrate to gesture-based callbacks.

Edge-to-Edge UI is Mandatory

- The opt-out flag window opt Out Edge To Edge Enforcement is gone.
- Apps now need to handle insets (like status bars) themselves.

Font Rendering Update

- The old elegant Text Height setting is deprecated and will be ignored in Android 16.

Privacy & Health

- Privacy Sandbox Updates
- Ad SDKs must update to support the new isolated runtime.

Health Connect Enhancements

- If your app handles medical data, you’ll need to integrate FHIR APIs.

Media, Games, & Connectivity

- New Tools for Games & Media
 - Use Wi-Fi ranging and CPU/GPU headroom APIs for better performance and features.

For OEMs & Hardware Makers

- Android 16 Integration Work
- OEMs need to merge the update into their custom Android skins.
- Material 3 Expressive is optional at launch.

UI Features May Be Pixel-First

- Features like lock screen widgets and double-tap to sleep may roll out to other devices later.

Hardware Compatibility

- Prepare for Wi-Fi 6z, improved Bluetooth bonding, and new customization options like QS tiles.
- Stricter security defaults (e.g., safer intent handling) now apply.

Summary

Android 16 brings new rules and APIs that app and device makers need to adopt — with a big focus on gesture navigation, privacy, health data, and performance.

Limitations and Known Issues

Android 16 Limitations (Beta Phase)

Missing UI Features (for now)

- Material 3 Expressive theming and Quick Settings redesign are hidden in Beta 4.
- Features like lockscreen widgets, split QS gestures, and live wallpaper APIs are delayed until future QPR (Quarterly Platform Release) updates.

Don't Expect Major Visual Changes Yet

- The first public Android 16 build looks a lot like Android 15.
- Big UI updates are coming later via Pixel Feature Drops or QPR1.

Beta Bugs & Stability

Fixed in Beta 4.1

- Issues with haptics, audio, video recording, and battery drain were addressed.
- Earlier builds had stability and power problems.

App Compatibility Risks

- Changes in ART may break apps that use undocumented features.
- Known issues include lockscreen clock bugs and parent/child profile restrictions.

Incremental, Not Revolutionary

More of an Evolution than a Leap

- Android 16 builds on Android 15 rather than overhauling everything.
- Some big features (like 3-way split-screen) are for large-screen devices, not phones.

Bottom Line

Android 16's initial release is solid but not feature-complete. Many key features are delayed for future updates — so temper expectations for now.

Future Scope and Direction

Android 2025 Roadmap

Two Major Releases in 2025

- Android 16 (Q2, with ongoing QPRs).
- Another big release (likely Android 17) in Q4.

Faster Update Cadence

- Features will be split between base releases and Pixel Feature Drops.
- QPR1 (mid-2025): Expected to bring lockscreen widgets, Material Expressive UI updates.
- QPR2: Will add more UI and functionality.

OEM Adoption & Ecosystem Impact

Material Expressive Rollout

- Pixel will lead; brands like Motorola may adopt the new theming by late 2025.

Looking Ahead to Android 17

Expected Trends

- More AI (e.g. Gemini APIs).
- Better customization, privacy sandboxing, and gesture shortcuts.
- Focus on glanceable info (Live Activities, summaries).

Hardware Evolution

- Broader support for adaptive refresh rates, Wi-Fi Az, and gesture sensors.

Summary

Android 16 is a refined continuation of Android 15 and sets the stage for Android 17. The “wow” features come post-launch through regular updates, leading to a more personal, intuitive, and privacy-focused Android by the end of 2025.



Conclusion

Android 16 is a refined follow-up to Android 15 and sets the stage for Google's 2025 plans. It launches in Q2, with major features like lockscreen widgets and Material Expressive UI rolling out gradually via quarterly updates. A second major release, likely Android 17, is expected in Q4, continuing trends like AI integration, customization, and stronger privacy. With faster update cycles, features are spread across releases and Pixel Feature Drops. While Android 16's launch is stable and polished, most visual changes will arrive later, making it a bridge to a more dynamic and personalized Android experience by year-end.

Thank you

Avijeet Thakur



abhijeet62966@gmail.com