Windows Phone 8 Reviewer's Guide

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Data plan and/or Wi-Fi access required for some Windows Phone 8 features. Carrier fees may apply. Availability of some features and services may vary by app, area, language, phone, carrier, and/or service plan.

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Meet Windows Phone

These days, it seems like the more feature-packed our phones get, the more complex they become. Over the past few years, the smartphone has become a veritable explosion of preinstalled features and downloadable apps, resulting in more and more communication channels to stay on top of, information to sync, accounts and settings to manage, and so on. Put another way, you had to work just to stay connected with all the stuff on your phone, instead of those features and apps working together to keep you connected to the people and things you really care about.

Two years ago, seeing an opportunity for a fresh approach, we stopped to ask ourselves, "How can we reinvent the phone to bring people closer to their interests and goals, as diverse as those pursuits may be? How can a phone be more integrated and more cohesive, with all its apps and the information within them and on the Web working together on your behalf?"

The result was Windows Phone 7. Its smart design put you first to help you focus more on your life and less on your phone — like a quiet, efficient assistant who's worked for you for years, slipping in and out of the picture to bring you exactly what you need, without disturbing the conversation.

So how did we do that? We started with Live Tiles, which you can pin to your phone's Start screen to stay on top of what's going on — as it happens. We broke down barriers that got in your way, such as the inability to take a photo when your phone is locked. We organized the phone's functions into Windows Phone Hubs, which bring together features and content for the many things you do on your phone, such as playing music, gaming, and staying in touch with others.

We also built in popular communication and social-networking services, tying them to the people in your life in a way that lets you focus on staying connected, not on the apps that enable you to do so. We also ensured that hardware and software were designed to work together to ensure that your phone was capable, powerful, and responsive. At the same time, we delivered flexibility and choice, so that you could choose the service provider¹ and phone design that were right for you.

From top to bottom, Windows Phone 7 was the smartphone that put you first.

When we launched Windows Phone 7 in November 2010, the positive reviews it received confirmed we were on the right track. It won the Gold in the "Interactive Product Experiences" category at the 2011 International Design Excellence Awards, with judges calling the phone "a truly elegant and unique experience." More important, however, people kept telling us that the more they used a Windows Phone, the more they liked it.

¹ Service provider availability may vary by location.

Here we are, roughly two years later, ready to unveil the latest chapter in the evolution of Windows Phone. We think you'll agree that Windows Phone 8 is designed from the ground-up to make it easier than ever to stay connected to the people and things you really care about.

Only Windows Phone has:

- Live Tiles they let you pin what matters most right on your Start screen, arrange it how you want, and see everything that's going on, as it happens. Pin your favorite people to Start to see their latest profile pic, tweets, posts, and updates in an instant. Pin your favorite apps, music albums, websites, directions, games, podcasts, photo albums, documents, notes, and more to Start as Live Tiles, so you can quickly get to the things you want. Pin as many as you want, wherever you want. With three tile sizes and tons of color choices, you can move your Live Tiles around until they're laid out perfectly. You can completely personalize your Start screen so that it's unmistakably yours.
- Live Apps a delightful twist on apps that make them easy to use and more amazing than ever. Live Apps bring what you want to know right to your Start screen, like the Groupon deal of the day, flight information on Delta Airlines, or headlines on CNN, so you don't have to search for what's important to you. Windows Phone has the apps you need from the brands you love, and is the only phone with Live Apps.
- A People Hub think of it as your contact list reinvented. It's where you'll find everyone you're connected to on Facebook, Twitter, Outlook, LinkedIn, and Skype in one place. You can even setup a Room to privately share photos, messages, to-do lists and calendars with your closest people.
- Kid's Corner a worry-free way to share your phone with your kid. It's like having a phone-within-a-phone that gives your little ones access only to the apps and features you choose for them. Your kids can personalize their very own Start screen and create a space that's all their own. You can let them do their thing: taking pictures, playing games, watching videos, and listening to their favorite tunes. So you can be sure that they're playing Angry Birds and not texting your angry boss.

Windows Phone 8 is also cloud-connected in a unique way. With SkyDrive, your photos, videos, and Office docs can be automatically backed up and accessible from virtually anywhere, from any device². After SkyDrive is set up, you don't need to worry about losing your stuff — even if your phone goes missing. Similarly, with Xbox Music, your music is automatically stored in the cloud, giving you access to it across a range of devices³.

² Wi-Fi access or data connection required; carrier fees may apply.

³ Devices include Windows 8, Windows Phone 8 and Xbox 360. Purchased music is stored in the cloud for free. Music not purchased from the Xbox Music Store requires an Xbox Music Pass (sold separately) for Windows Phone and Xbox 360.

In addition, because Windows Phone is built around you, it's built to help protect you. Every Windows Phone app has been tested and certified by Microsoft to give you peace of mind about the apps you download and use.

Finally, we're supporting more markets. Windows Phone 8 now supports 50 UI languages, 60 keyboard languages, and purchases from the new Windows Phone Store in 191 countries.

The result is something that's hard to describe. You have to experience it firsthand to fully appreciate how Windows Phone 8 was built for you. Just take it out of the box, tell it who you are, and it becomes something original, something intimate — something as unique as you are.

Welcome to Windows Phone 8 — it's the smartphone reinvented around you. Meet yours.

What's New in Windows Phone 8

With Windows Phone 8, you still get touchscreen Web browsing and all the apps you love. You also get everything that makes a Windows Phone unique, including a Start screen you can make your own, Live Tiles that provide updates at a glance, Office Mobile, Outlook Mobile, Windows Phone Hubs, and the Xbox entertainment experience. In fact, you get everything you liked about Windows Phone 7.5 and more, including hundreds of new features, enhancements, and under-the-hood improvements⁴ — all designed to put you first, so that you'll never miss a moment.

Shared Windows Core

Unlike Windows Phone 7.5, which was based on Windows Mobile, Windows Phone 8 shares its core with Windows 8. The Windows core is already used and trusted by more than 1.3 billion people, and has been adopted by millions of developers and thousands of hardware manufacturers around the world.

A common core brings Windows and Windows Phone together in powerful new ways, beginning with a familiar Start screen. In addition, because Windows 8 and Windows Phone 8 now share core components, it provides compelling benefits for consumers, app developers, and hardware manufacturers, including the following:

- Consumers will get greater choice in hardware, have access to more apps more quickly, and enjoy consistent new experiences across Windows Phone 8 and Windows 8 devices.
- Developers will benefit from fast and familiar development tools, can write code once and use it across more devices, and have increased opportunity to reach more customers.
- Hardware manufacturers can more easily deliver leading-edge hardware features and tailored device offerings, and will also benefit from faster time to market.

We designed Windows Phone 8 with the goal of allowing all existing applications in the Windows Phone Store to work on Windows Phone 8 devices. We're also working closely with key development partners to create versions of apps that take advantage of some of the new features in Windows Phone 8.

Latest and Greatest Hardware

One advantage derived from a common core is support for new hardware components and configurations, including the following:

⁴ Some features discussed in this guide are not available in all countries or regions.

- Multicore Processors. As you already know, we optimized Windows Phone to run butterysmooth on existing single core chipsets. Because Windows Phone 8 is based on the Windows 8 kernel, it can support dual-core, quad-core, and octa-core processors — in theory, as many as 64 cores. We plan to provide guidance and resources to help developers create compelling apps that leverage multicore hardware in ways that boost application performance without significant impact to battery life.
- **Multiple Screen Resolutions.** Windows Phone 7.5 offered an 800x480 screen resolution. Windows Phone 8 also supports 1280x768 and 1280x720 for a total of three screen resolutions a broader range of options that's great for both consumers and hardware manufacturers.
- **Removable Storage.** Windows Phone 8 supports removable microSD cards, enabling you to use removable storage for music, photos, and videos.

Start Screen

The Start screen on your Windows Phone puts what's most important to you front and center, making it obvious and accessible. New and improved Start screen features in Windows Phone 8 include the following:

- **Live Tiles.** Windows Phone 8 makes Live Tiles even more personal and useful by enabling you to easily choose from three different sizes.
- **Live Apps.** You can pin the Tiles for your Live Apps to the Start screen and resize them to small, medium, or large. All three sizes support new types of animations, enabling your Live Apps to "come alive" on your Start screen in new ways.
- Lock Screen. Now you can display images or information from selected apps or services on the Lock screen background, display detailed status for an app, and choose which quick status notifications are displayed. We also made it less likely to accidentally wipe your phone by entering an incorrect PIN.
- **Kid's Corner.** Kid's Corner helps give you peace of mind when sharing your phone with your child. You choose the applications, movies, and music available to your child on your phone, and everything else is protected by your Lock screen and optional PIN.

The above features are discussed in greater detail later in this guide, under Start Screen.

Phone

We've designed your Windows Phone to be the most useful phone you've ever had. New and improved phone features in Windows Phone 8 include the following:

• Integration With VoIP Apps. Third-party developers can integrate voice-over-IP (VoIP) communication apps directly with your phone's dialer, contact list, and so on — so that these experiences are just as seamless as placing or answering a traditional cellular call.

The above feature is discussed in greater detail later in this guide, under Phone.

Skype

Windows Phone 8 is the first smartphone to have a truly always-on Skype experience. Simply download the free Skype app from the Windows Phone Store to enjoy all the benefits of Skype on your phone. The new app delivers many improvements, including the following:

- **Always Reachable.** Skype keeps you signed-in and reachable even when the app is closed. It stays 'asleep' in the background until woken-up by an incoming chat or call, which minimizes battery use. You can receive Skype calls just like other calls including when your phone is locked. Skype calls will stay active when you navigate away from the Skype app, and you can easily switch between regular and Skype calls.
- **Centered Around Your People.** Skype contacts are automatically added to your contact list in the People Hub, enabling you to start a conversation on Skype directly from a person's contact card. You can even set your most important contacts as Favorites for easy access.
- **Faster and Easier to Use.** Skype chat updates appear directly on your screen in real-time: resizable Live Tiles show unread message count and/or a text preview of the most recent message, while new Skype chat messages show up as a small "toast" on the top of the screen, including when you're in other apps. You can even add a Skype notification to the Lock screen that shows when you've missed a message.

The above features are discussed in greater detail later in this guide, under Skype.

People Hub

The Windows Phone People Hub brings together the information you have about a person and the ways you can communicate with them in one place. New and improved features related to the People Hub in Windows Phone 8 include the following:

• All Your Contacts — And Their Info — In One Place. We added a new "together" panel in the People Hub — designed to give you quick access to your Groups and Rooms.

- **Adding Contacts.** If your phone is NFC-enabled, now you can also add or share contacts by tapping your phone against another NFC-enabled device.
- **Sharing a Contact.** Now you can share a contact via email or messaging. If your phone is NFC-enabled, you can also share a contact via Tap+Send.
- **Groups.** In Windows Phone 8, Groups now sync to your Microsoft account, so you'll see them in your People list on Hotmail or Outlook.com.
- **Rooms.** Rooms make it easy to stay connected with multiple people at once. Every Room member in a Room Chat session sees each other's messages and replies. Every Room also has a shared calendar, a shared photo and video album, and shared notes all of which are automatically synced across all Room members' phones.

The above features are discussed in greater detail later in this guide, under People Hub.

Photos Hub + Camera

Your Windows Phone makes taking photos as fun and easy as using your digital camera and gives you lots more that you can do with them. New and improved features related to the Windows Phone Photo Hub in Windows Phone 8 include the following:

- **Viewfinder.** Now you can zoom within the viewfinder using two fingers just stretch to zoom in and pinch to zoom out. We also enabled you to turn the flash on or off directly within the viewfinder, without tapping on Settings.
- **Lenses.** Lenses are apps that integrate directly into your phone's viewfinder, making it easier than ever to turn simple snapshots into fantastic photos. Lenses can also help you out in other ways, such as translating text or providing location-based augmented reality.
- **Integrated Editing Tools**. Now you can easily crop, rotate, and auto-fix your photos using built-in editing tools. It's just as easy to use third-party editing apps. You'll know which app was used to edit a photo and can easily reopen it with the same app later.
- Easy to Sync, Share, and Enjoy. You can choose to store your photos on a microSD card if your phone supports one and you have it inserted. You can even start sharing a photo via Tap+Send and complete the transfer using Bluetooth or Wi-Fi — it works between Windows Phone 8 and PCs or tablets running Windows 8.
- **Mobile Photo and Video Album.** In Windows Phone 8, we added a new multi-select feature for working with multiple photos at once.

• Video Sharing. With Windows Phone 8, you can share videos via MMS. In addition, if your phone supports NFC, you can start sharing a video with another Windows Phone 8 device (or with a PC or tablet running Windows 8) via Tap+Send and then use Bluetooth or Wi-Fi to complete the transfer.

The above features are discussed in greater detail later in this guide, under Photos Hub + Camera.

Music + Videos Hub

The Windows Phone Music + Videos Hub puts music and videos — and all you can do with them — in one place. New and improved features related to the Music + Videos Hub in Windows Phone 8 include the following:

- **Buzz Panel.** This new panel shows you Twitter feeds, images, and news feeds when you're viewing an artist in your collection or in the Xbox Music Store.
- **Xbox Music Store.** The new Xbox Music Store makes it easy to discover new music. You can browse by New Releases, Top Albums, Top Artists, or Genres or flick to the "spotlight" panel to see hand-picked recommendations that change on a regular basis.
- Xbox Music Pass. An Xbox Music Pass subscription gives you unlimited access to millions of songs you can stream or download. You can use your Xbox Music Pass on Windows Phone 8, your Windows 8 PC, and your Xbox 360 all for the same low monthly price.
- **Cloud Collection.** When you buy music from the Xbox Music Store, it is automatically stored in your cloud collection. This way, you can take your music with you across your Windows Phone, PC or tablet running Windows 8, and Xbox 360 console without having to sync it first. You can also sync playlists to the cloud for access from other devices.
- More Ways to Sync. If your phone supports a microSD card, you can use it to store your music and videos and to move that content to other devices. You can also use one of the new Windows Phone apps to move music between your phone and your PC or Mac.

The above features are discussed in greater detail later in this guide, under Music + Videos Hub.

Games Hub

The Windows Phone Games Hub provides a centralized place for accessing all your games, finding new ones and connecting with friends. New and improved features related to the Games Hub in Windows Phone 8 include the following:

- **World-Class Games.** Windows Phone provides an ever-growing, managed portfolio of world-class Xbox games, which put quality first and include top titles from some of the biggest names in mobile and console game development.
- **Notifications View.** We replaced the "requests" panel in Windows Phone 7.5 with a new "notifications" panel that also includes turn notifications, friend requests, beacons, and new message alerts.
- **In-Game Purchases.** Support for in-game purchases opens up an entirely new world of game play including "freemium" games that are free to play and offer advanced features, functionality, downloadable content, or related products and services.
- **Xbox SmartGlass App.** With Xbox SmartGlass, you can use a phone (or tablet) to enhance your gaming and entertainment experience on Xbox 360.
- Rich Games Platform. Windows Phone 8 supports game development using Direct3D, which makes it easy to take games written for Windows and port them to Windows Phone 8
 — and vice-versa. This will also help game middleware vendors bring their engines and toolsets to Windows Phone, in turn enabling game developers to easily bring their titles to Windows and Windows Phone from other popular smartphones.

The above features are discussed in greater detail later in this guide, under Games Hub.

Windows Phone Store

The Windows Phone Store — now available in 191 countries and regions — is your superstore for loading-up your Windows Phone with stuff that makes it uniquely yours, including apps, games, and music. New and improved features related to the Windows Phone Store in Windows Phone 8 include the following:

- Finding the Apps You'll Love. You can browse for apps in more ways including top free apps, new and rising apps, top paid apps, best rated apps, or hand-picked recommendations that change every week. Search is also more intelligent, taking into account things such as uninstall rate, crash rates, ratings, and the best version of an app for your device. If you want, you can even see personal suggestions that Bing thinks you may like based on your past behavior and the activity on your Facebook page.
- **Multiple Payment and Delivery Options.** You can pay for purchases in the Windows Phone Store in more ways including using your credit card, PayPal, a Microsoft gift card, or via your monthly mobile service provider bill.

- **Easy App Download, Installation, and Maintenance.** When you restore a cloud backup, it will automatically download any apps you had installed when that backup was captured.
- **In-App Commerce.** Apps now can offer digital products or services for purchase. In-app purchases are processed through the Windows Phone Store, so you'll benefit from the same payment options and safeguards as when you're purchasing an app.
- **App-to-App Integration and Communication.** With Windows Phone 8, we've made apps even smarter by enabling them to communicate with each other and share information on your behalf to deliver richer, more functional experiences.
- **Rich Development Platform and Tools.** In Windows Phone 8, we added support for development using C/C++, which means that developers now can leverage native components in the context of their standard XAML apps.

The above features are discussed in greater detail later in this guide, under Windows Phone Store.

Wallet

The new Wallet in Windows Phone 8 provides a single place for keeping your debit, credit, loyalty, and membership card information. New capabilities in Windows Phone 8 provided by its built-in Wallet include the following:

- **Store All Your Cards.** Windows Phone 8 provides a digital wallet that you can use to keep your debit, credit, loyalty, and membership card information readily at hand, in one place.
- **Pay With a Tap.** If your phone includes an NFC secure element and your mobile carrier supports secure payment, you can pay for purchases by tapping your phone on an NFC-enabled point-of-sale terminal.
- **Find and Store Deals.** You can add new deals or search for local deals. Depending on the information provided for the deal, you may also see options for mapping the vendor's location, getting directions, or calling the vendor.
- **Find Apps That Can Tie Into Your Wallet.** Your Wallet can recommend apps that are able to tie into your cards, such as those for frequent flyer miles or mobile banking.
- **Fast Cards.** This panel provides quick access to commonly used cards that support payment via NFC.

The above features are discussed in greater detail later in this guide, under Wallet.

Office Hub

The Windows Phone Office Hub makes it easy to stay productive on the go. New and improved features related to the Office Hub in Windows Phone 8 include the following:

- Find Your Documents Fast. A redesigned Office Hub makes it easier than ever to find the document you want including views based on how recently you've accessed them and the places in which they're stored.
- **Word Mobile.** Word Mobile in Windows Phone 8 includes a new full-screen reading mode. And now, when you open a document on your phone that you've saved with Word 2013 on your PC, it will even pick up where you left off — with the cursor in the exact same place.
- **Power Point Mobile.** Now you can view slide decks in either portrait or landscape mode. We also added a new thumbnail view, enabled you to see your slides and speaker notes at the same time, and improved rendering of shapes, SmartArt, and animations.
- **Excel Mobile.** Improvements include support for charts, smoother navigation, improved cell selection, and a smooth-floating grid UI. We also added an advanced "sticky" mode that makes it easier to navigate and read cells with lots of text. When you open a workbook, you'll see the same worksheet and zoom level from when it was last saved.

The above features are discussed in greater detail later in this guide, under Office Hub.

OneNote Mobile

In Windows Phone 8, we moved OneNote Mobile from the Office Hub to a dedicated app on the Start screen, making it easier than ever to capture notes and ideas on the go. OneNote saves to SkyDrive automatically, so your notes will always be in sync across your phone and PC. New and improved features related to OneNote Mobile in Windows Phone 8 include the following:

- **Now on the Start Screen.** OneNote Mobile is now a separate app on your Start screen, complete with its own Live Tile that can show you the last note you updated.
- Send Photos to OneNote. Now it's easy to share a photo to OneNote just tap, hold, and select OneNote when viewing the photo.
- Voice Notes. Now you can dictate your notes and have them automatically transcribed and added to OneNote. It works from anywhere on your phone even when it's locked, provided you've enabled this setting.
- Find Your Notes Fast. It's now easier to navigate your notes. You can also search the text in your notes or view them in the order you last accessed them.

The above features are discussed in greater detail later in this guide, under OneNote Mobile.

Email

Windows Phone makes it easy to manage all your email accounts. New and improved email features in Windows Phone 8 include the following:

- **Dark Inbox View.** Now you can choose from a white inbox view or a new "dark" Inbox view that matches your phone's Theme
- **Easy Access to Attachments.** Microsoft Office documents that you've received as email attachments will show up automatically in the Office Hub after you've downloaded and opened them.
- **Voice-to-Text.** You can send and reply to email with your voice. Simply tap the microphone button when composing a new message and start talking.

The above features are discussed in greater detail later in this guide, under Email.

Messaging

Windows Phone makes messaging fun and easy. New and improved messaging features in Windows Phone 8 include the following:

- **Threads.** Now you can delete multiple Threads at once. Just tap Select, use the checkboxes to choose which Threads you want to delete, and tap Delete.
- Send Photos, Contacts, and More. Now you can share more things via SMS/MMS including photos, contacts, videos, voice notes, and contact cards.
- Share Your Location. You can also share your location a few taps is all it takes to insert a map of your location into a message.
- Word Flow Keyboard. Your phone's Word Flow keyboard includes hundreds of new emoticons. It can also correct words and predict the word you're typing or plan to type next, making it easier to hold up your end of the conversation.

The above features are discussed in greater detail later in this guide, under Messaging.

Internet Explorer 10 for Windows Phone

Your Windows Phone puts what the Web is about in your pocket, making it easy to find, view, and act on Web content. New and improved features related to Internet Explorer 10 for Windows Phone include the following:

- **A Fast, Fluid Browser.** When rendering webpages based on JavaScript, Internet Explorer 10 for Windows Phone 8 is up to seven times faster than the version in Windows Phone 7.5. It also provides improved support for HTML5 and W3C standards, including HTML5 touch events.
- **Smart Address Bar.** Now you can choose from three functions for the address bar button: stop/refresh, favorites, and tabs.
- **Optimized for Touch.** When you're browsing modern HTML5-enabled websites, you'll benefit from an experience similar to that provided by touch-enabled Windows 8 devices.
- Receive and Share Links Via NFC. If your phone is NFC-enabled, you can go to a webpage by tapping your phone against an NFC-enabled display, poster, or flyer. It's also easy to share a link via NFC just tap More > Share Page > Tap+Send. (You'll only see this option if you have a NFC-enabled phone.)
- Find on Page. Find-on-Page is back in Windows Phone 8, making it easy to find text on a webpage.
- **Help Protect Your Safety and Privacy.** Internet Explorer 10 for Windows Phone includes a "Do Not Track" setting. When enabled, it sets a flag within all webpage requests indicating that the user does not wish to be tracked. The website then chooses how to respond to this flag.
- **SmartScreen Filter.** Internet Explorer 10 for Windows Phone 8 includes the same advanced SmartScreen Filter that's in Internet Explorer 10 in Windows 8, which alerts you whenever you try to visit a potentially malicious site.

The above features are discussed in greater detail later in this guide, under Internet Explorer 10 for Windows Phone.

Search

Your Windows Phone can help you quickly find what you want, without ever launching your browser. New and improved search features in Windows Phone 8 include the following:

- **Bing Explore.** From the Bing homepage, flick left a few times to see what's playing in local theaters, top news headlines, top videos, local events, and local deals.
- **New Search Categories.** Bing Search results now include four categories: web, local, media, and shopping.
- Local Scout. A new "for you" panel provides opt-in personal suggestions based on your search history and social networks. You'll even see why something was suggested, such as a friend liking it or the fact that you were looking for similar things in the past.
- **Quick Cards.** Quick Cards show a quick summary of relevant information, reviews, and related apps when you search on certain topics, in a format tailored to your Windows Phone. In Windows Phone 8, we expanded the categories for Quick Cards to include places, products, movies, events, news, deals, and videos.

The above features are discussed in greater detail later in this guide, under Search.

Maps

Your Windows Phone also comes with built-in GPS and Maps, so it can know where you are and show you how to get where you want to go. New and improved mapping features in Windows Phone 8 include the following.

- **Nokia Map Technology**. Through our partnership with Nokia, we've been able to deliver an amazing mapping experience including map data for more than 180 countries.
- **Get Maps and Directions.** In Windows Phone 8, now you can download any of several mapping apps (such as Nokia Drive) and easily open that app from within several locations in your phone to get turn-by-turn directions from that app.
- **Offline Maps.** Now you can download maps for offline viewing. Just go to Settings, tap Download Maps, and then tap Add to select the region or country you want.
- **Traffic Updates, Aerial Views, and More.** We recently improved traffic data to include more secondary streets and expanded geographic coverage to 26 new countries.

The above features are discussed in greater detail later in this guide, under Maps.

Sync and Manage Your Phone

Windows Phone 8 takes advantage of Microsoft cloud services to make syncing and managing your phone simple and easy. New and improved features that make it easier to sync and manage your phone include the following:

- Your Data, Anywhere. Windows Phone 8 is designed to work with Microsoft cloud services such as SkyDrive, Office 365, and Outlook.com, making it easy to access your data across your devices and on the Web.
- **Backup and Restore.** Windows Phone 8 can automatically back up your device settings to the cloud, making it easy to set up or restore your phone if it's lost or stolen, or if you choose to reset it for any reason.
- **Over-The-Air Updates.** Software updates are now delivered over-the-air, eliminating the need to plug your phone into your PC.
- Windows Phone Apps. Regardless of whether you're running Windows 7, Windows 8, or a Mac, you can use one of our new companion apps to directly transfer content between your desktop, laptop, or tablet and your phone. You can even sync with iTunes.

The above features are discussed in greater detail later in this guide, under Sync and Manage Your Phone.

Windows Phone 8 for Business

Windows Phone 8 is designed to meet the needs of businesses large and small. However, many new and improved features in Windows Phone 8 that make it ideal for business use are IT-centric and thus beyond the scope of this guide. That said, we've provided a brief overview near the end of this document.

For detailed information on how Windows Phone 8 is designed to meet the needs of businesses — and the new and improved features that support this — see the Windows Phone 8 for Businesses Reviewer's Guide, which you can get from your Microsoft PR representative.

Basic Navigation

Windows Phone 8 is optimized for touch navigation. However, we realized that a few "power" hardware buttons would make your phone even easier and more intuitive to use. We also included Microsoft Tellme voice capabilities — just in case you'd prefer to tell your phone what you want to do.

Hardware Buttons

Your Windows Phone has several hardware buttons. Five of them are part of our standard hardware specification, so you'll find them on Windows Phone devices from all original equipment manufacturers (OEMs).

- Start Button (1). When you tap the Start button, it takes you to the Start screen from anywhere on the device, including when you're in the middle of an app. Or, if you press and hold the Start button from any screen on the device, you'll activate listening mode to use your phone's built-in voice capabilities.
- Search Button (2). If you need to find something quickly, just tap the Search button and it'll take you to Bing Search, regardless of where you are on your phone. You can even press and hold the Start button for one-touch voice search.
- Back Button (3). You can use the Back button to go back within an app or between apps. The Back button also lets you navigate to a previous screen or webpage; exit a search operation; or close an on-screen keyboard, menu or dialog box. Press and hold the Back button to display a list of running apps and choose the one you want. This last behavior is described in more detail below, under Multitasking.



- Camera Button (4). Your Windows Phone has a Camera button within easy reach. The Camera button is dual-action, supporting both full-press and half-press modes. A full press launches the camera application, after which a half press activates the autofocus feature and a full press takes the photo. You can press and hold the Camera button to activate the camera and take a photo when your phone is off even if it's locked. (This button is only included when your phone has a camera, as will all Windows Phone 8 launch devices.)
- Volume Buttons (5). The Volume buttons adjust the volume of an active audio stream, such as a phone call, music audio, or an in-progress movie. Pressing one of the Volume buttons when you receive an incoming call will silence the ringtone.
- **Power Button (6).** If your Windows Phone is off, a brief press on the Power button turns it on. When the phone is on, a brief press of the Power button will turn off the display and lock the phone.

Multitasking (Improved)

Your Windows Phone automatically pauses built-in and third-party apps when you go to do something else, so that you won't need to start from scratch when you return to them later. For instance, if you're in the middle of playing a game, you can easily take a break to check email or send a text and then continue your game where you left off.

In other cases, apps can keep executing in the background. For instance, you can start playing music using your phone's built-in media player or favorite third-party media player, and it will continue to play when you go to do something else. In Windows Phone 8, we extended this functionality to support background execution for location and VoIP apps, so that your navigation app can still track your location when you're doing something else on your phone. Similarly, you can still get your Skype calls when you're not in the app.

Your Windows Phone makes it easy to switch between apps, even when you have several



open. When you're in an app and want to do something else, just tap the Start button and navigate to the new app. When you're ready to go back to what you were doing before, press and hold the Back button to see thumbnails of the screens you've recently been on and tap the one you want.

The task-switcher display, which is matched to your phone's color theme, shows thumbnails of the last screen displayed for each app. Your most recent app is always on the far right, displayed by default, with the apps you used before that to the left. The task-switcher pauses for incoming calls and is dismissed when your phone is locked. The Start, Back, Search, Power, and Camera buttons dismiss the task switcher, and the Volume buttons work when the task-switcher is displayed.

We designed multitasking in Windows Phone 8 to have minimal impact on your phone's performance and battery life. To take advantage of some of the multitasking features in Windows Phone 8, such as fast app resume, apps and games developed or updated for Windows Phone 7.5 or later are required. To take advantage of new improvements to multitasking in Windows Phone 8, such as background execution for location and VoIP apps, those apps must be written or updated for Windows Phone 8.

Touchscreen and Touch Gestures

Touch is the primary method for interacting with your Windows Phone, on which all UI controls have been sized for touch interaction. Windows Phone supports the following single-touch (one-finger) and multitouch (two-finger) gestures:

- **Tap.** A tap is a single touch on the screen; placing your finger down on a single point within a bounded area and lifting it back up within a short period of time.
- **Double Tap.** A double-tap is two quick taps within a bounded area.
- **Pan.** To pan, press your finger down and move it in one or more directions.
- **Flick.** To flick, press your finger down followed by a quick move in a single direction and lift your finger up.
- **Touch and Hold.** The touch and hold gesture is performed by pressing your finger down on a single point for a defined period of time.
- **Pinch and Stretch.** To pinch or stretch, press two fingers down and move them closer together or farther apart from each other.

Word Flow Keyboard (Improved)

Your phone's on-screen ("soft") Word Flow Keyboard can be used to input text on your Windows Phone. It's deployed automatically when an edit control becomes active and closes when you tap outside the edit control. It can even predict, suggest and correct words as you type — making it easier to hold up your end of the conversation.

Context-Specific Keyboards

To aid you in performing common tasks, your Windows Phone includes several contextspecific Word Flow Keyboards, including the following:

- **Default.** Standard QWERTY layout.
- **Text.** Standard layout with ASCII-based emoticons.
- Email Address. Standard layout with .com and @ keys.
- Phone Number. Typical 12-key layout.
- Web Address. Standard layout with .com key and customized Enter key. (*Hint: Tap and hold the .com key to select from .org, .edu, and .net.*)
- Search and Maps. Standard layout with customized Enter key.
- **SMS Address.** Standard layout with easy access to phone number layout.

You can even choose multiple keyboard languages. When you do, you'll see a key to the

right of the spacebar for switching between them. Spell-check and autocomplete features that are supported for certain languages also will change to reflect the active keyboard, so they won't go haywire like they would if you used the English keyboard to send a message in French.



Many of the context-specific Word Flow Keyboards also have a dedicated emoticon key, which displays a selection of common emoticons that you can insert – including hundreds of fun and colorful new emoticons that we added in Windows Phone 8.

Word Flow (Improved)

In Windows Phone 8, we made your phone's smart keyboard even smarter. Word Flow, an improved (and renamed) version of the Quick Correct feature in Windows Phone 7.5, can predict, suggest and correct words as you type — making it easier to hold up your end of the conversation.⁵

If you're all thumbs, Word Flow lets you tap on a misspelled word to see suggested corrections, so you'll spend less time trying to select and correct a single letter in a word. For instance:

- Word Flow looks for multiple words when trying to determine what you intended to type. So if you miss the spacebar and hit a letter instead, such as typing "heybyou" when you meant "hey you," you'll now see "hey you" as a correction option.
- Word Flow also considers context when correcting your typing. Try sending a text that says "come over fir dinner" to see how "fir" is corrected to "for" based on context.

Unlike some other popular smartphones, Windows Phone 8 supports a custom dictionary. Rather than just suggesting words from a generic dictionary, Word Flow takes your typing history and custom dictionary into account when suggesting corrections, so you'll be able to enter text faster — with fewer words mistakenly marked as misspelled or auto-corrected to something you didn't intend.

Word Flow can also automatically predict which word you're typing or plan to type next. For instance, type "happy" and your phone will predict that "birthday" may be the word you want. Or, if you always type "hey honey" when texting your spouse, when you type "hey", your Windows Phone will predict "honey" as the next word based on previous typing habits. Go ahead and try it — you'll need to type "honey" for the first text you send. The second time, it'll be the first suggestion after you type "hey."

Word Flow can even predict its way through an entire sentence. Try sending a text that starts with "Le" to see how Word Flow can help you quickly assemble the sentence "Let's get together soon." Pretty cool, huh?

Like the rest of your Windows Phone, we've designed Word Flow to learn how *you* use your phone and act on that information to deliver a more personal and immediate experience. The more you

⁵ Availability of Word Flow varies by market.

use your Windows Phone, the better Word Flow will get at predicting what you want to type next — including personal or made-up words you use with friends and family.

Copy and Paste

Your Windows Phone makes it easy to copy text from one app and paste it into another — including audio feedback and a UI that makes it obvious you can cut once and then paste that content several times. Just tap a word to select it, drag the handles on the highlighted word to expand your selection, and then tap the Copy button.

Pasting the text you've copied is just as easy. Just tap the Paste button, which you'll see prominently displayed on the suggestion bar of the Word Flow Keyboard. After you've pasted your selection once, you'll see the paste button hiding at the left edge of the suggestion bar, just in case you want to paste the same text somewhere else.



Voice Capabilities (Improved)

From anywhere on your phone, press and hold the Start button to use the Microsoft Tellme voice capabilities in Windows Phone, which let you use your voice to call and message people, start apps, search the Web, and more. The following are some examples:

- To make a phone call, say, "Call Oliver Lee, mobile."
- To search for something, just tell the phone what you want, such as "Find movie theaters," and Bing will look for an answer.
- To start an app such as calendar, say, "Open calendar."
- To send a text message, say, "Text Brandy."
- To dictate a note and have it automatically transcribed and inserted into OneNote, say, "Note send birthday card."
- If you're not sure, say, "What can I say?"

Voice capabilities in Windows Phone enable a hands-free experience when receiving and responding to a text. You can compose and send a text by pressing and holding the Start button to activate voice capabilities and then using your voice to select the recipient, compose the text, and send it. And now, with Windows Phone 8, you can also use your voice to dictate an email message or capture a note in OneNote. (More detail on these scenarios is provided in the Messaging, Office Hub, and Email sections of this guide.)



In Windows Phone 8, you can also use your voice to go "deeper" when controlling your apps — provided the app itself has been written or updated to support this capability. For instance, in Windows Phone 7.5, you could say "Open *BookReaderApp*" to open the app on your phone. In Windows Phone 8, if the developer of the app took advantage of this new capability, you could say

"Open *BookReaderApp BookName*" to launch the app and have it app open that book — enabling you to pick up right where you left off, without doing any navigation within the app.

We also improved the accuracy of voice recognition to make it more useful and expanded support for voice search, voice commands, voice-to-text, and text-to-voice to include new markets.⁶ Finally, we exposed access to speech APIs for access by third-party developers, so that they can also build apps that respond to voice commands and take advantage of speech recognition.

⁶ Availability of voice-recognition, voice command, text-to-voice, and voice-to-text features varies by market.

Settings

You'll find Settings on your App list, which is described later in this document. To make them more easily accessible, we divided them into two categories: System Settings and Application Settings. Just flick left or right to switch between them.



System Settings that may prove useful in reviewing Windows Phone 8 include the following:

• **Battery Saver.** Battery Saver helps conserve battery life by automatically turning off things such as push email, Wi-Fi, and the ability for apps to run in the background. You can set Battery Saver to turn on automatically whenever your battery gets low, and can turn it on at any time when your phone is running on battery power and have it remain on until your next charge. When Battery Saver is on, you'll see a heart icon in the battery life indicator.

- **Wi-Fi.** If cellular reception is poor in your area (such as when at home), you may want to enable Wi-Fi access. You can also connect to hidden Wi-Fi networks provided your carrier has enabled this feature.
- Internet Sharing. OEMs and/or mobile operators also have the option to enable support Internet connection sharing — that is, using your phone as a Wi-Fi hotspot. If this feature is enabled, you'll see an additional "Internet Sharing" item under Settings for configuring this feature. Turning it on displays the broadcast network name, the password, and the number of connected devices (5 maximum).
- **Speech.** In Windows Phone 8, you can control your phone in more ways and do more things using your voice. Choose whether to play audio confirmations, enable speech when your phone is locked, or enable speech recognition over the network. You can even dictate an email or a OneNote note.
- **Airplane Mode.** This setting toggles your phone's cellular, Wi-Fi, and Bluetooth radios on or off simultaneously. You can still toggle Wi-Fi and Bluetooth separately.
- **Bluetooth (Improved).** Turn this on to check out some of the new ways that Windows Phone 8 lets you share files, music, contacts, and more or use a Bluetooth headset to control your phone with your voice.
- **Location.** Turning this on enables apps for which you've previously enabled location services to access your current approximate location.
- **Keyboard.** Here you'll find options for adjusting the behavior of your phone's Word Flow Keyboard, such as whether to suggest text and highlight or correct misspelled words. You can choose keyboards for multiple languages and switch between them with a tap.
- **Ease of Access.** Windows Phone 8 includes new features designed to make your phone more accessible. From the App list, tap Settings > System > Ease of access to increase the text size in some apps; enable a special high-contrast theme; turn on the screen magnifier; or use Speech for speed dial, call forwarding, and announcing caller ID.
- **About.** Under About, you'll find a button to reset your phone. It may be helpful if you want to revisit the setup experience for any reason.

Screen Shots (New)

In Windows Phone 8, we added the ability to take screenshots. To do so, simultaneously press your phone's Start and power buttons. You'll hear the shutter sound and see a brief "Saving to

screenshots" notification, and can find the screenshot in a Screenshots album in your Photos Hub — just tap Photos > Albums > Screenshots to get there from the Start screen.

Help and How-To

In writing this guide, we've provided brief instructions for trying out many of great things your Windows Phone can do. However, we didn't want to make it too unwieldy by including all the help and how-to we've created. You'll find a comprehensive Help and How-To section on the Web at: <u>http://www.windowsphone.com/en-us/how-to/wp8/start/windows-phone-tips-and-tricks</u>. You'll also find Help + Tips in your phone's App list.

Getting Started

What You'll Need

To get your Windows Phone up and running and quickly personalized with all your own content, you'll need a few things.

PC Running Windows

Regardless of the system you use, whether it's a PC running the Windows operating system or a Mac, it'll work with Windows Phone 8. To connect and quickly sync media content to your phone, you'll need a PC running the Windows 7 or Windows 8 operating system (or a Mac) and one of three new Windows Phone Apps (discussed next).

New Windows Phone Apps

Say hello to the new Windows Phone apps, which are what you'll need to move content directly between your PC and phone. We've created three of them, so feel free to choose the one that best suits your needs:

- Windows Phone app (for Windows 8). This app is designed for the new Windows 8 experience and takes advantage of new technologies in Windows 8, enabling you to easily move content between your PC or tablet running Windows 8 and your phone.
- Windows Phone app (for desktop). This app works on Windows 7, as well as the Windows 8 desktop experience.
- Windows Phone app (for Mac). This app is similar to the Windows Phone 7 Connector for Mac.

More information on where to get these apps and how to use them is provided near the end of this document, under Sync and Manage Your Phone > Windows Phone Apps.

You can also connect Windows Phone 8 to a PC running Windows XP or Windows Vista, upon which it will be recognized as an external mass storage device.

Online Accounts

To experience all the great things you can do with your phone, you'll need network connectivity from your mobile operator or Wi-Fi and some online accounts. For people reviewing the phone, we suggest the following at a minimum:

- A Microsoft account (formerly called a Windows Live ID) you already have one of you have an account on Xbox LIVE, Zune, SkyDrive, Hotmail, Outlook.com, or other Microsoft services. If you don't have a Microsoft account, you can create one when you set up your phone.
- Facebook, Twitter, and LinkedIn accounts

You can also set up accounts for Exchange Server, Office 365, Yahoo Mail, Google, and other POP and IMAP email accounts.

Microsoft Account

Signing in to your Windows Phone with your Microsoft account lights up many of the services on your phone, such as downloading apps or buying music and videos from the Windows Phone Store, playing Xbox games, using an Xbox Music Pass, and accessing Hotmail or Outlook.com. It also gives you access to tools for managing your phone on the Web — such as mapping it, erasing it, or making it ring loudly. You'll only need to enter your Microsoft account info once, upon initial setup. If you don't have a Microsoft account, Windows Phone will guide you through the accountcreation process.

Signing in with your Microsoft account also provides a safety net. When you sign in with your Microsoft account, contacts that are saved on your phone, such as those you've imported from a SIM card or added to your phone directly, are backed up to the Web, so you won't have to worry about losing them if something unfortunate happens to your phone. Your calendar also is backed up, and you can choose to back up your photos, device settings, text messages, and more. You can also configure



automatic uploads of documents, photos, and videos to SkyDrive.

You can find more information on your Microsoft account at <u>http://windows.microsoft.com/en-US/windows-live/microsoft-account-help-center</u>.

If You Have Multiple Microsoft Accounts ...

Windows Phone stores only one Microsoft account during the setup process, which uses it for single sign-on across Xbox (formerly called Xbox LIVE), Xbox Music, and other Microsoft cloud services. If you already have multiple Microsoft accounts, you'll want to choose the one that you use for initial setup carefully.

- Microsoft music subscription. If you already have an Zune Music Pass or plan on getting an Xbox Music Pass, we suggest that you use the Microsoft account associated with that service. It's not possible to change the Microsoft account you've associated with your music subscription, so you won't be able to use all the music subscription-related features on your phone unless you sign in with the email address you used to create your music subscription. If you don't already have a Microsoft music subscription, you can request one from your Microsoft PR contact.
- Xbox. If you also have an Xbox account (formerly called an Xbox LIVE account) and it uses a different Microsoft account than your Xbox Music Pass account, you can change the Microsoft account you use for Xbox to match the one you use for Xbox Music. To learn how to do this, go to <u>http://support.xbox.com/en-US/billing-and-subscriptions/account-management/managemicrosoft-account</u>.
- **Email.** If you have a Hotmail, Outlook.com, Windows Live, or MSN account and it uses a Microsoft account other than the one you use to initially set up your phone, you can always add those additional email accounts after you complete the initial setup process.

Initial Setup

Setting up your Windows Phone for initial use is easy — just follow the instructions on the screen and you'll be up and running in a few minutes. Although not required to start using your phone, we've also suggested some other things that you do upfront so that you can get the most out of it.

Initial Phone Configuration

When you first turn on your phone, you'll be guided through the initial setup process. Tap your way through the options presented and enter your Microsoft account when prompted. If you don't have a Microsoft account, you'll be asked if you want to create one. You'll also be asked if you want to back up your stuff — we suggest that you say "Yes" to get the full experience. Your phone will be ready to use when you see the Start screen.

If you've already setup your phone, reset it, and are using the same Microsoft account to set it up again, you'll be asked whether you'd like to start fresh or restore your phone's settings from a backup. If you choose restore, your phone will download the backup and then prompt you for passwords for any restored accounts. If one of those accounts requires protecting your phone with a PIN (such as via Microsoft Exchange policy), you'll be asked to setup a new PIN.

Adding Other Accounts

If you have any other accounts that you'd like to add, now is a great time to add them. At a minimum, we suggest that you add a Facebook





To set up a Facebook account, do the following:

- 1. From the Start screen, flick left to go to the App list.
- 2. Tap Settings > Email & accounts > Add an account.
- 3. Select Facebook and enter your Facebook credentials.

You can repeat the process for any other accounts that you'd like to set up.

Syncing With Your PC

Your Windows Phone is cloud-connected, providing a simple and convenient way to move content between your phone and your PC. If you want to do so directly, without using the cloud, you'll need to install and use one of the new Windows Phone Apps mentioned earlier.

Choosing a Theme

If you want, you can also adjust your phone's color scheme. Starting from the App list, tap Settings > Lock & wallpaper > Theme. You can choose a light or dark background and select from 20 different accent colors — more than twice as many as Windows Phone 7.5.

Connecting a Bluetooth Headset

You can use a Bluetooth headset to make calls and control your phone with your voice. To turn Bluetooth on, go to Settings > System > Bluetooth.



Start Screen

The Start screen on your Windows Phone puts what's most important to you front and center, making it as unique as your fingerprint. You'll see the Start screen when you first turn on your phone after you flip up the Lock screen, and you can press the Start button on your phone to return to the Start screen at any time.

By default, you'll see Tiles for Windows Phone Hubs, which bring together information and applications in one convenient location. You'll also see Tiles for other common apps, such as those for browsing the Web, text messaging, or making a phone call, as well for as any email accounts you've set up.

Want to view or update your status on Facebook, LinkedIn, or Twitter? With Windows Phone 8, you won't need to launch separate apps. Just tap the Me Tile on the Start screen to go to the Me Card, where you can post a comment, change your photo, or see posts from friends. Content is aggregated from Facebook, LinkedIn, and Twitter, and you can post to multiple sites at once.

With Windows Phone 8, both the Start Screen and Lock Screen provide even greater levels of personalization, including more of the information you want — right at your fingertips. You can choose from multiple Tile sizes, pin more things to Start, view more information on the Start screen's Live Tiles, and configure what's displayed on the Lock screen. The Start screen is also your entry point to Kid's Corner, a new feature in Windows Phone 8 that lets your kid play a game or take photos with your phone while limiting what else he or she can do on it.


Live Tiles (Improved)

Only Windows Phone has Live Tiles on the Start screen that make your phone reflect who you are. They're large and clear to help you focus on what's important and give you information at a glance, without having to open any apps. They're also dynamic, updating automatically to bring your world to you. For example, the Calendar Tile displays your next appointment, the Phone Tile keeps you informed of any missed calls, and the Messaging Tile will change from a smile to a wink as you get more text messages.

The People Tile shows photos of your contacts. The Music + Videos Tile is tied to Xbox Music and displays an image of the artist that you're listening to. The Photos Tile shows a photo from your phone instead of a generic icon. Place two Windows Phone devices side-by-side and you'll know immediately which one is yours. And with just a quick glance, you'll know what's going on.⁷

Windows Phone 8 makes Live Tiles even more personal and useful by enabling you to easily choose from three different sizes (see Personalizing the Start Screen below).



⁷ Live Tile features require network connectivity and an appropriate service plan. Some features may require a Microsoft account.

Live Apps (Improved)

Only Windows Phone has Live Apps, which make your apps more useful and easier to use. Through their Live Tiles, they put what's important to you right on the Start screen, so that you won't need to dig around on your phone to view your next appointment or check for new email messages. Many Live Apps can also deliver information on your Lock screen, so that you won't have to unlock your phone to stay on top of things. Out of the box, Windows Phone 8 includes several Live Apps — including email, messaging, calendar, Windows Phone Store, and many more.

We've also made it easy for third-party developers to build Live Apps, with thousands of them already available in the Windows Phone Store. By pinning Live Apps you download to the Start screen, you can personalize it with information such as ESPN sport scores, CNN headlines, Delta flight notifications, friends' Foursquare check-ins, Weather Channel forecasts, and more.

You can pin the Tiles for your Live Apps to the Start screen and resize them to small, medium, or large. (Small and medium sizes are required to be supported by developers; the large size is optional.) All three sizes support new types of animations, enabling your Live Apps to "come alive" on your Start screen in new ways.





Personalizing the Start Screen

The Start screen is customizable, so you can make your Windows Phone distinctly yours — and see what's going on, as it happens. More than just app shortcuts, the Start screen's Live Tiles let you put what you care about most right up front, including people, photos, playlists, videos, websites, and map locations. Tiles for any people you've pinned to the Start screen show you those peoples' profile photos and status updates and frequently refresh themselves to show you when that content changes. It's your phone, so feel free to put your favorite apps, websites, photos, music, people, Groups, Rooms, email folders, or Local Scout results front and center.

When you pin a person to the Start screen, you'll get a Live Tile that display automatic updates from that person's social networking feeds on Facebook, Twitter, and LinkedIn, in a way that's not disruptive and lets you avoid constantly checking a bunch of apps to stay on top of what's new. Live Tiles for your contacts also display missed calls and new email and text message notifications. You can also pin Groups and Rooms to the Start screen. When you do, you'll see notifications for all of the people in that Group or Room.

Here are some things to try:

- Pinning an Item to the Start screen. Tap and hold the item and then tap Pin to Start. After the item is added, the Start screen is displayed and scrolls to the bottom to show you the newly added Tile.
- Moving a Tile. Tap and hold the Tile until its appearance changes and then drag the Tile to where you want it. Give the Tile another quick tap to lock it in place.
- Changing the size of a Tile. Tap and hold the tile until its appearance changes and then tap the Resize button at the Tile's lower-right corner to toggle between small, medium, and large.
- Removing a Tile. Tap and hold the Tile until its appearance changes and then tap the Unpin button at the upper-right corner. (This won't remove anything from your phone — only its Tile from the Start screen.)



App List

From the Start screen, flick to the left to pan to the App list, which shows all the apps on your phone. You can pin any app to the Start screen by tapping and holding on its name in the App list and then tapping Pin to Start.

The App list is also your starting point for changing the settings on your phone — just tap the Settings button on the App list to adjust ringtones and sounds; change your phone's theme (color scheme); configure Wi-Fi, Bluetooth, and location services; set up additional email or social networking accounts; and make other changes.

When you have 45 or more apps, the App list will show letters that separate the names of the apps. Tap any letter to display a grid of the entire alphabet and then tap any letter to jump to apps that start with that letter. There's also a search button — just tap it and type a letter or two to narrow down the list. You'll see new apps in your App list as soon as you start to download them, including a progress indicator and whether any downloads are paused.

On the App list, you'll find links to many of the features discussed in this guide, as well as a few that aren't, such as Alarms and Calculator. A complete description of what's on the App list is provided in Appendix B: Applications.



Lock Screen (Improved)

Whenever you turn on your Windows Phone you'll see the Lock screen, which is designed to give you important information at a glance. Across the top, you'll see indicators for cellular signal strength, wireless connection type (e.g., 3G) whether Wi-Fi and Bluetooth are on or off, and battery status. Below that, in larger text, you'll see the day, date and time. When you're playing

music, you'll also see convenient media controls on the Lock screen — and can even choose to display artist images (see Music + Videos Hub later in this document for more information.)

In Windows Phone 8, we've enabled you to customize the Lock screen in new and exciting ways. These include the following:

- More background options. Now you can choose from more than just which photo appears on the Lock screen. You can also choose to display images or information from selected apps or services — such as breaking news from CNN, a wallpaper slideshow from Angry Birds, or the latest Bing photo of the day. A list appears in the setting drop down menu indicating which of your applications support this feature, which automatically checks for updates to the background display every 30 minutes.
- **Detailed app status.** You can choose to display a detailed status update from one app, such as the next appointment for the day on your calendar or the latest message you've received for an email account.



• Quick status notifications. In Windows Phone 7.5, notifications at the bottom of the Lock screen were fixed. With Windows Phone 8, you can choose which notifications appear — up to a limit of five — and the order in which they're displayed. Options include the number of missed calls and voice mails, new text messages or IMs, game alerts, and new emails for up to three accounts. The fifth notification can also be used to display data from a third-party app.

To configure the above features (as well as screen time-out and password), go to Settings > System > Lock screen.

In Windows Phone 8, we also made it less likely to accidentally wipe your phone. Many companies set up a security policy on employees' phones that wipe data if the PIN is entered incorrectly several times. While this can offer valuable protection, it also poses the risk of accidental wipes. For example, toddlers may repeatedly enter an incorrect PIN beyond the specified number of attempts – inadvertently wiping their parents' device.

To prevent such accidents, Windows Phone 8 includes a simple feedback tool. Before the final PIN attempt, the device will display a simple alphanumeric phrase, which needs to be entered exactly before the final PIN attempt can be made.

| 12:38 |
|---------------------------------------|
| SETTINGS |
| lock screen |
| Background |
| choose background |
| Show artist when playing music On |
| Notifications |
| Choose an app to show detailed status |
| Calendar |
| Choose apps to show quick status |
| |
| م 📑 > |

Kid's Corner (New)

According to a survey of United States smartphone users, 66 percent of parents allow their children to use their phones for games, photos, music, and more. Kid's Corner, a new feature available only on Windows Phone 8, provides a great way to help keep an otherwise bored child entertained while out shopping, eating in a restaurant, or just visiting with friends. You choose the applications, movies, and music to make available your child on your phone, and everything else is protected by your Lock screen and optional PIN. So your kids can entertain themselves with Angry Birds, without accidentally placing a call or texting your angry boss.

Setting up Kid's Corner is easy: Just tap on the Kid's Corner Tile, which is provided on your Start screen by default, and then use the wizard to select the apps and content you want your child to be able to use – such as Camera, apps you've deemed suitable, and specific content and titles within the Music + Videos Hub and Games Hub.





After you've completed the setup process, your child will have full access to Kid's Corner from his or her own Lock screen, which is accessed by flicking left from *your* Lock screen. Just flick it up to enter Kid's Corner. If you have a PIN set and the timeout since you last used your phone is expired, you'll need to enter it to unlock Kid's Corner.



Windows Phone Store and in-game purchases are blocked in Kid's Corner, so you won't see any unexpected charges on your accounts. Kid's Corner also blocks Web browsing. (NOTE: If a game is ad-supported and your child taps on an ad, it will open a modified instance of the browser with the address bar removed to help prevent freely browsing. However, any hyperlinks in the destination webpage from the ad will still work. Similarly, tapping a hyperlinked phone number in the webpage will launch your phone's dialer.)

To make Kid's Corner feel even more personal, your child can customize its wallpaper, accent and theme colors, and name that appears on its Lock screen. To leave Kid's Corner, press the power button. When you press it again, you'll be back at your own Lock screen.

Phone

It's easy to get distracted by all the things your Windows Phone can do. But at heart, it's still a phone. And we've designed it to be the most useful phone you've ever had. Windows Phone 8 makes it easy to multitask while you talk — to surf the Web, update Facebook, or view your schedule. You'll be able to quickly and easily talk with the people you care about, without having to worry about accidentally dropping or interrupting the call. Custom Ringtones let you personalize your phone and decide which calls to take, and Visual Voicemail⁸ makes it easy to catch up on the ones you missed.



⁸ Visual Voicemail is carrier-dependent.

Placing a Call

Windows Phone gives you many ways to make a phone call. You can tap an entry in your contacts list or call history, tap out the digits on the virtual dial pad, or even dial by voice. Want to call your friend Nancy Anderson on her mobile phone? Just press and hold the Start button until the Microsoft Tellme listening screen appears and say "Call Nancy Anderson mobile," and your Windows Phone will look up the number for Nancy's mobile phone and dial it.

Your Windows Phone also recognizes phone numbers in email messages and on webpages. Just tap on an underlined phone number to place a call or send a text message to that number.

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Receiving Calls

With Windows Phone, it's easy to decide whether to answer a call. When your phone rings, if the caller is in your contact list, you'll see that person's name and number — even a photo if you've added one to that person's contact card or linked to his or her online profile. Just tap to answer or ignore the call.

If you're doing something on your Windows Phone when a call comes in, such as listening to music or drafting an email, Windows Phone will automatically pause those apps until you finish your call. You can pick up right where you left off.

If you want, you can continue with what you were doing while you're talking on the phone. You'll see a small notification bar at the top of the screen that provides the status of your call. Tap the notification to expand it and go back to the phone app.



Call History and Missed Calls

The Phone Tile on the Start screen shows you when you've missed a call or have unheard voicemail. Tap the Phone Tile to see your call history, which lists all your incoming, outgoing, and missed calls. Tap any entry to see the contact card for that person, from which another quick tap enables you to place a call, send a text message, send an email, or take other actions that are available for that person.

At the bottom of the call history screen, you'll find buttons for manually dialing a phone number, pulling up your entire list of contacts, and checking your voicemail. A quick tap on the More button at the bottom right of the screen lets you delete your call history and access your phone settings.





Juggling Multiple Calls

With Windows Phone, you can juggle multiple calls with ease. Call duration and status — and whether another call is on hold — are visible at a glance, so you'll never get confused. When talking on your phone, a quick tap on the More button lets you activate the speakerphone, mute a call, or put a call on hold.

Want to add a friend to an ongoing call? Just tap the More button and then tap Add Call to put your current call on hold and dial another number. Your phone will show the call that's on hold at the top of the screen, and you can merge the two calls into a conference call with another quick tap of your finger.

Handling an incoming call when you're already on the phone is just as easy. If you're on a call and another call comes in, a quick tap lets you ignore the incoming call, put your current call on hold and take the new call, or end your current call and answer the new one.



Windows Phone 8 Reviewer's Guide

Custom Ringtones

With Windows Phone 8, you can add Custom Ringtones to your phone — just do the following:

- 1. Acquire or create the new ringtone on your PC. Files must be unprotected (non-DRM), less than 40 seconds long and less than 1 megabyte in size. Supported file formats include MP3 and WMA. Xbox Music Pass music cannot be used.
- 2. Change the file's Genre to Ringtone.
- 3. Use one of the new Windows Phone Apps to sync the ringtone to your phone.

We also included a handy link for getting more ringtones, which you'll find under Settings > Ringtones + Sounds.

To use a custom ringtone as your new default ringtone, do the following:

- 1. From the App list, tap Settings > Ringtones + Sounds.
- 2. Tap the existing ringtone and then tap the new one you want to use from the displayed list.

To assign a built-in or custom ringtone to a specific contact, do the following:

- 1. In the People Hub, open that person's contact card.
- On the "profile" panel of the contact card, tap Edit > Ringtone and select the ringtone you want to use for that person.



We implemented Custom Ringtones in a way that makes it possible for developers to build ringtone apps or add ringtone-related features to apps. In this way, any app that revolves around sound or music could potentially become a source of Custom Ringtones for your phone. Like what? Imagine you've downloaded a voice recording app for capturing your baby's giggles or your best friend's comic outbursts. The developer of that app could implement a Save as Ringtone option that turns that sound into a unique ring.

Visual Voicemail

Depending on your mobile operator and phone plan, you may have the option to set up Visual Voicemail, which lets you see your voicemail messages in a list and play them with a tap. Visual Voicemail isn't available for all mobile operators, and it uses your cellular data plan. If it's offered by your mobile operator, it must be enabled on your mobile phone plan, and your mobile operator might charge extra for it.

If Visual Voicemail is supported by your mobile operator and enabled on your plan, you'll see an option to turn it on or off alongside your other phone settings.



Integration with VoIP Apps (New)

Windows Phone 8 provides a new set of public APIs, also known as Rich Communication Suite (RCS), that third-party developers can use to integrate voice-over-IP (VoIP) communication apps directly with your phone's dialer, contact list, and so on — so that these experiences are just as seamless as placing or answering a traditional cellular call.

With VoIP apps that take advantage of RCS, such as Skype, Tango, and Qik, you can receive VoIP calls even when the app is not running thanks to improved multitasking in Windows Phone 8. You'll also see the call notification window above the Lock screen, just like you do with cellular calls, and can easily manage simultaneous VoIP and cellular calls. Of course, you can also multitask while on a VoIP call — it won't stop you from simultaneously using your Windows Phone for other things.



Skype

Download the new Skype app from the Windows Phone Store to stay connected wherever you are. You'll get free calling to over 250 million Skype users, including video calling and instant messaging. In addition to free member-to-member calling, you'll also get low-cost domestic and international calling to any number. (Cellular data charges may apply, but you also have the option to connect over Wi-Fi.)

No other service offers a full suite of communication all in one application. And unlike many other services, Skype works across all major platforms, making it possible to interact with people on a broad range of devices — from TVs and PCs to mobile phones and gaming consoles.

Always Reachable (New)

Skype keeps you signed in even when the app is closed, so you'll always be reachable. Skype calls will stay active when you navigate away from the Skype app, and you can easily switch between regular and Skype calls. You can even receive Skype calls while your phone is locked — the incoming call screen is the same as for a regular call. The Skype app stays 'asleep' in the background until it's woken up by an incoming chat or call, so you won't have to worry about it draining your battery.

Centered Around Your People (New)

When you download the Skype app, you'll see your Skype contacts on your consolidated contact list in the People Hub. You can start a conversation on Skype directly from the contact card — just choose Skype from the list of ways you can communicate with that person. You can even set your most important contacts as Favorites for easy access. And with a Skype ID connected to a Microsoft account, you can communicate and share with all the most important people in your life, regardless of whether they are on Skype or Messenger.

Faster and Easier to Use (Improved)

Skype makes it easy to stay on top of recent messages. Your chat updates appear on the Start screen in real-time via resizable Live Tiles; the small and medium Live Tiles show your unread message count while the large Live Tile provides a preview of the most recent message. You'll see a small "toast" notification on the top of the screen when new messages arrive, including when you're in other apps. You can even add a Skype notification to the Lock screen to view your unread message count at a glance.

For more information on Skype for Windows Phone, go to skype.com/go/windowsphone.

People Hub

Windows Phone is the only phone with a People Hub, which brings together the information you have about a person and the ways you can communicate with them in one place. It combines information stored on your phone with information from your online accounts to provide a single view of all your contacts and what's going on in their lives, with the ability to reach out to them just a few taps away. We designed it to be command central for the many ways you communicate today — from phone calls, emails, and text messages to staying connected on Facebook, LinkedIn, and Twitter.



All Your Contacts — And Their Info — in One Place (Improved)

Just tap the People Tile on the Start screen to view the "all" panel in the People Hub, on which you'll see a single list that combines contacts stored on your phone with your contacts on Outlook, Hotmail, Messenger, Facebook, Twitter, LinkedIn, Google, and other compatible email accounts. If you only want a subset of your contacts across those accounts displayed on your phone, you have that option too. You'll find a Me Tile just like the one on the Start screen at the top of your contact list, providing a quick way to access your Me Card (described below).

A flick of your finger pans to the "what's new" panel, which shows recent status updates and photos that people have posted on Facebook, LinkedIn, and Twitter. Of course, we made it easy to filter which of these social networking services will appear — just tap the red text below the What's New heading; it says "all accounts" by default.

Tapping someone's name takes you to more updates from that person, and tapping on a thumbnail of a photo they've uploaded shows a larger view. Tapping the Comments button to the right of a post lets you see others' comments, respond with a comment of your own, or just give a shout out with a Like to a post.

The "recent" panel puts you in quick touch with people whose information you've recently viewed or that you've recently connected with by phone or text message — complete with profile photos if they're available and recent status updates displayed on the oversized Tiles, just like with those people you've pinned to the Start screen.

In Windows Phone 8, we added a new "together" panel, which gives you quick access to your Groups and Rooms, both of which are described in greater detail below.



Built-In Support for Popular Social Networks

Windows Phone 8 includes built-in support for Facebook, LinkedIn, and Twitter to help you share and stay connected with others. We exposed these social networks throughout your phone to make it fast, easy, and intuitive to do the following:

- Facebook. You can see your Facebook friends and their profile photos in your contact list; view and act on the contact info they've published on Facebook; write on someone's wall; post status updates, photos, and videos; view, like, unlike, and comment on others' posts, photos, and videos; tag people in photos; and see your Facebook events on your phone's calendar.
- Twitter. You can view your Twitter contacts and their profile photos in your contact list; tweet, retweet, comment, reply with @mention, share webpages and photos, and share check-ins. You can also click on @mentions and #hashtags to view profiles or other Twitter posts related to a topic.
- LinkedIn. You can view your LinkedIn contacts and their profile photos in your contact list, see status updates from your contacts, comment on those updates, and share webpages and check-ins.

In addition, Windows Phone 8 supports dynamic addition of new social networks.



Filter Your Contact List

By default, the "all" panel of the People Hub will display a single list that combines contacts stored on your phone with your contacts on Outlook, Hotmail, Messenger, Facebook, Twitter, LinkedIn, and Google. However, you can also filter which of your contacts are displayed. To filter your contact list, do the following:

- 1. From the App list, tap Settings, flick to Applications, then tap People > Filter My Contact List — or, if you're already within the People Hub, just tap More > Settings.
- 2. Tap the checkboxes to choose the desired accounts.

You can also choose to only show social networking posts from people displayed in your contact list — just tap the checkbox below Filter My Contact List on the People Settings screen.

By filtering your contacts on the contacts list and leaving the "Hide posts from the contacts I've filtered" option turned off, you can keep the list of contacts displayed under the "all" panel of the People Hub short-and-sweet while still being able to view updates from all your contacts on the Hub's "what's new" and other panels.



Filter Your Social Networks

While you may want access to all your social networks on your phone, you may not want to see all of them all of the time. In Windows Phone 8, it's easy to filter which updates are displayed. For example, on the "what's new" panel of the People Hub, just tap "all accounts" — it's in colored text, just above the first item displayed — to switch between all social networks and any one of them. You'll see similar filtering options throughout your phone, enabling you to see what you want — and only what you want—with just a few taps.



Consolidated Contact Cards

Tap on someone's name or Live Tile to see a single contact card containing all the information you have about that person, including all the ways you can communicate, recent calls and conversations, and recent activity on Facebook, LinkedIn, and Twitter.

Each contact card can have up to four panels: "profile", "what's new", "photos", and "history." You may not see all these panels for each contact, however, as the "what's new" and "photos" panels are only displayed when you have one or more relevant social networking connections to that person. Similarly, the "history" panel is only displayed when there's a history to show.

The "profile" panel combines information stored on your phone with content from that person's online profiles. You'll see that person's photo, latest status update, and more, with all the actions you can take for that person, such as making a phone call, sending an email or text message, starting a chat session, or mapping an address, just a finger-tap away. If you've installed the Skype app and the person whose profile you're viewing is a contact on Skype, you'll see an entry for communicating in that way, too.

The "profile" panel also is where you can personalize your ringtone for a contact. To do this, tap Edit > Ringtone and select the ringtone you want to use for that person.



If the contact is a friend on Facebook, a contact on LinkedIn, or someone you follow on Twitter, you'll also see a "what's new" panel that shows recent status updates and photos they've posted. It's similar to the "what's new" panel in the People Hub, but shows updates for only that one contact.

The "photos" panel gives you quick access to your friends' photos on Facebook. Just tap to see that person's online albums and photos they're tagged in. Under "albums," the first Tile takes you to the photos in which that person is tagged and the others map one-to-one to their online albums.

The "history" panel shows recent conversations for a contact across the many ways you can communicate on your phone, including voice calls, text messaging, email, and Messenger. Assuming you linked your Microsoft account to your Facebook Chat when prompted to do so, you'll also see your Facebook Chats here. You can even search some email accounts that support Exchange Active Sync for old messages that are no longer on your phone.



Linking Contacts

Windows Phone can link multiple profiles for people automatically, so that all their information and the different ways you can reach out to them will show up in one place. Your phone will attempt to link profiles automatically based on information such as name, phone number, and email address. If you install the Skype app, Windows Phone can even link your Skype contacts.

To link one profile to another manually, select the Link button at the bottom of either contact card and select the other profile to which you want to link. Adding information to a profile for an online contact, such as a phone number that a Facebook friend doesn't have on his or her Facebook profile, stores the information in a separate profile in an account that you own, such as Hotmail or Google, and automatically links the two profiles for you.

When profiles are linked, you'll see an indicator showing how many profiles are linked together on the Link button. Tapping the button lets you link to another profile or unlink profiles.



Adding Contacts (Improved)

Windows Phone gives you multiple ways to add new contacts. To add a new contact manually, just tap the Add button at the top of your contact list in the People Hub, enter that person's information, and tap the Save button. You can even take and/or include a photo if you want. You can also add contacts by syncing with additional online accounts or by importing contacts from a SIM card (described below).

If your phone is NFC-enabled, you can also add contacts that way. When someone shares a contact via NFC, your phone will vibrate and you'll see a popup notifying you that someone is attempting to share a contact. Tap Accept to initiate the transfer, after which you'll see the new contact card and can tap Save to add it to your phone.



Sharing a Contact (New)

It's easy to share a contact. While viewing the "profile" panel for a contact, just tap More > Share Contact, tap Share, and then choose the method you want to use to share: email or messaging.

If your phone is NFC-enabled, you can also share contacts via Tap+Send. Contacts can be shared with other NFC-enabled devices—such as NFC-enabled Windows 8 PCs and other NFC-enabled Windows Phones.



Instant Access to Favorite People

Contacts you've recently viewed or communicated with via phone or text messaging are highlighted in the "recent" panel on the People Hub, giving you fast and easy access to people you're most likely to communicate with. Want to make someone's info even more immediately accessible? You can pin people to the Start screen for one-tap access to contact information and status updates. Just tap and hold the contact's name on the "all" or "recent" panels in the People Hub and tap Pin to Start, or tap the Pin button at the bottom of someone's contact card. There's no limit to how many people you can add.



Groups (Improved)

Groups lets you mirror your real-life relationships on your phone by grouping your contacts together in ways that match the interactions in your daily life, such as a carpool or a collection of work colleagues. You can communicate with the members of a Group no matter which phones they have. You'll have quick access to your Groups on the "together" panel of the People Hub.

When you tap a Group, you'll see the following:

- A "group" panel that shows a Live Tile for each Group member and gives you one-tap access to all the ways you can communicate, including email, text messages, and Messenger. Want to tell everyone in your best friends Group that you're going to the movies tonight? Just tap the messaging method you want to use and, assuming that all Group members can receive that type of message (shown by "Everyone" in small text), you can reach out to everyone at once.
- A "what's new" panel, which shows you social networking updates from everyone in the Group.
- A "photos" panel, which shows you photos in which members of the group are tagged and gives you quick access to their photo albums.



To create a new Group, tap the New button on the "together" panel and then tap New Group. Editing a Group also is easy—just tap on the Group and you'll find the Edit button at the bottom of the screen.

You can even pin a Group to the Start screen, just like a person. When you do this, you'll see a Live Tile for the Group that notifies you when anyone in the Group posts new things to Facebook, LinkedIn, or Twitter. You'll also a notification when someone in the Group sends you an email or text message—or when you miss a call from anyone in the Group.

In Windows Phone 8, we made Groups even better. They now sync to your Microsoft account, so you'll see them in your People list on Hotmail or Outlook.com.



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Rooms (New)

You can think of Rooms—a new feature in Windows Phone 8—as an even better version of Groups. Like Groups, Rooms make it easy to share social updates and communicate with multiple people at once. But with Rooms, you also get an invitation-only space where all Room members can share a common calendar, notes, and a photo/video album. In this way, Rooms are an ideal way for families, sports teams, community organizations, and other groups of people to stay in-touch and in-sync.

With Rooms, you get the following:

 Room Chat. Unlike with group texting, every Room member in a Room Chat session sees each other's messages and replies, making it easy to keep everyone in-the-loop—and only Room members can see those messages. And with the new Location Sharing feature in Windows Phone 8 (discussed under Messaging later in this document), you can just as easily let everyone else in a Room know exactly where they are.



- Shared Calendar. Every Room has a shared calendar, which all Room members can view and update. If anyone adds an event or makes a change, it is automatically synced to all other Room members' phones. (Note: The shared calendar within a Room shows only events for that Room. Tap More > Show All Calendars to go to your main calendar and view all your appointments. See Calendar later in this document for more on your phone's Calendar.)
- **Shared Photo Album.** Rooms also provide a shared photo and video album—just share a photo or video with a Room and it'll be visible to all Room members. It's as easy as sharing a photo on Facebook and only takes a few taps.
- **Shared Notes.** Rooms also make it easy to share OneNote notes, which are automatically synced across all Room members' phones. It's easy to create additional notes, so you can create separate ones for the grocery list, weekly chores, and other purposes.

Anyone in the Room can change its background image—just tap More > Choose Background from the Room's "members" panel. Because the room is shared, changes to the background photo are automatically synced to other Room members' phones.

A compelling aspect of Rooms is how easy they are to setup and use. Creating a new room and inviting new members to a room is quick and easy, with no configuration needed. To create a new Room, just tap the New button on the bottom of the "together" panel of the People Hub.

Only the person who created the room can invite or remove Room members. Room invitations are sent via SMS. If the person you invited is also using Windows Phone 8, after that person accepts the invitation, his or her phone will provision the room and you're all set.

We designed Rooms so that the shared calendar feature works with iOS and Windows Phone 7.5 devices too. If you send a Room invitation to someone using an iOS device or Windows Phone 7.5, he or she will get a link to a webpage that provides directions on how to configure that device's calendar for calendar sharing.



Me Tile and Me Card

With Windows Phone 8, you won't need to launch multiple apps to post on Facebook, LinkedIn, or Twitter. Just tap the Me Tile—you'll find it on the Start screen and at the top of your contact list in the People Hub—to go to your Me Card. It's great for updating your status or profile photo, and for seeing and responding to new posts on your social networks. The Me Card has three panels:

- A "share" panel for changing your profile photo, updating your status, checking-in to a location, setting your chat status for instant messaging, or posting a message on Facebook, LinkedIn, or Twitter. You can even post to all three social networks at once.
- A "notifications" panel, which provides a summary of social network activity that involves you, such as someone posting on your wall or commenting on one of your photos.
- A "what's new" panel, which lets you view social networking messages, comments, and photos.

The Me Tile on the Start screen and in the People Hub give you information at a glance. You'll see status updates, photo updates, check-ins, missed calls, and whether you have new text messages, email messages, instant messages, and voicemail.


Quick Jump and Search

Know lots of people? The Quick Jump menu makes it easy to fast-forward through your contact list. Just tap any of the letters that separate the names in your contact list, such as the "a" button near the top, to jump to names that start with another letter of the alphabet.

You can also search for someone by their first or last name. Just press the Search button and type a character or two to narrow down your list of contacts to people whose first or last names begin with the letters you've typed.





Easy SIM Import

Adding contacts stored on your old phone's SIM card is also easy. Just do the following:

- 1. Put your old SIM card into your new phone.
- 2. From the Start screen, flick to the App list.
- 3. Tap Settings, flick to Application Settings, then tap People > Import SIM contacts.

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Photos Hub + Camera

In the past, photos were about preserving a memory. Today, they're equally about sharing that moment. More people today are taking photos with their phones, and more of those photos are posted to social networks and shared online in other ways.

If you're carrying your Windows Phone, you're ready to capture great photos, enjoy them, and share them with others.⁹ It makes taking photos as fun and easy as using your digital camera and gives you lots more that you can do with them. You can go from pocket to photo to posting online in seconds and take more photos just as quickly, with a dedicated camera button that works even when your phone is locked to help capture that important shot. The camera in your phone also provides advanced features such as continuous auto-focus, face focus, a fast shutter, pinch-to-zoom, integrated photo editing tools, and more.



Your Windows Phone also makes it easy to enjoy your photos, share them with others, and view and comment on others' photos. Just tap the Photos Tile on the Start screen to go to the Photos Hub, which shows all your photos in one place, including photos on your camera and your photos

⁹ A camera is not required per the Windows Phone 8 minimum chassis specification; however, all launch devices will have both rearfacing and front-facing cameras. See Appendix C: Hardware Specifications for more information.

on SkyDrive and Facebook. Flick to the "what's new" panel in the Photos Hub to see photos that others are sharing with you on those sites, view comments that people have posted, and add a comment of your own. You'll find it just as simple to add captions and share your own photos with others, post photos to Facebook and have them automatically saved for you to SkyDrive, and keep the photos on your phone synchronized with those on your PC.

Want to know when people comment on the photos you've posted? Just glance at the Me Tile on the Start screen and it'll let you know. You can also discover your friends' albums and find photos of your friends from the People Hub, from the Photos Hub, from within people's contact cards, and from within Groups.





We designed the Photos Hub experience to be as unique as you are—and to suit your preferences. By default, the Photos Hub's background and Photos Live Tile on your Start screen will change to show new photos that you've taken. If you'd prefer to choose a single photo or have your phone cycle through only those you've marked as favorites, you have those options too.

In Windows Phone 8, we made the photos experience even better. New features include additional tools for editing photos on your phone, new ways to sync and share, and Lenses, which let you apply virtually unlimited creativity to your photos.





Pocket to Photo in Seconds

Your Windows Phone works just like a digital camera, enabling you to quickly and easily capture high-quality photos and video. You can take a photo in seconds, share it online in just a few more seconds, and take the next photo just as quickly. And with a minimum of 4 GB of flash memory on your phone and an additional 7GB of free storage on SkyDrive, you'll be able to store lots of photos without running out of space. You can shoot video too—just tap the button that looks like a movie camera to switch between camera and video modes.

Your phone's dedicated camera button works even when your phone is locked to help you quickly capture that important shot. After that, you can use your phone's viewfinder (described next) to review it and any other photos—and see thumbnails of any videos—that you captured during that session. With your permission, Windows Phone will automatically tag photos with location data, so that you'll always know where a photo was taken.





Viewfinder (Improved)

A press of your phone's camera button activates the camera viewfinder, on which you'll find buttons for switching between photo capture and video capture, adjusting flash mode, and choosing a Lens (discussed next). Tap More in the viewfinder to adjust your camera's photo and video settings, including scene mode, ISO, white balance, aspect ratio, and video quality. OEMs and mobile service providers can customize camera settings to add additional features.

Icons in the viewfinder rotate as you switch from portrait to landscape orientation, so they'll always appear as they should. Photo and video settings you adjust can be saved, so you won't need to turn off the flash every time you use the camera. You can even tap any spot on the screen to focus there and take the shot — all in one fell swoop.

If you used Windows Phone 7.5, you may have noticed that the zoom buttons are gone in Windows Phone 8. That's because now you can zoom within the viewfinder using two fingers — just stretch to zoom in and pinch to zoom out. We also enabled you to turn the flash on or off directly within the viewfinder, without tapping on Settings. You'll also see buttons for selecting a Lens (discussed next), switching between photo and video capture, and using your phone's front-facing camera.

Reviewing the photos you've taken is just as fast and easy, without the need to open a separate folder or application. The last photo you took is just off the left edge of the camera viewfinder, enabling you to easily flick through shots and decide which ones are "keepers." Photos you've taken in portrait mode will have the same orientation when you review them, so you won't have to turn your phone sideways to view them. Flick in the other direction or press the camera button to return to the live view.



Lenses (New)

With Lenses in Windows Phone 8, you can unleash your creativity in virtually limitless ways. You can think of Lenses as photo apps that integrate directly into your phone's viewfinder, making it easier than ever to turn simple snapshots into fantastic photos.

A Lens can be any app that uses your phone's viewfinder. The first category that meets this definition falls into what many of us think of as traditional "photography" tools — that is, they do things such as applying special effects, stitching several shots together into a panorama, applying color or tone filters, "framing" a photo, or capturing several shots in rapid succession.

Lenses can also work together with your phone's Camera and viewfinder to help you out in other ways. For example, the Bing Vision Lens (discussed in more detail later, under Search and Maps) helps you explore the world around you by using your phone's camera to scan a barcode and lookup product information or translate text from one language to another. Similarly, a Lens could provide location-based augmented reality, showing you nearby places of interest on the viewfinder when you point your phone's camera in their direction.

Tap the Lenses button in the viewfinder to select a Lens. When you capture a shot using a Lens, you'll see text below the photo indicating which Lens you used to capture it. In the Photo Viewer, when viewing that photo, you'll see an option for editing it using the same Lens added to the menu of options.

Finding and downloading lenses is easy, too. Just tap Find More Lenses in the Lens Picker to explore Microsoft and third-party lenses in the Windows Phone Store. Device manufacturers and mobile operators can customize the default Lenses you'll find on your phone.



Integrated Editing Tools (Improved)

Windows Phone 7.5 provided an Auto-Fix feature for quickly correcting your photos. In Windows Phone 8, we added two more tools: crop and rotate. When viewing a photo that's on your phone, tap More > Edit to do the following:

- Rotate. Each tap of the Rotate button rotates your photo 90 degrees clockwise.
- **Crop.** Tap the Crop button, drag the blue crop handles to adjust the crop area. If you want a predefined aspect ratio, just tap the Aspect Ration button to select from several predefined options. When you're finished cropping your photo, tap Done.
- **Fix.** Tap the Fix button to have your Windows Phone automatically correct global and local exposure levels and white balance for a photo. If you don't like the changes, tap the button again to undo them.



Changes from using the above tools are only saved when you tap the Save button. If you don't want to save them, just tap your phone's Back button to exit edit mode without saving. Also, note that you can only edit photos stored on your phone. You can save photos from online albums to your phone and then edit them, but it will only change the copy that's on your phone.

Of course, you can also use your favorite editing apps to tune-up your photos. Simply select a photo on your phone, tap Apps, and launch the app you want.

As with Lenses, when you use a third-party app to edit a photo, you'll see which app was used to edit that photo in the Photo Viewer and an option for opening the photo using the same app added to the menu of options for it — provided the app supports these features.



Easy to Sync, Share, and Enjoy (Improved)

With Windows Phone, there's no need for photos to remain stuck on your phone. You can also upload photos to SkyDrive for sharing or use SkyDrive to sync your photos across devices, share and comment on selected photos on Facebook, save photos from SkyDrive or Facebook to your phone, and send photos using email, MMS, or Tap+Send (via NFC). Just tap and hold on any photo that's stored on your phone to share it, edit it, delete it, add it to your favorites, make it your Lock screen image, and more.

When you're viewing photos on Facebook, you'll see the captions and comments associated with them and can instantly add a comment of your own. If you're viewing a photo while browsing the Web on your phone, just tap and hold to save it to your phone, after which you can do all the same great things you can do with the photos you took on your phone. The same goes for photos you're viewing on Facebook or SkyDrive.

It's just as easy to share the photos stored on your phone with others. When viewing a photo, just tap, hold, and then tap Share to share your photo via Tap+Send, Messaging, or email. You can also share your photos on Facebook or Twitter, share them with a Room, insert them into OneNote, or share/upload them via installed photo apps that support it. You can even start sharing a photo via Tap+Send and complete the transfer using Bluetooth or Wi-Fi — it works between Windows Phone 8 and PCs or tablets running Windows 8.



Want to access your photos from another device — or simply back them up just in case your phone is ever lost or stolen? You can set up Windows Phone 8 to automatically upload all the photos you take to SkyDrive, so that you can also access them on your PC, a Windows 8 tablet, or just about any device connected to the Internet. With SkyDrive, you get 7GB of free storage, with no limit to the number of photos you can store in the cloud or how long you can store them. You can also control how your photos are organized and who can view them.

By default, photos are uploaded to SkyDrive in medium resolution to minimize transfer time, reduce data consumption, and enable you to store more photos in the 7GB of free storage you have on SkyDrive. And now, in Windows Phone 8, you can also configure your phone to use Wi-Fi to automatically upload full-resolution photos and videos.¹⁰ To do so, go to Settings > Applications > Photos+Camera and then tap SkyDrive under Auto Upload.

If you also use a stand-alone digital camera, you can still enjoy and share those photos with your Windows Phone by using one of the new Windows Phone apps and a USB cable to move them between your PC and your phone. Or you can upload photos you took with your camera from your PC to SkyDrive, where you'll have access to them from your phone. Either way, location data and other information within your photo files are retained.

And now, with Windows Phone 8, you can also choose to store your photos on a microSD card if your phone supports one and you have it inserted. Just tap Settings > Phone Storage to adjust this setting.



¹⁰ Full-resolution automatic upload of photos and videos to SkyDrive is not available in all markets.

Mobile Photo and Video Album (Improved)

You can also use your Windows Phone as a mobile photo and video album. Photos and videos that you take with your camera are siblings in your photo gallery, so you can see all the great videos from your last vacation alongside your photos from the trip — instead of having to view them in two different places. Of course, you can pin any album to the Start screen to keep those memories fresh.

In Windows Phone 8, we added a new multi-select feature for working with multiple photos at once. When viewing an album, just tap Select and then tap the photos you want — or tap More to select all photos. Then tap one of the buttons at the bottom of the screen to add them to your Favorites, delete them, or share them — or tap More to save them to SkyDrive.



Photo Tagging and Automatic Face Detection

With Windows Phone 8, you can tag photos you've taken with your phone when sharing them on Facebook or SkyDrive. You can also use your phone to tag photos that are already in your Facebook and SkyDrive albums. Either way, your Windows Phone can automatically detect the faces in your photos, so that you can easily tag the people in them.

To tag people in a photo, do the following:

- 1. Tap to open the photo, tap More (or tap and hold on the photo), then tap Add or View Tags.
- 2. Tap the face you want to tag, and then choose or type a tag.
- 3. Tap Done.



Video Sharing (Improved)

You can share videos captured on your phone on Facebook, on SkyDrive, and by email. And now, with Windows Phone 8, you can also share videos by MMS. All Windows Phone 8 devices support transcoding, which your phone can use to decrease file size for sharing. Restrictions for sharing videos and when they're transcoded are based on file size and depend on connectivity and destination and method of sharing.

As with photos, when sharing between Windows Phone 8 and a PC or tablet running Windows 8, you can start to share a video via Tap+Send — that is, use NFC to initiate the transfer — and then use Bluetooth or Wi-Fi to complete the transfer.



Background Photos and Other Settings

The background photo in the Photos Hub and on the Photos Live Tile is completely customizable — just tap More on any of the panels in the Photos Hub to choose a photo or switch back to shuffle mode. With shuffle mode, you can tag any photos that are stored on your phone as favorites and they will show up on the Photos Hub background and on the Photos Live Tile on the Start screen, so you can always see your favorite photos in both places.

The Settings screen — also accessible from the More button — is where you can adjust other options, such as whether tapping on the screen will take a photo, whether pressing and holding the camera button will wake up your phone, whether location information is captured, and options for automatically uploading your photos.



Music + Videos Hub

The Music + Videos Hub puts all your media — and all you can do with it — in one place. It's your destination for all things media and entertainment, including finding and playing your favorite songs, videos, or podcasts; and downloading or streaming music from the Web — including rich album art and top-notch playback quality to immerse you in the content. Want tunes that fit your mood? Smart DJ is designed to provide just the right mix. Your Windows Phone can even sync effortlessly with your iTunes library.¹¹



Apps like YouTube, Last.fm, and Slacker can integrate with the Music + Videos Hub, so that the most recent things you've watched and listened to are always displayed front and center, regardless of which apps you used. Third-party apps that take advantage of multitasking in Windows Phone can keep playing your favorite music while you read your email, send a text message, browse the People Hub to check out new status updates and photos, or find a restaurant and book a table for tonight.

From end-to-end, the Music + Videos Hub is personalized to reflect your taste. It's also cloudconnected — powered by the new Xbox Music service, which makes it easier than ever to find the tunes you'll like. And with cloud collection, a new feature provided with Xbox Music, you can store your music in the cloud for streaming access from your Windows Phone, PC, or Xbox 360. Put simply, with Windows Phone 8, your music can follow you and not your device.

¹¹ Requires Windows Phone app (for desktop) or Windows Phone app (for Mac).

The new Xbox Music Store is also part of the Xbox Music experience, making it easy to explore new media on the go and share the great new things you find with friends.¹² With tens of millions songs to choose from, we're confident that you'll find the tunes you like. Can't get enough music? A monthly Xbox Music Pass subscription will give you unlimited access to the entire Xbox Music Store library from your Windows Phone, PC, or Xbox 360. With the new Xbox SmartGlass app, you can even browse your music on your phone and play it on your Xbox 360.

¹²Microsoft account required for these features.

All Your Media — and All You Can Do With It — In One Place

Tap the Music + Videos Tile on the Start screen to go to the Music + Videos Hub. We designed the experience it provides to be as unique and dynamic as you are — from personalized playlists to beautifully displayed content that reflects your musical tastes. Your music journey is reflected in the Hub, which is updated every time you play content.

On the "collection" panel, you can explore your music, videos, and podcasts by media type. Within your music collection, you can browse by artists, albums, songs, playlists, or genres. Context-sensitive menus let you quickly add songs, albums, or artists to your Now Playing list; pin a song, album, or artist to the Start screen; find similar media in the Xbox Music Store; and share the media you're enjoying with others. If you're not sure what you want to hear, the Play Music button at the bottom of the "collection" panel will start playing your entire music collection in shuffle mode.

The "history" panel in the Music + Videos Hub provides easy access to whatever you were enjoying last. It works across a variety of media types, eliminating the need to look in different places for various types of recently played media. (Note: You'll only see this panel after you've played some media and established a history.)





The "new" panel shows media that you've recently purchased or synced to your phone. By default, you'll see Tiles for purchasing an Xbox Music Pass (discussed later) and for connecting your phone to your PC to start adding your own media to your phone.

On the "xbox" panel — it's new in Windows Phone 8 — you'll see a Tile for the Xbox Music Store. Just tap it to start exploring the Store's library of tens of millions of songs. If the Microsoft Account you used to set up your phone is already associated with an Xbox account, you'll also see a Tile for downloading the Xbox SmartGlass app (discussed in more detail later, under Games Hub) and hand-picked Spotlight recommendations from the Xbox Music Store. (Note: If the Microsoft Account you used to setup your phone isn't associated with an Xbox account, you can sign up for an Xbox account on the "xbox" panel of the Games Hub. You may want to do this now to get the full Music + Videos Hub experience.)

Apps that you download can also tie into the panels in the Music + Videos Hub. Those that do will show up on the "apps" panel in the Music + Videos Hub, which you'll only see after downloading one or more relevant apps.



Buzz Panel (New)

When you're viewing an artist within the Xbox Music Store or your collection, you'll see a new "buzz" panel that displays Twitter feeds, images, and news feeds for that artist.



Rich Media Player

Your Windows Phone is a full-featured media player — similar to a premium portable media device. Its touch-friendly user interface makes it easy to browse content and, with Xbox Music built-in, you can see additional information about the media on your phone. Intuitive, context-sensitive menus make it easy to add songs to your Now Playing list; pin a song, album, or artist to the Start screen; and share which media you're enjoying with others.

The media player supports a variety of content types, including .mp3, .m4a (aac), .wma, .mp4, .m4v, .wmv, and .jpg formats. You can listen to audio on your phone using a Bluetooth stereo headset or through its built-in 3.5mm mono audio jack, and you can control music playback from anywhere on the phone — even when it's locked. Audio playback works in concert with your phone's other functions, such as by gradually decreasing the volume when a call is received and by putting your phone into a power-saving mode while playing music to extend battery life.

Playback controls on the built-in media player



are large enough for easy access. They're always the same size and in the same place, so you'll always know where to tap. The Rate, Shuffle, and Repeat buttons, which you'll find just to the right of the album art, are also always readily accessible. You'll see the names of the next two songs when jamming to a Smart DJ mix, and can easily play your entire music collection in shuffle mode by tapping the Play button at the bottom of the "collection" panel. Finally, you'll see an icon on your phone when you're listening to streaming music so that you'll know when you're consuming bandwidth.

Lock Screen Controls and Artist Images

Mini-playback controls are displayed at the top of the Lock screen whenever you're playing music, along with the artist's name and what's playing. We made these controls easy to see, regardless of the background image on your phone. The same mini-playback controls will appear when you press a Volume button while doing something else on your phone. Just tap the information below the playback controls to launch the full media player and turn on options such as Shuffle or Repeat.

You can also display artist images for the song that's currently playing on the Lock screen just go to Settings > System > Lock Screen to enable this feature. When you turn it on, you'll see artist images when you're playing music and your normal Lock screen wallpaper when you're not playing music or when your music is paused. We've even made the transitions elegant notice how smoothly the Lock screen image fades from one state to the other. (Note: This feature is turned off by default because it does have a small impact on battery life.) You'll find the switch to turn it on along with the other Music + Videos settings.)



Video Playback

Windows Phone 8 makes it simple to enjoy video on your phone, too. Just tap Videos on the "collection" panel of the Music + Videos Hub to view your video library. Tap the video you want to play and it will start playing in landscape orientation. Want to remove the black bars that sometimes appear at the top and bottom of your screen? Just tap the full-screen toggle button. Want to rewind or fast-forward? That's easy too — just tap, hold, and drag the slider.



Xbox Music Store (New)

In the mood for something new? Your Windows Phone provides over-the-air access to the new Xbox Music Store, making it easy to discover new music while on the go. You'll have the freedom to preview new content before deciding to purchase it and can pay for what you want through your mobile service provider account or by using your credit card.¹³ The Xbox Music Store also offers select free content.

On the first panel of the Xbox Music Store, you'll see the featured album of the day. Flick left and tap a Tile to browse by New Releases, Top Albums, or Top Artists — or tap Try Unlimited Music to sign up for an Xbox Music Pass. Flick left again to browse by Genres. One more flick takes you to the "spotlight" panel, where you'll see hand-picked recommendations that change on a regular basis.



¹³ Payment methods may be limited by market and/or carrier.

Xbox Music Pass (New)

A monthly Xbox Music Pass subscription¹⁴ gives you unlimited access to millions of songs you can stream or download to your Windows Phone. The Xbox Music Pass experience includes powerful discovery tools, such as Smart DJ (discussed later), which serves up music based on what you already like. You can even sign up for an Xbox Music Pass right on your phone — just look for the "Try Unlimited Music" offer located in the music experience. Best of all, you can use your Xbox Music Pass on Windows Phone 8, your Windows 8 PC, and your Xbox 360 — all for the same low monthly price.



¹⁴ Availability of Xbox Music Pass varies by market.

Cloud Collection (New)

When you buy music from the Xbox Music Store, it is automatically stored in your cloud collection. This way, you can take your music with you across your Microsoft devices — including Windows Phone 8, a PC or tablet running Windows 8, and your Xbox 360 console — without having to sync it first.

Accessing your cloud collection is automatic and seamless. Make a purchase on one device and the music will show up your other devices that are tied to the same Microsoft Account. When you purchase a song on your phone, just navigate to the music experience on your Xbox 360 or PC running Windows 8 and you'll see that new song as part of your library. It's that simple.

You'll see the music in your cloud collection alongside any music on your phone — a single view that makes it easy to play your music without worrying about where it's stored. Within the list, songs in your cloud collection are marked with an icon that looks like a radio. If you want to view only music stored in the cloud or on your phone, you can do that too. Just tap the small "All" at the top of the "songs" panel to adjust the filter.

Of course, if you want, you can download any songs or albums from your cloud collection to your Windows Phone to conserve bandwidth or listen to when you don't have a wireless connection. Just tap and hold on any song with the cloud collection radio icon to download it.

In Windows Phone 8, playlists are also cloudenabled, enabling you to easily sync them to the cloud for access from your other devices.



Pin Your Favorite Music to Start

Regardless of whether your favorite music is stored on your phone or in your cloud collection, you can pin it to the Start screen for easy access. You also can pin artists, genres, and Smart DJ mixes to the Start screen. Just tap and hold on any of these items, tap Pin to Start, and you'll see a Tile for that specific album, genre, playlist, or artist on your Start screen.





Smart DJ

Ever have one of those moments when you want to hear some music but don't feel like choosing it — or when you're in the mood to discover some new music? Smart DJ¹⁵ is designed to provide just the right mix of artists you know and ones you might like. It does this by taking a "seed" — an album, artist, or song — and creating a mix of similar music from your collection. If you have a monthly Xbox Music Pass subscription, Smart DJ also can select from the millions of music tracks in the Xbox Music Store catalog. Of course, you can turn this off if you want.

We've sprinkled Smart DJ all over the Music + Videos Hub: It's available from artist cards, from the media player, and from every artist, album, and song in your collection — just tap and hold. We have a hunch that you're really going to like Smart DJ mixes, so we also added them to the "history" panel. That way, you can easily find a recent mix that you liked and then save it or pin it to the Start screen for instant access.





¹⁵ Availability of Smart DJ varies by market.

Music Store Search

With Windows Phone 8, it's easy to find the music you want. When you start typing a search term, you'll see suggestions that match what you've typed so far, along with the category that each suggestion falls under — for example, music or apps + games. Tap a suggestion or finish typing your search term and tap Enter, and you'll see your search results organized into three panels: music, podcasts, and apps + games. Search is context-sensitive, so when you start a search from within the Xbox Music Store you'll land in the "music" search results panel. The same goes for podcasts and apps + games.



More Ways to Sync (Improved)

The music experience in Windows Phone 8 is cloud-connected via Xbox Music, which reduces the need to manually sync content across your Microsoft devices. However, it's not the only way to sync your music. If you're running Windows 7, Windows 8, or a Mac, you can use one of the new Windows Phone Apps to move content between your phone and PC, or can move your music to and from your phone using a microSD card, if your phone has a slot for one.

Windows Phone 8 supports the industry-standard Media Transport Protocol (MTP), enabling you to also use other apps (such as Windows Explorer) to transfer music from your PC to your phone and vice-versa. Just connect the two via a USB cable and your phone will show up under the list of devices connected to your PC as a mass storage device.

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| move to internal |
| photos 25 MB (9 files) |
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| others 60 MB (47 files) |
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Podcasts

With Windows Phone, you can browse and download podcasts right on your phone. In the Windows Phone Store, you'll see a Podcasts option.¹⁶ Just tap it to see new, top, and featured podcasts or to browse by genre. Under each genre, you'll find "audio" and "video" panels to help you find the type you want. Of course, you can also tap the Search button on any screen to search for specific titles.

When you subscribe to a podcast series, you control how many episodes you want to keep and the order in which they're played. To help you conserve battery life, new podcasts are downloaded only when your phone is connected to a charger. Podcasts download over Wi-Fi by default to help you save on your monthly phone bill, but you can easily change this setting if you have a plan with unlimited data — just go to Settings > Applications > Music + Videos.



¹⁶ United States market only.

Games Hub

If playing games is a part of your life, you'll appreciate the Games Hub in Windows Phone. More than just a games folder, it provides a single place to launch all your games, find new ones. and connect with friends, bringing the social experience you may know from Xbox 360 to your phone.

Tap the Games Tile on the Start screen to go to the Games Hub, which puts your Xbox games and other games in one place — with a clean, light design that emphasizes your game collection and highlights the latest Xbox game titles. The Games Hub provides easy access to the Games Store to find new games, and is your source for gaming news, updates, and tips. It's also where you'll go to send and receive game invites, which can appear on the Games Tile on your Start screen.¹⁷



A new "notifications" panel provides more than just requests to join games; it now includes turn notifications, friend requests, beacons, and new message alerts. Also new are in-app purchases, which means that more titles can be free to play — supported by paid in-game upgrades and enhancements. And with Kid's Corner (discussed earlier, under Start Screen), you can feel better sharing certain games on your phone with your kids.

Only Windows Phone has Xbox Games built-in, delivering a mobile gaming experience that you can't get anywhere else. You'll see your avatar come to life and have access to you personal accomplishments, including recent games, leaderboards, Gamerscore and Achievements. With some games, you can even play with friends from one Windows Phone to another — or even from

¹⁷ Xbox features require network connectivity, an appropriate service plan, and a Microsoft account.

phone to PC.¹⁸ You can also start a game on your PC or Xbox 360, pause it, and pick it up on your phone. And with Xbox SmartGlass, you'll have access to a great second-screen experience designed to complement your Xbox 360 games and entertainment.

Whether you're waiting for the bus or just relaxing on the couch, Windows Phone 8 puts Xbox and mobile gaming in your pocket.

All Your Games — and New Ones — in One Place

With the Games Hub, you'll have access to your entire library of games — both Xbox games and others — in one place, and will find it just as easy to find great new games. Simply tap on "get more games" to go to the Games Store, where you can explore Xbox games, top games, new games, and free games, or browse by category. The experience is consistent with the rest of your phone, including personal suggestions from Bing, spotlight recommendations, a panoramic background image, and an on-screen search button dedicated to finding games.

Intrigued by a new game, but not sure if you'll love it? No worries. You can try all Xbox games in the Games Store before you buy, so you'll be able to figure out which ones fit your style, without spending a dime. You'll also have access to reviews, screenshots, and related games you may like.

When you do find a great game, you can pay for it with your credit card, through your mobile service provider's bill, PayPal, or a Microsoft gift card.¹⁹ When you're downloading a game, you'll see download progress and paused downloads. And if you find yourself playing a great new game every chance you get, you can pin it to the Start screen for instant access.



¹⁸ Asynchronous, turn-by-turn-based gaming only. Game play, content and features may vary across console and devices.

¹⁹ Payment methods may be limited by market and/or carrier.

Collection View

Games within your collection are neatly organized in the same familiar alphabetical view as your App list — with icon on the left and name on the right. And when your collection exceeds 20 games, the last three titles you've played will appear right up top, so you can get to your favorites faster.



Built-In Xbox Experience

Windows Phone is the only phone that has the quality, consistency, and community of Xbox builtin. You'll have access to your personal accomplishments, including recent games you've played, leaderboards, and your avatar, Gamerscore, and Achievements. Animated 3-D avatars will wave at you, yawn and perform a host of other actions. Shake your phone and your avatar will dance — or may even faint. Bug your Avatar too much and it might even lash out at you or pull the Collection screen into view to hide behind.

The Games Hub also makes it easy to do the following:

- Message. Read and reply to messages sent by other Xbox members from their own phones, PCs, or Xbox 360 consoles. If a message contains certain emoticons, you'll notice your avatar's expression change to reflect them. If a sender overloads a message with conflicting emoticons, your avatar will look bewildered.
- Connect with friends. Find out if your Xbox friends are currently online through the friend status view. You can also search, browse, initiate and respond to friend requests right from your phone.
- See how your friends stack up. See the recent games your friends have been playing, and compare Gamerscores and achievements for all Xbox games played on the phone, console, or PC.
- Update your profile. Moved to a new city? Have a new motto in life? You can update your name, bio, motto, and location right from your phone.



• Find players and know when it's your turn. You'll receive notifications for multiplayer games or turn requests and can track them in the "notifications" panel of the Games Hub.
With some Xbox games, you can even start the game on your PC or Xbox 360, pause it, and pick it up on your phone. Or play on your phone with a friend who's playing on a PC or Xbox 360. You can also play games where you and a friend take turns over time, starting and stopping whenever you'd like. You can even nudge a friend who's taking too long. When it's your turn, you'll see your avatar peeking out at you from the Games Tile on the Start screen. Or course, you can also use your phone to send and receive invitations to play games.

You can download the free Xbox Extras app to do even more with your avatar, such as customizing it with a wide range of outfits and props.



World-Class Games (Improved)

Windows Phone provides an ever-growing, managed portfolio of world-class Xbox games, which put quality first and include a variety of great titles from top game publishers, such as Final Fantasy FROM Square Enix co LTD; iStunt 2 from Miniclip; Need For Speed Hot Pursuit from EA; Angry Birds Star Wars and Angry Birds Space from Rovio (both coming November 2012); and Asphalt 7: Heat from Gameloft (also coming November 2012); Lode Runner Classic, GeoDefense Swarm, and BulletAsylum from Microsoft Studios; and many more. Your Windows Phone also provides access to exclusive content created only for Windows Phone, such as Beards and Beaks from Microsoft Studios, and companion titles that extend the experience of popular Xbox 360 franchises.

Microsoft is continuing to work with game developers to ensure a continually-growing portfolio of quality games to help keep the gaming experience on your Windows Phone fresh and exciting. New support for game development using native code and Direct3D will help further increase the number of great Xbox games can choose from.



Note: Xbox games shown on this page are scheduled for release in November 2012.

Notifications View (Improved)

The Games Hub in Windows Phone 7.5 had a "requests" panel that showed your game requests. In Windows Phone 8, we replaced it with a new "notifications" panel that also includes turn notifications, friend requests, beacons, and new message alerts — all contributing to an even better gaming experience when you're playing with friends.



Xbox SmartGlass App (New)

Tap the Xbox SmartGlass Tile on the "xbox" panel of the Games Hub to download Xbox SmartGlass, which lets you use your Windows Phone (or Windows 8 tablet) as a "second screen" with your Xbox 360 for an enhanced gaming and entertainment experience.

With SmartGlass, you can control and interact with your favorite TV shows, movies, music, sports, and games. Your devices intelligently work together to deliver rich interactive activities and new content related to what you're watching or playing on your TV at the moment. For instance, when you're viewing a movie (or deciding what to watch), it can provide rich related information such as cast and crew, synopses, ratings, related movies, and more. Similarly, when playing a game, it can provide achievements, Gamerscores, or ratings.

Just like Windows Phone itself, Xbox SmartGlass is designed to work for you — through the delivery of immediate information to your phone based on what's happening on your TV screen *right now*, without having to dig around on your phone and miss all the action.

Peter Orullian is working on getting us some SmartGlass screenshots.

In-Game Purchases (New)

In-game purchases, a new feature in Windows Phone 8, opens up an entirely new world of game play — including "freemium" games that are free to play and offer advanced features, functionality, downloadable content, or related products and services.

Parental Controls

With Windows Phone 8, parental controls you've set via Xbox will extend to the phone, making it easy to block your children from downloading mature-rated games and content while still giving them access to the ones you've deemed OK. This allows the portfolio of games available in the Games Store to include M-rated games, while still giving parents control over which content their children can access across all gaming devices. Parental controls tied to a Microsoft account can be accessed from Xbox.com and Xbox 360.

Rich Games Platform (Improved)

Through its shared core with Windows 8, Windows Phone 8 gives game developers an even richer platform to build great new games, too. Features designed to support mobile gaming include support for native code and Direct3D, multitouch screen, accelerometer, 3-D graphics, graphics acceleration, location and notification services and more.

Through its new support for development using C/C++, Windows Phone 8 now enables game development using Direct3D. This makes it easier for developers to take games written for Windows using Direct3D and port them to Windows Phone 8 — and vice-versa.

Support for game development using C/C++ and Direct3D will also help game middleware vendors bring their engines and toolsets to Windows Phone, such as was recently announced by Unity. In turn, these new engines and tools will make it easy for game developers to bring new and existing titles to Windows Phone.

Note: Xbox games shown on this page are scheduled for release in November 2012.



Windows Phone Store

The Windows Phone Store — now available in 191 countries and regions — is your superstore for loading up your Windows Phone with apps, games, music, and podcasts. Each category provides its own immersive experience, including featured items, new or highly rated content, and a background image for today's featured item that spans the entire Store. So even if you don't know exactly what you're looking for, you'll have plenty of opportunity to discover something interesting among exclusive Xbox games and other games, millions of songs, and a broad range of high-quality apps. Mobile service providers and phone manufacturers can add their own stores to the Windows Phone Store, so you'll also be able to choose from anything they have to offer.



With Windows Phone 8, it's even faster and easier to find great apps that can integrate intuitively with your phone and work together on your behalf. The Windows Phone Store now has more than 110,000 apps, with a continued focus on quality over quantity. It offers more free games and top-rated Xbox games, which are now available in more countries. More and more quality apps are coming to the Store every day, courtesy of Windows Phone and Windows 8 developers.

The Windows Phone Store is powered by Bing Search, so you'll see more relevant results and recommendations. The Store can even learn what you like and recommend apps just for you. You'll also have new payment options, including the ability to make in-app purchases.

We think you'll also appreciate how we've made it easy to decide whether apps are right for you, download and install them, and stay on top of any updates. Of course, you can also find and download apps for your phone on the Web, from your PC.

The Windows Phone Store is quick, convenient, one-stop shopping for your phone — with a new experience every time you visit.

Finding the Apps You'll Love (Improved)

The Windows Phone Store provides many ways to shop for apps — just tap the Store Tile on the Start screen or tap Store in your App list to enter it and start exploring. On the first panel, you'll see any specialized stores that have been added to your phone by your mobile service provider or device manufacturer along with the store's four main categories: apps, games, music, and podcasts. Flick left a few times to view featured apps, games, and music.



Within each of the apps, games, music, and podcasts sections of the Store, you'll see several panels. For example, while browsing apps, the first thing you'll see is the featured app of the day. Flick left to browse by top free apps, new and rising apps, top paid apps, or best rated apps. The collections Tile will take you to hand-picked recommendations that change every week, so if you're browsing it around the winter holidays, you just may see Christmas apps. The Picks for You Tile provides just that — opt-in personal suggestions that Bing thinks you may like based on your past behavior and the activity on your Facebook page.

Another flick left takes you to the "categories" panel, which makes it easy to find certain types of apps — such as those for entertainment, news, sports, business, or education. Within each of those categories, flick left or right to view top free apps, new and rising apps, top paid apps, and best-rated apps.

The last panel in the Windows Phone Store provides spotlight recommendations, which are handpicked to help you discover great apps in the Store. Selections are country-specific and change frequently — on a daily basis in key markets.

Within the Windows Phone Store, you can tap the "soft" Search button you'll see at the bottom of most panels start typing a search term to find an app. You'll see suggestions that match what you've typed so far, along with the category that each suggestion falls under: music or apps + games. Search results will be displayed on their own "apps + games" panel, which is displayed by default when you search from the Apps Store or Games Store within the Windows Phone Store.

The new Windows Phone Store is powered by Bing Search, so you'll get more relevant results and recommendations. For instance, it now takes into consideration things like uninstall rate, crash rates, ratings, and the best version of an app for your specific device.

Finally, you can shop for apps on the Web just go to <u>http://www.windowsphone.com/store</u> and click on Apps + Games to browse apps for your phone on the Web. If you find something you like, you can purchase it on the Web and it'll automatically download to your phone.



Buy With Confidence

Sometimes it's hard to know whether you'll like an app before spending money on it. With the Windows Phone Store, it's easy to determine if an app might be right for you. When you tap on an app or game in the Store, you'll see four separate panels for details, screenshots, reviews and ratings, and related apps and games — a panoramic view that mirrors the rest of the Windows Phone experience. Of course, the Try and Buy buttons are at the bottom of each panel, so that you won't need to "back up" one single step to take action after making a decision. And you won't have to worry about compatibility, as you'll only see apps that are right for your region, phone model, screen resolution, and any parental control settings you may have in place.



All apps must pass a rigorous certification process managed by Microsoft, in which they're checked for malicious code and other things that may downgrade your experience. Both automated and manual processes are used to validate they work correctly, don't pose a security risk, comply with local regulations, are categorized correctly, and follow the app publishing guidelines. Microsoft also has a managed process for receiving, analyzing, and acting on reported issues — such as apps that don't comply with the law, or that violate copyright or trademark requirements.

You can even bring your paid apps from your old Windows Phone 7.5 device to your Windows Phone 8 phone free-of-charge, subject to device limits. (Instructions on how to do this are provided below, under Easy App Download, Installation, and Maintenance.)





Multiple Payment and Delivery Options (Improved)

With Windows Phone 8, you can pay for purchases in the Windows Phone Store in more ways — including using your credit card, PayPal, a Microsoft gift card, or via your monthly mobile service provider bill.²⁰ All of these payment methods are available through your phone's built-in Wallet (discussed later) and are protected by your Wallet's PIN if you set one and configured it to help protect music, app, and in-app purchases. You can even use Wi-Fi as a pass-through for large downloads, eliminating the need to wait for your purchases to be delivered over the air.





²⁰ Payment methods may be limited by market and/or carrier. Music cannot be purchased using PayPal or a Microsoft gift card in any market. For more information go to <u>http://www.windowsphone.com</u>.

Easy App Download, Installation, and Maintenance (Improved)

Tap Install for a free app (or tap Try for a paid app) and you'll be taken to where that app will live; for example, if you download a weather app, you'll be taken to the App list. If you download a game, you'll be taken to the Games Hub. Either way, you'll see the new app or game listed along with your other apps or games, including a status indicator showing its download progress and whether it's paused. The progress bar disappears when the download is finished, so you'll know the moment your new game is ready to play.

You'll get notifications when updates are available for your apps — they'll show up on the Store Tile on the Start screen and in the Windows Phone Store. You can also redownload any apps you've already purchased for free — just in case you get a new phone.²¹ This can be done in the following ways, all of which require you to be using the same Microsoft Account you used when you originally purchased and/or downloaded the apps:

- On your new phone, navigate to the app you want to re-download in the Windows Phone Store and tap Install.
- On the Web, go to www.windowsphone.com/my and login. Click on Account to view your App Purchase History, then click Reinstall for the app you want to reinstall and follow the instructions.
- When you've enabled cloud backup with Windows Phone 8 and choose to restore a cloud backup when setting up Windows Phone 8 a second time, it will automatically download any apps you had installed when that backup was captured.



²¹ Requires old and new phones to be Windows Phone 7 or later, and the app will need to be compatible with your new phone. You'll also need to use the same Microsoft account.

In-App Commerce (New)

In Windows Phone 8, apps now can offer digital products for purchase. These can include consumables that are "used" and can be purchased again (such as movie rentals, in-game currency, or access to content for a period of time) as well as durables, which you buy once and can use forever — such as additional game items and levels.

In-app purchases are processed through the Windows Phone Store, so you'll benefit from the same payment options and safeguards as when you're purchasing an app — including access to in-app purchases in 191 countries and regions. In-app purchases are also protected by your Wallet's PIN if you set one and configured it to help protect music, app, and in-app purchases.

App-to-App Integration and Communication (Improved)

With Windows Phone 8, we've made apps even smarter by enabling them to communicate with each other and share information on your behalf to deliver richer, more functional experiences. For instance, an app that you use to track your time on the treadmill or on the running trail could launch your favorite tunes while you're exercising. Or an app for restaurant reviews could launch a GPS app to show you how to get there. In fact, the Maps app in Windows Phone 8 can now "hand off" an address to your preferred app for driving directions.

Apps can be associated with specific file types, allowing you to select which app you want to use to view a pdf file, play a video, or edit text documents. If a file type is associated with multiple apps on your phone, you can select which one to use from a list. If you don't have an app for that file type, you'll see a list of relevant apps in the Windows Phone Store.

Rich Development Platform and Tools (Improved)

Your Windows Phone is supported by a rich ecosystem designed to help developers build and deliver quality apps and games that take advantage of your phone's unique features and design. The Windows Phone development environment combines Microsoft Silverlight and the Microsoft XNA Framework with familiar tools, such as Microsoft Visual Studio and Microsoft Expression Blend, providing a powerful toolset for taking advantage of Windows Phone features such as Live Tiles, Windows Phone Hubs, panoramic layout, notifications, location and map services, and integration with popular online services.

Windows Phone has already attracted more than 160,000 developers from around the world — creative minds who see Windows Phone as an opportunity to deliver integrated, immersive new experiences that will change how people engage with mobile apps and games.

In Windows Phone 8, we added support for development using C/C++ — intended primarily to support game development using Direct3D. However, this also means that developers now can leverage native components in the context of their standard XAML apps.

For more information on developing apps for Windows Phone, visit the App Hub at <u>developer.windowsphone.com</u>.

Wallet

Your Windows Phone can also be your wallet. In Windows Phone 8, we added a digital wallet that you can use to keep your debit, credit, loyalty, and membership card information readily at hand, in one place. Your Wallet can even help you find apps that can link to the cards in it to provide additional information, such as card balance or transaction history. You can also use your Wallet to find, store, and share local deals.



In developing the Wallet in Windows Phone 8, we focused on a secure SIM implementation (as opposed to an embedded secure element) to be more coordinated and aligned with mobile operators' product plans. Microsoft will build and manage the end-user experience, the Wallet "shell," and the surface area for third-party ISV's to build client-based solutions or apps. Mobile operators can customize aspects of the experience, such as branding and selection of default payment instruments, and can own the business relationship with service providers (such as financial institutions) under whatever arrangements they choose.

Setting Up Your Wallet

You may find a Wallet Tile on the Start screen by default. If not, you can get to your Wallet from the App list. The first time you tap it, you'll see a wizard to guide you through adding your cards, finding and linking related apps, and helping to protect your Wallet with a optional PIN. After that, assuming you've chosen to setup a PIN, you'll need to enter it whenever you open your Wallet.

Store All Your Cards (New)

The Wallet has four panels. On the "all panel," you may see an entry for your mobile operator account, which your Windows Phone imported for you — just tap it to view information on what you can do with that account, such as purchasing apps and games. If you have a credit card associated with your Microsoft account, that card will be imported and configured too. At the bottom of the screen, you'll find buttons for pinning it to the Start screen and editing account information. To add a new card, just tap Add and follow the wizard.



Pay With A Tap (New)

If your phone supports NFC and your mobile carrier supports secure payment, you can also pay for purchases by simply tapping your phone on an NFC-enabled point-of-sale terminal. Even if your device doesn't support NFC, you can still use select payment instruments in your wallet for purchases in the Windows Phone Store.



Find, Store, and Share Deals (New)

A flick to the left from the "all" panel takes you to the "deals" panel, where you can add a new deal or search for local deals. If you find a deal that catches your eye, just tap on it for more details. From there, all it takes is one more tap to view the deal online, save it to your wallet for later, or pin it to the Start screen. Depending on the information provided for the deal, you may also see options for mapping the vendor's location, getting directions, or calling the vendor. And don't worry if you're a compulsive deal-collector; we've provided tools for sorting your deals by merchant or expiration date, and for searching for keywords within your saved deals.



Find Apps That Can Tie Into to Your Wallet (New)

Another flick left takes you to the "featured" panel, where you'll see recommended apps that can tie into your Wallet. For example, if you download a recommended banking app, it could let you view your account balance within the Wallet — without opening the app itself. Similarly, a frequent flyer app could let you see your current mileage within your Wallet.

Note: The "featured" panel will only become visible after Wallet-enabled applications start to become available.



Fast Cards (New)

The "fast cards" panel provides quick access to commonly used cards that support payment via NFC.

Note: You'll only see this panel if you have one or more such cards configured, your phone supports NFC, and your mobile carrier supports secure payment.



Office Hub

The Office Hub in Windows Phone 8 makes it easier than ever to stay productive on the go, providing access to Microsoft Office documents on SkyDrive and Office 365. Your Windows Phone will handle the synchronization, so you won't have to worry about where the latest copy of a file resides. You can also share your files with others in a way that avoids having to worry about version control or overwriting someone else's changes when collaborating on documents.



The Office Hub also includes the latest mobile versions of Microsoft Word, Excel, and PowerPoint, each of which has new features to help you get stuff done more quickly on your phone when viewing, editing, and commenting on documents. Documents on your phone will look like the originals and, when you make edits or add comments, document formatting and content will remain intact.

In Windows Phone 8, we also redesigned the Office Hub to make it easier to find your docs and moved OneNote Mobile (discussed next) out of the Office Hub, providing direct access to it as an app — including a Tile for it on the Start screen by default.

Office Documents on SkyDrive and Office 365

If you have a Microsoft account, you already have access to SkyDrive, where you can store documents, OneNote notes, and photos in the cloud — it's included with your Microsoft account and ready to access from your phone. We think you'll be surprised at how easy it is to work on a document stored on SkyDrive using your phone, and then pick up where you left off when you're back at your computer. You won't have to worry about multiple copies of a document on multiple devices, or which device has the latest version.

You can access all types of Office documents in your personal and shared SkyDrive folders, and can also access documents in SkyDrive folders that others have shared with you. And with 7GB of free storage, SkyDrive provides plenty of space for your documents.

Windows Phone 8 works just as seamlessly with Office 365. Simply add an Office 365 account like you would any other account. After you enter your credentials, your Office 365 email and team site will automatically be configured on your phone and you'll be asked if you want to download the Lync Mobile app (discussed later).





Find Your Documents — Fast (Improved)

Staying productive on the go starts with being able to find the document you want. In Windows Phone 8, we redesigned the Office Hub to help you more quickly and intuitively find your PowerPoint presentations, Word documents, and Excel spreadsheets — regardless of whether they're stored on your phone, on SkyDrive, or on SkyDrive Pro as a part of Office 365.

The "recent" panel of the Office Hub provides quick access to the documents on your phone, on SkyDrive, on SharePoint, and on Office 365. And now, with Windows Phone 8, you'll also see documents that you received as email attachments and opened at least once. Regardless of where they're stored, they're sorted by how recently you've accessed them. Tap the Search button to find a document by name, or tap the New button to create a new doc. You can choose a blank one or use one of several built-in Word and Excel templates.

If you're using Office 2013, your recent document list will stay in sync across Windows Phone 8, a PC or tablet running Windows 8, a tablet running Windows RT, and Office Web apps running within a browser.²² When you edit a Word document on your PC, close it, and then open the same document on your phone or on another PC running Office 2013, the document will open to the same page as where you left off, with the cursor in the exact same spot. With Excel, the workbook will open to the same worksheet. And with PowerPoint, you'll see the same slide.



²² Synchronization of personal documents via SkyDrive is tied your Microsoft account, and synchronization of business documents via SkyDrive Pro is tied to your business network credentials.

The "places" panel — it replaces the "locations" panel of the Office Hub in Windows Phone 7.5 — lets you browse your documents by where they're stored: on your phone, attached to email messages, or on SkyDrive, or Office 365. These locations are sorted by when you last accessed them. Tap the Search button to find a document by name, or tap the New button to add a SharePoint site.



Word Mobile (Improved)

With Word Mobile, you can view, create, edit, and comment on Word documents on your phone. Documents look great and formatting is preserved when you make changes or add comments. Outline view, a mobile-specific feature, allows you to quickly jump to relevant sections of a document by dynamically creating a hyperlinked table of contents for documents that are formatted using heading styles. Just tap the Outline button to see a list of sections, tap a section name once to see a preview, and tap it again to jump directly to it. Outline view also shows you which sections have comments, so you can find and respond to them quickly, with the option of browsing all comments sequentially or jumping directly to a specific comment.

Word also provides other familiar features. For example, you can search for a particular word or phrase in a document by tapping Find on the app bar. Want to share a document by email? Just tap Send. Want to cut some text to paste into another app? Just tap a word to select it, then tap-and-drag the handles that appear before and after the selected word to include additional text. Want to create a new doc? Just tap New — we've even included a few prebuilt templates.

As mentioned earlier, when you open a document that you've viewed with Word 2013 on your PC or tablet, Word will even pick up where you left off. We also included a new full-screen reading mode.

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PowerPoint Mobile (Improved)

With PowerPoint Mobile, you can view and edit PowerPoint presentations on your phone, including changing the text on a slide and editing the speaker notes.

To move between slides, tap the Outline button, flick left or right, or use the new thumbnail view. To zoom in or out on a slide, just pinch or stretch your fingers. We think you'll appreciate the smooth transitions when switching between slides, how text is rendered crisply when you zoom in on a slide, and how the image occupies the full screen to maximize your viewing area when you're zoomed-in and prevents accidentally switching to the next slide. To edit a presentation, go to the slide you want to change and then tap Edit.

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Excel Mobile (Improved)

With Excel Mobile, you can view, create, and edit Excel spreadsheets on your phone — including access to powerful Excel features for sorting data, applying filters, and formatting cells. You can also select multiple cells and view the sum, average, min, max, and count values for the selected cells. Want to enter a function? Excel Function Assistance makes that easy, too. Of course, we also included a few prebuilt templates for creating a new workbook.

If a workbook has multiple sheets, charts or tables, you can tap the Outline button to see a list. Tap on an object name to see a preview, and tap it again to jump directly to it. The Outline list also shows you which worksheets have comments, so you can find and respond to those items quickly. Looking for a particular word, phrase, or number? Just tap Find.

As mentioned previously, when you open a workbook you saved with Excel 2013, you'll see the same worksheet and zoom level from when the workbook was last saved. Other improvements in the latest version of Excel include support for charts, smoother navigation, and improved cell selection — including new grab-handles that make it easy to select a range or resize a row or column. We also added a smooth-floating grid UI, which no longer snaps to gridlines, and an advanced "sticky" mode that makes it easier to navigate and read cells that have lots of text.

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Downloadable Lync 2010 Mobile App

When you set up an Office 365 account on your Windows Phone, you will be directed to the Windows Phone Store to download the Lync 2010 Mobile app. It works with Lync Server 2010 deployed on-premises, as well as with Lync Server in the cloud as part of Office 365.

Lync 2010 is designed to help you easily communicate with co-workers. We think you'll appreciate how effortlessly you can view presence information, start an instant messaging session (including multiparty chat), search for people in your company, update your availability, and join a conference call from a meeting on your calendar.

A new Lync app, to be released at a later date, will take advantage of new and improved capabilities in Windows Phone 8, such as background execution for VoIP apps.



Information Rights Management

Windows Phone 8 supports IRM for both Outlook email and Office Mobile documents to help protect sensitive or confidential information. After you provide the correct credentials, you'll be able to access emails and documents protected using Active Directory Rights Management Services in Windows Server, without having to tether your phone to your PC.



OneNote Mobile

OneNote Mobile makes it easy to capture notes and ideas on the go. You can type a note, use your phone's camera to capture a photo and insert it into a note, capture audio using your phone's microphone, or dictate a Voice Note while you're doing something else on your phone and have it automatically transcribed and inserted into OneNote. It can even work when your phone is locked.

Regardless of the information you want to capture, we designed OneNote Mobile to make it easy — and to work the way you do. It's always ready to take your input and, through synchronization with SkyDrive, you'll have access to your notes from your phone or your PC.

Now on the Start Screen (Improved)

OneNote is now a separate app on your Start screen, enabling you to get to it even faster than before. Tap the OneNote Live Tile on the Start screen to see all your OneNote notebooks. By default, you'll see any existing notebooks on SkyDrive that are tied to the Microsoft account you used to setup your phone, as well as a new one that was created when you setup your phone. You'll also see a shared notebook for any Rooms you've created.

The OneNote Live Tile will even show you which note was updated last. If you want, you can pin individual notes to the Start screen for faster access.



Automatic Sync with SkyDrive and Office 365

By default, all of your OneNote notebooks are automatically synced with SkyDrive or SkyDrive Pro on Office 365, making it easy to create a to-do list on your PC and then check off items as they're completed on your phone. It works the other way, too, so you can capture a photo of a whiteboard using your phone and then view it on your PC using the desktop version of OneNote or the OneNote Web App. Of course, you have complete control over which notebooks or pages in a notebook are synced. (Not all notebooks or pages are synced, only the once you access.)



Easy Information Capture and Rich Formatting

When you're viewing a note, just tap on the screen where you want to edit the note — it'll bring up the Word Flow keyboard, which can help correct and predict your typing. Below the keyboard, you'll see buttons for inserting a To-Do item with checkbox, creating a bulleted list, inserting an existing photo (or capturing and inserting a new one), and capturing audio using your phone's microphone. Tap More to the right of those buttons to share a note, pin it to Start, create a numbered list, increase or decrease indent, or choose formatting options that include bold, italics, underlined, and highlighting.





Send Photos to OneNote (New)

With OneNote, an idea or action item never needs to slip away. For example, say you're out-andabout when you see a great idea for that upcoming landscaping project. Just shoot a picture with your phone's camera, tap and hold the photo, tap Share, and choose OneNote.



Voice Notes (New)

Now you can dictate your notes and have them automatically transcribed and added to OneNote, without having to type them in by hand. To do so, press and hold the Start button to activate Speech, then say "Note" and speak your note. It'll work regardless of what you're doing on your phone — including when your phone is locked, provided you've enabled the use of Speech at those times. (*Note: This setting is turned off by default. You can turn it on under Settings > Speech.*)



Find Your Notes — Fast (Improved)

If you find yourself using OneNote more and more, don't worry. It's now easier to navigate your notebooks. You can also search the text in your notes — just tap Search and enter a word or phrase. Or tap Recent to see your notes in the order you last accessed them.


Email

Only Windows Phone has Outlook Mobile built-in, making it easy to manage all your email from your phone. You can set up multiple email accounts, with access to powerful features to help you manage it all, including one-tap calling, mapping, and access to documents. Outlook Mobile also brings together your email and calendar, enabling you to see meeting requests and easily act on them in one place.

Windows Phone makes managing your email easier than ever. If you're like most people, you probably have at least one email account for work and two or more personal accounts. However, many smartphones today take an allor-nothing approach when it comes to email; either all your inboxes are combined or all of them are separate. Your Windows Phone takes a smarter approach, putting you in control by letting you combine email from two or more accounts in a single Linked Inbox, which you can pin to the Start screen for easy access. You can also pin specific email folders to the Start Screen.

Windows Phone 8 includes other powerful email tools, too. Conversation view groups your email by sender and subject, so that you can easily get to earlier messages on a topic. You can search your inbox by keyword, flag emails for future follow-up, filter by status (such as unread, important, or flagged), and delete multiple messages at once. Phone numbers and addresses are automatically hyperlinked in email messages, enabling you to call or map them with just a tap.



Email on Windows Phone 8 even works with your phone's Calendar, making it easy to respond to meeting requests. Windows Phone 8 also offers advanced support for Microsoft Exchange Server, with capabilities that include reading IRM-protected emails, alpha-numeric PINs, setting Out-of-Office messages, syncing Outlook tasks, and searching the email server for messages.

And now, with Windows Phone 8, you can even dictate your email messages. We also added a "dark" Inbox view that matches your phone's Theme — just tap More > Settings from within Outlook Mobile to adjust this and other settings.

Multiple Email Accounts

With Windows Phone, you can easily set up and check multiple email accounts, including Hotmail, Outlook.com, Office 365, Yahoo Mail, Google Mail, and most industry-standard POP and IMAP email services. Windows Phone 8 also works with one or more Exchange Server accounts, enabling you to act on job-related email and meeting requests while on-the-go. By default, you'll see a separate Live Tile on the Start screen for each account that shows you the number of new messages for that account.



Powerful Tools for Managing Your Inbox

Your Windows Phone helps you handle work and personal email efficiently by providing familiar features for managing and prioritizing your mail. You can search your inbox by keyword, flag emails for future follow-up, and flick your finger to filter by unread, important, or flagged status. Want to delete a number of messages at the same time? Just tap the Select button on the app bar (or tap the left edge of the screen) to view checkboxes, select the messages to delete and tap the Delete button.



Dark Inbox View (New)

In Windows Phone 8, we added a "dark" Inbox view that matches your phone's Theme — just tap More > Settings from within Outlook Mobile to adjust this and other settings. (*Note: The dark inbox view is particularly useful with devices that use AMOLED technology because it can improve battery life. It can also improve readability in low-light situations.*)



Conversation View

With Conversation view, you can display your emails by conversation to make them easier to track and manage. Just tap a conversation — you'll recognize them in your inbox by the vertical bar on the left — to expand it and view all related messages. Tap it again and the conversation will collapse. Deleting a conversation (or marking it as "read") will affect all related messages, eliminating the need to clean out your inbox one message at a time.





Linked Inboxes

Don't want to clutter your Start screen with Live Tiles for all your email accounts? With Windows Phone 8, you can view and manage email from multiple email accounts in a single Linked Inbox. Choose only those accounts that you want to link to an inbox — work, personal, or both — and finally you're in control. You can create multiple Linked Inboxes, give each one a unique name and pin them to the Start screen for easy access. It's similar to how you can link contacts in the People Hub to see all the information you have on a person in one place.

To link one inbox to another — for instance, to link your Yahoo Mail account to your Hotmail account and rename it — do the following:

- 1. On the Start screen, tap your Hotmail account to open its inbox.
- 2. Tap More > Link inboxes.
- 3. Tap the Yahoo Mail account to link the two together.
- 4. Tap Rename Linked inbox, change the name to "Personal Email" (or whatever you want), and tap the Done button.
- Tap the Start button to return to your Start screen, and you'll see a Live Tile for the Linked Inbox.

To unlink the inboxes, do the following:

- From within the Linked Inbox, tap More
 > Linked Inboxes.
- 2. Tap either of the inboxes listed, then tap Unlink.



Pinning Email Folders to Start

With Windows Phone 8, you can pin individual email folders to the Start screen — just tap, hold, and Pin to Start. It's handy if you've created a folder where important messages go; pin it to the Start screen and you'll see at a glance when new ones arrive.





Quick Calling and Mapping

Phone numbers and addresses are automatically hyperlinked in email messages, enabling you to call or map them with just a tap or two.²³



²³ Availability of hyperlinked addresses varies by market. Hyperlinked phone numbers are supported in many markets; however, some international phone number formats (particularly those with a short string of numbers) may not be recognized and converted to hyperlinks.

Easy Access to Attachments (Improved)

Microsoft Office documents sent as email attachments can be downloaded, opened, and saved in the Office Hub. In Windows Phone 8, they'll even show up automatically in the Office Hub after you've downloaded and opened them. You can also access documents stored on SharePoint Server by tapping a link in an email.



Voice-to-Text (New)

With Windows Phone 8, now you can send and reply to email with your voice. It works just like it does for text messages, Web searches, and calling contacts. Simply tap the microphone button when composing a new message and start talking.



Email/Calendar Integration

Email on Windows Phone 8 works hand in hand with your phone's calendar to help you do more. For example, you can view and respond to meeting requests directly from your inbox, just like with your PC. Your Windows Phone will even tell you if there's a conflict, take you to your calendar for that time, and show you the meeting invitees and their responses, giving you all the information you need to decide what to do.



Exchange Server Support

Windows Phone 8 provides advanced support for Exchange Server, enabling you to do the following:

- Read IRM-protected emails.
- Use alpha-numeric PINs.
- Set Out-of-Office messages.
- Sync Tasks.
- Search the email server for messages.

Of the above, one of the most powerful features is the ability to search Exchange Server for fully indexed email content and attachments, not just by sender or subject line. You can then further refine search results by date range and folder. You can also view and sync multiple Exchange Server calendars. (More detail on this feature and on syncing Tasks is provided in the Calendar section of this guide.)

Calendar

Windows Phone provides powerful calendar tools to help you stay on top of your day, beginning by displaying your next appointment on the Lock screen and Start screen. You can view your schedule in different ways, with appointments from multiple calendars displayed in one place and color-coded — including your Room and Facebook events. It's just as easy to create new appointments, reply to meeting requests, view or add meeting attendees, and manage your To-Do list. You can even sync and view multiple calendars for Exchange ActiveSync-enabled accounts, and can join a Lync meeting directly from the calendar.²⁴ These are just a few of the ways that your Windows Phone can help you manage your busy life.



²⁴ Requires download of the Lync Mobile App, which is available in the Windows Phone Store.

Always Know What's Next

Your Windows Phone puts upcoming appointments front and center. Your next appointment is readily displayed on your phone's Lock screen and as a large, readable Live Tile on the Start screen — showing you at a glance where you need to be next.





View Your Day Your Way

Windows Phone gives you multiple ways to view your calendar, depending on whether you're making a new appointment or working your way through an already packed day. You can use the traditional "day" view, which helps you spot free time by showing you an hour-by-hour view of the day. Or you can focus on just what's scheduled by flicking to "agenda" view, which lists only future appointments. Your calendar also includes a "to-do" panel, which is discussed in greater detail below.



See All Your Calendars in One Place

Your Windows Phone supports multiple calendars, including those from Hotmail, Outlook.com, Google, Yahoo, Exchange Server, your Rooms, and Facebook, with the ability to turn each one on or off at any time. You'll see appointments across all your calendars in a single view, with appointments from each calendar color coded to help you differentiate between personal and work commitments at a glance. You can sync and view multiple calendars for Exchange ActiveSync-enabled accounts.

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Facebook Events

Windows Phone 8 brings Facebook Events directly into your calendar. You can view the details on the event, see the guest list, accept or decline the event, and view and post comments. You can also filter to view only the Facebook Events you've accepted — you'll find this under Calendar Settings, which you can get to from your calendar by tapping More > Calendar.

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Easily Schedule and Manage Appointments

The Calendar app makes it easy to create and manage appointments. You can quickly create a new appointment by entering just a few fields and tapping Save. Or tap More Details before you save to set a reminder, schedule a recurring meeting, add attendees, or adjust your status for the appointment, such as free, busy, tentative or out-of-office. You can even create a new appointment within Calendar and assign it to a shared calendar for a Room, where it will also be visible to other Room members.



Quick Events

Quick Events in Windows Phone 8 let you create appointments faster by typing the subject from directly within your calendar's day view — just tap the time for the appointment in the displayed grid and start typing.



See Who's Attending

When viewing a meeting on your calendar, just flick your finger to pan from the "details" panel to a list of attendees. Want to add someone else to the meeting? Just tap Edit > More details > Attendees > Add someone. You can also tap a name to add that person to your contact list.



Other Aids for Managing Your Busy Day

We've also provided other calendar features to help you stay on top of your day. For example, if you're running late, just open the appointment and tap the button that looks like a running figure to send an email telling everyone that you're running late. If the meeting has an address, a quick tap will show you a map. And because your phone is location-aware, it can even provide directions on how to get there.



To-Do List

Windows Phone 8 lets you use your calendar to sync, view, and manage your To-Do List, which you'll find just a flick away from the "day" and "agenda" views.

Capabilities include the following:

- Create new tasks and edit existing tasks
- Assign (or edit) due dates, set reminders, set importance, and capture notes.
- Display active tasks and sort them by due date or by priority.
- Delete a task, postpone it a day, mark it to complete today, or mark it as completed.
- Display completed tasks, sorted by their completion date.
- Configure whether you want your To-Do List items displayed on your calendar's "day" and "agenda" views (you'll find this option alongside other calendar settings).

By default, your To-Do List on your phone is automatically synced with the Microsoft account you used to setup your phone, enabling you to get to it just as easily from the Web on Hotmail or Outlook.com. If you're connected to Exchange Server, you can also sync with your Outlook tasks.



Messaging

Every smartphone can send text messages. Windows Phone 7 "broke the mold" and did it a little differently, providing a unique experience to make texting easier — and a lot more fun. You got staggered callouts and actionable links, could snap a photo to include on the fly, and immediately knew when you had new text messages, regardless of what you were doing on your phone.

In Windows Phone 8, text messaging is just as fun and easy. It's also part of a unique unified messaging experience. Windows Phone is the only phone that ties together SMS, MMS, Messenger and Facebook Chat — all in one place — so that you can more easily connect and stay connected with friends. You can even switch between them on the fly, without breaking stride or launching a different app. And with the voice features in Windows Phone 8, you can even carry on your conversations hands-free.

Windows Phone 8 also includes powerful new features that make messaging even better. Word Flow (discussed earlier) makes it faster and easier to compose a message. Location Sharing, also new, enables you to easily share a map of your location. You can also delete multiple messages at the same time, and can even sync your instant messages to the cloud, on Hotmail and Outlook.com.

You'll find Messaging on the Start screen and in your App list — just tap to get started. With so many options, you'll be able to reach your friends regardless of whether they're out and about with their phones, on their PCs at home or work, in front of the their TVs playing a game on their Xbox 360s, or anywhere else Messenger and Facebook Chat are supported.

However you choose to communicate, we think you'll find Messaging in Windows Phone 8 incredibly easy to use and that there's nothing else quite like it on the market today.



Threads (Improved)

Threads in Windows Phone 8 bring together the different ways you communicate in one place, allowing you to switch between them on the fly while keeping the entire conversation in view. Start a Thread with someone on Messenger, and then continue the conversation via SMS when your friend goes offline. Or reach out to that buddy who's slow to return text messages because he's always on Xbox playing the latest game.

You'll see your Threads whenever you launch Messaging. They're organized by conversation to help you keep track of who said what. Threads with messages you haven't viewed are in color, enabling you to quickly see which people have reached out to you or replied to a message you sent.

Buttons at the bottom of the panel provide quick access to common actions. Tap New to start a new Thread, or tap Status to set your chat status. Tap More > Settings to turn Facebook Chat and Group Text (described below) on or off. To maximize battery life, by default, we set your chat status to offline. To enable Messenger



and Facebook Chat, simply set your status to "available" from the Me Tile or within Threads.

In Windows Phone 8, we made it possible to delete multiple Threads at once. Just tap Select, use the checkboxes to choose which Threads you want to delete, and tap Delete.

Keep Track of Who Said What

Just tap a Thread to view it. Within each Thread, individual text messages and IMs are shown using staggered, color-coded callouts that make it easy to follow the back-and-forth — including inline photos sent by IM or MMS. Your Windows Phone even provides intelligent suggestions during a conversation, letting you know if a contact goes offline, so with one tap you can switch from IM to text messaging and keep the conversation going.

See Who's Online

From the Threads panel in Messaging, a quick flick takes you to the "online" panel, where you can see which of your friends are online and view their chat status, such as available or away. People with whom you've had recent conversations are at the top for easy access, and you can start or continue a conversation by just tapping on someone. We included the New and Status buttons on this panel, too, so you won't need to flick back to Threads to get to them.



Group Text and Chat

With most phones, you can send texts to groups of people by putting more than one recipient on the To line. With Windows Phone 8, it's far easier. If you have those people in a Group, you can send a text message, MMS message, or IM to all of them with just a tap — provided they're all wired to communicate in that way. Group chat in a Room is even better, as it will let all Room members follow the entire conversation.

You may have noticed an Enable Group Chat setting under Messaging. This setting enables your phone to convert SMS messages to the MMS protocol, so that responses from different people to a single text you sent to them can be grouped into a single Thread. Turn it off and responses to a text you sent to a group of people will show up as different Threads.



Never Miss a Message

When you receive a new text message or IM via Messenger or Facebook chat, you'll hear a sound and a brief notification will appear at the top of the screen, even if your phone is locked. When you have new messages, the Messaging Tile on the Start screen will show you how many you have and the emoticon on the Tile will change. When you've received one message, the smile becomes a wink. When you have four or more messages, the emoticon will change again.

If you have any Rooms or Groups pinned to the Start screen, you'll see notifications on their Live Tiles, too.





Send Photos, Contacts, and More (Improved)

Windows Phone supports MMS and photo attachments in Messenger, so you can send photos that are saved to your phone and links to websites within your messages. Just tap Attach when composing a message and choose a photo — you can choose from your online albums as well as the photos on your phone. Or tap Camera at the bottom of the screen to use your phone's camera to take and include a new photo on the fly. And now, with Windows Phone 8, you can also share contacts, videos, your location (discussed next), voice notes, and contact cards via text message.



Share Your Location (New)

Windows Phone 8 makes sharing your location as easy as sending a text or IM. Unlike third-party location services, this feature is built into your Windows Phone and requires no special downloads or set-up. Best of all, you can share your location with just about anyone who has a messaging service on his or her device.

To share your location when composing a message, simply tap Attach > My Location. Windows Phone will instantly pinpoint your location and add a small map to your message.

Message recipients using Windows Phone can tap on the map for the full Maps experience, allowing them to get directions, see what's nearby, and so on. (Recipients using other phones will receive a link that takes them to a webpage with your location shown on a map.)

Location Sharing works with SMS, Messenger and Facebook Chat. It also works for messages that you send to multiple people at once, such as the members of your Groups and Rooms.





Hold Up Your End of the Conversation (Improved)

When you're composing a message, your phone's Word Flow Keyboard²⁵ can predict, suggest, and correct words as you type. It lets you tap on a misspelled word to see suggested corrections, and can also predict the word you're typing or plan to type next. So even if you're all thumbs, your Windows Phone can help you hold up your end of the conversation.

The Word Flow Keyboard in Windows Phone 8 also makes using emoticons more fun and easy. Just tap the emoticon key on the keyboard to choose from hundreds of new ones. In fact, we added so many that we had to redesign the emoticon chooser. At the bottom, you'll see buttons for switching back to the regular keyboard, choosing from emoticons you've used recently, choosing emoticons based on the characters used to compose them (such as :-) or :P), or choosing from hundreds of other fun, colorful symbols.

When messaging using the Word Flow Keyboard, remember that you can also choose multiple keyboard languages, as discussed earlier under Basic Navigation \rightarrow Word Flow Keyboard. It's handy if you message people in more than one language.



²⁵ Word Flow not available in all markets.

Take Action With a Tap

Windows Phone makes it easy to act on the content of text messages and IMs by recognizing and highlighting actionable information within them, enabling you to send an email, call a phone number, open a website, or map an address with just a tap.





Send and Receive Messages With Your Voice

Built-in voice-to-text conversion in Windows Phone 8 makes it easy to compose messages using your voice.²⁶ It works with email, text messages , and IMs, including Room Chat. When composing a message, just tap Speak to say your message instead of typing it.

We also enabled hands-free text messaging for use with headsets and Bluetooth devices. The default setting will announce and read text messages to you over Bluetooth only. Go to Settings > Speech to change this to have your phone read incoming text messages aloud over a wired headset only, over Bluetooth or a wired headset, or always. Windows Phone will even prompt you to compose and send a reply.



²⁶ Voice-to-text conversion not available in all markets.

Internet Explorer 10 for Windows Phone

Your Windows Phone puts what the Web is about in your pocket, making it easy to find, view, and act on Web content. You'll find Internet Explorer 10 for Windows Phone — the fastest version ever — on the Start screen and in the App list, and can tap a hyperlink from anywhere on your phone to launch the browser and go to that page. We think you'll find your phone's built-in browser to be fast, fluid, and perfect for touch.

Your phone's built-in browser delivers many of the same features as Internet Explorer 10 in Windows 8, including a smart address bar, tabbed browsing, favorites, History, and the ability to delete your browsing history. Of course, we also optimized the browser for your phone, adding features such as multitouch zoom; landscape view; a Web-ready keyboard; and automatic recognition of street addresses, phone numbers, and email addresses on webpages.

Internet Explorer 10 for Windows Phone also includes a new SmartScreen Filter — just like the one in Internet Explorer 10 in Windows 8 — to help protect you from malicious websites. JavaScript performance is up to seven times faster than with Windows Phone 7.5 and twice as many HTML5 features are supported. We also added more ways to share, enabled you to get links via NFC, and re-enabled Find-on-Page.



A Fast, Fluid Browser (Improved)

Windows Phone 7.5 had a browser based on Internet Explorer 9. Internet Explorer 10 for Windows Phone shares it codebase with Internet Explorer 10 in Windows 8 to bring you an experience that's fast, fluid, and perfect for touch.

With Internet Explorer 10 for Windows Phone, you get the following:

- **Hardware-Accelerated Graphics.** Uses your phone's built-in GPU to improve performance when rendering HTML5-based animation or video in the browser.
- **Faster JavaScript Engine.** When rendering webpages based on JavaScript, Internet Explorer in Windows Phone 8 is up to seven times faster than the version in Windows Phone 7.5.
- Improved Support for HTML5 and W3C Web Standards. Including CSS3, SVG, DOM, XHTML, and ECMAScript. Support for HTML5 is double what it was in Windows Phone 7.5, including new support for HTML5 touch events.
- **A Clean UI Design.** Enables you to experience the beauty of the Web instead of the browser frame.
- **Protected Mode.** Helps improve security by constraining the browser session to a low-rights security sandbox.
- **Tab Isolation.** Runs each browser tab in a separate process so that one poorly-designed website won't crash the entire browser or affect other tabs.



Rapid Access to the Web

With Windows Phone 8, you'll have many options for accessing the Web. You'll find Internet Explorer 10 for Windows Phone on the Start screen and in the App list, and you can get quick access to favorite webpages by pinning Tiles for those pages to your Start screen. Of course, you can tap a hyperlink from anywhere on your phone to launch the browser and go to that page.



Mobile-Ready Browser

By default, Internet Explorer 10 for Windows Phone identifies itself to websites as a mobile browser so that sites can optimize their content for your phone. Even if a site doesn't provide mobile-optimized content, you'll find that webpages still load quickly and look great. You can rotate your phone to switch between portrait and landscape views, and you can adjust your preference between mobile and desktop versions of websites in the Settings menu. And when you need to enter text on a webpage, the view will automatically zoom in to make it easier. You can view YouTube videos just as easily, without having to download a standalone YouTube app.




Less Browser, More Web

Internet Explorer 10 for Windows Phone helps you see the beauty of the Web - not the browser frame. The address bar is at the bottom of the screen to conserve screen space, and it won't disappear when you switch to landscape view. The More menu — always just a tap away — is the single place to go for switching tabs, revisiting recently-viewed sites, accessing and adding to your favorites, pinning websites to the Start screen, sharing websites with others, finding text on a page, and accessing browser settings.



(2)

Smart Address Bar (Improved)

Built for easy use while on the go, the address bar in Internet Explorer 10 for Windows Phone suggests websites as you start to type, showing matches from your favorites, browsing history, and popular Bing searches. You can also enter a search term in the address bar to find what you want using the search engine configured by your phone's service provider. Need a map? With Windows Phone, you won't need to go to a separate app. Just enter the address as a search term and your map will be at the top of your results.

In Windows Phone 8, now you can choose from three functions for the address bar button: stop/refresh, favorites, and tabs. To adjust this from within Internet Explorer 10, just tap More > Settings.





Web-Ready Keyboard

Windows Phone includes a Web-specific soft keyboard for typing URLs with a dedicated ".com" key to reduce the number of characters you'll have to type. You can tap and hold the ".com" key to choose from ".org," ".edu", or ".net."



Optimized for Touch (Improved)

Internet Explorer 10 for Windows Phone takes advantage of your phone's multitouch screen. When viewing a page, you can pinch or stretch your fingers to zoom in or out, flick the screen to scroll or pan, tap a photo to view it full-screen, or tap on text to have it fit to your screen for easy reading.

Touch-friendly features in Internet Explorer 10 for Windows Phone also help you do more with less effort. With a few quick taps, you can share photos and links via email, save images on the Web to your phone, or pin webpages to your Start screen for easy access.

Taking action on webpage content in other ways is just as easy. Internet Explorer 10 for Windows Phone automatically recognizes phone numbers, email addresses, and physical addresses on webpages, regardless of whether they were designed as hyperlinks or not, so you can make a phone call, send an email, or map an address with just a tap or two.

Of particular note is the new support for HTML5 touch events in Internet Explorer 10 for Windows Phone. So when you're browsing modern HTML5-enabled websites, you'll benefit from an experience similar to that provided by touchenabled Windows 8 devices.



Tabbed Browsing

Tabbed browsing in Internet Explorer 10 for Windows Phone lets you keep up to six sites open at a time. When viewing any webpage, just tap More > Tabs to see thumbnails of all tabs, and then tap any thumbnail to see that page full-screen. Tap the Close button on any thumbnail to close that tab, or tap the New button at the bottom of the tab view to open a new tab. Under More > Settings, you can specify whether links from other apps are opened in a new tab or the current one.



More Ways to Share

Windows Phone 8 provides more ways to share the beauty of the Web. Just tap More > Share Page and choose whether you want to share through messaging, email, Tap+Send (covered next), Xbox, or via one or more of your social networks. You can even share to Facebook, Twitter, and LinkedIn at the same time.



Receive and Share Links Via NFC (New)

If your phone is NFC-enabled, you can also go to a webpage using NFC — just tap your phone against an NFC-enabled display, poster, or flyer. Your phone will vibrate and you'll see a popup notifying you that you've received a URL and asking whether you'd like to open your browser. Tap Accept to load the URL within Internet Explorer 10.

It's just as easy to share a link via NFC. While viewing the webpage, tap More > Share Page > Tap+Send. (You'll only see this option if you have a NFC-enabled phone.)

This functionality is based on industry standards, so you can also use it to receive webpage links shared by NFC-enabled devices — such as NFC-enabled Windows 8 PCs and NFC-enabled Android devices.



Find on Page (New)

Based on popular demand, Find-on-Page is back in Windows Phone 8. Internet Explorer 10 for Windows Phone makes it easy to find text on the webpage that you're viewing. Just tap the More button on the browser's app bar, tap Find on Page, and enter the text you're looking for. You'll see all instances of that text highlighted on the page, and can go from one instance to the next by tapping the forward and back buttons at the bottom of the screen. After you've found what you're looking for, press the back button to return to the normal webpage view.



Help Protect Your Safety and Privacy (Improved)

Internet Explorer 10 for Windows Phone makes it easy to erase browsing history, cookies, and other personal data on your phone — just tap the More button on the app bar, tap Settings, and then tap Delete History. You can also choose whether to allow cookies on your phone. Protected Mode helps improve security by constraining the browser session to a low-rights security sandbox.

We added a "Do Not Track" setting for Internet Explorer 10 for Windows Phone, which is similar to the Do Not Track setting in Internet Explorer 10 in Windows 8. This setting is enabled by default when you setup your phone using the recommended settings and can be turned off under Settings > Internet Explorer > Advanced Settings. When enabled, it sets a flag within all webpage requests indicating that the user does not wish to be tracked. The website then chooses how to respond to this flag. (*It's worth noting that, today, there is no single definition of what it means to be* "*tracked*," *so expressing a preference via this setting does not guarantee that you'll be able to block all websites and content that you may view as being associated with tracking behavior.*)





SmartScreen Filter (New)

Internet Explorer 10 for Windows Phone 8 includes a SmartScreen Filter, just like the one that's in Internet Explorer 10 in Windows 8, which alerts you whenever you try to visit a potentially malicious site. Unlike some browsers on other devices that require you to manually download lists of such sites, the SmartScreen Filter in Internet Explorer 10 checks against a centralized list of potentially malicious sites and downloads in real-time to provide more effective and up-to-date protection.



Search

Windows Phone has Bing built-in. You can access Bing for Windows Phone at any time using the dedicated Search button to help you quickly find what you want. You can tap or speak your query, after which you'll see context-sensitive search results that include local information, Web results, news, images, and Instant Answers.²⁷ When you're exploring your local area, you'll only be a tap away from useful information, such as phone numbers, ratings and reviews, directions, and more.

We hardwired your phone's dedicated Search button to Bing for Windows Phone, putting you just a moment away from powerful ways to discover the world around you, such as Bing Search, Bing Vision, Bing Music, and Local Scout. Quick Cards show a quick summary of relevant information, reviews, and related apps when you search for certain things. App Connect makes Bing Search results more relevant by connecting them to appropriate apps.

In Windows Phone 8, Bing for Windows Phone can even provide personal suggestions customized search results based on your location, social network, preferences, and search histories. You'll see them in Local Scout, on some Quick Cards, and in the Windows Phone Store. We also added Quick Cards for more categories, added a "shopping" category to Bing Search results, improved coverage for traffic data, and enabled you to get turn-byturn directions to your destination via the app of your choice.



²⁷ Bing Search and voice recognition features may vary by market or language.

Hardware Search Button

Everyone uses search, which is why every Windows Phone has a dedicated Search button that works regardless of what you're doing on your phone. Pressing it always takes you directly to Bing for Windows Phone — putting you just a moment away from Bing Search web results, local information, maps, directions, Instant Answers, Quick Cards, Bing Vision, Bing Music, Local Scout, and more. (Context-sensitive search is exposed through the "soft" search buttons on various screens.)



Bing for Windows Phone

Bing for Windows Phone gives you access to our popular Bing daily homepage. Just tap in the search box to display the soft keyboard and, as you begin typing a search term, Bing will automatically make suggestions based on your favorites, search history, and popular search terms on the Web today.

The Bing homepage changes daily, providing new images with hotspots that you can tap on to help you discover fun facts. You'll also see your present location, telling you that Bing knows where you are and is ready to deliver location-aware search results.²⁸

At the bottom of the screen, you'll find buttons for other ways to take advantage of Bing on Windows Phone 8, including Local Scout, Bing Music, and Bing Vision, each of which is discussed in greater detail in the following sections. (We moved the button for Voice Search back up into the search box — just tap it to tell your phone what you're looking for.)



²⁸ Requires enabling Location Services and "use my location" option in search settings.

Bing Explore (New)

From the Bing homepage, flick left a few times to see some of the ways that Bing Explore — a new feature in Windows Phone 8 — can help you explore the world around you. You'll see panels for many of the common ways that people use search, such as finding what's playing in local theaters, top news headlines, top videos, local events, and local deals. Of course, the results you'll see are locally and temporally relevant.



New Search Categories (Improved)

Windows Phone 7.5 divided search results into web, local, and images categories. In Windows Phone 8, we changed the images category to media (it now includes videos *and* images) and added a fourth category: shopping. Of course, you can still switch between the categories with a flick of your finger,²⁹ and the category most relevant to your search is still presented first — for instance, if you search for "sushi," you'll see nearby restaurants front and center instead of the encyclopedia entry on sushi.



²⁹ Local results are not available in all markets.

Location-Aware Search

Bing Search local results are based on your current location, as determined by your phone's builtin Wi-Fi and GPS receivers, including A-GNSS capabilities that work when you're indoors. You'll see matches for local search results along with a map showing their locations in one comprehensive view, eliminating the need to flip back and forth.

Just tap the map for a full-screen view or tap a local result for more information on it, including phone numbers, ratings, reviews, and in some cases, even nearby attractions — all provided in one place to help you quickly and easily make decisions. You can share the results with friends in several ways, and you can pin a local result to the Start screen for easy access at a later time.



Instant Answers

Instant Answers³⁰ put popular information front and center, enabling you to view movie times, weather, game times, stock quotes, flight times, and more without having to tap a link and load another webpage. When an Instant Answer is available, you'll see it at the top of the "web" panel in your search results. Instant Answers can also include results from the Apps + Games Store.³¹

Bing supports a variety of Instant Answers that use context, such as location and time-of-day, to deliver the right information when you want it. Here are some searches to try: "weather," "movies," "BA 49" (flight numbers), "MSFT" (stock quotes) and "Seattle Seahawks" (sports scores).



³⁰ Instant Answers are not available in all markets.

³¹ Feature available in limited markets, within some of those markets in English only.

Local Scout (Improved)

Local Scout³² in Windows Phone 8 provides a location-aware "neighborhood guide" that shows nearby places. Just tap the Scout button — it's at the bottom of the Bing homepage — to view recommended restaurants, shopping, and activities within a 25-mile radius of your location.



When you're exploring a new area or feeling indecisive, let Local Scout be your guide. To make it easy to find what you want, we divided Local Scout results into the following panels:

- Eat + drink, which shows nearby places to grab a bite or quench your thirst.
- See + do, which shows nearby attractions and activities.
- Shop, which shows nearby stores.
- For You, which provides opt-in personal suggestions based on your search history and social networks. You'll even see *why* something was suggested, such as a friend liking it or the fact that you were looking for similar things in the past. If you don't like a suggestion, tap the Refine button at the bottom of the panel to let your Windows Phone know your preferences.

³² Local Scout is only available for select areas in limited markets.

All panels show a thumbnail map of the area. On the first three panels, you can tap the small text below the panel's heading to tell Local Scout what matters to you the most. For instance, on the eat + drink panel, you can sort by distance, ratings, or personal suggestions — or filter by cuisine. You can even filter by places that are open now or offering a deal. Of course, you can pin Local Scout results to the Start screen for quick access — just tap More > Pin.

We also improved the Local Scout Live Tile, which now flips to show the top personalized recommendation from the Local Scout "for you" panel.





Quick Cards (Improved)

Quick Cards show a quick summary of relevant information, reviews, and related apps³³ when you search on certain topics, in a format tailored to your Windows Phone. In Windows Phone 8, we expanded the categories for Quick Cards to include places, products, movies, events, news, deals, and videos.

We designed Quick Cards to deliver and organize the info you're most likely looking for when on the go. For instance, a Quick Card for "Xbox 360" shows basic information about that product, prices from various vendors, product reviews, and apps related to the product. Quick Cards for venues can include a panel for upcoming events. To try this out, use Bing to search for "Safeco Field Seattle," tap that result to view the Quick Card, and then flick left to see upcoming events.

Quick Cards can even tie in personal suggestions. Movie, place, and product Quick Cards can show "likes" from friends — you'll see them in the Quick Card's 'buzz" panel. They can also show public posts, such as from Twitter.



³³ Quick Cards are only available in limited markets. Related apps feature in Quick Cards only works with apps developed or updated for Windows Phone 7.5 or later.

Bing Vision

With Windows Phone 8, you can also use the camera to quickly find product information and explore purchase options. You'll find a button to launch Bing Vision below the Bing Search screen — just tap it to initiate a search on an image of a barcode, QR code, Microsoft Tag, or the cover of a CD, DVD, or book.³⁴ Results are saved and can be viewed with a quick tap on History.

Bing Vision can even help you crack the language barrier, such as when viewing a sign in a foreign country — when it's active, just tap Scan Text > Translate to translate it into different languages.³⁵ You can also search based on the recognized text — it might be useful when pointing Bing Vision at a restaurant sign or a road sign — and you can copy the text to your phone.

In Windows Phone 8, Bing Vision can also be accessed as a Lens from within the camera experience, which improves discoverability and convenience.



³⁴ Bing Vision not available in all markets. Specific capabilities (e.g. barcode scan, Microsoft tag scan, translate text) also vary by market. ³⁵ Only select languages can be scanned and translated.

Bing Music

If there's a catchy tune you don't recognize playing somewhere other than on your phone, you can use Bing Music to identify the song and go to the Xbox Music Store to purchase or stream it. Just tap the hardware Search button on your phone and then tap the Music button at the bottom of the screen. After listening to the song for a few seconds, Windows Phone 8 will show you who sings it, which album it's on, and where to get it.

Your Windows Phone will even save these search results for you automatically, so that you can quickly get back to what you were doing and download the song later. Just tap More > Music History from Bing for Mobile on your phone to view matches from Bing Music.





Voice Search

If you prefer, you can skip the keyboard and tell Bing what you're looking for — just tap the Voice button in the Bing search bar for built-in voice recognition. Voice search also works from the Start screen. Just press and hold the Start button and say, "Search for pizza" or "Find pizza," and Bing will show you the closest places to get one.

Voice search in Windows Phone 8 is fast and accurate — a quicker option than typing, and a great way to find what you want even if you don't know how to spell it. Of course, Microsoft Tellme in Windows Phone 8 also lets you do many other things on your phone with your voice. (These are covered earlier in this guide, under Basic Navigation.)



App Connect

App Connect makes Bing Search results even more relevant by connecting them to appropriate apps.³⁶ It works together with the Windows Phone Store, so it will suggest both apps that are already on your phone and new apps to download.

With App Connect, popular apps can become way more useful — and accessible — than ever. For instance, when you search for Showbox SoDo (a local venue in Seattle) on Bing, an app for rating local venues and viewing ratings from others will show up at the top of the "Web" results panel as a suggested download. Search for "Xbox 360" and you'll see both a suggested app and a Quick Card for that product. Open the Quick Card for Xbox 360, which can let you pass information about that product to an app (such as one for shopping or gaming) to continue your search experience.

Developers can take advantage of App Connect to build apps that know what you're searching for and take advantage of this information to deliver seamless, end-to end-experiences. Imagine searching for a local restaurant using Bing and then instantly booking it with the OpenTable app — without having to tell the app which restaurant you want. Or finding a movie to see tonight with Bing and then buying tickets with the Fandango app, again without having to tell the app which theater, movie, or showing you want.

Here's another scenario that's equally compelling: Imaging you're at a friend's house and he shows you a great new book. But he's only halfway finished and won't loan it to you, so you point Bing Vision at the cover of the book and it shows you a Quick Card with reviews, prices and places to buy. If you have an e-reader app that takes advantage of App Connect installed, a shortcut to that app will appear in the Apps panel of the Quick Card, and tapping the app will launch it and take you directly to where you can download the book.

In Windows Phone 8, we improved the algorithms for App Connect to make recommendations more relevant.

³⁶ App Connect only works with apps updated or developed for Windows Phone 7.5 or later.

Maps

Your Windows Phone comes with built-in GPS and Maps, so it can know where you are and show you how to get where you want to go. In select locations, you can even choose from routes for driving or walking and view street-level images and real-time traffic updates. You can also download maps to your phone and view them when you don't have a cellular or Wi-Fi connection, and can use your favorite mapping app to get turn-by-turn directions. Maps in Windows Phone 8 is based on Nokia map technology, which includes map data for more than 180 countries.

Nokia Map Technology (New)

Through our partnership with Nokia, we've been able to build Nokia map technology into Windows Phone 8 to deliver an amazing mapping experience — including map data for more than 180 countries.

Easy Access to Maps

Local search results come with one-tap access to Maps, so you'll find mapping your destination just as easy as finding it with Bing Search. You may even want to pin your home location to your Start screen, so it's easy to get home from wherever you happen to be. Maps also can be accessed through Local Scout, through Bing Search, or directly from Maps in your App list. (Note: If you have a Nokia phone, the App list will say Nokia Maps.)

Offline Maps (New)

In Windows Phone 8, now you can download maps for offline viewing — when viewing a map, just go to More > Settings, tap Download Maps, and then tap Add to select the region or country you want.



Location Finder

The Location Finder feature on your Windows Phone uses its built-in Wi-Fi and GPS receivers to instantly pinpoint your current approximate location on a map — just tap the Me button on the app bar below the map. Maps are multitouch ready, so you can spread your fingers apart to zoom down to street level or pinch them together for the big picture. Try using it to find your way around your local mall.





Traffic Updates, Aerial Views, and More (Improved)

Maps also give you other useful information. In select locations, you can choose from routes for driving or walking and can even see street-level images and real-time traffic updates³⁷ — features that are accessed by tapping the More button below a map. The More button also provides access to other settings, such as turning location-based mapping features on or off and deleting previous map searches, pins, and images.

We recently improved traffic data to show more secondary streets and expanded geographic coverage to 26 new countries, so you'll benefit from this whether you have Windows Phone 8 or Windows Phone 7.5.



³⁷ Traffic updates available in limited markets only.

Get Directions (Improved)

You can also get directions to a location — just tap the Directions button at the bottom of a map.

Windows Phone 7.5 offered basic turn-by-turn directions. In Windows Phone 8, we made this more flexible — and ultimately more powerful. Now you can download any of several mapping apps (such as Nokia Drive) and can easily open that app from within several locations in your phone (for example, within Maps or when viewing a Quick Card for a place) to get turnby-turn directions from that app. Just look for "drive" or "directions" and tap it to launch the app and pass it the address of your destination. Depending on the mapping app you've chosen, it may also be able to provide you with audible directions.



Sync and Manage Your Phone

Windows Phone 8 delivers several improvements that make it easier to manage your phone and sync your information and content — beginning with improved integration with Microsoft cloud services such as SkyDrive and Outlook.com. We also added online backups to give you additional peace-of-mind, and implemented over-the-air updates so you won't need to connect your phone to your PC to get the latest software. And if you want to sync content directly from your phone to your PC, you can choose from one of new Windows Phone apps. Of course, you still have access to online tools for finding your phone, erasing it remotely, and reinstalling your apps.

Your Data, Anywhere (Improved)

Your Windows Phone is designed to work with Microsoft cloud services, enabling you to access information on your phone from the Web and vice versa. Synchronization is automatic, and set-up is simple — just enter your Microsoft account info on your phone once and you're all set. Your Microsoft Account also is your key to other Windows Phone experiences, including Xbox, Xbox Music, the Windows Phone Store, and online tools for finding and managing your phone.

Through automatic, over-the-air sync, your email, contacts, calendar, instant messages, and text messages are synced with Hotmail or Outlook.com. Similarly, your photos, videos, Office documents, and OneNote notes are synced with SkyDrive. In this way, you can access any of these things from any PC as easily as on your phone — all you need is a Web browser and an Internet connection.

These same cloud services also help give you peace of mind. Drop your phone in the lake on the last day of a two-week vacation? You may have lost your phone, but at least all the photos you took are safely on SkyDrive. Similarly, the songs you purchased are on Xbox Music — ready to stream again as soon as your new phone is setup. That'll also be easy because Windows Phone 8 now can backup your phone's settings in the cloud.

My Windows Phone

Go to <u>windowsphone.com/my</u> and login to see how you can access your phone from the Web. You'll see links to your photos and documents on SkyDrive, a link to your Xbox info, and links to your inbox, contacts, and calendar on Hotmail. My Windows Phone also provides tools for finding and managing your phone, viewing/editing your account and billing info, and viewing and reinstalling your apps.

Find and Manage Your Phone

Below the phone picker, you'll see a map of your phone's last location (assuming you've enabled this) and a link to find, ring, lock, or erase your phone. Click on the link to access the free³⁸ Find My Phone tools to help you get your Windows Phone back if you lose or misplace it — or at least help you safeguard your personal information. With these tools, you can do the following:

- **Map Your Phone.** You can take advantage of Wi-Fi and your phone's built-in GPS receiver to see its approximate location on a map.³⁹
- **Ring Your Phone.** You can have your phone ring very loudly for 60 seconds using a special ringtone even if your phone is on silent or vibrate-only mode.
- Lock Your Phone and Display an "If Found" Message. You can lock your phone from afar so that nobody else can use it. You can also type an "If Found" message to display on the screen that describes how to return your phone if somebody finds it, and can even make your phone ring to help people notice it.
- **Erase Your Phone.** You can reset your phone to the factory settings and erase all the information on it.

These tools rely on special text messages that don't appear on your phone. They're not tied to a paid subscription service and are ready to use in most countries whenever you may need them.

See and Reinstall Your Apps

Click the Account link to view the account information for your phone, view your billing information, or edit payment information. The Account screen also shows your App Purchase History, with handy links for reinstalling any apps you may have downloaded and later deleted. You can also use these links to reinstall your apps if you get a new phone. (*Note that your purchase history is tied to your Microsoft account.*)

Web Store

From My Windows Phone, click on Apps + Games to use your PC's Web browser to browse and buy apps and games. When you choose to purchase or try an app or game on the Web, it'll download directly to your phone.

³⁸ Internet access required. Carrier fees apply.

³⁹ Location Services must be enabled on phone.

Backup and Restore (New)

Windows Phone 8 can automatically back up your device settings to the cloud, making it easy to set up or restore your phone if it's lost or stolen, or if you choose to reset it for any reason. Settings that can be backed up include those for photos + camera, sound, messaging, theme, and wallpaper/background. Backup also saves accounts you've configured (but not their passwords), your Internet Explorer favorites, and a list of apps that you've downloaded.

Enabling cloud backup couldn't be easier — just say "yes" during the setup process, when you're asked if you want to backup your stuff. Restoring a backup is also easy. During the setup process, after you enter your Microsoft account, Windows Phone will check for any backups associated with that account. If one or more backups associated with your Microsoft account exists, Windows Phone will ask you if you'd like to start fresh or restore a backup.

To try this out, do the following:

- 1. Setup your Windows Phone and use it for a while.
- 2. Go to Settings > About, tap Reset Your Phone, and then confirm it.
- 3. Setup your Windows Phone again using the same Microsoft account as in step 1.

When you choose to restore a backup, Windows Phone will download the backup, apply the saved settings, and then prompt you for passwords for any restored accounts. If one of those accounts requires protecting your phone with a PIN (such as via Microsoft Exchange policy), you'll be asked to setup a new PIN. The restore process will continue after you see the Start screen, during which Windows Phone will download and reinstall your apps.



Over-the-Air Updates (New)

Windows Phone 8 makes it easier to get the latest software updates more quickly and easily. They're now delivered over-the-air, eliminating the need to plug your phone into your PC. To support this, we've provided a few settings that you can adjust to tailor the update experience to your liking. Just tap Settings > Phone Update to do the following:

- Manually check for an update.
- Choose whether you want to be notified when an update is available.
- Choose whether to automatically download updates if your data settings allow it. (This means that you need to have data "on" under Cellular Settings.

The phone will do pre-install checks in the background prior to downloading an update; if you want to use your phone during this time, you still can. After the pre-install process is completed, you'll get a prompt asking if you want to install the update. As this may make your phone unusable for up to 15 minutes, you'll have the option to install immediately or postpone it until later.

When downloading the update, Windows Phone will try to do so over Wi-Fi whenever possible to help you conserve data. If Wi-Fi is not available, your phone will tell you the size of the update and ask if you want to download it over cellular. For a large update, your mobile operator may require that it only be downloaded over Wi-Fi.

As the update is installing, you'll see a black screen with two white, moving gears. After the process is completed, you'll see an "Update is done!" message — and can go about using your phone, with all your settings, data, apps, and so on just like they were before.



Windows Phone Apps (New)

Windows Phone apps offer solutions for moving content between your phone from your PC; managing phone storage and settings; and searching phone content. There are three different Windows Phone apps, each designed for a specific experience.

Windows Phone App (for Windows 8)

Windows 8 is ready for Windows Phone 8 out-off-the-box. Just connect your phone to your PC using a USB cable and the built-in Windows Phone app in Windows 8 will install and launch automatically.

The app embodies the Windows 8 design philosophy, enabling you to use new Windows 8 features such as the Share Charm to move content between your phone and your PC. It's worth noting that this app uses the new *Share contract* technology in Windows 8, which provides a way for a person to share data from the phone or PC to another app or person. Third-party developers can also write apps that use the Share Charm to support the direct transfer of data between that app and Windows Phone 8 in a secure way.



To move one or more photos from your phone to your PC, do the following:

- 1. Connect your phone to your PC using a USB cable to automatically launch the Windows Phone app. After a moment, you'll see the photos, music, and videos that are on your phone. To the right, you'll see Tiles for adding photos, video, and music.
- 2. Tap (or right-click) the "photos" label below the displayed photos to see the albums on your phone, then tap (or right-click) the album you want to choose from.
- 3. Tap (or right-click) to select the photos or videos you want to save, tap (or right-click) on the app's black background, then tap (or right-click) Save to PC. You'll see a notification in the upper right of the app when the transfer is complete.

To move one or more photos from your PC to your phone, do the following:

- 1. From the PC's Start screen, tap (or click) the Photos Live Tile, tap (or click) the Pictures Library Live Tile. Continue navigating until you see the photos you want.
- 2. Tap (or right-click) to select the photos or videos you want to save.
- 3. Tap the upper-right corner of the screen (or move the mouse cursor all the way past that corner) to bring up the Charm bar, select the Share Charm, then select Windows Phone from the list. You'll see a progress indicator while the files are being transferred, after which the files will appear in an "Other Photos" album on your phone.

Windows Phone App (for Desktop)

If you're on Windows 7 — or are on Windows 8 but prefer its desktop experience — then this is the app for you. It can even sync with iTunes.

If you're using Windows 7, just plug your phone into your PC, upon which you'll see a Device Stage screen that includes a link to get the Windows Phone app. If you're on Windows 8, you can get the app at <u>www.windowsphone.com</u>. (Note: After you install the app, when you run it for the first time, you may be prompted to download the Microsoft .NET Framework 4.)

When you run the app for the first time, you'll be asked to name your phone and select a few options. After you do this, the app will catalog the content on your PC. You can then use the app to browse the content on your PC and sync it to your phone — and vice versa.

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| music photos+videos m | ovies+TV podcasts | | | | Search | ą |
| All content on your phone is sh | nown here. You can ma | nage items by selecting | them and then cl | hoosing an | option below. | |
| Name | Album | Artist | Duration | Size | | * |
| Beautiful Goodbye | Overexposed | Maroon 5 | 04:15 | 8,17 MB | | |
| Daylight | Overexposed | Maroon 5 | 03:45 | 7.26 MB | | |
| Doin' Dirt | Overexposed | Maroon 5 | 03:31 | 6.84 MB | | |
| Fortune Teller | Overexposed | Maroon 5 | 03:23 | 6.59 MB | | |
| Ladykiller | Overexposed | Maroon 5 | 02:44 | 5.39 MB | | |
| Love Somebody | Overexposed | Maroon 5 | 03:50 | 7.4 MB | | 1 |
| Lucky Strike | Overexposed | Maroon 5 | 03:05 | 6.04 MB | | |
| One More Night | Overexposed | Maroon 5 | 03:39 | 7.08 MB | | |
| Payphone | Overexposed | Maroon 5 | 03:51 | 7.45 MB | | |
| Sad | Overexposed | Maroon 5 | 03:14 | 6.31 MB | | |
| The Man Who Never Lied | Overexposed | Maroon 5 | 03:25 | 6.65 MB | | |
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Windows Phone App (for Mac)

If you have a Mac, then you'll want to use this app, which can be downloaded from the Mac App Store. It's similar to the Windows Phone 7 Connector for Mac, and can be used to sync your phone with your iTunes libraries.
Windows Phone 8 for Business

In developing Windows Phone 8, we didn't just focus on delighting consumers. We also focused on meeting the needs of businesses large and small — from sole proprietors who can't afford to be distracted by technology to large enterprises with extensive IT needs, policies, and existing IT infrastructure. Windows Phone 8 closes the gap between what employees want from a phone and what organizations require of phones that are used for both personal and business purposes. No other phone delivers the same, no-compromise experience with the Microsoft software and services that end-users and IT departments already know and trust.

Benefits for Business End-Users

With Windows Phone 8, business end-users will have access to powerful out-of-the-box communication and collaboration tools, including the following:

- A **People Hub** that brings together all their contacts in one place and allows them to communicate with those people using any of the ways that are relevant for each contact.
- **Outlook**, which provides powerful tools for email, calendar management, and tasks. Users' calendars and to-do lists sync with Exchange (to-do list sync is unique to Windows Phone). Through these capabilities, users can stay on top of tasks, view and respond to meeting requests directly from their email inboxes, identify schedule conflicts, view meeting invitees and their responses, or join a Lync meeting with just a tap.
- An Office Hub that provides one-stop access to documents received as email attachments or stored on Office 365. The Office Hub "recent" document list can remain in sync with the recent document list on the user's Windows-based PC⁴⁰, so users won't have to worry about finding the latest copy of a file. Even if a user has just finished accessing a document on the PC but has never accessed it on Windows Phone, that document will be available in the recent document list on the phone just a tap away.
- The Office Hub also provides the latest mobile versions of Microsoft Word, Excel, and
 PowerPoint touch-ready versions of familiar Microsoft Office applications that make it
 easy to view, edit, and comment on Office documents while on-the-go. Enhancements in
 PowerPoint include a new thumbnail view and a new slide view that shows editable speaker
 notes below the slide, on one screen. When preparing for a presentation, users can do so
 using Windows Phone 8 until the moment they step up to the podium.

⁴⁰ Requires Office 2013. Also requires SkyDrive and a Microsoft account, or Office 365.

• **OneNote**, now available directly on the Start screen, gives the user control over synchronization of notebooks over SkyDrive and Office 365. Users have complete control over which notebooks or pages in a notebook are synced and can easily navigate multiple notebooks. Users also can dictate notes while the phone is locked and have those notes automatically transcribed and added to a OneNote page, without having to type them in by hand. With OneNote, an idea or action item never needs to slip away.

Just as important as the above, a Windows Phone is customizable, enabling users to personalize their phones in ways that work best for them without getting themselves into trouble. With Windows Phone 8, you won't hear things like "I can't open that file" or "All my icons disappeared" — types of issues that businesses fear will result in increased support costs.

Benefits for IT Departments

For IT departments, rapid user adoption, strong user acceptance, and superior user productivity are just a few of the advantages provided by Windows Phone. No other phone is as easy to deploy and manage within a Windows-based IT infrastructure — a fact that holds true regardless of whether that infrastructure is hosted in the cloud on Office 365 or within a company's data center on Windows Server, Exchange Server, Lync Server, and other Microsoft server software.

Robust Security

Windows Phone supports BitLocker-based full device encryption — including operating system and data files — to help protect data. Just like Windows 8, Windows Phone 8 is based on the NT kernel and has a trusted boot process that protects the platform by allowing only validated software components to execute. Application sandboxing helps prevent malicious apps from gaining unauthorized access to data belonging to other applications or preying on them in other ways. Windows Phone is also the only phone with native support for Information Rights Management, which businesses can use to help protect sensitive information.

Integration with Existing IT Infrastructure

No other phone integrates as seamlessly, rapidly, or cost-effectively with existing Windows-based IT infrastructures. Windows Phone 8 supports Exchange Server and the latest ActiveSync (EAS) protocol (v14.1) while maintaining compatibility with older versions, enabling businesses to deliver rich email experiences with the version of Exchange Server that they already own and know — without additional investments.

Businesses can manage Windows Phone devices with EAS policies through Exchange Server, Office 365, Windows Intune, System Center Configuration Manager 2012, or EAS-compliant third-party management tools. Windows Phone 8 supports essential EAS policies and capabilities to protect

email and other corporate data, including password policies, remote wipe, and SSL encryption of data transmission.

Similarly, Windows Phone 8 "just works" with SharePoint Server and Lync Server, enabling businesses of all sizes to provide easy access to existing communication and collaboration services — regardless of whether they're hosted on-premises or in the cloud on Office 365.

Full Control Over Mobile Devices and Line-of-Business Apps

With Windows Phone 8, enterprises can develop enterprise mobile apps using the same tools and technologies they already employ for desktop and server software development: Microsoft Visual Studio.

After development is complete, businesses can develop, package, sign, and distribute mobile lineof-business applications while maintaining end-to-end control. Windows Phone 8 supports native mobile device management, enabling IT departments to use tools such as System Center Configuration Manager 2012 and Windows Intune for device enrollment and management, software distribution, configuration management, and reporting.

Companies can publish their mobile applications via their own private app portals, providing an effective means of securely distributing those apps to mobile employees. IT departments can even create their own Windows Phone Hubs to deliver all the business apps and information that mobile employees need to do their work. Company Hubs are a one-stop-shop for working on a Windows Phone — one that can help make mobile employees more productive.

For More Information

A more detailed look at all the business-friendly features built into Windows Phone 8 can be found in the Windows Phone 8 for Business Reviewer's Guide, which you can request from your Microsoft PR contact.

Appendix A: Applications

Following is a list of all the apps on the App list, along with a brief overview of each one. You'll also see any other accounts that you set up, such as Google Mail or Yahoo Mail, and any apps that you install on the App list. You can tap and hold on any app to pin it to the Start screen, and you can tap and hold on any Tile in the Start screen to unpin the app.

Alarms

The Alarms app lets you set and manage multiple alarms. You'll see all your alarms on one screen, and you can easily turn individual alarms on or off. Each alarm can be set to go off once or to repeat on selected days of the week, can have its own sound, and can be named however you choose. If you pin the Alarm app to the Start screen, the Alarm Tile will show you whether any alarms are turned on and the time the next alarm is scheduled to go off.



Calculator

In portrait mode, provides a basic 10-key calculator. Rotating the phone to landscape mode changes the calculator app to a scientific calculator.

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Calendar

Launches your calendar, which is discussed earlier in this guide.

Camera

Launches your phone's camera, just like pressing the dedicated camera button on your phone.

Games

Launches the Games Hub, which is discussed earlier in this guide.

Help + Tips

Provides help and tips for using your Windows Phone.

Hotmail

If you logged in with a Microsoft account during initial setup, you'll see a Hotmail app, which takes you to your Hotmail or Outlook.com email.

Internet Explorer

Launches Internet Explorer 10 for Windows Phone, which is discussed earlier in this guide.

Maps

Launches Maps, which is discussed under Search and Maps earlier in this guide.

Messaging

Launches the Text Messaging app, which is discussed earlier in this guide.

Music + Videos

Launches the Music + Videos Hub, which is discussed earlier in this guide.

Office

Launches the Office Hub, which is discussed earlier in this guide.

OneNote

Launches OneNote Mobile, which is discussed earlier in this guide.

People

Launches the People Hub, which is discussed earlier in this guide.

Phone

Launches the Phone app, which is discussed earlier in this guide.

Photos

Launches the Photos Hub, which is discussed earlier in this guide.

Settings

Launches the Settings menu. (Individual settings are described in the next section of this guide.)

Store

Launches the Windows Phone Store, which is discussed earlier in this guide.

Wallet

Launches Wallet, which is discussed earlier in this guide.

Appendix B: Settings

The Settings menu is organized into two panels: System Settings and Application Settings. Following is a brief summary of what you can adjust in each area.

System Settings

Ringtones + Sounds

- Ringer: On/Off
- Vibrate: On/Off
- **Ringtone:** Select a sound from options provided
- New text or IM: Select a sound from options provided
- New voicemail: Select a sound from options provided
- New email: Select a sound from options provided
- Play a sound for appointment reminders: Yes/No
- Play a sound for key press: Yes/No
- Play a sound for lock and unlock: Yes/No
- Play a sound for all other notifications: Yes/No

Note: All sounds have a preview button at the left.

Theme

- **Background:** Dark or Light
- Accent color: Select a color from 20 options provided (device manufacturers and mobile service providers can provide additional accent color options)

Email + Accounts

• Add an account: Tapping this lets you select a type of account to configure. Options include Microsoft account, Outlook (includes Outlook.com, Exchange, and Office 365), Yahoo Mail, Google, Facebook, Twitter, LinkedIn, Other Account (POP and IMAP), and Advanced Setup.

The Email + Accounts Settings screen also shows all your existing accounts. You can tap one to adjust settings such as account name, frequency to download new content, download email from last X days (where X is a configurable number), and content to sync (such as email, calendar, and contacts). You can also adjust your password, configure logging, and other advanced options.

Internet Sharing

OEMs and/or mobile operators also have the option to configure their phones to support Internet connection sharing — that is, using your phone as a Wi-Fi hotspot. If this feature is enabled, you'll see an item under Settings for configuring this feature.

Lock Screen

- **Background:** Tapping this button allows you to select from a photo on your phone, Bing, or any installed apps that support this feature.
- **Change photo:** If you chose "photo" above, you'll see this button. Tap it to choose a photo.
- **Show artist when playing music:** Turning this on displays artist images on the Lock screen when you're playing music.
- Notifications
 - **Choose an app to show detailed status:** Default options include Calendar, Messaging, Phone, and any email accounts you have setup. Some apps you download can also show up here.
 - **Choose apps to show quick status:** Default options include Games, Messaging, Phone, and any email accounts you have setup. The fifth notification can also be used to display data from a third-party application.
- Adjust screen time-out: Options include 30 seconds, one minute, three minutes, five minutes, 15 minutes, and never. (Duration of screen time-out cannot be longer than that of password time-out.)
- **Password:** On/Off (Turning this on prompts you to enter and confirm a numeric password. If connected to Exchange Server, this can also be a complex alphanumeric password.)

• Adjust password time-out: Options include 30 seconds, one minute, three minutes, five minutes, and 15 minutes. You'll only see this if you have a password set.

Used together, the screen time-out and password time-out settings enable you to have your phone switch off after a short period of inactivity and then use it again within a longer password time-out duration, without having to re-enter your password.

Wi-Fi

- Wi-Fi networking: On/Off
- Advanced Settings
 - Notify me when new networks are found: Yes/No
 - Send information about nearby Wi-Fi connections to help discover nearby Wi-Fi: Yes/No

The Wi-Fi Settings screen also shows detected wireless networks — just tap one to connect. Tapping on a wireless network you're currently connected to lets you adjust proxy settings or login credentials, as well as view other information for that connection.

OEMs and/or mobile operators have the option to configure their phones to also allow you to connect to hidden Wi-Fi networks (networks that don't broadcast their network name.) If this is enabled, you can connect to a hidden wireless network by tapping the New button at the bottom of the Advanced Setting screen.

Bluetooth

• Bluetooth radio: On/Off

If you turn Bluetooth on, your phone will search for Bluetooth devices and be discoverable while you're on this screen.

Tap + Send

• NFC sharing: On/Off

Airplane Mode

• **Airplane mode:** On/Off (When you turn this setting on, it turns off your phone's cellular, Wi-Fi, Bluetooth, and NFC sharing. While in airplane mode, You can still toggle Wi-Fi, Bluetooth, and NFC sharing separately.)

Cellular

- Data connection: On/Off
- Data-roaming options: Roam/Don't Roam
- **Mode selection:** Options vary based on connection types supported by your phone.
- **Highest connection speed:** Varies based on connection type. You can adjust this to limit connection speed to other than the highest speed supported by your device.
- **Network selection:** Automatic/Tap to Select (which searches for options from which to choose.)
- Add Internet APN: Tapping this button lets you configure an access point name (APN), username and password, APN proxy settings, and IP type.
- Add MMS APN: Tapping this button lets you configure an access point name, username and password, WAP gateway URL and port, MMSC URL and port, maximum MMS size, and IP type.

Location

• Location services: On/Off (When this setting is turned on, your current location will be available to any apps you've allowed to access it.)

Kid's Corner

This setting is disabled by default. When you turn it on for the first time, you'll see a brief wizard for choosing the content you want to make accessible and setting a password. After that, the Kid's Corner setting screen shows the following:

- Kid's Corner: On/Off
- **Games:** Tap to choose the games you want to make accessible.
- **Music:** Tap to choose the music you want to make accessible.
- **Videos:** Tap to choose the videos you want to make accessible.
- **Apps:** Tap to choose the apps you want to make accessible.
- Launch Kid's Corner: Tapping this button takes you to the Kid's Corner Lock Screen.

Battery Saver

- Always turn on Battery Saver when Battery is low: Yes/No
- Turn on Battery Saver now, until next charge: Yes/No

The Battery Saver Settings screen also displays remaining battery life (as a percentage).

Phone Storage

This screen shows bars that indicate how much of your phone's internal storage is being used. Tap the bar for a more detailed breakdown.

If your phone supports a microSD card and you have one installed, you'll see a second bar for how much of its storage is being used. Below that, you'll see settings for configuring whether new music, videos, and pictures are stored on your phone's internal storage or on the card.

Backup

Backups can help you guard against mishaps by saving certain info to the cloud. On this screen, you'll see settings for the following:

- App List + Settings
 - o Backup: On/Off
 - **Backup now:** Tap this button (active only when backup is turned on) to perform a backup now.
 - **Advanced:** Tap this button to delete all settings currently stored in the cloud and turn off backup.
- **Text Messages:** Tapping this takes you to the Messaging settings screen, where you can turn backups of your text messages on or off.
- **Photos:** Tap this to configure automatic upload of photos and videos to SkyDrive. For each type of media, you can choose from the following settings: Don't upload, Good quality, or Best quality. (Some of these options may use your data plan or require Wi-Fi.)

Date + Time

- 24-hour clock: On/Off
- **Set automatically:** On/Off (Turning this off shows additional settings for manually entering a time zone, date, and time.)

Brightness

• **Automatically adjust brightness:** On/Off (Default is medium. Turning this off lets you select from low, medium, and high brightness levels.)

Keyboard

- Add keyboards: Tap this to add soft keyboards for one or more additional keyboard languages. Tap-and-hold an installed keyboard on the list immediately below this button to remove it.
- **Typing Settings:** Below the Add Keyboards button, you'll see a list of installed keyboards. Tap one to adjust the following typing settings.
 - Suggest text: Yes/No
 - Highlight misspelled words: Yes/No
 - Correct misspelled words: Yes/No
 - Insert a space after selecting a suggestion: Yes/No
 - Insert a period after double-tapping the spacebar: Yes/No
 - **Capitalize the first letter of a sentence:** Yes/No
- **Advanced.** Tap this button to adjust the following settings:
 - **Reset suggestions:** Removes all the words you've added to your suggestion list.
 - Improve suggestions by sending information about my keyboard usage to Microsoft: Yes/No

Language + Region

- **Phone language:** If your phone supports more than one language, you can tap this to change the UI language.
- **Country/Region:** Select from list
- **Regional format:** Select from list (You'll see an example of the regional format below the one you've chosen.)
- Browser and search language: Select from list

Ease of Access

- **Text size:** Drag the slider to change text size in Phone, People, Email, Messaging, and on the Lock screen.
- **High contrast:** On/Off (Changes the colors for some features and hides some of their background images.)
- Screen magnifier: On/Off (When on, you can two fingers to pan and change the magnification level see settings UI for additional instructions.)
- **Speech for phone accessibility:** On/Off (When on, you can use Speech for speed dial, call forwarding, and announcing caller ID.)

Speech

- Use Speech when the phone is locked: Yes/No
- Play audio confirmations: Yes/No
- **Read aloud incoming text messages:** Select from off, always on, Bluetooth and headsets, Bluetooth only, and wireless headset only.
- Test to Speech voice: Male/Female
- Speech language: Select from list
- Enable speech recognition service: Yes/No (Sends the words you speak and supporting data including recent contact names to Microsoft to provide and improve the speech recognition service. By allowing access, you can use additional speech features on your phone.)

Find My Phone

- Send apps to my phone using push notifications, not SMS: Yes/No
- Save my phone's location periodically and before the battery runs out to make it easier to find: Yes/No

Phone Update

- **Check for updates:** Tap this button to immediately check for updates.
- Tell me when updates are available for my phone: Yes/No

• Automatically download updates if my data settings allow it: Yes/No

This screen also tells you when an update is available.

Company Apps

• **Add account:** Tap this button to add a company account to your phone. When you do, you'll be asked to sign in with a username and password.

About

The About Settings screen displays phone information, such as phone name, model, software, total storage, and available storage.

- **More info:** Tap this button to display additional configuration information.
- Help contacts: Provides contact information for support.
- **Online content:** Tap Terms of Use or Privacy Statement to view these policies.
- **Reset your phone:** Tap this button to erase all personal content (including apps you've purchased) and reset your phone to factory settings. If you do this, you'll need to repeat the first-time setup process.

Feedback

• **Send feedback:** On/Off (Enabling this setting sends feedback to Microsoft to help improve the Windows Phone experience. Feedback will only be sent over Wi-Fi.)

Application Settings

Background Tasks

Some apps have the ability to keep running in the background, such as a music app or an app that sets an alarm. The Background Tasks setting lets you turn this on or off on a per-app basis.

Games

- **Connect with Xbox:** On/Off (Turning this on upload game scores and achievements to Xbox and displays gamer profile info.)
- **Sync game requests:** On/Off (Turning this on automatically downloads new Xbox multiplayer game requests.)
- Show game notifications: On/Off (Turning this on alerts you when Xbox sends you a notification.)

Internet Explorer

- Website preference: Mobile version/Desktop version
- Use address bar button for: Options include Stop/refresh, Favorites, and Tabs
- **Delete history:** Tapping this button lets you delete all temporary files, history, cookies, and saved passwords from Internet Explorer 10.
- Advanced Settings. Tap this button to adjust the following settings:
 - Allow access to my location: On/Off
 - Get suggestions from Bing as I type: Yes/No
 - Send browsing history to Microsoft to help improve Bing services: Yes/No
 - Use SmartScreen Filter to help protect against unsafe websites: Yes/No
 - Send a Do Not Track request to websites you visit: Yes/No
 - Cookies from websites and apps: Options include Accept All, Block Some, or Block All
 - **Open links from other apps in:** A new tab/The current tab

- Allow sites to store files on my phone: Yes/No
- **Manage storage:** Tap this button to see websites that have stored files on your phone. If you need to free up some storage space, tap a site to delete its files. (*Note the multi-select button at the bottom of the screen.*)

Maps

- Use my location: Off/On (Uses your location to provide better local search results)
- **Download maps:** Tap this button to view downloaded maps or add a new one.
- Check for updates: Tap this button to check for newer versions of any downloaded maps.
- **Delete history.** Tap this button to delete previous map searches and temporary files from your phone.

Messaging

- Text message backup: On/Off
- Use Facebook Chat: On/Off
- SMS delivery confirmation: On/Off
- MMS delivery confirmation: On/Off
- Send MMS acknowledgement: On/Off
- Group text: On/Off
- Add MMS APN: Tap this button to configure a MMS APN.

Music + Videos

- **Connect with Xbox Music:** On/Off (Enabling this setting enhances the Music + Videos experience.)
- Xbox Music cloud collection: On/Off
- Only download new podcast episodes over Wi-Fi: Yes/No
- **Suggestions:** Tap this button to get personalized suggestions by connecting your Microsoft account (and Facebook account, if you choose) to Bing.

This screen also includes a link for accessing your Xbox Music account settings.

Office

- **User name:** Enables you to enter a user name.
- Open SharePoint links in the Office Hub: Yes/No
- **Reset Office:** Tapping this button will erase all saved Office settings, local files, and offline files.

People

- **Import SIM contacts:** Tapping this button when a SIM card is inserted lets you import contacts stored on that card.
- **Filter my contact list:** Displays checkboxes for which social networking and email accounts are used to build your contact list.
- Hide posts from the contacts I've filtered: Yes/No
- **Sort list by:** First name/Last name
- Display names by: First name/Last name
- **Use my location:** Yes/No (Check this box to let Windows Phone use your location to let you find places and check-in.)
- Save check-in history with my Microsoft account to improve search results: Yes/No

The People Settings screen also provides access to existing accounts and lets you add new ones.

Phone

- **Phone number:** (view only)
- Use default voicemail number: On/Off (If turned off, you can enter a voicemail number below this switch)
- Call voicemail. Tap this button to call your voicemail.
- Show my caller ID to: Everyone/No one/My contacts
- Call forwarding: On/Off

- **International assist:** On/Off (Enable this feature to automatically correct some common mistakes while dialing internationally or dialing while abroad.)
- SIM security: On/Off

Photos + Camera

- Tap screen to take pictures and videos: On/Off
- Press and hold camera button to wake up phone: On/Off
- Prevent accidental camera launch when phone is locked: On/Off
- Include location info in pictures I take: On/Off
- Auto upload
 - SkyDrive: Tap SkyDrive to configure whether photos and videos are automatically uploaded to SkyDrive and, if so, whether good or best quality resolutions are used. (Enabling auto-upload may use your data plan and/or require Wi-Fi.)
 - **Apps:** Tap this to find and install apps that can automatically upload your content.
- **Reset camera:** Tap this button to reset your phone's camera settings.

Search

- **Use my location:** On/Off (Turning this on uses your location to provide better local search results.)
- Send location info for Microsoft Tags: On/Off
- **Suggestions:** Tap this button to get personalized suggestions by connecting your Microsoft account (and Facebook account, if you choose) to Bing.
- Safe search: Off/Moderate/Strict
- Allow Search button from Lock screen: Yes/No
- Get suggestions from Bing as I type: On/Off
- Allow Microsoft to store and use images from vision searches: Yes/No
- **Delete History:** Tap this button to delete previously typed search terms from your phone.

Store

- **PIN:** Tap this to create or change your Wallet PIN.
- **Suggestions:** Tap this button to get personalized suggestions by connecting your Microsoft account (and Facebook account, if you choose) to Bing.

Wallet

- **Wallet PIN:** On/Off (Turning this on prompts you to enter and confirm a Wallet PIN)
- Use Wallet PIN to protect music, app, and in-app purchases: On/Off

Appendix C: Hardware Specifications

All new Windows Phone 8 devices will include the following:

- A powerful Qualcomm Snapdragon S4 dual core processor.
- DirectX graphics hardware support with hardware acceleration for Direct3D using programmable GPU.
- A minimum of 512 MB of RAM for WVGA phones and a minimum of 1 GB of RAM for 720p and WXGA resolution phones.
- A minimum of 4 GB of flash memory, with an optional microSD slot that supports either SD or SDXC memory cards.
- 802.11 b/g wireless (802.11n optional) and Bluetooth.
- True multitouch capacitive touch screen, with a minimum of four simultaneous points.
- Accelerometer, proximity, and ambient light sensors. A magnetometer/compass and gyroscope are optional. (Phones with a magnetometer/compass are not required to have a gyroscope. Phones that have a gyroscope will always have a magnetometer/compass.)
- A GPS receiver. (All Windows Phone 8 devices also support Assisted Global Navigation Satellite System (A-GNSS), which can be used to augment standard GPS. (GLONASS, which is required by the Russian government, is also supported for phones that include it.)
- 800x480 (WVGA), 1280x720 (720p), or 1280x768 (WXGA) display resolution with minimum 16 bits of color per pixel.
- Vibration motor.
- Micro-USB 2.0.
- 3.5mm stereo headset jack with 3-button detection support.
- Dedicated Start, back, search, power, volume up, and volume down buttons.
- A rear-facing, autofocus camera with LED or xenon flash and an optional front-facing camera, both with VGA quality or better, and a dedicated camera button for quick access. (Note: While the Windows Phone 8 chassis specification does not mandate either a main camera or a front-facing camera, all of the Windows Phone 8 launch devices will have both.)

Appendix D: International Considerations

Windows Phone 8 supports more than twice as many UI languages as Windows Phone 7.5, as well as an additional 26 keyboard languages.

UI Languages Supported

Windows Phone 8 supports 24 new UI languages, for a total of 50. Supported UI languages include the following:

- Albanian
- Arabic
- Azerbaijani (Latin)
- Belarusian
- Bulgarian
- Catalan
- Chinese Simplified
- Chinese Traditional
- Croatian
- Czech
- Danish
- Dutch
- English (UK)
- English (US)
- Estonian
- Filipino
- Finnish
- French

- German
- Greek
- Hebrew
- Hindi
- Hungarian
- Indonesian
- Italian
- Japanese
- Kazakh
- Korean
- Latvian
- Lithuanian
- Macedonian
- Malay
- Norwegian (Bokmål)
- Persian
- Polish
- Portuguese (Brazil)

- Portuguese (Portugal)
- Romanian
- Russian
- Serbian (Latin)
- Slovak
- Slovenian
- Spanish (Mexico)

- Spanish (Spain)
- Swedish
- Thai
- Turkish
- Ukrainian
- Uzbek (Latin)
- Vietnamese

UI languages installed depend on the specific phone model and market.

Keyboard Languages Supported

Windows Phone 8 supports 26 new keyboard languages, for a total of 60. Supported keyboard languages include the following:

- Albanian
- Arabic
- Azerbaijani
- Belarusian, Catalan
- Chinese Simplified 12 Key
- Chinese Simplified Handwriting
- Chinese Simplified QWERTY
- Chinese Stroke
- Chinese Traditional BoPoMoFo
- Chinese Traditional Cangjie
- Chinese Traditional Handwriting
- Croatian
- Czech
- Danish
- Dutch (Belgium)
- Dutch (Netherlands)
- English (India)
- Estonian
- Filipino
- Finnish

- French (Canada)
- French (France)
- French (Switzerland)
- German
- Greek
- Hebrew
- Hindi (Devanagari)
- Hindi (Latin)
- Hungarian
- Indonesian
- Italian
- Japanese 12 Key
- Japanese QWERTY
- Kazakh
- Korean 12 Key Chunjiin
- Korean 12 Key Naratgeul
- Korean 12 Key SKY
- Korean QWERTY
- Latvian
- Lithuanian

- Macedonian
- Malay
- Norwegian
- Persian
- Polish
- Portuguese (Brazil)
- Portuguese (Portugal)
- Romanian
- Russian
- Serbian Latin

- Slovak
- Slovenian
- Spanish (Mexico)
- Spanish (Spain)
- Swedish
- Thai
- Turkish
- Ukrainian
- Uzbek
- Vietnamese