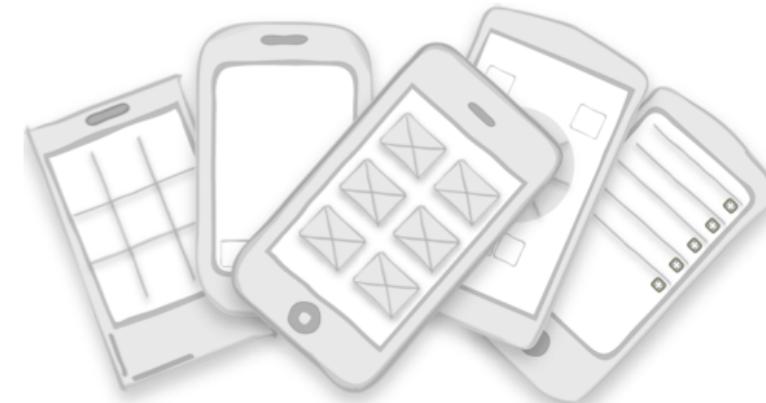
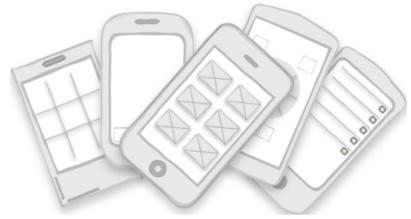


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# Seminario 5 – Diseño de App. en Android

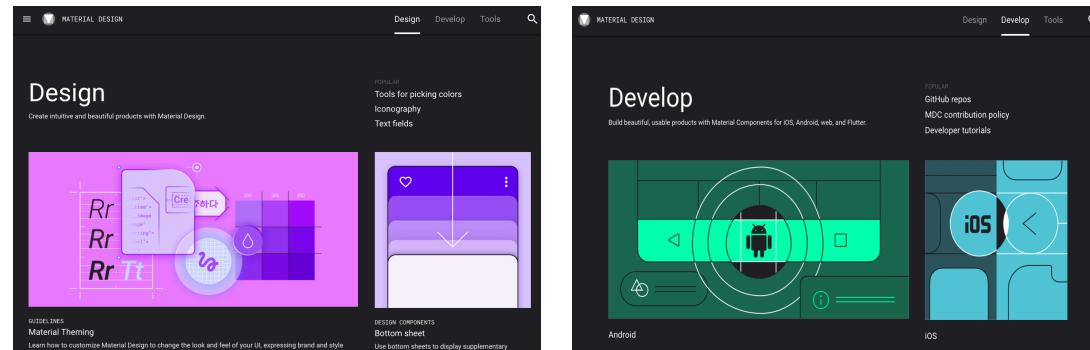


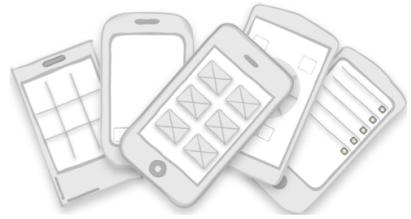


# CONTENIDO

- ✗ Diseño para móviles
- ✗ Tipos de aplicaciones
- ✗ Estructura básica de una Aplicación.
- ✗ Guías de estilo y Patrones de Navegación.
- ✗ Elementos de Estructura y Navegación.

<https://material.io/design/>





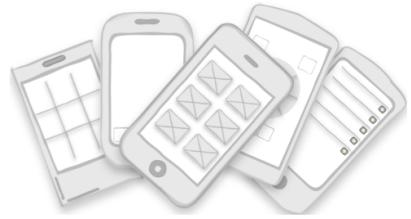
# Diseño para móviles

## Características de los móviles:

- Áreas de visualización propias y limitadas.
- Estilos de interacción y navegación específicos.
- Poca atención del usuario durante su uso.
- Optimización de aplicaciones y tareas.
- Usuario muy pendiente del esfuerzo y el tiempo.

## Propiedades:

Especificas, Concisas, Efectivas y Atractivas

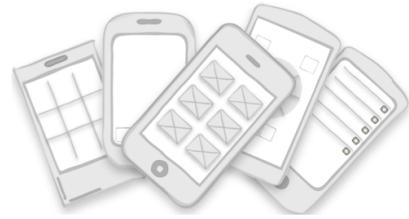


# “Principios de Diseño” para Android

- ✗ Cautívame.
- ✗ Simplifica mi vida.
- ✗ Permíteme ser asombroso.

The screenshot shows the Android Developers website with the URL <https://developer.android.com/design/get-started/principles.html>. The page title is "Principios de diseño para Android". It features a navigation bar with links to "Plataforma", "Android Studio", "Google Play", "Android Jetpack", and a search bar. Below the title, there are three main principles: "Cautívame", "Simplifica mi vida", and "Permíteme ser asombroso". A detailed description for "Cautívame" is provided, along with a small image of a colorful abstract surface.

<https://developer.android.com/design/get-started/principles.html>



# “Principios de Diseño” para Android

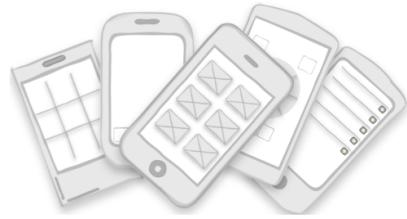
## ✗ Cautívame.

- Deléitame de formas sorprendentes.
- Los objetos reales son más divertidos que los botones y los menús.
- Permíteme darle un toque personal.
- Conóceme.

## ✗ Simplifica mi vida.

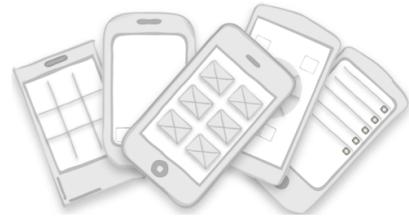
## ✗ Permíteme ser asombroso.

<https://developer.android.com/design/get-started/principles.html>



# “Principios de Diseño” para Android

- ✗ Cautívame.
- ✗ Simplifica mi vida.
  - Sé breve.
  - Las imágenes son más prácticas que las palabras.
  - Decide por mí, pero permíteme tener la última palabra.
  - Solo muéstrame lo que necesito, cuando lo necesito.
  - Siempre debo saber dónde me encuentro.
  - Nunca pierdas lo que es mío.
  - Si se ve igual, debe funcionar de la misma manera.
  - Solo interrúmpeme si es importante.
- ✗ Permíteme ser asombroso.



# “Principios de Diseño” para Android

- ✗ Cautívame.
- ✗ Simplifica mi vida.
- ✗ Permíteme ser asombroso.
  - Ofrézcarme trucos que funcionen en todos lados.
  - No es mi culpa.
  - Fomenta lo simple.
  - Haz el trabajo pesado por mí.
  - Haz que lo importante sea rápido.



# Lectura recomendada

**Principios para el diseño de aplicaciones móviles:**

## Atraer a los usuarios y generar conversiones

think with Google

**13 Haz que resulte fácil añadir y gestionar formas de pago**

Simplifica el almacenamiento de pagos y reduce el número de pasos necesarios para acceder a los servicios. Crea una página de introducción de datos de tarjetas de crédito sencilla con distintas opciones como teclado numérico y escaneo de tarjetas y una función para alternar entre las mismas.

**14 Ofrece algo útil antes de pedir a los usuarios que se registren**

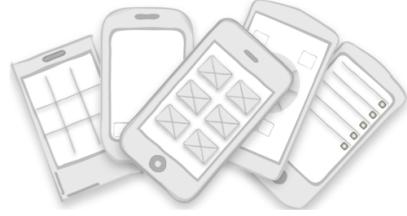
El registro es una manera de conectar con el usuario, acelerar futuras oportunidades de conversión y enriquecer la continuidad de la relación. Sin embargo, a menudo puede suponer un obstáculo y dificultar las conversiones. A continuación, te mostraremos cómo desarrollar un proceso de registro que conducirá a los usuarios a donde desean con mayor rapidez.

**Capítulo 4: Registro**

**thinkwithgoogle.com 16**

**thinkwithgoogle.com 17**

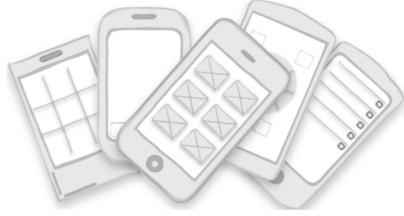
SWAD/PrincipiosDiseñoMoviles.pdf



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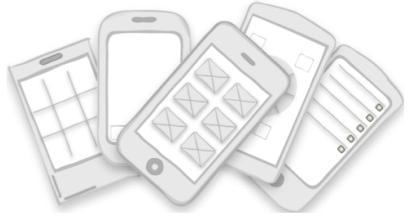
# 1 - Estructuras de Aplicaciones Móviles





# Estructuras de aplicaciones móviles

1. Alrededor de una sola actividad que se maneja en una sola pantalla (calculadora)
2. Intercambiar entre varias funciones pero con una navegación lineal (no profunda) (teléfono, contactos, ...)
3. Aplicaciones con una jerarquía de navegación más o menos compleja y una estructura de datos también compleja (Gmail, ...)

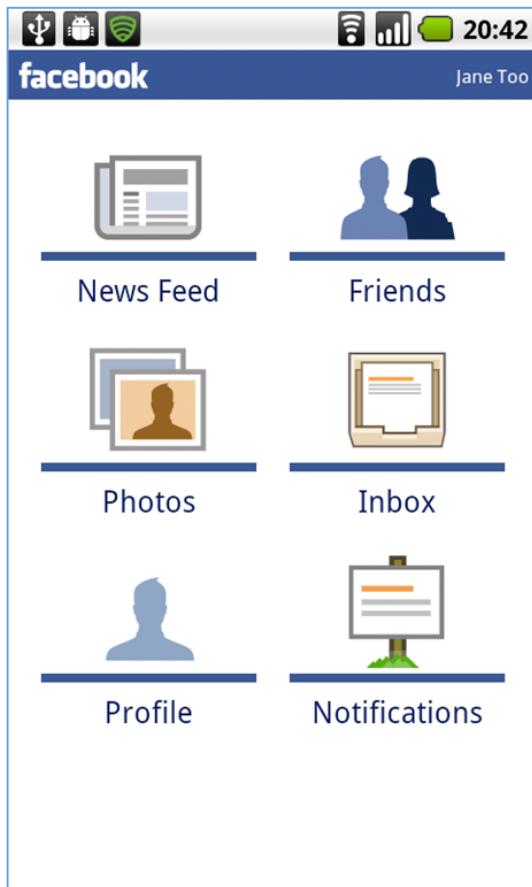


# Tipos de Aplicaciones

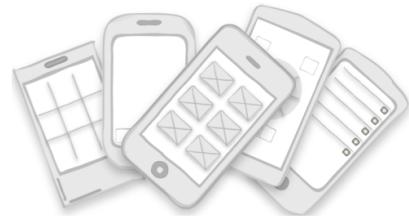
- × App. dirigidas por la navegacion. Navegar por una o más estructuras de navegación que nos llevan a los datos o a las funciones que queremos realizar.
- × App. dirigida por datos. Navegar por un conjunto de categorias de datos hacia el detalle de la informacion donde los datos pueden verse y manejarse (consultarse, editarse, borrarse, ...)



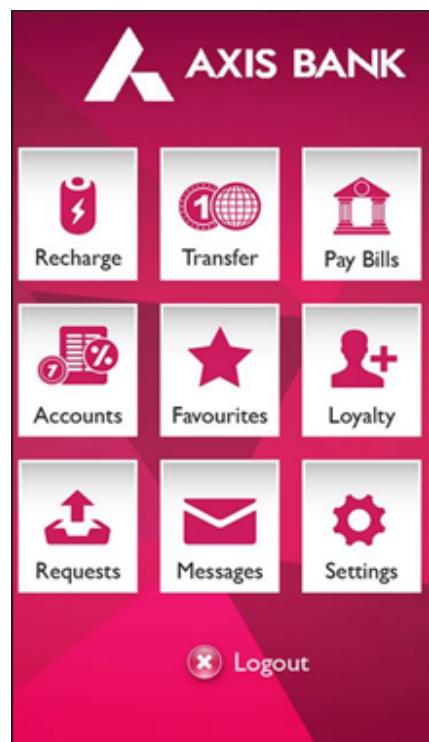
# App dirigidas por la navegación. Menú inicial - (Springboard)



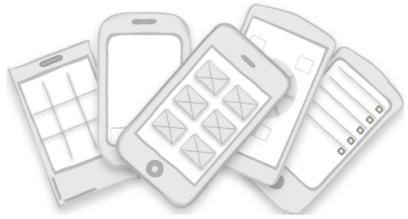
- Potente y simple.
- Visible en todo momento.
- Añadimos esfuerzo de navegación.
- No tenemos información de los datos.
- Cuando un usuario aprende la estructura de la App, **el proceso de navegar se vuelve pesado e innecesario.**
- No es accesible para los niveles mas bajos.



# Ejemplos. Menú inicial

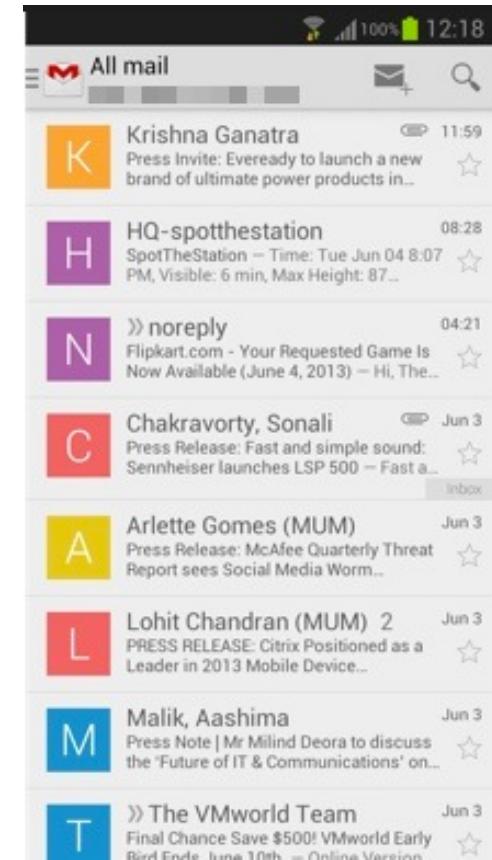


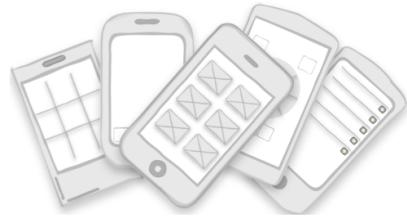
iOS ... TabBar



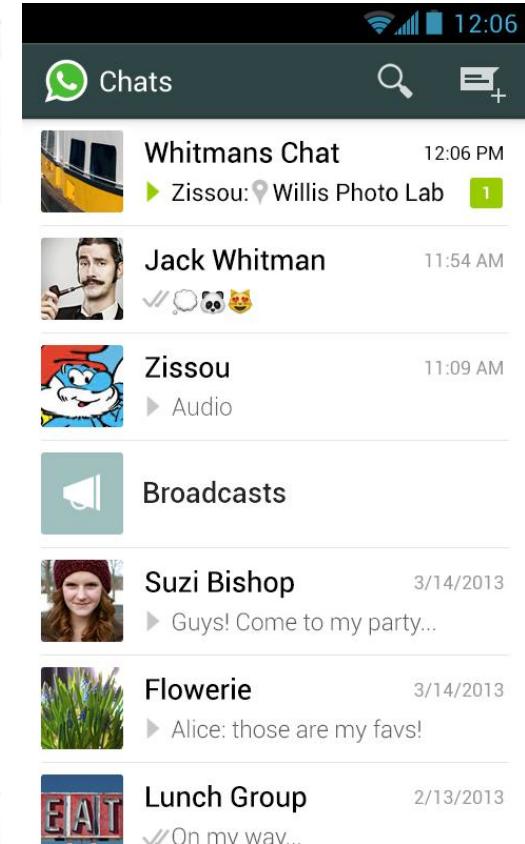
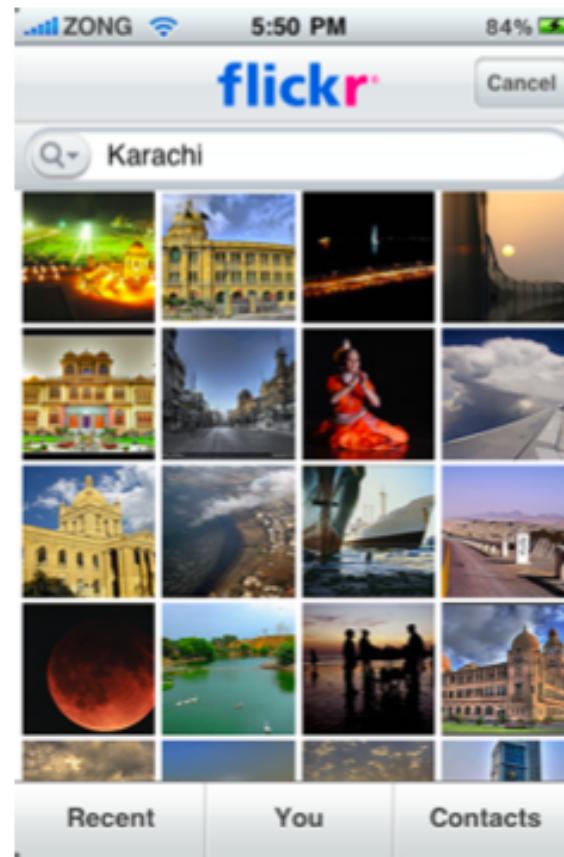
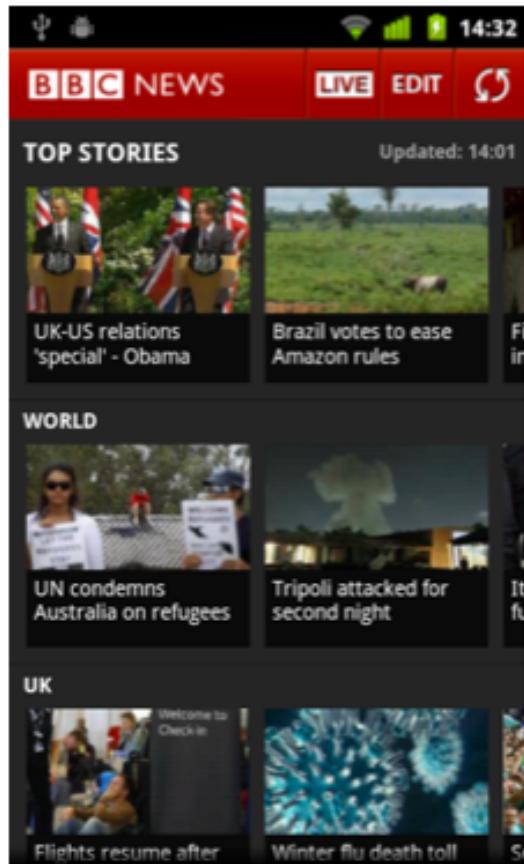
# App dirigidas por los datos.

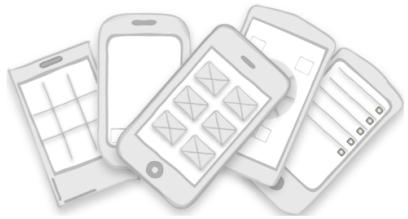
- ✗ Mostramos parte de los **datos** en la pantalla de inicio y las operaciones que se pueden realizar sobre ellos.
- ✗ Navegamos por la propia **estructura de los datos**.
- ✗ Realizamos **tareas en contexto** y sobre sus datos.
- ✗ Mas difícil de diseñar pero mas **rápida/directa** una vez se conoce la estructura.





# App dirigidas por los datos.





# Evolución ...

The image displays three separate screens of the HDFC Bank mobile application:

- Accounts:** Includes options like Account Summary, View Account Statement, Funds Transfer, Fixed Deposits Summary, and Recurring Deposits Summary.
- Third Party Transfer:** Includes options like Third Party Funds Transfer, NEFT Fund Transfer, View RTGS Funds Transfer, and View List of Beneficiaries.
- Credit Card:** Includes options like Account Summary, Account Information, Credit Card Payment, and View Unbilled Transactions.

Each screen has a bottom navigation bar with icons for Accounts, Fund Transfer, BillPay, Credit Card, and More.



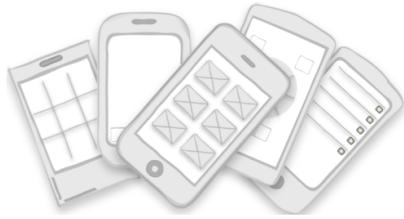
Aplicaciones de Banco



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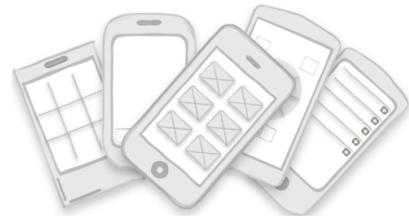
## 2 - Estructuras de Aplicaciones en Android



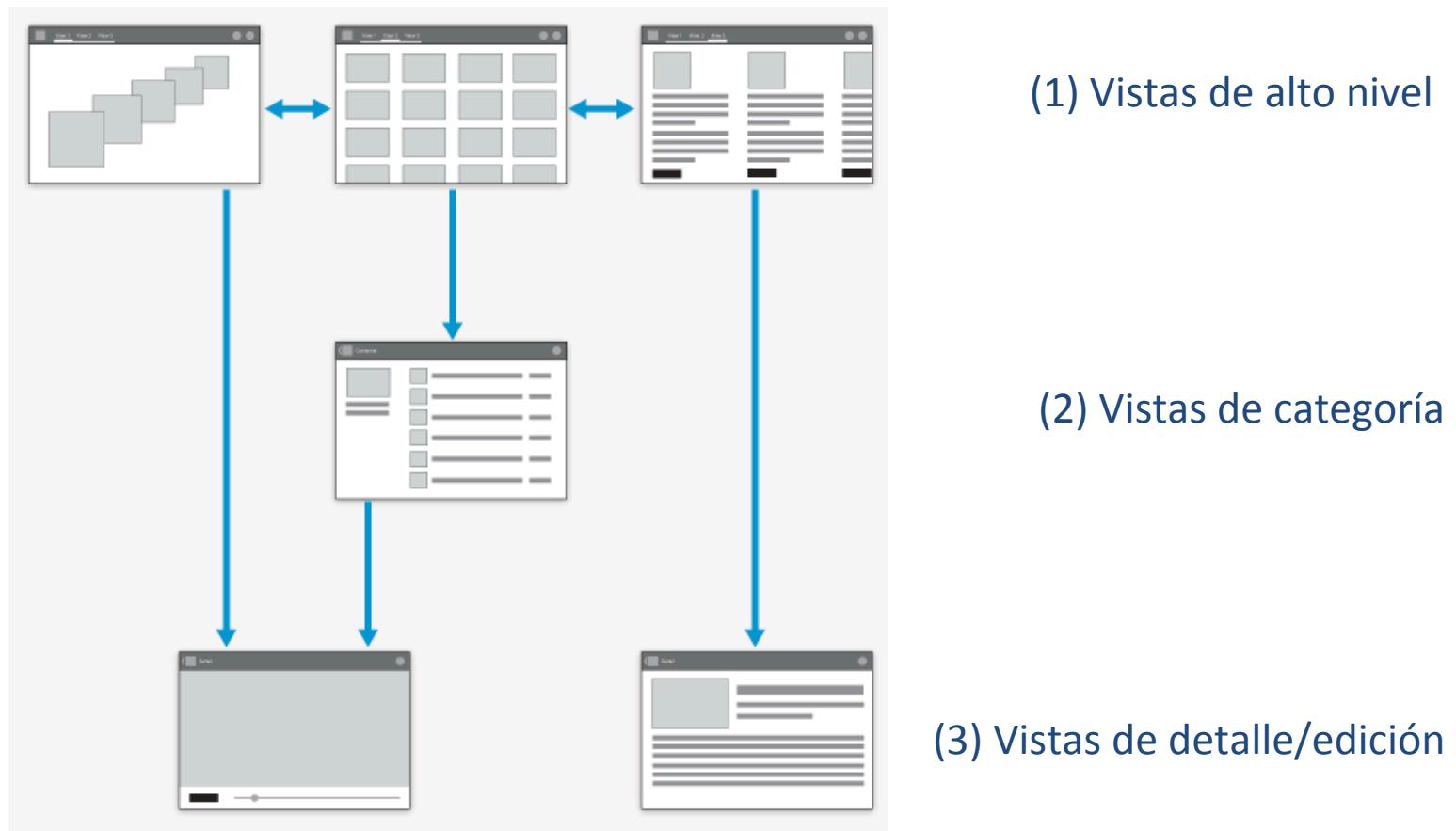


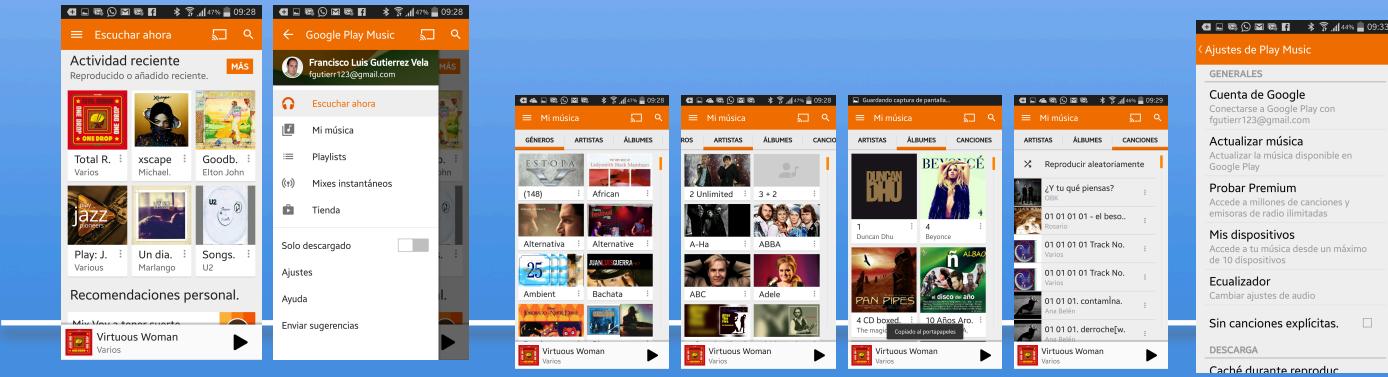
# App. en Android

- × **Aplicación (App)**: es un Conjunto de actividades.
- × **Actividad (Activity)**: componente de una aplicación que define una **pantalla de información y un conjunto de acciones** que el usuario puede realizar con ellos. Presentación visual.
- × **Vista (View)**: Componentes de la IU. Forman el aspecto visual de la actividad y la interacción.
- × **Tarea**: Secuencia de actividades que el usuario puede seguir para alcanzar un objetivo.
- × **Intent**: Mecanismo para hacer que una App indique que necesite la ayuda de otra App para hacer una tarea (ejemplo ... mensajería entre App)

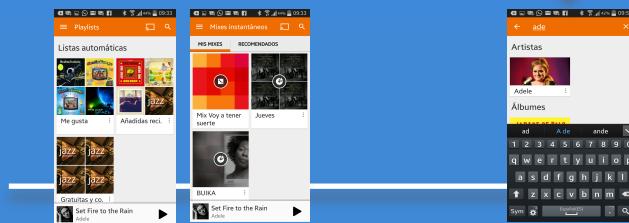


# Estructura general de una APP dirigida por datos





## Vista Alto Nivel



## Vistas Categorías

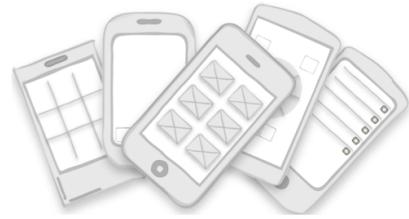


## Vista Detalle



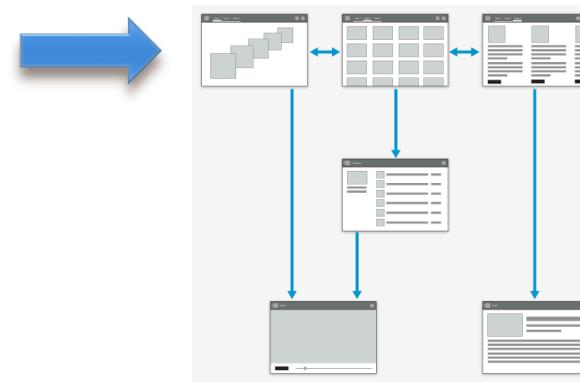
Ejemplo de estructura de  
Una App. dirigida por datos





# Estructura de una App en Android

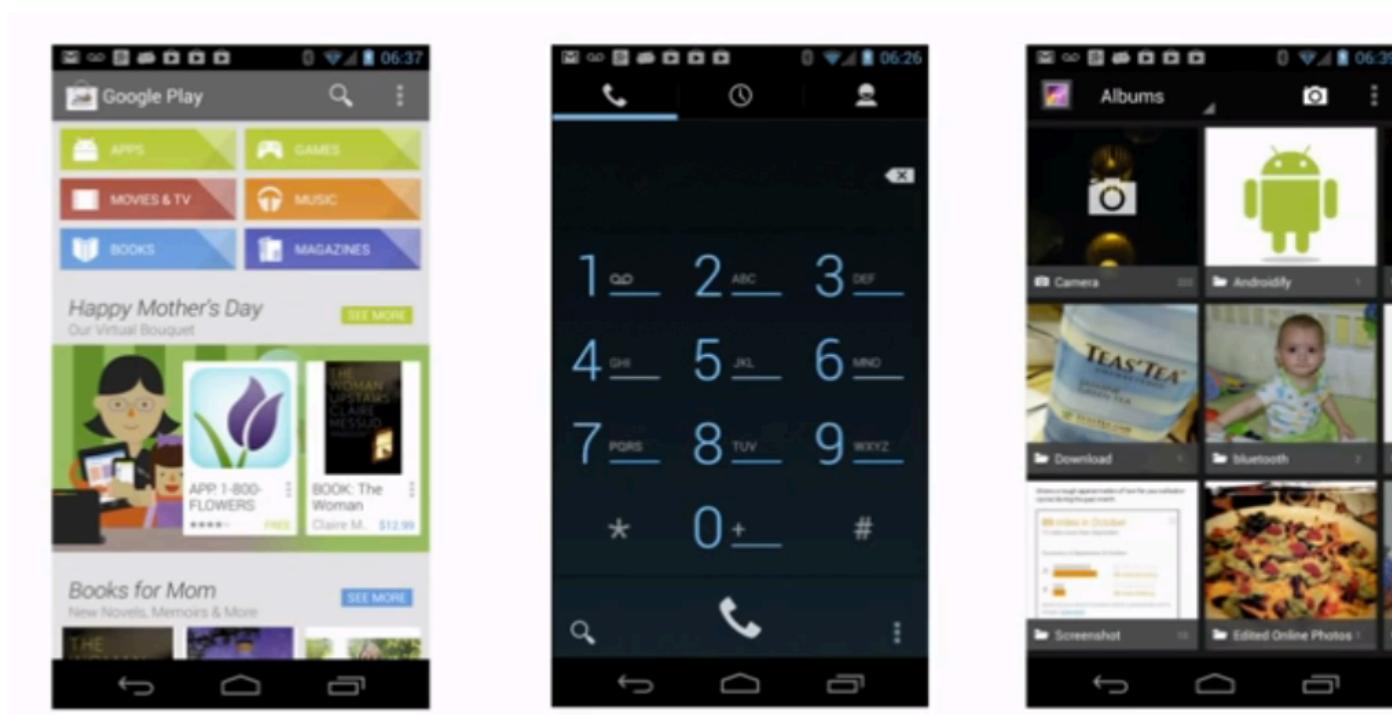
## 2.1 - Vistas de alto nivel

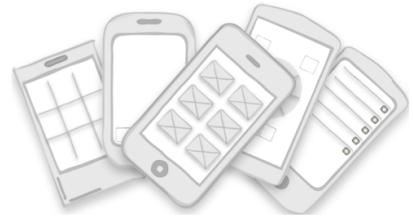




## (2.1) Vistas de alto nivel

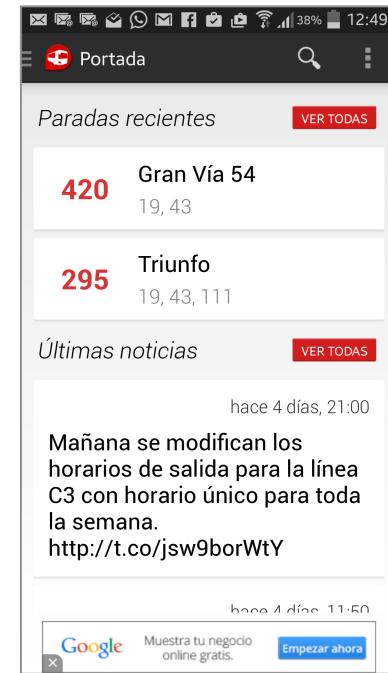
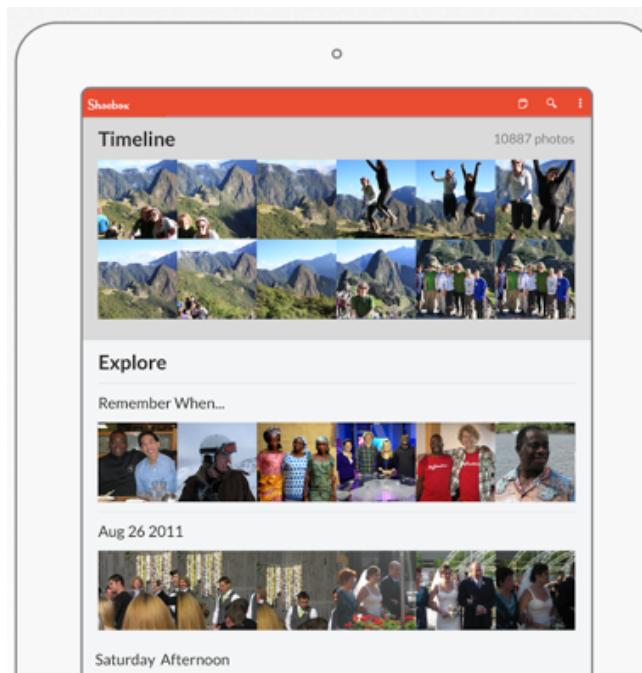
- × Mostrar al usuario las **áreas principales** de nuestra App y estructuras para **navegar** por ellas.
- × Funcionalidad principal e **identidad** de la aplicación.





## (2.1) Vistas de alto nivel

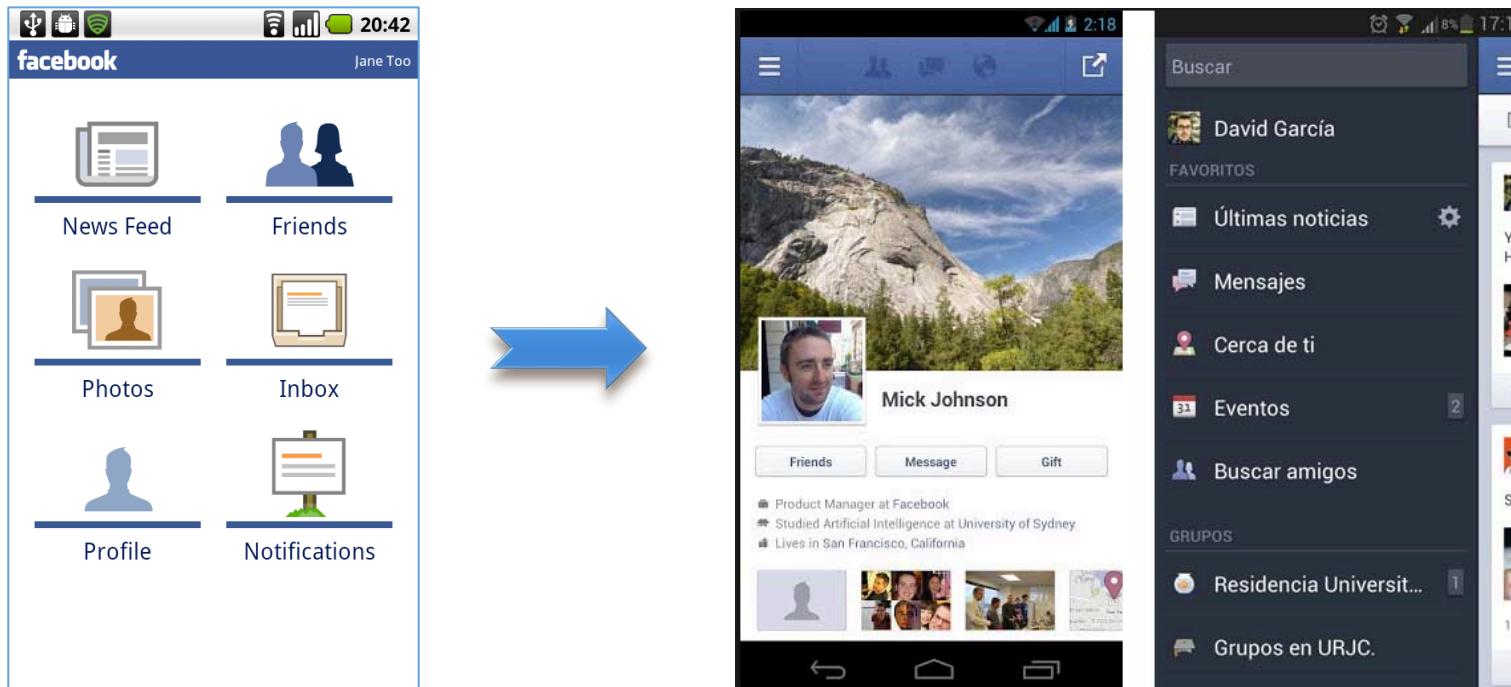
- Mostar la información más “relevante” de la jerarquía de información.

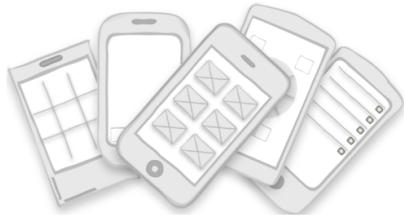




# Navigation Drawer (Navigation View)

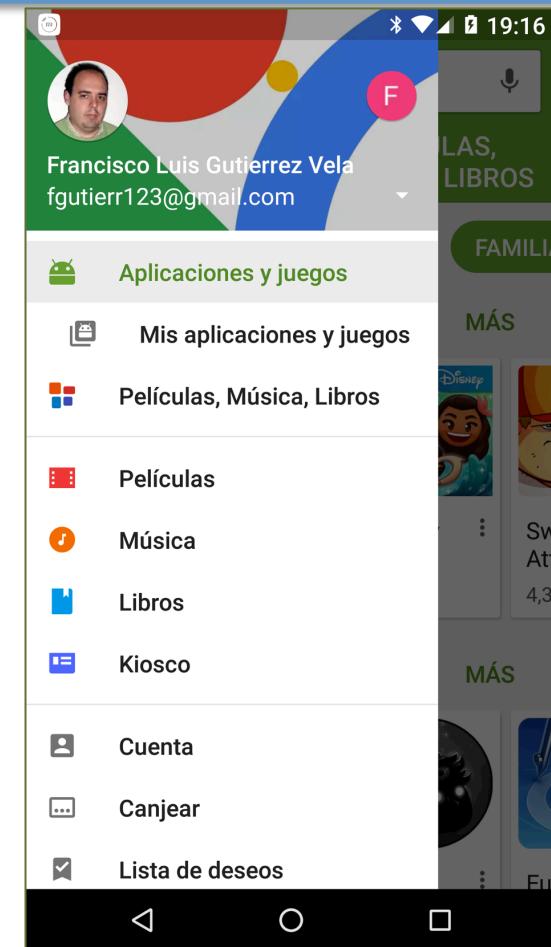
× Menú de navegación vertical “ocultable”.

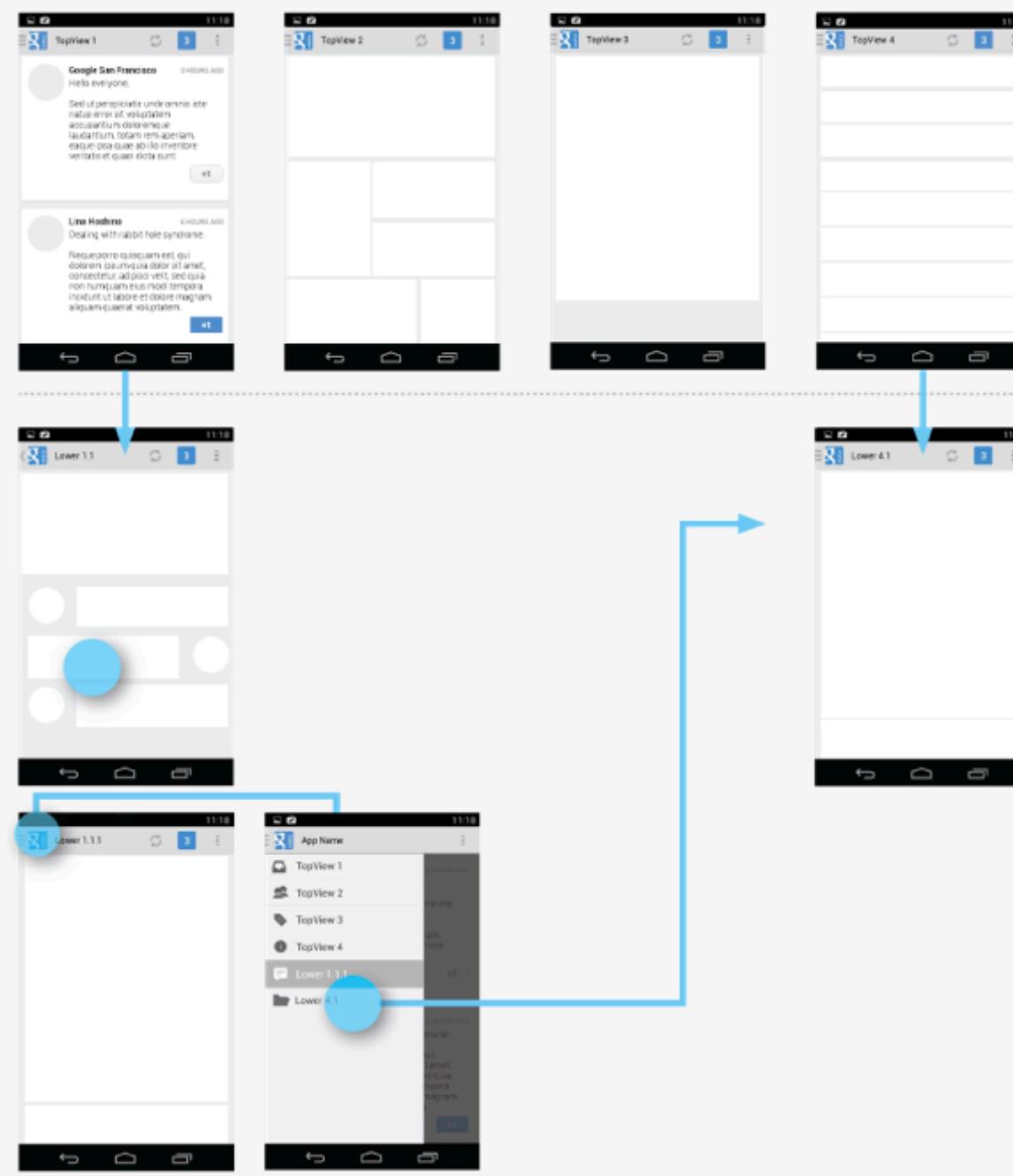




# Navigation Drawer

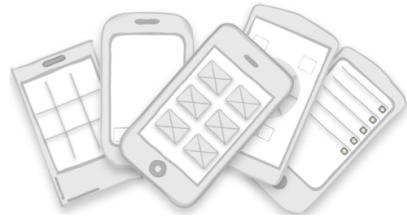
- ✗ No ocupa espacio en pantalla.
- ✗ Tenemos una gran número de vistas de alto nivel.
- ✗ Proporcionar acceso directo a **vistas de bajo nivel**.
- ✗ Acceso rápido a vistas sin relación entre si.
- ✗ Tenemos una jerarquía de navegación profunda.





TOP LEVEL VIEWS

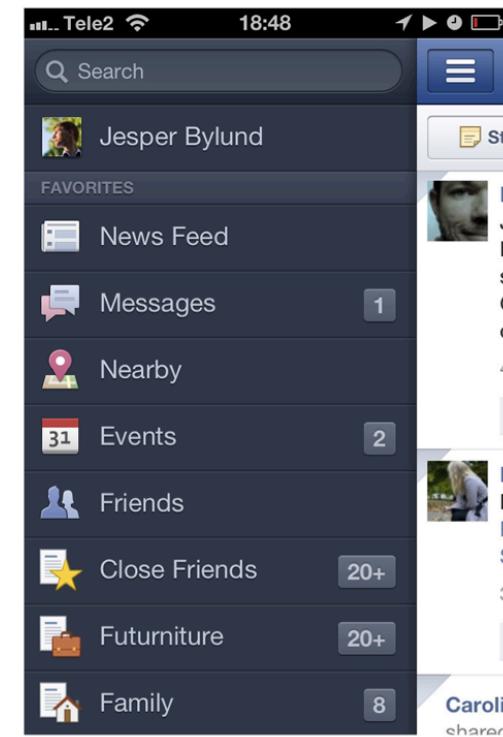
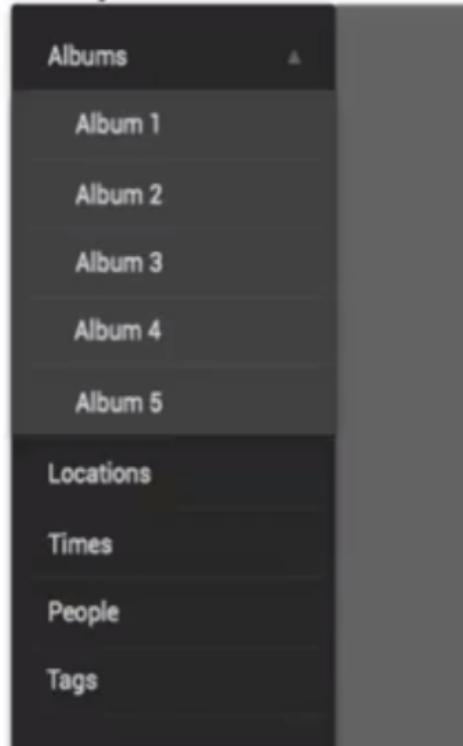
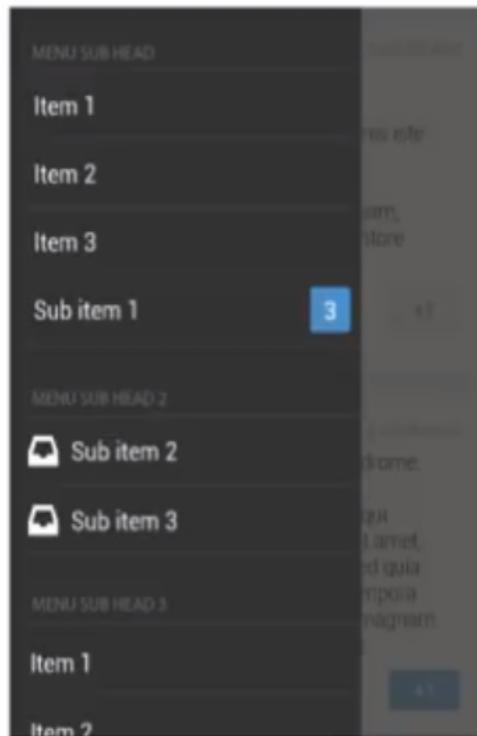
LOWER LEVEL VIEWS



# Navigation Drawer

## Menú de Navegación

- Podemos añadir iconos, divisores, contadores, elementos desplegables, ...

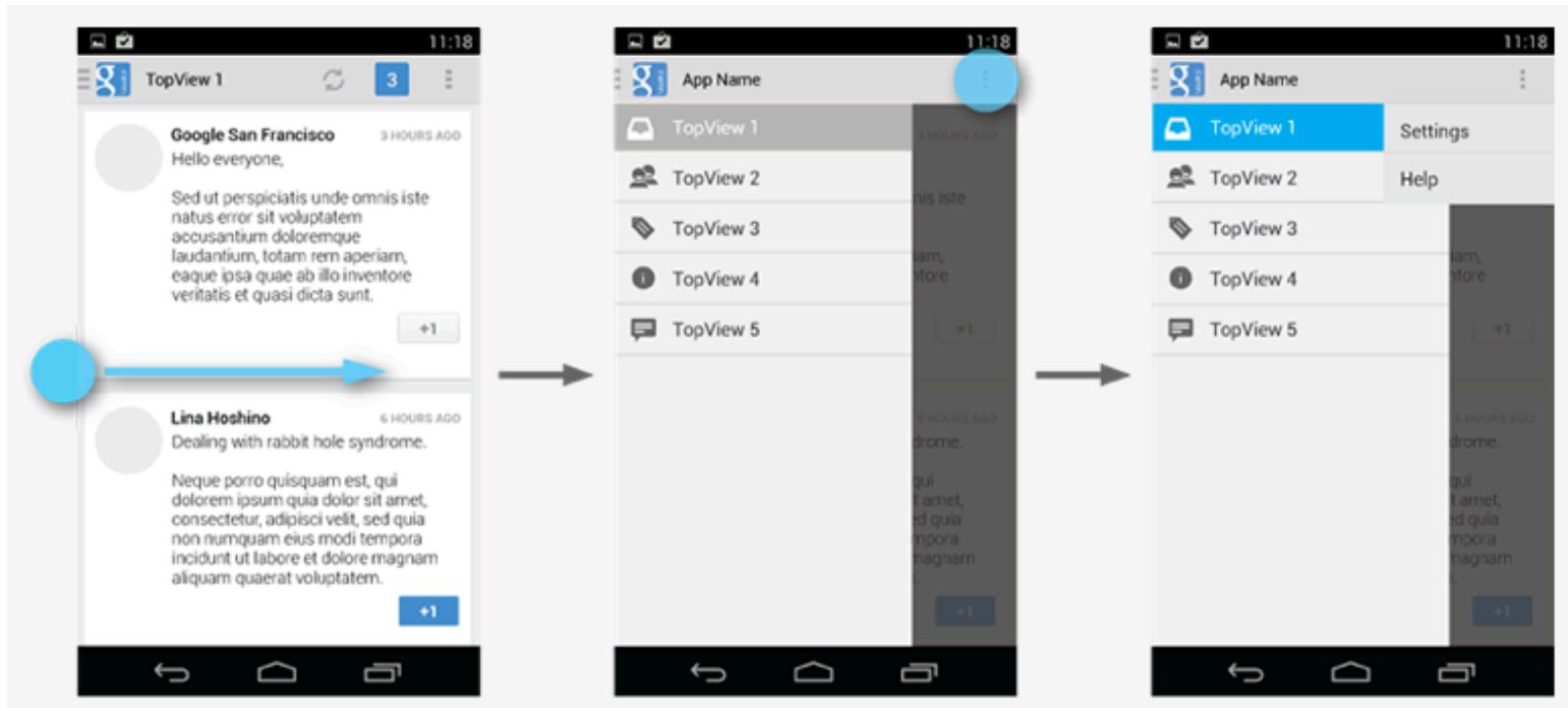


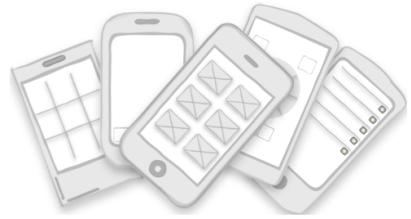


# Navigation Drawer

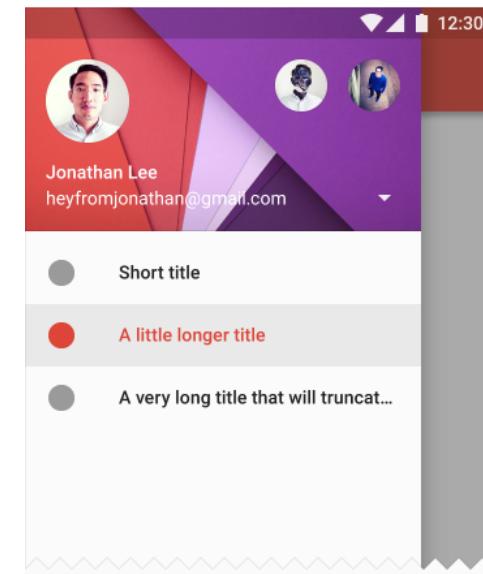
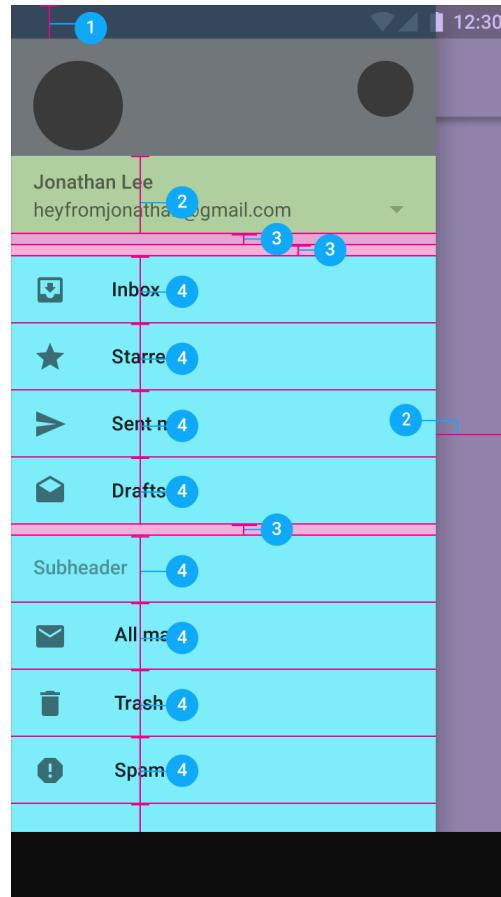
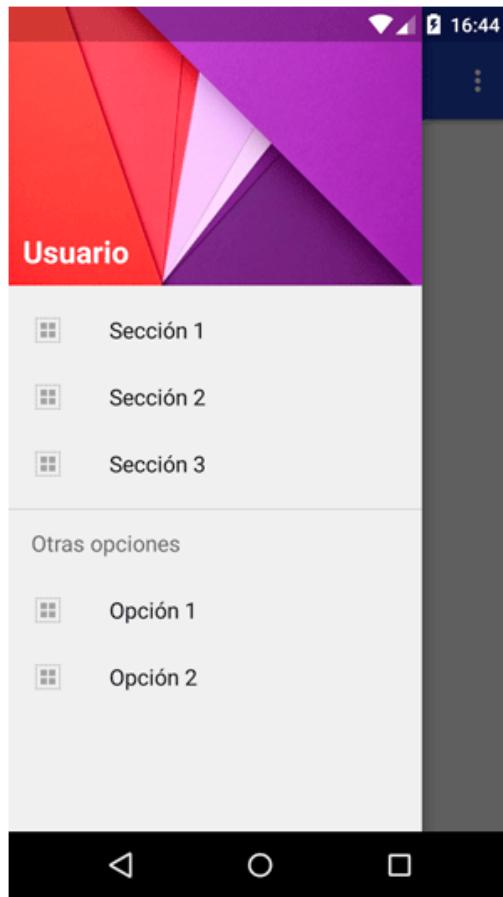
## Menú de Navegación

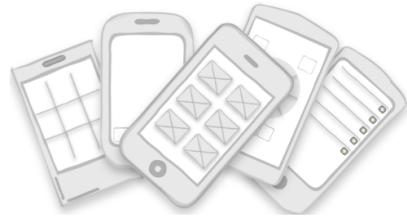
- ✗ Cambios en la barra de acción al desplegar el menú.



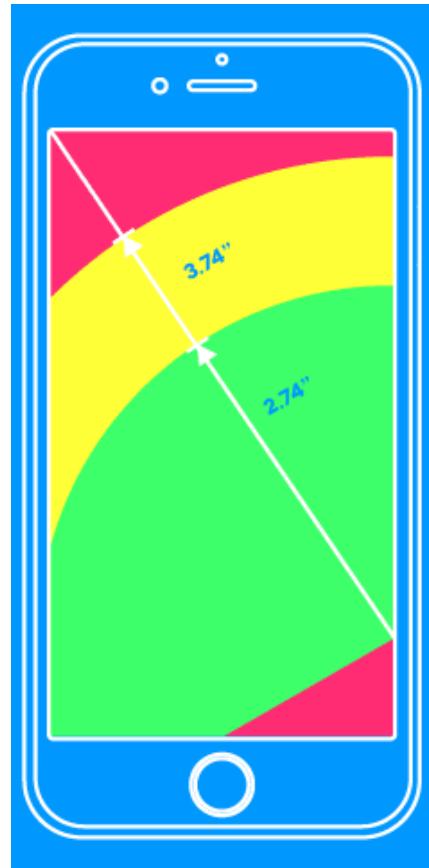


# Navigation Drawer Navigation View – (MD)

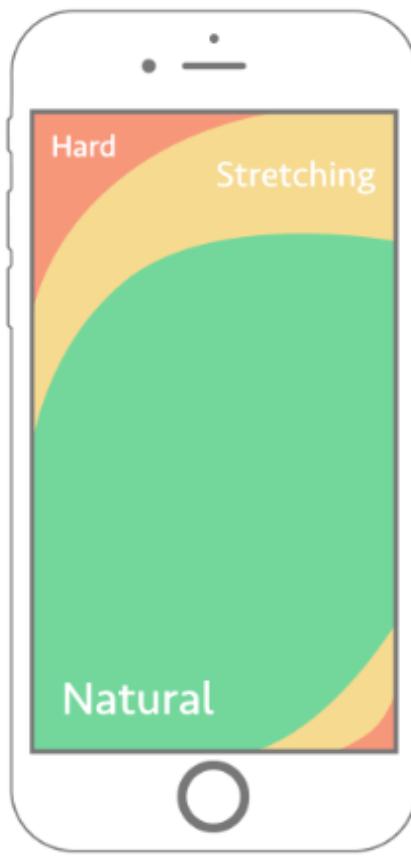




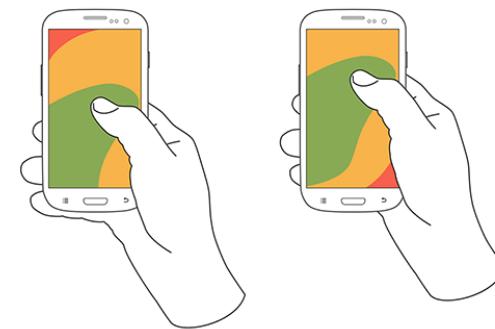
# Bottom Navigation Bar (MD)



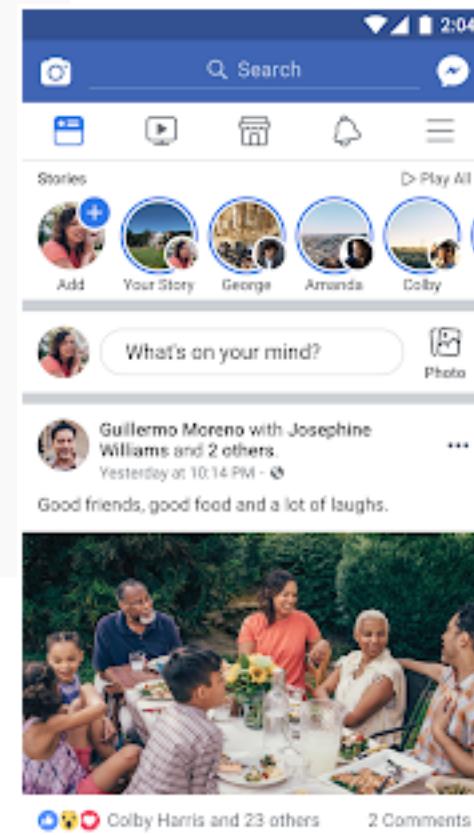
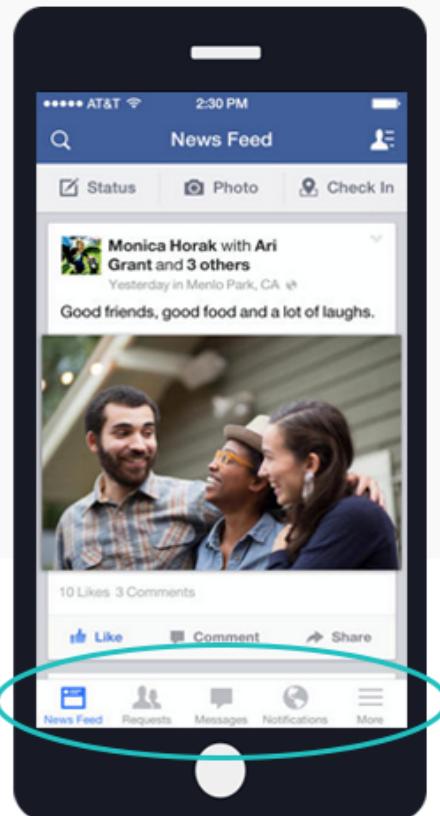
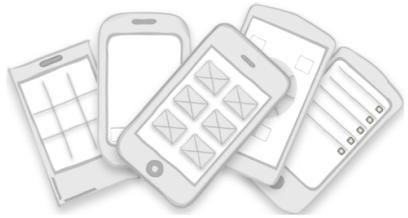
Iphone 6 plus



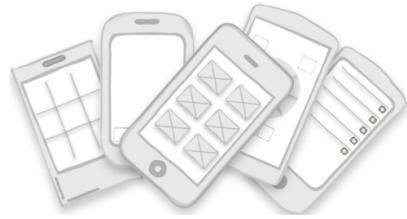
Right Hand



SWAD/TheThumbZone.pdf

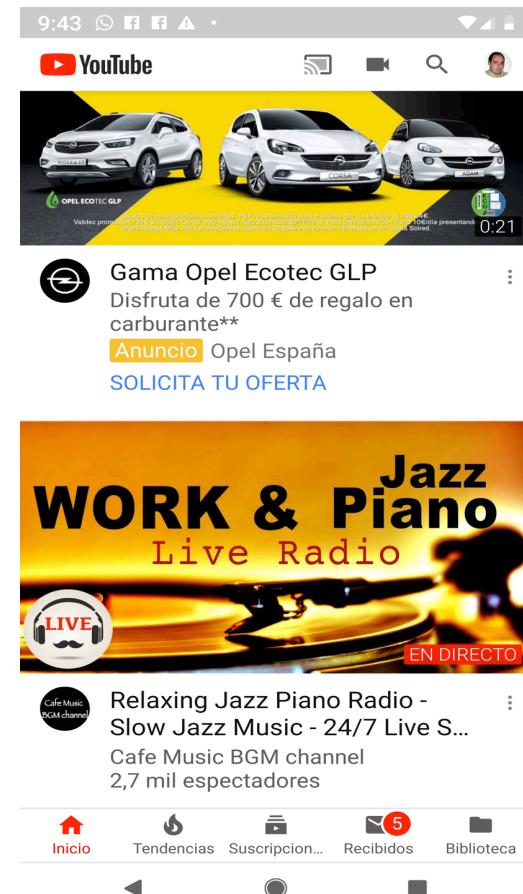


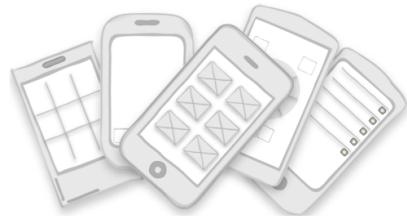
TabBar (iOS)



# Bottom Navigation Bar (MD)

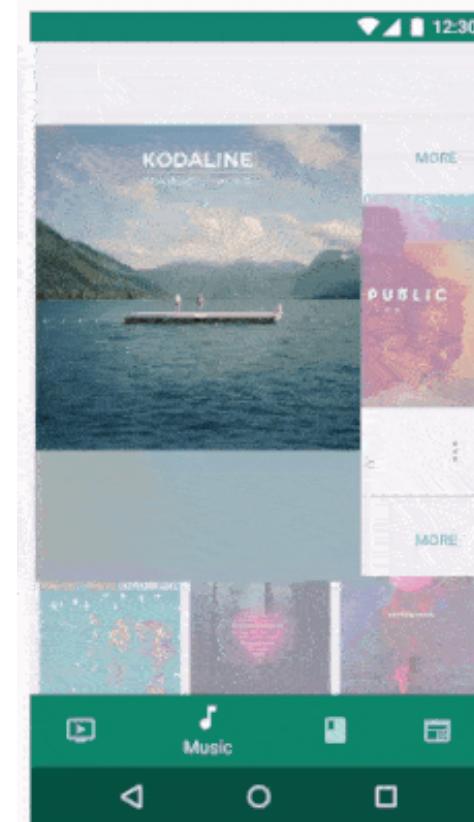
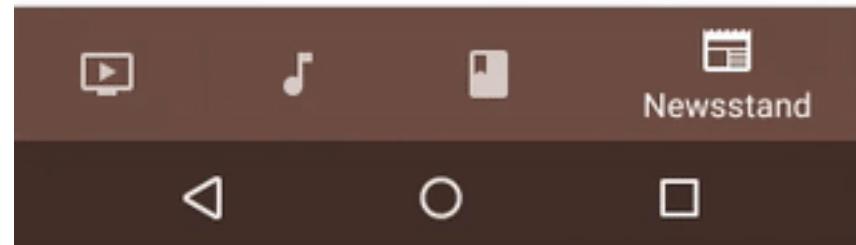
- ✗ Moverse rápido entre un número pequeño de vistas de alto nivel.
- ✗ De 3 a 5 destinos de alto nivel.
- ✗ Cuidado al mezclarlo con tabs.
- ✗ No usar navegación gestual.





# Bottom Navigation Bar (MD)

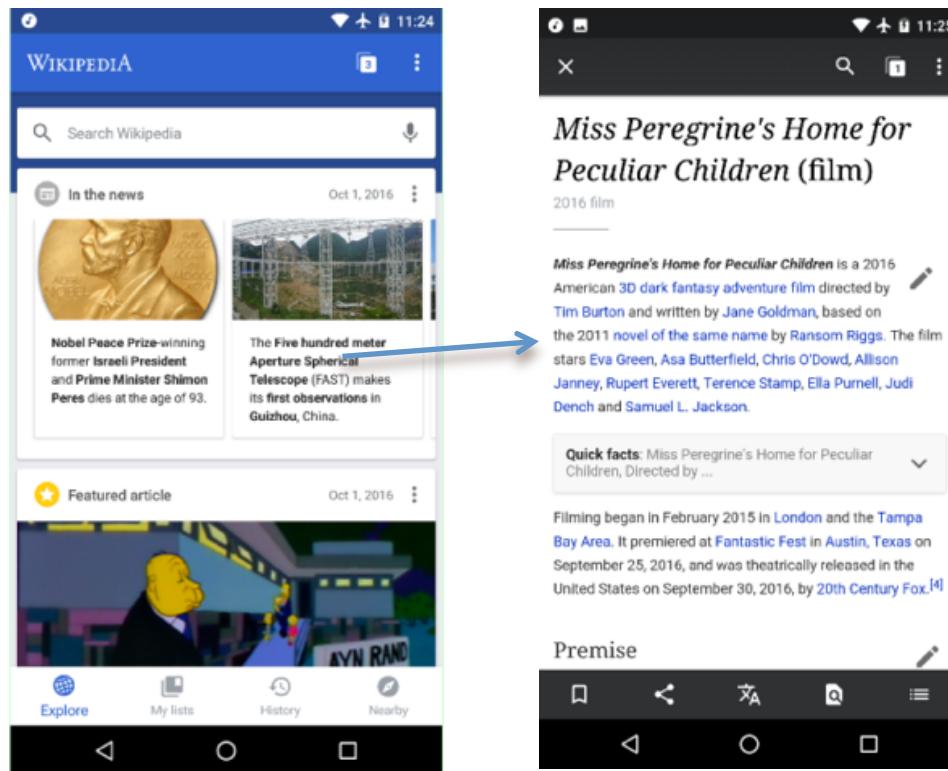
- ✗ Animación y cambio de vista.
- ✗ Inicialización del estado  
de la tarea realizada.

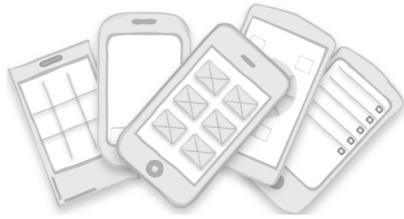




# Bottom Navigation Bar (MD)

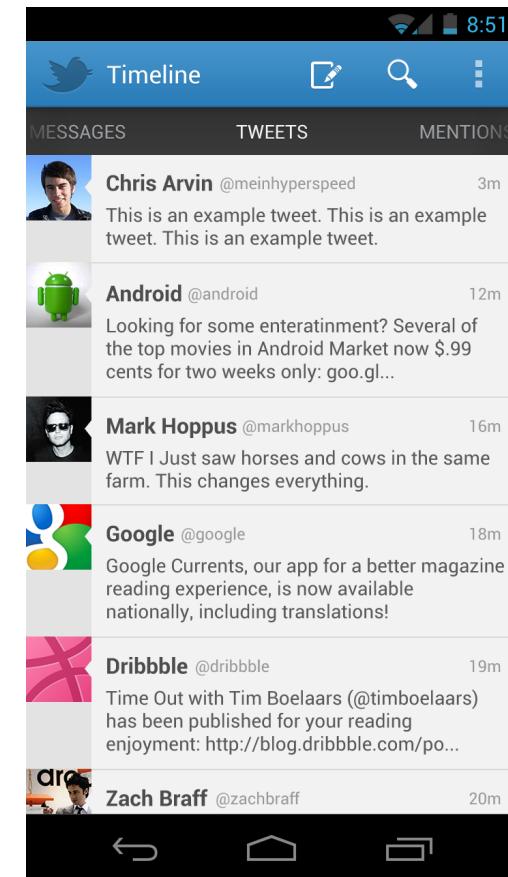
✗ Cambio de bottom bar entre vistas

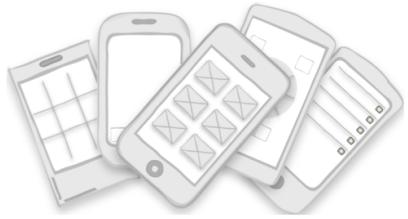




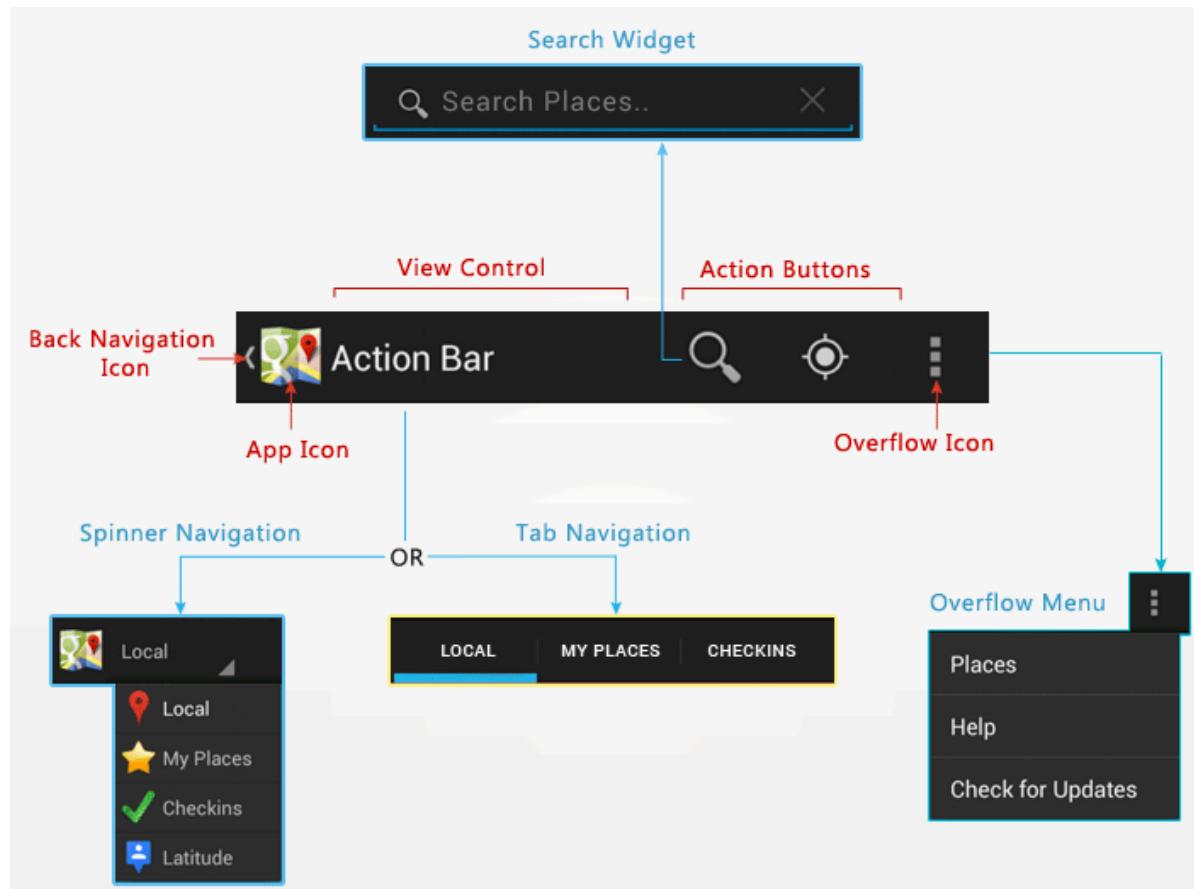
# La Barra de Acción (ActionBar)

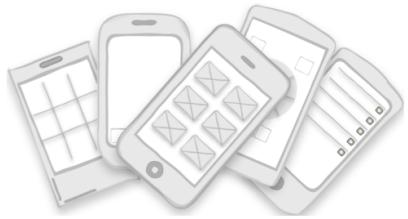
- × Crear una **navegación** consistente y acceso a las **funciones importantes**.
- × **Persiste** en la App. entre pantallas.
- × Mostrar **información** de (nombre de la app, icono, lugar de la jerarquía de menús, ...). Dar **identidad a la App**.
- × Poseen **controles de navegación** para movernos entre diferentes vistas (múltiples vistas)
- × Enlaces a **acciones importantes** como (buscar información, añadir nueva, configuracion ...)



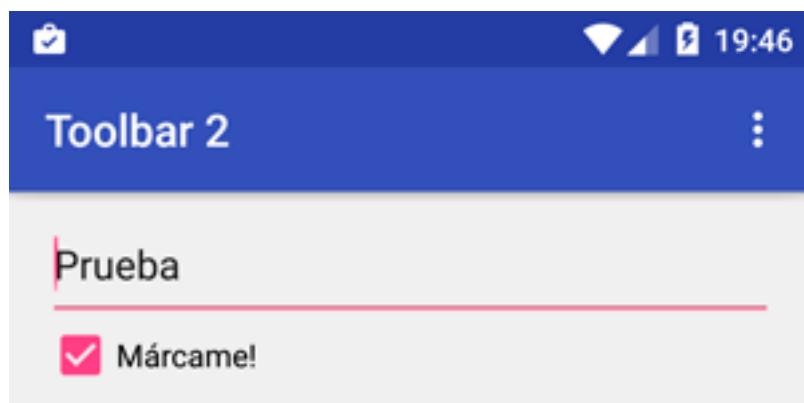
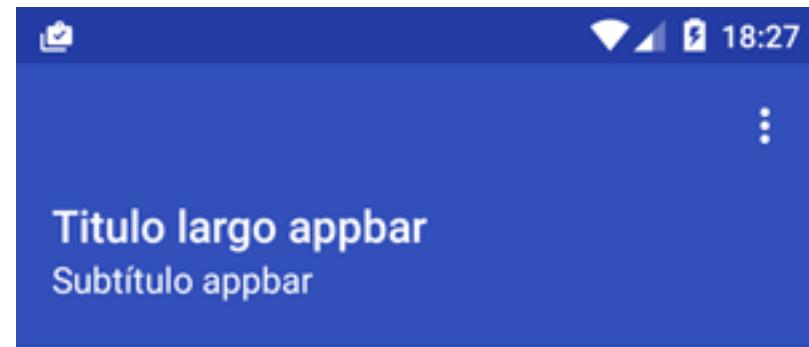
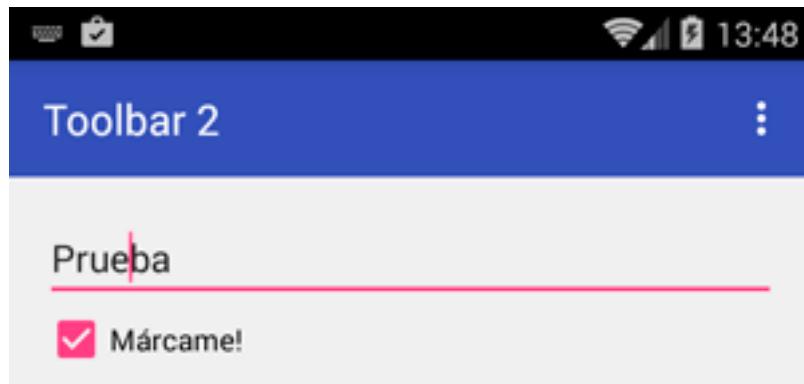


# La barra de acción (ActionBar)



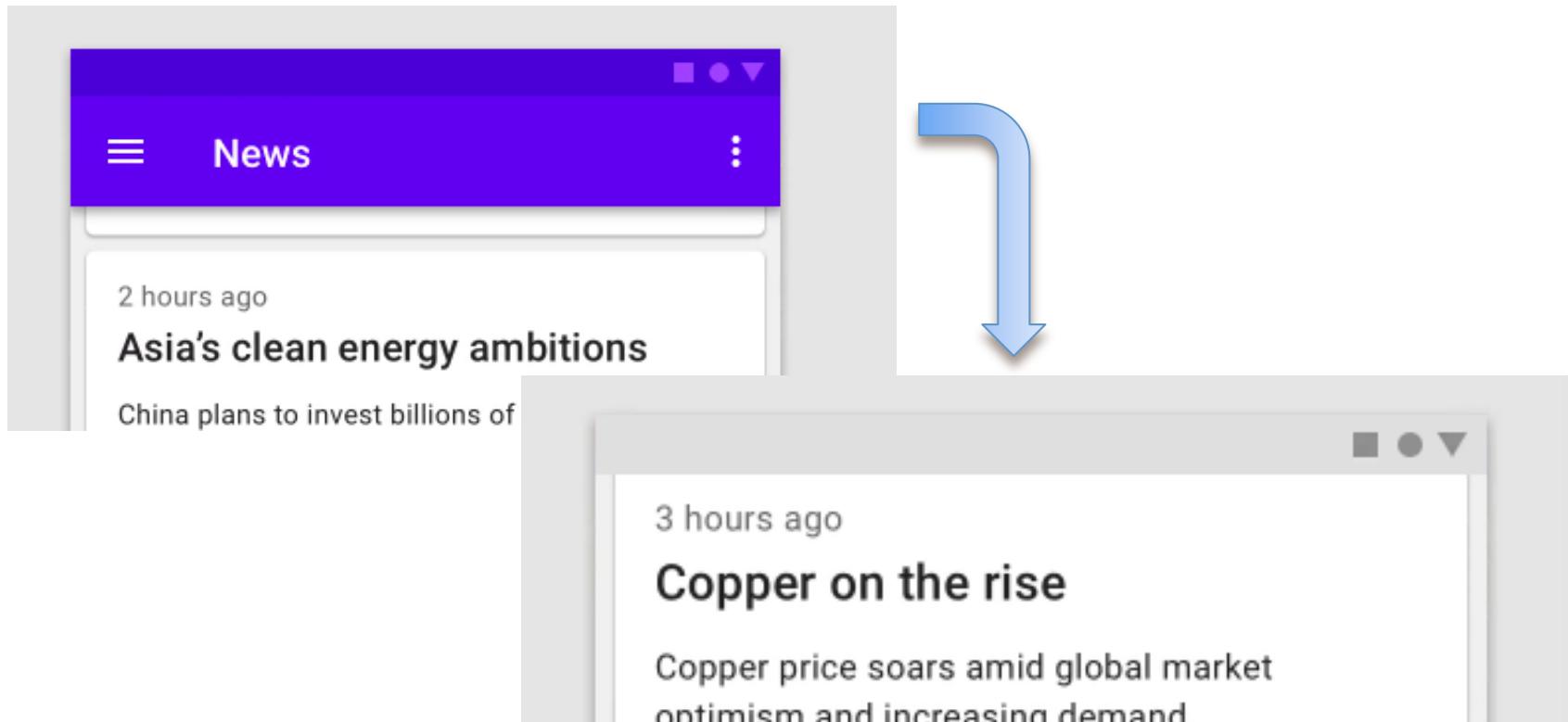


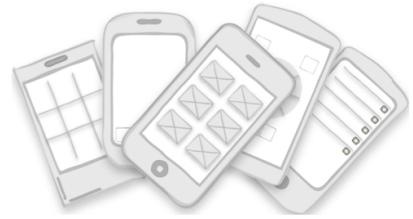
# La barra de acción Action Bar – App Bar (MD)





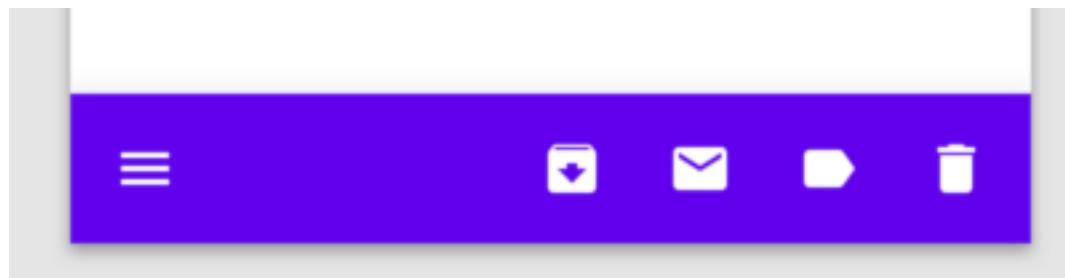
# Action Bar – App Bar (MD) Scrolling





## La barra de acción App Bar - bottom (MD)

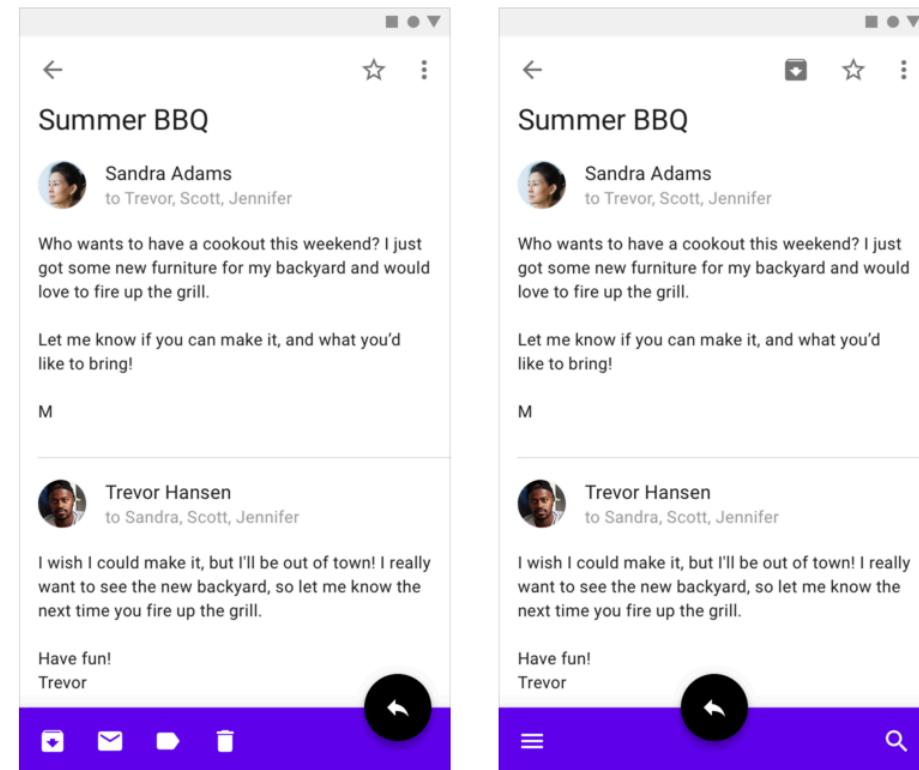
- × Acciones principales de la vista actual en la parte baja de la pantalla.

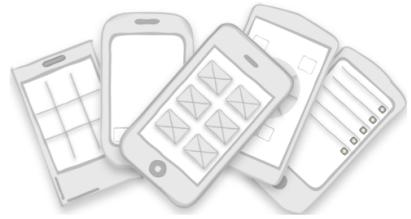




# La barra de acción App Bar - bottom (MD)

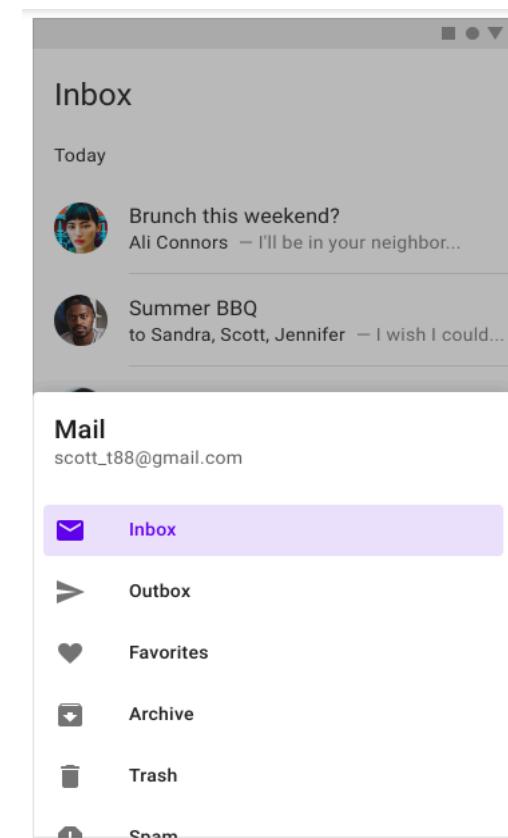
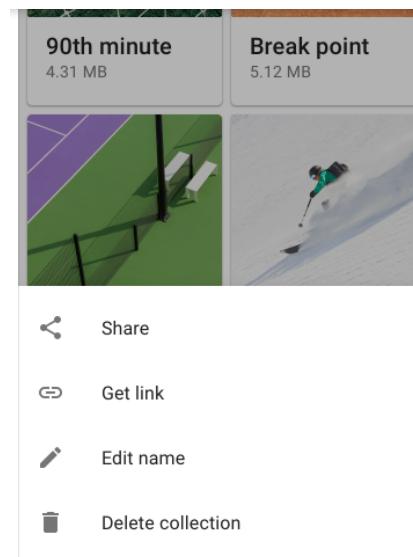
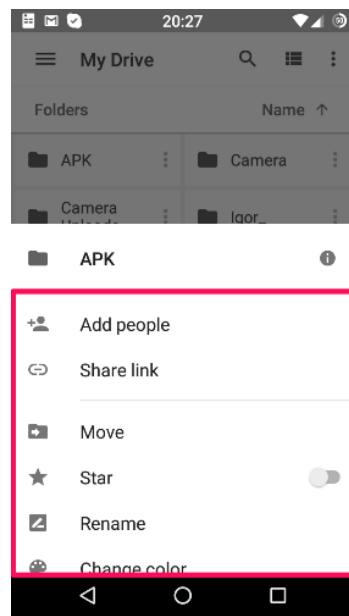
- ✗ Como mezclarla con una Top App Bar
- ✗ Subir navegación arriba.
- ✗ Subir acciones peligrosas.
- ✗ Subir acciones contextuales

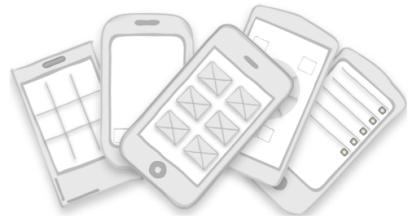




# App Bar - bottom (MD) Bottom Drawer

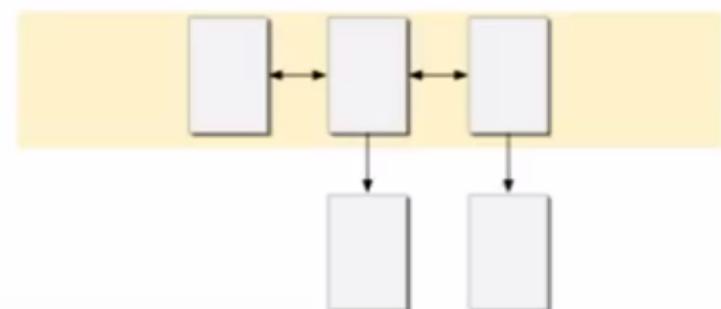
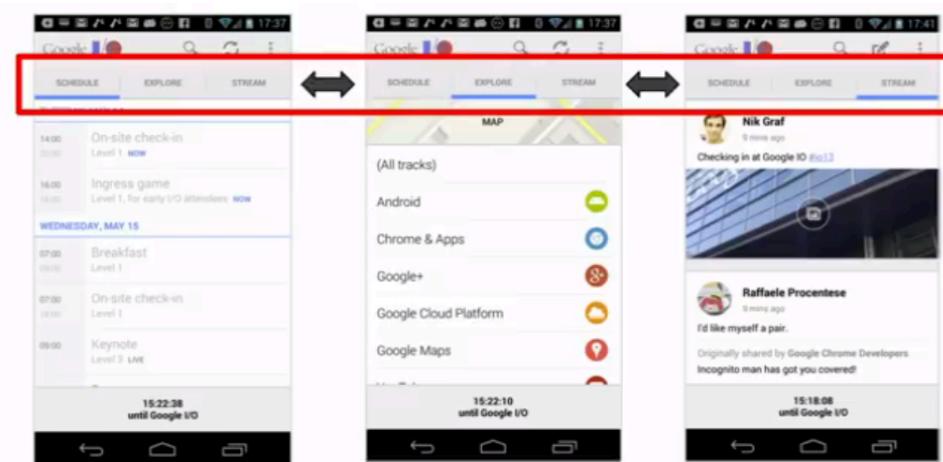
✗ Para la navegación  
desplegadas desde abajo.

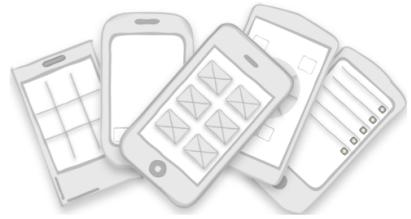




# Navegación por pestañas. Tabs

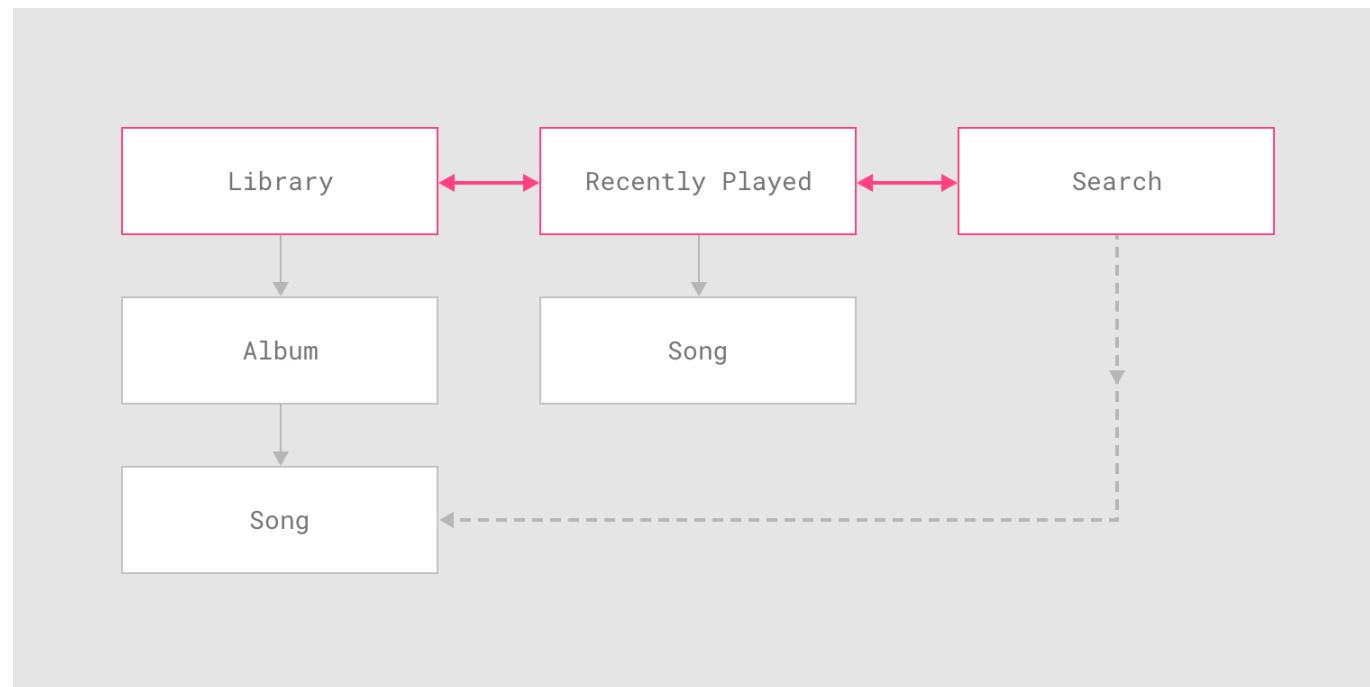
- × Movernos por un número pequeño de vistas de igual importancia y de una forma rápida (side swipe). **Agrupar contenido similar.**

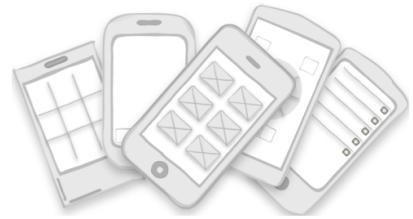




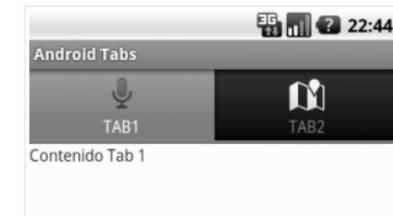
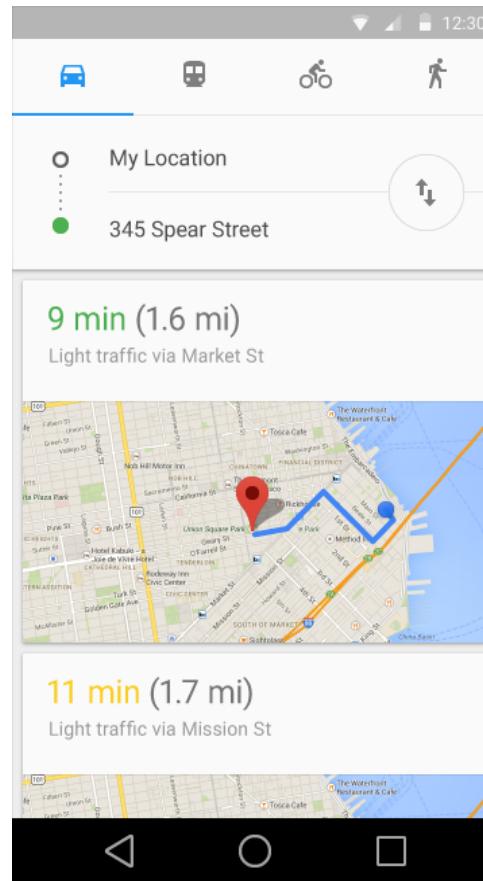
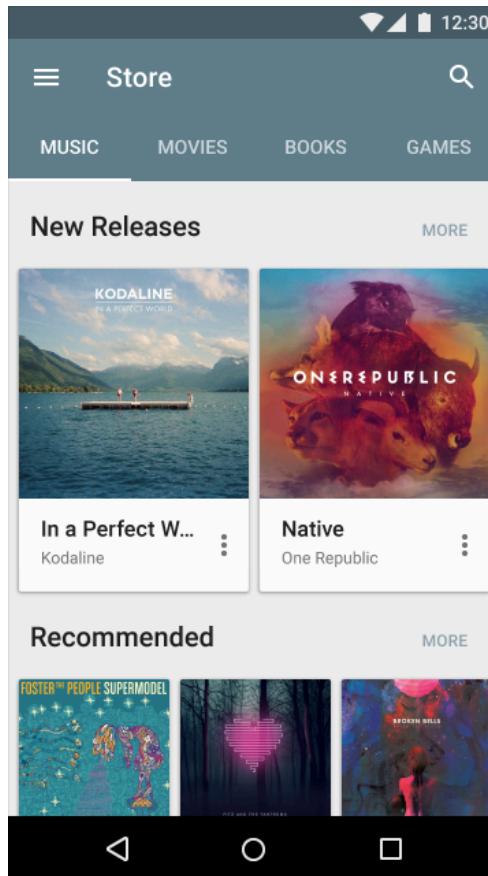
# Navegación por pestañas. Fixed Tabs

## ✗ Navegación lateral

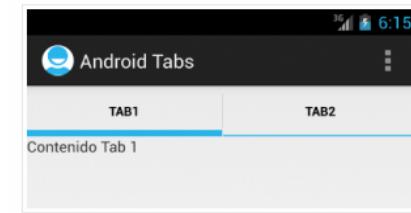




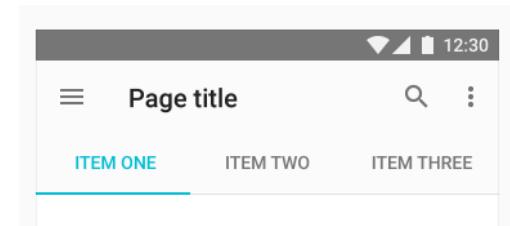
# Ejemplo. Fixed Tabs



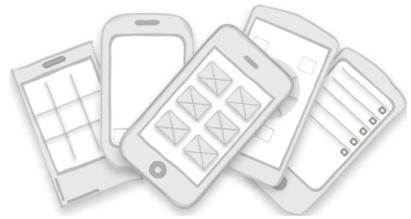
Android 2.x



Android 4.x



Android 5.0 - MD

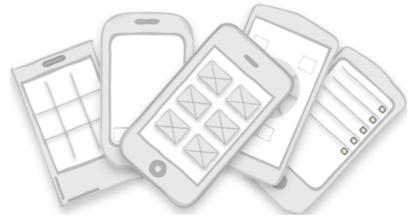


# Ejemplo. Fixed Tabs

× Usado como una barra de herramientas.

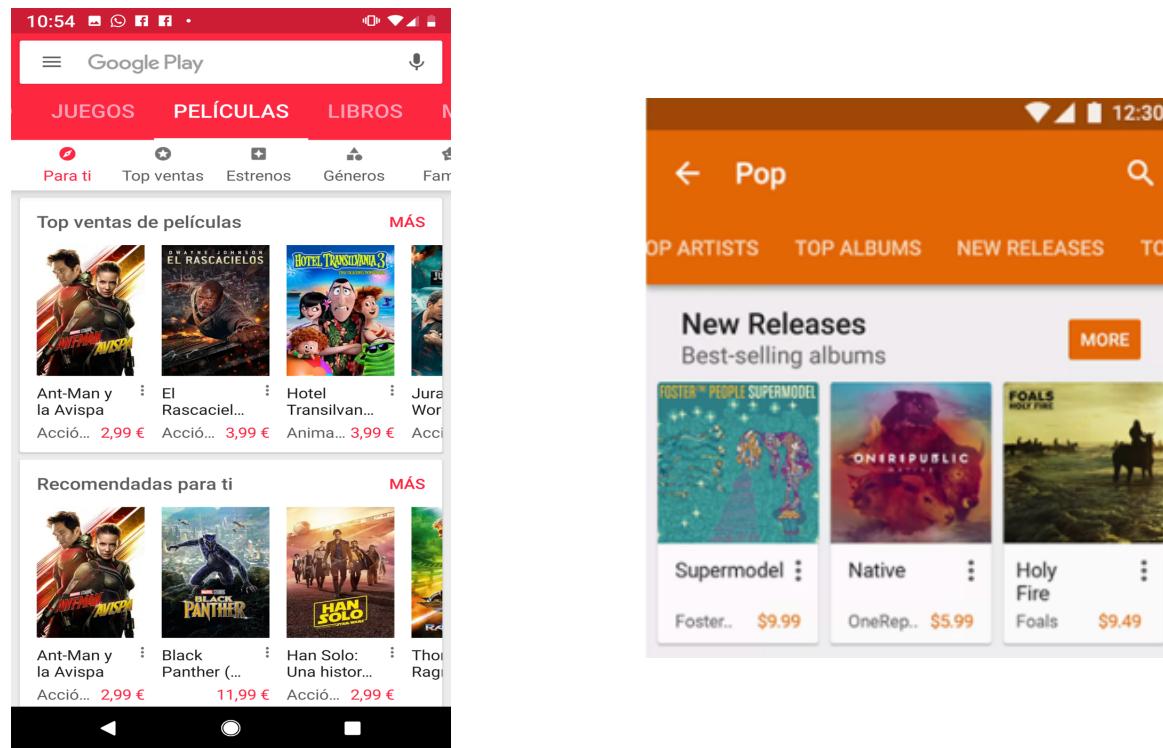
The image displays four screenshots of mobile applications illustrating the concept of fixed tabs:

- Screenshot 1 (Left):** Facebook app. Shows a news feed post from "Silvana Vanesa Aciar" with a caption: "Hermosa familia Mayela!!!! Un abrazo grande!!!". Below it, a "Publicación sugerida" from "gafas.es" about progressive lenses.
- Screenshot 2 (Second from Left):** YouTube app. Shows the "Inicio" (Home) screen with a video thumbnail of two padel players.
- Screenshot 3 (Third from Left):** YouTube app. Shows the "Cuenta" (Account) screen for "Francisco Luis Gutierrez Vela". It includes a sidebar with links like Historial, Mis videos, Notificaciones, Compras, Ver más tarde, and Biblioteca (A-Z).
- Screenshot 4 (Right):** YouTube app. Shows the "Tendencias" (Trending) screen with a video thumbnail for "Britney Spears - Slumber Party" by vevo.



# Scrollable Tabs

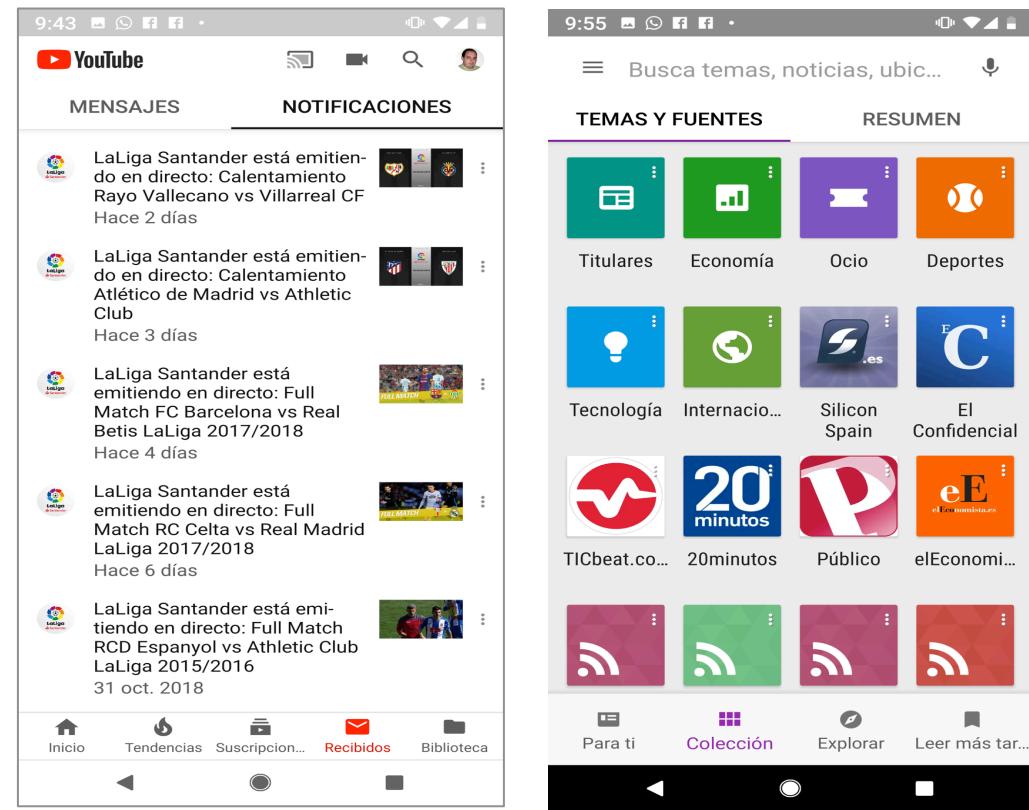
- × Número de pestañas **mayor** que el que cabe en pantalla. Movimiento por deslizamiento.

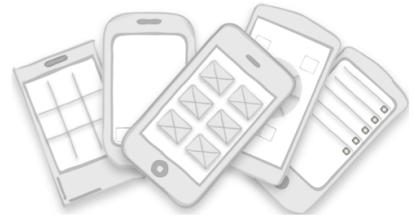




# Tabs + Bottom Navigation

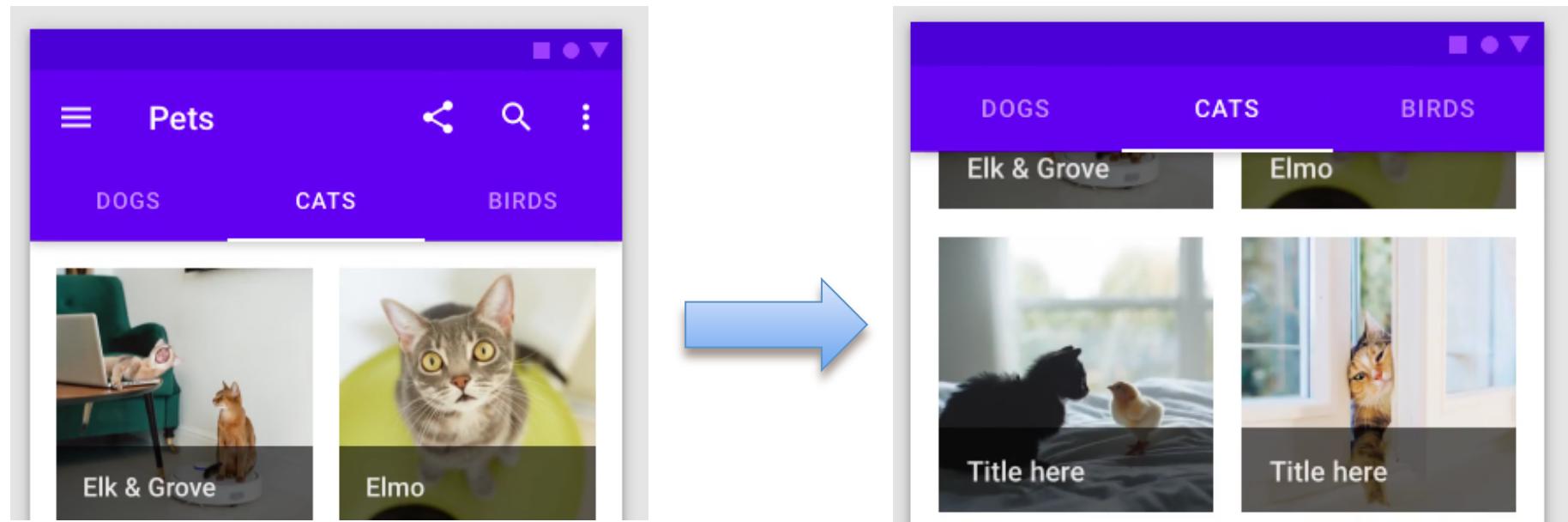
- ✗ Cuidado al mezclar los dos sistemas de navegación

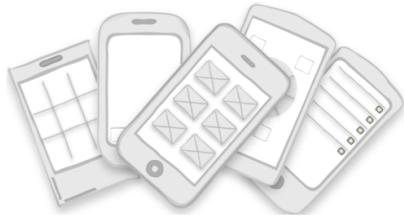




# Tabs + App Bars Scrolling

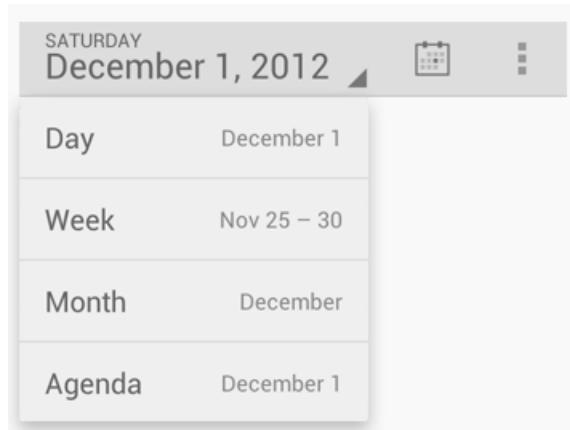
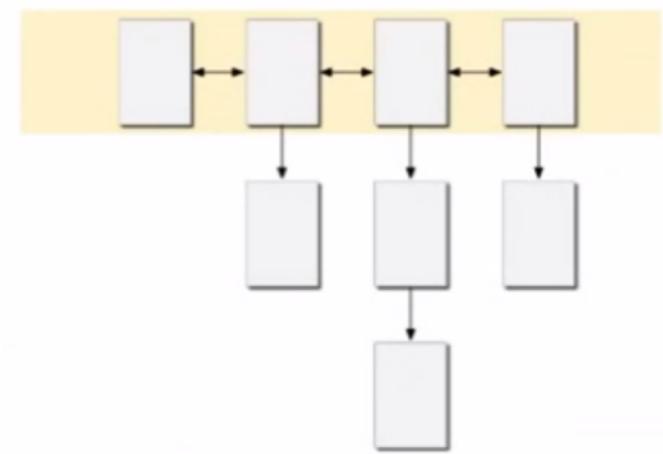
✗ Scroll de la vista dentro de la pestaña





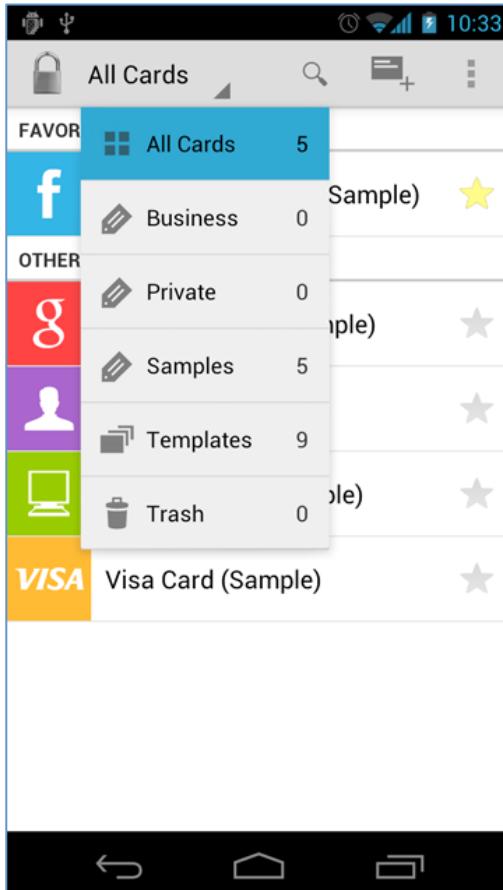
# Navegación por Menú desplegable (Spinners)

- ✗ Menú desplegable para cambiar entre vistas de la misma información (“Page Filter”)
- ✗ Cambiamos entre vistas del mismo conjunto de datos o diferentes formas de estructurar los datos.
- ✗ Ocupa menos espacio.

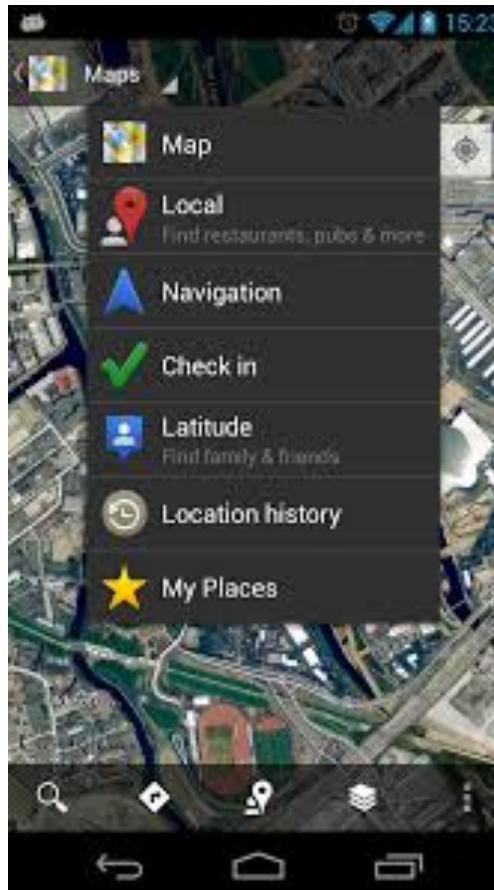




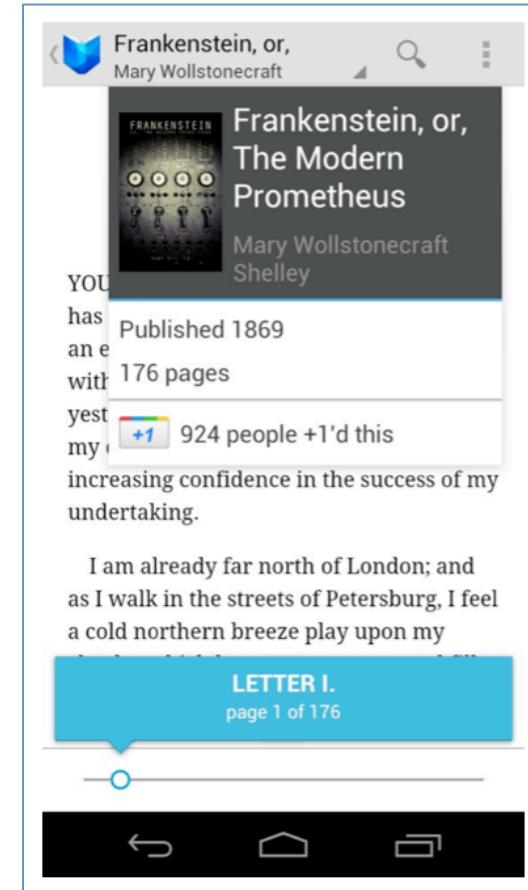
# Uso de Spinners



Diferentes vistas



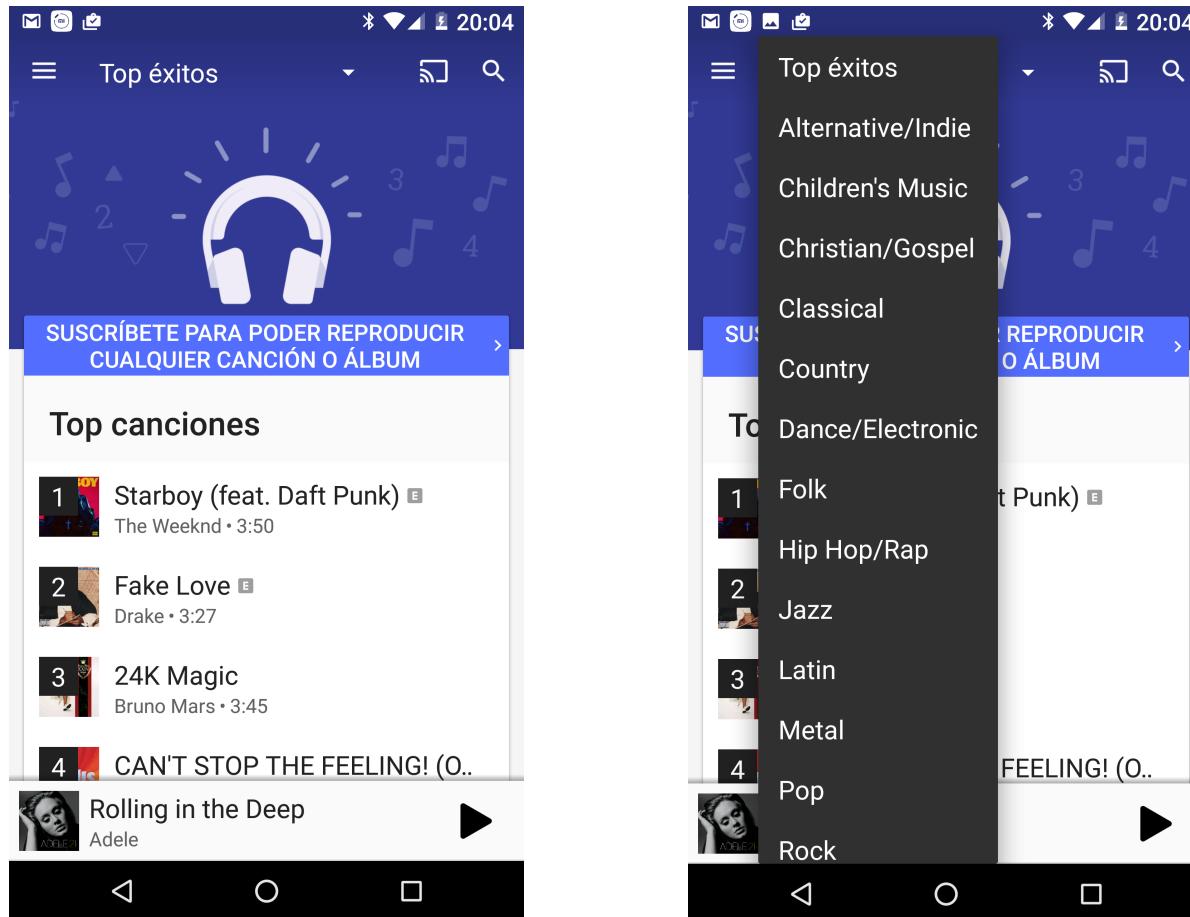
Funciones



Ampliar información

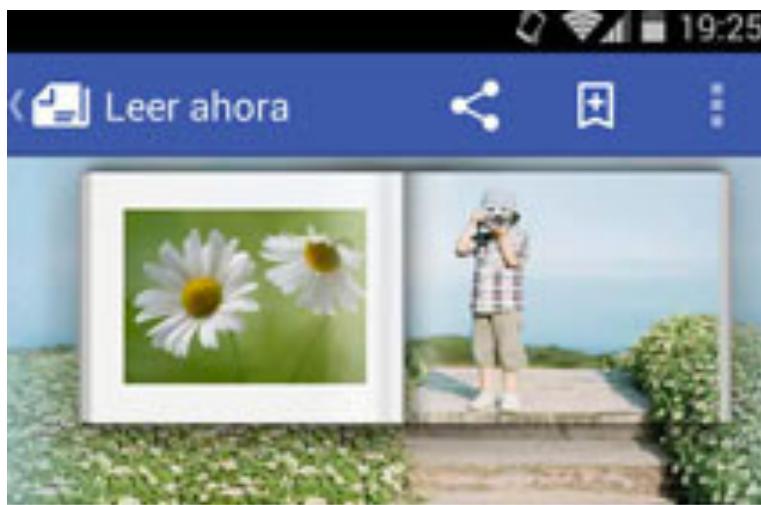


# Uso de Spinners

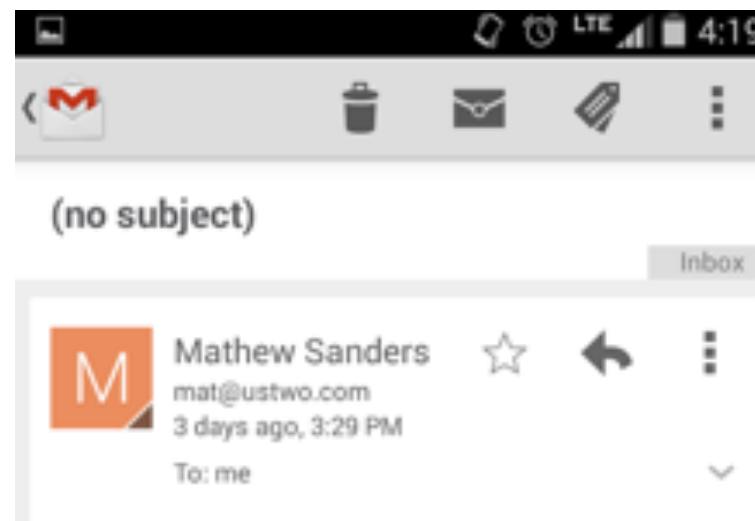


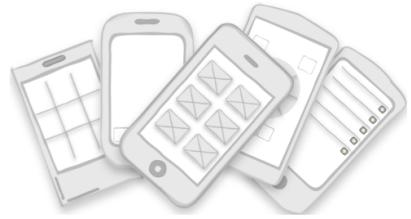


# Lanzar una Acción Action Buttons



Ahora Flickr te permite crear  
libros de fotos desde tu





# Lanzar una Acción Action Buttons

- ✗ Usarlos para las acciones más importantes dentro de la APP. (frecuentes, importantes, típicas)
- ✗ Ocultar las acciones que no estén disponibles en un contexto determinado.

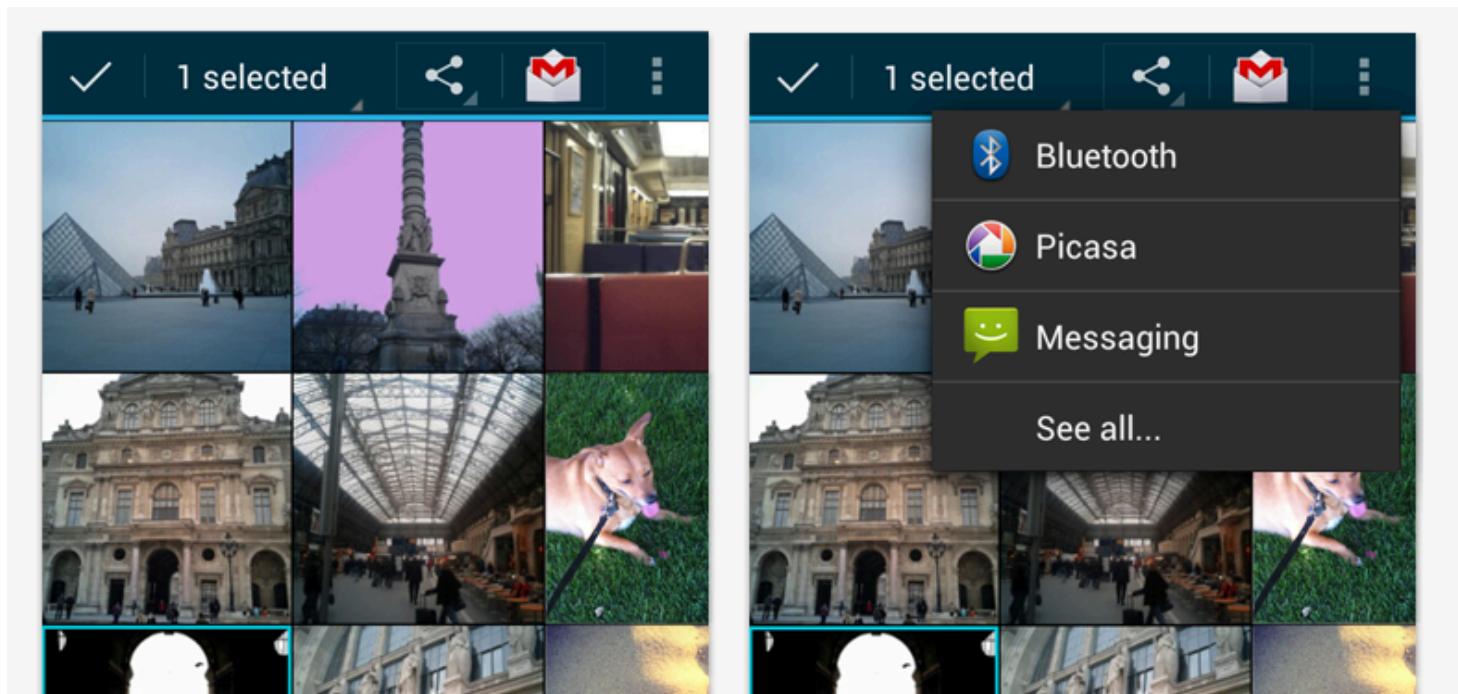


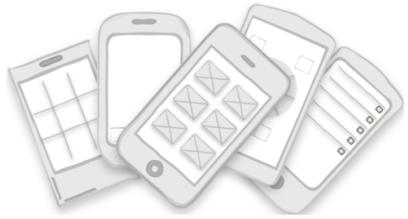
<https://material.io/tools/icons/>



# Action Buttons

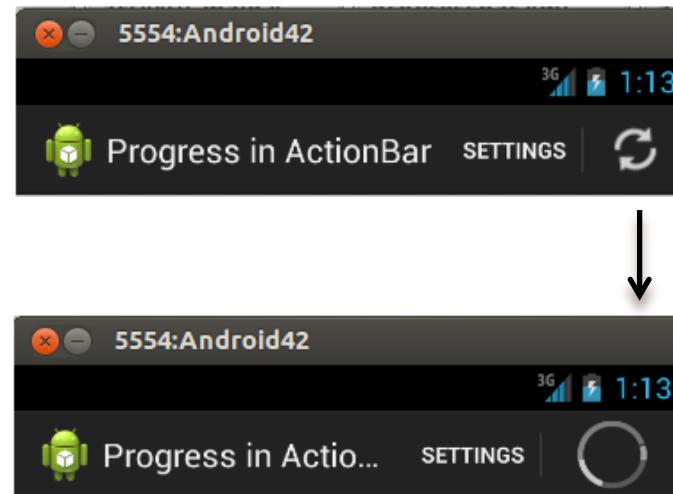
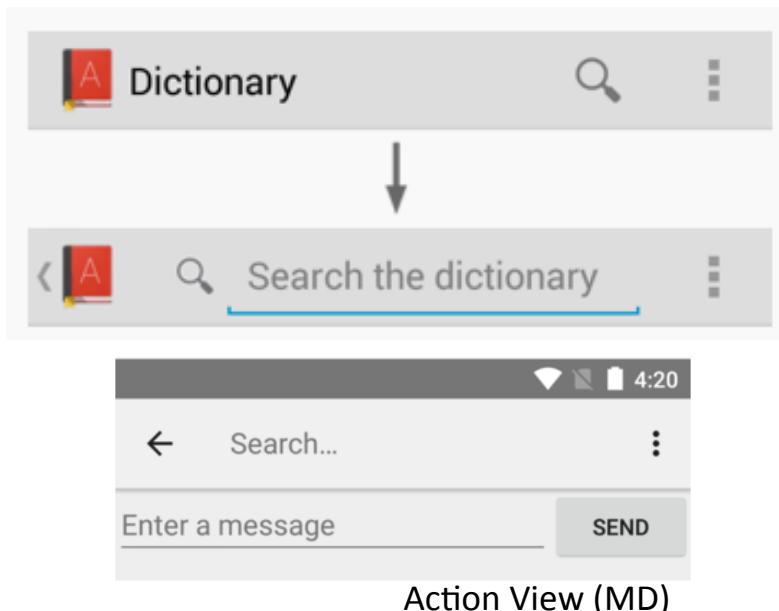
- Hay Botones de acción con un funcionamiento específico. Por ejemplo “Sharing data”

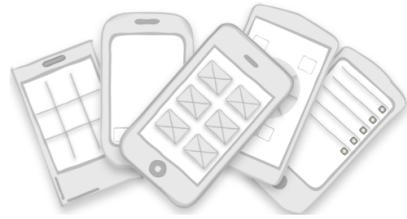




# Action Views

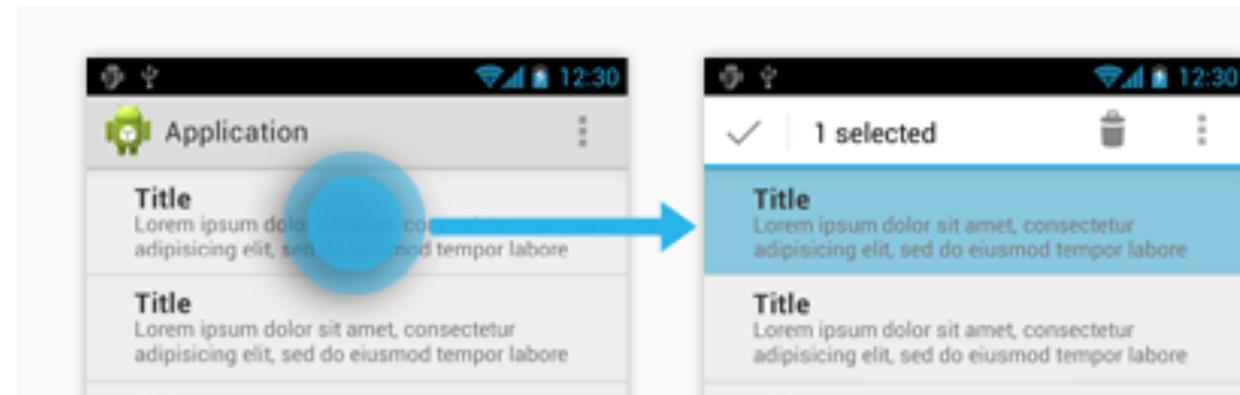
- × Vista que aparece en una barra de acción como substituto de un botón de acción.
- × Usado para solicitar más información al lanzar la acción o realimentar al usuario del estado..

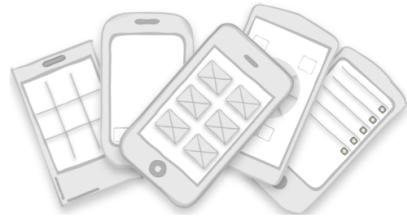




# Contextual Action Bar

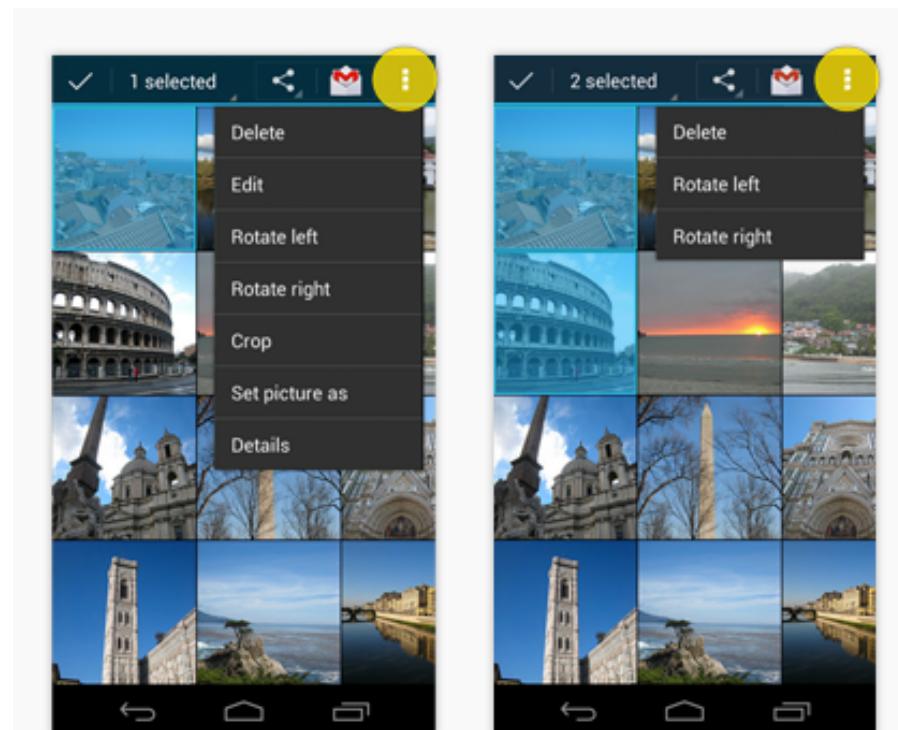
- × Es una barra de acción temporal que se coloca encima de la de la App durante una sub-tarea determinada.
- × Por ejemplo acciones de selección de texto o datos.

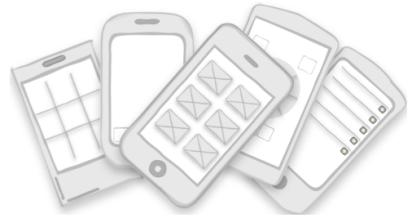




# Contextual Action Bar

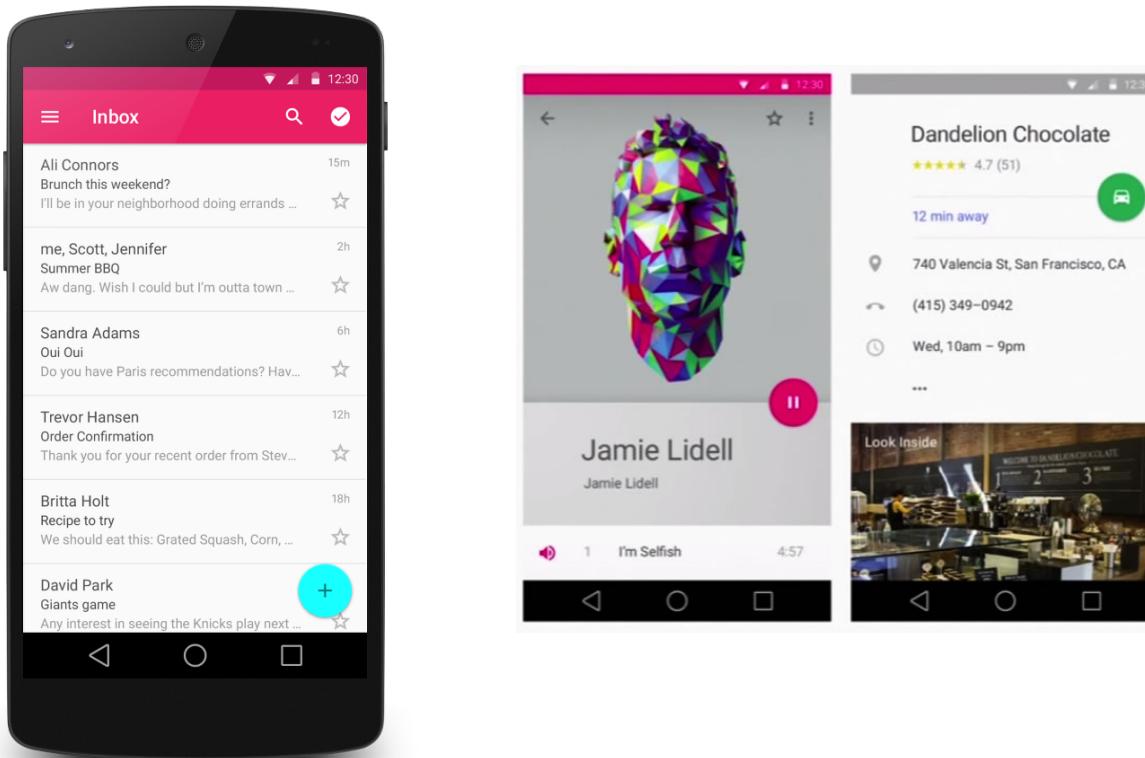
- × Ajuste dinámico de las acciones dependiendo del número de elementos seleccionados.

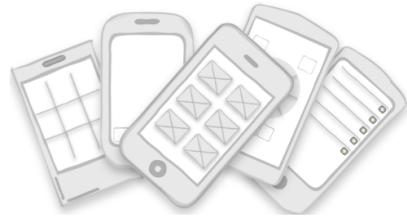




# FAB (Floating Action Button)

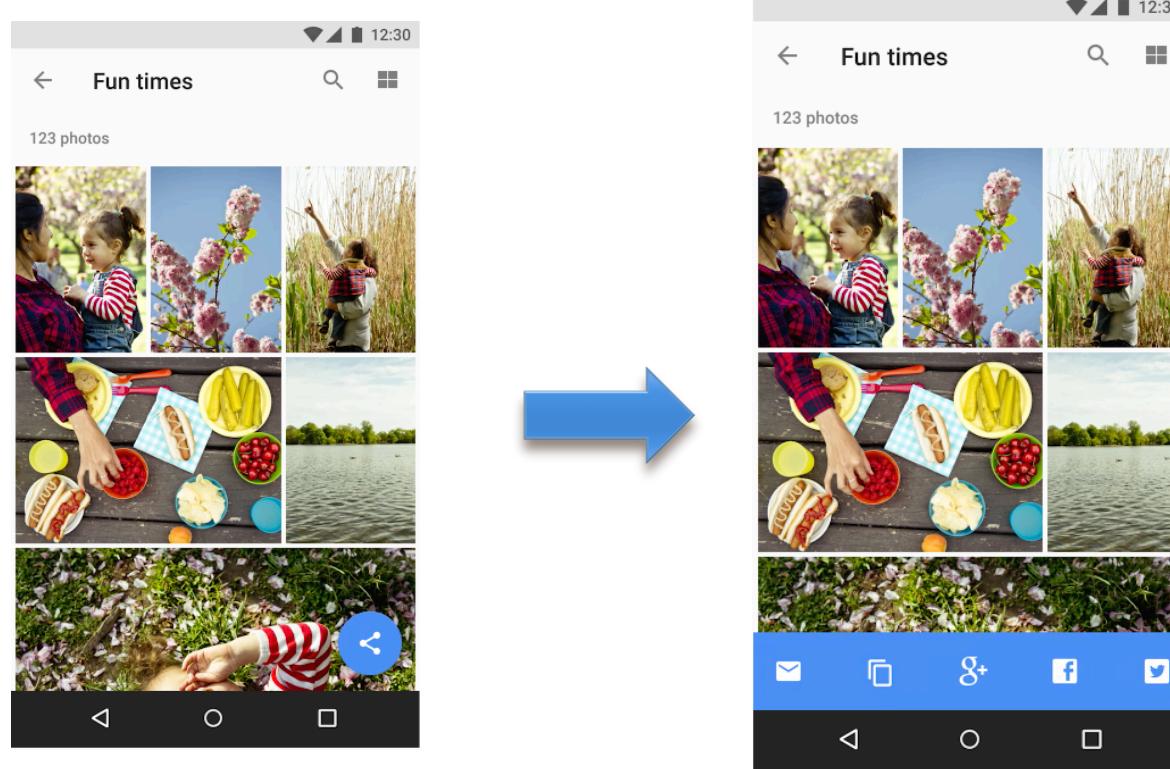
- × Representa la acción que más realiza el usuario en una vista determinada.

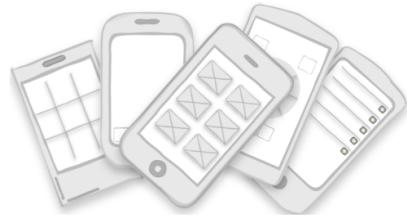




# FAB (Floating Action Button)

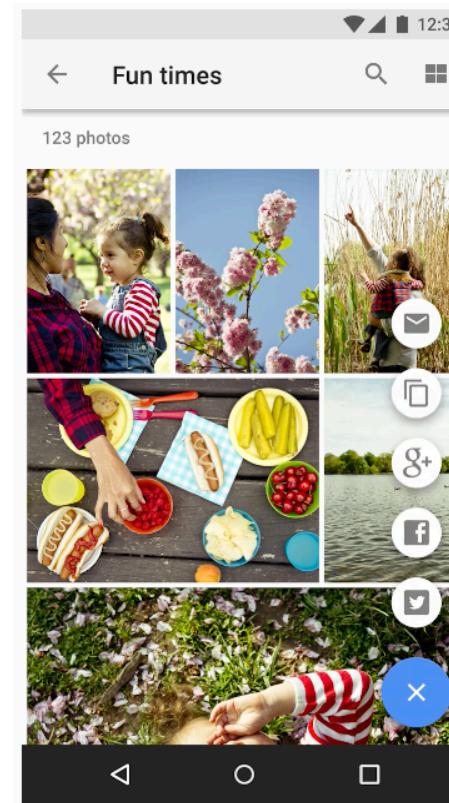
- ✗ Múltiple selección de acciones (FAB, ToolBar)





# FAB (Floating Action Button)

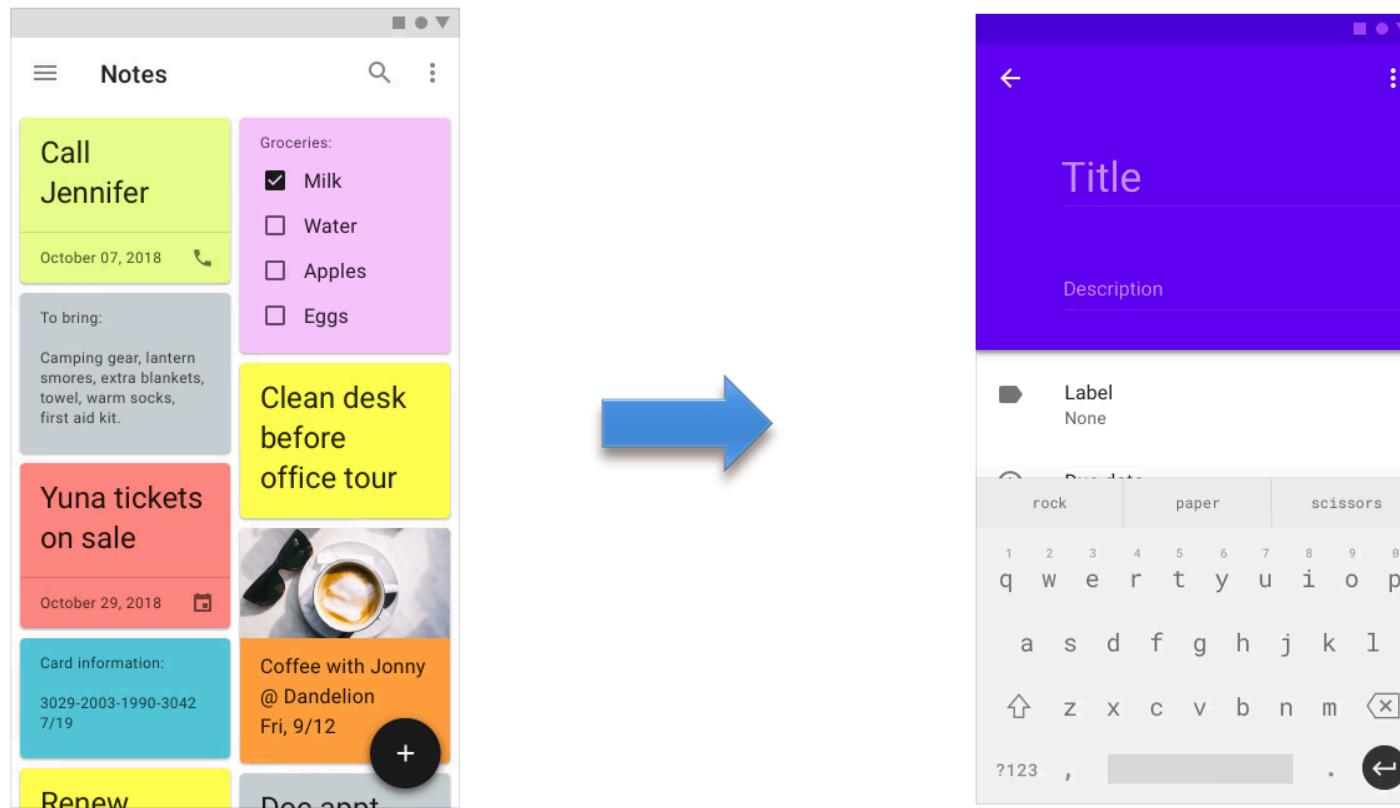
- × Acciones relacionadas con el FAB

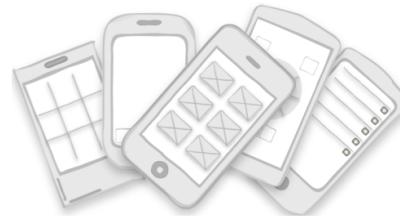




# FAB (Floating Action Button)

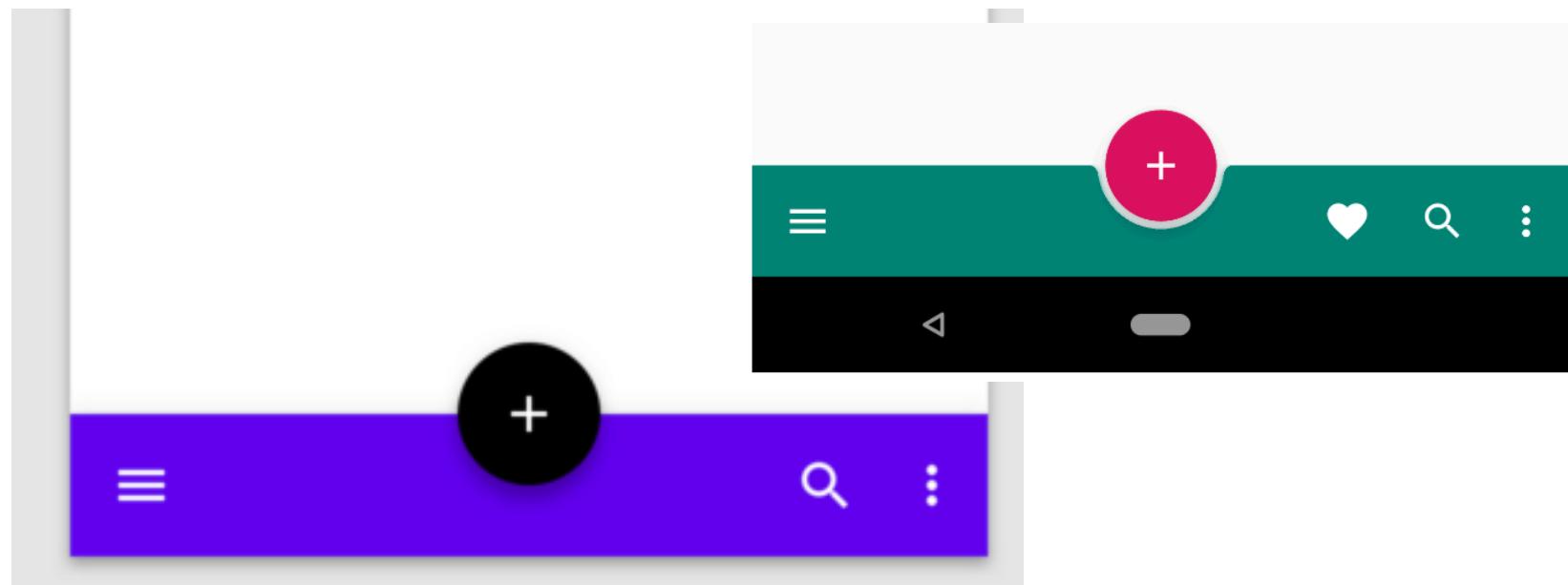
- El FAB se convierte en una nueva vista

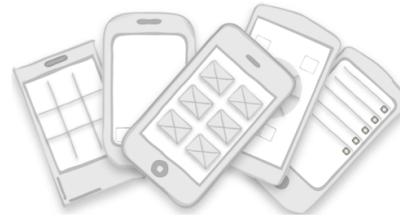




# FAB-Integración con Appbars

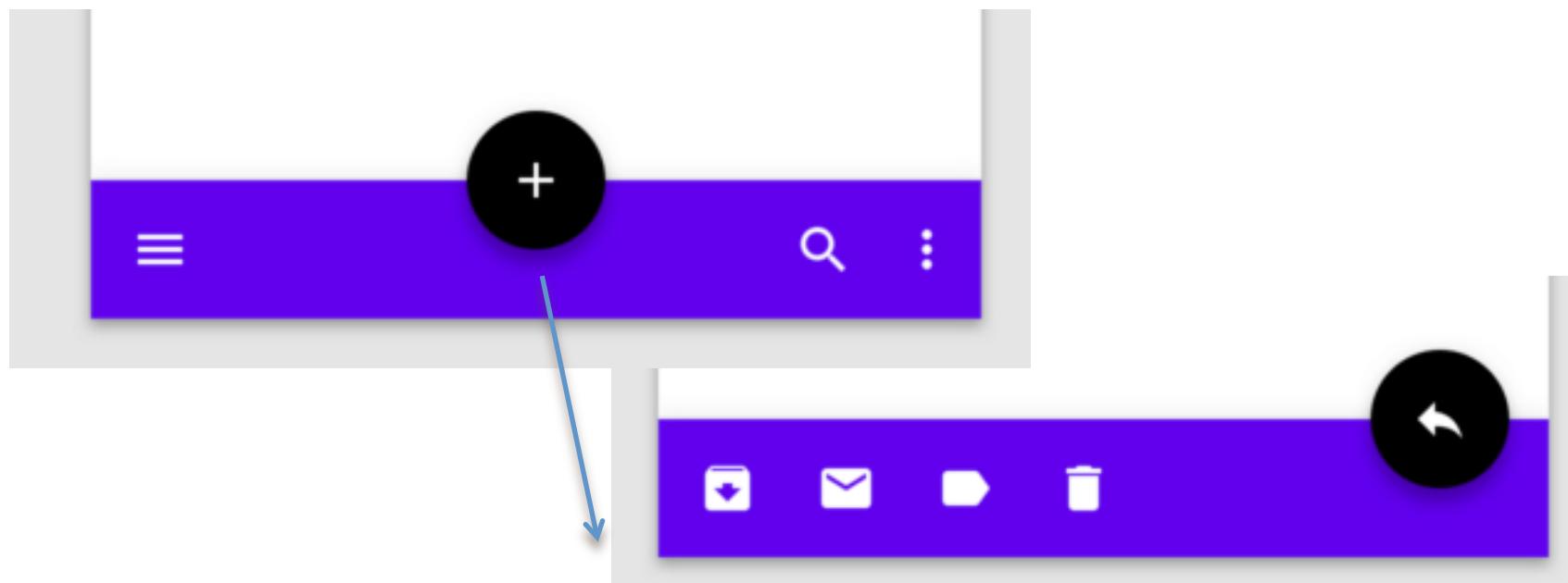
- × Navegación y acciones principales en la parte baja de la pantalla. Más de una acción ...

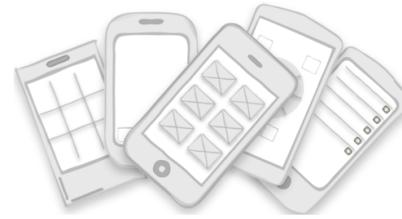




# FAB-Integración con Appbars

- ✗ Cambio de vista, nuevas acciones al contexto, Pantalla primaria -> Pantalla secundaria

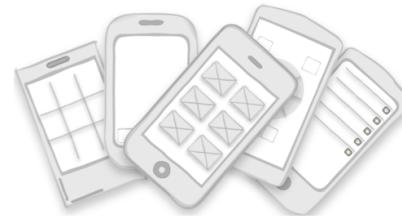




# FAB-Integración con Appbars

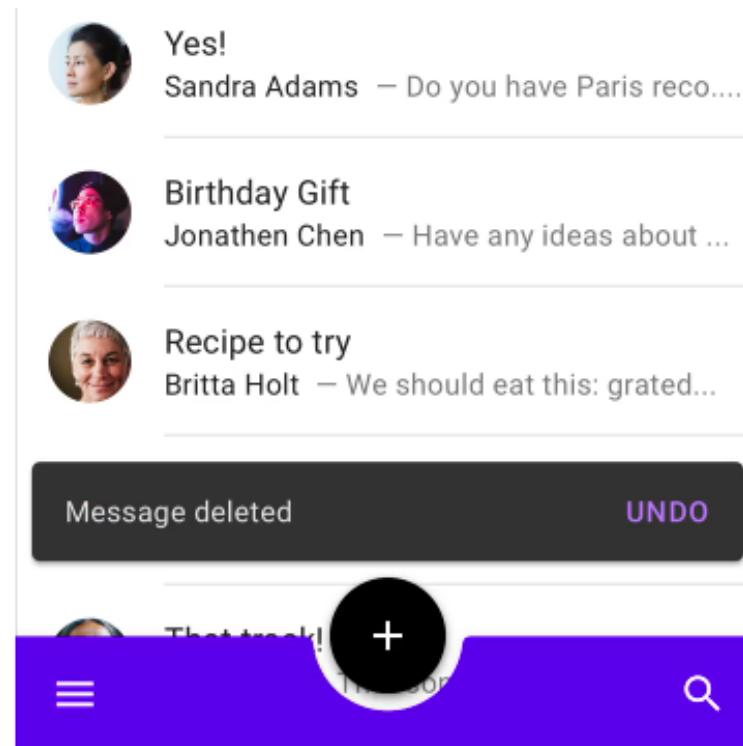
## ✗ Navegación atrás

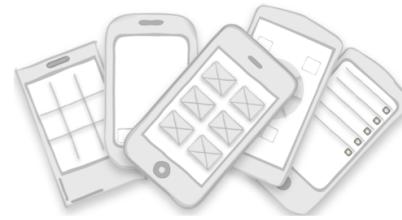




# FAB-Integración con Appbars

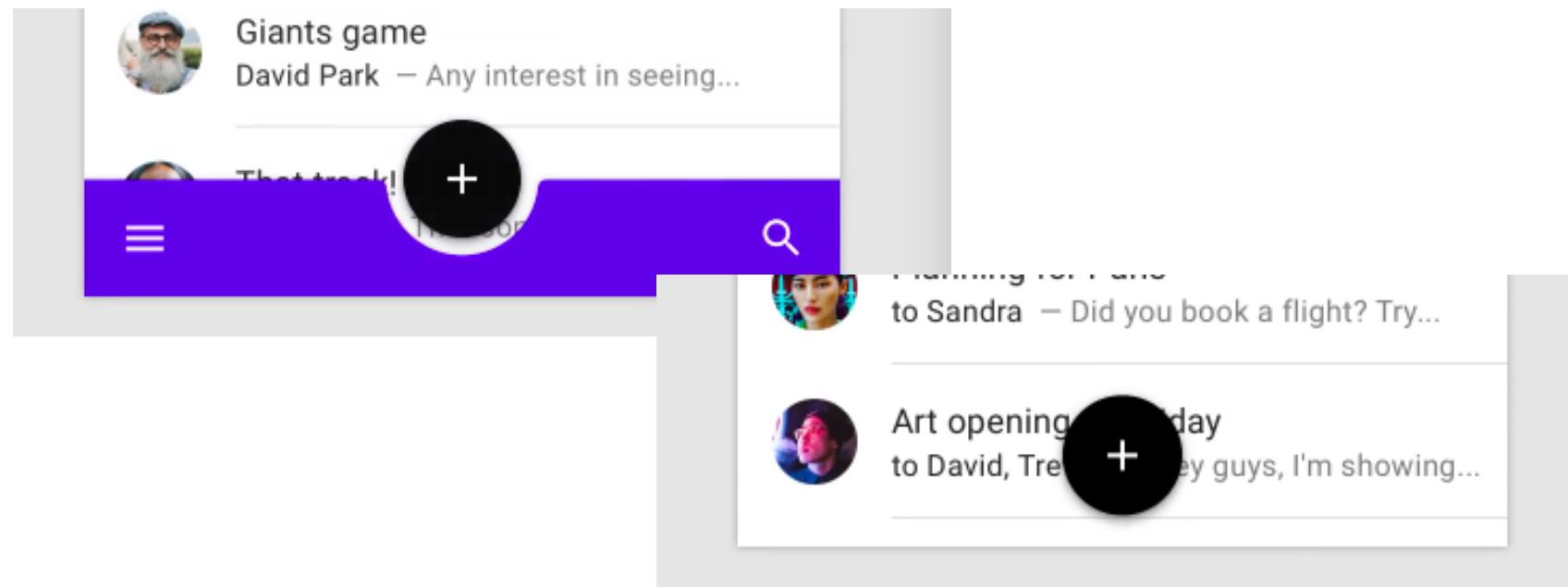
- ✗ Mensajes. Snackbar  
o toast.



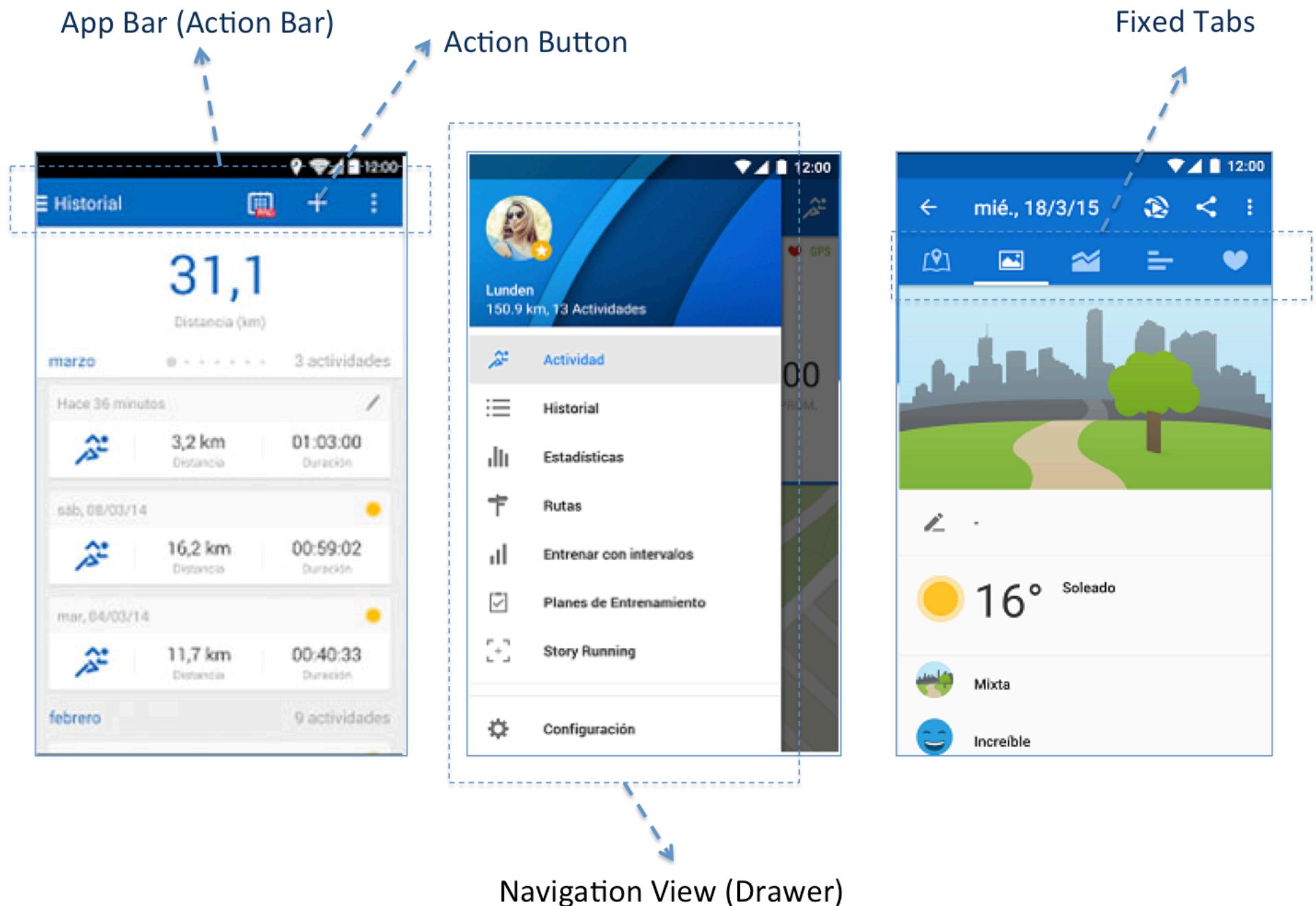


# FAB-Integración con Appbars

## ✗ Scroll de la vista

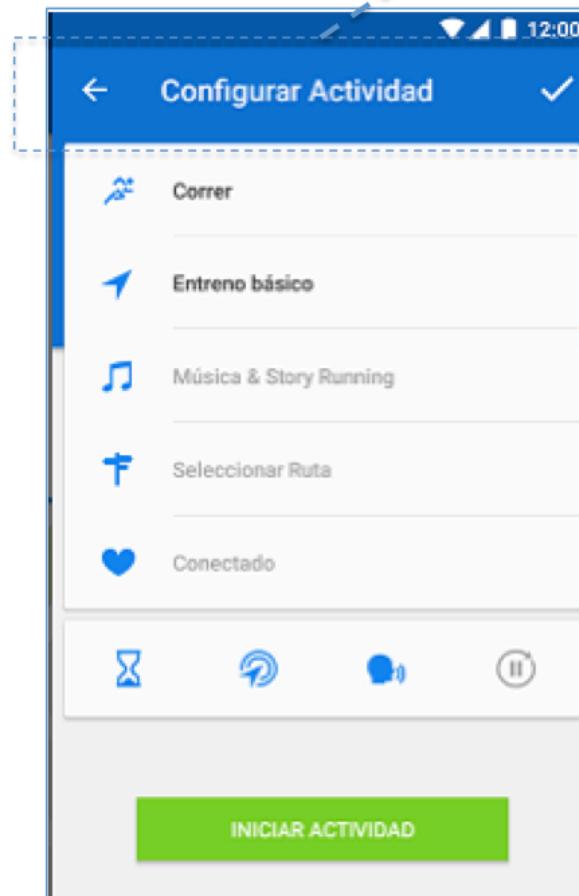


## Resumen

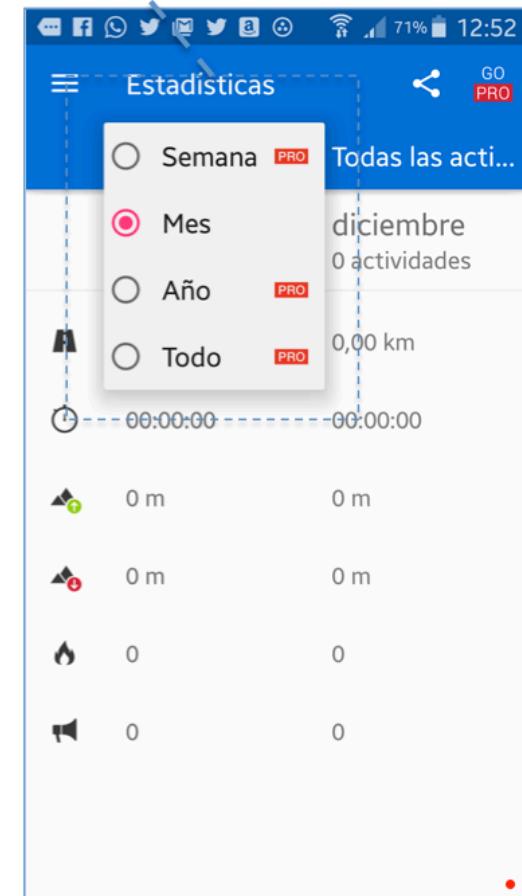


# Resumen

Contextual Action Bar



Spinner (Context Menu)

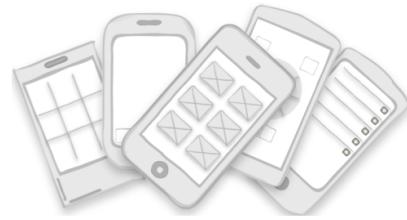


FAB

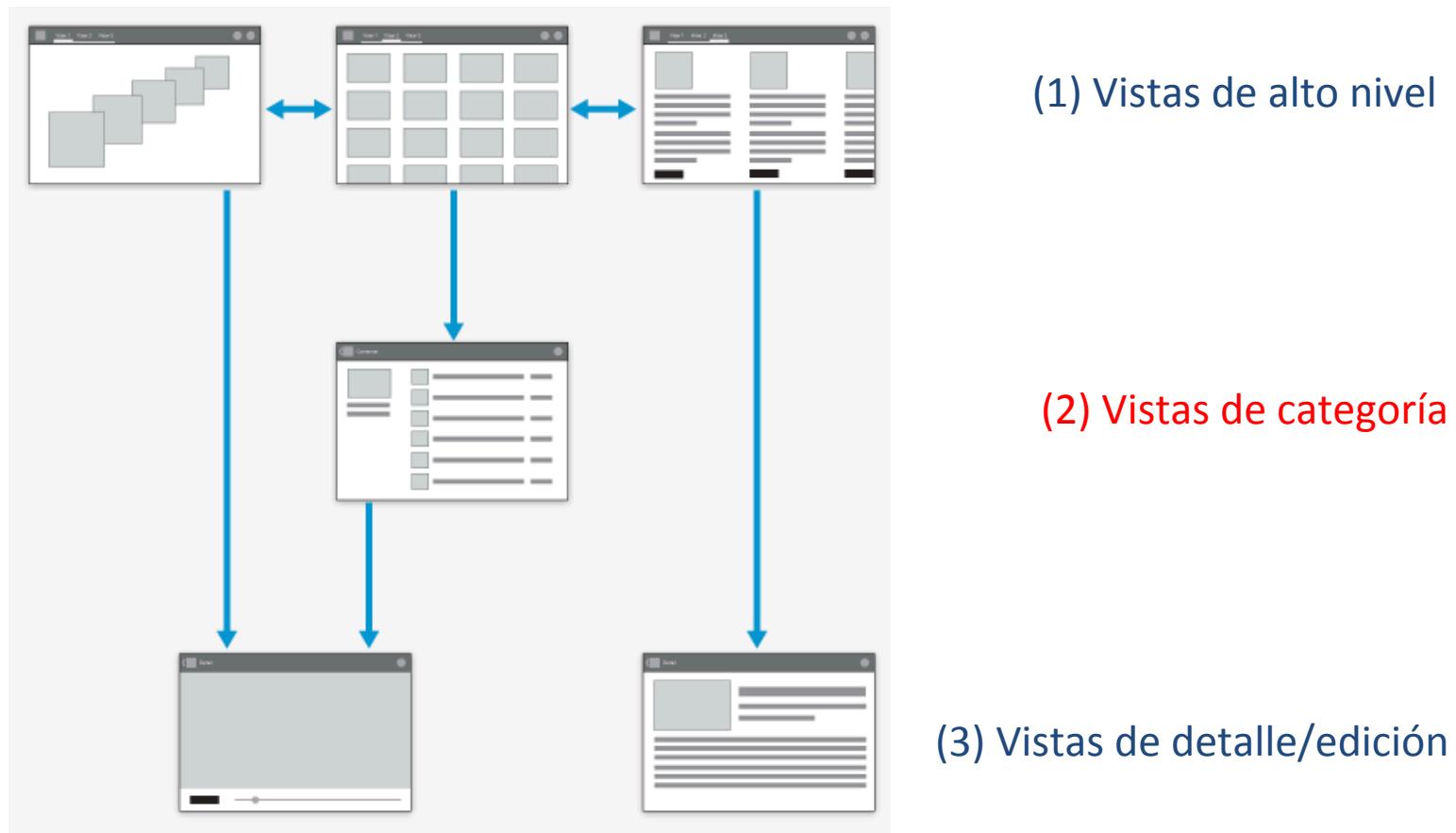
# Resumen

The image displays three screenshots of the Google I/O app interface, each highlighting a different design pattern:

- App Bar - Top:** The first screenshot shows the top navigation bar with the time (10:55), signal strength, battery level, and a back arrow. Below it is the main agenda screen for May 8th, showing various sessions like Breakfast, Badge pick-up, Keynote, Lunch, Codelabs, Office Hours & App Review, and I/O Store. The "Agenda" tab is selected. A blue arrow points from the text "App Bar - Top" to the top of the first screenshot.
- Bottom Navigation:** The second screenshot shows the "Opinion" screen. It features a "TU OPINIÓN" section with a placeholder for a user review ("Usuario de Google, Tu opinión será pública") and a rating scale from 1 to 5 stars. A blue arrow points from the text "Bottom Navigation" to the bottom navigation bar at the bottom of the second screenshot.
- App Bar – Bottom + FAB:** The third screenshot shows the details for the "[Office Hour] Android Bazel" session. It includes the session title, date (May 8, 11:30 a.m. - 12:30 p.m.), location (Office Hours tent (section B)), and a detailed description about Bazel. At the bottom, there's a floating action button (FAB) with a star icon. A blue arrow points from the text "App Bar – Bottom + FAB" to the bottom of the third screenshot.



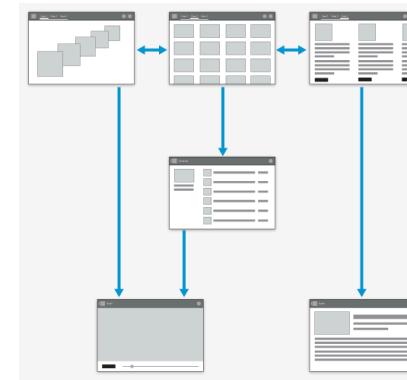
# Estructura general de una APP dirigida por datos





# Estructura de una App en Android

## 2.2 - Vistas de Categorías

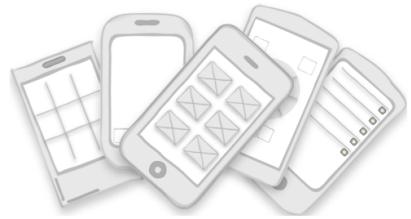




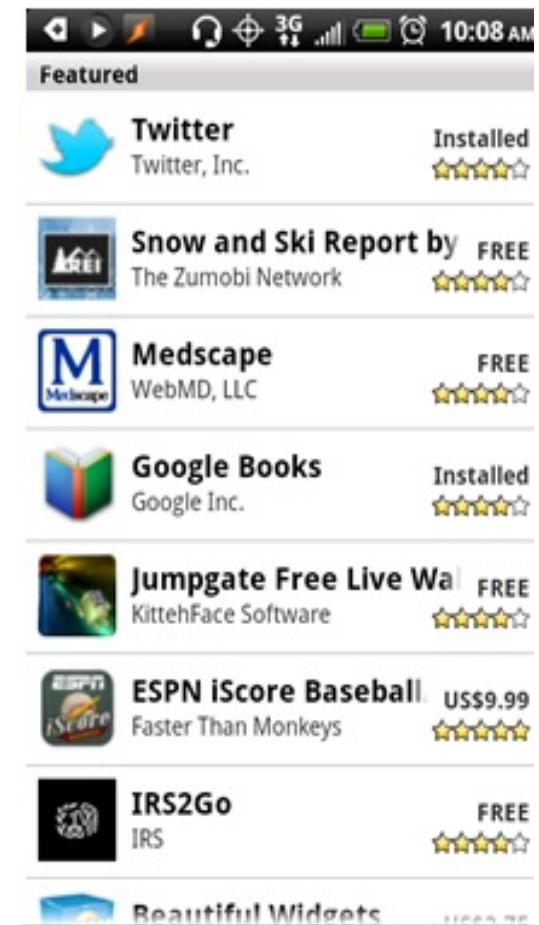
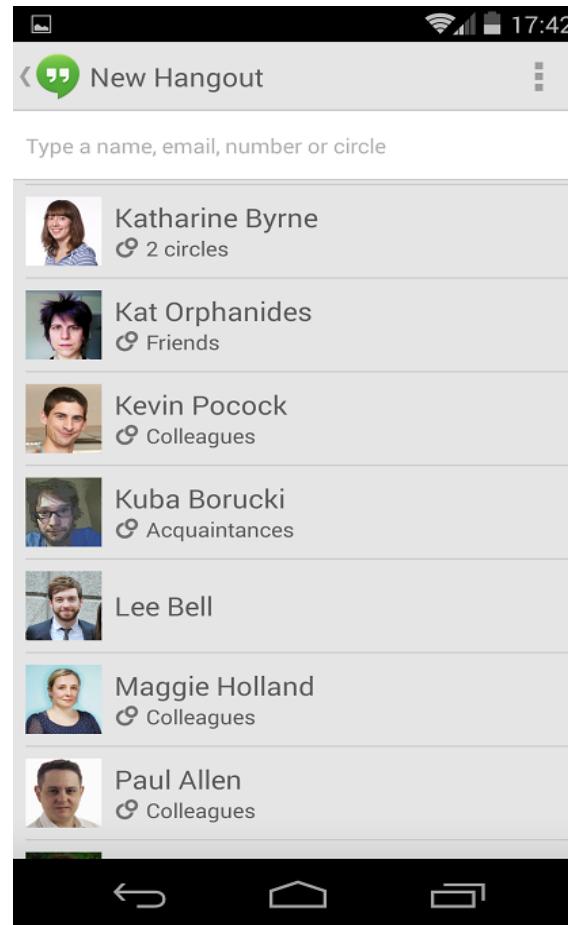
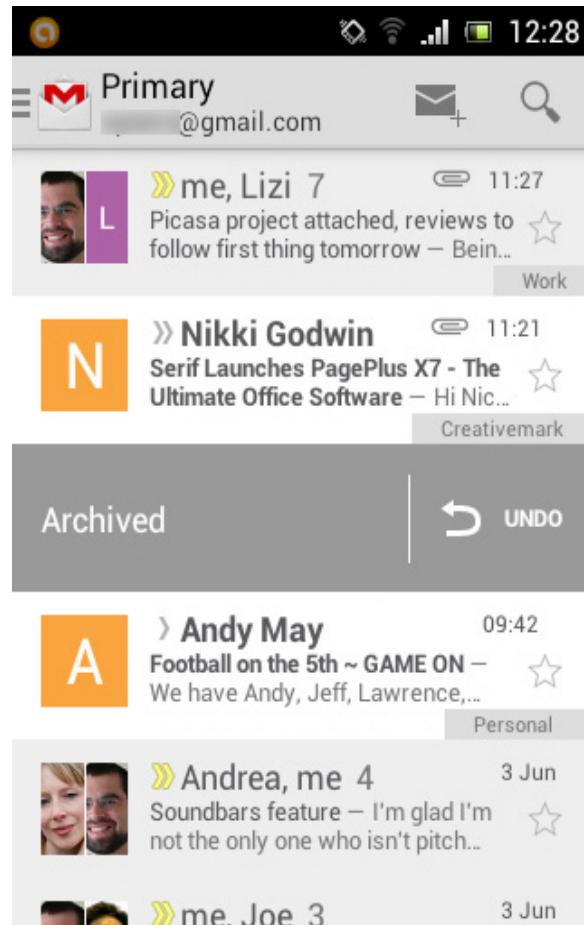
## (2.2) Vistas de Categorías

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- ✗ Conjunto de vistas que nos permiten navegar a través de las categorías hasta alcanzar los niveles de detalle.
- ✗ Habitualmente navegación sobre una estructura jerárquica. (carpetas, álbum, resultados de una búsqueda, catalogo, ...)
- ✗ Evitar crear niveles profundos dentro de la App.



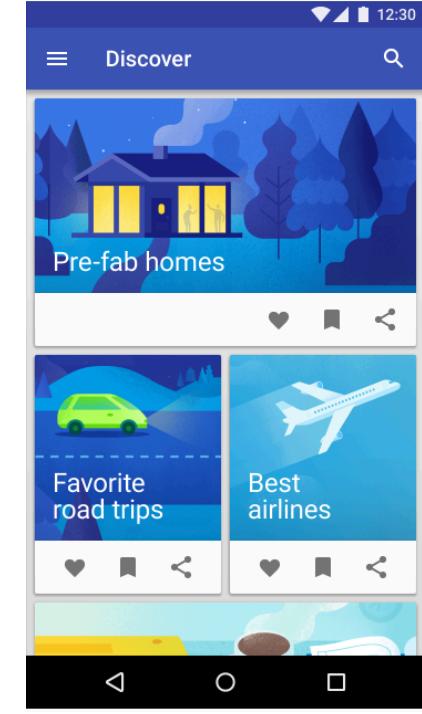
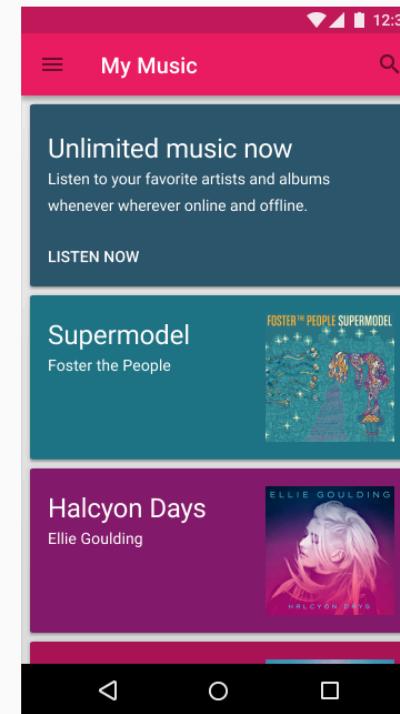
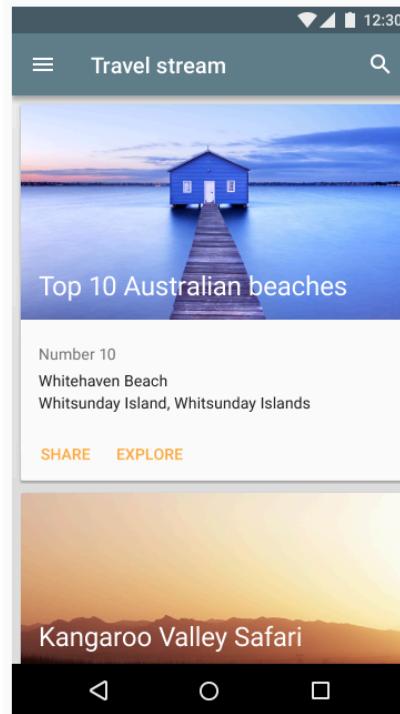
## (2.2) Vistas de Categorías

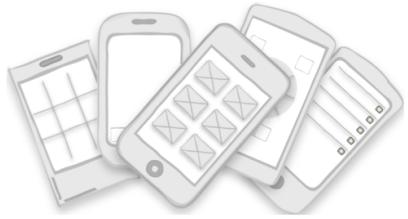




# Tarjetas (Cards - MD)

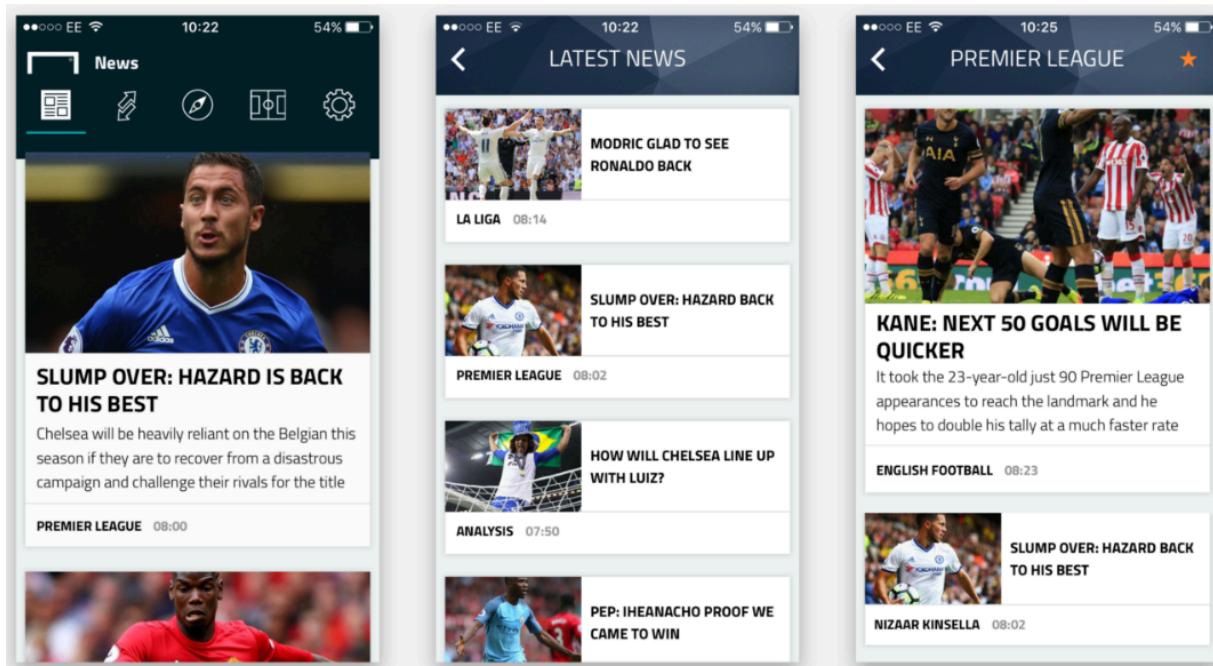
- ✗ Trozo de papel que sirve como enlace a una información más detallada. (**tarjetas de información**)

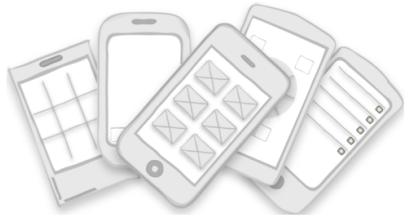




# Tarjetas (Cards - MD)

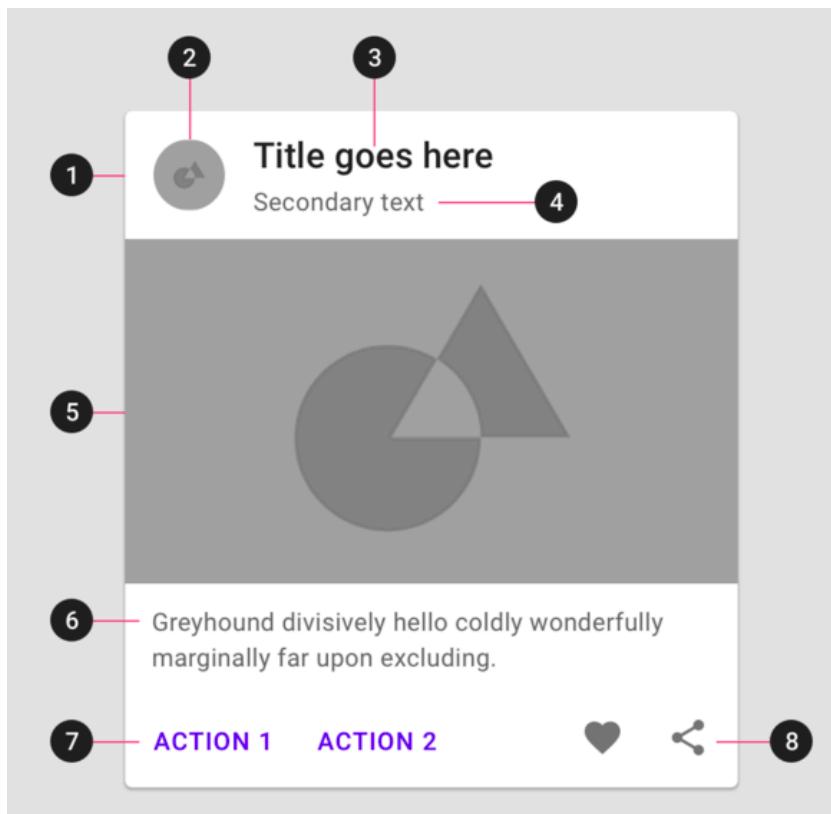
- Mostrar una breve información de un elemento y dar a entender que hay más información asociada a ese elemento. Puede incluir acciones asociadas.



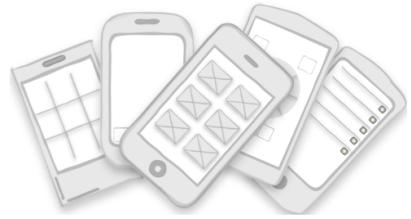


# Tarjetas (Cards - MD)

- ✗ La estructura de una tarjeta es:

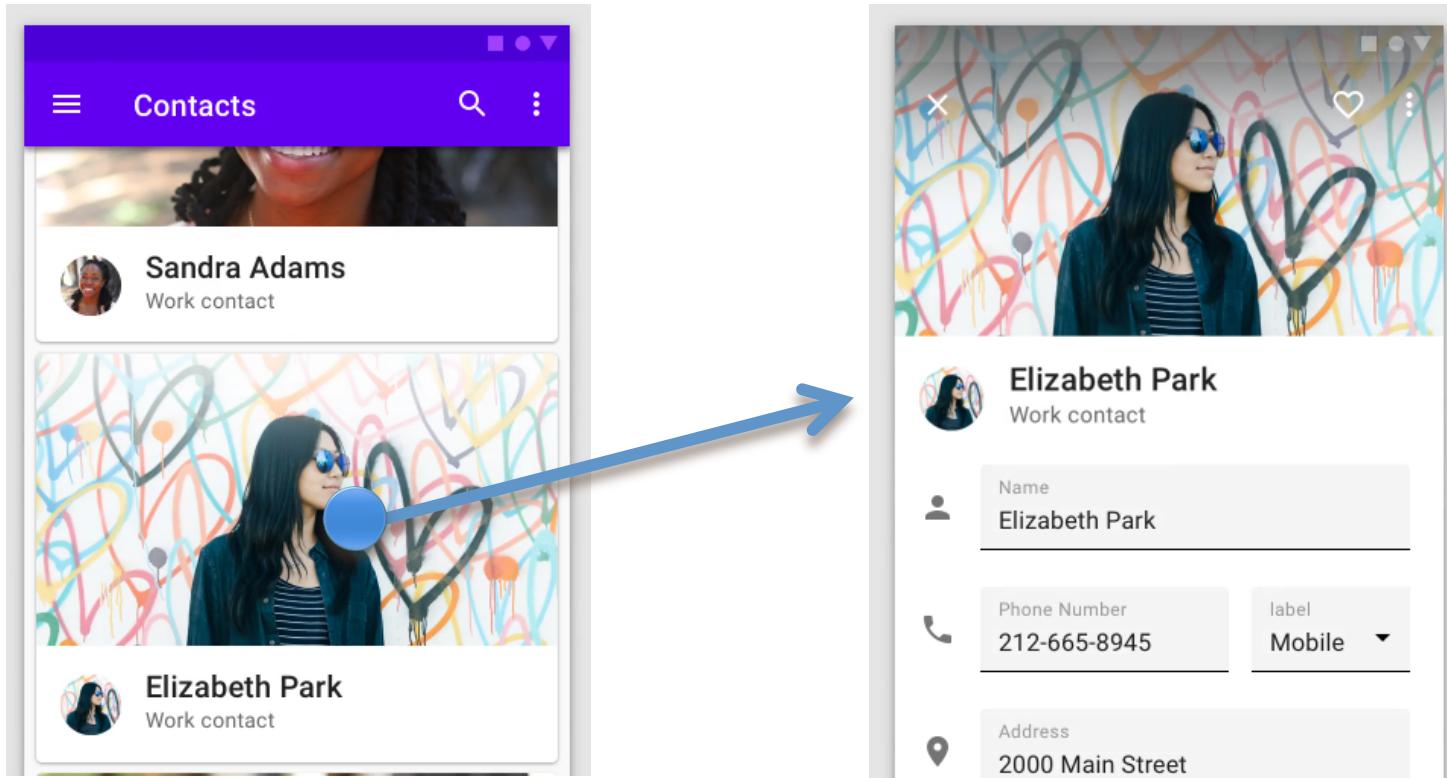


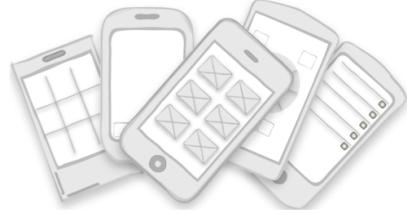
1. Contenedor
2. Miniatura
3. Texto de cabecera
4. Subtitulo
5. Contenido
6. Texto de apoyo
7. Botones de acción
8. Iconos de acción



# Tarjetas (Cards - MD)

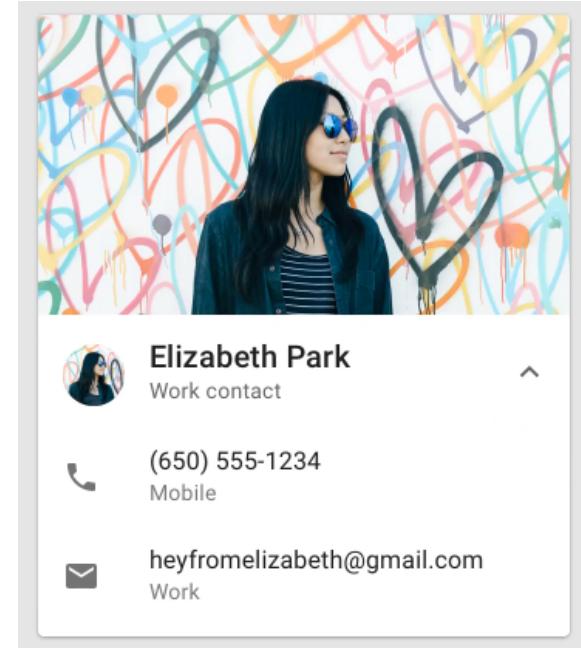
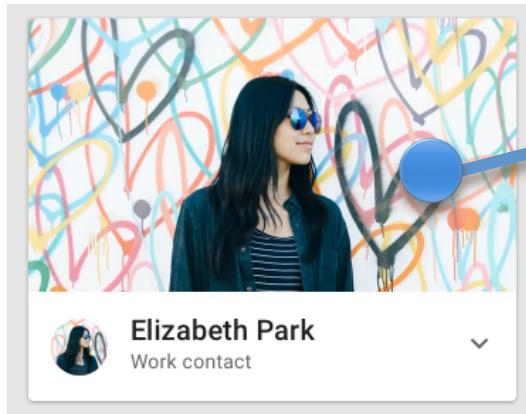
- ✗ Expansión de una tarjeta:





# Tarjetas (Cards - MD)

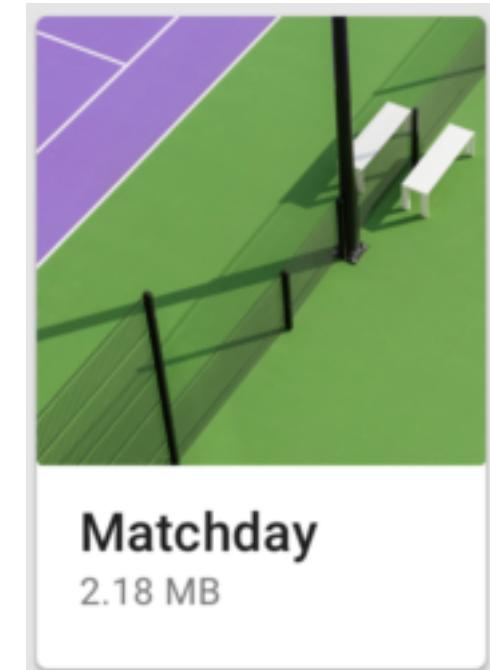
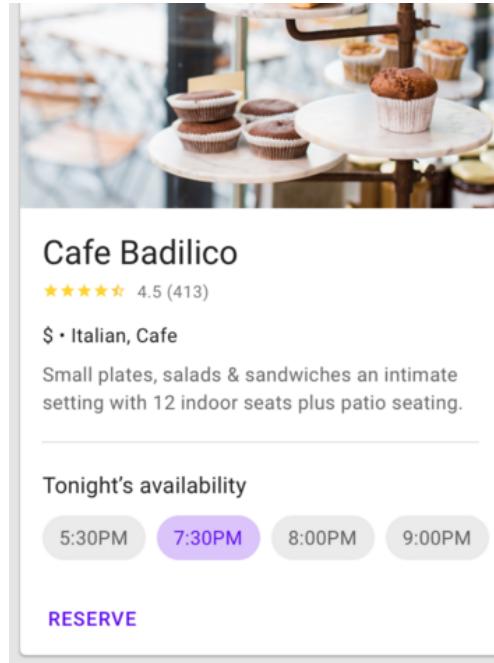
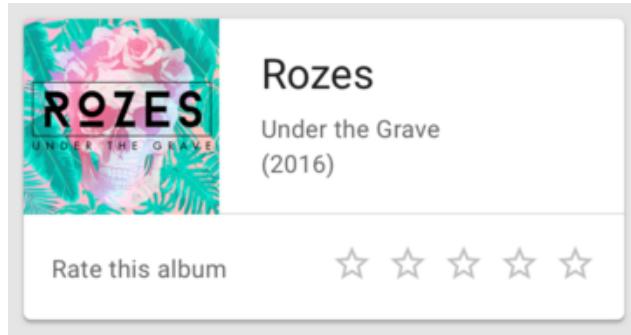
- ✗ Expansión de una tarjeta:

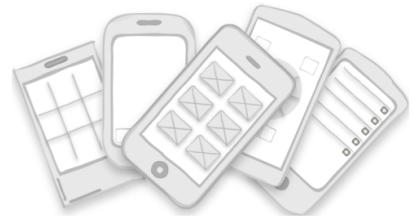




# Tarjetas (Cards - MD)

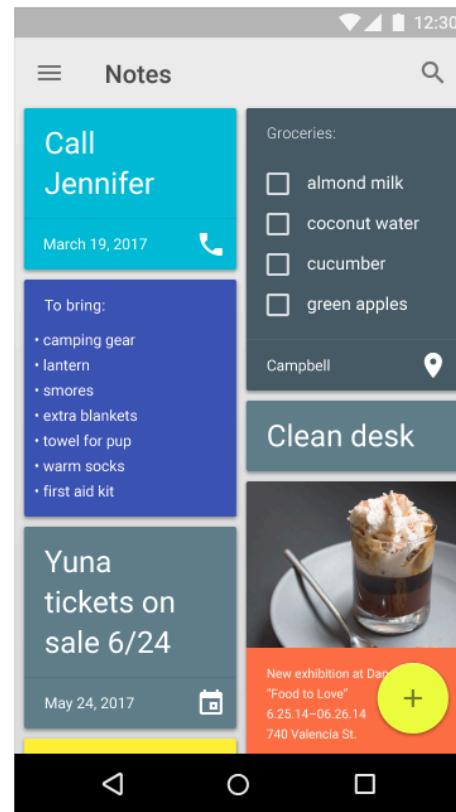
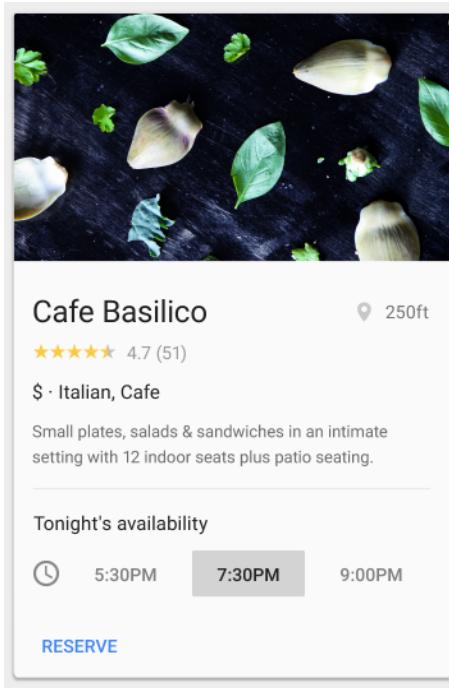
- ✗ Ejemplos de tarjetas.

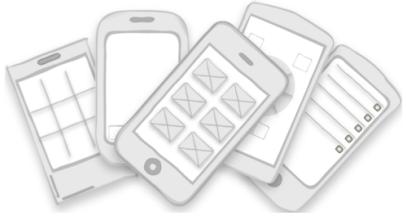




# Tarjetas (Cards - MD)

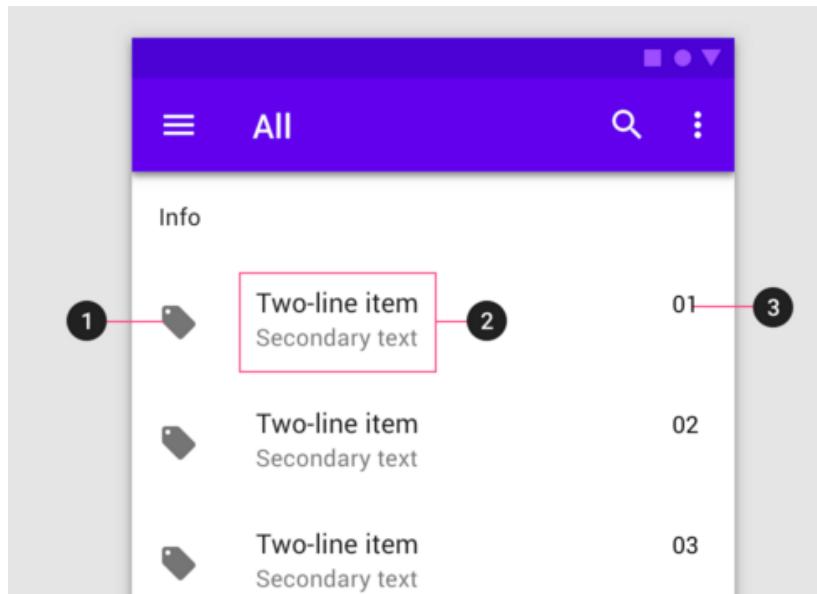
× Información de tarjetas heterogéneas



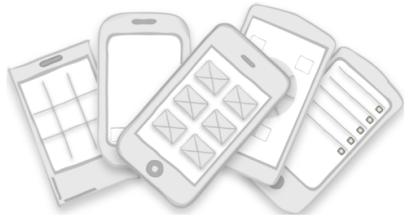


# Listas

- ✗ Grupo de textos o imágenes con asociaciones asociadas.

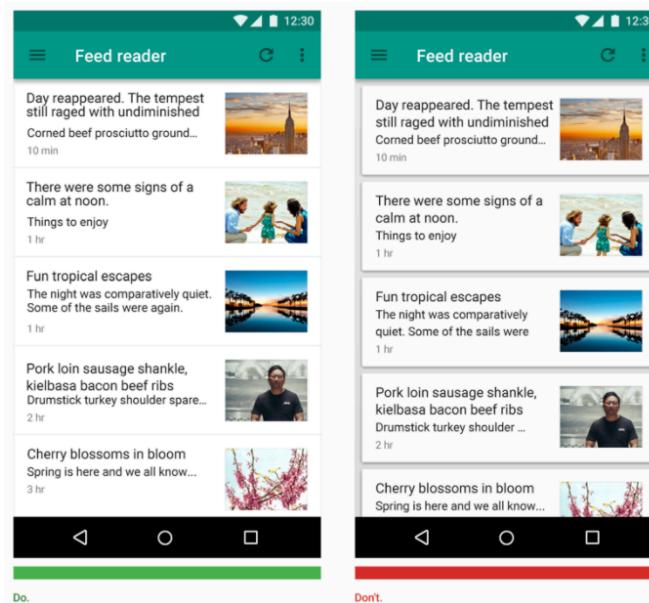


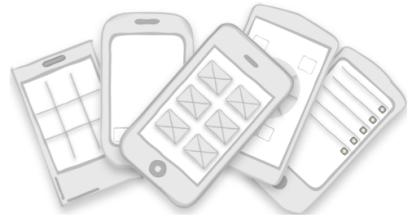
Cart		
4 Items in your cart		
	Pencil in stock	1.50
	Rubberbands in stock	4.50
	Rulers only 1 left in stock	8.00
	Clock in stock	22.00
TOTAL		41.24
Subtotal		36.00
Shipping		2.00
Tax		3.24



# Listas/Tarjetas

- × Las listas se escanean más rápido por los usuarios y deben usarse cuando el contenido es similar y repetitivo.
- × Las tarjetas son mejores cuando el usuario las compara por el contenido de las imágenes.





# Lectura recomendada

## ✗ Información de tarjetas heterogéneas

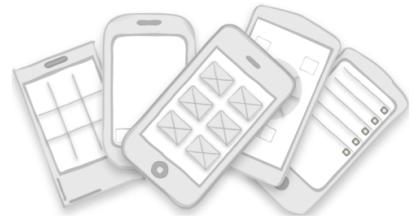
**The future of cards in Web design**

by JERRY CAO — Tweet — 15 Jul, 11:12am in DESIGN & DEV

The image illustrates the concept of "cards" in web design, where content is presented in a modular, card-based format. This allows for a more dynamic and visually appealing user interface compared to traditional static pages.

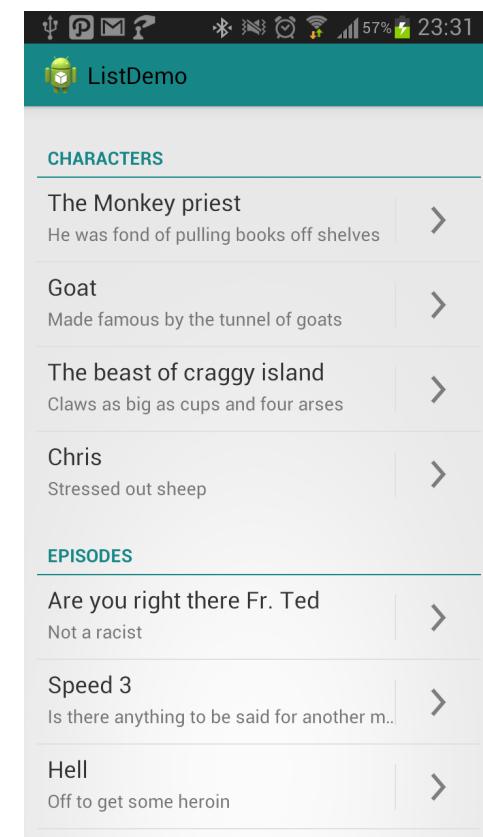
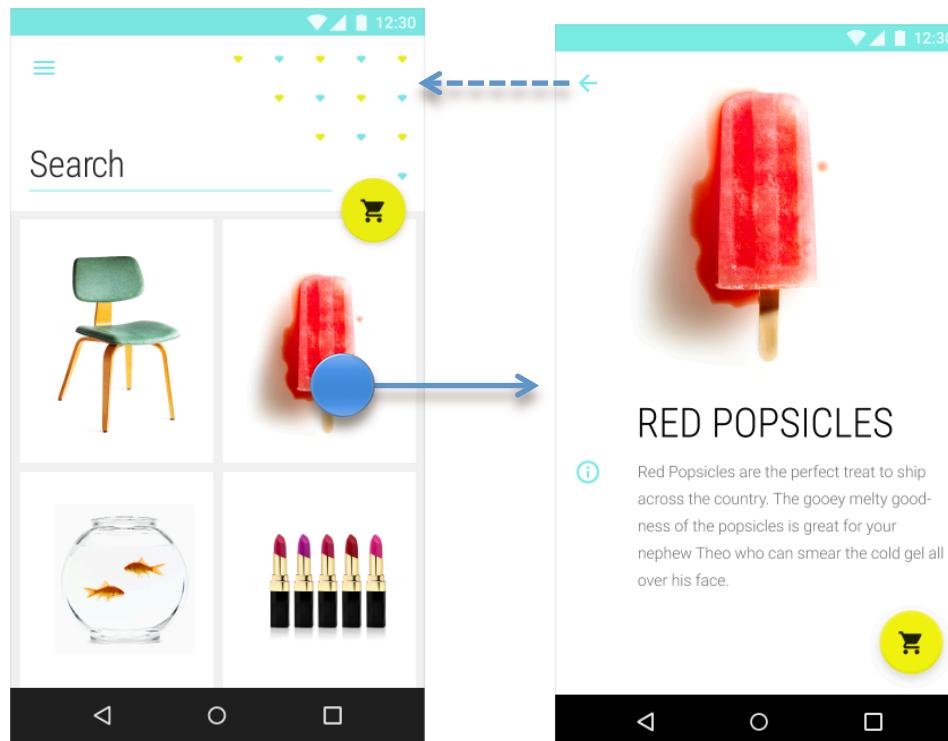
You've been seeing those rectangular boxes on a lot of websites lately, right? Those are cards, and they're popping up more and more. But don't mistake cards for being a mere trend or simply eye-candy. Cards are as practical as they are popular – in fact, that's why you're seeing them so often.

[SWAD/FutureOfCardsWebDesign.pdf](#)



# Navegación entre categorías

## ✗ Enlace entre vistas

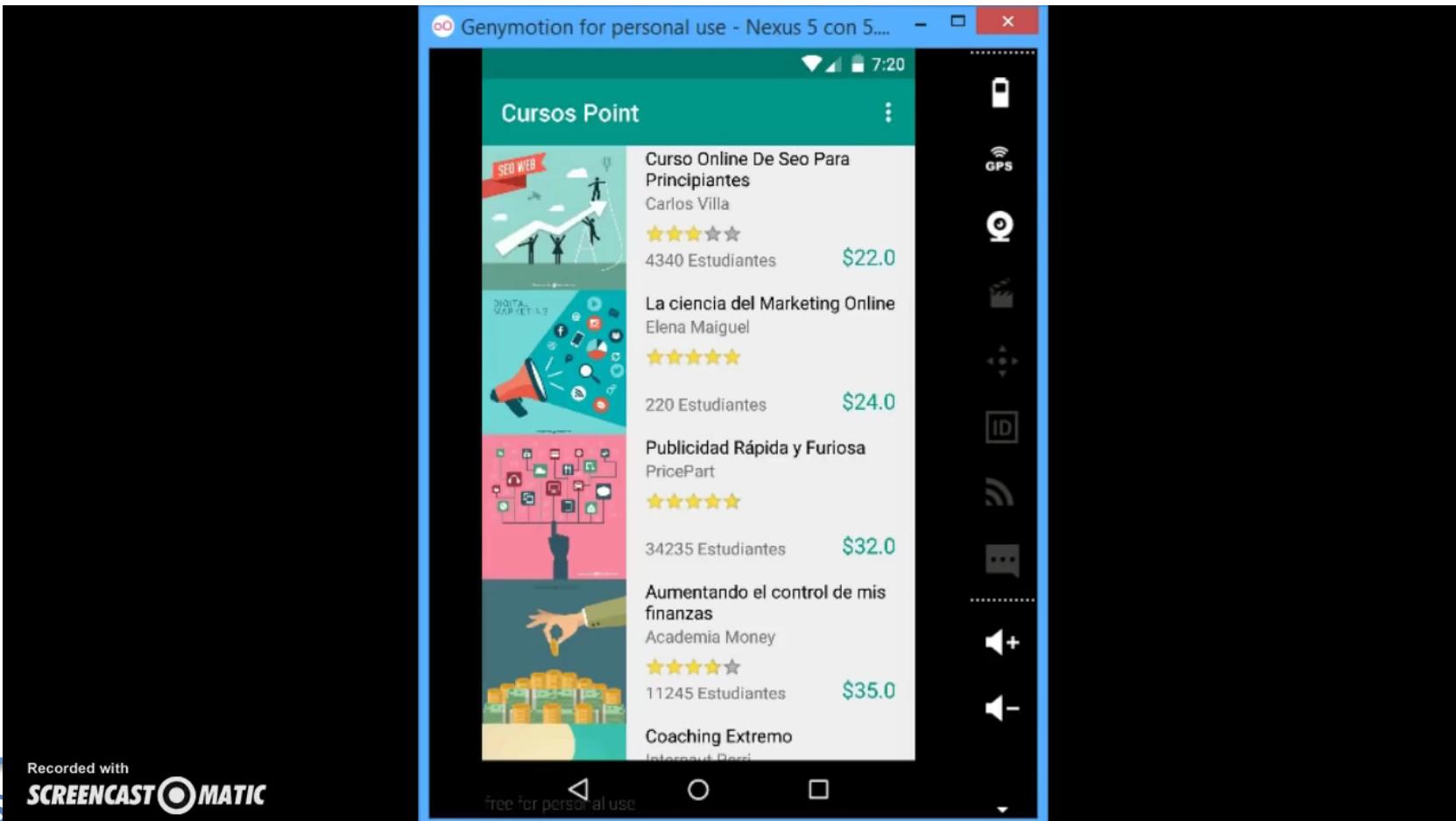


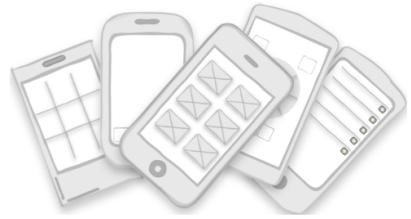
listView



# Navegación entre categorías

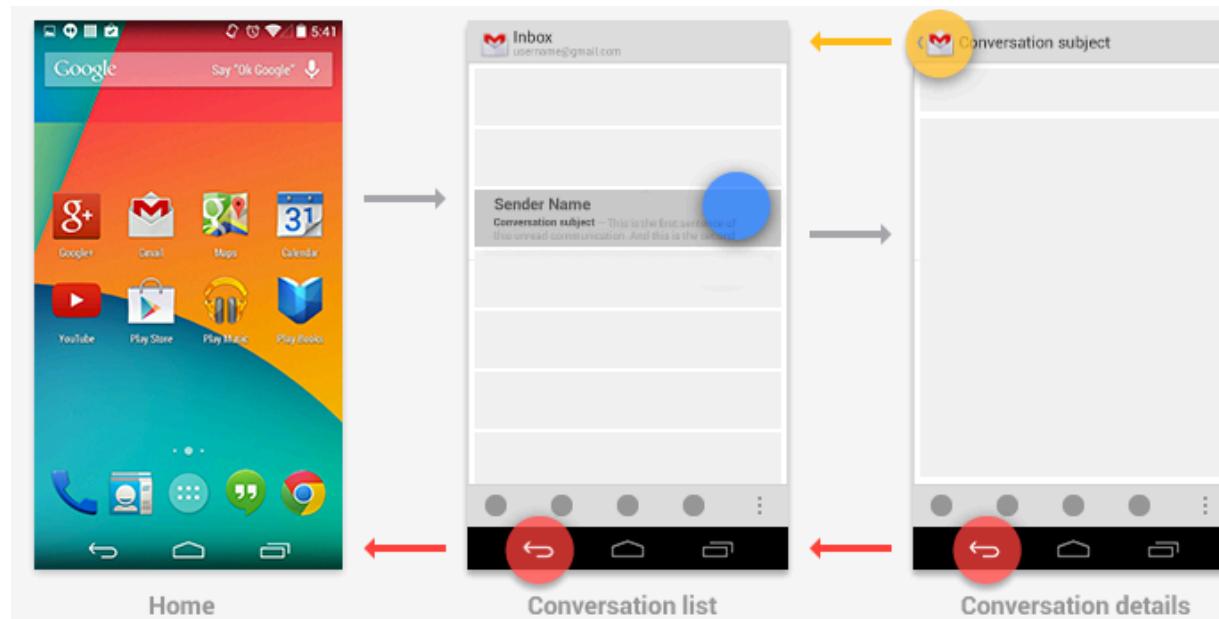
## ✗ Transiciones en MD

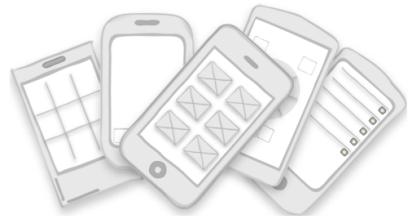




# Navegación entre categorías (Up&Back)

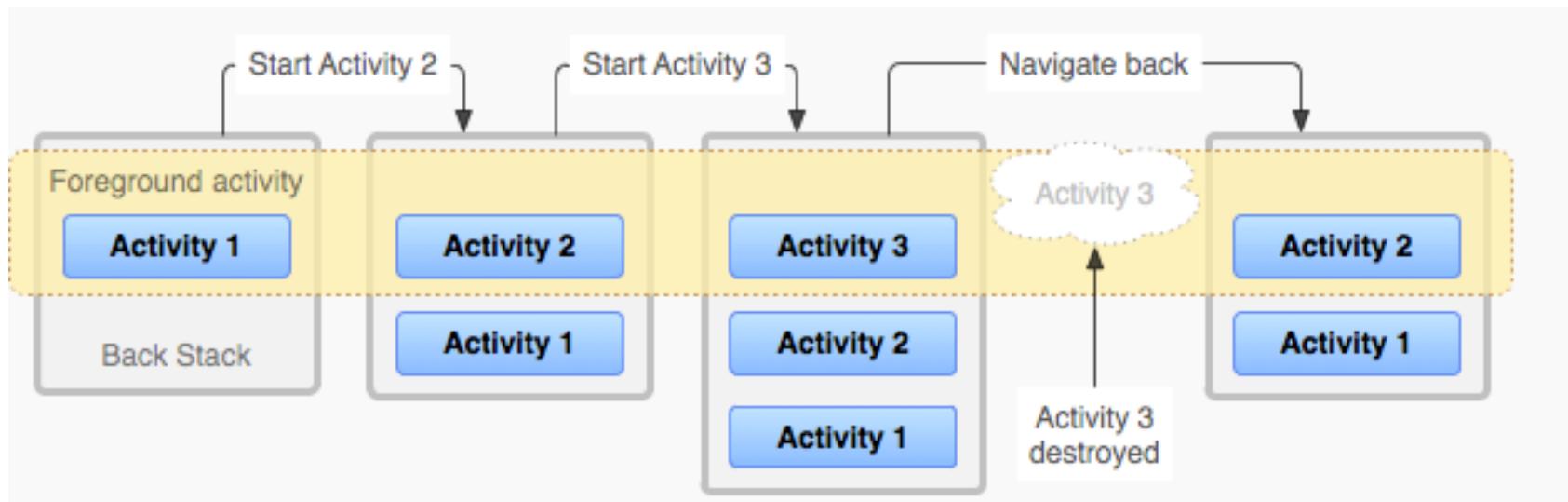
- ✗ **Botón Arriba (Up).** Navegar a la **categoría anterior** de la jerarquía de datos.
- ✗ **Botón Atrás (System-Back).** Navegar en orden cronológico inverso sobre las actividades visitadas.



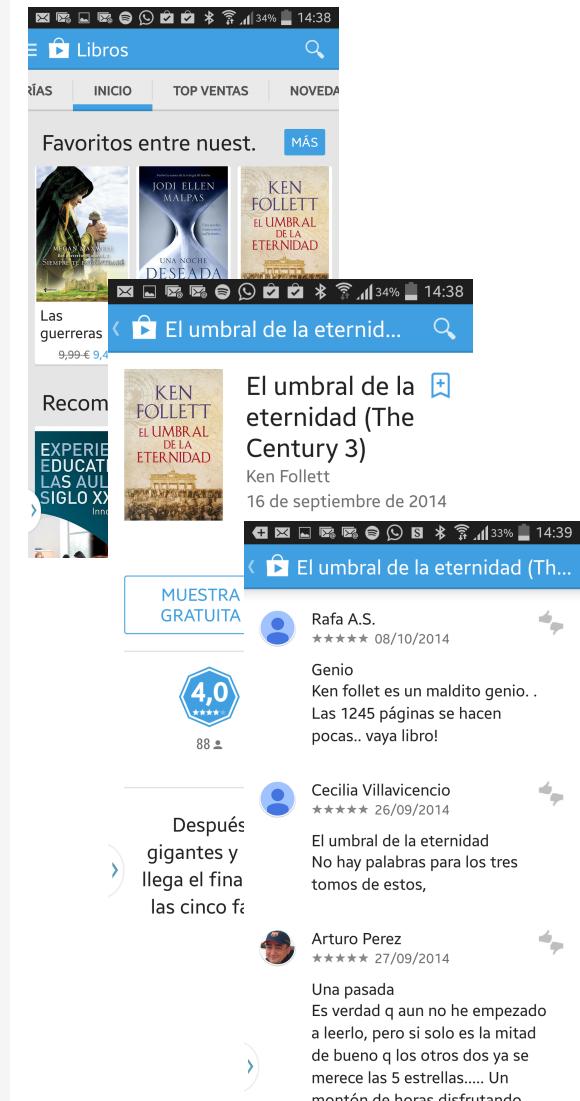
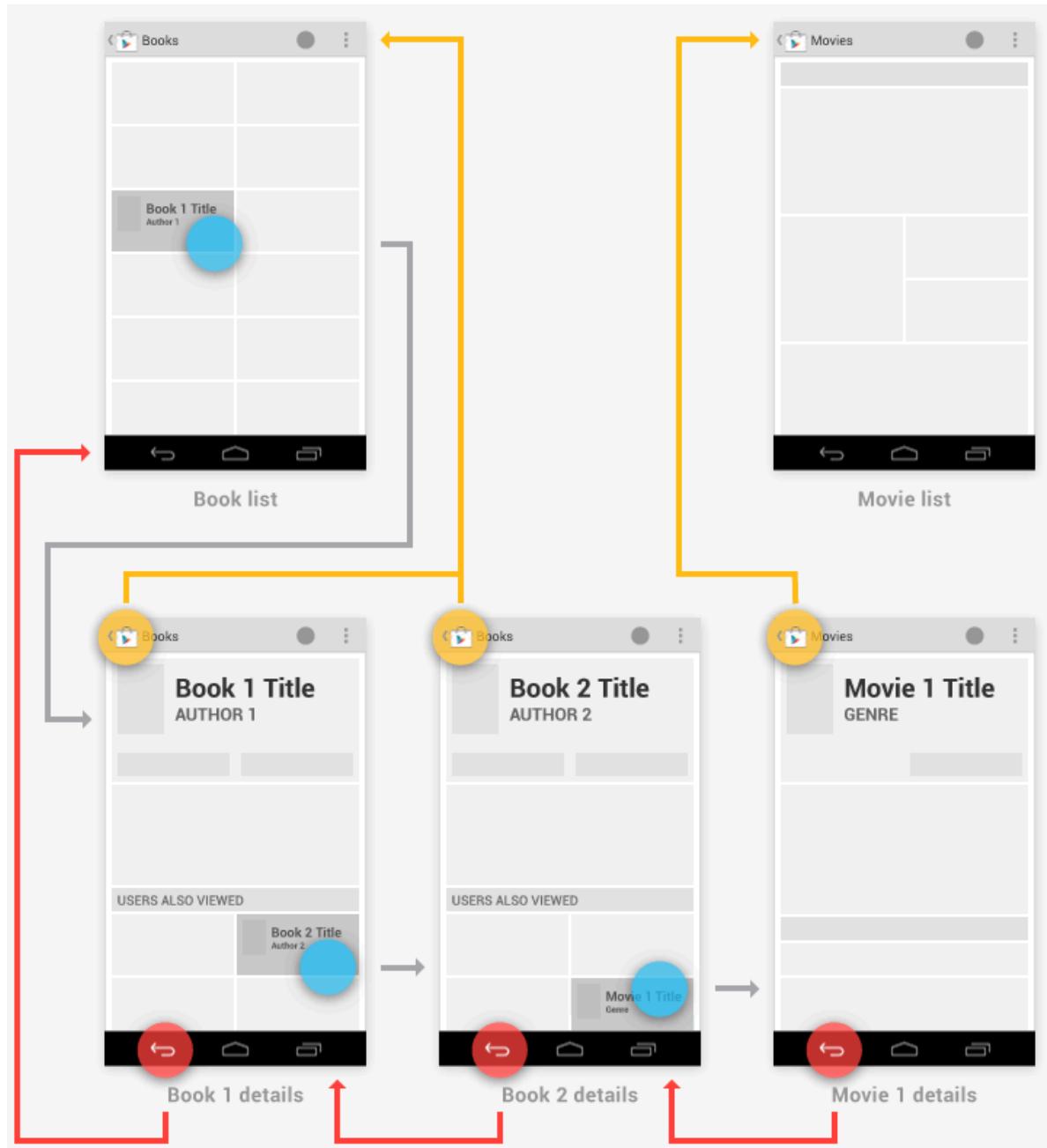


# Navegación entre categorías (Up&Back)

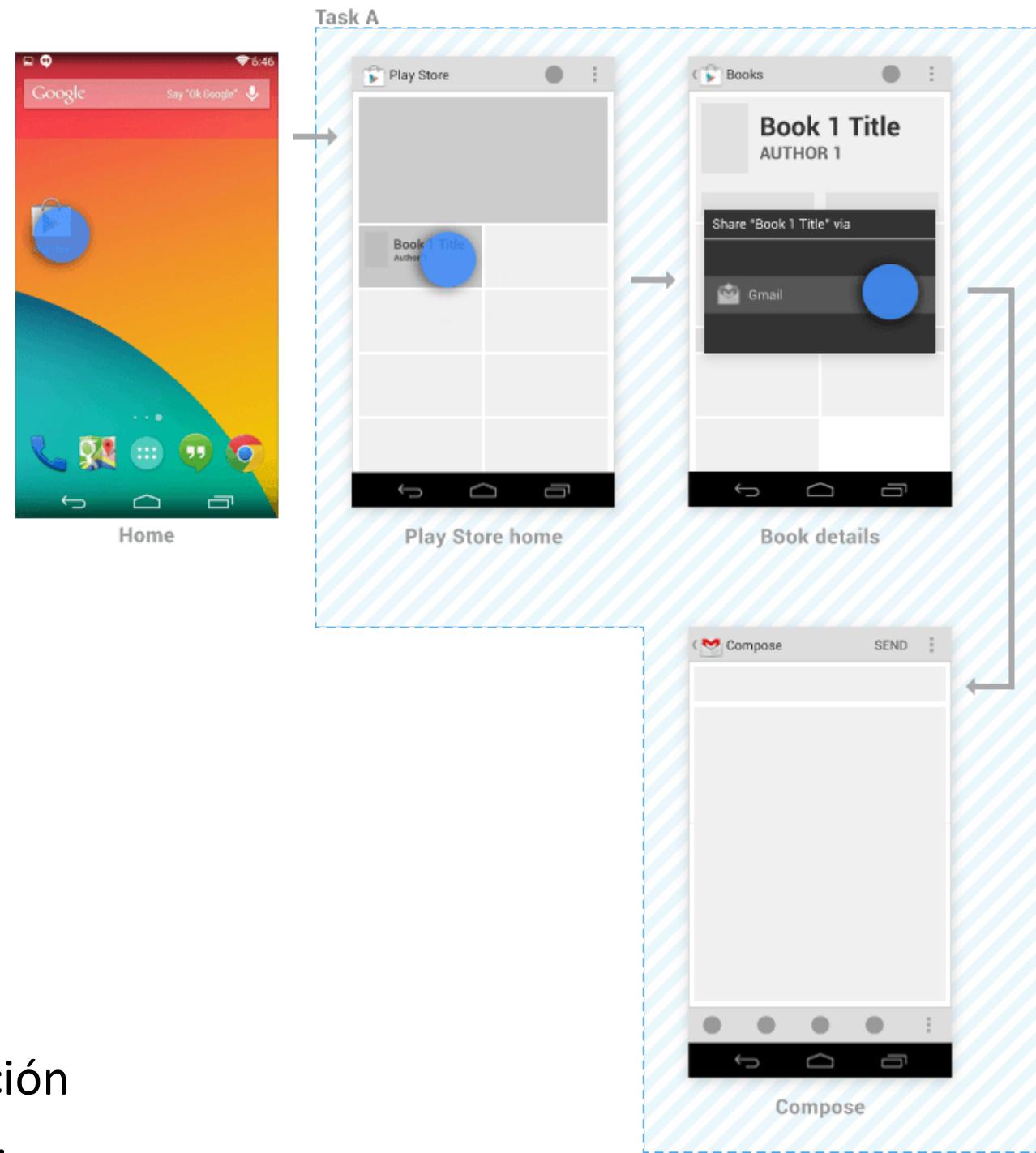
- × Botón Arriba (Up). Navegar a la categoría anterior de la jerarquía de datos.
- × Botón Atrás (System-Back). Navegar en **orden cronológico inverso** sobre las actividades visitadas.



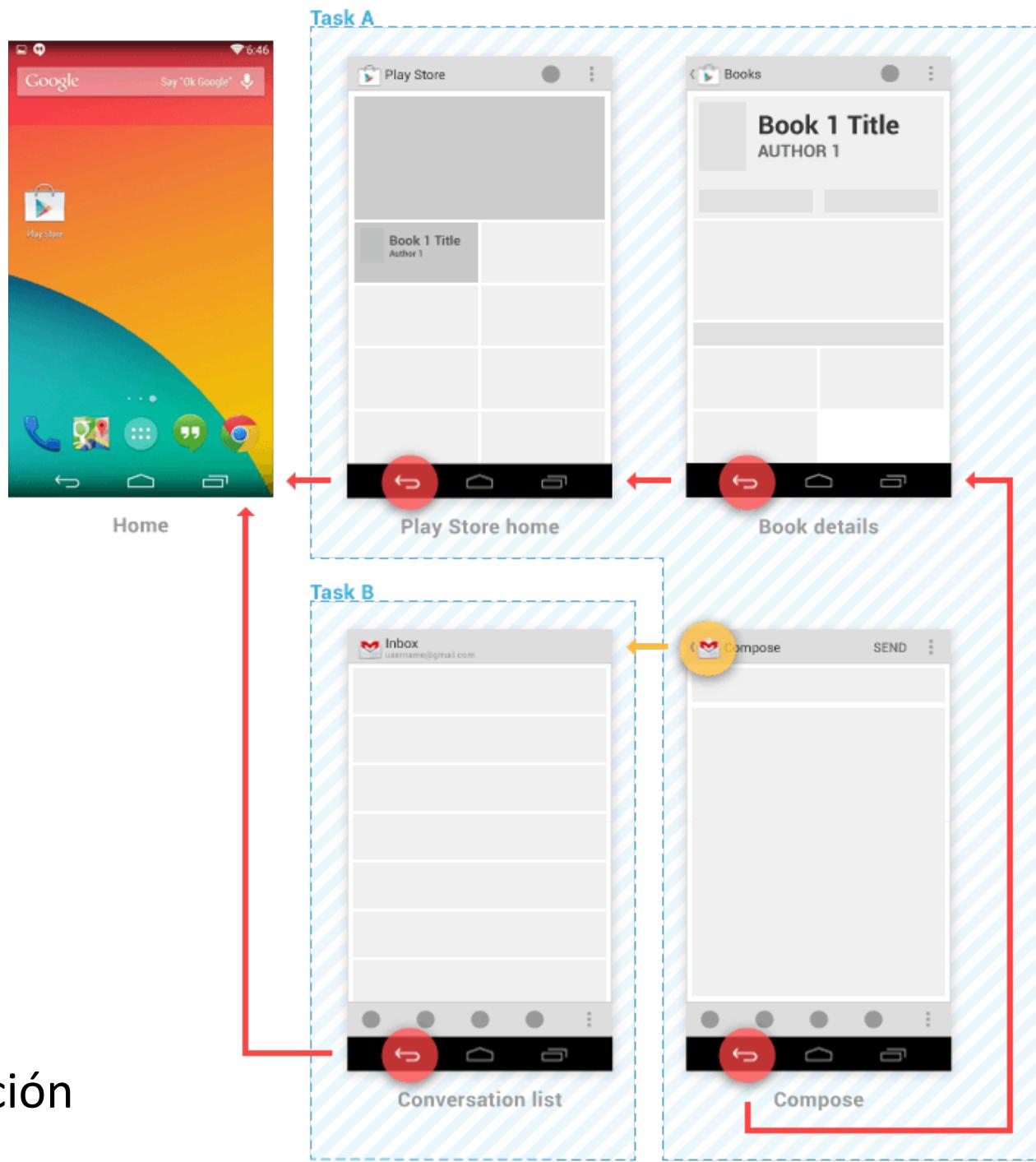
Pila de Actividades – BackStack)

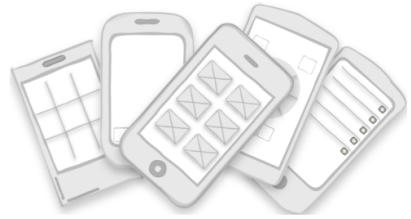


Lanzando una Aplicación  
desde dentro de otra.



Lanzando una Aplicación  
desde dentro de otra.





## System-Back

---

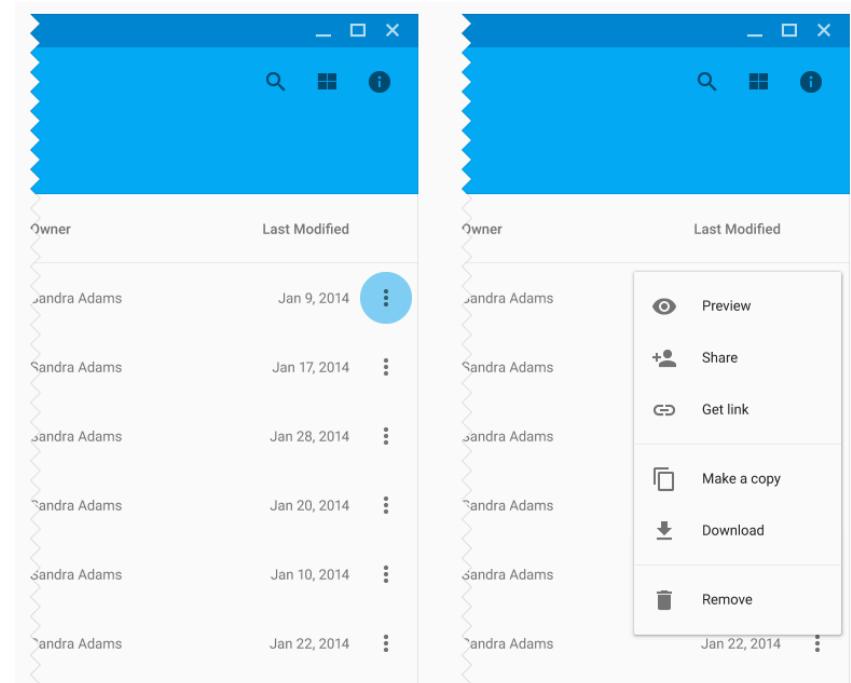
También sirve para:

- ✗ Cerrar ventanas flotantes (dialogs, popups)
- ✗ Cerrar barras de acción contextuales.
- ✗ Deseleccionar elementos de una lista.
- ✗ Cerrar los teclados.

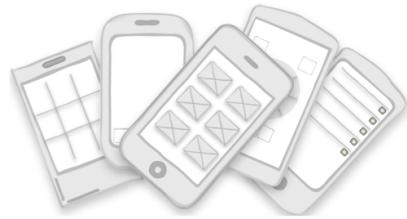


# Menús en contexto

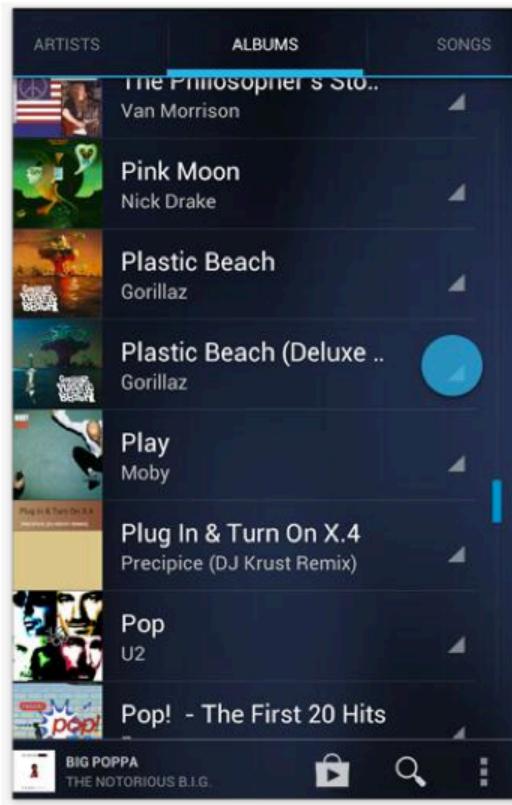
- ✗ **Floating Context Menu.**  
(Menú flotante)
- ✗ Actuar frente a un dato dentro de una categoría con **un conjunto de funciones disponibles.**
- ✗ No tenemos que navegar hasta llegar a la vista del dato.



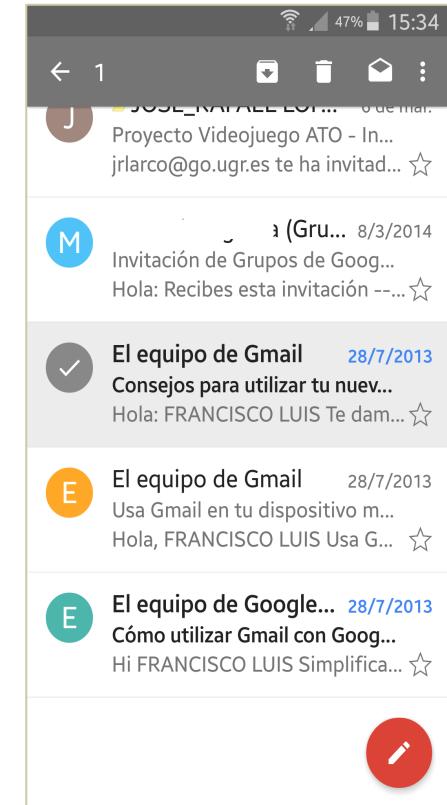
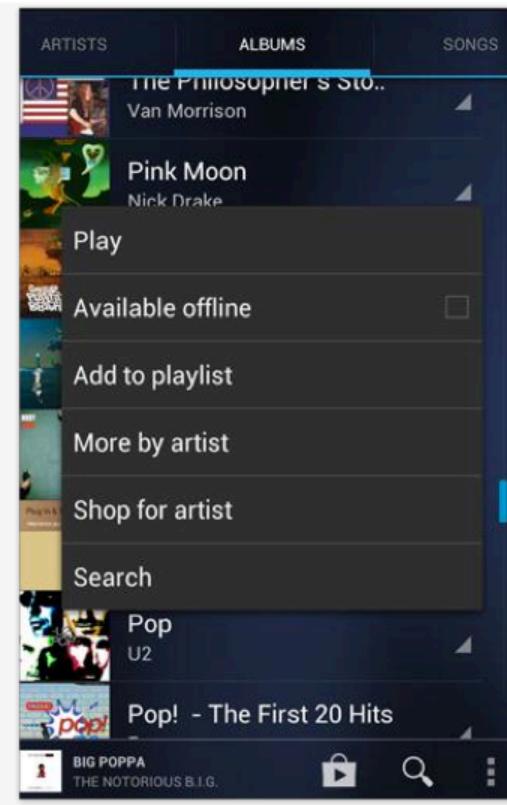
“Long Press Gesture”



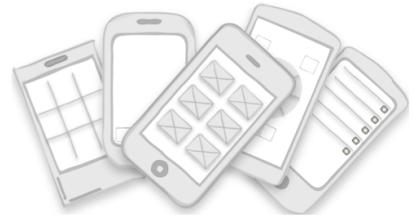
# Menús en contexto



Floating Context Menu

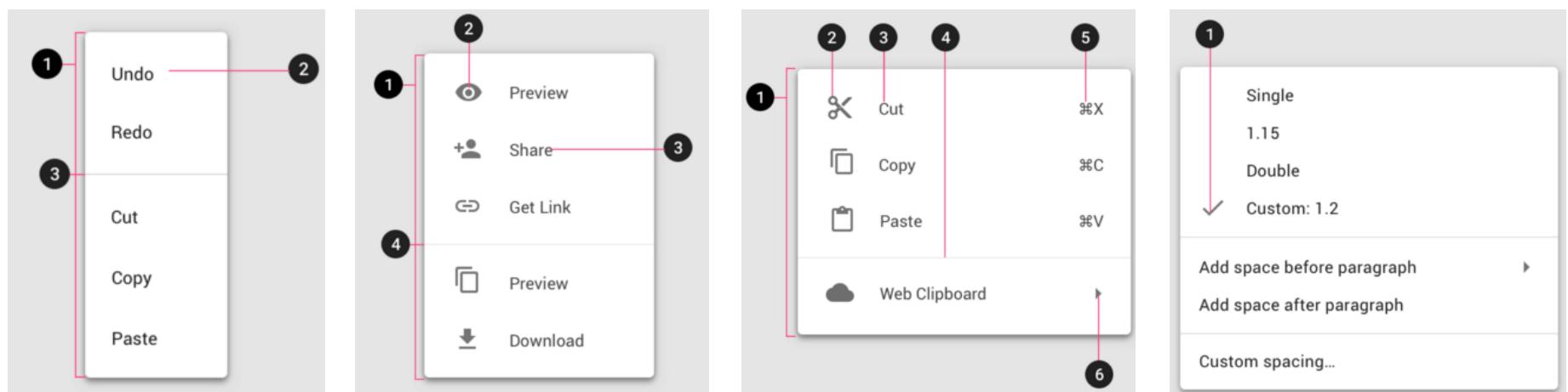


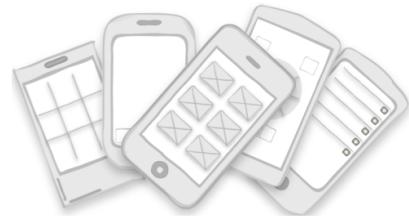
Contextual Action Bar



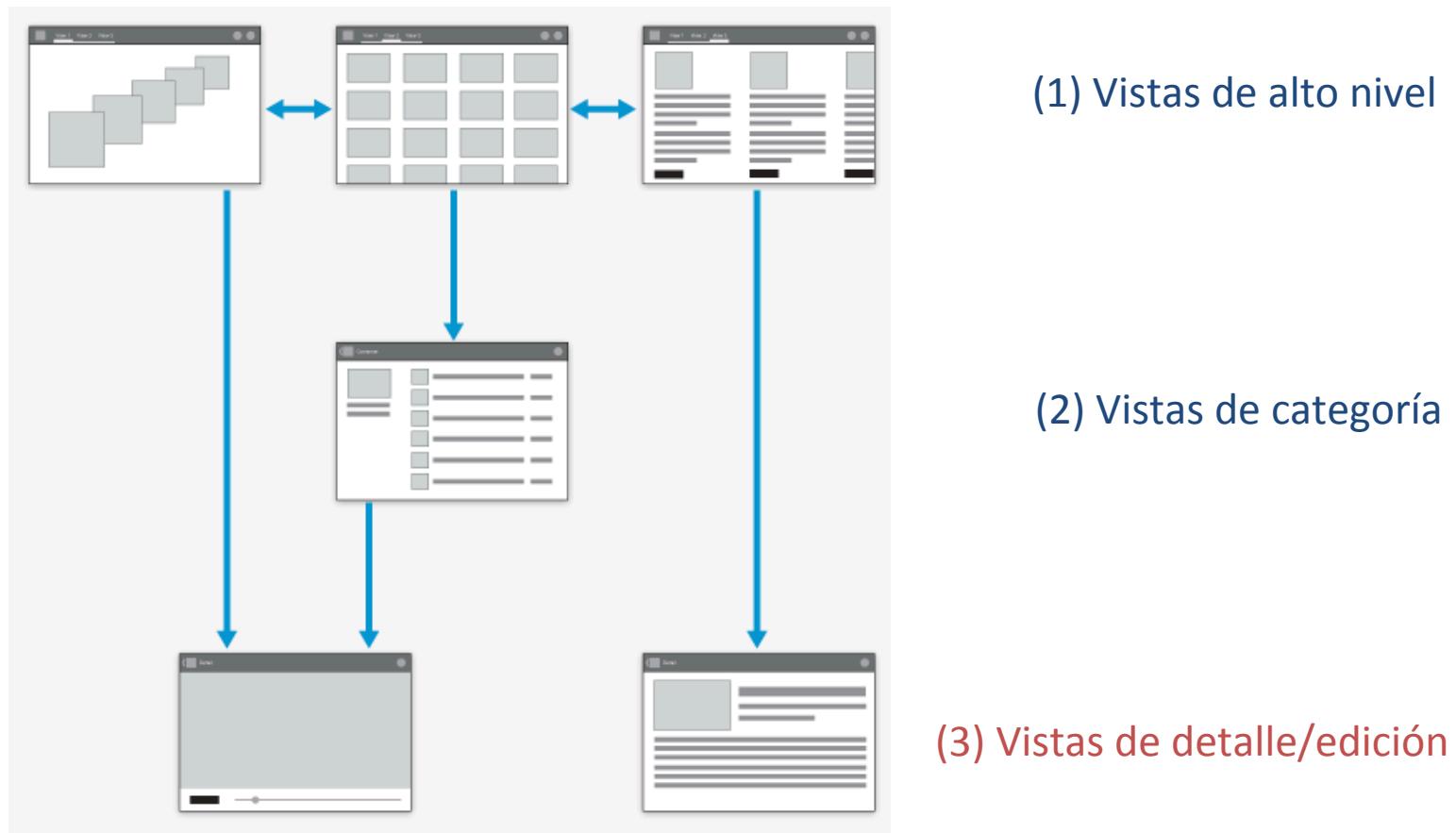
# Menús en contexto

## Ejemplos de menús:





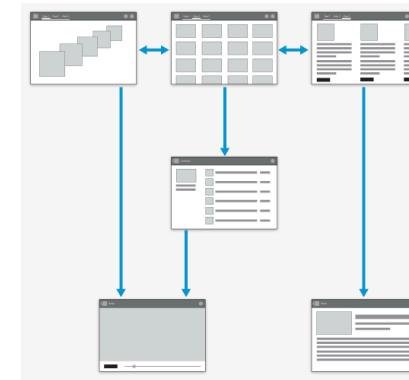
# Estructura general de una APP dirigida por datos

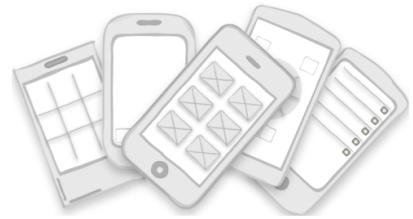




# Estructura de una App en Android

## 2.3 - Vistas de detalle





# (3) Vista de detalle/edición

- × Donde se consumen o su usan los datos.
- × Visualización, modificación o borrado.

The image displays three mobile application screenshots:

- Screenshot 1: Twitter Client (Tweet screen)**  
A screenshot of a Twitter client showing a tweet from "El País Cultura" (@elpais\_cultura). The tweet content is: "Foro asegura que el 16 de diciembre el Centro Niemeyer tendrá programación. [elpais.com/articulo/cultu...](http://elpais.com/articulo/cultu...) (vía @anitamarcos)"  
A red arrow points upwards from the bottom of this screenshot towards the second screenshot.
- Screenshot 2: Game Store (Arcade & Action)**  
A screenshot of an Android app store listing for "Worms" by Electronic Arts Mobile. The price is listed as "Buy ~£1.88".  
Below the listing is a "Description" section:

The original, award-winning, turn-based strategy game - NOW OPTIMIZED FOR ANDROID! Send your worm platoons into battle with cult-classic weapons like the Banana Bomb and Super Sheep. Fight on multiple skill levels, from Easy to Insane. Laugh-out-loud dialogue and amazing character-driven animation will definitely
- Screenshot 3: Social Security Booking Form**  
A screenshot of a mobile form titled "3. ELEGIR FECHA Y HORA".

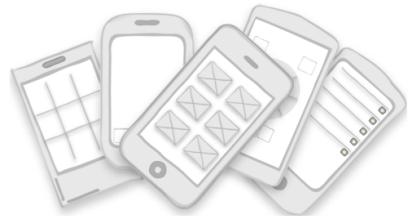
Bienvenido:  
USUARIO S LOGIN PRUEBAS MOVILIDAD  
SEGURO SOCIAL  
18:24

FECHA DE SU CITA  
27/02/2013 Cambiar  
HORA DE SU CITA  
10:40 Cambiar

DATOS  
USUARIO S LOGIN PRUEBAS MOVILIDAD  
619257775

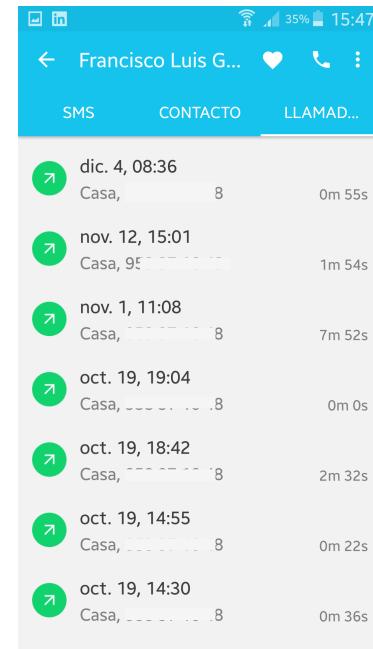
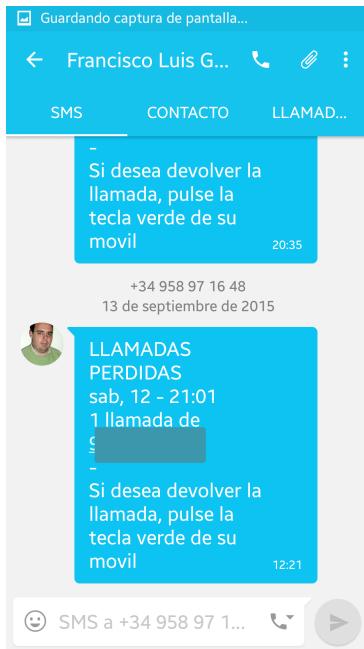
CATEGORÍA  
INSTITUTO NACIONAL DE LA SEGURIDAD SOCIAL  
Jubilación  
OFICINA  
Pl. Dr. Tamames, s/n. 28820 - COSLADA

CONFIRMAR

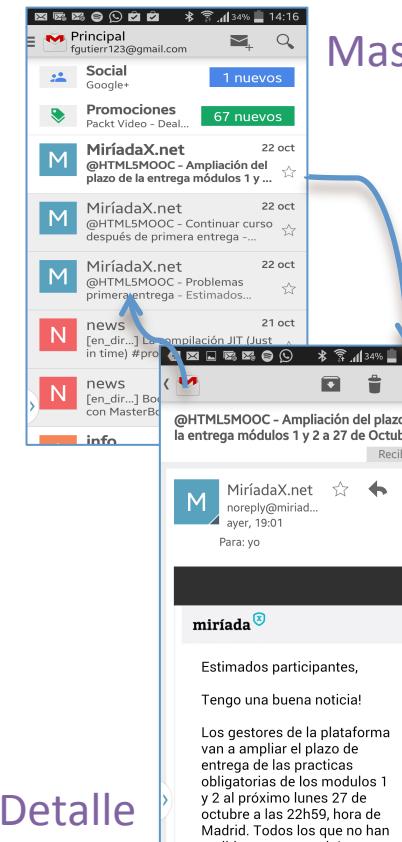


# Navegación a bajo nivel

- ✗ Hacer una navegación efectiva entre vistas de detalle.

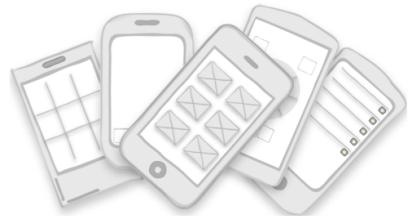


Navegando entre detalles (Tabs)



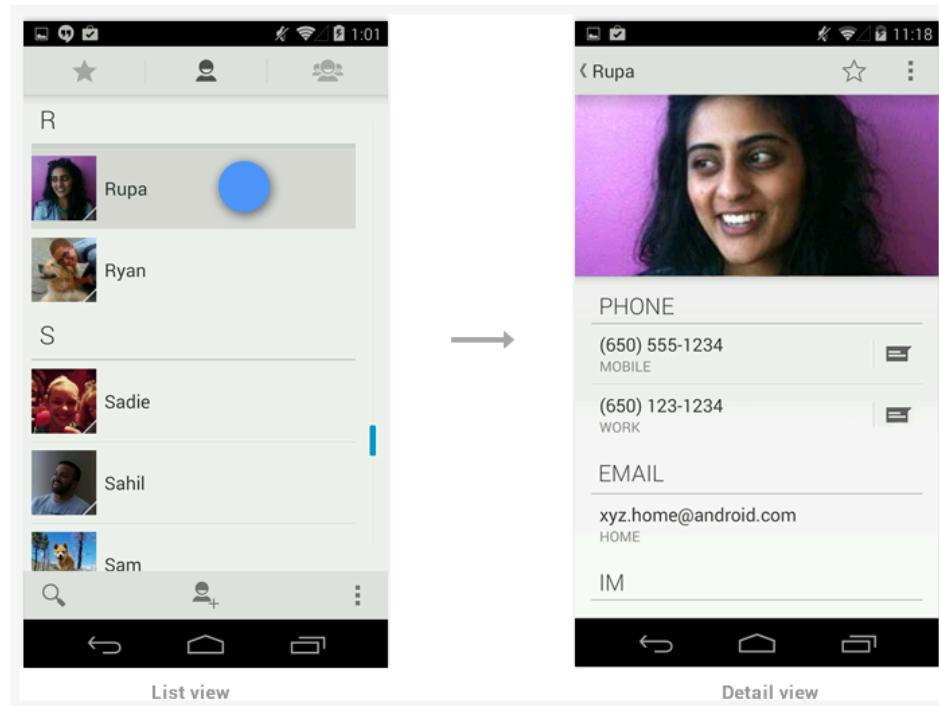
Detalle

Master



# Master-Detalle Fragments

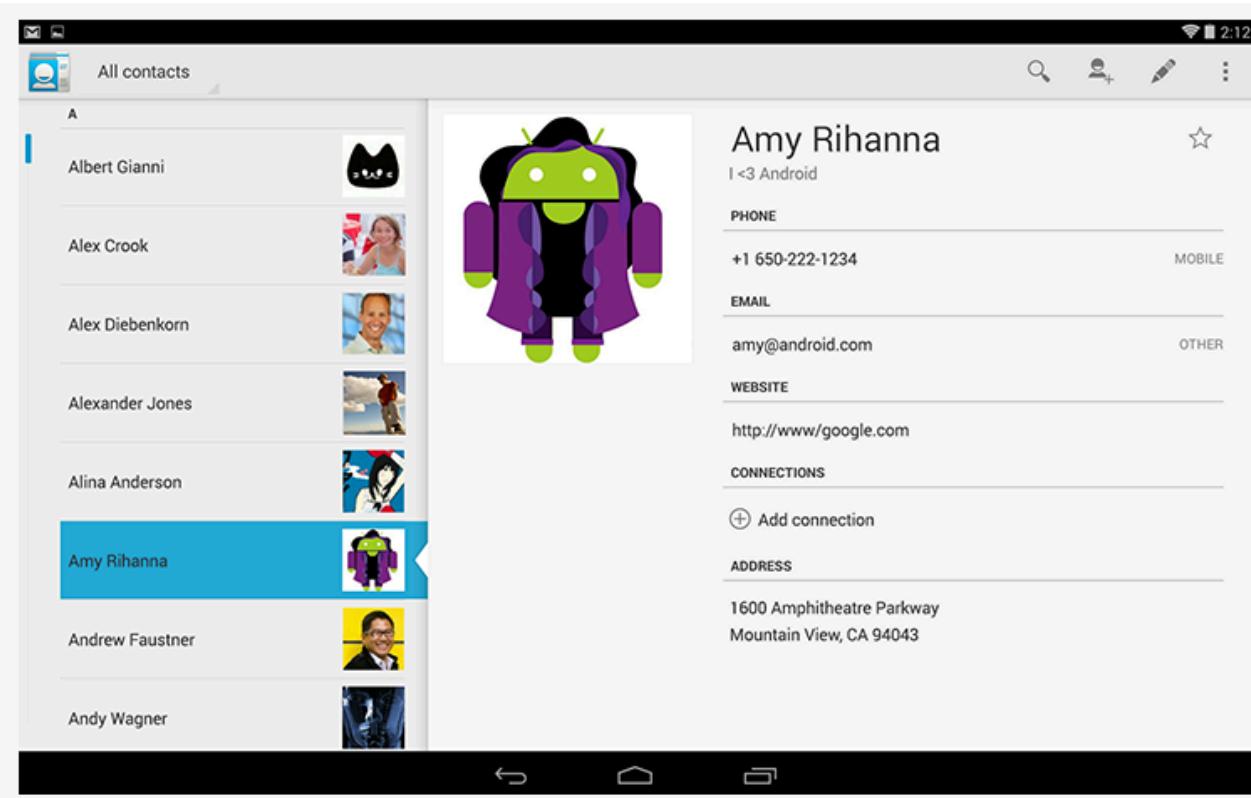
- El uso de “multi-paneles” permite hacer una gestión más eficiente de esta relación.

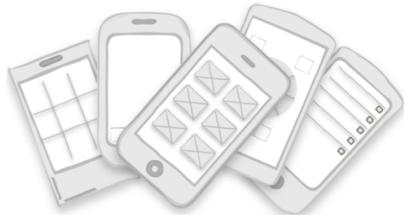




# Master-Detalle

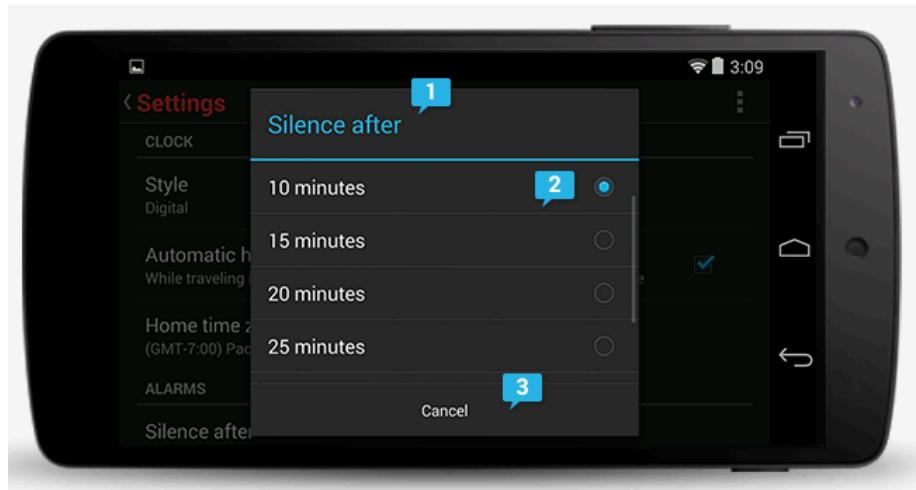
✗ El paso a tablets es homogéneo.



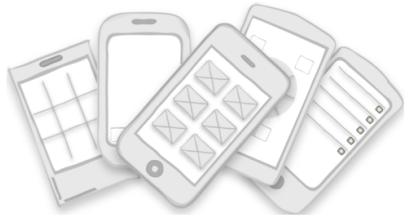


# Diálogos

- × Ventana para que el usuario tome una decisión o entre información adicional para la actividad.
- × No llena la pantalla y actúa como un **evento “modal”**



1. Título (opcional)
2. Área de contenido
3. Botones de acción



# Dialogo. Botones de acción

- × Izquierda (**Dismissive Action**). Acción que vuelve al usuario al estado anterior.
- × Derecho (**Affirmative Action**). Acción que continua el proceso que lanzó el dialogo.

Pick your toppings

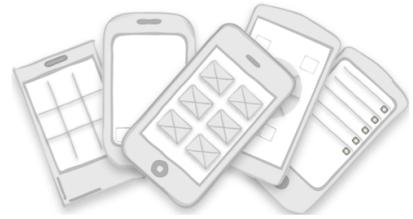
Onion	<input type="checkbox"/>
Lettuce	<input checked="" type="checkbox"/>
Tomato	<input checked="" type="checkbox"/>

**Cancel**      **OK**

Playlist name

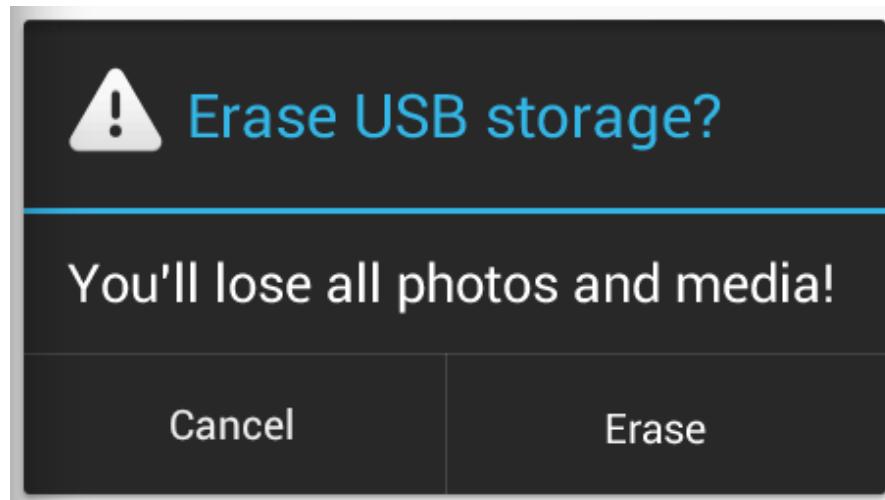
Playlist 1

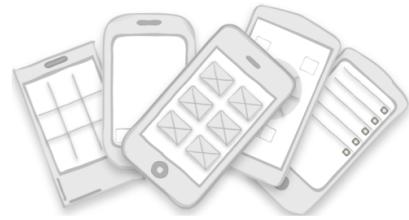
**Cancel**      **OK**



## Alertas AlertDialog

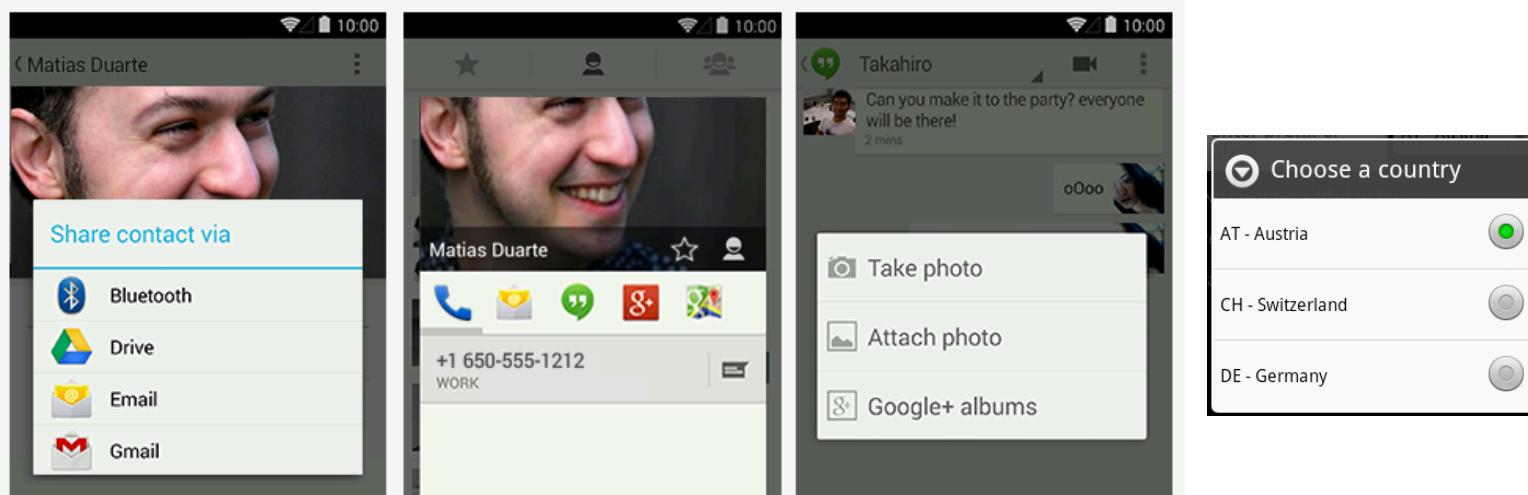
- × Informan al usuario de situaciones que requieren confirmación antes de proceder.
- × Usar para dar más impacto al mensaje

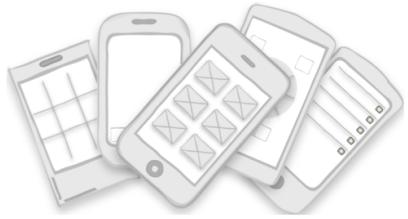




# Popup

- ✗ Tipo de dialogo que no requiere selección por parte del usuario.
- ✗ No tiene botones de acción.
- ✗ Se sale pulsando fuera o haciendo selección en el dialogo y entonces avanzamos en el flujo de la tarea.





# Toast

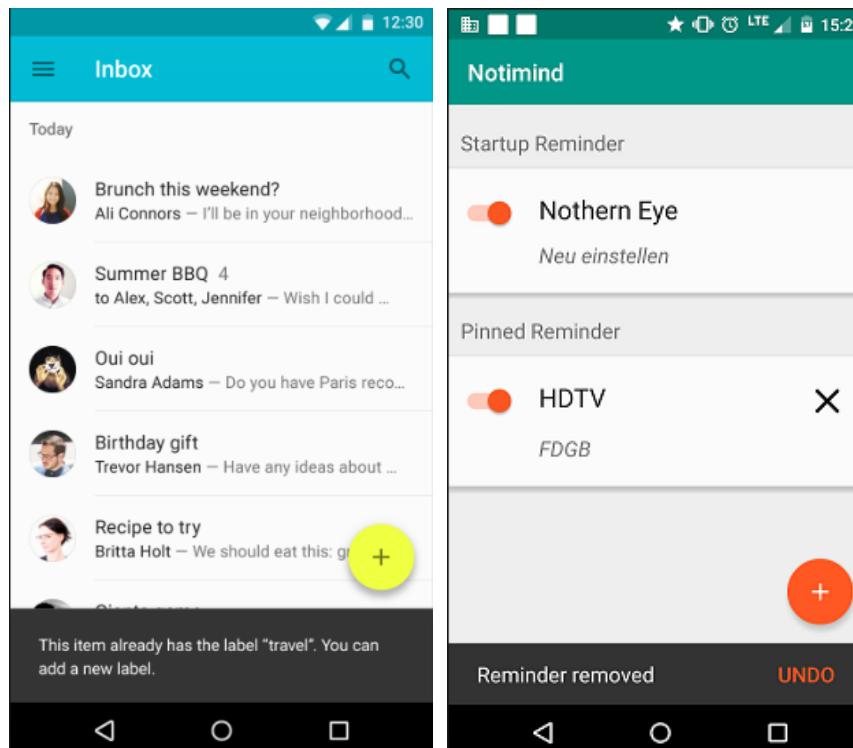
- × Pequeño “popup” para mostrar una realimentación corta y rápida sobre la operación realizada.

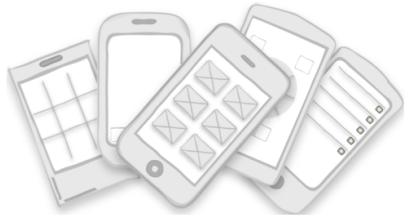




# Snackbars (MD)

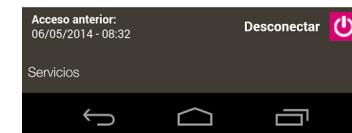
- × Contiene una línea de información sobre la acción actual y un acción asociada.



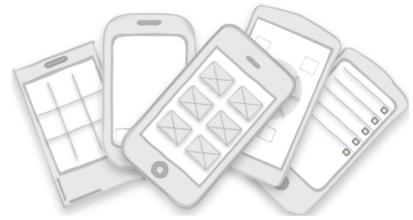


# Ejercicio (ejeS5\_Nav.pdf)

- ✗ Usar la aplicación móvil que tenga tu banco y analízala desde el punto de vista de la estructura y la navegación.
  - Tipo de aplicación.
  - La información (jerarquía, categorías, detalle, ...) que muestra.
  - Estructuras de navegación usadas.

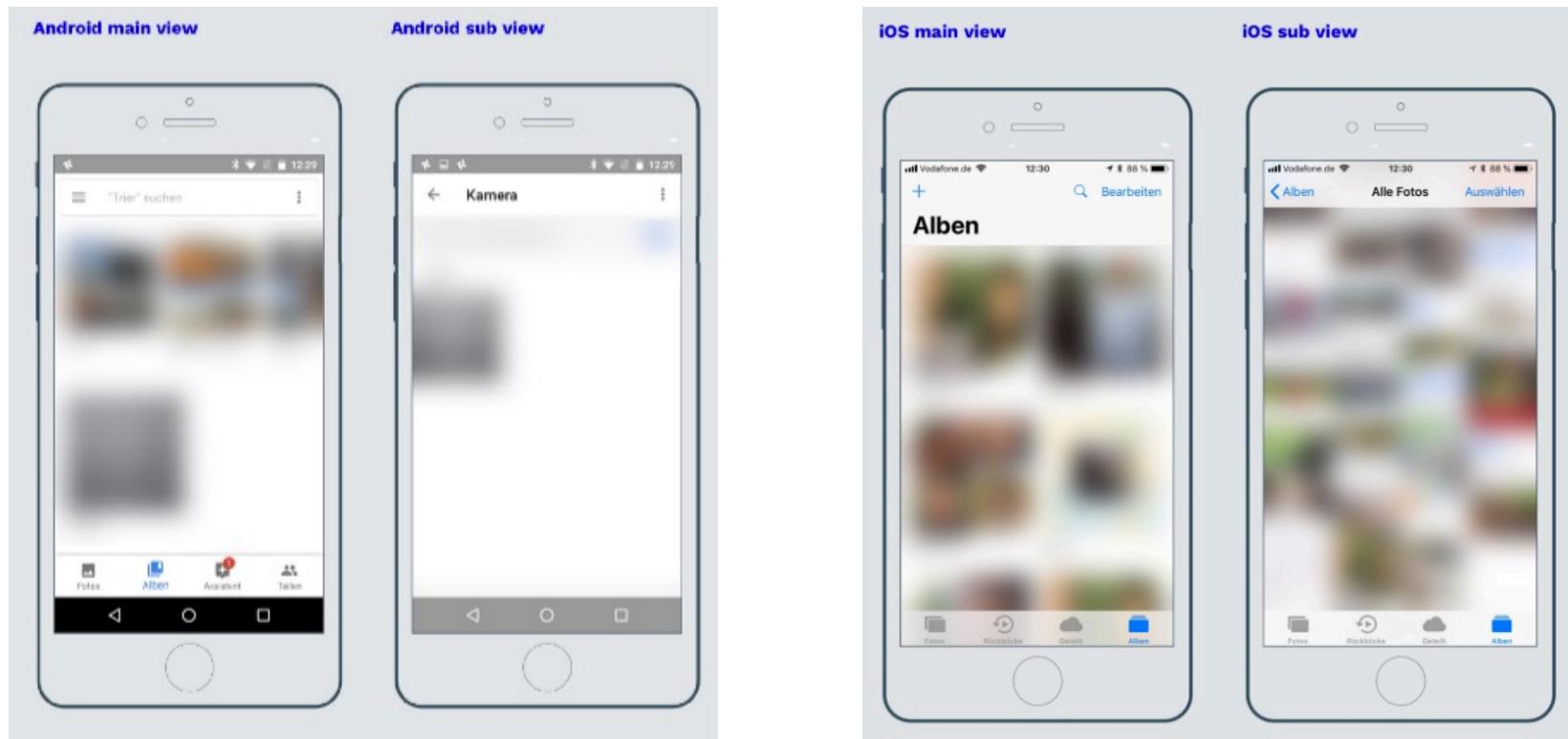


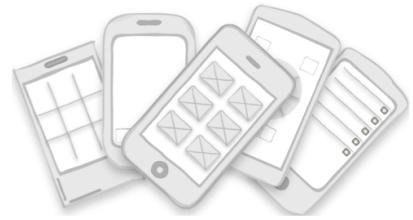
(Incluir capturas de pantalla en el análisis y si consideras que se podría mejorar, indicar cómo? ... realizar bocetos de pantalla ... )



# Diferencias entre SO

## Navegación principal



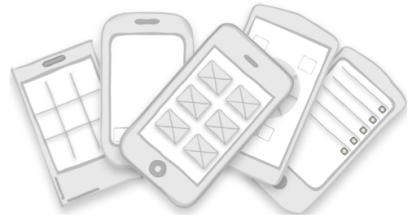


# Guías de estilo

- ✗ **Windows.** <https://dev.windows.com/es-es/design>
- ✗ **Android.** <https://developer.android.com/design/index.html>
- ✗ **iOS.** <https://developer.apple.com/library/ios/documentation/userexperience/conceptual/mobilehig/>
- ✗ **Mac OS X. Designing for Yosemite.**  
<https://developer.apple.com/library/mac/documentation/UserExperience/Conceptual/OSXHIGGuidelines/>
- ✗ **Android Wear.** <http://developer.android.com/intl/es/design/wear/principles.html>
- ✗ **Apple Watch.** <https://developer.apple.com/watch/human-interface-guidelines/>

The image displays three side-by-side screenshots of mobile design guidelines:

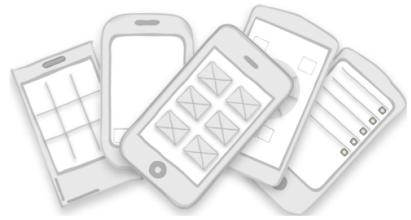
- Android Design:** Shows the main page with a welcome message, navigation links like "Get Started", "Material Design", and "Design Principles", and two phones illustrating the design.
- Windows Dev Center:** Shows the "Design" section with a navigation bar, a "Modern design" section featuring a map, and a "Get the guidelines" button.
- Apple Watch Human Interface Guidelines:** Shows the main page with a welcome message, navigation links for "Overview", "Gestures", "Force Touch", etc., and three Apple Watch screens displaying different interface elements.



## Ejercicio (ejeS5\_iOS.pdf)

1. ¿Qué sistema de navegación usa iOS para substituir a las pestañas de Android?
2. ¿Dónde colocarías los botones de acción de una App Bar en una aplicación para iOS?
3. ¿Tiene iOS algo similar a los FAB?
4. ¿Cómo diseñarías en iOS un menú contextual tipo “Floating Context Menu” de Android?
5. ¿Cómo propone iOS la selección múltiple de elementos en una lista?

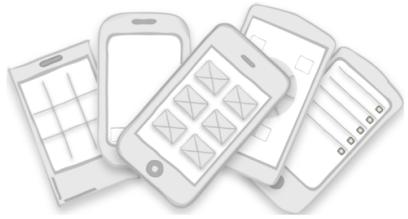
(\*) Usar la guía de estilo de iOS para responder a estas preguntas  
<https://developer.apple.com/design/human-interface-guidelines/ios>



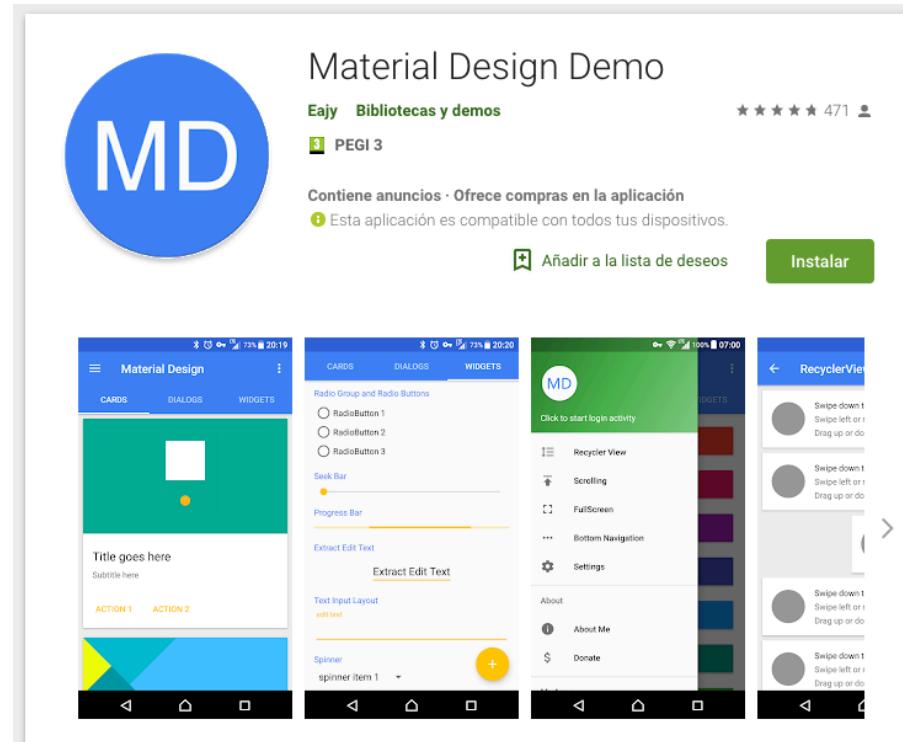
# Desarrollo

<https://material.io/develop/android/>

<https://codelabs.developers.google.com/codelabs/mdc-101-java/>



# Desarrollo...



<https://play.google.com/store/apps/details?id=com.eajy.materialdesigndemo>  
<https://github.com/Eajy/MaterialDesignDemo>



# Lectura recomendada

Apple Developer      Discover      Design      Develop      Distribute      Support      Account     

iOS ▾

## Human Interface Guidelines

Overview

**App Architecture ▾**

- Accessibility
- Loading
- Modality
- Navigation
- Onboarding**
- Requesting Permission
- Settings

User Interaction

System Capabilities

Visual Design

Icons and Images

Bars

Views

Controls

Extensions

Technologies

Resources

## Onboarding

Launch time is your first opportunity to onboard new users and reconnect with returning ones. Design a launch experience that's fast, fun, and educational.

A smartphone is shown displaying the "What's New" section of the Human Interface Guidelines. The screen shows three new features: "More Personalized" (Top Stories), "New Spotlight Tab" (Discover great stories selected by our editors), and "Video in Today View" (The day's best videos, right in the News widget).

**What's New**

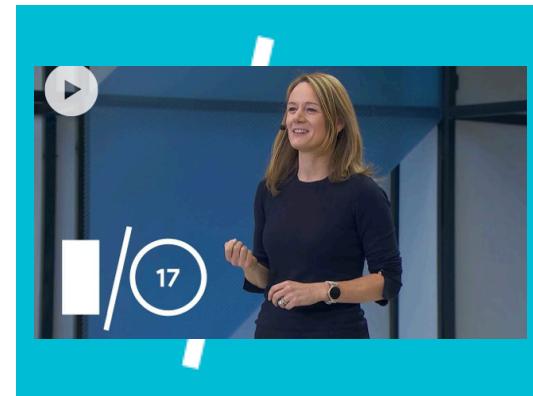
- More Personalized  
Top Stories picked for you and recommendations from Siri.
- New Spotlight Tab  
Discover great stories selected by our editors.
- Video in Today View  
The day's best videos, right in the News widget.

<https://developer.apple.com/ios/human-interface-guidelines/app-architecture/onboarding/>



# Google I/O

The screenshot shows the official website for Google I/O 2015. At the top left is the I/O logo with the text "May 28 - 29, 2015 Moscone Center West, San Francisco, CA". At the top right are navigation links: ABOUT, SCHEDULE, VIDEOS, ONSITE, OFFSITE, and SIGN IN. The main feature is a large photo of Sundar Pichai speaking on stage. Below the photo is a button labeled "Watch the keynote". A text box contains the message: "Google I/O is for developers - the creative coders who are building what's next. Each year, we explore the latest in tech, mobile & beyond." Below this is a "WATCH THE KEYNOTE" button. A "Featured sessions" section shows three video thumbnails with play icons.



<https://events.google.com/io/>



# Lectura Recomendada



About Portfolio Perspective Training Articles

## Visual Guide to Android L Material Design: 7 Insights Every Serious Designer Needs to Know

Nov 14th, 2014 by Greg Nudelman

151  
Shares



It happened again. In the seemingly never-ending battle of mobile titans, someone moved your skeuomorphic cheese. And this time it was Google, with Android L Material Design. Here are 7 hard-won insights from 4 Material Design workshops I recently facilitated with my top clients in Argentina, Abu Dhabi and United States.

### What is Material Design?

Material Design is a new Google design language that Google hopes to port to everything from mobile phones and tablets to websites and desktop apps – in short everything not including wearables (at least not at the moment.) You can get a feel for Material Design by seeing how Material Design transforms the Gmail app:

1. Starting from the current Android 4.4.4 (on the left), we
2. Remove some content complexity
3. De-clutter the action bar, remove the launch icon, and clean up fonts
4. Add standardized spacing on the 8 pixel grid
5. Add color and a substantial amount of vertical space, while also removing the overflow menu
6. And last but not least, we add a FAB (Floating Action Button) ergonomically positioned in the bottom right corner:

SWAD/VisualGuideMaterialDesign.pdf



# Lectura Recomendada

2/9/2018 Best Practices For Mobile Form Design — Smashing Magazine

**ABOUT THE AUTHOR**



Nick Babich is a developer, tech enthusiast, and UX lover. He has spent the last 10 years working in the software industry with a specialized focus on ... [More about Nick...](#)

AUGUST 28, 2018

## Best Practices For Mobile Form Design

SWAD/BestPracticesMobileFormDesign.pdf

JUNE 1, 2017 • 25 comments

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**Topics**



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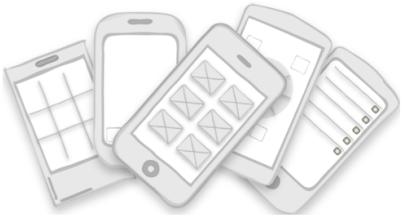
**QUICK SUMMARY** Someone who uses your app or website has a particular goal. Often, the one thing standing between the user and their goal is a form. Forms remain **one of the most important types of interactions** for users on the web and in apps. In fact, forms are often considered the final step in the journey of completing their goals. Forms are just a means to an end. Users should be able to complete them quickly and without confusion.

16 min read

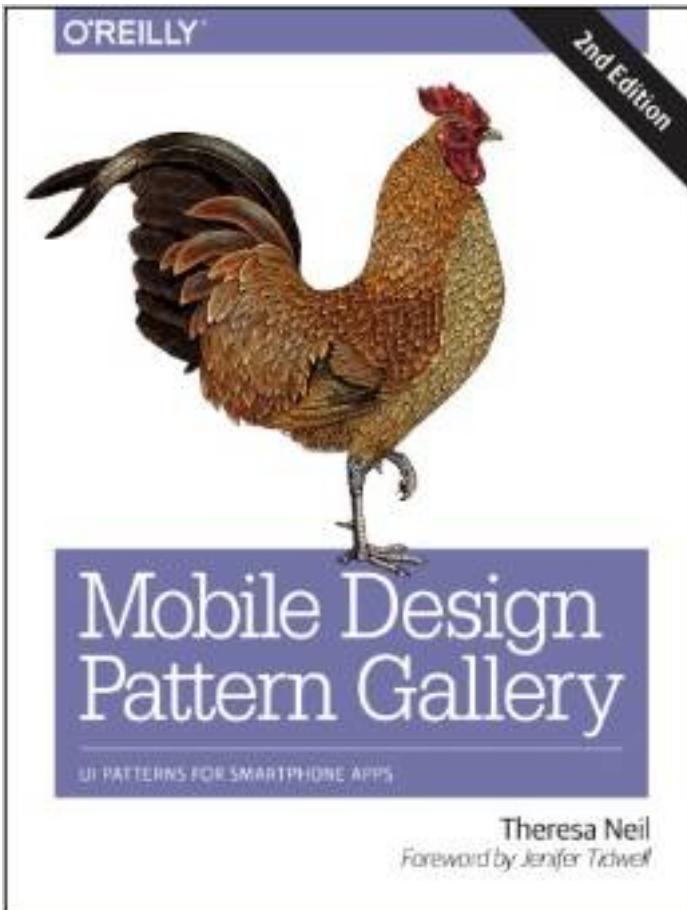
Coding, Forms, Usability, Sponsored Content

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SWAD/DesigningWebForms.pdf



# Patrones



FREE DESIGN COURSE BOOK DESIGN PATTERNS CONSULTING WORKSHOPS CODE COMMUNITY ABOUT

 **Android Design Book**

**Chapter 5: Welcome Experience**

May 20, 2014 By [admin](#)



5.1 Antipattern: End User License Agreements (EULAs) EULA antipattern in Chase app 5.2 Antipattern: Contact Us Impediments Contact Us Impediments antipattern in the US Bank app Contact Us Impediments antipattern expressed as a long form in the Kodak app 5.3 Antipattern: Sign Up/Sign In Registration Failure: Sign Up/Sign In antipattern in SitOrSquat app 5.4 Pattern: [...]

Filed Under: [Design Patterns](#), [Patterns](#) Tagged With: [antipattern](#), [Contact Us Impediments](#), [End User License Agreements](#), [EULA](#), [Sign In](#), [Sign Up](#), [Tutorial](#), [Watermark](#), [Welcome Animation](#)

**Chapter 6: Homescreen**

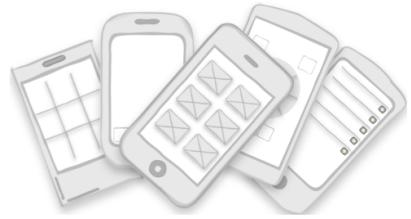
May 19, 2014 By [admin](#)



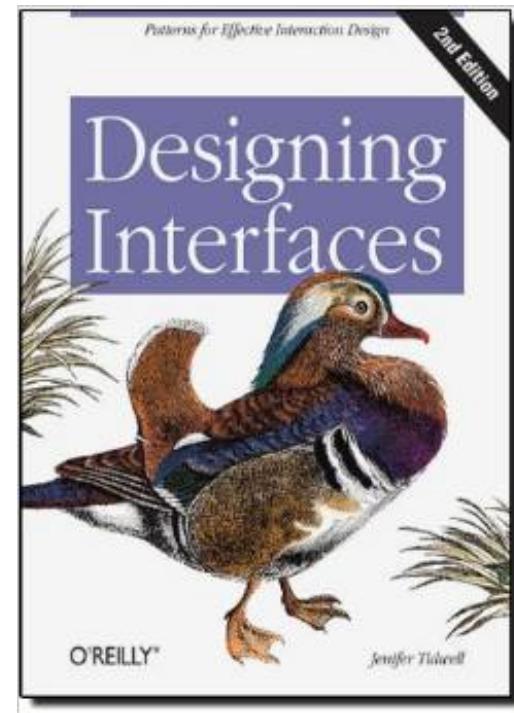
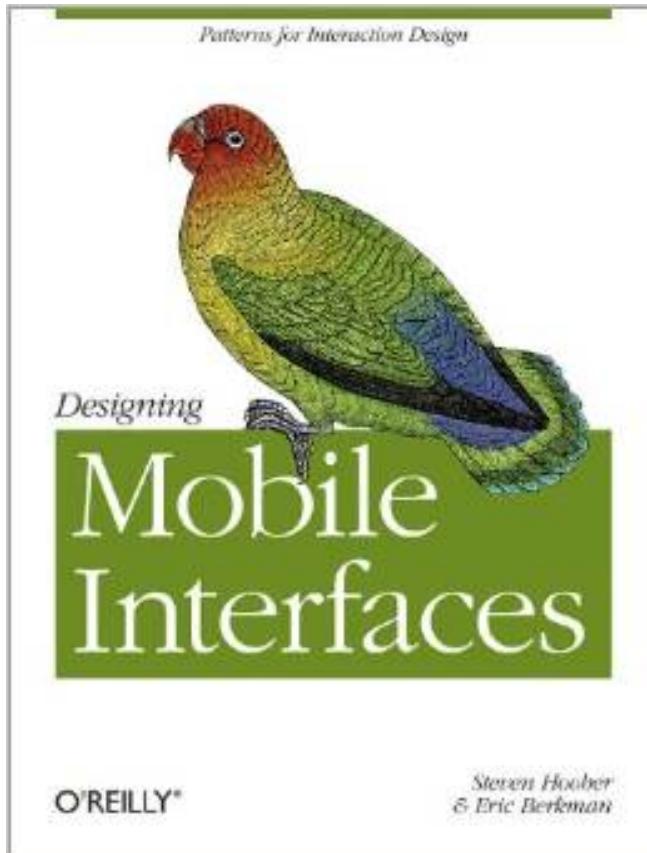
6.1 Pattern: List of Links The Travelocity app uses a typical List of Links pattern. This early version of the Google Plus List of Links tells just a bit more of the story with the number of notifications (though it does not tell you what those notifications are). The Southwest Airlines app shows a grouped [...]

<http://www.androiddesignbook.com/category/design-patterns/>

<http://proquest.safaribooksonline.com/9781449368586?uicode=goliat>



# Patrones



<http://proquest.safaribooksonline.com/0596008031?uicode=goliat>

<http://proquest.safaribooksonline.com/9781449318451?uicode=goliat>



# Buscar inspiración ...

A screenshot of the 'Android Niceties' Tumblr page. It displays a collection of screenshots from various mobile applications, including 'Inbox by Gmail', 'FlightTrack S', and several travel and weather apps. The page has a light blue header and footer.

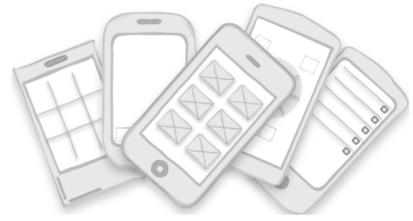
<http://androidniceties.tumblr.com>

A screenshot of the 'Inspired UI' website. It features a news section with headlines like 'Hand-picked news: Designing the new Foursquare' and a 'RECENT' section with three cards related to LinkedIn. Below these are 'CATEGORIES' and a sidebar with links to various UI design patterns such as Activity Feeds, Browser Calculators, Calendars, Capture, Checkout, Content Coverage, Content & Edit, Outstation, Discovery, Empty States, Find Friends, Games, Home, iTunes Screenshots, Launch Screen, Lists, and Logins.

<http://inspired-ui.com>

A screenshot of the 'Pptrns - Mobile User Interface Patterns' website. The top navigation bar includes links for 'Android', 'Aventura', 'DESSI', 'Series.ly', 'Udemy', 'T3chFest', 'MDA', 'COMICS', 'Trenes', 'GAMIFICACION', 'UXP', 'Videosjuegos', 'ACTUALES', 'Torrent', and 'Pptrns - iOS 7'. The main content area features a red 'F' logo and sections for 'iPhone', 'iPad', and 'iOS 7'. It shows examples of mobile interfaces, such as a news article about William Burroughs's drugs curing Alzheimer's researcher, and a 'SEE NEW TOPICS' button. A sidebar lists more UI patterns: Activity Feeds, Browser Calculators, Calendars, Capture, Checkout, Content Marks, Content Coverage, Content & Edit, Outstation, Discovery, Empty States, Find Friends, Games, Home, iTunes Screenshots, Launch Screen, Lists, and Logins.

<http://www.pptrns.com>

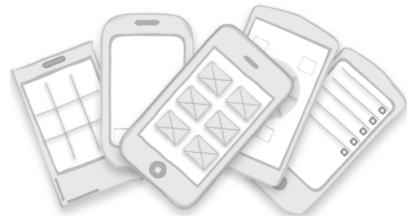


# Buscar inspiración ... (MD)

The screenshot shows the materialup website interface. At the top, there is a navigation bar with tabs for 'INSPIRATION', 'RESOURCES', 'FREEBIES', 'MARKET', and 'COLLECTIONS'. A search bar is located above the main content area. The main content area displays a grid of cards, each representing a different Material Design project or resource. The cards include:

- Presentation for Drive** by Salomon Aur... (Category: User Interfaces, ID: 12)
- Afisha search** by Slava (Category: Animations, ID: 7)
- Uber** by Pieter Goris (Category: User Interfaces, ID: 7)
- Music App For Tv/Pad** by 李响\_Xerlee (Category: User Interfaces, ID: 6)
- Play Books** by Kevin Aguilar (Category: Icons, ID: 9)
- Be Optimistic ^ ^** by Jiaxin Chen (Category: User Interfaces, ID: 8)
- SM Music Player** by Raaz Das (Category: User Interfaces, ID: 8)
- Webmoney UI App** by thanhloc (Category: User Interfaces, ID: 7)
- Signal Android Icon** by Open Whisper Systems (Category: Icons, ID: 5)
- Material Design: Why Implementation is crucial to the Floating Action Button** by 3takeaway (Category: Articles, ID: 5)
- Why implementation is cru...** by Parth (Category: Articles, ID: 5)

<http://www.materialup.com>



# Bibliografía



(1)

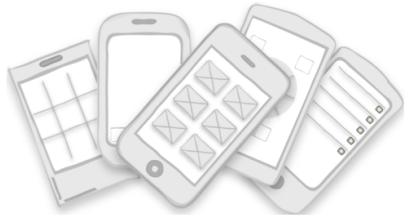


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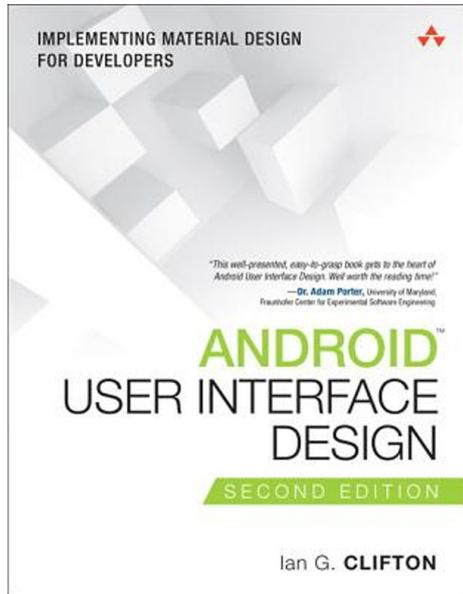


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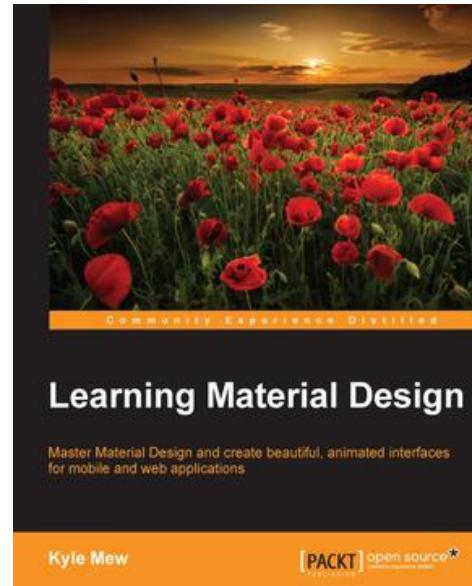
- [\(1\) http://proquest.safaribooksonline.com/9781118417553?uicode=goliat](http://proquest.safaribooksonline.com/9781118417553?uicode=goliat)
- [\(2\) http://proquest.safaribooksonline.com/9780133154849?uicode=goliat](http://proquest.safaribooksonline.com/9780133154849?uicode=goliat)
- [\(3\) http://proquest.safaribooksonline.com/9780124095144?uicode=goliat](http://proquest.safaribooksonline.com/9780124095144?uicode=goliat)



# Bibliografia



(1)



(2)



(3)

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[\(2\) http://proquest.safaribooksonline.com/9781785289811?uicode=goliat](http://proquest.safaribooksonline.com/9781785289811?uicode=goliat)

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