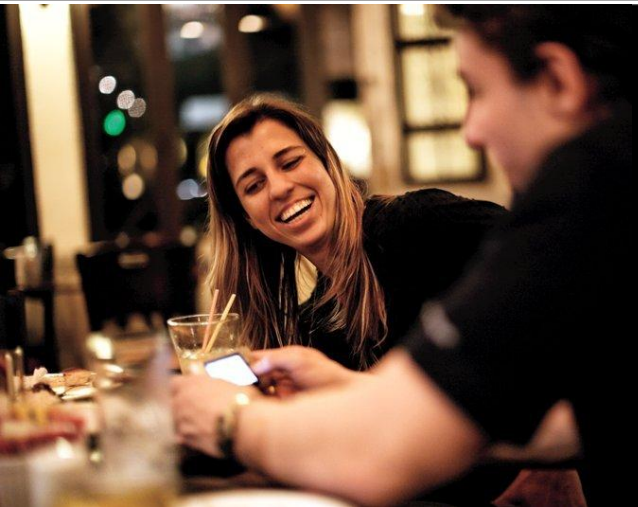




Microsoft | Open Door  
Windows Phone 7  
Development

By: Walaa Mohamed Atef

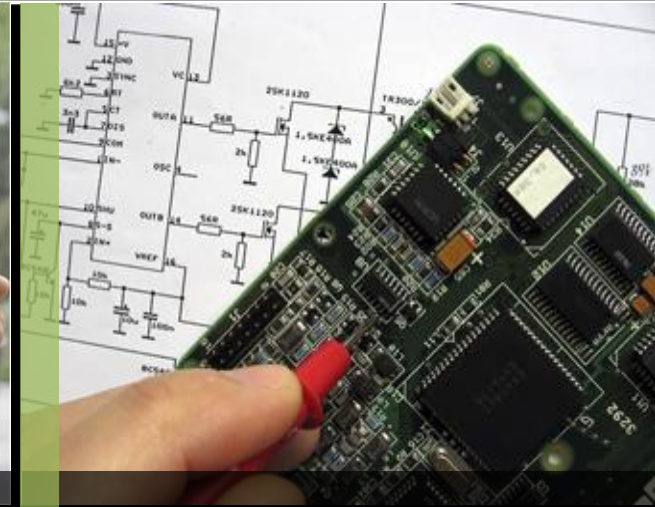
## Changing our game



DESIGN:  
END USER  
COMES FIRST



PLATFORM:  
RICHER,  
DEEPER, EASIER  
APPS

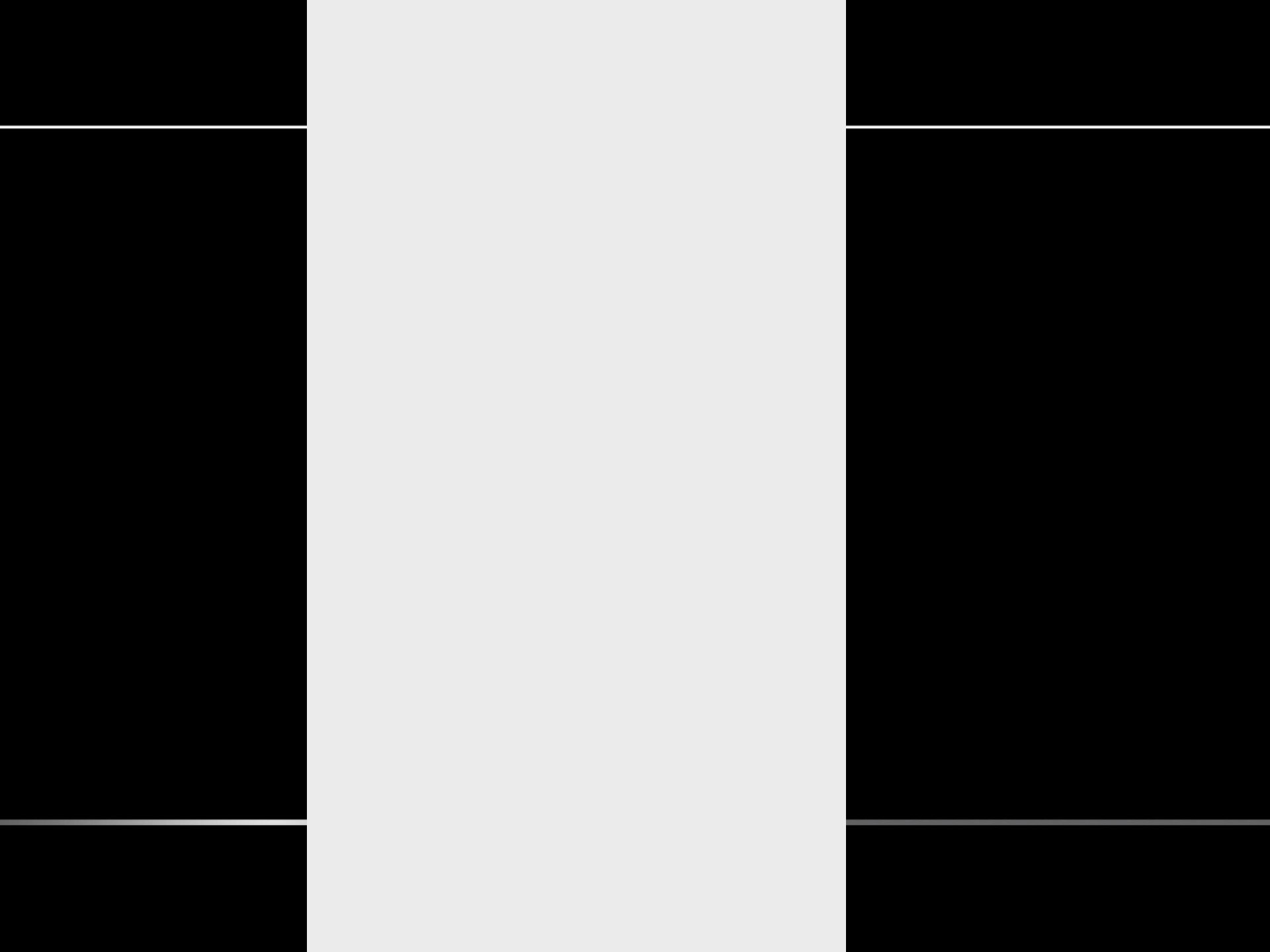


HARDWARE:  
FASTER TO  
MARKET, LESS  
HEAVY  
LIFTING

How it looks like.



**Microsoft®**



# Platform Overview

# Hardware Foundation

## Display

480x800 QVGA  
320x480 HVGA (future)

## Capacitive touch

4 or more contact points

## Sensors

A-GPS, Accelerometer,  
Compass, Light

## Camera

5 mega pixels or more

## Hardware buttons

Start, Search, Back



## Multimedia

Codec acceleration  
Common detailed specs (What does it meant?)

## Memory

256MB RAM or more  
8GB Flash or more

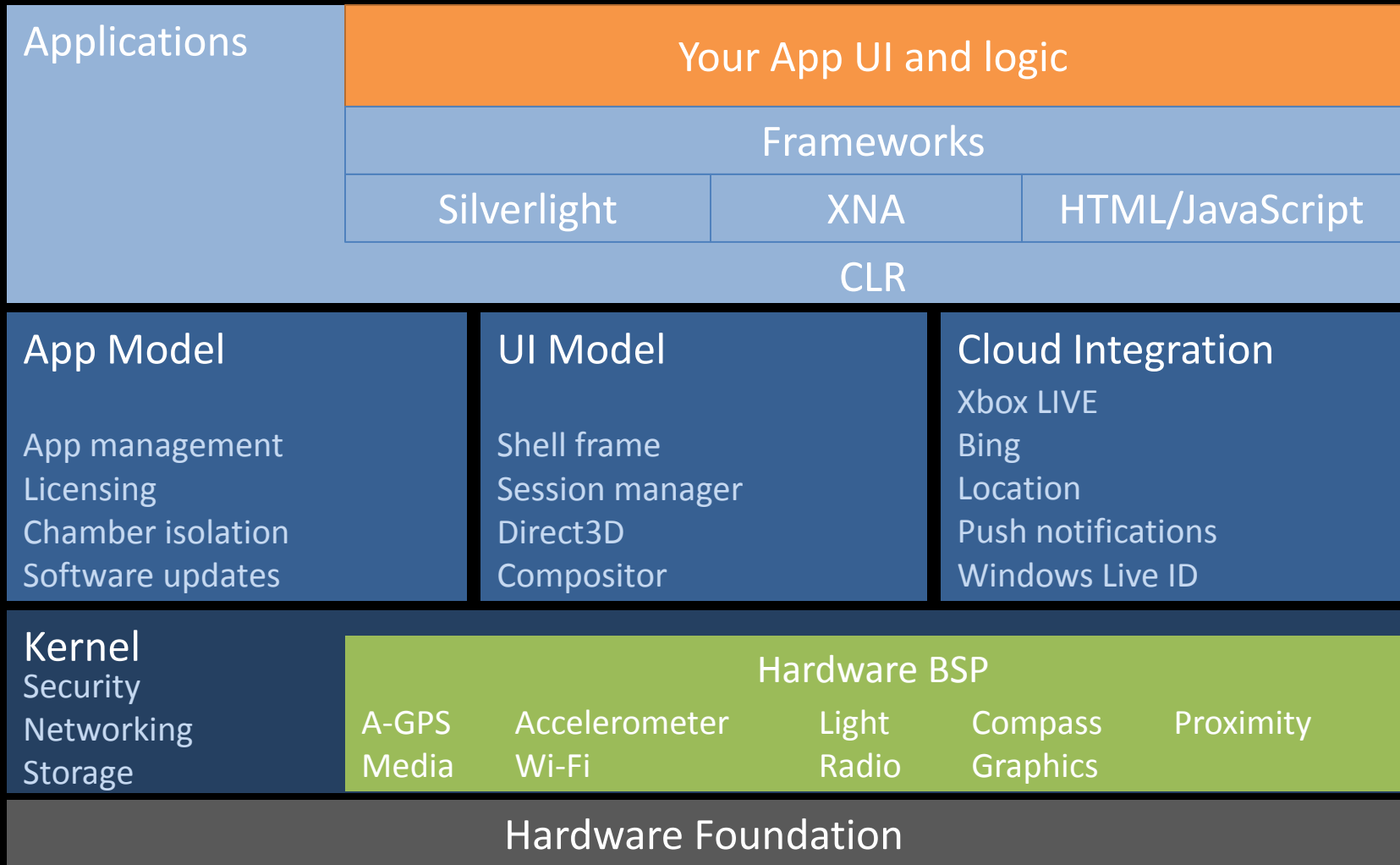
## GPU

DirectX 9 acceleration

## CPU

ARMv7 Cortex/Scorpion  
or better

# Software Architecture



# Development Overview

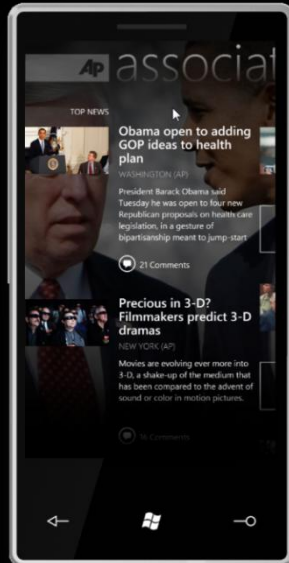


# Development Options



Microsoft®  
**Silverlight™**

- Modern XAML/event-driven application UI framework
- Rapid creation of visually stunning apps
- Metro-themed UI controls
- 500,000 developers spanning Windows and web



- High performance game framework
- Rapid creation of multi-screen 2D and 3D games
- Rich content pipeline
- Mature, robust, widely adopted technology spanning Xbox 360, Windows, and Zune



**Microsoft®**

- Windows Phone Developer Tool.
  - VS 2010 Express for WP7
  - Expression Blend 4 for WP7
  - Silverlight (3) for WP7
  - XNA Game Studio for WP7
  - Windows Phone Emulator
  - Phone Registration Tool
- Windows Phone 7 Training Kit.

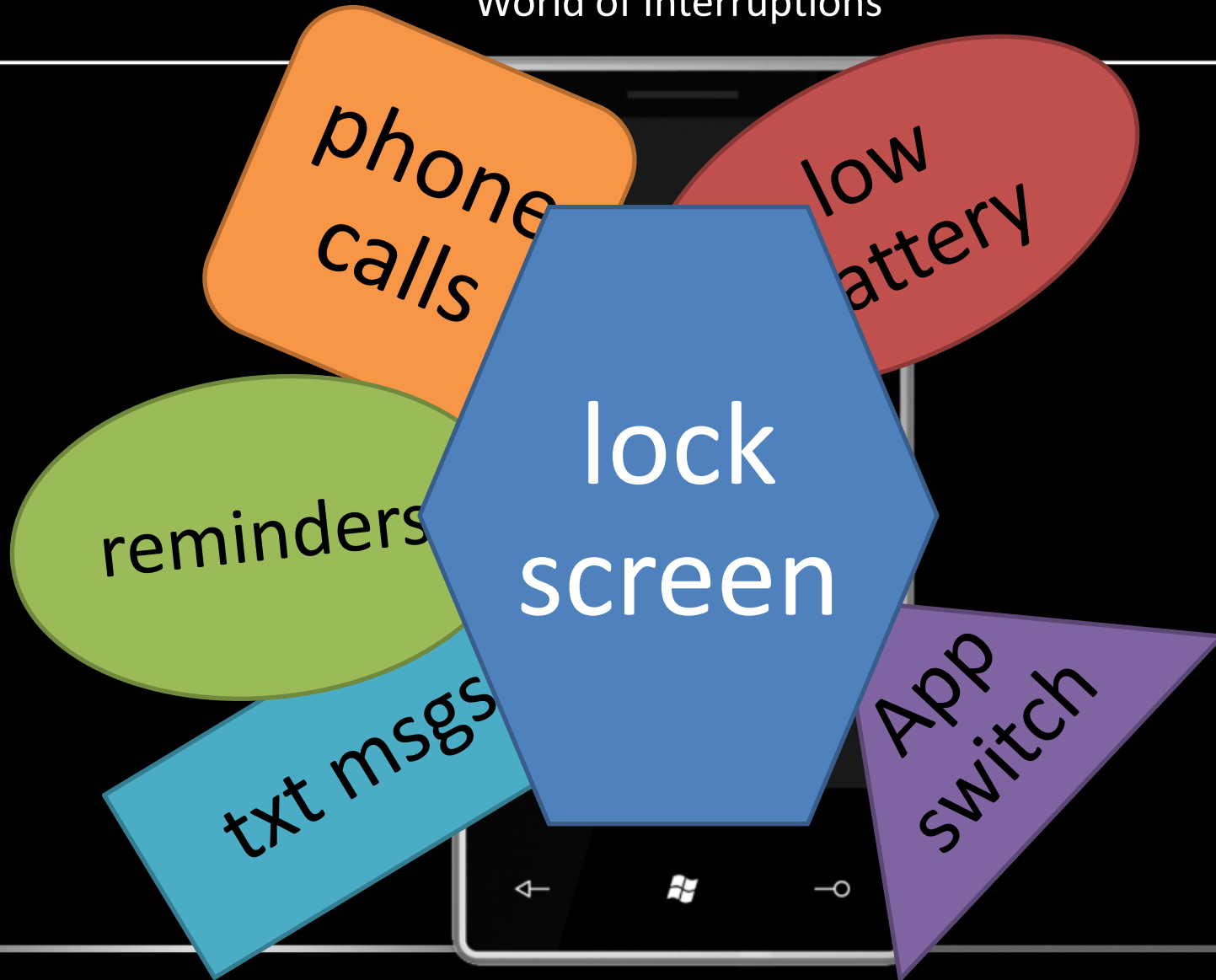
## Development Considerations (Phone is different than a PC).

---

- Limited Battery Life
- Poor Network Connectivity
- Different Performance Characteristics
- Small Screens
- Many input mechanisms. (Touch & Accelerometer)
- Possible frequent interruptions

# Application Life Cycle

## World of Interruptions



**Microsoft®**

# No Multi-tasking

---

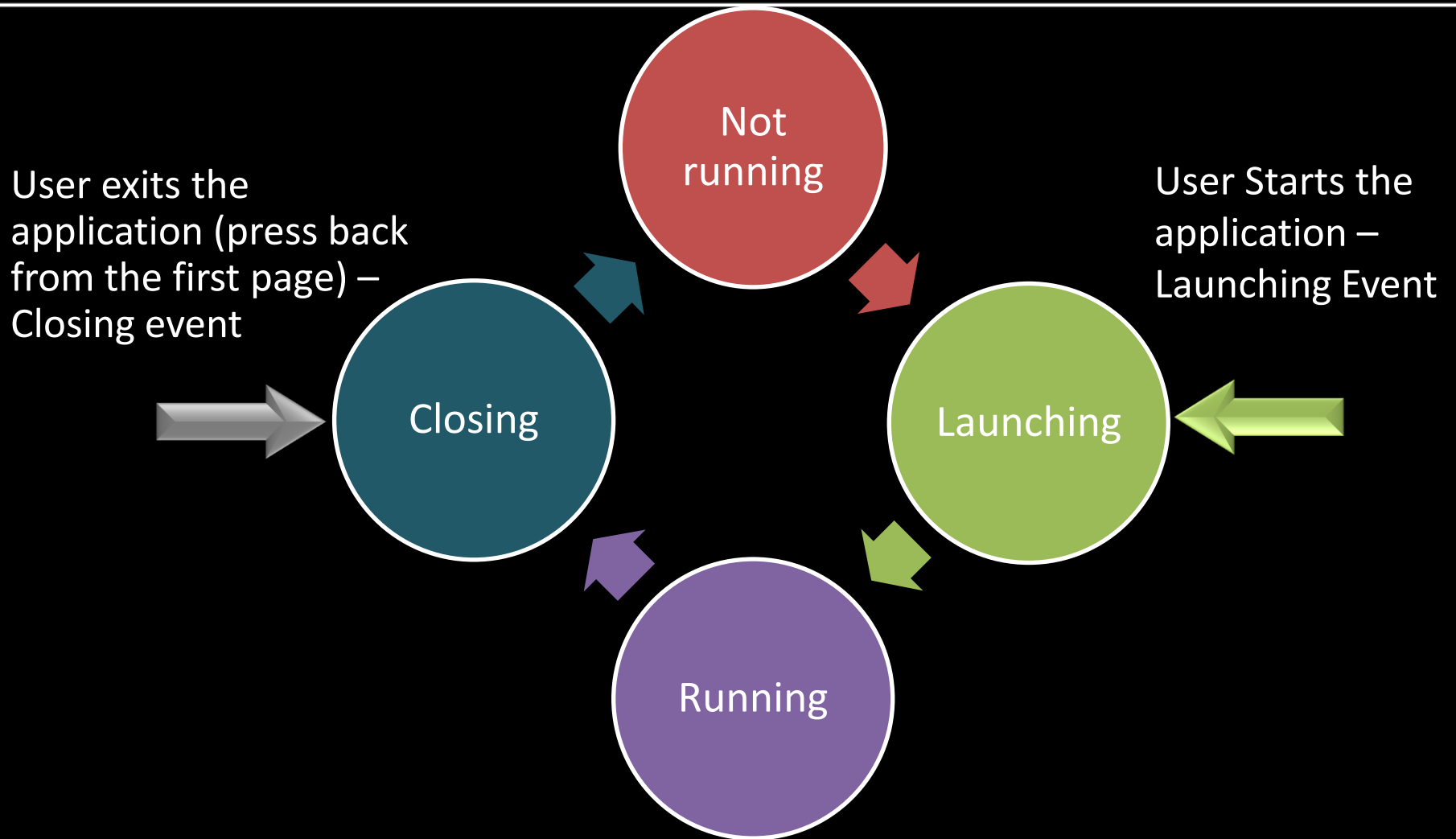


Dead

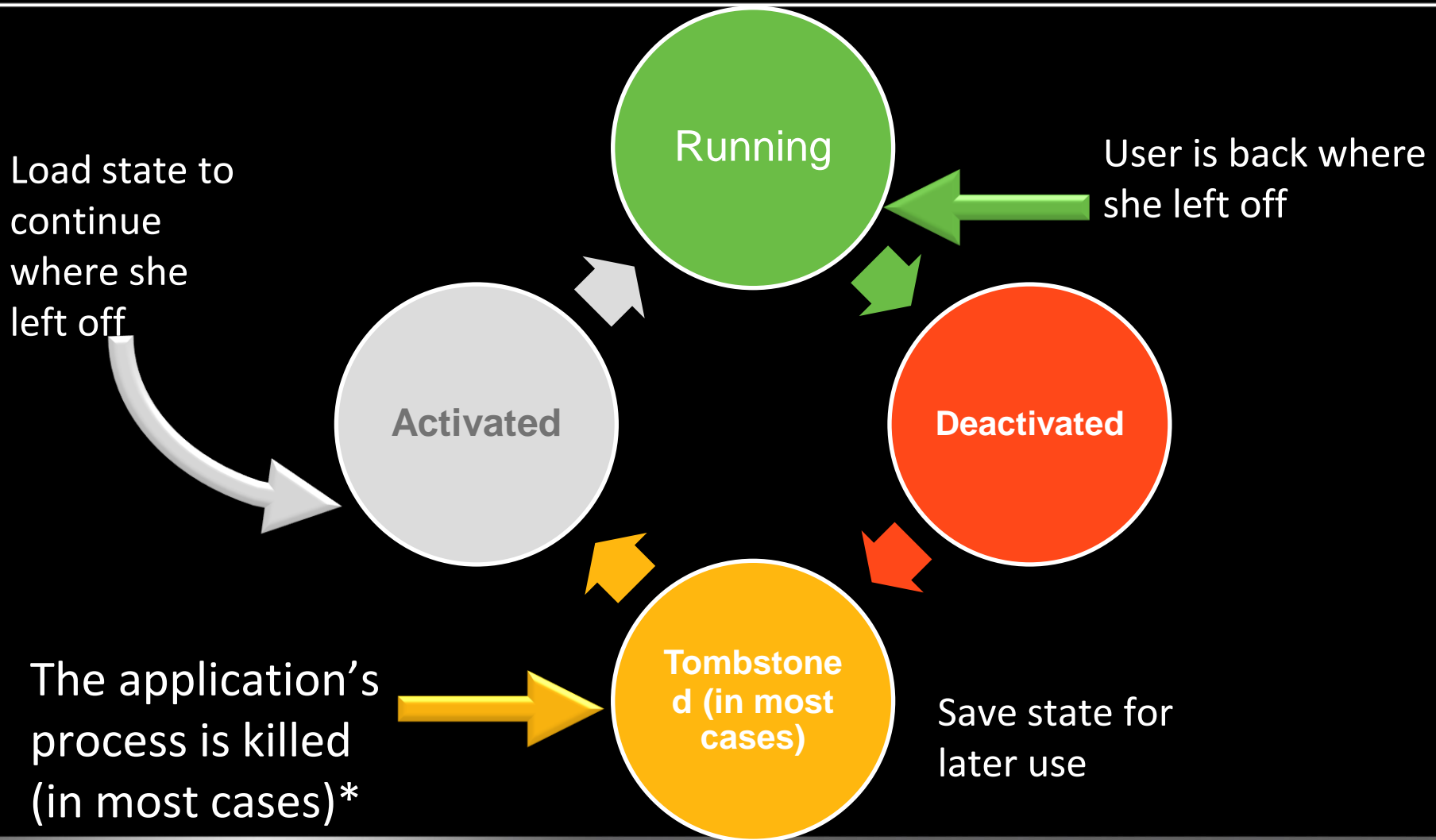


Running

## Application Life Cycle...



## Application Life Cycle...





# Application Life Cycle...



Start

Launching  
event

App  
Running

User  
'Backs'  
past first  
page

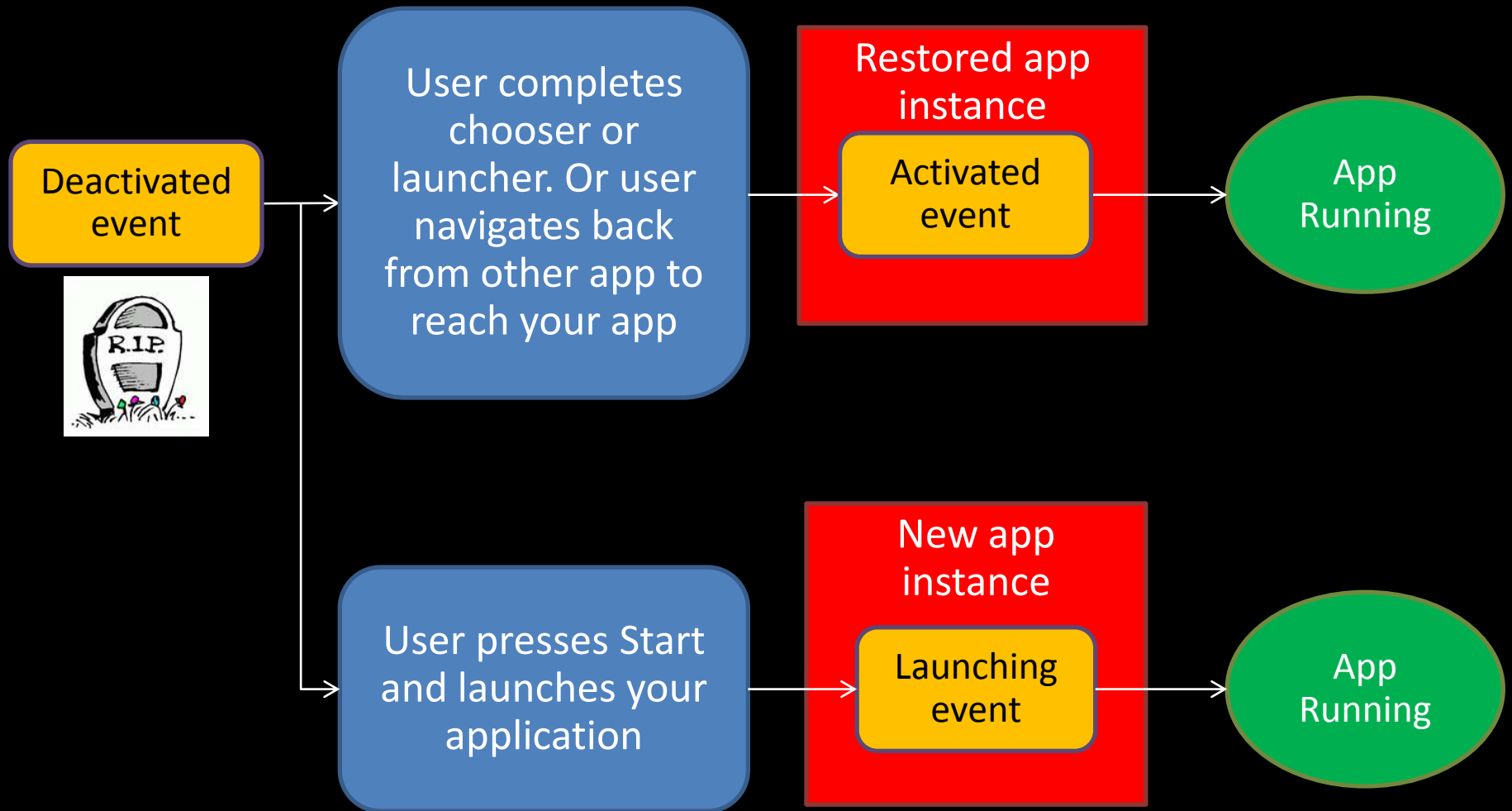
Closing  
event

User invokes  
chooser or  
launcher, or  
presses Start to  
launch another  
app

Deactivate  
d event



## Application Life Cycle...



# Launchers and Choosers

- The Windows Phone execution model isolates every application in its own sandbox
  - Apps cannot directly access information stores, such as contacts
  - Apps cannot directly invoke other applications, such as phone or messaging
- Launchers and Choosers allow applications indirect access to these phone features
- Launcher and Chooser APIs invoke distinct built-in applications that replace the currently running application

## Launchers & Choosers

---

- **Launcher**
  - Launches one of the built-in applications through which a user completes a task
  - No data is returned to calling application
  - Example: PhoneCallTask
- **Chooser**
  - Launches one of the built-in applications through which a user completes a task
  - Returns some data to calling application
  - When caller completes, calling application is reactivated and supplied with the Chooser result
    - Note, user can cancel the launcher, resulting in an empty return value
  - Example: PhotoChooserTask

## Launchers & Choosers

### Launchers

- PhoneCallTask
- SearchTask
- SMSComposeTask
- WebBrowserTask
- EmailComposeTask
- MarketplaceDetailTask
- MarketplaceHubTask
- MarketplaceReviewTask
- MarketplaceSearchTask
- MediaPlayerLauncher

### Choosers

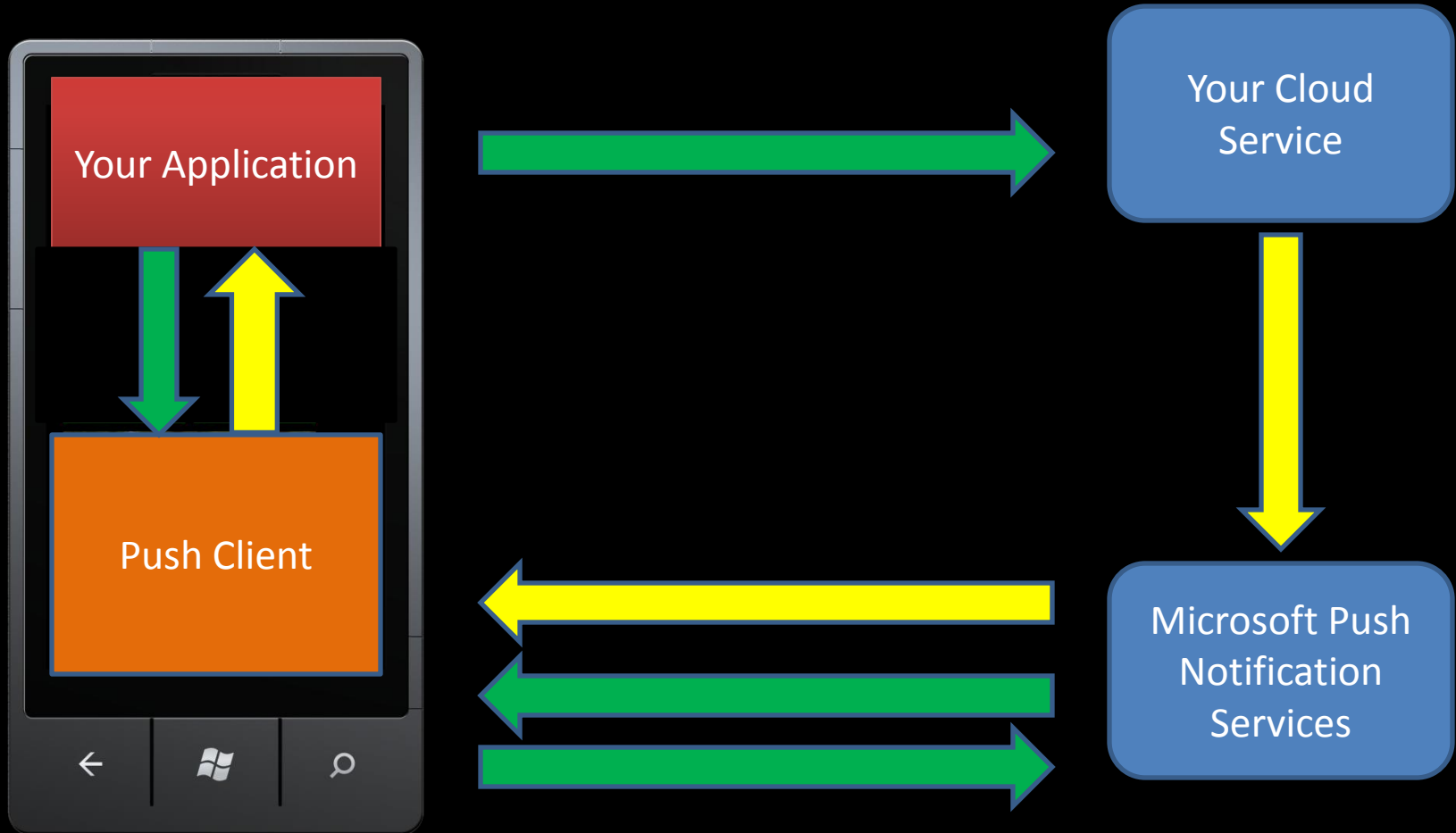
- CameraCaptureTask
- EmailAddressChooserTask
- PhoneNumberChooserTask
- PhotoChooserTask
- SaveEmailAddressTask
- SavePhoneNumberTask

Demo no. 1

---

# My First Windows Phone Silverlight Application

# Push Notification





# Thanks



# Windows Phone

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