Lecture
Mobile platforms
Android apps vs Mobile Web

DT228/3

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Mobile Platform.. which one?

Native app versus Mobile web site

Native app: Built in the mobile platform.
Downloaded (or on device when purchased)

i.e. all apps in the Apple or Android appStore
All the code we've been developing on this course..

Mobile web site (also called mobile web apps)
= website that is optimised to
display on a mobile device.
Just use the browser on the device to open up a URL to browse.

(and Hybrid app) e.g. Phone gap apps ..)

Native app / mobile website: Which is better?

Ans: Depends on what you need it for

Very very general guideline:

Mobile website

Quick *lookups* of "public" info…

E.g.
CNN
Carzone

Native apps

"Doing" things / Storing personalised info

e.g.
Games
Task lists
etc

Pros /Cons – Native app versus mobile web app

	Native Android app	Mobile Website
Installation/ Use	Has to be specfically downloaded	Simple refresh
Animation/ graphics	Fast, responsive	Behind native apps
Device compatability	Must be written for the specific mobile platform	Platform independant
Internet connection	Not required	Required

Pros /Cons

	Native Android app	Mobile Website
User interface	Optimised for the platform	Depends on the website
Searchable by other users?	No (although app can be distributed via app market)	Yes
Access to device hardware sensors e.g. camera	Yes	Generally, no.
Development cost	Separate version needed for each platform	Build once, run on all mobile devices that have a browser

Mobile web sites..

Need to be developed properly!
Optimised for the device size

Computer Monitor Website

Mobile Friendly Website

Hybrid apps – e.g. using Phonegap

Cross platform apps: Don't require separate app development for each plantform

- Like native apps, run on the device
  Uses HTML5/CSS for rendering, and
  Java script for logic.
- Run inside a native container, and leverage the device's browser engine (but not the browser) Can be deployed into app stores
- Can access device capabilities such as camera/ accelerometer via Javacripst API

Note:

- Still need to tweak for individual platforms
- Can't access ***all*** native functionality
- Still using web technologies for display so some compromise on the look and feel

Hybrid – e.g. using Phonegap (Cordova)

Hybrid.. how does it compare?

	Native Android app	Mobile Website	Hybrid
Installation/ Use	Has to be specfically downloaded	Simple refresh	?
Animation/ graphics	Fast, responsive	Behind native apps	?
Device compatability	Must be written for the specific mobile platform	Platform independant	?
Internet connection	Not required	Required	?

Hybrid.. how does it compare?

	Native Android app	Mobile Website	Hybrid
User interface	Optimised for the platform	Depends on the website	**?**
Searchable by other users?	No (although app can be distributed via app market)	Yes	**?**
Access to device hardware sensors e.g. camera	Yes	Generally, no.	**?**
Development cost	Separate version needed for each platform	Build once, run on all mobile devices that have a browser	**?**

When to go native versus website versus hybrid..?

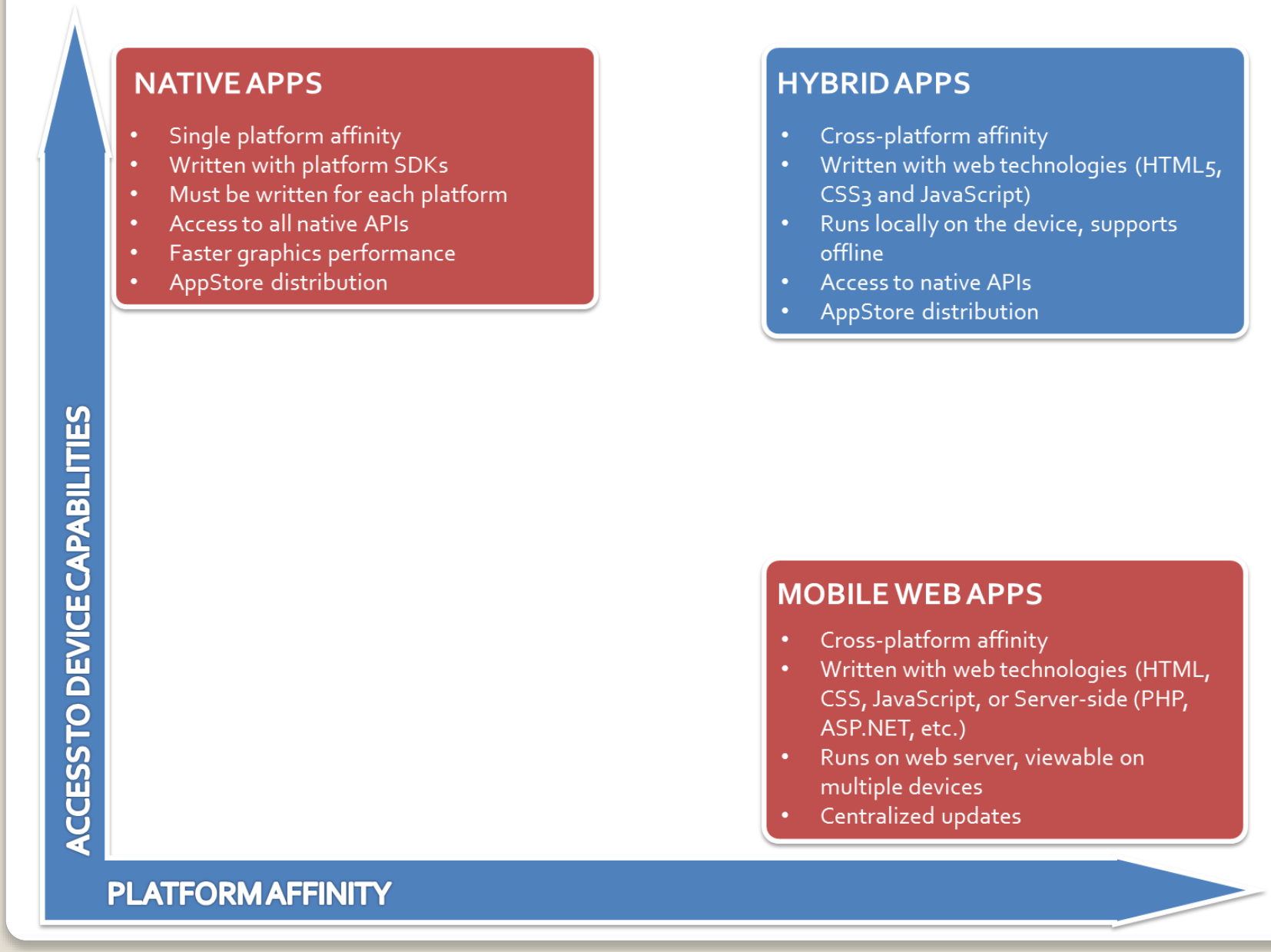
Example 1

Government wants to release "pocket aid" – an app for making emergency first aid info available on mobile phones. Native or web app?

- **Example 2**
- Irish Times wants to have a slick online version of their newspaper for their readers. It'll include headlines, full stories, puzzles and crosswords

Example 3

Dept of education wants to release a self test maths app for improving maths standards. The app will show maths problems, displays the solutions as animated walk throughs.


NATIVE APPS
Single platform affinity
Written with platform SDKs
Must be written for each platform
Access to all native APIs
Faster graphics performance
AppStore distribution
HYBRID APPS
Cross-platform affinity
Written with web technologies (HTML5, CSS3 and JavaScript)
Runs locally on the device, supports offline
Access to native APIs
AppStore distribution
MOBILE WEB APPS
Cross-platform affinity
Written with web technologies (HTML, CSS, JavaScript, or Server-side (PHP, ASP.NET, etc.)
Runs on web server, viewable on multiple devices
Centralized updates
ACCESS TO DEVICE CAPABILITIES
PLATFORM AFFINITY

Future?

Now…

Hype is still around native apps/ app Stores etc.
Mobile web apps relatively under used

Future…~(imo)

Hybrid apps potential will get better.

React Native (from Facebook) is similar to hybrid but uses native UI components

All businesses will need a mobile "version" of their existing website(s) ie. Mobile web app.

For high end UI dependant stuff, businesses will also release native apps e.g. share dealing, Irish Times crossword etc.

Web technologies (such as HTML5) will make mobile web apps look much better than they do today