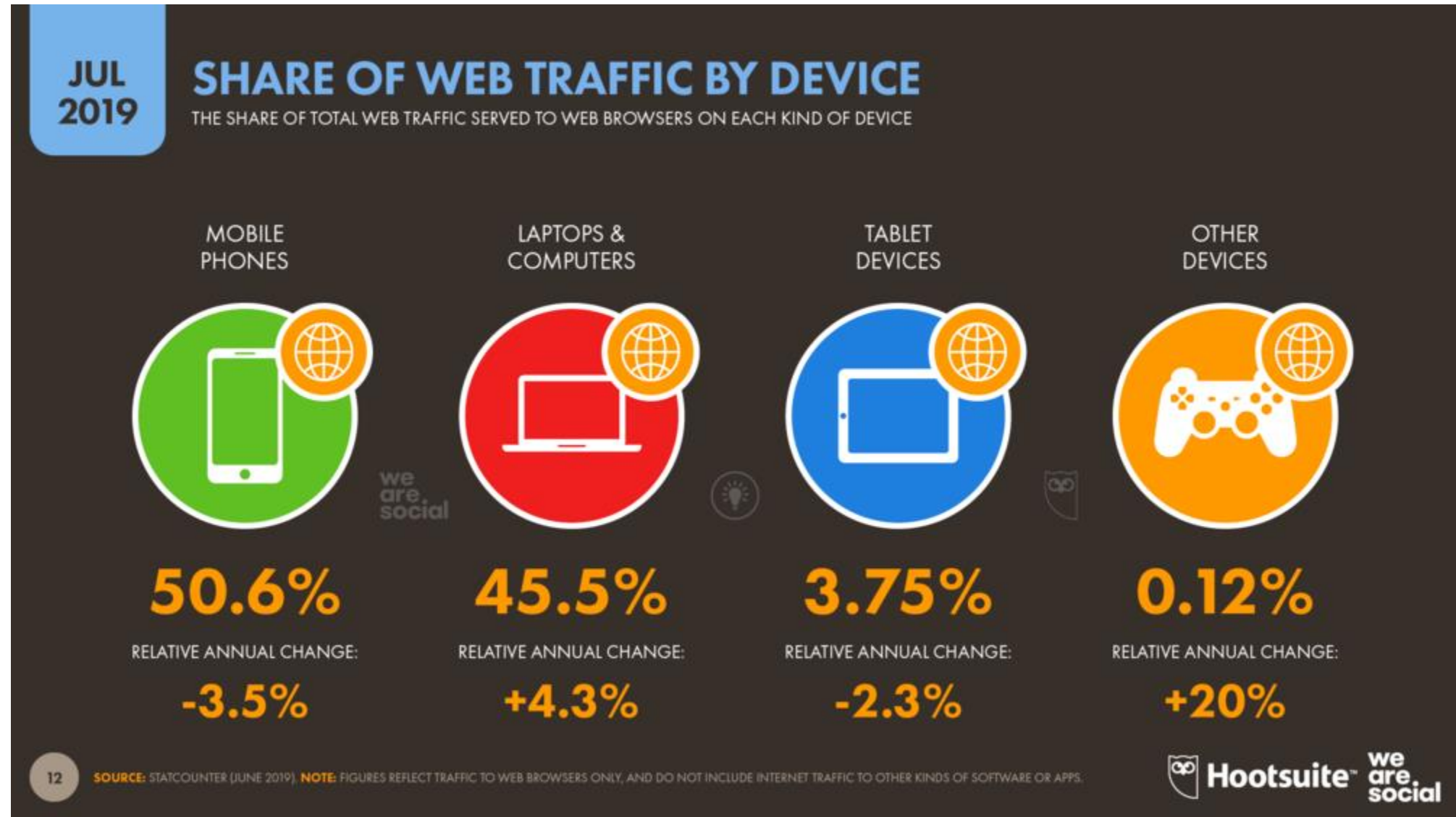# Responsive UI

Agenda
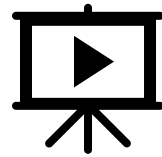
Web Usage

Mobile devices

Which one is mobile?

Mobile device definition

A portable, wireless
computing device
that is small enough
to be used
while held in the hand

Mobile device definition

Pocket-size

Handheld

A portable, wireless
computing device
that is small enough
to be used
while held in the hand

Portable

Wireless

Mobile Phone Brands 1993 - 2019

https://www.youtube.com/watch?v=IdDEVIfbGEA&list=PLck2iFB-00xmovwem61gJ0NMaN5ohT3HP&index=7&t=0s

https://www.youtube.com/watch?v=2Uj1A9AguFs

Mobile application types

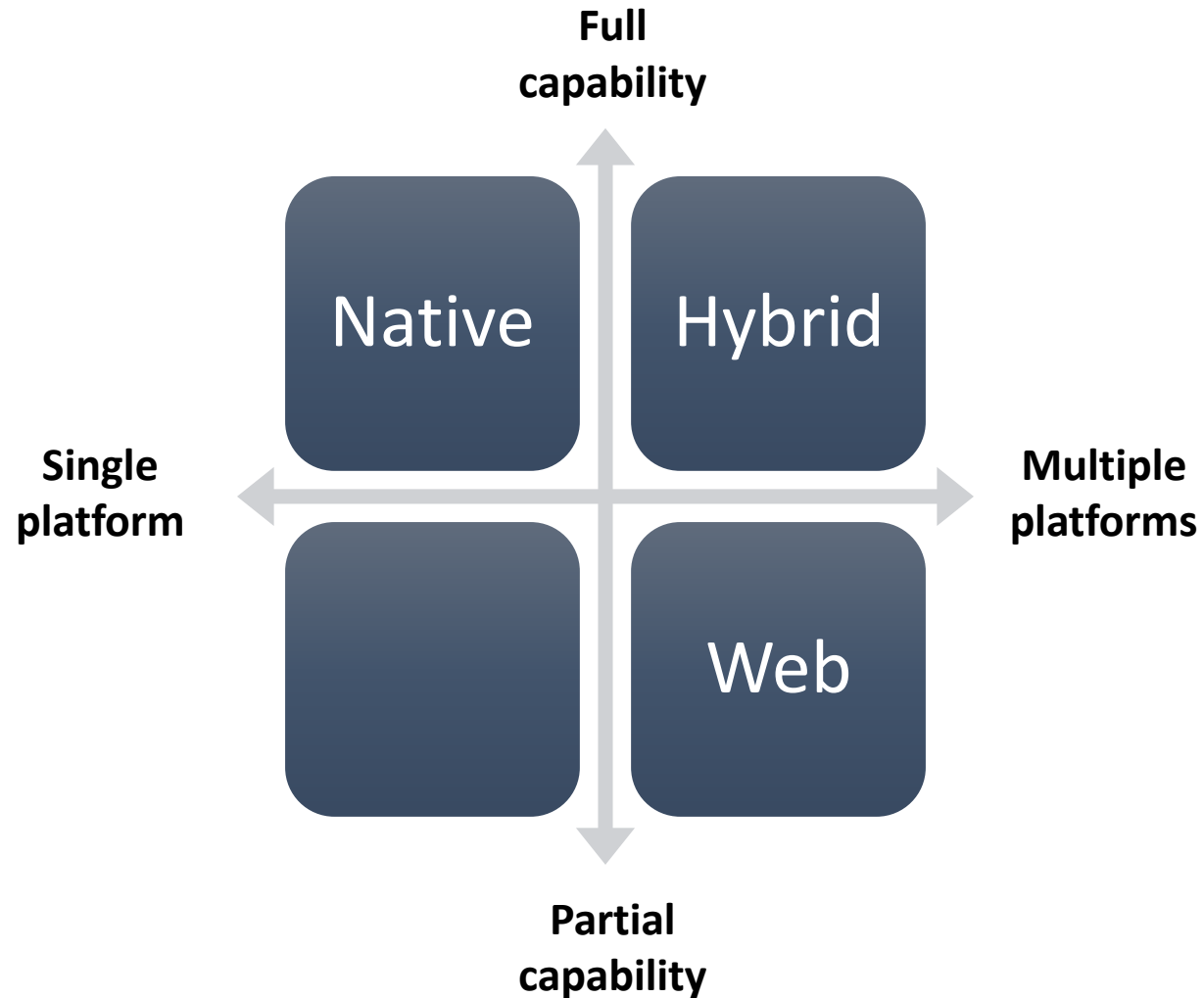**Web**
- Server-side
- HTML, CSS, JavaScript, PHP

Hybrid
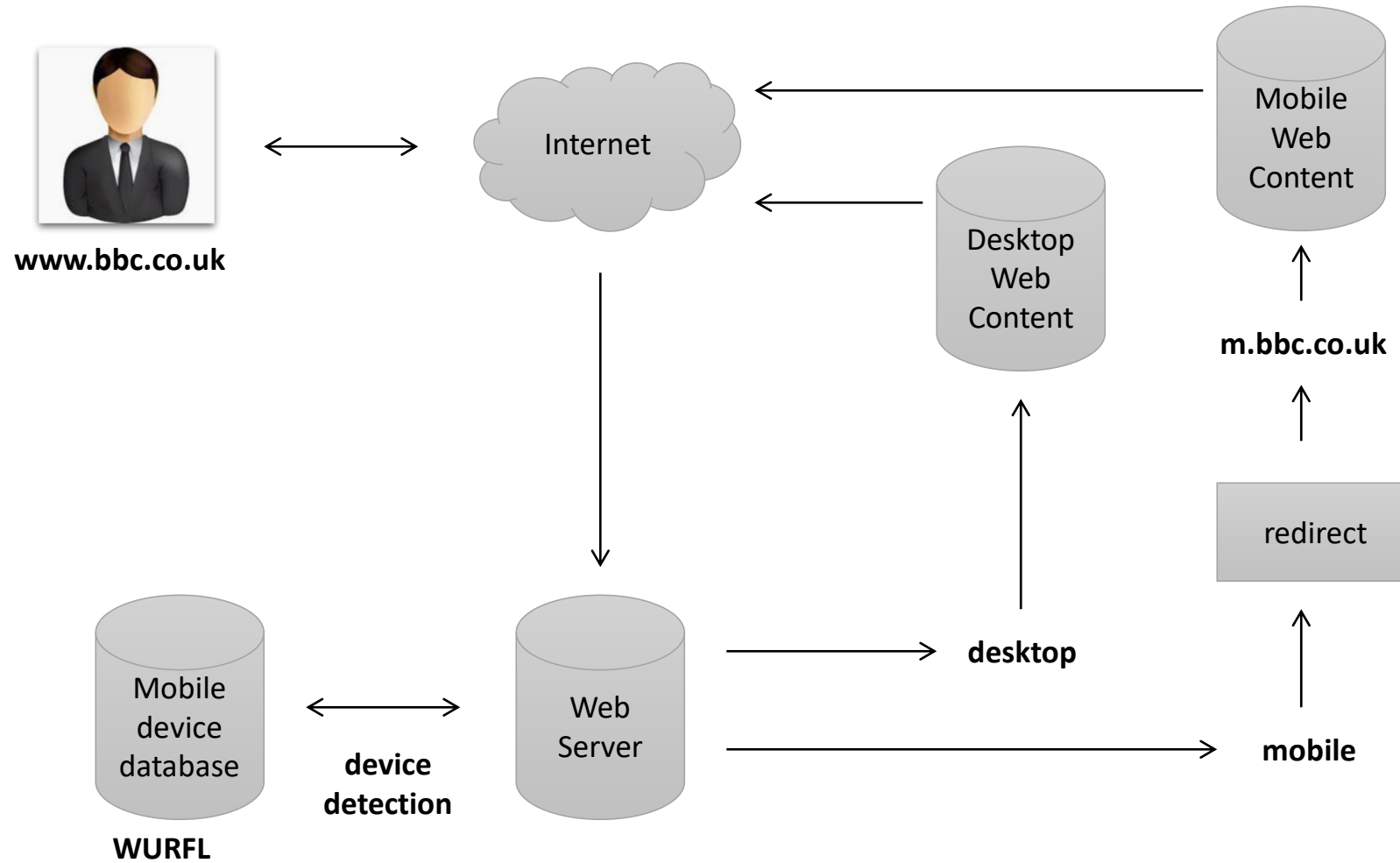- Native container (PhoneGap framework)
- HTML, CSS, JavaScript

Native
- Specific platform
- Objective-C, Java, C#

Mobile application pros and cons

Full capability

Native

Hybrid

Single platform

Multiple platforms

Web

Partial capability

Mobile device detection

www.bbc.co.uk

Internet

Mobile Web Content

m.bbc.co.uk

Desktop Web Content

redirect

desktop

mobile

Web Server

Mobile device database

WURFL

device detection

WURFL DDR structure

```
<device id="samsung_gt_i8160_ver1" user_agent="Mozilla/5.0
(Linux; U; Android 2.3.6; pl-pl; GT-I8160 Build/GINGERBREAD)
AppleWebKit/533.1 (KHTML, like Gecko) Version/4.0 Mobile
Safari/533.1" fall_back="generic_android_ver2_3"
actual_device_root="true">

  <group id="product_info">
    <capability name="model_name" value="GT-I8160"/>
    <capability name="brand_name" value="Samsung"/>
    <capability name="marketing_name" value="Galaxy Ace 2"/>
  </group>

  <group id="display">
    <capability name="physical_screen_height" value="83"/>
    <capability name="physical_screen_width" value="50"/>
    <capability name="resolution_width" value="480"/>
    <capability name="resolution_height" value="800"/>
  </group>

</device>
```
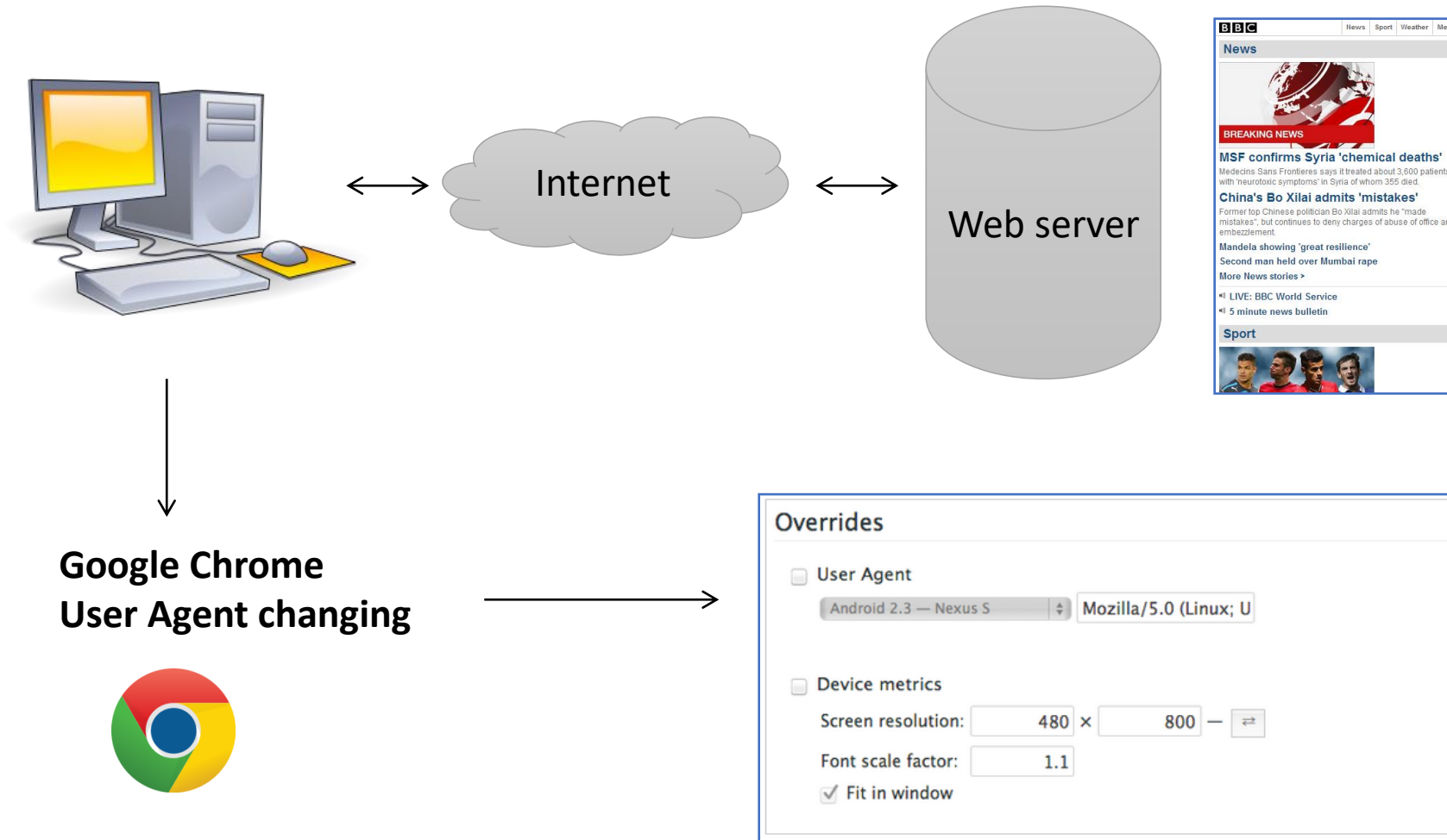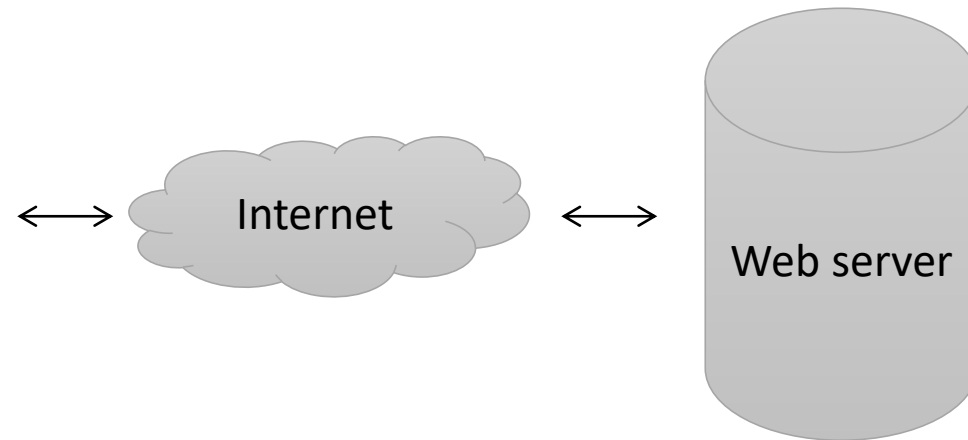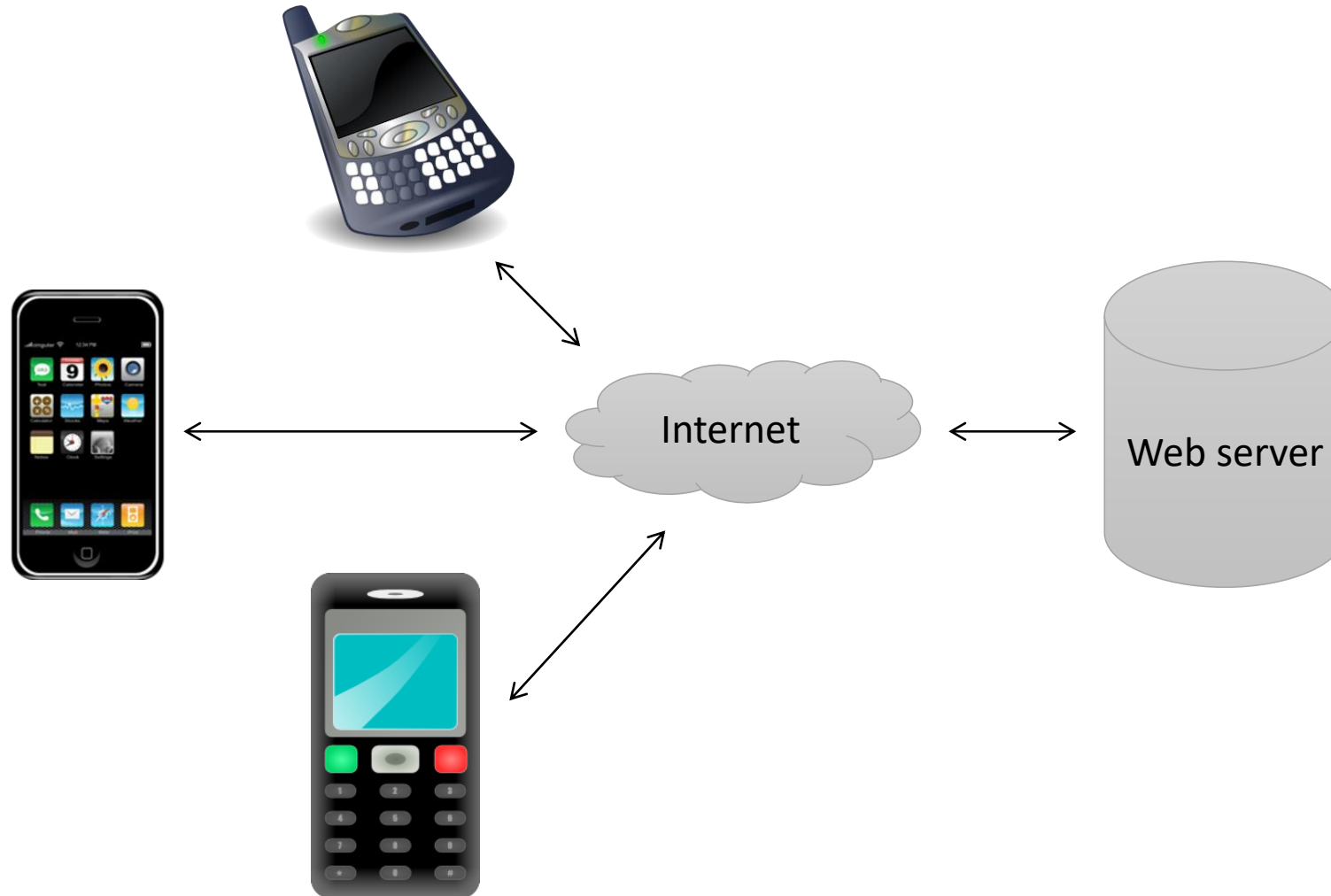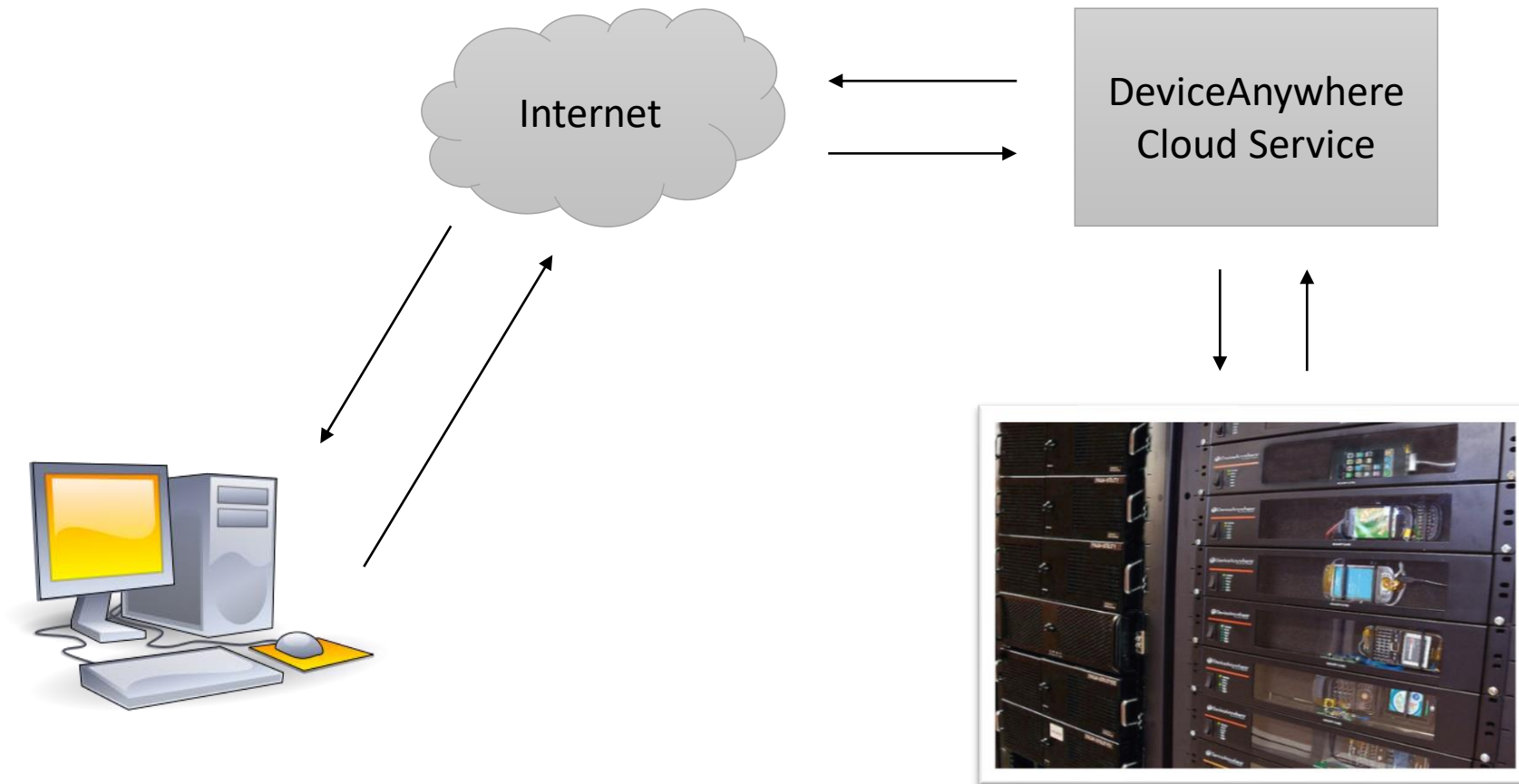
Mobile web app testing

Real mobile device

Mobile device emulator
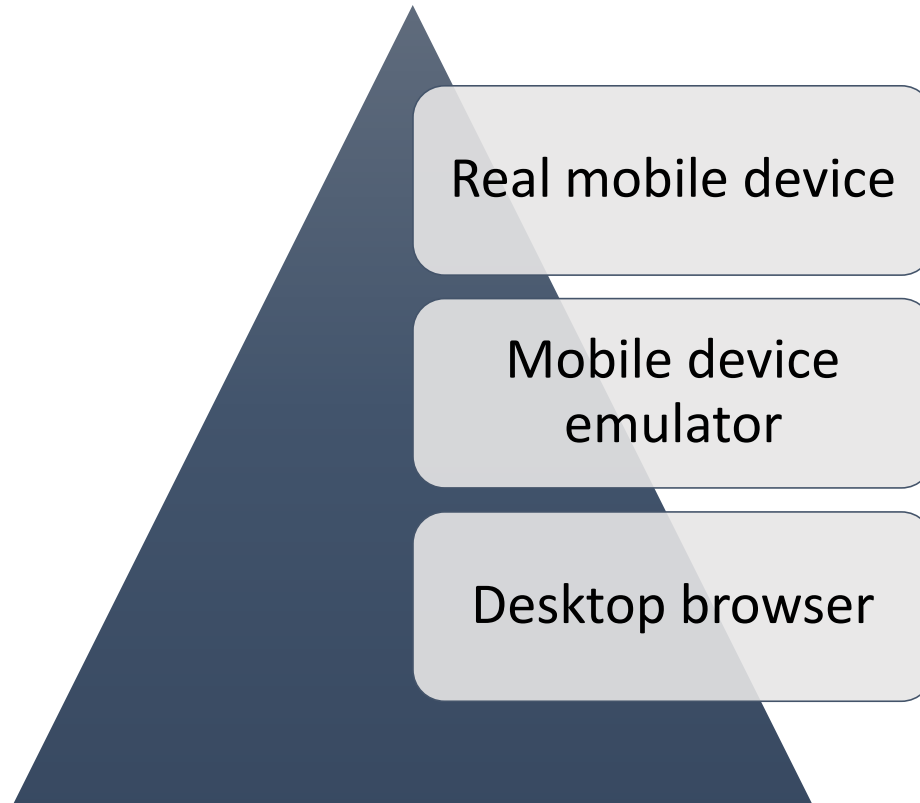
Desktop browser

Testing on desktop browser

Internet

Web server

Google Chrome
User Agent changing

Testing in mobile device emulator

device or browser emulator

Internet

Web server

Testing on real mobile device

Internet

Web server

Mobile device testing in the cloud
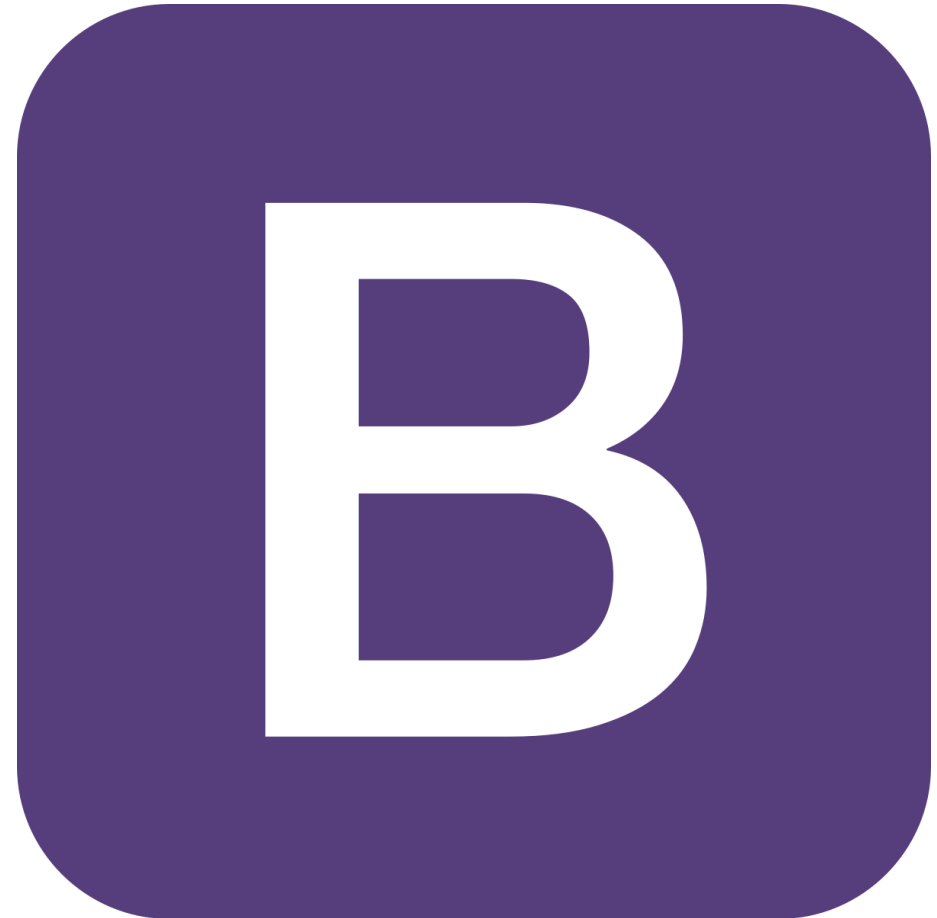
Internet

DeviceAnywhere
Cloud Service

Bootstrap

Biblioteka CSS

Licencja MIT

Zestaw narzędzi dla tworzenia interfejsu graficznego

Stylizacja tekstu, formularzy, przycisków, …

Responsywna siatka

Desktop vs Mobile View

Bootstrap Advantages

Easy to use

Responsive features

Mobile-first approach

Browser compatibility

Bootstrap Usage

Pobierz Bootstrap z getbootstrap.com

Dołącz Bootstrap z CDN (Content Delivery Network)

https://www.bootstrapcdn.com/

Należy również dołączyć bibliotekę jQuery

Bootstrap Web Page Example

Hello, world!

This is an example to show the potential of an offcanvas layout pattern in Bootstrap. Try some responsive-range viewport sizes to see it in action.

Heading

Donec id elit non mi porta gravida at eget metus. Fusce dapibus, tellus ac cursus commodo, tortor mauris condimentum nibh, ut fermentum massa justo sit amet risus. Etiam porta sem malesuada magna mollis euismod. Donec sed odio dui.

View details »

Heading

Donec id elit non mi porta gravida at eget metus. Fusce dapibus, tellus ac cursus commodo, tortor mauris condimentum nibh, ut fermentum massa justo sit amet risus. Etiam porta sem malesuada magna mollis euismod. Donec sed odio dui.

View details »

Heading

Donec id elit non mi porta gravida at eget metus. Fusce dapibus, tellus ac cursus commodo, tortor mauris condimentum nibh, ut fermentum massa justo sit amet risus. Etiam porta sem malesuada magna mollis euismod. Donec sed odio dui.

View details »

Heading

Donec id elit non mi porta gravida at eget

Heading

Donec id elit non mi porta gravida at eget

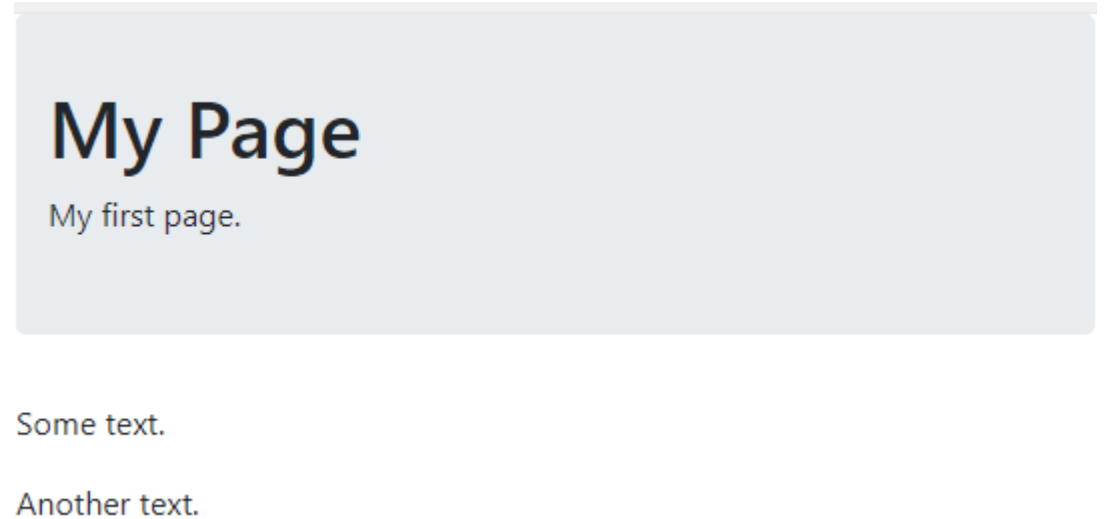### Heading

Donec id elit non mi porta gravida at eget

Bootstrap Container

```
<div class="container">
  <h1>My Page</h1>
  <p>Some text</p>
</div>
```

.container

Bootstrap Jumbotron

```
<div class="container">
  <div class="jumbotron">
    <h1>My Page</h1>
    <p>My first page.</p>
  </div>
  <p>Some text.</p>
  <p>Another text.</p>
</div>
```

My Page

My first page.

Some text.

Another text.

Bootstrap Grid System

span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1

span 4	span 4	span 4

span 4	span 8

span 6	span 6

span 12

Grid Classes

col-   bardzo małe ekrany, o szerokości mniejszej od 768px

col-sm-   małe ekrany, o szerokości co najmniej 576px

col-md-   średnie ekrany, o szerokości co najmniej 768px

col-lg-   duże ekrany, o szerokości co najmniej 922px

col-xl-   bardzo duże ekrany, o szerokości co najmniej 1200px

Grid Example

```
<div class="row">
  <div class="col-sm-4">Tekst A</div>
  <div class="col-sm-8">Tekst B</div>
</div>
```

Tekst A	Tekst B

Bootstrap Starting Point

Bootstrap   https://getbootstrap.com/

w3schools.com   https://www.w3schools.com/bootstrap4/

tutorial.point.com   https://www.tutorialspoint.com/bootstrap/

Syed Fazle Rahman, Bootstrap. Tworzenie interfejsów stron WWW. Technologia na start!, Wydawnictwo Helion:

https://helion.pl/ksiazki/bootstrap-tworzenie-interfejsow-stron-www-technologia-na-start-syed-fazle-rahman,bootst.htm#format/d

Jeden rozdział książki dostępy w materiałach do zajęć.