

# **Rich Applications**

## **info6005**

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**Electronics and Computer Science**



*Key Aim*

# Data Rich Applications and Open Data



# What is a data rich application?

# London

51.51 N, 0.13 W

Mon 28 Jan @ 20:07:00

Go to Map - Go to Grid - Change City

## WEATHER STATIONS (MULTIPLE SOURCES) 5

STATION	WIND SPEED	WIND GUSTS	DIRECTION	TEMPERATURE	HUMIDITY	RAIN TODAY	PRESSURE	FORECAST
CASA Office: Bloomsbury W1	10.3 mph	10 mph	SW ↙	10.9 °C	83%	2.0 mm	999.7 mbar	Cloudy Night
Hampstead NW3	15.4 mph	8 mph	SW ↙	10.0 °C	94%	2.0 mm	997.0 mbar	Cloudy Night
Ben Cook: Bow E2	7 mph	6 mph	S ↑	10.2 °C	94%	1.3 mm	1001.1 mbar	Clear Night

## WEATHER (METAR) 884

### London City Airport

Partly cloudy

**SSW at 21 mph** **10 C**

## FORECAST (YAHOO! WTH) 1784

Mon

**8 C**

Showers/Wind



Tue

**12 C**

Light Rain/Wind



## TUBE LINE STATUS (TfL) 14

Bakerloo	Good Service
Central	Good Service
Circle	Good Service
District	Good Service
H & C	Good Service
Jubilee	Good Service
Metropolitan	Good Service
Northern	Good Service
Piccadilly	Good Service
Victoria	Good Service
W & C	Good Service
Overground	Good Service
DLR	Good Service

## BIKE SHARING (TfL) 74

**2.1 %**

Stations Full

**2.5 %**

Stations Empty

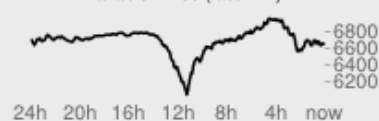
**6656**

Bikes Available

**550**

Bikes or Docks Faulty

Available Bikes (last 24h)



## ON THE STREETS NOW (TfL) 14

?

Underground trains

## RADS (CASA) 1

CASA Office Desk

**8**

cpm (uncalibrated)

## RIVER LEVEL (PLA) 284

Thames (Tower Pier)

**1.49**

metres

## AIR POLLUTION (DEFRA) 1784

1 = Low  
10 = V High

	Ozone	NO <sub>2</sub>	SO <sub>2</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>
Bloomsbury	1	1	1	1	1
Marylebone Rd	1	2	1	2	2
N Kensington	2	1	1	n/a	1

## STOCKS (YAHOO) 10

FTSE 100 Index

**6294.41**

+9.96 (0.16%)





**But what makes a  
rich application?**

# Nike+GPS

3G 7:20 AM

Done Summary

Your Run on 6/19/11 at 12:25pm 25

 **7.52mi**

8'56"/mi 1:02:06 431 cal

**TAG** Play Nike+ Tag

Share Run


Route Info

How was your run?

3G 9:30 AM

Done Distance Pace

7'32" FASTEST SLOWEST 9'15"



Finish 14.1mi 8'35"/mi 117:74



Google

3G 7:20 AM


Back Results Comments


RunGRL's Distance Game

## ChopStyx is IT.

 **ChopStyx**  2.13mi

Trash their screen


 **Rayarooo** 3.25mi

 **Hoai** 7.52mi

Home History Settings


3G 7:20 AM


Summary Cheers




**Lance Armstrong**

9 friends have cheered you on.

 **Kim Sewald** Good work! Youdabesssss!!! We need to go for a run soon. 2 minutes ago

 **Mark Wolton** You training for a marathon? 2 minutes ago

 **Carrie Bean** Awesome sauce! Let's meet up for a run soon 2 minutes ago



3G 7:20 AM

Edit History

Monday Distance ✓

**14.7mi**

Saturday Beat Your Best ✓

**12.8mi**  

12/23/09 Time ✓

**5.42mi**

Home History Settings

# National Rail

Departures **Live Progress**

Departed 3 Updated 16:51 15:44

Birmingham New Street	16:03	>
Departed 3 minutes late	16:06	
Birmingham International	16:14	>
Departed 2 minutes late	16:16	
Coventry	16:25	>
Departed 4 minutes late	16:29	
Leamington Spa	16:38	>
Departed 3 minutes late	16:41	
Banbury	16:55	>
2 minutes late	16:57	
Oxford	17:16	>
On time		
Reading	17:46	>
On time		
Basingstoke	18:08	>
On time		
Winchester	18:24	>
On time		

Edit **UK Train Times**

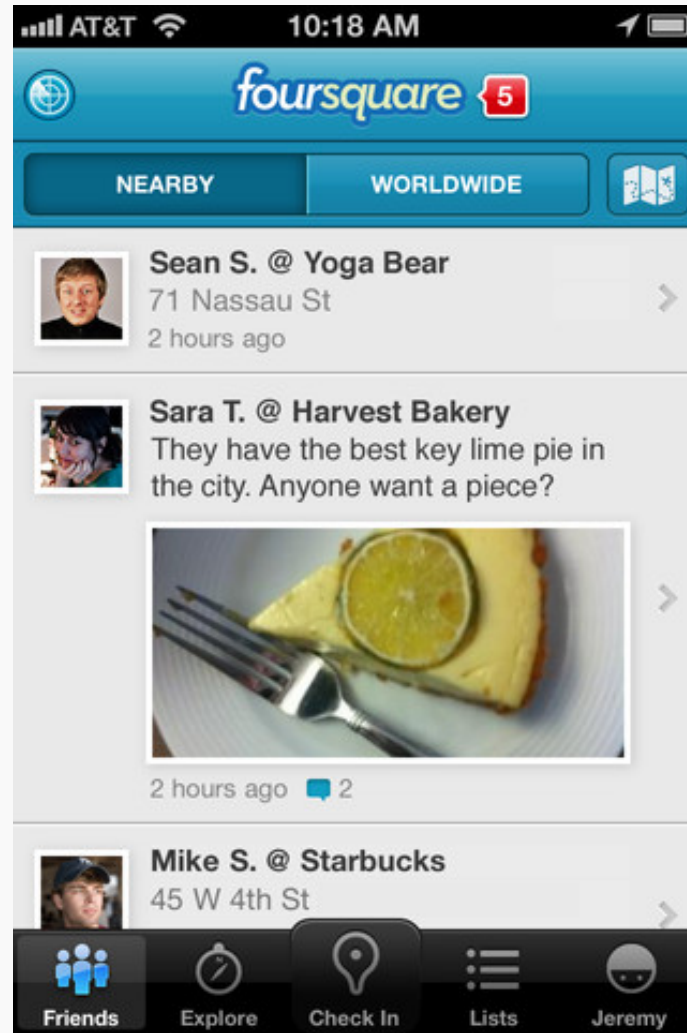
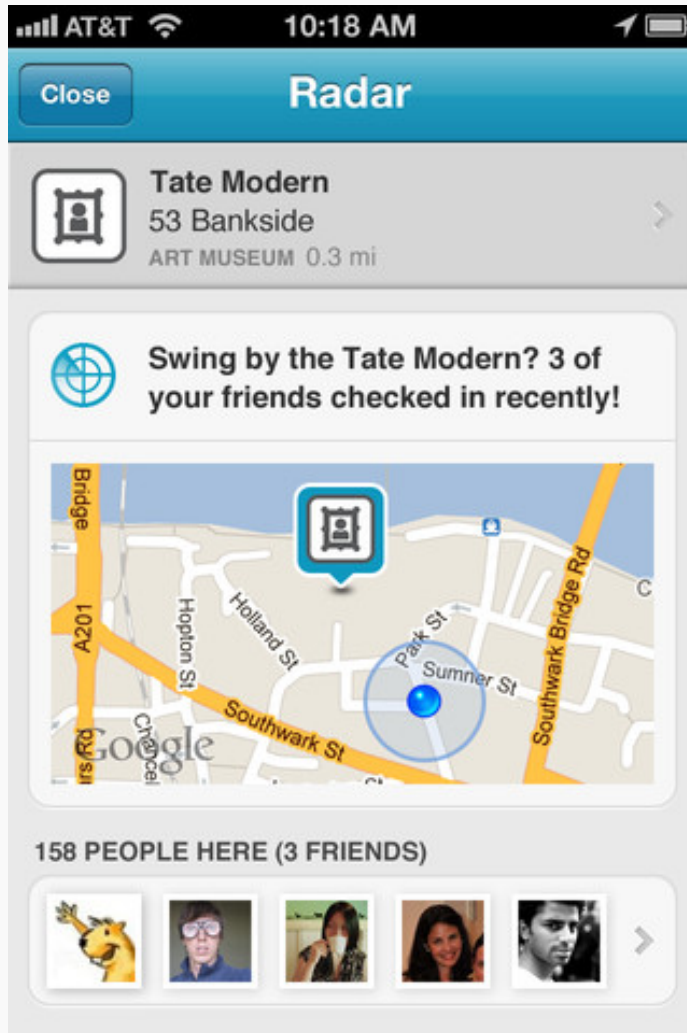
Live Departures & Arrivals

- Reading departures** >
- London Paddington departures** >  
Calling at Reading
- Select a station** >

Journey Planner

- Reading** >  
to **Liverpool (All Stations)**
- Plan a journey** >
- Next train home** >
- Recent search results** >

# Foursquare



Applications and data are resources which can be used to build new applications... quickly.

Rich applications source data and services from many places to provide something new.

Presented in the correct way, a simple breakthrough can make a \$RICH\$ Application.





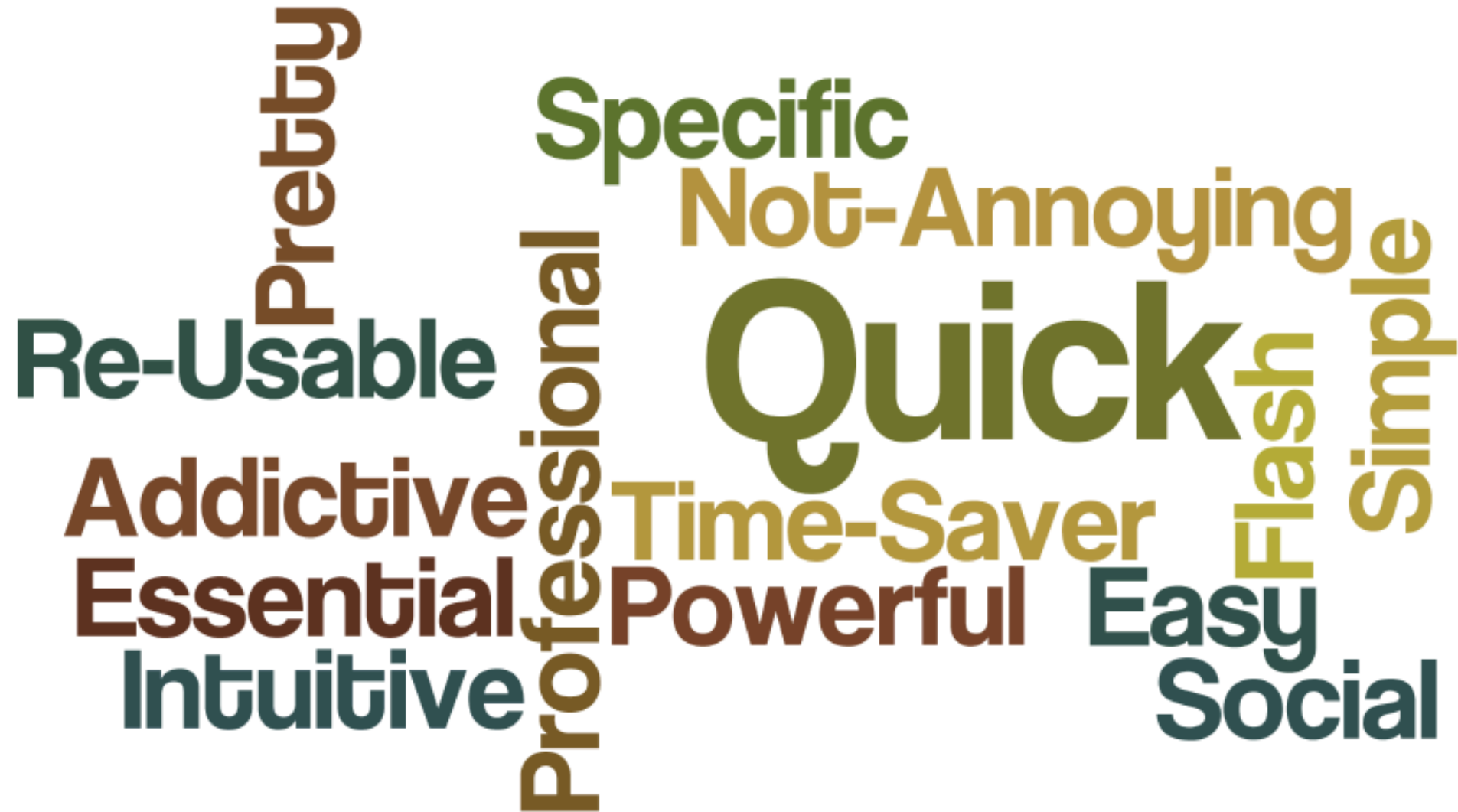


# What makes a rich application?

*Pretty*

*Addictive*

# What makes a rich application?



# From the Course Outline (1)

- User centric (participatory) design
- HCI, user experience, limitations and success factors
- Top-down development and bottom-up design.

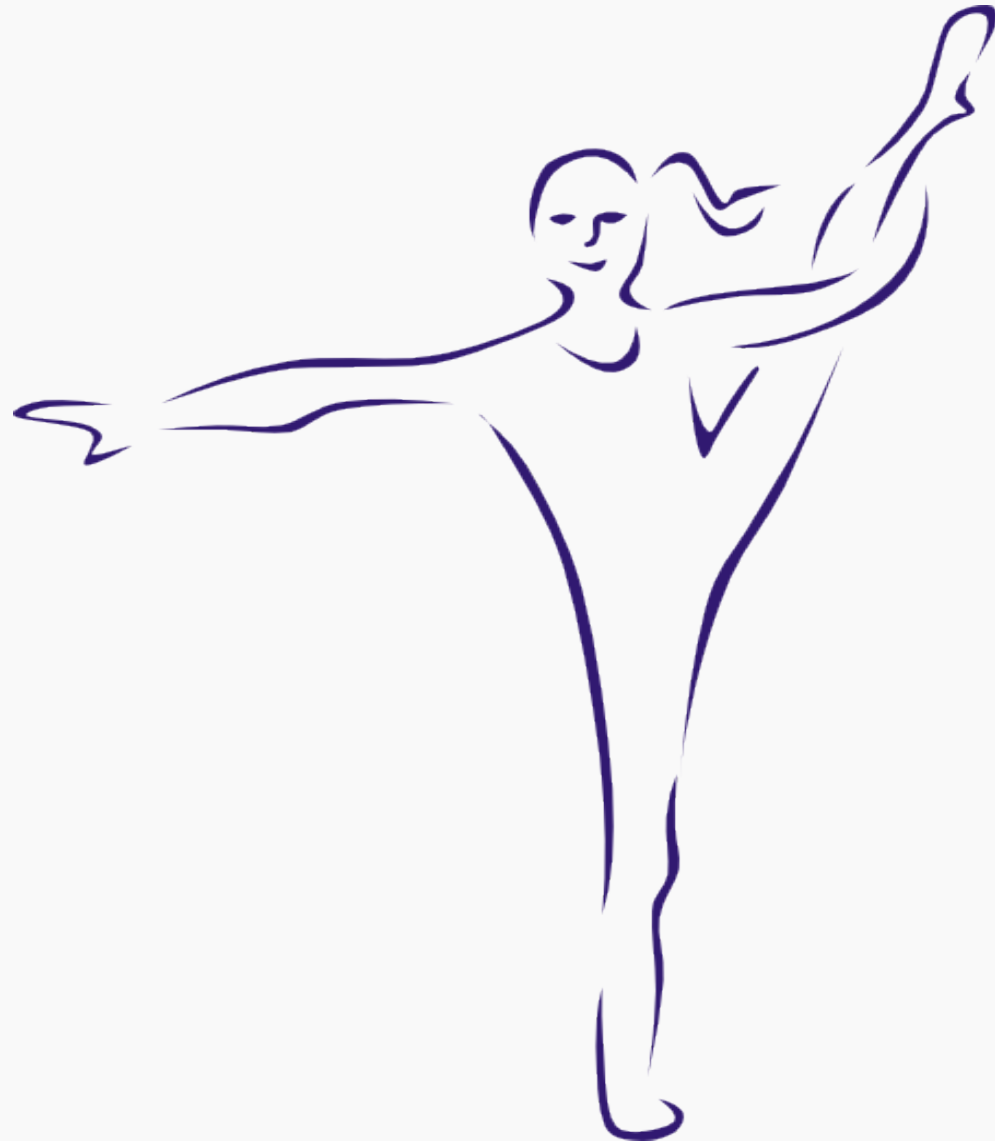
Now called UX Design  
(User eXperience)

# From the Course Outline (2)

- Evidence based research in developing rich, maintainable and usable applications.
- Main current debates within the discipline and theories informing these debates.

**Lastly....**

- **Agile**



# Recap...

- In this module we are going to look at the benefit of using open data to develop rich applications.
- By focusing on the end user and target market we are going to look at how to pitch a product and potential build a business.

# Course Topics

Validation  
Discovery  
Alignment  
Importing Open-Data  
Linked-Data

Agile Top-Down  
Mobile Development  
Visualisation

User-eXperience  
Re-Usability Focussed-Design  
Addiction

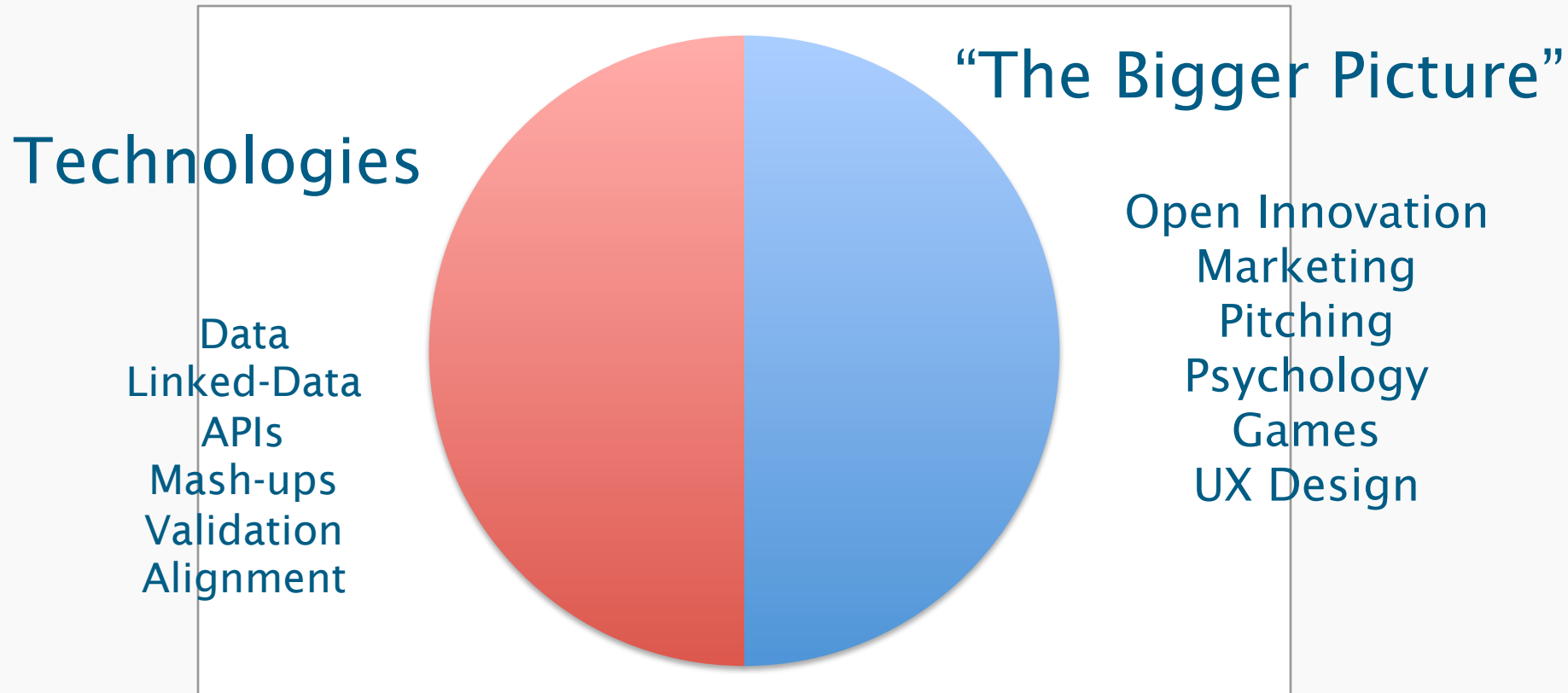
Open-Innovation  
Intellectual-Property  
Marketing Pitching

# Lectures

- 2 a week until after Easter.
- Guest Lectures
  - Will fit in schedule dependent on guest availability
- Keep an eye on the website and turn up to find out what is happening.
- [www.ecs.soton.ac.uk/notes/info6005](http://www.ecs.soton.ac.uk/notes/info6005)



# Course Balance (Teaching)



# Course Outline

- First 5/6 Lectures
  - Open Data
  - Discovering Open Data
  - Importing
  - Validating
  - Aligning
  - Visualising

## Coursework 1 - Visualisations

# Coursework 1 - Visualisations

- Take a given data set and visualize the data for discovery and exploration in at least two different ways.
- Not sure if maps will be banned.
- Individually assessed.
- (To Be Confirmed)

# Course Outline

- ~9 Lectures
  - Rapid Innovation
  - Mobile Development
  - UX Theory and Evaluation
  - Game Theory
  - Addiction
  - Open Innovation and IP
  - Pitching

## Coursework 2 – A Rich Application



# Coursework 2 - Develop and Present a Rich Application (Group)

- This is an open ended coursework however:
  - It **must** use at least two sources of open data
  - **Must** show good UX Design
  - **Must** be a product with a target market
  - **Must** use at least one technology outlined on this course.
  - **Must** have a working prototype that demonstrates above (not necessarily complete).

# Coursework 2 - Assessment

- Each application will be pitched to a panel of professional judges (dragons)
  - The Pitch is worth a lot of marks
- Each application must be accompanied with report (~8 Pages, no more than 12) outlining design choices and target markets

# Little tip for success on this course

## Produce products, not code

(code is a tool used to produce a product)

# Good Luck and Have Fun

