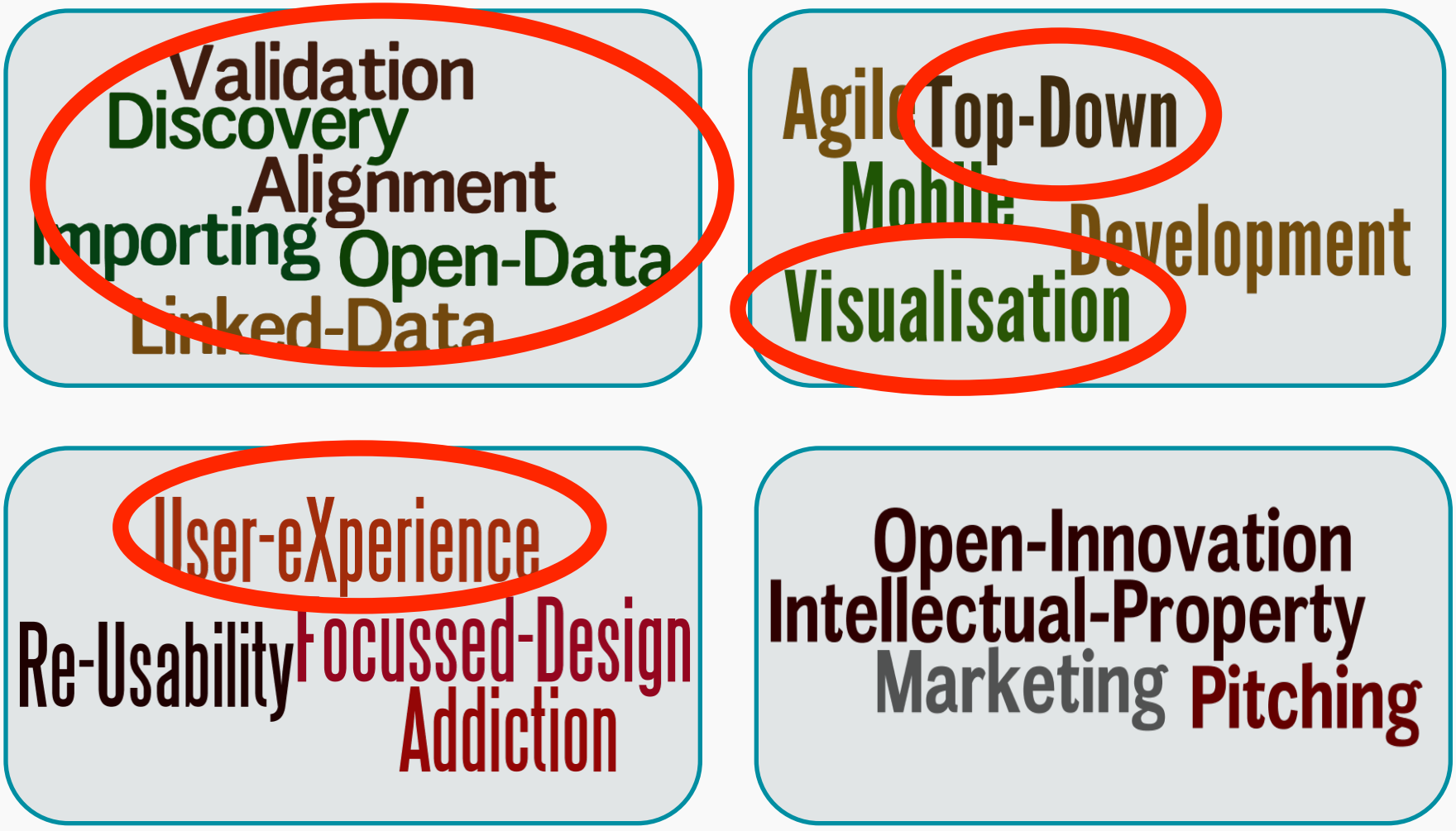
UNIVERSITY OF Southampton

Introduction to D3
(and coursework)

!Max

Apologies. Max is trying to keep himself together.

Coursework 1



Coursework 1

- Produce 2 Interactive Visualisations from the supplied dataset
  - You should aim to make the visualisations different (e.g. not two bar charts!)
- These visualisations should be both appropriate for:
  - Representing the data
  - Presenting to a target audience

Coursework 1

- Interactive
- Dynamically Generated
- Web Based

Coursework 1

- GP Earnings and Expenses DataSet

- Dataset from 2009-2010 and 2010-2011

- **You do not have to use all of the data**
  - e.g. Limited columns
  - e.g. Limited timeframe

Tips

- This coursework is 20%
  - 40% as this is a double module
- Distribute your effort in order to cover the marks scheme.
- Don’t get too stuck in one area.

Marks Distribution

- Choice of Visualisations (5 Marks)
- Implementation (4 Marks)
- Interactivity (4 Marks)
- Cleaning and Manipulation (5 Marks)
- Completion (2 Marks)

Choice of Visualisations (5 Marks)

- Two Visualisations
- Appropriate to the data
- Appropriate to the audience
- Multi-Dimensional

Interactivity (4 Marks)

- Appropriate
- Enables Selection
- Filtering
- Analysis

Implementation (4 Marks)

- Uses appropriate library
- Dynamic
- Flexible
- Elegant and maintainable, robust and smooth in operation

Cleaning and Manipulation (5 Marks)

- Identified
- Corrected

- Essentially 1 mark per error type
- Manipulated / Enriched

Completion (2 Marks)

- Exceptional Solutions
  - This is the section reserved for surprising the markers with exceptional results
- There are many ways to get these marks
  - Due care and attention to complete one area
  - Exceptional implementation
  - Enriching data (don't lose audience!)
- 2 Marks! So don't focus on this

D3

- A JavaScript library to manipulate a web page in the context of a dataset

- HTML, SVG or Canvas
- CSS, jQuery and JSON

- Focuses on the data

D3 (Continued)

- Forces the publication of data
- Proper use of technologies
- Reads JSON ☺

Toolkit

- D3 javascript
- Debugging Console!
- (jsFiddle)

D3 Key Methds

- ‘Method Chaining’ or ‘Cascading’

- select() and selectAll() blesses a node ready to receive data.

- enter() prepares items in the dataset NOT displayed to be rendered.
  - All to start with
  - Limited Items Later

DEMO

(the bit where it goes wrong)

Resources

- Getting Started with D3 (O'Reilly)
- http://alignedleft.com/tutorials/d3/
- Interactive Data Visualisations (O'Reilly – March 2013)