



# DATA ENCOUNTERS OF THE THIRD KIND

**Marian Hilditch**

AUA Annual Conference and Exhibition

15 April 2019, Manchester

The future of HE data is now.  
But what does it mean?



# DATA PRESENT



# The Cambridge Analytica Files

A year-long investigation into Facebook, data, and influencing elections in the digital age

## Key stories

Hide



**Facebook's week of shame / The Cambridge Analytica fallout**

Mark Zuckerberg apologises for Facebook's 'mistakes'

**Observer comment cartoon**  
An apology - of sorts -

**Politicians can't control the digital giants with rules drawn up for the analogue era**  
*Andrew Rawnsley*



**'Did they just use me? Was I naive?' / Brexit whistleblower speaks out**

**Report** Insider claims Vote Leave may have

## The imp in the machine

“Yes, data is big, but hasn’t it always been so? In fact, didn’t it used to be bigger, like, room-loads big? Yes, the data has been there: unstructured, untidy, and unusable, gathering dust in the basements of governments and universities alike. And it’s true, Big Brother has always been watching; the difference is that, as the Cambridge Analytica files would show, Big Brother now has the ability to *understand*.”

<https://wonkhe.com/blogs/the-imp-in-the-machine/>

# MEANWHILE, ELSEWHERE

# OfS Data Vision

## Condition F4: Provision of information to the DDB

**Condition F4:** For the purposes of the designated data body (DDB)'s duties under sections 64(1) and 65(1) of HERA, the provider must provide the DDB with such information as the DDB specifies at the time and in the manner and form specified by the DDB.

139. The OfS will seek to ensure that the selection and specification of lead indicators allow the identification of possible increased risk before this crystallises. Indicators that provide strong signals of likely future risk (for example significant shifts during the student recruitment cycle) and data trends over time will be more useful than data that retrospectively reveals where problems have already occurred (unless those problems have not previously been identified).



## The CEO's vision for the Office for Students

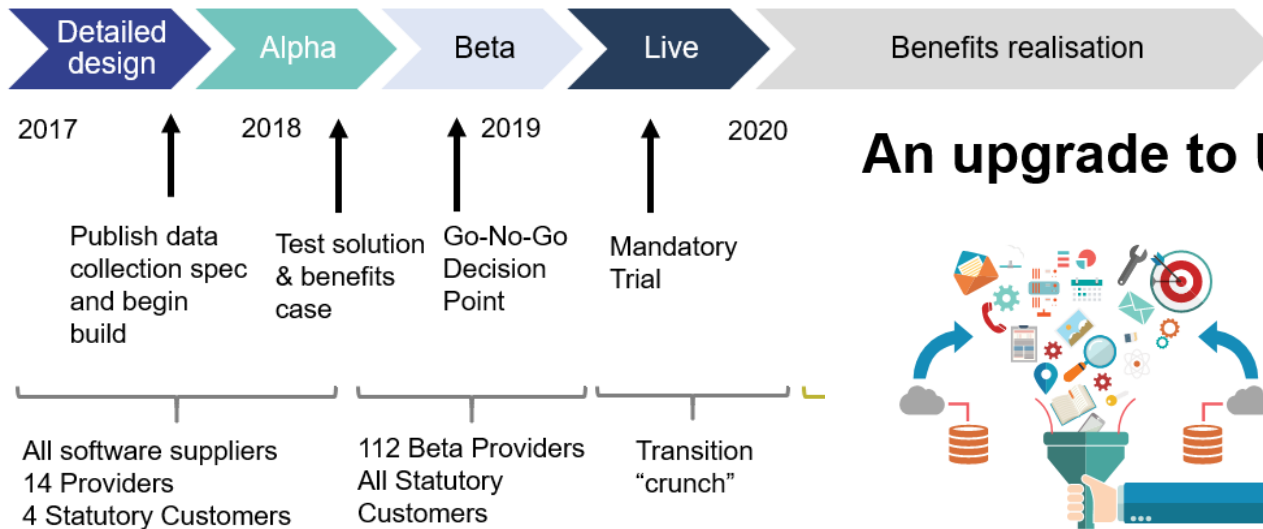
Is the data robust enough to make regulatory decisions? Is the burden appropriate? Nicola pointed to the development of the OfS Data Strategy over the spring and summer. She feels that regulating based on data can remove bias, but getting there will require some work. Intelligent use of data could lead to the ability to make predictions. She hints that the Data Futures project will play a part here and wants the OfS to be held to the idea that compliant institutions should see less regulatory burden.

The OfS will use existing data where possible – and will work with providers in 18-19 to ensure that this approach will work.

1 year ago by [DAVID KERNOHAN](#) Mar 20th 2018, 10:40:21



# Programme timeline



# The move to Data Futures and the benefits it will bring

## An upgrade to UK HE data infrastructure



- HESA as a hub for data collection
- Agile 'data-driven' system
- In-year collection regime, connected to existing data
- Fit for purpose governance
- Initially looking at Student record (including AP and ITT)

**New collection process and data model, aligned with the business process and events at an Institution level**



# OfS Data Strategy

## Office for Students data strategy

2018 to 2021

Reference OfS 2018.50

Enquiries to [datastrategy@officeforstudents.org.uk](mailto:datastrategy@officeforstudents.org.uk)

Publication date 29 November 2018

1. This document sets out how the Office for Students (OfS) will use data to support our regulatory responsibilities for the period of the first OfS strategy, 2018 to 2021. Over this time, as we continue to develop our regulatory approach, we will in parallel shape a longer-term data strategy for 2021 and beyond.
2. This is, therefore, a data strategy in development. It describes our high-level approach to collecting and managing data, and the sorts of behaviours that students, higher education providers and others can expect from us. It also outlines our plans to deploy a wide range of data, while making clear our expectation that our use of data will evolve significantly over the coming years.

### What we mean by 'data'

13. We interpret data in the broadest possible sense. For us data includes:

- structured data returns from individual higher education providers to HESA, the OfS, the Education and Skills Funding Agency (ESFA) and other bodies
- administrative data collated by others such as the Student Loans Company (SLC), UCAS and DfE
- qualitative and textual data such as that collected through surveys of students and stakeholders, and providers' access and participation plans
- **unstructured and big data from sources such as social media and web analytics.**

# AND THEN

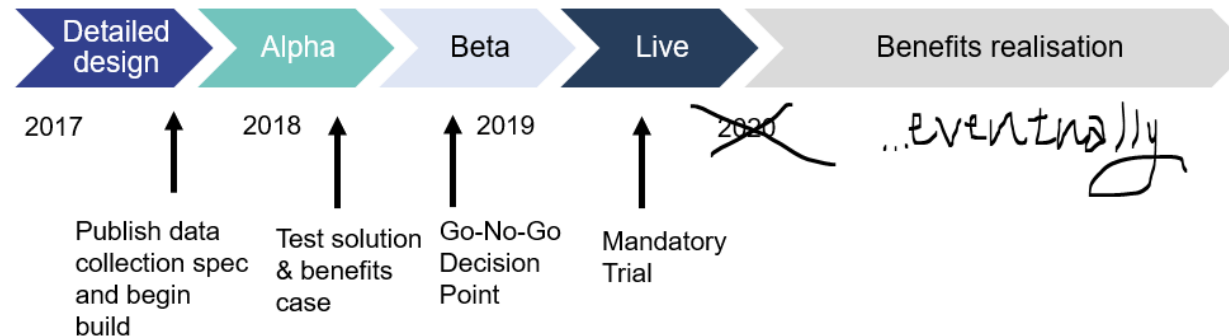
# Data Futures: programme update

12 March 2019

We are writing to provide an update on the current position regarding Data Futures. This information comes in the light of risks raised by the Programme Team, and a recent independent review of the programme. It also follows a discussion at the [Data Futures Programme Board](#) meeting on 27 February, and the HESA Board meeting on 1 March.

## Data Futures progress

The first and most important point is that Data Futures will not be going live in 2019/20. This is clearly a significant development, with practical implications for all parties. We are aware that it may cause difficulties for some providers in particular.





SHOWTIME

BUT ALSO

# The last couple of years in HE data

- Apprenticeships
- Teaching Excellence & Student Outcomes Framework (TEF)
- Evolving student loans
- Graduate Outcomes\*

\*though it is reducing burden compared to the DLHE



All resource intensive, hard to incorporate into BAU, undergoing constant revisions or encountering implementation setbacks.

## And still to come

- Postgraduate Taught Feedback survey
- KEF (Knowledge Exchange Framework)
- Augar review...

# New datasets

Collection

## Statistics: higher education graduate employment and earnings

Official statistics on longitudinal education outcomes showing university graduate earnings and employment.

The longitudinal education outcomes (LEO) statistics bring together:

- education data from the Department for Education (DfE)
- employment, benefits and earnings data from:
  - the Department for Work and Pensions (DWP)
  - Her Majesty's Revenue and Customs (HMRC)

Office for Students



## Access and participation dashboard

The dashboard can be used to compare different student groups (for example, disabled students or students by their ethnic background) and their peers, and reveal gaps in access, continuation, success and progression.

The poster features a central illustration of a hand holding a smartphone. The phone screen displays a circular graphic with a graduation cap in the center and labels for various professions: Doctor, Designer, Teacher, Developer, and Journalist. The background is orange. Logos for the Department for Education, ODI, and NODE LEEDS are visible on the left. Text on the right provides details about the competition and events.

DfE Higher Education Open Data Competition

Department for Education

ODI

NODE LEEDS

### Higher Education Open Data Competition

Digital tools for prospective students

Warm up events:  
Newcastle - 2 July  
London - 3 July  
Manchester - 6 July

Innovation event:  
Leeds - 18 July

## Emerging Economies University Rankings 2019

The *Times Higher Education* Emerging Economies University Rankings 2019 includes only institutions in countries classified by the FTSE as “advanced emerging”, “secondary emerging” or “front

[Explore](#)



## Latin America University Rankings 2018

The *Times Higher Education* Latin America University Rankings lists the best universities in the Latin America and Caribbean region.

[Explore](#)



## Asia University Rankings 2018

In calculating the top universities in Asia, the *Times Higher Education* Asia University Rankings 2018 use the same 13 performance indicators as the *THE* World University Rankings,

[Explore](#)



## World University Rankings 2019

The *Times Higher Education* World University Rankings 2019 includes more than 1,250 universities, making it our biggest international league table to date.

[Explore](#)



## World Reputation Rankings 2018

The *Times Higher Education* World Reputation Rankings 2018 are based on the world's largest invitation-only opinion survey of senior, published academics.

[Explore](#)



## Young University Rankings 2018

The *Times Higher Education* Young University Rankings list the world's best universities that are aged 50 years or under. The 2018 ranking includes 250 universities, up from 200 in 2017.

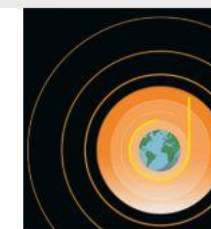
[Explore](#)



## University Impact Rankings 2019

The *Times Higher Education* University Impact Rankings are the only global performance tables that assess universities against the United Nations' Sustainable Development Goals.

[Explore](#)



## Wall Street Journal/Times Higher Education College Rankings 2019

The *Wall Street Journal/Times Higher Education* College Rankings give students and their families the information that they need to help them choose where to study.

[Explore](#)



## Japan University Rankings 2019

The *Times Higher Education* Japan University Rankings 2019, based on 16 individual performance metrics, are designed to answer the questions that matter most to students and their families when...

[Explore](#)



## Europe Teaching Rankings 2018

The Europe Teaching Rankings is part of *Times Higher Education's* series of tables focusing on institutions' teaching and learning environments for students.

[Explore](#)





# What do providers gain from all this?

## Own data

- Understanding of student behaviours to support retention
- Supporting at-risk students
- Increasing student satisfaction
- Addressing low attainment
- Improving academic offerings
- Workload planning
- Cost saving

## Sector data

- Increased intelligence (sector, market, competitor)
- Benchmarking
- Can predict trends
- Providing for future market needs
- Ensuring own viability
- There's bound to be a league table everyone's on top of by now

...and more

# WITH GREAT POWER

# Learner Analytics

## Discussion groups

1. Using indicators of non-engagement as potential wellbeing alerts
2. Making the best use of the data we have about students to support them to thrive
3. Questions of ethics, wellbeing and informed consent



## Student suicides: the bereaved father who says data could save lives

James Murray, whose son took his own life, wants universities to use patterns of data to identify struggling students



▲ James Murray is the father of Ben Murray, the Bristol University student who took his own life aged 19 in May, pictured at his home in Falmouth. Photograph: Adrian Sherratt

Mon 8 Oct 2018 10.37 BST

# Artificial Intelligence

## Don't ignore the ethics of learning analytics

ANALYSIS | 5/02/19

In the work we do with universities, a danger we have identified is that **data analysis algorithms that embed demographic factors hold the potential for bias.** Whenever a mathematical model is created, weight is attributed to certain conditions which then indicates an outcome. Gender and racial bias in algorithms are topics of heated debate in the sector, and latent bias exists in many Learning Analytics approaches that we have seen.

<https://wonkhe.com/blogs/dont-ignore-the-ethics-of-learning-analytics/>



Cat Hallam  
@CatHallam1

Follow

Today, I simply wanted to renew my passport online. After numerous attempts and changing my clothes several times, this example illustrates why I regularly present on Artificial Intelligence/Machine Learning bias, equality, diversity and inclusion. #passport

7:09 PM - 6 Apr 2019

### You need another photo

This photo has failed our automated checks for the following reasons:

**✗ It looks like your eyes are closed** ←  
You must keep your head straight and in the centre of the photo.  
You can still submit your photo if you believe it should be accepted (eg there's a medical reason why you can't open your eyes).

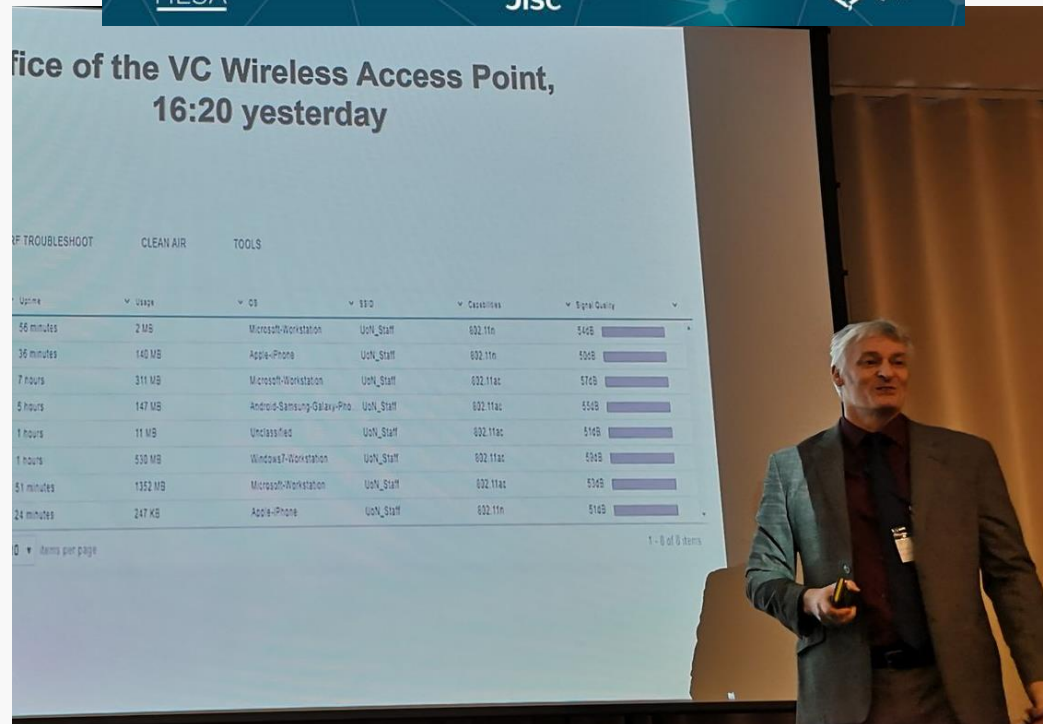
**✗ Your photo quality is too low**  
You need to use a photo that's between 50kb and 10mb

**✗ It looks like your mouth is open** ←  
Sometimes this is caused by facial hair or shadows near your mouth. Please try different lighting.  
You can still submit your photo if you believe it should be accepted (eg there's a medical reason why your mouth appears to be open).

Your photo



# Intelligent campus



## University accused of using 'sinister' surveillance technology to track what websites its students are looking at

- Vice-chancellor Nick Petford said its new Waterside campus 'pretty much knows what you're doing 24/7'
- He said system could even draw 'heat maps' of where groups were congregating
- He also explained the attendance of overseas students was being monitored

PUBLISHED: 00:31, 20 January 2019 | UPDATED: 11:32, 22 January 2019



A university was last night accused of using 'sinister' surveillance technology to track students and check what websites they are looking at.

Northampton University vice-chancellor Nick Petford told a conference in **London** last week that its new Waterside campus 'pretty much knows what you're doing 24/7' thanks to its use of new technology.

Prof Petford said that the IT system at the campus could even draw 'heat maps' of where groups were congregating, based on which buildings students had accessed with their ID cards.

<https://www.dailymail.co.uk/news/article-6611317/University-accused-using-sinister-surveillance-technology.html>

# ETHICS

- Is the sector mature enough to manage this much data?
- Do providers understand their responsibilities from collection to dissemination?
- Can we justify why we collect each piece of data?
- Is our data secure?
- What kind of decisions are we making based on the data we analyse?
- How much of the decision making is left to technology?
- Do we have the capacity/knowledge/infrastructure to act on findings?

Is your data correct?

# THANK YOU

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(to end of April)

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(from May)

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