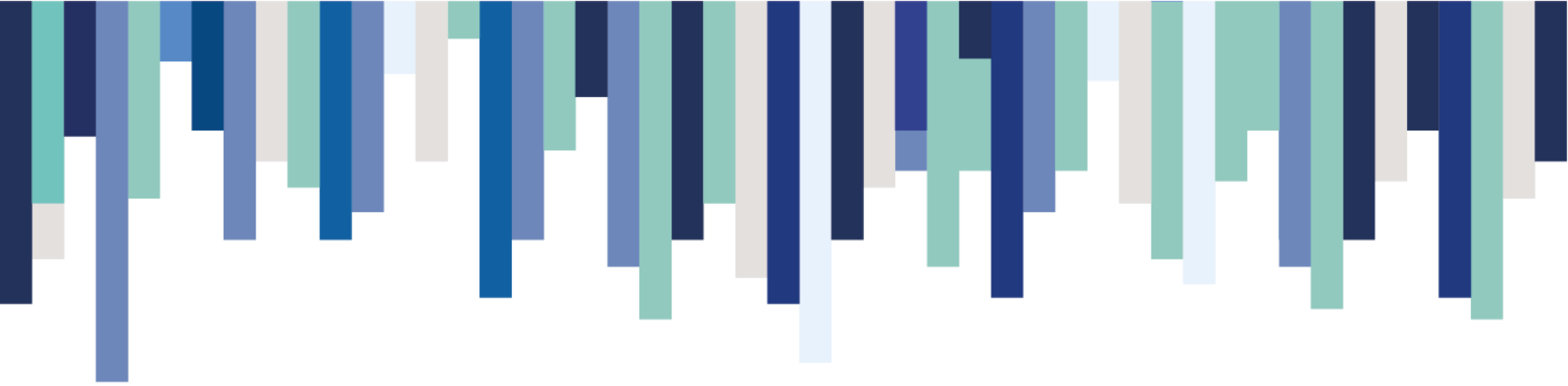



# HESA



## **Are you data capable?**

Andy Youell

HEIDA Conference, Istanbul, 2016-09-22



## Where we were

- Un-coordinated approach to data collection
  - Different definitions
  - Different timescales
  - Different request points
- Duplication and burden
- Incoherence
- Missed opportunities

## Data capability

- System level – Oversight, leadership
- Organisation level – Governance, management
- Individual level – Skills, knowledge



## Governance

- Oversight and leadership of the information landscape
- Increased collaboration
  - Standardisation
  - Rationalisation
- Good practice for data collection and sharing
- Efficiency and effectiveness of data flows
  
- Data Landscape Steering Group

## Data standards

- Standard = Specification x Adoption
- Rigid data specifications
- Complex, dynamic realities
- Routes and opportunities to adoption

## Why are standards difficult?

- Different realities
- Different understanding of the same reality
- Different language to describe realities
- Data to support different processes and functions
  
- Inconsistent adoption
- Lack of oversight/leadership
  
- Success of HEIDA model depends on standards!

## Data capability

- Foundations of data management and governance
  - Lots of activity in the value-add space
- What does good look like?
- How do we get there?



## Organisation symptoms

- Data = Burden
- Duplication within organisation
- Lack of systems integration
- No single source of truth
- Difficult/failed BI projects
  
- Lack of standards and rationalisation



17,179,869,184

## Spreadsheets

- Conflate data and algorithms
- Make assumptions and change your data
- Very difficult to QA
- Version control problems
  - Spread and mutate like a virus
  - Multi-user editing

## Debug this.....?

```
Invoice_total = (SELECT SUM(item_price  
    * quantity) FROM shopping_basket) *  
    (1+tax_rate)
```

```
= ( (Sheet1!F17*Sheet1!G17) + (Sheet1!F18*S  
heet1!G18) + (Sheet1!F19*Sheet1!G19) + (She  
et1!F20*Sheet1!G20) ) * (1+Sheet2!B14)
```

## Debug this.....?

```
=IF($B$2=1,Mthly!B3,)+IF($B$2=2,SUM(Mthly!B3:C3),)+IF($B$2=3,SUM(Mthly!B3:D3),)+IF($B$2=4,SUM(Mthly!B3:E3),)+IF($B$2=5,SUM(Mthly!B3:F3),)+IF($B$2=6,SUM(Mthly!B3:G3),)+IF($B$2=7,SUM(Mthly!B3:H3),)+IF($B$2=8,SUM(Mthly!B3:I3),)+IF($B$2=9,SUM(Mthly!B3:J3),)+IF($B$2=10,SUM(Mthly!B3:K3),)+IF($B$2=11,SUM(Mthly!B3:L3),)+IF($B$2=12,SUM(Mthly!B3:M3),)
```

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```
=IF($B$2=1,Mthly!B3,)+IF($B$2=2,SUM(Mthly!B3:C3),)+IF($B$2=3,SUM(Mthly!B3:D3),)+IF($B$2=4,SUM(Mthly!B3:E3),)+IF($B$2=5,SUM(Mthly!B3:F3),)+IF($B$2=6,SUM(Mthly!B3:G3),)+IF($B$2=7,SUM(Mthly!B3:H3),)+IF($B$2=8,SUM(Mthly!B3:I3),)+IF($B$2=9,SUM(Mthly!B3:J3),)+IF($B$2=10,SUM(Mthly!B3:K3),)+IF($B$2=11,SUM(Mthly!B3:L3),)+IF($B$2=12,SUM(Mthly!B3:M3),)+($B$2=1,Mthly!B3,)+IF($B$2=2,SUM(Mthly!B3:C3),)+IF($B$2=3,SUM(Mthly!B3:D3),)+IF($B$2=4,SUM(Mthly!B3:E3),)+IF($B$2=5,SUM(Mthly!B3:F3),)+IF($B$2=6,SUM(Mthly!B3:G3),)+IF($B$2=7,SUM(Mthly!B3:H3),)+IF($B$2=8,SUM(Mthly!B3:I3),)+IF($B$2=9,SUM(Mthly!B3:J3),)+IF($B$2=10,SUM(Mthly!B3:K3),)+IF($B$2=11,SUM(Mthly!B3:L3),)+IF($B$2=12,SUM(Mthly!B3:M3),)
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```





HESA



## Spreadsheets

- The ultimate data enabler
- Drive massive levels of data duplication
- Everybody is a data scientist / engineer...
- ...irrespective of their skills and knowledge
- 88% of spreadsheets contain errors

# Data capability toolkit

- Helping organisations help themselves
  - HE providers
  - Data collectors and processors
- Available at **[www.hediip.ac.uk](http://www.hediip.ac.uk)**

PROJECTS -> DATA CAPABILITY



## **Capability maturity model**

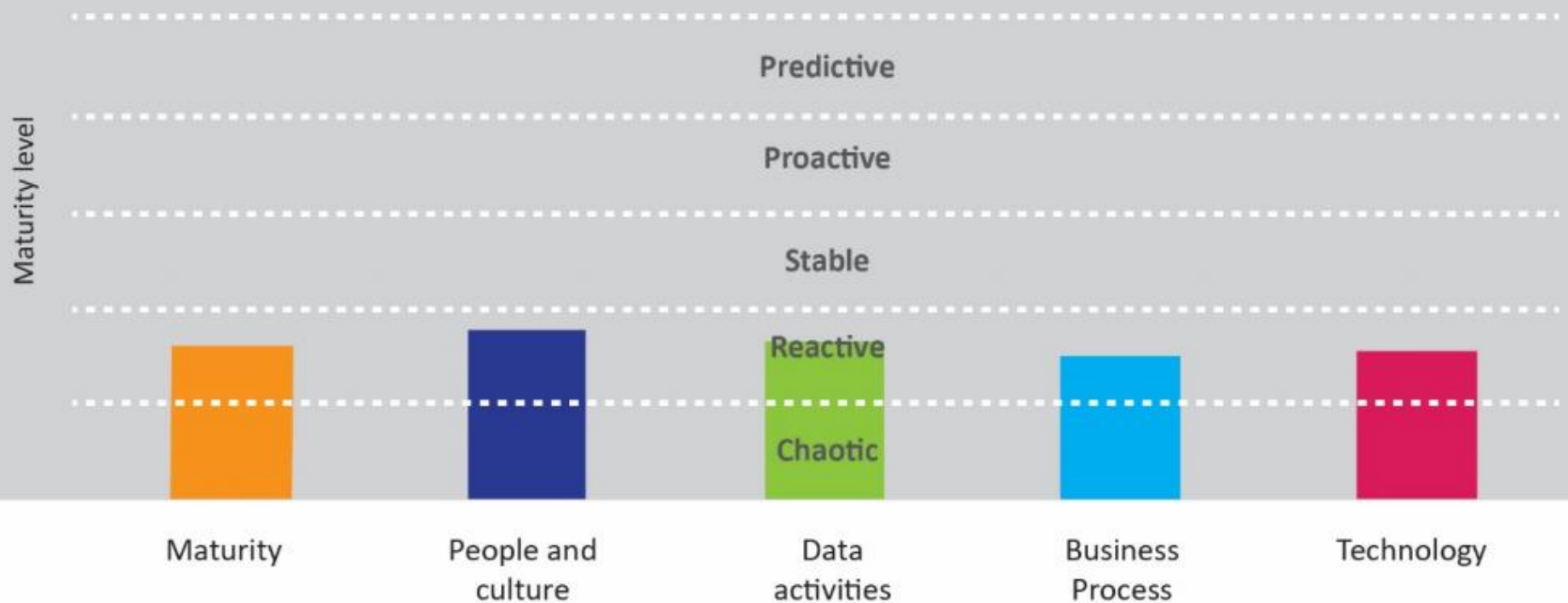
- Predictive
- Proactive
- Stable
- Reactive
- Chaotic

## Roll-out

- Training seminars
- LinkedIn group
- Follow-up workshops
  
- Self-assessment data for over 100 UK HE institutions ...
- ....analysed in a report

## Data capability : A call to action

Maturity levels split by capability





## **Data capability : A call to action**

- The way data is perceived is not the way it is managed
- Data is held, managed and used in silos
- Data is not aligned to wider business processes
- Business intelligence is not supplied by trusted data
- Data governance is weak

## Raising the agenda

- Developing a community of practice
- Blogs, presentations etc
- Messaging for senior staff
- Keeping data issues on the policy agenda

## Future

- Redesign of HESA data collection processes
  - Bring external reporting closer to business processes
- Support for community of practice
- Engage more with other sectors
- Re-run sector-wide assessment

HESA



## **We want....**

- Efficient and effective organisations
- Better user experiences
- New user experiences
- Drive more value from data

# HESA



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