

# Data Capability: A call to action

## Executive Summary

January 2016

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The HEDIIP Data Capability project was commissioned in December 2014 to improve the standards of data management and governance across the information landscape. The project developed a toolkit which assesses an organisation's capability maturity and provides a framework and benefits case for improvement.

The assessment is based on a 5-level maturity model.

### Chaotic

No formal data management capability exists, Data is collected, stored and processed in an entirely operational context and without any visible business process or objective assurance.

### Reactive

A nascent data management capability is emerging. Known outputs are supported by informal roles and simple business processes. The real value of data is unlikely to be well understood or advocated by non planning or returns staff, although the value of outputs - especially statutory obligations will be.

### Stable

Data Management is embedded for key datasets and statutory outputs. Roles have emerged and business process reduce reliance on individuals. Data Quality measurement will be patchy, focused on where information asset accountability has been devolved.

### Predictive

Data Management is a visible organisational capability. The majority of outputs are automated and supported by rigorous and integrated business processes. Capacity for business change is available and likely to be supported through a form of data architecture function.

### Proactive

Data Management has morphed into a strategic capability. It is the foundation for the development of new and innovative services, of which predictive analytics and sophisticated data linking are just two.

## The HEDIIP Data Capability toolkit

This assessment forms part of a wider data capability process which links improvements in data capability to objectives – both near and longer term – of the organisation. The process steps through the 8 stages shown below.

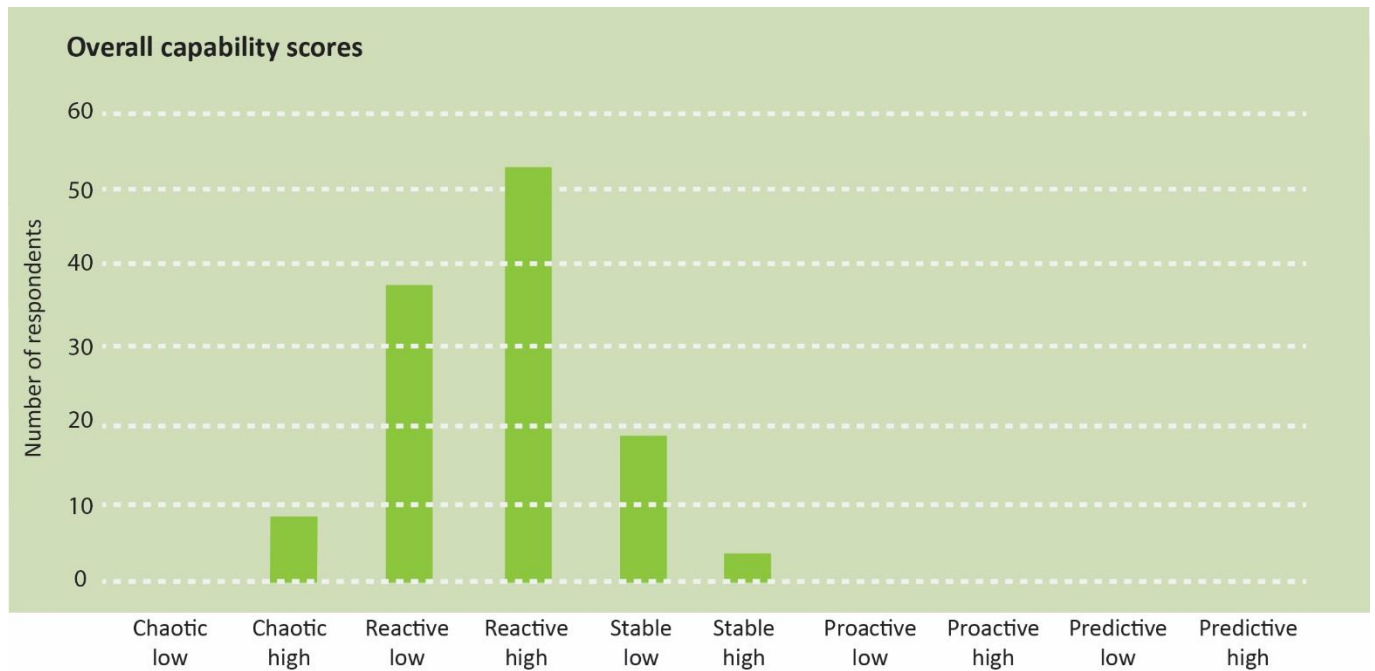


The process involves assessing the current level of data capability and establishing the desired level, derived from benefits linked to organisational objectives. From here, gaps can be described and mitigations planned, often as a part of daily operations and within current initiatives for change.

The toolkit was launched in June 2015 with 167 staff from 101 institutions having been trained on the value and use of this toolkit during the second half of 2015.

The on-line self-assessment process has generated all the data analysed in this report.

## Overall capability scores



The majority of assessments fell into the reactive level. No institution believes it has a proactive or predictive capability for managing its data. The reasons for that came out clearly in the detailed findings summarised below:

## Findings

### 1. The way data is perceived is not the way it is managed.

The analysis suggests that the value of data and its stewardship are seen as both important and embedded. However, this perception does not appear to be borne out in reality. This potentially softens the desire to drive the changes required to embrace opportunities created by a true data asset.

### 2. Data is held, managed and used in silos.

This builds on the first finding. Data is often collected, transformed and used for very specific outputs which in turn reduces its wider value. This approach brings with it duplication and confusion caused by multiple copies of the same data, none of which everyone trusts.

### 3. Data is not aligned to wider business processes.

Because data is being held in silos, its operation and management often do not conform to documented business processes.

### 4. Business Intelligence is not supplied with trusted data.

Although there are encouraging investments in business intelligence solutions, the data underpinning such tools often lacks the quality to be trusted.

## 5. Data Governance is weak.

The oversight and assurance of data assets should be treated in a manner comparable to finance and estate assets. This is the purpose of governance and there are some weaknesses in this area especially around data ownership.

While this may paint a picture of doom and gloom, there is much encouragement to be taken from the findings. There is evidence that institutions have an understanding of how data can support objectives, and a willingness to create better data outcomes through insight and collaboration.

It is worth reviewing the benefits of generating momentum in this direction of travel. At the same time, risks of the current state should also be explained.

### Benefits

#### Improved decision making

With better data comes better decision making. These are collaborative decisions because there is a single set of trusted data everyone is working with. It will also provide a higher return on investment for existing or planned business intelligence activities.

#### Reduced cost of operations

Once data is managed as an asset, much duplication, rework and confusion will disappear. The cost of known internal and external returns will fall, as will the ever increasing efforts to complete them on time and to a high level of accuracy.

#### Foster collaboration

Even creating a shared understanding of 'data problems' can be a catalyst for collaboration. Often, tactical solutions backed by expensive technology implementations are seen as the 'quick fix' for poorly understood business issues. A data culture starts with this business problem and bring together data, process, people and technology to resolve it in support of institutional goals.

#### Support for change

Many institutions are undergoing transformational change programmes. This is in addition to external changes in data collections and policy developments such as the TEF. Data will be at the heart of supporting these changes and providing new opportunities.

#### Student Experience

Both in terms of compliance and individual experience; from search to apply to enrolment to assessment and qualification. Improvements in the management and coordination of data assets will underpin more joined-up and higher quality student-facing services.

#### Driving more value from data

Time can be wasted reformatting data for routine tasks. Once this data can be served in a way that matches the needs of the user, not only does productivity improve, new data insights and opportunities are more likely to be found.

## Risks

### Unsustainable data commitments

The rate of change in data activities is high and a failure to intervene will eventually result in current processes becoming unsustainable. The only mitigation at that point is likely to be expensive extra resource.

### Poor decision making

Poor data undermines the quality and accessibility of management information and therefore reduces the ability to make well-informed decisions.

### Data security and misuse

Weaknesses in data governance increase the risks of breaching ethical or statutory regulations.

### Cost of operations

Having data 'go wild' will lead to many 'cottage industries' within both the professional and academic areas. These all attract a cost, and generally make the role of creating large and time consuming outputs harder as data is changed but not reconciled. There can be inefficiencies driven by duplication of processes, and additional subsequent costs driven by the need to reconcile these different processes.

### Missed opportunities

When data is moribund and has very little flexibility to support change, opportunities for cost savings, new services and improving the student experience are devalued or lost entirely. Data becomes a 'cost' to the institution and is viewed as a problem that needs fixing. These fixes tend to both tactical and expensive. Crucially they do not actually add any lasting value to the asset.

It should be clear that institutions will be investing in data in both the benefit and risk scenarios. It is surely better to target that investment – and deliver benefits – by redefining the relationship with data rather than doing more of the very things that have questionable medium or long term value.

## A call to action

Institutions are already investing heavily in data. Much of this cost is hidden inside multiple functions. Better outcomes await those with a wider vision for this data. As the priorities, goals and objectives of the institution change, so must the way data is managed in support of it.

Three strands underpin this approach. First, the relationship with data must be redefined by defining a strong link between organisational objectives and improvements in data capability.

Second a framework to provide appropriate levels of management and oversight to the data asset should be established. This is not bureaucratic dogma with a mandate to police data; at its heart it has a mission to provide managed access to data. By implementing best practice, managing towards an agreed end state and assigning accountability to data owners, governance can be introduced softly.

Third, this changing culture and relationship with data must be embedded through advocacy, transparency and clearly-defined roadmaps towards a future state. The future state is nothing more than publically aligning institutional aspirations with data capability. This is a people-led change so sustainability must be built in from the start.

There is, of course, the option of doing nothing. A nexus of internal and external pressures suggest this may be an unwise strategy. It will result in a lost opportunity to both significantly increase the capability and efficiency in managing data and to use this data to make better informed decisions.

While this analysis of assessments provides some headline outputs from the data capability project, this is just a small part of a far richer toolkit with a process and best practice to drive improvements for every institution. The project has trained over 160 practitioners in the art of improving data capability; they are ready and able to start this journey and they need broad support. Data is shaping and changing our world. Recognising this suggests the sector must change with it. Already a number of institutions are undertaking initiatives to shift data from being the problem of the few to the opportunity of the many.

There is no better time to start the journey than now.