



Unlocking the Value of Information

Purpose

The purpose of this briefing for senior policy makers, influencers and executives is to:

- Raise awareness of the potential for better exploitation of information assets within all organisations, and particularly within the public sector.
- Influence policy and help to foster a radically improved information management culture in the UK.
- Provide high level guidance on approaches to identify and value information assets and to measure and benchmark an organisation's information management capability.

A more detailed examination of the issues raised in this paper will be published in October 2009 for information management practitioners.

The broken information culture in the UK is reducing economic income by c£65bn pa: £44bn in missed private sector profits plus £21bn in avoidable costs in the public sector. [[Capgemini](#)¹]

Introduction: *The importance of an asset-centric approach*

The EURIM Executive Workshop on Information Governance identified that good information governance concerns not just how to protect data but also how to ensure it is responsibly exploited and optimised for business and consumer benefits. A range of follow up work streams were established, including 'Security by Design' and 'Identity Governance'. The 'Value of Information' work stream was set up to counter balance the 'security-centric' issues that tend to dominate the debate and may reinforce an unnecessarily 'safety first' mindset that misses opportunities to responsibly exploit information to transform performance.

Our hypothesis was that an 'asset-centric' approach to the management of information will not only generate more business value but is also more likely to be successful from an information security perspective than a narrower, more mechanistic 'security-centric' approach will achieve. Our rationale was that a culture that recognises information as the life blood of the organisation, on a par with other strategic assets such as pounds, people and property, will also naturally adopt and more successfully deploy the disciplines required to ensure the quality and security of the asset. The reference material we have reviewed supports this hypothesis.

This paper provides an overview of our findings and our recommendations. The reference material is available on our [website](#)² and direct links are provided to individual documents quoted.

The paper and the website are structured in 5 sections:

A - describes the **nature of the problem** of poor information management.

B - explains the **principles behind the solutions** to the problem.

C - outlines some of the **current tools available**.

D - describes some **best practice examples of** leading organisations that exploit information to generate value.

E - summarises our **recommendations**.

The references throughout this paper are to the source documents on the website.

The average data loss costs \$1.8m. 69% of organisations say that data losses can damage their brand and 30% say they can put them out of business. Lost business accounts for 65% of the cost, with an average of 20% customers terminate accounts immediately. [Datamonitor³ & Ponemon⁴]

A - The Nature of the Problem: *The importance of a compelling need for change*

It is self evident that, in the information age, information is a key asset for any organisation. There are compelling examples of organisations that owe their success and, in some cases, their existence to the efficient exploitation of information. Nevertheless, most organisations do not use information well and are constrained in achieving their corporate goals as a result.

The Audit Commission report *'In the Know'*⁶ identified a direct correlation between the overall performance ratings of councils and their ratings for information management. This supports the findings of [information maturity assessments](#)⁶ by SAS of over 1,000 organisations globally. The assessments underline that information management maturity correlates directly with improved corporate performance. The key drivers for the organisations which have achieved greater maturity tend to be a compelling event, such as a merger or even survival (information mature organisations report higher than average levels of competition). Significantly, on a five level scale, public sector organisations on average score one level lower than private sector counterparts and 'culture' is the biggest lagging indicator.

Not only is poor information management causing sub optimal performance, but this has a high cost in terms of finances, reputation, and even lives. All reports into data losses in the public sector have highlighted systematic institutional deficiencies in information management and the tragedies of Soham, Shipman and Baby P have been cited by the [Audit Commission](#)⁷ as cases of poor information management. Unless there is a significant transformation in information management awareness, culture and capabilities then, as data volumes continue to grow exponentially, such failures are likely to increase.

The resulting [welter of recent reports](#)⁸ promoting the need for better management and exploitation of information assets in the public sector suggest that the time for a more 'asset-centric' approach has now arrived – perhaps driven by the 'compelling event' created by the recession in public sector finances.

All of these reports identify a need for a step change in culture, capabilities and approach, and some provide tools to assist in this. Unfortunately, while they individually contain much to be applauded, the lack of coordination and cross referencing between them may be clouding, rather than clarifying the picture.

B. The Principles of the Solution: *Accountability and 'the intangibility paradox'*

If information assets sat in the balance sheet alongside tangible operating assets and financial assets then, in terms of accountability, there would be little need to worry about efficient investment and governance because, information assets would then be subject to the key financial disciplines that ensure resources are used efficiently:

1. The visibility of balance sheet recognition would ensure proper scrutiny, care and governance of the information assets.
2. The regular testing of asset values, the measurement of profit /public value and the measurement of return on capital would provide strong incentives for managers to use these assets effectively.
3. The requirement to create value would naturally lead organisations to search for new information investments, where value exceeds cost, and to abandon old ones where it doesn't.

However, GAAP (Generally Accepted Accounting Practice) does not allow assets such as information into the balance sheet unless they happen to have been bought in a transaction, such as a takeover, and have an easily identifiable price. This is not a failure by GAAP; it is for a very good reason – which we will call 'the intangibility paradox'.

Intangible assets – including brand and reputation, intellectual property, human capital, organisational competencies as well as information assets – are often the most valuable resources in a business, because they generate its competitive advantage. They do this because they are complex, difficult to replicate, unique and specific to the business. Unfortunately these same qualities also mean they usually have no easily and routinely measurable market value. Their value is a function of the benefit they do and will confer in the future, which may be very real and very large but is also uncertain and contingent. So these assets don't fit straightforwardly into the binary, black and white world of the balance sheet.

Key drivers for information security expenditure in the private sector are loss of reputation and business opportunities. In the public sector the key drivers are data integrity and business continuity. [\[DBERR⁹\]](#)

Nevertheless the need for efficient resource allocation and the potential benefits of accountability are particularly great for these assets. Thus best-in-class organisations – for instance, pharmaceutical companies with their Research and Development assets, branded-goods companies with their brands – have developed methods to create an environment of accountability for these intangible assets that has the same payoffs as conventional balance sheet accounting and encourage and incentivise the right decisions from managers.

C. Solutions and tools: *Know where you need to be, what you have and what it is worth*

70% of Local Authorities do not have anyone responsible for Data Quality [Data Connects CDI research] 75% of Local Authorities cite lack of capability and capacity as a key barrier to better use of information. [\[Audit Commission¹⁰\]](#)

The employment of a Chief Information Officer (CIO), rather than a Chief Technical Officer (CTO), is often cited as evidence that an organisation is taking a more strategic approach to information management. However, if the motivations for the change are security and compliance centric, the CIO can regard themselves more as the guardian of data rather than the champion of its exploitation. Where information is regarded as an asset rather than a liability the accountability is more likely to be a board level issue, often led by the Chief Finance Officer or CEO. Such organisations will tend to adopt a more holistic approach to achieve the required change.

Nevertheless, best practice in managing information assets is still emerging, there remains a critical shortage of information workers and there is no clear professional formation. Emerging evidence suggests there are four key actions for bringing clarity and accountability to information assets within an organisation:

1. Assess and benchmark current and required [Information Management Maturity¹¹](#), to inform strategies, approaches and capabilities.
2. Organise to deploy the strategies by creating an [Information Management 'Centre of Excellence'¹²](#).

3. Identify and record information assets in an [Information Asset Register](#)¹³.
4. Deploy [Information Asset Valuation](#)¹⁴ approaches.

At present, a large part of the best practice approach concerns base-lining and benchmarking the **information management maturity** within the organisation across areas such as IT, Processes, Skills and Culture. This informs the development of an holistic information management vision and strategy, aligned to the organisation’s mission and goals, and the development of a prioritised route map for improvement.

Once a strategy and direction have been set, many ‘information mature’ organisations then set up an **Information Management Centre of Excellence** (often called a ‘Business Intelligence Competency Centre’) to lead the deployment of the strategy. Key drivers include the need to consolidate and rationalise scarce and thinly spread information management resources, to better connect IT and analysts with business needs and to proactively promote better use of information.

An early task is the creation of an **Information Asset Register**. This is a systematic approach to identifying what information exists in the organisation, where it is, who uses it and what they use it for.

The next step is **Information Asset Valuation**. As for any intangible asset, the full economic valuation of information assets can be costly, including forecasts of the future, and scenario analysis. It is essential when an investment case is to be made but for appraising project extensions, for periodic performance measurement, for management incentivisation, and for stewardship and control, it is more efficient to identify metrics to proxy the underlying values. An analogy is branded-goods companies, who tend not to do a wholesale revaluation of their brands routinely but instead develop scorecard approaches, using readily observable factors such as market share and customer loyalty to track the health of the asset.

NTT Telecom increased the use of data analysis across the organisation 15 fold by deploying a BICC. Customer churn reduced to 0.8%, saving the company \$84m pa. [[NTT DoCoMo](#)¹⁵]

These metrics have still to be developed for information assets. Tools have been developed to assess information value in certain contexts, but none is yet in widespread use. These tools include the [Shark Finesse / SAS tool](#)¹⁶ for assessing the Return on Investment and Public Value from better Information management, the [Tribal / Data Connects](#)¹⁷ approach to valuing the benefits from Customer Data Integration and The National Archives ‘Information Management Value Model’, to assess the benefits of content and document management.

D – Best practice case studies : *Demonstrating the value of information*

Customer Data Integration alone is worth over £1m pa to the average Council in improved revenues and reduced costs. [[Data Connects CD](#)]¹⁸

Research shows that far more organisations claim to recognise the importance of information than are actually practicing good stewardship and the exploitation of it. Sharing case studies, showing how organisations are gaining value from information assets, will be key to moving the information management discussion beyond ‘motherhood and apple pie’, and into action. A wider range of examples is available on the [website](#)¹⁹ and the issue will be explored in more detail in the Practitioners’ paper later this year. Meanwhile, the following examples from the

private and public sectors illustrate the potential:

1. **Tesco:** The mission of the UK’s largest retailer is “to understand customers better than anyone”. It’s 13m Clubcard holders account for 80% of transactions and Tesco are able to almost

personalise offers via c9m variations in its quarterly mailshots - achieving an average 25% response rate, compared to the average for Direct Mail of 2%.

2. **Continental Airlines:** saved more than \$250m over a five-year period after integrating and analysing data from 25 operational systems. This drove numerous business innovations, including real-time alerts of delays; better long-term planning, improved marketing programmes, improved logistics etc.
3. **The Vehicle & Operator Services Agency:** uses analytics to focus inspectors - resulting in a 43% reduction in checks on HGV vehicles, a 118% increase in 'prohibitions' and a 22% increase in customer satisfaction. This has reduced costs and increased effectiveness not only for VOSA but also for compliant operators and the UK economy as a whole, as well as contributing to reduced numbers of 'Killed & Seriously Injured' on the roads. The Transport Select Committee has congratulated VOSA for becoming 'the model for enforcement best practice' across Europe.

E - Recommendations: *The need for a coordinated approach*

The EURIM Value of Information committee, recommend:

1. **The National Audit Office (NAO)** should require all Central Government Bodies and Agencies to include Information Asset Registers in their annual reports to common standards. **The Audit Commission** should continue to encourage similar developments within Local Government.
2. **The National Audit Office** should sponsor a programme of work to develop valuation methodologies for public sector information assets with a long-term view towards incorporating these intangible assets within Resource Accounting.
3. **Parliament** should require that all new major legislation proposals that imply the development of new databases (whether implemented in the public or private sectors) should be accompanied by Impact Assessments, on both the opportunities and intentions for further exploitation of this data and their implications for the preservation of privacy.
4. **EURIM** will promote the importance of adopting a strategic and more holistic 'asset centric' approach to information management. In particular, the importance and value of information should become part of its briefing for new parliamentarians.
5. The **IT industry** should play a more proactive role in promoting best practice in information management. This work could be coordinated by Intellect and should include an information 'taxonomy', to reduce the existing confusion created by narrow, vendor- specific definitions.
6. **The Knowledge Council** should consider how knowledge in information management can be better coordinated, summarised and disseminated across the public sector at all levels. This may include the selection of a cross government agency to act as a 'One Stop Shop / First Stop Shop' on the subject. The role could include collaborating in the maintenance and development of the 'website library' of material and tools collated by EURIM.
7. **Professional bodies** should seek to coordinate and collaborate with the above to promote awareness and create a 'UK Information Management and Governance Forum'. (eg The National School of Government, The head of the Government Accounting profession, SOLACE, IDEA, BCS, and CIPFA).
8. **A pilot government department or local authority** be identified to trial the approaches and solutions identified in this report, assess the value and promulgate the lessons learned.
9. **Industry** sponsorship should be sought to support one or more of 6, 7 and 8, which should be independently monitored by academic researchers.

Appendix of Links

- 1 <http://www.eurim.org.uk/activities/ig/voi/capgemini.pdf>
- 2 <http://www.eurim.org.uk/activities/ig/voi/voi.php>
- 3 <http://www.eurim.org.uk/activities/ig/voi/Datamonitor.pdf>
- 4 <http://www.itpro.co.uk/170937/will-hmrc-breach-cost-625-million>
- 5 <http://www.eurim.org.uk/activities/ig/voi/auditfeb08.pdf>
- 6 <http://www.eurim.org.uk/activities/ig/voi/IEM.pdf>
- 7 <http://www.eurim.org.uk/activities/ig/voi/auditfeb08.pdf>
- 8 <http://www.eurim.org.uk/activities/ig/voi/importance.php>
- 9 <http://www.eurim.org.uk/activities/ig/voi/DBERR.pdf>
- 10 <http://www.eurim.org.uk/activities/ig/voi/nat.php>
- 11 <http://www.eurim.org.uk/activities/ig/voi/sas1.php>
- 12 <http://www.eurim.org.uk/activities/ig/voi/sas1.php>
- 13 <http://www.eurim.org.uk/activities/ig/voi/carnegie.php>
- 14 <http://www.eurim.org.uk/activities/ig/voi/valuation.php>
- 15 <http://www.eurim.org.uk/activities/ig/voi/NTT.pdf>
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