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Strategic Asset Management

How Much Does Asset Information Cost?

In this issue, **Ruth Wallsgrove**, Sarras (UK) reports on a landmark study to assess how much asset organizations really spend on information.

One key conclusion is that the best companies actually spend *less* than the worst!

See what causes this—and how you can make large savings through better asset information management. Manage your information as you would your assets!

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MANAGING ASSET INFORMATION *AS AN ASSET*

Do you remember?

When we began to take Asset Management seriously back in the late 1980s, early 1990s, and to start recording what we had – and what it contributed to our output, we found many assets that we did not even know we had – and many that seemed to be making no contribution at all (yet were being housed, secured, maintained, etc).

Asset information has had a similar history to physical assets. For most agencies there has been a period of rapid (but not necessarily coordinated) data growth, generally insufficient maintenance from then on and, inevitably, data degradation – as well as the proliferation of over-lapping systems

It is time to take stock.

The UK Benchmarking Study

This is what the UK study does. It looks not at the value of information as such, rather at the costs involved in getting and using it.

Six UK companies were examined (two London underground infrastructure companies (called Infracos), who were the initiators of the benchmarking study, one electricity, one water, one rail and one nuclear.)

> "These companies were chosen on the basis that they were known and thus likely to take part. But they also represent a hypothesised spectrum from least complex/ risky to most complex/risky, and in the UK also represent two sectors that are most ahead on Asset Management generally (electricity distribution and water), contrasting with two still in the process of implementing Asset Management. This would give us at least one 'best practice' company on asset information, and two organisations likely to be similar to London Underground."

The original objective was to set a budget for information and establish metrics to use as cost codes to monitor day by day. These goals were met – and a great deal of interesting other information was gathered along the way.

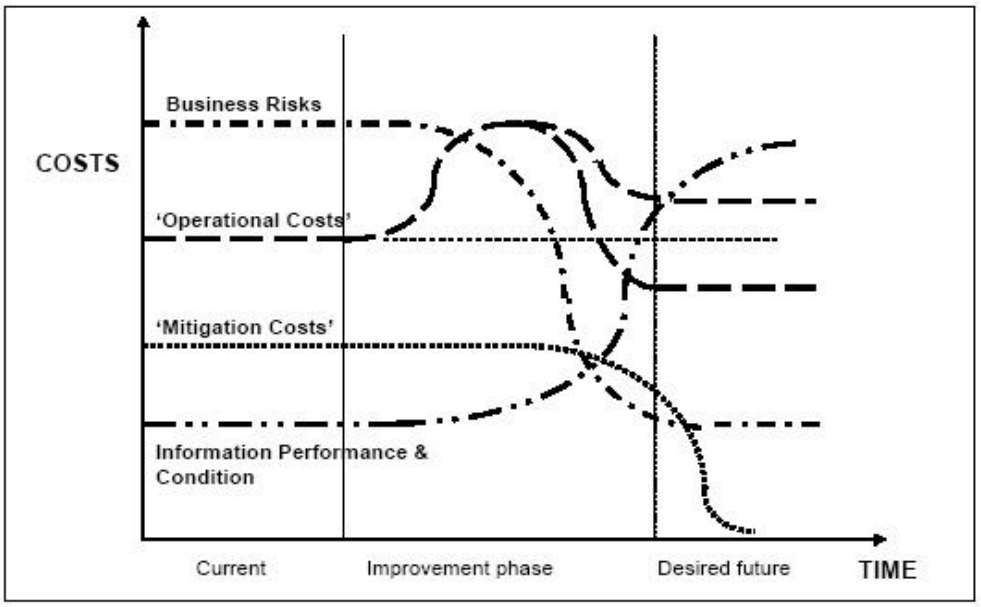
> "For all companies, asset information management was seen as the major issue in information management.
>
> Generally we decided to exclude other kinds of information, such as financial or customer, except where a company could not split out asset information costs from others (e.g. in overall IT expenditure).
>
> It could be taken that most of the indirect functions in an organisation – such as Finance or Human Resources - are mostly information management functions themselves, but we did not define them in this way for this project, and our results mostly exclude anything but asset information management costs."

THE IDEAL INFORMATION STRATEGY

(FROM DINO NOLA, JNP2003)

As asset information management improves

- **Business risks decline**
- **Operational costs initially rise, then decline**
- **Mitigation costs fall**
- **Information performance and condition improves**



"The fact that business risks are high and information performance & condition are low does not mean that the current costs of managing information are low. To capture the distinction between efficient use of resources – which may increase – and wasted costs, which must be managed down, the graph distinguishes between:

Operational Costs: This is the 'useful' component of the costs associated with the management of the information assets. It may be lower than required, and the expenditure may not be in the right places.

Mitigation Costs: The business also bears Mitigation Costs, where the required information does not meet requirements. For example, if the systems for storing and indexing documents are poor, Mitigation Costs are incurred as increased search and retrieval times and, in worst case scenarios, when the information is lost and needs to be re-created. This category also includes any costs for non-critical, or non-useful, information.

Following the improvement phase costs may be higher or lower than previously. You need to spend what is needed to meet requirements, that is to support the decisions to keep the business risk to the appropriate level. But it is clear the ultimate target for Mitigation Costs should be zero."

CALCULATING INFORMATION COSTS

"The approach this project took was to look at two different kinds of activities:

- The proportion of information management activities by 'direct' staff in direct/ non-overhead core business processes – that is, in the Infracos themselves, Operations, Maintenance, and Capital Projects
- The costs of 'dedicated' information management resources, e.g. IT costs, Library, Drawing Office, dedicated Asset Information units

For an organisation like an Infraco, managing a rail network, a huge majority of the total (both revenue and capital) expenditure each year is in Operations, Maintenance and Capital Projects.

The main method used was to identify and interview key personnel who can represent a function or team in respect of a core process such as Operations or Capital Projects. The methodology identifies the costs of staff who as part of their 'day jobs' must carry out information management activities. A good example is the importance of both Operations and Capital Projects in passing information to the rest of the business - in Operations, to expend significant resources in collecting data, and in Capital Projects assembling and passing on 'as built' information in a variety of forms.

For the dedicated costs, we asked people to look at their budgets and identify anything that is obviously primarily an information function. This proved even harder than expected!"

CALCULATIONS

"We used a robust approach to calculating totals from what we obtained in the benchmarking.

1. Establish how much of the organisation's total budget is spent on the core processes of Operations, Maintenance and Capital Projects (altogether, a huge % for all the organisations we surveyed)
2. From the interviews, estimate (with their agreement) a percentage of time spent in each of these processes on information activities, to give us a rough % of total expenditure

For example, if the total expenditure on Operations & Maintenance is £100M annually, and 20% or more of this time is spent on information activities, that gives us £20M. For Capital Projects we had to consider how much is on materials: if £200M is the total CAPEX expenditure, and half of that is on materials, and 25% or more of the rest is information activities, this gives us £25M. If total annual expenditure is £350M, our 'direct' information costs of 20+25M give us just under 13%.

Dedicated information costs are then added on to this.

In general we stopped counting when we got to 30%."

RESULTS It quickly became clear that managing information costs 20% or more of total expenditure in asset based companies, whether or not those companies manage it well. If they manage it inefficiently, they are likely to be spending more than 25%

WHERE COMPANIES SPEND TOO MUCH

"If you make a rough division of the 'tasks' in managing asset information, you can look at where the effort goes in comparison with the benefits.

- Collect Data
- Process and Store Data
- Turn Data into useful Information
- Access Information
- Make decision

You have to spend upfront collecting, processing and storing the data in IT, *but* you only get the business benefit when you make a decision based on it.

Despite what some people may think, our results suggest that people in general spend about the right amount on IT – that is, on storing the data, and some automatic processing before and after. *This does not mean that they spend it on the right things.*

Where they do seem to **spend too much is in collecting data and in accessing information** – because they are definitely doing the wrong things.

It seemed clear that the **worst companies were wasting a lot of time re-collecting data and accessing information that was hard to get at.**

We identified these **as major areas of inefficiency and wasted effort:**

- **Excess time spent accessing difficult to access information on Capital Projects**
- **Data collection costs on recollecting data that has already been collected or that is not important**
- **Duplication of responsibility for asset data, especially for quality assurance on this data**
- **Excess time spent accessing data for Investment Planning, Maintenance Scheduling and associated Regulatory reporting**

IT is a relatively small component of overall information costs

"In the companies we benchmarked, only **one spends significantly more than 3% of total expenditure on IT, and they consider that a problem.** Since then we have identified other companies that seem to have high mitigation costs on IT – ie they spend more than they feel is justifiable on IT - but this is still far outweighed by the other mitigation costs."

AND WHERE COMPANIES SPEND TOO LITTLE

"It looked generally as though much too little effort had been spent on making what information there is accessible to those who need it, in a form they can use. This was slightly academic for the companies with chaotic asset IT generally, but is noticeable right across these sectors with only one or two exceptions. It is probably true to say that most organisations have, at one point or other, and in one form or another, collected most of the asset data they really need, and invested in IT systems to store it. Getting this to the right people in the right form, however, seems for some reason to be much harder for them.

User access to information clearly remains a problem for asset companies in the UK. Most utilities, for example, have invested heavily in a work management system. But a common complaint is that such projects run out of budget before they give Asset Managers the information they need, at least without a struggle; it is as if IT runs out of steam before it gets to the useful bit. Other big IT projects stop before they even consider the specific raw data that Asset Managers need, because when (say) a customer system project runs out of money, time, and/or patience, Customer Services will naturally chop anything they don't personally need from the scope."

Ruth Wallsgrove

Ruth is an acknowledged expert in Asset Management and Asset Information Strategy, having worked in this field for over 15 years. As a partner in Sarras, (a leading consultancy in UK utilities), and the Operations Director of the Institute of Asset Management, Ruth has overseen the publication of the first UK edition of International Infrastructure and the First National Standard on Asset Management.

She is a frequent chair and speaker at UK Asset Management conferences and organises workshops on asset information, regulatory models and other topical issues. Her paper "The Real Cost of Asset Information: how better costs less" was presented at ICOMS 2004, held in Sydney last month.

Thanks to **ICOMS** for permission to quote from Ruth's paper presented at ICOMS 004

ICOMS is the International Conference of Maintenance Societies. But don't be fooled, whereas some say "asset management" when they really mean maintenance, ICOMS tends to do the reverse. ICOMS 2004 presented over 55 papers on strategic, tactical and operational aspects of asset management. ICOMS 2005 will be held in Hobart, 31 May to 3 June 2005. (Just type ICOMS 2005 in Google Search to find all the details)

THE POWER OF THE UK STUDY

At last a way of selling asset management that does not rely on a belief in the hereafter!

Previously emphasis has been placed on **stressing *the benefits* of good information** and information processes. But while these are real, they are very hard to prove, because

- They are long term
- They are impossible to measure because they relate to the 'hypothetical otherwise' (i.e. an assumption of what would have been the decision in the event that the information was not available.)

The UK Study stresses, instead, ***the costs* of poor information and information processes** and shows that they can be susbstantial. Savings from improving information processes can be proven, because

- They are short term (impacts the recurrent budget)
- They are measurable (reduction in costs over time)

Not only that, but…

Previously emphasis has been placed on **one off gains from better capital decisions**.

The UK Study shows that the **gains are continuous – and related to the recurrent budget**.

And

IT (AIS, etc) is de-emphasised

"Only one company spent significantly more than 3% of total expenditure on IT, and they consider that a problem."!

Finally it shows that

The total costs of information collection and use are substantial

20% minimum for heavy asset users that are efficient
- rising to 25%+ for those that are inefficient

and 5% of your company total expenditure as a minimum gain is not to be sneezed at!

COLLECTING BETTER INFORMATION ABOUT ASSET INFORMATION

In the Victorian Infrastructure Study "Facing the Renewal Challenge" we identified a need to separate different forms of capital cost, namely we argued the benefits of distinguishing between renewal, upgrade and expansion capital, because their ongoing cost implications were so significantly different. It is pleasing to see that this is now being done by an increasing number of councils.

Similarly, the UK study identifies areas where extra cost information would be beneficial

New Cost Categories

"Three possible practical cost categories for more regular monitoring emerged from this work:

- A cost code for time wasted due to relevant information not being available for any reason, whether due to IT or not (as a suffix addition to other existing codes so that other information about that work is not lost, eg which project)
- onitoring the total spent annually on information mitigation projects, especially data cleansing and data surveys for data partly or wholly already collected before
- An indicator of organisational complexity, for the number of different teams involved in some way in information strategy (not collection), starting with the number of directorates with some responsibility for asset information strategy – this seems to correlate inversely with information management efficiency and sufficiency".