In data we trust

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With productivity proving a persistent issue, Anthony Walker explains how data can best be harnessed to boost output

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The US statistician William Edwards Deming once said: 'In God we trust; all others bring data.'

Deming stressed the importance of using data to improve processes and the need to innovate, and said those who merely aimed for no defects in or continual improvement of an outdated product or service were doomed to fail. His principles helped organisations increase quality, and simultaneously reduced costs to have a positive impact on productivity.

Productivity

'Productivity isn?t everything, but in the long run it is almost everything ,' wrote Paul Krugman, the Nobel Prize-winning economist in 1994, and the maxim is still as relevant now as it was then.

Countries with strong productivity tend to benefit from high rates of growth, low inflation and higher disposable incomes at the household level. In the UK, productivity is at a point last seen just before the 2008 financial crisis, when average annual growth was 2.1% during the decade before the crash. Had this trend continued, productivity would now have been 20% higher than it currently is.

While other countries have experienced slower productivity growth, the UK has fared worse than most. In October last year, the Office of National Statistics published a paper highlighting that UK productivity growth in 2016 was 15.1% below the average for the rest of the G7 economies. By contrast, productivity growth in the USA was 21.8%, in France 22.3%, and in Germany 25.6%.

In February 2017, McKinsey published Reinventing construction: A route to higher productivity , which stated that the construction industry spent around $10tr annually on goods and services, amounting to about 13% of global GDP. Despite this expenditure, construction productivity growth globally has averaged only 1% a year over the past 20 years, compared with 2.8% for the total world economy and 3.6% in the case of manufacturing.

There are, however, positive signs that the productivity of some UK companies has significantly increased as a result of investment in innovation. In a speech given last year, the Bank of England?s Chief Economist Andy Haldane highlighted companies that had experienced high and rapidly rising levels of productivity through such developments.

Industrial strategy

In November, the UK government published a white paper entitled Industrial strategy: Building a Britain fit for the future , designed to address the long-standing issue of boosting productivity throughout the economy.

The strategy outlines five foundations of productivity: ideas, people, infrastructure, business environment and places. The aims from the first category in particular could have a big impact on building surveying. These include:

- raising research and development from 1.7 % to 2.4% of GDP by 2027, including ?75m investment in artificial intelligence and ?76m in digital and construction skills;
- increasing the rate of the research and development tax credit to 12%; and
- an investment of ?725m in industrial strategy challenge fund programmes to maximise the value of innovation.

There will also be a series of government partnerships with the construction, artificial intelligence, life sciences and automotive sectors to boost productivity, employment, innovation and skills. While not a silver bullet, this national focus and additional funding should benefit all built environment professions.

Maximising data collection

Building surveyors provide data that is used to enable important decisions throughout the property lifecycle ? from financing, constructing and buying to leasing and occupying assets. Access to robust data can support the growth of productivity for the clients who use it as well as the surveyors who collect it.

Although we collect lots of data, a substantial amount is not fully used. It is often misplaced or not shared, and tends to be incompatible with other databases or reporting requirements. This undermines the data?s value for the client and other stakeholders, even though most of these issues can be avoided with just a little forward planning.

To maximise the value of data we gather for clients, it is important to understand the following:

- why they want to collect data;
- what they will do with it;
- the challenges they want to solve;
- the required format and structure for the data;
- who will use it;
- how the surveyor can add value;
- the outputs required;
- how analysis of the data will help inform decisions; and
- requirements for exporting or importing to other software.

Without clarity on the above issues, it is unlikely that the maximum value of the data will be exploited. In some cases, it will be useless, potentially leaving a less than positive impression on the client, reducing the opportunity for follow-on work and perhaps meaning some of the work will need to be carried out again, all adversely affecting productivity.

Clarity will enable the process and workflow to be finalised and agreed with the client. If there are no changes from the existing workflow, then this can be closed off very quickly. However, you may need to consider a new workflow to ensure the outputs are provided in the most effective way, which may require specific data collection methods and reports that take time to create.

The use of mobile devices to streamline the workflow for collecting surveying data is nothing new, with many in the profession using such technology to add value for the client and make productivity gains in terms of quality, time and cost.

A number of building surveying firms have invested a lot of time to tailor client reports to the latter?s needs rather than providing a stock output, for instance, adding considerable value.

The workflow should ideally have four key phases from commencement to completion of the survey:

- **establishment**: to agree outputs and advise how value can be added;
- **surveying**: as per the agreed data structure; in larger survey programmes it is advisable to consider a pilot survey;
- **reporting**: as per the agreed outputs; and
- **closedown**: issue reports to be provided in draft for review and comment before completion.

Quality assurance would take place throughout all four phases.

This structured approach to maximising data?s value is not offered universally across our profession, often because clients look for ways to minimise fees at all costs to the detriment of quality.

Where this occurs, clients can potentially receive data that fails to maximise value, sometimes meaning that they appoint another surveyor to collect data again at additional expense. Alternatively, they work with the data they have but cannot maximise its value. Either way, it is unlikely to have a positive impact on productivity.

Data analytics

We now operate in data-dense environments, and it can be challenging to separate the wheat from the chaff. In recent years, the process of examining data sets to draw conclusions about the information they contain has increased in value and application. Data that has been analysed is converted into intelligence; but without such analysis, it is just data and its full potential is not realised.

Data is often wrongly regarded as an IT issue, when it is actually a business and economics consideration. IT staff have the knowledge and expertise to help you collect and manage data, but they do not have the surveying knowledge or skills to interpret it.

Building surveyors provide data to enable important decisions throughout the property lifecycle

When a surveyor hands over a report to a client, they are ideally placed to provide advice and recommendations, ensure cost efficiencies, maximise investment and add value.

Collecting data with a mobile device and generating reports through a spreadsheet will enable data to be analysed, whether this is done by the use of basic spreadsheet filters or

integrating the data into business intelligence tools such as Microsoft Power BI for more advanced analysis.

Such tools can provide low-cost, powerful analysis without the need for specialist knowledge or training. They allow users to build a clear picture of their priorities and enable a range of variables to be considered quickly in alignment with funding limitations or other constraints.

EO Consulting , GoReport , Ocuair and Trident Building Consultancy are currently working on an RICS pilot project, demonstrated at the RICS Building Surveying Conference , that will show how various data sets collected using mobile technology in turn create reports and outputs that can then be directly linked to an analytical dashboard.

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Further information

- Related competencies include: Data management
- This feature was taken from RICS Building Surveying Journal (May/June 2018)
- Related categories: Financial management