big data and analytics techniques may have received a lot of attention in recent years, but they still have a very low adoption rate among SMEs. It is true that these developments have little practical relevance to most small businesses. Or are small businesses missing out on real possibilities to improve businesses? Or are small businesses having little practical relevance to most small businesses? As they feel it isn't relevant to them.

**ALL DATA, NOT BIG DATA**

The participants started by talking about terminology. Do any SMEs really have ‘big data’? And is ‘big data’ a useful way to engage with SMEs? While the term has a lot of cache about it and can attract attention (like ‘cyber’), it can also switch a lot of businesses off as they feel it isn’t relevant to them.

There are, of course, many different types of SME. For a start that bases its business model on data, ‘big data’ might be a relevant concept. But there was a strong consensus that the term ‘all data’ was far more helpful because it incorporates a number of important elements.

- **Internal data**: Most businesses have large amounts of information that they do not fully use. For example, manufacturers collect a lot of data as part of their contractual obligations, but few re-use that data for their own purposes.
- **External data**: There are many new sources of data that small businesses can easily access, such as website data, open data and social media data.
- **Non-traditional data sources**: It is also possible to convert things not thought of as ‘data’, such as text or voice, into usable data streams.

All of these sources of data could have some relevance for smaller businesses, and they should be open-minded in thinking about what data means for them.

**INFORMED DECISIONS**

A lot of data analysis focuses on producing numbers and computer dashboards. But what do these numbers mean? And what will the business do differently as a result of the analysis?

Many businesses struggle to define how data can be used to drive business growth or improve management of operations and risks. This needs a transition from thinking about what data they have, to understanding what it can tell them about their business, and taking action as a result.

Small businesses can seem to have advantages here. Their size and agility means they could be well placed to adopt new practices or change their approach quickly. As a result, insights from data could be particularly helpful to them when competing against larger, less responsive companies.

However, this process requires time and space to think about strategy and future planning. This presents particular difficulty for smaller businesses, as they are often heavily focused on day-to-day operations and don’t usually have the time to focus on these questions.

**START WITH A QUESTION**

One of the simplest ways of identifying possible insights and actions is to start by asking questions: what would I really like to know about my customers or suppliers? By focusing on a single question and starting small, businesses can realise tangible benefits quickly and gain confidence to move on to more complex questions.

By focusing on a single question, businesses can realise tangible benefits quickly and gain confidence to move on to more complex questions.

But it’s also helpful to engage in some experimentation. It is difficult to understand the power of data in an abstract way. It’s only when you see how it can be used, connected with other data, visualised or analysed that you can get an idea of some of the insights it could provide. Therefore, experimentation can help to frame good questions.

Participants suggested a range of ways in which this could be done. It could be through talking with specialist providers and undertaking an initial scoping exercise for a data analytics project. Alternatively, attending something like a hackathon (a collaborative computer programming event) could open up a business to fresh ideas. Businesses can also work with universities through Knowledge Transfer Partnerships and thereby access data science skills. More information is available at ktp.innovateuk.org.

**THE INTEGRATION CHALLENGE**

One of the biggest practical challenges for most SMEs is poor integration between systems. Despite small IT environments, many SMEs buy different point solutions such as finance, CRM or payroll - often based on the cheapest option. This makes integration and consolidation of data difficult.

Similarly, the lack of clear data standards in many industries leads to many different data formats. This means that significant amounts of work is often required to clean up data before it can be used for more sophisticated analysis.

Focusing on the need for specialist analytic skills and knowledge therefore misses the need for resources in more basic data management and quality.

Without this, SMEs will never be able to maximise the value of their data.

**LEARNING TOGETHER**

The final part of the discussion concerned how ICAEW and others can help small businesses make better use of data. This focused on how SMEs can learn from their own experience, as well as the experience of others.

Peer learning can be a particularly powerful form of learning: for example, case studies about what worked for similar companies or peer networks. There is some reticence about sharing information that could potentially give away competitive advantage. But it was felt that there were broad areas of common interest where it would be possible to encourage knowledge sharing.

This can also help to drive the cultural change that encourages decisions based on data rather than the gut instinct of managers or owners. Participants suggested that this shift requires the leadership of a numerate CEO who is interested in change, and connecting with like-minded people, who can support this process.

Our discussion got beneath the surface of some of the particular challenges for SMEs and big data. Big data is something that is relevant, although the term itself might not be helpful. Small businesses need to start by asking questions that will give them useful insights and focusing on actions that will make a difference.

But they do face some particular challenges. The IT environments may be more complex and less integrated than sometimes imagined, adding cost and time to any data projects. They also typically lack the time to think deeply about the future of their business and frame good questions. However, opportunities to learn should help them define their actions better so that they too can benefit from new trends in data and analytics. #