

Why your engineers and scientists are best-placed to realise the value from your data and how they can achieve this with a flexible problem-solving approach and visual data exploration

Philip Kay, SAS JMP Division, Marlow, UK; Malcolm Moore, SAS JMP Division, Marlow, UK

Many companies are realising that data is a key asset. It holds their IP and has the potential to unlock future growth. Data in industry is coming in larger quantities, more frequently and from more sources all the time. The buzzwords Big Data, Industrial Internet of Things and Industry 4.0 were coined to describe the benefits that can be realised by organisations that can use this opportunity to gain a competitive edge. But companies tell us that they are unable to get useful insights into their processes because their engineers and scientists don't have the time, skills or tools.

Large-scale Big Data projects promise to deliver huge business value through the centralised aggregation of the data and complex machine learning methods. However, these projects almost always fail to deliver because little consideration is given to how the data will be used and the experience of engineers and scientists is not integrated into the process. Machine learning is not a panacea: there is no modelling algorithm that can help you if you do not have the data needed to answer the key questions your business has. In other cases, the solutions are not trusted because they are overly complex and impenetrable.

Therefore, we propose that you will realise more value by taking a flexible, pragmatic and staged approach to problem-solving using data. We will present on the tools and culture that will enable your engineers and scientists to realise the potential of your data. You will see how you can use simple tools to take data sets from multiple sources, merge them, and clean them ready for analysis. You will find out how a range of exploratory visualisation and modelling methods can be used to understand complex patterns and relationships in your data. And how you can easily automate the whole process incorporating interactive visual dashboards for compelling communication to ensure stakeholder buy-in.