Sources	Forbes, Analytic Insights
Date	February - June 2021

Potential scale of impact	Certainty of outcome	Impact horizon
★★★★	★★★☆	H1　　H2　　H3

Big data technologies are essential for efficient data management and they are evolving constantly as the global IT industry jostles for position. Developments in the medium term (the next five years) include

- **Rich new ways to explore and interpret data:** Not everyone is great at spotting a potentially valuable insight hidden in a pile of statistics. Natural language processing (NLP) is one tool that allows analysts to ask questions of data and to receive answers in human language - greatly increasing access and improving capabilities in the organisation. Extended reality (XR) is another, used to create new kinds of visualization that allow users to impart richer meaning from data.

- **The hybrid cloud:** cloud computing - which provides access to vast data stores and real-time information without needing expensive on-premises infrastructure - has fuelled the boom in apps and startups offering data-driven services on-demand. But relying entirely on public cloud providers is not the best business model and many companies now find themselves looking towards hybrid cloud systems, while other, perhaps sensitive, data remains within the proprietary walled garden.

- **Edge computing** is the term for devices built to process data where it is collected, rather than sending it to the cloud. Some data simply needs to be acted on immediately - the data gathered from sensors on autonomous vehicles, for example - and the approach is creating new infrastructure requirements and high value services for consumers.

- **The rise of DataOps** - the end-to-end flow of data through an organisation. Data Ops seeks to remove obstacles that limit the usefulness or accessibility of data. "DataOps-as-a-service" is likely to emerge, with suppliers offering end-to-end management of data processes and pipelines on-tap and pay-as-you-go. This will continue to lower the barriers of entry to small and startup organisations with great ideas for new data-driven services but without access to the infrastructure needed to make them a reality.

BIG DATA: OILING INDUSTRY 4.0

Analyzing, processing and extracting information and value from the heaps of unstructured data