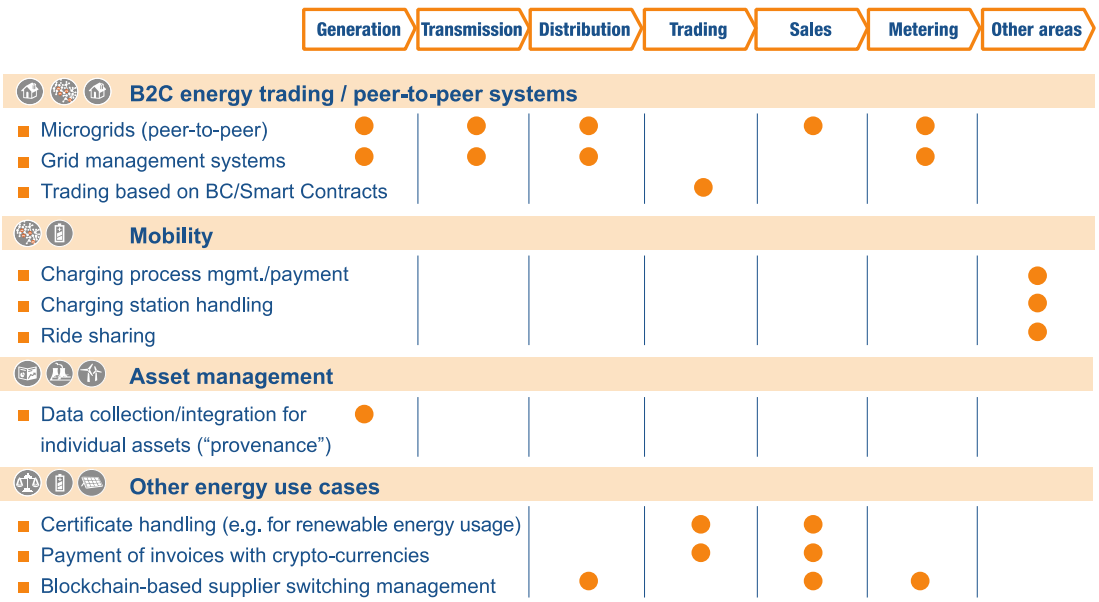
TODAY'S FOCUS

WHERE IS BLOCKCHAIN BEING USED IN THE ENERGY SECTOR?

The number of blockchain projects in the energy sector is ever-increasing. The range of potential applications reflects the characteristics of the technology (Figure 3). A blockchain is a decentralised tamper-proof ledger of all transactions in a network. Using blockchain technology, participants in the network can confirm transactions without the need for a trusted third-party intermediary.

This makes it particularly applicable to situations where multiple parties share, and update data and they need to trust that the actions that are recorded are verified as valid. In the energy sector this includes areas such as B2C energy trading, distributed energy and the emerging field of peer-to-peer energy systems. Other potentially significant deployments include electric vehicle charging, payment systems and asset management. Strength of blockchain is its application in situations where the provenance of an asset and the data from it needs to be interrogated and updated by multiple parties. Such applications could range from liquefied natural gas cargoes all the way through to static assets such as smart meters.

Figure 3. Several blockchain use cases along the energy value chain are currently investigated



Source: World Energy Council, PwC

Figure 4 provides an overview of some of the blockchain initiatives underway in the energy sector. It is illustrative of the range of projects and is a partial snapshot of one moment in time and certainly not a complete list. The overview highlights the mix of technology and power companies developing blockchain, sometimes in competition with each other but often in collaboration. Interestingly, many projects and initiatives have their origin in Europe or Asia, rather than the US, in contrast to many other digitally-driven developments.