Technical, Legal and Business Challenges Faced by Blockchain Enabled Systems

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Over the past year interest around blockchain and distributed ledger technologies (DLT), more in general, has been increasing. The understanding of the technologies alongside investments in the field have been picking up and some use cases, besides digital currencies, are being explored. While several publications evaluate the disruptive power of blockchain-based systems, the literature on the challenges and hindrances to the successful development of blockchain-based systems is still limited.
¿ The aim of this paper is therefore to investigate the key challenges limiting the widespread adoption of DLT and to provide a comprehensive overview of the latest developments in this space. The paper is divided into three sections. The first part offers an overview of the main events occurred in the blockchain space until today by providing an analysis of alternative DLT applications: digital currencies, asset registries, application stacks and asset-centric technologies. The second part lists the current challenges faced by blockchain technologies dividing them into technical, business and legal challenges. For each group, ten challenges are identified and analysed. In the final part, to get more insights into the challenges, we design two surveys which received 295 responses from scholars and professionals with expertise on DLT. Initial observations point out to the fact that legal challenges have been perceived as the most important ones, while business challenges are the ones that have to be solved first according to the respondents to the survey. We conclude with the analysis of the data gathered from the surveys and a final discussion and suggestions for further research.