Blockchain and sustainability - contradiction or complement?

In an interconnected, global world, a transparent, immediate, seamless traceable, forgery-proof and chronological record of transactions of as many assets as possible becomes a major challenge.

Blockchain technology is the long-sought solution to this. The hype has given way to a certain scepticism in recent months.

Two misconceptions are responsible for this. On the one hand, blockchain is too often reduced to its best-known application – the cryptocurrency Bitcoin. And Bitcoin, like all cryptocurrencies, has recently had to struggle with enormous price fluctuations. On the other hand, blockchain has the reputation of requiring enormous computing capacities and of being an energy hog. However, such concerns only apply to certain applications of the underlying technology, such as Bitcoin. Depending on the network architecture, choice of protocols and set-up, a modern blockchain does not consume more energy than conventional database solutions. This last objection in particular has caused concerns to be expressed about blockchain, especially in the fight against climate change. Yet blockchain technology can certainly be described as a booster in the fight for a more sustainable world.

Digitalisation and sustainability: the twinset of the future

Liechtenstein and its banks have never joined this chorus of critics. On the contrary: for us banks, digitalisation and sustainability belong together like twins. They are therefore also the two cornerstones of the Roadmap 2025, our multi-year strategy published last year. It is certainly also important that we define sustainability much more comprehensively than the admittedly currently most urgent fight against climate change. We align our efforts with the broadly defined 17 UN Sustainable Development Goals (SDGs). However, not only the banks, but also Liechtenstein's government recognised the potential of digitalisation very early on. For example, with the so-called Blockchain Act, a holistic and technology-neutral, legal framework for all blockchain related applications has been introduced for the first time worldwide already back in 2020.





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Transparency, new sources of financing and new incentives

But how exactly can blockchain make the world more sustainable or help reduce CO_2 emissions in accordance with the Paris Climate Agreement? The traceability of transactions on a blockchain, once again, plays a central role. For example, the technology makes alignment with sustainability goals more visible by enabling data and information about projects to be tracked and understood transparently. Blockchain-based platforms can be used to standardise data, evaluate investment performance and improve compliance with ESG standards, for example. This potential will be amplified in the not-so-distant future when the Internet of Things is integrated and linked with artificial intelligence and quantum computing.

However, other aspects are at least as important in this context. For example, blockchain makes it possible to open up new sources of financing and to better mobilise existing industry commitments to CO₂ reduction by setting up new financing platforms. As a reminder, at the global level, it is estimated that the annual investment required to achieve the SDGs is around USD 7 trillion. A substantial part of this will have to come from the private sector. Reducing the cost of capital for infrastructure projects while improving liquidity, transparency and access to finance can make the ambitious goals much more realistic. Finally, blockchain can improve awareness and access by acting as a transaction-enabling infrastructure for new business models. This creates incentives and thus increases the willingness of institutions and consumers to contribute to building a sustainable economy and society.

The potential applications are vast. According to a new study by the World Economic Forum and PwC, two-thirds of the 169 subgoals of the SDGs could be supported or even fuelled by technological innovations.

With the Blockchain Act and the experience already gained with it at an early stage, the Liechtenstein financial centre is in an excellent position to use the new technologies to fulfil its responsibility for and aspiration to greater sustainability. The financial resources are available, as is the knowledge of what needs to be done. What is needed now is consistent action and the necessary courage and leadership. In this way, the financial centre will live up to its claim of «thinking in generations», i.e. above all also for the future.