Roland Berger

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Roland Berger partners with The DFINITY Foundation for blockchain-powered Voluntary Recycling Credits standard to transform waste management

Munich/Dubai, October 2023: After announcing last June the introduction of the Voluntary Recycling Credits (VRC) standard to address the growing global waste issue, Roland Berger, a global management consultancy, has forged a partnership with The DFINITY Foundation, a Swiss-based non-for-profit organization who is a major contributor to the Internet Computer Blockchain and has a vast R&D team in the blockchain space with over 250 patents. Through this partnership, The DFINITY Foundation will develop the underlying technology for the first global standard to incentivize recycling activities. The groundbreaking feature of this credit is that it is based on blockchain, ensuring secure, transparent tracking of offset activities.

Inspired by the Voluntary Emission Reduction (VER) model in the carbon market, VRC represents a unit for a defined amount of recycled material, like aluminum or plastic. The incorporation of blockchain technology into the VRC standard is not merely an advancement, but a foundational element critical for its success. Blockchain, inherently decentralized and tamper-proof, guarantees a transparent, auditable, and secure record of recycling credits and transactions. This transparency ensures that all parties – whether waste producers or recyclers – can trust in the veracity of the credits they purchase, sell, or trade. Additionally, blockchain's immutable nature ensures that once a credit is recorded, it cannot be altered or duplicated, thereby ensuring the integrity of the entire VRC system. The DFINITY Foundation, the technology partners for this initiative, will provide a solution built on the Internet Computer blockchain that will instill confidence, credibility, and scalability into the project, ensuring its viability as a global standard for recycling incentives.

The Internet Computer is a general-purpose, layer one blockchain that acts as a Cloud 3.0. The network has been operating for over two years and has experienced zero downtime. It also processes over 750 million transactions daily, a 425% increase from its first year of operation. The Internet Computer is the only blockchain network in the world capable of hosting social networks and enterprise systems, providing an alternative to the Legacy IT stack.

"Selecting the right blockchain technology that harmoniously balances decentralization, security, usability and storage space is key for a project of this importance. Hence, we are happy to announce that we selected The DFINITY Foundation as our technology partner for the VRC project. The Internet Computer is one of the most advanced blockchains in the world, its efficacy and security make it the perfect platform to build this project on," said Pierre Samaties, Partner and leading the global Digital Assets, Web3 and Metaverse Practice at Roland Berger.

The Internet Computer blockchain is one of the most sustainable blockchains operating today. A single online search is four times more energy intensive than a transaction on the Internet Computer. The energy consumption of the Internet Computer is substantially lower than competing blockchain projects and the existing Web2 tech.

Dominic Williams, Founder and Chief Scientist of the DFINITY Foundation, commented, "We are honored to have been selected by the Roland Berger team to collaborate on the Voluntary Recycling Credit. This initiative aligns with the core values of our team at DFINITY and Internet Computer, as we always look to ensure the blockchain remains at the forefront of sustainability and work with leading enterprises. The integration of the VRC into the Internet Computer is a major step forward for the future of the program, as DFINITY and Roland Berger collaborate in making a true difference in the world of today and tomorrow."

A Reaction to the Waste Crisis

In March 2022, at the resumed fifth session of the UN Environment Assembly (UNEA-5.2), the resolution to draft a legally binding instrument on plastic waste heralds a significant commitment towards mitigating the detrimental effects of pollution, biodiversity loss, and climate change. With the waste sector contributing immensely to this planetary crisis, the VRC initiative addresses a global issue – the 2 billion tons of municipal solid waste

produced annually, and the very low recycling rate of less than 10% for global plastic waste.

Announced in Paris on the side of the INC-2 meeting, this innovative project is the result of a collaborative partnership that started in June 2023 between Roland Berger, BEEAH Group, International Solid Waste Association (ISWA) and was supported by the United Arab Emirates Ministry of Climate Change and Environment (MOCCAE) and the COP28 Presidency.

"Addressing the global waste crisis requires not just innovation, but collaboration at an unprecedented scale. With the development of the VRC platform, we are bridging the realms of technology and sustainability to forge a cleaner future. I am immensely proud of our contribution to this pioneering initiative, and we have a unique opportunity to redefine waste management and make tangible strides in environmental stewardship," said Hani Tohme, Managing Partner at Roland Berger Middle East.

The long-term vision for VRC extends beyond just waste management. It is about facilitating the adoption of extended producer responsibility schemes and revisiting production chains to diminish the dependency on raw materials, replacing them with recycled alternatives. This, in turn, reduces landfill waste, supporting the broader objectives of the Paris Agreement.

What Does VRC Mean for Businesses?

For committed companies aiming at reducing their environmental footprint, VRC offers an avenue to attain their targets, compensating for the waste produced and placed on the market. Especially beneficial for businesses in areas with sparse recycling infrastructure, these blockchain-based tokens provide certified credits which align with the United Nations Sustainable Development Goals. Conversely, companies with surplus recycling capabilities can trade their credits, creating a dynamic marketplace.

Recycling firms stand to gain from a financing cycle that boosts investment in collection and recycling technology. From a market perspective, the VRC will standardize and formalize practices to create virtuous resource management loops.

The Road to COP28

Leading up to UNFCCC COP28, the partnership's focus remains steadfast on the development of the VRC platform, ensuring it is robust and user-friendly, and can be seamlessly integrated with existing systems. Simultaneously, active discussions with governments and industry-leading companies worldwide are taking place, advocating for the adoption of the VRC standard. By securing early commitments and fostering collaborations, the coalition aims to create a broad ecosystem that champions the VRC system, establishing it as the globally recognized benchmark in recycling incentives by the time COP28 convenes.

Showcasing VRC at COP28

Under a unique private-public coalition, the project team led by Roland Berger will display the first-ever live recycling credits transaction at the forthcoming COP28 in Dubai. The consultancy firm along with its partners is eager to introduce this initiative to the global stage and redefine commitment towards the absence of materials pollution worldwide.

About Roland Berger

Roland Berger is the only management consultancy of European heritage with a strong international footprint. As an independent firm, solely owned by our Partners, we operate 51 offices in all major markets. Our 3000 employees offer a unique combination of an analytical approach and an empathic attitude. Driven by our values of entrepreneurship, excellence and empathy, we at Roland Berger are convinced that the world needs a new sustainable paradigm that takes the entire value cycle into account. Working in cross-competence teams across all relevant industries and business functions, we provide the best expertise to meet the profound challenges of today and tomorrow.

About the DFINITY Foundation

he DFINITY Foundation is a not-for-profit organization comprised of leading cryptographers, computer scientists and experts in distributed computing. With a mission to shift cloud computing into a fully decentralized state, the Foundation leveraged its experience to create the Internet Computer and currently operates as a major contributor to the network.

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