Blockchain for climate action

The European Commission aims to use innovations in blockchain technologies to help fight climate change.

Blockchain technologies: Digital innovations to enable climate action

Blockchain is a powerful tool that can significantly improve the transparency, accountability and traceability of greenhouse gas emissions. It helps companies provide more accurate, reliable, standardised, and readily available data on carbon emissions.

Blockchain can be utilised through smart contracts to better calculate, track and report on the reduction of the carbon footprint across the entire value chain. It can provide instant authentication, verification of real-time data and clear data records.

Blockchain technologies can transform individual efforts of companies into a networked effort. And, it can clearly pinpoint the contributions individual actors make to reduce their carbon footprint. The spirit of competition and market-based incentives create a win-win situation for all.
Clean technology startups play a critical role in this process. They develop blockchain-enabled platforms that bring together all stakeholders, including companies, government and citizens.

The decentralised approach of blockchain provides both breadth and depth. It engages and enables everyone to participate in the calculation. It allows for tracking and reporting of reductions in greenhouse gas emissions along the entire supply chain, including manufactures, suppliers, distributors and consumers.

Innovations in blockchain technologies are powerful enablers for collective action to fight climate change. Recognising the unique value of clean technology startups in this process is of great importance. Public and private investors are starting to take notice of their unique value.

**Key activities**

Some steps the EU is taking to harness blockchain for climate action include:

- promoting the development and adoption of blockchain technologies best suited to overcome the tragedy of the commons and incentivise actors to reduce their carbon footprint and consider the societal impact of their actions;
- developing technical assistance and investment programs that support blockchain-based digital innovations that contribute to climate change mitigation and adaptation;
- accelerating blockchain-based solutions that establish a network between suppliers and consumers, moving beyond the individual to include all societal stakeholders;
- supporting sustainable finance initiatives and promoting the use of blockchain-enabled technologies for financing climate actions through green bonds, fintech solutions and alternative finance mechanisms;
- supporting EU countries and national government agencies to collaborate in the development and adaptation of blockchain-based solutions that support climate actions and the reduction of greenhouse gas emissions;
- developing partnerships with strategic partners, including UN agencies and international financial institutions, such as the World Bank, the European Investment Bank, and the European Bank for Reconstruction and Development;
- supporting the strengthening of the clean technology innovation ecosystem in Europe and improve access to finance for clean technology startups and small and medium-sized enterprises.

Follow the latest progress and learn more about getting involved.
Latest News

NEWS ARTICLE | 06 September 2023
European Blockchain Sandbox announces the selected projects for the first cohort

The European Commission, Bird and Bird and OXYGY have announced 20 use-cases for the first cohort of the European Blockchain Sandbox.

PRESS RELEASE | 15 June 2023
Digital Assembly 2023 kicks off focusing on a digital, open and secure Europe
The Commission hosted, together with the Swedish Presidency of the Council of the EU, the Digital Assembly 2023 in Stockholm.

PRESS RELEASE | 14 February 2023
Commission launches European Regulatory Sandbox for Blockchain

The Commission has launched the European Regulatory Sandbox for Blockchain. Sandboxes are controlled environments where companies can test their products and services while engaging with relevant regulators.

NEWS ARTICLE | 14 February 2023
Launch of the European Blockchain Regulatory Sandbox

The European Commission today launched a regulatory sandbox for innovative use cases involving Distributed Ledger Technologies (DLT).

Browse Blockchain
The EU wants to be a leader in blockchain technology, becoming an innovator in blockchain and a home to significant platforms, applications and companies.

**See Also**

Blockchain funding and investment
The EU provides funding for blockchain research and innovation through grants and prizes and by supporting investment.

**European Blockchain Services Infrastructure**

The European public sector is building its own blockchain services infrastructure, which should soon be interoperable with private sector platforms.

**Legal and regulatory framework for blockchain**

The European Commission recognises the importance of legal certainty and a clear regulatory regime in areas pertaining to blockchain-based applications.


The European Commission takes an active role in the blockchain standards community, engaging and working closely with all relevant bodies around the world.

**European Blockchain Partnership**

The European Blockchain Partnership (EBP) is an initiative to develop an EU strategy on blockchain and build a blockchain infrastructure for public services.

**EU Blockchain Observatory and Forum**

The EU Blockchain Observatory and Forum facilitates dialogue between decision makers, thought leaders, and the blockchain community.

**Other**


Europe’s digital transition goes hand in hand with the European Green Deal.