

The growing use of cryptocurrencies such as Bitcoin, Ethereum, or Zcash not only opens new opportunities for the digital financial market but also poses complex challenges for authorities, companies, and research institutions in terms of transparency, security, and data control. GraphSense, an open-source and free cryptoasset analytics platform, addresses exactly these challenges. It provides a secure, traceable, and scalable framework for analyzing transaction networks, enabling investigations, compliance measures, and research in a rapidly evolving digital world efficiently and transparently.

Quick Facts

- Solution area: **Processes, Regulations and compliance, Social participation and engagement, Technological innovation**
- Administrative level: **State, Federation**
- Solution process: **Digitization and technology, Judiciary, Public service, Science and research, Security and defense**
- Technology: **Automation and robotics, Blockchain (incl. NFT), Information technology, Networks, Platform technology**

How it works

GraphSense combines state-of-the-art analytical technologies with a user-friendly interface suitable for both experts and beginners. The platform supports major cryptocurrencies including Bitcoin, Bitcoin Cash, Litecoin, Zcash, and Ethereum. Users can examine transaction networks in real time, detect anomalies, and visualize relationships between actors. The underlying algorithms and data models are entirely based on open-source components, ensuring maximum transparency and control. Using address- and entity-based graphs, authorities and researchers can identify suspicious patterns early and draw conclusions about illegal or fraudulent activities. The platform was developed through numerous research projects – from the KIRAS projects BITCRIME, VIRTCRIME, and KRYPTOMONITOR through to the EU Horizon project TITANIUM – combining scientific expertise with practical applicability for police, judiciary, and companies in the crypto sector.

The Big Picture

GraphSense enables coordinated, efficient, and transparent analysis of cryptocurrencies at national and European levels. Police authorities, judiciary, and compliance teams benefit from the standardized yet flexible platform, which can be used for forensic investigations as well as training and research purposes. Its open-source foundation promotes continuous development and adaptation to new technological challenges. At the same time, GraphSense strengthens European technology sovereignty and positions Austria as a center of competence in crypto-forensics and digital security.