2. Public and Closed:

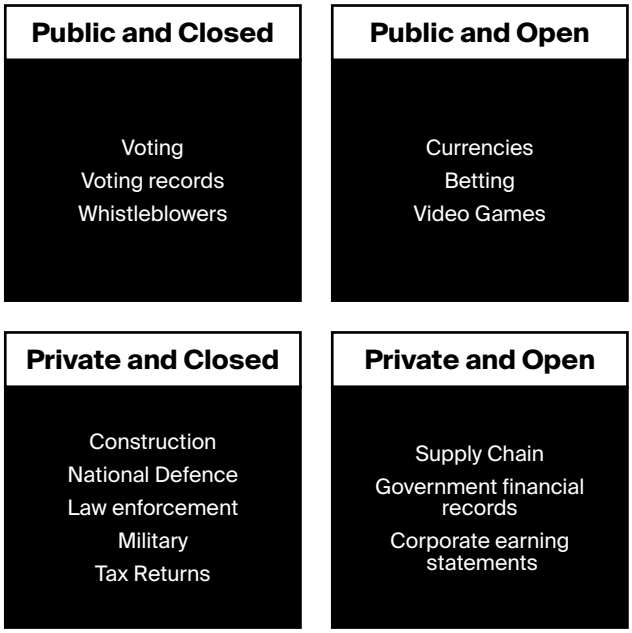
A use case for this kind of blockchain for example is voting or polling. Everybody can write his/her vote or opinion to the blockchain, but only the creators of the ballot box are allowed to read the voting results. Public and closed blockchains are often used for medical, legal or financial use cases where customers or prospects can store confidential and / or personal information[2] for restricted access by the corresponding entities.

3. Private and Open:

This type of private blockchain is commonly used in supply chains, where only suppliers are able to write the supply status to the chain, but every private blockchain's participant can track the status and see the information.

4. Private and Closed:

Private and closed blockchains enable use cases where only trusted and known members are able to write and read the data in the blockchain (e.g. an inter-bank blockchain where banks exchange assets).



Why use a private / permissioned blockchain?

Companies often choose private blockchains over public ones because they:

- are required to implement very specific use cases (e.g. enabling them with a customized private blockchain to execute transactions faster)
- have concerns about data privacy and confidentiality, or
- operate in regulated areas requiring the use of a private blockchain.

A private blockchain provides more control over the blockchain for these companies or consortiums, since they decide who is able to write data and participate.

A private blockchain is only operated by authorized members or sometimes even only by a subset or one of these members. Thus, a private blockchain is more centralized than a public blockchain consisting of thousands of nodes.

Having consent within this group of permissioned members would even allow them to remove blocks and reverting to an older state. To get such a consent or agreement between a small group of permissioned blockchain participants is easier than in a global, decentralized blockchain with thousands, or tens of thousands, of participants with different backgrounds and goals.

Moreover, operating a private blockchain means as well that the company or consortium requires people with appropriate expertise and experience to run the private blockchain. In addition to required human resources, costs for infrastructure and licences have to be considered as well. Private blockchain technology and services are often offered by startups and the private blockchains are developed and / or strongly customized for a specific use case by these startups. This exposes the company to additional counterparty risks resulting in potential scenarios where the startup is no longer available (e.g. due to bankruptcy).

[2] Important note: Confidential or private data should never be stored on a blockchain, since data may get decrypted in the future. Thus, the blockchain does only store the hash (so called "anchoring") of the data and confirms the content of the data. The data itself is stored off-chain in a secure and access restricted location.