custody and crypto custodians[3], a functional description of various service elements can already be given. Previous work has already been done by the International Securities Service Association (ISSA) and its analysis for an "Infrastructure for Crypto-Assets"[4].

For the purpose of this document, crypto custody means services around the new token economies representing digital securities on distributed ledgers, in particular, the administration of holdings and management of public and private cryptographic keys (e.g. generation, redemption and recovery). As well the reporting to customers and to regulatory bodies becomes a core functionality. It can be expected that a crypto custodian will offer value-added services similar to those provided by traditional custodians, e.g. concerning asset management or triparty collateral management services. Given the probabilistic nature of settlement on some public blockchains, specific questions arise around the finality of these transactions. Regarding private chains, finality is not a matter of concern due to their deterministic approach.

Further, the proof of legal ownership of tokens via cryptographic keys becomes a core issue. As the private key enables execution of ownership rights, it remains to be seen how today's traditional custody chains within the multi-layered custody model will be transferred to the custody of digital assets.

From a technical perspective, the participants in the network might not want to maintain their own technical environment but want to outsource this functionality. Therefore, the maintenance of nodes could also become part of the crypto custodian service offering.

Crypto assets might represent full rights and obligations in a purely digital form and hence might become a primary target of potential cyber-attacks. This makes cyber security a matter of highest priority.

4.3 Trusted Third Party (TTP) Layer

The core of the conceptual investigation in this paper is the introduction of a trust model as a reliable and neutral link ensuring regulatory compatibility and legal certainty. The TTP connects the Custody Layer with the Collateral Token Layer. This means that the TTP ensures that tokens created on the Collateral Token Layer represent assets traditionally issued, booked and held at depositing institutions[5]. The holder of a token on the Collateral Token Layer can exercise rights related to the assets represented in the token via the TTP.

[3] See 5th Anti-Money Laundering Directive, May 2018 (https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L0843&from=EN)

[4] See International Securities Services Association: Infrastructure for Crypto-Assets: A Review by Infrastructure Providers, October 2018 (https://www.issanet.org/e/pdf/2018-10_ISSA_report_Infrastructure_for_Crypto-Assets.pdf)

[5] However, it can be expected that in future securities will also be issued directly on DLT (see Box 'Considerations Regarding Custody for Digital Securities').