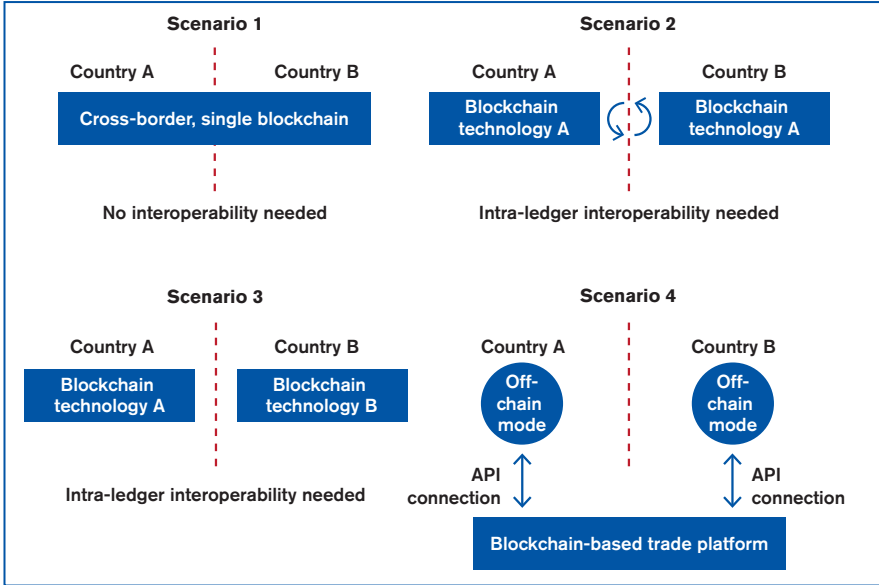


Figure 9 Cross-border G2G scenarios



Source: Author.

project is the Singapore Customs Declaration initiative. In collaboration with Singapore Customs, IBM developed a blockchain-based customs portal allowing it to send customs declarations from New York to Singapore.²⁷ A permissioned ledger allows all members of the network to access all customs information in a single place and in real time. Various private sector consortia in the field of transportation and logistics are also looking into the feasibility of developing multi-stakeholder trade platforms (see Section 3.1(c)). Although, in theory, such platforms would be ideal, it is difficult to envisage such a scenario at a global level. This approach is more likely to be limited to some trading lines and some customs authorities, with various platforms running in parallel.

Another scenario would be one in which government authorities on both the importers' and exporters' sides belong to two different platforms built on the same blockchain technology (e.g. Hyperledger Fabric). In such a case, "intra-ledger interoperability" – i.e. interoperability between blockchains platforms built on the same blockchain technology – would be required (see Figure 9, Scenario 2). Such interoperability is the subject of intense research and solutions are emerging. In May 2018, the Enterprise Ethereum Alliance, for example, unveiled an open-source cross-platform standards-based framework for Ethereum-based permissioned blockchains that would allow interoperability between permissioned blockchains