

Introduction to ToIP

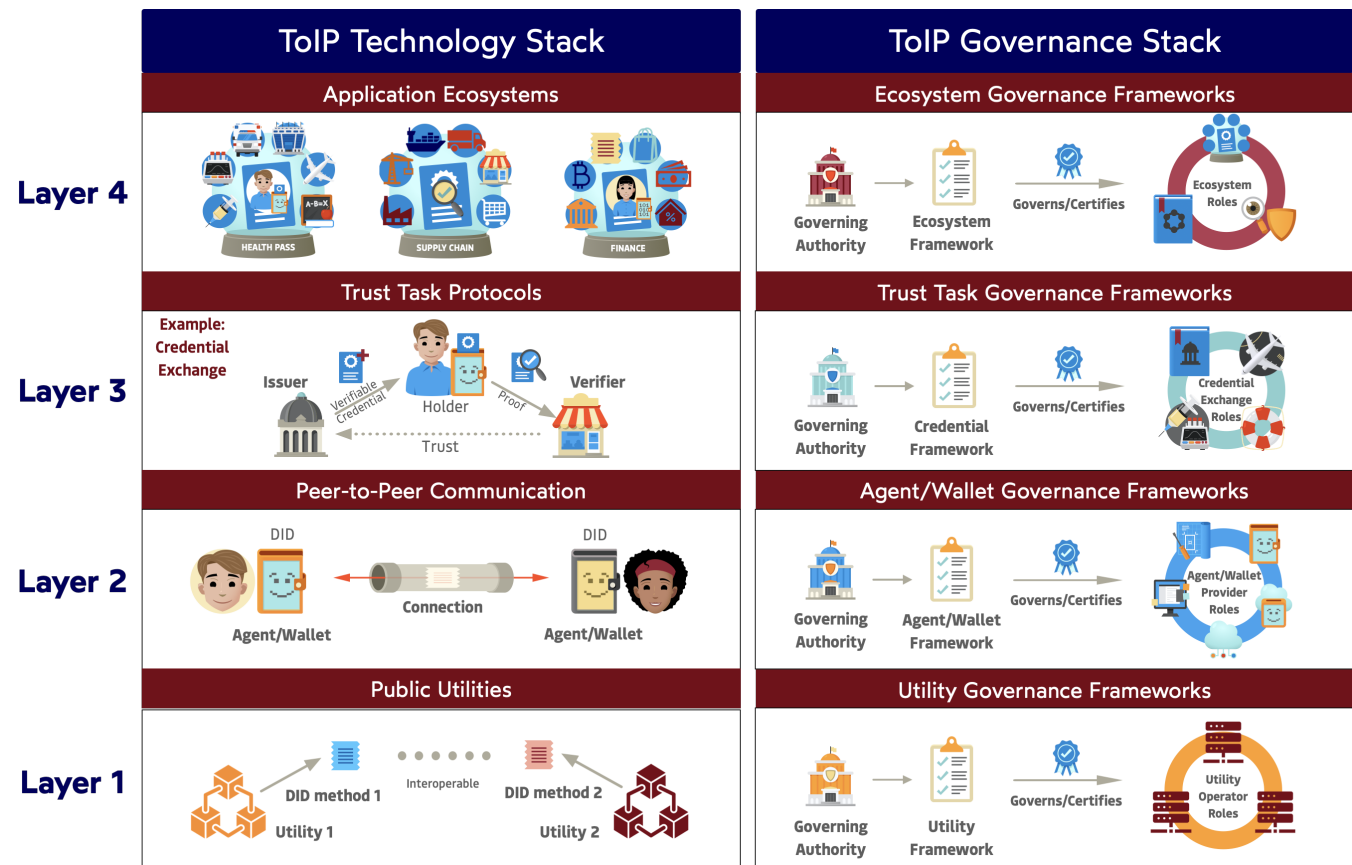
This ToIP wiki page is a starting point for anyone new to the concept of Trust over IP who wants to start with a high-level introduction to the ToIP stack and the ToIP Foundation.

The Introduction to ToIP White Paper

In December 2021, the ToIP Foundation finished [a new white paper that provides a complete illustrated introduction to ToIP](#). We strongly suggest this as the best starting place to become acquainted with the core concepts of ToIP and the mission and work of the ToIP Foundation.

The ToIP Stack

At the very core of ToIP is the **ToIP stack**—a four-layer model for interoperable decentralized digital trust infrastructure. Below is a static picture of this stack, but the best way to learn about this stack is via [this interactive model on the ToIP website](#).



Evolution of the ToIP Stack

As work on the ToIP stack progressed, in November 2022 the Foundation published a new document called [Evolution of the ToIP Stack](#) to provide an overview of the four stages that development is progressing through. We highly recommend this document to put the work of the ToIP Foundation into context.

Design Principles for the ToIP Stack

If you are intrigued by what you have read above, another resource that can help you understand ToIP at a deeper level is the [Design Principles for the ToIP Stack](#). Produced by 22 ToIP Foundation members via a series of community writing workshops held over four months in the fall of 2021, this 58-page document explains the 17 design principles guiding the development of the ToIP stack across all ToIP Foundation working groups and task forces.

Historical Documents

The concept of the ToIP stack originated with ToIP Foundation Executive Director John Jordan and a group of Internet architects who were deeply involved with decentralized [digital identity](#), sometimes called [self-sovereign identity](#) or SSI. These architects were convinced that the core concepts of decentralized digital wallets and credentials—and the combination of cryptography and governance that made them work—could be the basis for finally establishing an interoperable trust layer for the Internet that could address longstanding issues in cybersecurity, privacy, data protection, and digital trust. After developing a core design for the ToIP stack, they published an article called [The Trust Over IP Stack](#) in the December 2019 special issue of IEEE Communications Standards Magazine called [The Dawn of the Internet Identity Layer and the Role of Decentralized Identity](#).

That article led to the publication of the overall requirements for ToIP in a Hyperledger document called [The Trust Over IP Stack](#). That became the basis for the launch of the ToIP Foundation in May 2020 and the first version of the white paper called *Introduction to ToIP*, now superseded by [Introduction to ToIP V2.0](#).

The diagram below is a visual depiction of the evolution of the original founding documents into the second generation of foundational documents now being published by the ToIP Foundation.

First Generation

Second Generation

