

State information system in Estonia



In Estonia, the state information system (state IS) is regarded as a **service-centred** organisation, meaning that all operations performed by civil servants, entrepreneurs, citizens as well as software are considered services. Thus, the state IS is a **common service space**, which relies on the support systems for the maintenance of databases and is administered with the assistance of the administration system for the state information system (RIHA). Information systems of different organisations communicate with each other through services and offer services to citizens and enterprises via the State Portal “eesti.ee” (though, for the time being, a considerable number of services to the end-user are provided directly via organisations’ own portals).

Since users of the state IS are not interested in the structure of the state, but in their legitimate right to use services, state authorities are obliged to co-operate and ensure the functioning of the state IS as an integral whole, whereby common **single point entries** operate in collaboration of state information systems. **Uniform authentication** of users is ensured by the Estonian public key infrastructure (PKI).

Public service is a service provided by a service provider (an organisation) to the end-user – a citizen or an organisation (including public bodies, enterprises). In addition to public services, the service space contains nested services that do not necessarily have an independent meaning for the end-user but are used as a part of a public service operation process for the provision of some other service.

In the common service space, services are provided by central and local government agencies as well as private companies and third sector organisations. All of them, as well as individuals, are also users of services. When using public services, the common service space allows individuals to represent, within the limits of their authority, both themselves and companies they work for.

Thus, the logical components of the state IS are the following:

- the administration system for the state information system (RIHA) together with its services catalogue;
- the state-administered citizen IT environment (State Portal “eesti.ee”);
- support systems and rules (data exchange layer X-Road).

In the use of data services, the application of the data exchange layer (X-Road) allows transition from an architecture that is based on bilateral agreements to that based on multilateral ones. Such an approach reduces the number of connections between information systems and facilitates the management of communication between them. Organisations providing and using services over the data exchange layer can be authenticated in a standardized manner and the data exchange between them is secure. Service providers are obliged to ensure the quality of their service, i.e. to systematically perform operations necessary for guaranteeing that the service complies with requirements established for it.

All services provided by the state IS are described by service providers in RIHA, where they are available for all interested parties. A part of the description (i.e. its free text) can be published in the public web. Strict rules have been established for a service description published in RIHA. It should contain at least the syntax and protocol of the service, the service provision policy (based on which principles, to whom and for which purposes the service is provided), and the quality indicators of the service (its functionality, reliability and efficiency – these are necessary for evaluating and ensuring the quality of the service).