STATE TAX INSPECTORATE

GOVTECH CHALLENGE SERIES 3.0

HOW TO MANAGE FISCAL DATA SECURELY AND RELIABLY?

CURRENT SITUATION AND THE CHALLENGE

State tax inspectorate is looking for a solution to ensure that in case of disconnection between the Payment Instrument (analogue to the cash register) and the server(s) (e.g. decentralized DLT (distributed ledger technology)* network where fiscal data of transactions (receipts) is transferred and registered), The Payment Instrument could continue to record transactions securely (without the possibility of data manipulation) in its medium (offline mode), and data not transferred to the server(s) (sales receipt/transaction fiscal data) would not be lost or changed (manipulated) in the Payment Instrument medium, until the connection to the server(s) (DLT network) is restored.

Prior to the development of the Virtual Fiscalization e-service**, the State Tax Inspectorate under the Ministry of Finance of the Republic of Lithuania (STI) faced the challenge of implementing receipt data irreplaceability, traceability, reliability and decentralized transmission solutions. It is planned that the virtual fiscalization solution will be implemented through decentralized data provision-receipt nodes (servers). It is planned that the managers of the nodes would be not only the STI, but also other economic entities operating in one ecosystem. Such an ecosystem would minimize the risks of manipulating fiscal data. However, the challenge is how to integrate such use cases of the solution in the mentioned ecosystem, when the connection between the Payment Instrument and the data provision-receipt node (server) is lost. The STI seeks to assess the technological ways of managing this challenge.

**DLT is a distributed ledger technology that implements a decentralized data sharing and management infrastructure that provides high security, data consistency, transparency of operations, and does not require a single central control point.*

***In order to create conditions for amortization of cash register users' costs, the STI under the Ministry of Finance plans to create a "Virtual Fiscalization" electronic service, which will enable alternative methods of accounting for economic transactions to appear on the market (e.g. other Payment Instruments such as cash registers). bank card readers, mobile apps, other applications). This service will save administrative and time costs for taxpayers (fewer costs that are now incurred in purchasing and maintaining a cash register, filling in and archiving and storing paper cash transaction logs). The number of physical control actions performed by the tax administrator on honest taxpayers and the duration of the tax administration's control actions against taxpayers will also decrease, as most of the actions will be performed by the tax administrator himself by automatic means.*

SOLUTION

In the future, with the introduction of the Virtual Fiscalization service for cash registers and other means of payment at the STI under the Ministry of Finance, the tax administrator will be able to automatically receive information electronically on actual transactions (fiscal sales of goods / services) for tax administration purposes. Virtual fiscalization (ie protection of fiscal data from mani-

pulation and provision via decentralized data nodes (servers)) is planned to be performed (i) online, when transactions are accounted for by means of Payment without integrated hardware - fiscal block and (ii) indirectly. (offline, for example, information of a specified period is transmitted once every 24 hours), when transactions are accounted for by means of Payment (cash registers) with integrated technical equipment - fiscal block.
The scope of the challenge is only the case (i) when the Virtual Fiscalization operates online when the transactions are accounted for by Payment Instruments without integrated hardware - the fiscal block. The challenge must be focused exclusively on software, the proposed solutions cannot be based on the use of additional hardware (analogous to the fiscal blocks used in cash registers). The solution must be easily adaptable to the integration with a decentralized data provision-receipt node (server) based on DLT technology.
The use of data signing certificates must also be ensured for the protection of fiscal data.

SOLUTION SUITABILITY

The STI seeks to assess the technological ways of managing this challenge. If the proposed solution ensures that data in the Payment Instrument medium cannot be lost or altered (manipulated) until the connection to the server(s) is re-established, this will be considered an appropriate result.

FUTURE OPPORTUNITIES

If the solution ensures that data in the Payment Instrument medium cannot be lost or altered (manipulated) until the connection to the server(s) is re-established, its architecture may be approved as a mandatory technical requirement for all Payment Instruments that can be used as an alternative to cash registers, accounting for transactions. Developers will be able to develop innovative Payment Instruments and offer them on the market (e.g. Payment Instruments such as bank card readers, smartphone mobile apps, other applications could be developed and used instead of a cash register).

ADDITIONAL INFORMATION THAT MIGHT BE RELEVANT (IN LITHUANIAN)

Key legislation:

- Lietuvos Respublikos 2002 m. rugpjūčio 13 d. Nr. 1283 vyriausybės nutarimas Nr. 1283 „Dėl kasos aparatų diegimo ir naudojimo tvarkos aprašo patvirtinimo“
- Valstybinės mokesčių inspekcijos prie Lietuvos Respublikos finansų ministerijos viršininko 2004 m. sausio 26 d. įsakymas Nr. VA-9 „Dėl kasos aparatų, prekybos (paslaugų teikimo) automatų ir taksometrų spausdintuvų techninių reikalavimų“.