Financial Management Automation System in Social Security

e-signature Module (MOSİP/e-imza Modülü)

Published On: 22 August 2015

Organisation: Social Security Institution (SGK)

Country: Turkey

Level of government: Central government

Sector: Social protection

Type:

Launched in: 2014

Overall development time: 1 year 1 month

Description

A new era in social security services in Turkey started with the Financial Management Automation System Project (MOSİP), which began to be established in 2009 in order to make the social security institution's work and operations faster, reliable and transparent. MOSİP is the first financial management system in Turkey which has e-signature support. The project encompasses the processes of electronically signing, signature verification and the digital storage of accounting, payment and attaching supporting documents which are produced in the MOSİP system and processed as hardcopies. With this system, users (frontline staff) are able to sign the documents produced and receivable from the MOSİP system with their electronic signature. With this system the users are also able to

- Sign multiple times with only one pin code authorisation.
- View the final version of the documents on their screen before signing.
- Sign the document by multiple users sequentially.
- Confirm on what date and time the signature is made and on that day if it is valid or not.
- View the e-signed documents when necessary.

Other details worth noting:

- All documents will be processed as a whole package.
- All signatures have a time stamp and cancel information stored on the server.
- Signatures on a document can be verified individually or collectively in the system.
- All signed documents can be downloaded to local PCs.
- Users can attach PDF documents from local computers or all documents directly from scanners.
- Users can pick certificates for signing operations among the certificates in the smart card. Any document can be printed while viewing.
- Users can log into the system with their smartcards. In this case, only the pin code is required to sign in.

Why the innovation was developed

- The innovation was developed in order to save a lot of expenditure in the Social Security Institution, e.g. stationery, staff, storage (archives).
- Its purpose is to make the account and budget systems benefit from advanced technological capabilities so the process is realised in a faster and more effective way.
- Moreover, with this system it is expected that the process of transition to the e-audit system will be accelerated.
- - Resource saving.
  - Environmentalist.
  - Efficient.
  - Transparent.
  - Secure.
  - Account and budget departments employees and managers.
  - Employees preparing payment documents and authorised administrators who have the rights to allow these payments.
  - Employees working at archiving departments.
  - The number of beneficiaries is 6 712 as of the date 16.07.2014.
  - It is considered that public staff who are responsible for audits will benefit from the innovation in the future.

Results

Efficiency

The cost of the project:

- USD 4 645 for 10 million time stamps.
- Maintenance contract.
- Project cost USD 106 884.

Expected savings:

- Reducing the cost of staff by USD 394 835 annually.
- Reducing the time, which is elapsed during the process with hardcopy documents. This time cost is reduced by approximately USD 1 625 790 annually.
- Reducing the stationary (paper and post) cost by USD 1 230 955 annually.
- With this project, the annual average of 22.5 million A4 paper is expected to be saved. If it is assumed that an A4 sheet of paper is of 5 g, the annual savings will be 112.5 tons of paper. With MOSİP e-signature project about 2 000 trees per year (1 hectare) forest area is freed from being cut.
- Annual saving amount is approximately: USD 3 251 580.

Effectiveness

- The staff can complete approximately 40% more transitions with the help of the innovation.
- The payments and other transactions can be completed 70% quicker.

Service quality

Accessibility:

- All accounting transactions began to be performed online. Thus, the process of transferring the documents to the account department by the relevant personnel is eliminated.

Reliability:

- Through signature control, the risk of signing in place of other employees is eliminated.
- The authorisation of the signature is verified by an independent agency.
- In case of negative results regarding signature verification, the system does not allow the signing process.

Development

Design

The idea for the innovation was generated by middle and senior managers, and frontline staff (users). It was included in SGK's 2013 central action plan.

Design time: 3 months

Testing

- First, trialling was done by the unit that developed the project.
- A pilot implementation in one city during nearly 3 months.
- After visiting provinces and conducting training sessions, collective practical trainings were given in the capital.
- The system was open to the whole country for 2 months of training.
- After this 2 month period, the system started to be used decisively.

Testing time: 3 months

Implementation

Tools used:

- Eclipse.
- Toad admin tool.
- Ireport.
- Java.
- EGA company's electronic signature API is used for the process of signing, solving and verification.
- Sun.pdf library is used for pdf analyse and scanning.

Resources used:

The cost of the project:

- USD 4 645 for 10 million time stamps.
- Maintenance contract.
- Project cost USD 106 884 (institution's personnel costs are not included).

The project is developed by a work team of 5 people.

Implementation time: 5 months

Challenges and solutions

- The servers and connection bandwidths were not able to hold the composed burden which was a problem encountered.
- Network card changed from 100 Mbps to 1000 Mbps.
- The connection number in data source has been raised from 13x9 to 22x9.
- The connection response time has been improved from 20 seconds to 4 seconds.

Partnerships

NKR Software Consulting Company Ltd. Co.
Private sector
The Financial Automation System is developed with this company. The e-signature module is an expansion of the system. The analysis, design, implementation, test and maintenance phases are completed together. The partner company has experienced, innovative and motivated staff which was helpful for a quick development and design.

Lessons Learned

Lessons Learned

- Before beginning this kind of project, it is very necessary to evaluate deeply the suitability of technical infrastructure like internet speed or capacity of servers to be used in the project.

Conditions for success

- Guidance.
- Motivation.
- Technical infrastructure.

Other information

Effective, economic and efficient execution of the asset and resource conservation issues are being addressed with the Public Financial Management and Control Law No. 5018, whilst defining internal control activities. MOSİP in e-signature project serves both of these purposes. The creation of the control environment in the public sector is one of the issues emphasised. Through this project, important facilities in the control and monitoring processes will be provided.