

IT FOR SUPPORTING THE SLOVENIAN NATIONAL HOUSING SAVING SCHEMA: EXAMPLE IN G2B INTEROPERABILITY

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Abstract

In this article we focus on information technology support for the Slovenian National Housing Savings Schema including G2B cooperation between the Housing Fund of the Republic of Slovenia and several business banks. From e-Government perspective, our solution incorporates also G2C component by offering services to citizens. We present our experience in automating information exchange between several actors. In our view, application interoperability is the most important factor that contributes substantially to the overall success of the IT support. Although it seems that the ultimate interoperable solutions for e-Government are still pretty far-fetched, we argue that even moderate steps in this direction can bring considerable benefits for the involved actors.

1. Introduction

Supporting the Slovenian National Housing Savings Schema has been one of the most prominent tasks of the Housing Fund of the Republic of Slovenia in the last decade. Since its establishment in 1991, the Fund has been actively involved in several tasks with the intention to help improving the housing conditions for the citizens of Slovenia. Following the era of financing the individual construction with the loans under favourable conditions [1], the Fund's major strategy shifted to encouraging individual housing savings by offering an attractive Savings Schema to citizens. One of the fundamental motivations for this action was to divert substantial amount of financial resources from consumption to savings, which, among other consequences, eventually turned out to have a positive effect on Slovenian economy [2]. The relationship between the development and asset allocation of contractual savings and capital structures is analysed in more detail also in [4].

The importance of application integration and interoperability [3] in e-Government has been emphasized in several recent publications (e.g. [6]). The Slovenian National Housing Savings Schema domain has some typical characteristics that justify the implementation of e-Government principles. First, the Schema is a state project governed by the legal Act. Second, there are several actors involved, including the Ministry of the Environment and Spatial Planning, the Fund, several business banks, and citizens. And last, the Schema offers an incentive financial instrument to help citizens acquiring suitable housing facilities. Therefore, the citizens that are saving their money in the Schema are entitled to gain access to exact and up-to-date information about the status of their savings, while the other three cooperating actors have to provide services for accessing such information. Although providing such services to citizens seems relatively simple at first sight,

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various roles of the involved actors are the cause of many intricacies that call for an efficient implementation of integration and interoperability principles.

In this article we present the Slovenian National Housing Schema project from information technology viewpoint. In particular, we focus on integration and interoperability issues related to exchanging information between the government institutions and business banks for enabling e-Government services to citizens. First, we describe the context and the underlying business process. Then, we elaborate on some of the most crucial phases, discussing the issues related to the information technology. Next, we present a few topics concerning the actual implementation of supporting the underlying business process. Finally, we conclude by summarizing the most important findings in the paper.

2. Slovenian National Housing Savings Schema

The Slovenian government enforced the conditions of the National Housing Savings Schema (NHSS or Schema) in resolutions passed in 1999 and 2000 [5]. The principle behind the NHSS was to establish a systematic framework for promoting long-term savings deposits and consequently increasing the quantity of long-term housing loans under favourable terms to citizens. Note that several other EU member states, like for example Austria, Germany and the Czech Republic, offer similar legislative contexts for savings in housing.

The Schema introduced two incentive mechanisms for savers: state premium accruals and favourable housing loans. On one hand, the savers in the NHSS receive state premium accruals in the form of a fixed extra amount added to their saving account after each year. The state premium accruals not only increase the attractiveness of the saving by enlarging the return, but also encourage regular monthly saving payments. On the other hand, the banks included in NHSS are obliged to offer loans to the savers in at least twice the amount of their savings and at fixed interest rates that are known in advance. It turned out that such a transparent instrument simplifies the planning of housing financial construction for savers. Besides, the banks are not allowed to charge additional fees for loan approval and management. Therefore, since its introduction in 1999 the NHSS received a remarkable attention and was very popular among the Slovenian citizens.

The first savers joined the NHSS in July 1999. Till the end of 2006 the total number of savers included in the NHSS exceeded 99.000. The overall share of the savers that broke the contract prematurely is 16.8%, which seems relatively high. On the other side, 53.3% of the rest of the savers, which is almost 44.000, have already completed their contracts and, consequently, acquired the rights for state premium accruals and the housing loan under favourable terms. The total amount saved within the completed contracts is over €363 million. The sum includes €284 million of capital payments, €55 million of bank interests and revalorisation, and €24 million of state premium accruals. At present time there are still over 38.000 citizens actively saving money in the NHSS; their capital payments amount is at the end of the year 2006 over €170 million.

3. Interoperability – key success factor in IT support

By definition, interoperability is the ability of two or more systems, or components to exchange information and to use the information that has been exchanged. With respect to software, the term interoperability is used to describe the capability of different programs to exchange data via

common set of business procedures, and to read and write the same file formats and use the same protocols. In IT we can distinguish between several types of interoperability that can be ranked hierarchically from application interoperability, through semantic and enterprise interoperability to environment interoperability. Most of the up-to-date e-Government interoperable solutions seem to function solely on the application level; even on this level they function in a fragmented manner.

The state performs the NHSS through the Fund and selected business banks. There are four different actors involved in the underlying process: (1) the Ministry of the Environment and Spatial Planning, (2) the Fund, (3) a business bank and (4) a citizen. The role of the Fund is central, since it communicates directly with all three actors. Citizens included in the NHSS want to get a decent revenue for the saved money and a loan at the end of the saving period. Participating banks included the NHSS in their services portfolio and are trying to increase their market share by acquiring new customers. The Fund controls the distribution of public money; in fact, the Fund validates the compliance to the NHSS criteria for each saving account, for which it requires relevant data from banks. In addition to that, the Fund is also in charge of promoting the general awareness about NHSS in public. Providing high quality e-services to citizens contributes to the above goal.

The Fund and the banks carry on the majority of interdependent work to support the NHSS business process implementation. At first sight, banks could deal with the task alone since it mostly falls in the category of their regular business. However, after each completed year the savers are entitled to receive a state premium accrual if they had paid their instalments regularly and according to the established plan. Since the Fund is responsible for validating savers' compliance to the plan, it needs to acquire data about the contracts and paid instalments. To actively keep an eye on the things, the Fund issued a protocol that governs the necessary data exchange between the banks and the Fund. The quantity of the exchanged data is relatively high; however, the frequency is quite moderate since the exchange has to take place only once or twice every month. Since the Fund decided to maintain its own database for monitoring saving accounts, it was a natural move to make it available to interested banks and citizens through a web application. In such way the banks are able to use the Fund's database for advising citizens and to proactively handle potential problems like missing instalments etc. The Fund also allowed secure Internet access to this web application to citizens. Here, the citizens can observe the status of their saving account, which gives them additional sense of control over the saving matters. The introduction of the Fund's G2C service had also a surprising side effect: several banks decided to offer B2C services to citizens, thereby narrowing the time and information gap by providing even more accurate data on the Internet.

4. Implementation and experience

After establishing the NHSS project, the Fund issued detailed requirements for data exchange with the corresponding banks. At first, the amount of data was relatively small and the exchange was technically carried out using storage media like diskettes and CDs. Soon, such exchange had become more of an obstacle, so the participants began using the Internet for the task. Here, some data protection and privacy issues had to be considered, but after that the exchange went on smoothly. Nowadays, the interoperability level achieved by such exchange still seems sufficient for the task. However, the Fund's officers are much inclined to push it further to a higher level, even though some inherent problems are expected. Since the NHSS project, although taken seriously by the banks, is not their principal activity, they are not really enthusiastic about investing more resources to the solution. In fact, the benefits of a higher-level integration and interoperability seem rather moderate from the banks perspective.

In order to include citizens and banks more tightly in the NHSS business process, the Fund's management decided to allow web access to NHSS database. The majority of citizens accepted the new possibility to monitor their saving activity with a positive attitude. There were more than 100.000 visits to the web page in the last year. Instead of dealing with problems and having to complain after each saving year, they were offered a possibility to react immediately when they observe there is something wrong with instalments paid to their saving account. Therefore, the quality of data increased substantially. We estimate that by introducing this web application we were able to avoid over 90% of complaints, thus sparing a lot of unnecessary effort.

The Fund carries out the NHSS project through careful business process management. The whole business process is cautiously divided into sub-processes, where each of them is described in detail with several diagrams and written description in Slovene language. Since the most important actions are typically carried out once a month, such a detailed description is a necessary prerequisite for execution with controlling mechanisms that guarantee acceptably low margin for error.

5. Conclusion

In this article we present a few arguments that establish interoperability as one of the key success factors in implementing effective IT solutions for e-Government. In the context of the business process of the Slovenian National Housing Savings Scheme we discuss the experience gained in implementing and using the supporting application. Besides the interoperability issues we would like to put forward also the topics like user interface design, change management, data privacy and security, and risk management. For future work we consider advancing the interoperability solution to a higher level by using message queuing and web services technology.

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7. References

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