Tyoelake.fi

Taina Ojala
Organisation: Finnish Centre for Pensions
Address: 00065 ELÄKETURVAKESKUS
Finland
Tel +358 10 7512588
Fax+ 358 10 751 2496
E-mail taina.ojala @etk.fi

Abstract : The service portal Tyoelake.fi provides, within the decentralised earnings-related pension scheme, a uniform interface for electronic communication with the insured.

The following services are available at the current time: General information relating to pensions, age-profiled advice service for all stages in life, a one-to-one advice service and a service whereby an identified client can check his or her contracts of employment and own employment details included in the registers and make any corrections.

eEurope Awards is a certificate, which can be used by the best public-sector Internet services in 2003. In the category "Better Life for European Citizens", the web service Tyoelake.fi was ranked among the five best.

1   Introduction

The reasons for developing the web service Tyoelake.fi can be found in the development of the population trend in Finland. The large numbers of citizens born after the Second World War are approaching the age when the personal interest in pension matters increases. There has therefore been a wish to direct part of the increasing demand towards electronic self-service. At the same time, there has been a wish to also give people, others than those approaching retirement age, a chance to receive information about their pension accrued in the course of their work and to follow matters relating to their own pension benefits. This can be seen as promoting the mobility of labour both in Finland and outside the Finnish borders.

At the beginning of 2001, the Finnish Centre for Pensions and all the authorised pension providers of the decentralised Finnish statutory earnings-related pension scheme agreed on creating a common service portal for the insured. At the same time, longer-term development policies were drawn up and the contents of the first version as well as the timetable for the publication were decided on. For organising the building of the service a permanent course of action, which creates continuity for the development, was also agreed on. The web service Tyoelake.fi was opened in December 2002.

The most difficult question in planning the service was the manner of authentication. As a solution, a separate password and user identifier would have been difficult administratively and also inconvenient for the user, because one does not check one's registered data on a daily

basis. The electronic identification card, which was introduced in Finland in 1999, had not become popular and does not thus guarantee a sufficient number of potential clients. For this reason the authentication procedures of the largest Finnish banks were adopted as authentication solutions, in which case the number of potential clients would increase to millions. At the same time, the basis for implementing a single log-in for the web services of the earnings-related pension scheme was created, in which case the insured can easily move from one web site to another after identifying himself or herself. This and a few functional improvements of Tyoelake.fi were introduced in Tyoelake.fi version 2 in January 2004.

The fact that the use of codes for online banking, which was successfully implemented in the Tyoelake.fi service, is being planned for the services for the general public provided by other producers of large open web services should be attributed to the positive consequences of the Tyoelake.fi project. In February 2003, the National Board of Taxes, the Social Insurance Institution and the Ministry of Labour concluded an agreement on the matter, which led to introduction of these parties' common authentication system during the spring 2004.

2   The pension portal Tyoelake.fi

The web service comprises an extensive and informative web site, which is open to everyone and contains information about the earnings-related pension scheme, and an individual service intended for identified insured persons. The open service and the text version made for the visually handicapped are trilingual, which further extends the number of users.

The course of action of the uniform portal is however not centralised, but it is based on directing the insured to the services provided by their own authorised pension providers. Matters are then handled in a competent, accurate and fast way, because this is a key business activity for the pension provider.

Some of the individual services offered by the portal Tyoelake.fi are also available to web services of the authorised pension providers. The authorised pension providers can use the corresponding data in their other advisory service, they may shape the service they provide according to their own web site content and decide themselves how they deal with information that is freely available and with that requiring authentication to gain access.

2.1   Open services

The following services are available for all:
- distribution of general information, grouping of contents shown in the navigation bar all the time
- age-profiled advisory service for different stages of life, as alternative to the aforementioned
- pension glossary, free text search function and links in texts
- open advisory service

The web site has been built to be trilingual, in which case the contents are available in the national languages, Finnish and Swedish, as well as in English. Since the web site is in three languages, it is made available to all potential users. In practice, working in Finland

presupposes that the person has knowledge of one of the languages above. The extensive range of languages also meets the needs of the labour force moving in and out of the country.

Tyoelake.fi contains almost 700 pages including all pages in different languages, from which about 300 handles information in the open service and 370 information in the pension glossary. There is for example essential information about pension reforms in the service in good time before the reform enters into force. Among other things an alphabetical table of changes to the pension scheme as of 1 January 2005 has proved to be very popular. The pension glossary between Finnish, Swedish and English provides to-the-point explanations of difficult pension terminology. It is possible to search separate words in the search function and access the glossary over links in the texts.

The feedback and the questions that the users have asked about pension benefits in the open advisory service are transmitted by electronic mail to the Finnish Centre for Pensions or to any pension provider according to the users' own choice.

2.2 Individual services

The following individual services are available for identified insured:

❑ checking one's own contracts of employment and periods of self-employment included in the registers and making possible corrections
❑ individual advisory service
❑ the insured's connection to the services of his or her own pension provider

It was clear right from the start that the new pension portal should include individual services in addition to information contents. The individual services can be offered only by using reliable means of identifying the client, and they are available in the national languages. The service improves the insured's opportunity to check whether his or her own data included in the registers are correct and to receive individual information about his or her pension. This strengthens the confidence in statutory pension provision and social rights, and gives the insured a more secure basis for planning his or her future.

The employment record contains private-sector contracts of employment including data on the pensionable wage as well as public-sector contracts of employment. Basic information about all the earnings-related pension benefits, i.e. private-sector employees' pensions as well as state employees' and other employees' pensions, has been compiled in the Tyoelake.fi web service.

The feedback and the questions that the users have asked about pension benefits are transmitted by electronic mail. For the administration of the feedback and the questions, a course of action utilising the current decentralised service network has been created. By means of this course of action the service is directed to the party who is able to clarify the matter in the best possible way.

The earnings record in the registers of the earnings-related pension scheme is made visible to the identified insured and he or she can check the correctness of the data. For further information the insured can proceed to the services provided by his or her own authorised pension provider or turn to the Finnish Centre for Pensions. The insured is directed to his or her own authorised pension provider for individual and personal advice, when it is the best way to serve the insured.

The authentication solution in the portal Tyoelake.fi is something remarkable and new in eGovernment services. The introduction of the authentication service of monetary institutions is a unique solution both in Finland and internationally. The employment registers of the Finnish Centre for Pensions contain, among other things, data on all the contracts of employment in Finland over a period of 40 years needed for the calculation of pension accrual.

There are several means of authentication in the open service. The insured may use a card with PKI technology. The card contains the Population Register Centre's certificate. The other possibility is to use the authentication technology of one's own Internet bank, in which case the bank verifies the identity of the client. Online banking is in extensive use throughout Finland, and consequently the service already reaches approximately 80 per cent of the working population, i.e. the target group.

3   Administration

More than 50 authorised pension providers administer the Finnish statutory earnings-related pension scheme. It is important for them to develop the service provided to their own insured, but the service interface for the insured to gain access to the integrated earnings-related pension scheme should not be too diverse. When building and further developing the new web site, the insured's point of view has been put first. The cooperation in creating the service has from the beginning been channelled to the Finnish Centre for Pensions' responsibility.

The largest difficulties in planning and building the developing projects are related to the huge number of parties involved. The implementation has also from the beginning been carried out in good cooperation with the Data Protection Ombudsman and other authorities.

The development and maintenance of the web service and cooperation projects are managed by a committee, which approves the development policies of the service, the contents and the costs of the implementation. The members of the committee represent parties responsible for private-sector, state and local government pensions while the chairman and the development manager come from the Finnish Centre for Pensions. The costs are shared between the participants in proportion to the insured wage bills, because they best approximate the number of potential users of the service. Each party approves its own share of the budget in its administrative bodies.

There has all the time been a wish to minimise changes to the current service processes and the effects on the personnel. The advisory service related to the portal is decentralised to existing organisations. All the parties have been trained and are capable of adopting coherent courses of action. The development of the courses of action is maintained by regular meetings of the advisers' cooperation group.

The services improve also in the customer advising. In the future, it is not enough that one pension provider does its job properly. The whole system must also function properly. The pension providers and the Finnish Centre for Pensions have to improve their expertise on the whole legislation on earnings-related pensions.

4   Pension reforms

At the beginning of 2005, the earnings-related pensions underwent the largest reform in their 40-year history. The pension reform applies to every new pension that starts after the reform has entered into force. The entitlement criteria for an earnings-related pension and the rules for calculating the pension changed at the beginning of 2005. Among other changes, the retirement age became flexible. It is possible to retire on an old-age pension according to one's own choice between the ages of 63 and 68. The aim of the reform is to encourage people to continue working and cope with their work better and longer than at present. The reform is very generous towards those who continue working.

Facts about calculating the pension
- The basis for the earnings-related pension is the annual earnings. The old way of calculating the pension separately for each employment contract is not continued.
- The new calculation mode encourages continued participation in working life as the accrual rate increases with age. From the age of 18 a pension accrues at a rate of 1.5 per cent on the annual earnings and from the age of 53 at a rate of 1.9 per cent. Between the ages of 63 and 68 the annual accrual rate is 4.5 per cent. However, persons who have reached the age of 53 pay a pension contribution which is about 30 per cent higher than that of younger age groups.
- Unpaid periods due to childbirth or other factors do not cause interruptions in the pension accrual.
- For earnings-related pension provision it is important what kind of coefficients are used to adjust wages and salaries. A coefficient that emphasises the wage development ensures that wages and salaries earned at a young age will maintain their value.

Besides the 2005 reform there will be another reform in 2007, in which many laws regarding pension matters will be combined into one. A life expectancy coefficient will be introduced in 2009. The increase in average life expectancy by one year will increase pension expenditure by approximately five per cent. The aim is to limit the growth in pension expenditure by introducing a life expectancy coefficient as of 2010. The coefficient is calculated annually on the basis of the most recent five-year statistics provided by Statistics Finland. The life expectancy coefficient ties the retirement age automatically to the change in life expectancy. The coefficient will be determined for the first time in 2009 when it will receive the value 1. If life expectancy increases after this, the coefficient will decrease. Correspondingly, if life expectancy decreases, the coefficient will increase.

5   Future objectives

5.1   Short-term objectives

In the short term the need for information caused by the increasing retirement rates in the near future and the considerable pension reforms can better be satisfied by making use of electronic services. In Finland, the use of information networks and the utilisation rates of web services provided by banks are first-rate in an international comparison. Thus, the target group of the service can also be reached in practice.

User feedback of the service has been very positive. On average the amount of visitors has increased about 60 per cent in 2004 compared with 2003. The number of visitors to the Tyoelake.fi service varies between 900 and 1800 a day in 2004 (the amount of visitors has

increased especially in the autumn 2004). Most of the visitors use the services that require authentication.

The hopes placed on the utilisation rate have come true. The portal Tyoelake.fi brings the services of the earnings-related pension scheme within the reach of the entire population better than before. Utilising a general information network serves the needs of the mobile labour force since the service is available irrespective of time and place.

5.2   Long-term objectives

The long-term objective of developing the service is to create, within the decentralised earnings-related pension scheme, a uniform interface for the electronic communication of the insured. The preliminary development policies for future versions were already drawn up at the initial stage of building the service portal. However, integration of the service into the processes of pension providers is not reasonable before the standardization of processes of pension providers is done.

The following services for the insured would be available on the Internet via the same portal:
- receiving a pension estimate (prestudy will be done during 2005, the service would be available 2007-2008),
- filing a pension application electronically

The success of the service has created good opportunities for further development. The planning of the next stages has been ongoing since the beginning of 2003. The objective is an online pension application service and the connection of it to the processes of the investigating institutions. By means of the authentication solution, opportunities have arisen for creating controlled electronic processes also for pension applications.

Persons with low earnings-related pensions are also entitled to a national pension, which is decided by the Social Insurance Institution. Old-age pension applications will be the first ones that can be filled in and sent to the investigating institutions via the service at the beginning of 2006. It will be possible for the insured to apply for both the national pension and the statutory earnings-related pension in the same new service, just as he or she can do today on one paper application. Cooperation to enable single log on, between the different authentication systems which the pension scheme and the Social Insurance Institution use, has started. Cooperation with the private and the public sector and the Social Insurance Institution has become closer in these development activities.

The pension application is directed to the last pension provider. The principle of the last pension provider means that the pension provider where a person's last employment contract or period of self-employment was insured before retirement awards and pays the whole earnings-related pension. Possible further clarifications need to be sent only to one place. Confirming the withholding of taxes can be done at one go. If the pension recipient's situation changes, he or she only needs to contact one pension provider. The pension is also paid to the bank account all at once, not in doses.

6   The use of information technology resources

Combining open, authentication and individual service into a uniform and functional entity has been the greatest challenge of the implementation. Integrating the traditional mainframe

environment based on batch runs with the network environment introduced new skill requirements, among other things, and required coordination of action of different network operation centres.

Knowledge of the pension industry, web technology skills as well as an ability to integrate business needs and the possibilities offered by technology are required of those developing the service. Carrying out the projects has also been challenging as for the management and coordination of different groups of pension providers as well as multiple suppliers.

6.1   Baselines of technical solutions

The technical environment has been made to fulfill the following requirements :
- Data can be saved in a central database (DB2) or in a SQL Server database.
- Solution has to be based on Microsoft DNA architecture.
- Compatibility of different platforms of multiple suppliers has to be granted.
- Data communications with pension providers has to work in all different situations.
- Data communication uses the message standard of the Finnish Centre for Pensions.
- Data security requirements are extremely high.
- Usability requirement is decided case by case.
- XML is used in the internal structure.

The general solutions made for the service support the principles mentioned above :
- The structure of the service is based on Microsoft DNA architecture (ASP, COM+).
- The environment in use is the duplex Internet Information Servers (IIS).
- Data communication between web services and mainframe is handled by the COM Transaction Integrator (COMTI) component in the Host Integration Server (HIS 2000).
- The status of the user interface is mantained by VS Session session management system, which saves this information in a local MS-SQL-Server database.
- The TMH Report Management System is used for printouts. It has been implemented by the TMH PrintWare.
- The company TietoEnator administers the IT devices and their functioning.

6.2   Open service publication system

The open service is based on the DynaGen publication system (content management and publishing platform), which is a product based on Microsoft architecture implemented by Quartal Oy. By means of this product, the information officers and other employees can easily maintain the contents without the help of the technical personnel.

The main user interface of the service is the web site www.tyoelake.fi.

6.3   Pages requiring authentication

Personal data and individual services supplied to users are based on the central registers in the mainframe environment of the Finnish Centre for Pensions and have been implemented by a uniform architecture together with other web applications of the Finnish Centre for Pensions. These have been implemented by TKP Tieto Oy.

Part of the individual services offered by the portal Tyoelake.fi can also be used within internet services of the authorised pension providers. Both Tyoelake.fi and the internet

services of the pension providers use common connections to the central data base, TMH printing system, authentication system and SQL Server database server.

The service call in Tyoelake.fi is transmitted as a XML message to the COM Transaction Integrator (COMTI) component, which transforms data into APPC messages. Tyoelake.fi uses mainframe services by IMS transactions via the Host Integration Server.

6.4 Authentication system

A common authentication service for the earnings-related pension scheme has been built for the submission of personal data. The authentication service is based on PKI technology.

In the authentication service the person can use, as an authentication tool, an identification card provided with the Population Register Centre's certificate or codes for online banking offered by a Finnish bank. The authentication includes finding a person's personal identification code either from the Population Register Centre's service or from the Internet bank. An agreement has been concluded with the banks according to which they are not entitled to store the service users' data. For the service, the earnings-related pension scheme pays the banks the price agreed on.

The authentication service is located outside the Tyoelake.fi system. The authentication service is based on Java technology.

6.5 Data security

Personal data is only given to an identified user. The exchange of personal data has been protected by SSL encryption. The e-mail messages between the organisations offering the service are sent through the VPN network. The replies to the questions asked by the users are sent through open e-mail, but the e-mail messages only include general information as personal data is sent by letter to the address stored in the population information system.

In the data transfer between the portal Tyoelake.fi and the authorised pension providers, the parties are identified by means of server certificates. Every search for personal data leaves a record in the log database.

6.6 Further demands from the online pension application system

Development of an online pension application system creates further requirements for the technical environment:
- The user interface will be done with Microsoft .NET architecture.
- Data communication will use the SOAP protocol with XML messages.
- Host connections and pension application data transfer to different computer systems of pension providers will be done through an integration broker.
- Pension providers will receive pension application data by the WebServices.