Establishing an ETS

Recommendations for creating a European pension tracking service

March 2015

TTYPE

Track and Trace your pension in Europe

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Foreword

Our consortium felt very honoured when it was given the opportunity to contribute to the adequacy of pension information for European citizens. In our daily operations as pension providers, pension communication is crucial. It was an exciting challenge for the members of the consortium to work together and to use the joint expertise to make concrete proposals for digital pension communication at European level. We discovered that working across borders is truly inspiring and delivers results.

Our project originated from the White Paper[1] on pensions published by the European Commission (EC) in February 2012. The White Paper presents a range of initiatives to make the pensions and pension systems of the EU Member States more adequate, safe and sustainable. One of these initiatives included promoting the development of pension tracking services. It also included supporting a pilot project on cross-border tracking. Consequently, the EC looked for the support of European pension providers to develop such a cross-border pension tracking service. It offered a grant for a project to create a high-level design. After a call for proposals, this grant was awarded to our consortium consisting of Dutch pension institutions APG, MN, PGGM and Syntrus Achmea, Danish pension provider PKA and Finnish Centre for Pensions ETK.

In June 2013, we started the TTYPE (Track and Trace Your Pensions in Europe) project. The project went through a rigorous process of planning, gathering information, constructing and reviewing solutions, discussions with external experts, etc. We were able to find solutions that were feasible, which offered clear value to beneficiaries and also had added value for pension providers. We approached the design from various viewpoints – functional, technical, legal, security, organisational – and incorporated all the learning points, ideas, challenges and solutions into the final design and recommendations in this report. We feel that the proposed design is well balanced and feasible and that it provides sufficient detail for implementation. Furthermore, the design provides flexibility to accommodate developments in, for example, European IT systems, new technological innovations or changes in privacy legislation.

We want to thank all those organisations and individuals that helped us during the process. Without their support, this report would not have been possible.

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1. White Paper; An Agenda for Adequate, Safe and Sustainable Pensions (European Commission, 16 Feb 2012)

Executive summary

INTRODUCTION: THE NEED FOR A EUROPEAN PENSION TRACKING SERVICE

In 2012, the European Commission (EC) presented the White Paper: an Agenda for Adequate, Safe and Sustainable Pensions. In the paper, the EC put forward a comprehensive agenda on creating adequate, safe and sustainable pensions in Europe. The EC states that "Citizens working in another Member State not only need to preserve pension entitlements accrued across borders, they also need to have a clear overview of their accrued pension rights stemming from statutory and occupational pension schemes". The proposed solution for obtaining a clear overview of the pensions accrued across Europe is the establishment of a European pension tracking service.

The assignment of the consortium, which is responsible for the execution of the TTYPE (Track and Trace your Pension in Europe) project, is to deliver a high-level design for a European pension tracking service (ETS) and makes recommendations for its establishment. The project should make use of the knowledge and experience of existing tracking services.

MAIN OBJECTIVE: CONNECTING PEOPLE TO THEIR PENSION PROVIDERS

The general idea of an ETS is to offer people an online service that helps them connect to their pension providers across Europe. This should provide EU citizens with up-to-date and accurate information on their pensions entitlements accrued in different European countries, help them to obtain an overview and ultimately assist them in making better financial decisions (e.g. on additional private pension provisions). Such a European pension tracking service would be beneficial to multiple target groups at national and European level. The first target group comprises European mobile workers: people working – or having worked - in another country than their country of origin.
This group is expanding rapidly in Europe. The second target group consists of EU citizens in countries where there is no national tracking service available. An ETS could provide these services, but it could also assist EU Member States in setting up a national tracking service. An ETS also adds value to pension providers because it can help them in delivering a better overview on pensions to their participants[2] and in tracing lost beneficiaries.

For an ETS to be successful, a few requirements have to be taken into account.
These requirements form the basic outline of an ETS and consist of the following.

1. citizens need to feel they can rely on the information provided;
2. pension providers, national tracking services and citizens need to trust the service;
3. an ETS needs to be low cost; and
4. it must be attractive for pension providers and national tracking services to connect and for citizens to use it.

THE DESIGN HAS THREE LEVELS OF FUNCTIONALITY

The ETS should provide the range of functionality that different users will need and make it possible for as many providers as possible to connect to it. To support this, the ETS has three functional levels. These are:

1. **Finding your way in pensions in Europe**
   This level provides general information on pensions in EU countries and helps citizens to find their pension providers.
2. **Finding your pensions in Europe**
   This level shows personalised pension information from pension providers in the format in which the pension provider delivers it.
3. **Understanding your pension**
   This level shows pension information in a standardised and structured form, so that an aggregated overview is possible of different pension entitlements.

Providers can opt to connect to any or all of the levels.

2. In this document we use the generic term 'participant' to refer to individuals that have pension entitlements or pension rights with a specific pension provider, regardless of the type of pension (occupational, state, personal, etc.)

Apart from providing information to citizens, the ETS helps citizens to trace the pensions they are entitled to. It facilitates participants and providers in finding each other. The ETS also gives pension providers the option to show the ETS information on their own website. This gives them the opportunity to offer more detailed information to their participants.

FEASIBILITY, SECURITY AND COMPLIANCE OF THE DESIGN

In addition to these functional levels, several design principles were defined to add to the feasibility, security and compliance of the ETS. One is that the ETS should have a user-centric architecture. Consultations with legal experts demonstrated that this principle is very important in making the ETS compliant to legislation, although additional research – especially when connecting providers from countries with no previous connections – is still necessary. The design was also checked by four ICT consultancy firms to establish technical feasibility. Their advice (where applicable) was included in the design. It should be noted that although the design was based on the current state of technology and pension and privacy legislation, it does leave a lot of room for new developments in these areas.

THE ETS SHOULD BE IMPLEMENTED THROUGH A STEP BY STEP APPROACH

In addition to the design, a business model was developed that can be used as a basic framework for the organisation developing and operating the ETS. Cost estimates for implementation and maintenance are hard to provide at this stage. But the involvement of the European Commission (being a driver for the mobility of the EU labour market) in the realisation of the ETS will be important both politically and financially.

We conclude that the implementation of the ETS is feasible and the proposed design in our report demonstrates its appeal to citizens, providers and national tracking services. Successful implementation should be effected in a step-by-step approach, but it will be a complex and long-term process. Its success will depend on:

1. the willingness of providers and existing national tracking services to connect;
2. reaching a critical mass of participation; and
3. sufficient support from the European Commission, umbrella organizations and other relevant stakeholders.

Note to the reader

The following chapters of this Final Report contain a concise version of our findings. This version is intended for a wide audience that includes all pension experts interested in pension communication and tracking services. Should you – when reading this document – wish to know more about one of the topics discussed, then refer to the Addendum accompanying this report. The Addendum describes the lines of our research, our discussions and conclusions in far more detail than this report.

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1. Our approach

When given the assignment from the European Commission, we soon realised that we should look for a truly European solution rather than scaling up an existing solution (as used in one of the consortium's countries) to EU level. We concluded that we would need one that would appeal and be useful to all EU citizens and could also fit into the current communication channels of the EU pension institutions[3]. To find the best solution, we would need to mobilise existing European experience and knowledge, particularly as regards pension systems, pension communication, pension legislation and pension tracking services. We also realised that given the heated political debate surrounding pension issues within the EU, we would need to try to obtain broad support for whatever solution we came up with.

That is why we put a lot of effort into obtaining and exchanging information with experts from across Europe. We conducted a survey[4] to collect information on tracking services and pension communication. We organised meetings with associations such as Pensions Europe, ESIP, EAPSPI, ETUC, Insurance Europe, with employer organisations and with individual pension providers. We also consulted experts on legislation and on ICT. And last but not least, we organised three events with a broad range of European pension experts – including representatives from national tracking services – to convey and discuss our findings.

To find a solution with broad support from stakeholders, the TTYPE project focused on obtaining and exchanging information with experts from across Europe.

This proved to be successful. Our project attracted media attention from the start and more and more parties showed an interest as it progressed. But, more importantly, all this information and support helped the project in identifying best practices and arriving at a final design endorsed by stakeholders.

3. For the sake of simplicity, we refer to the European Economic Area (EEA) as "EU".
4. For the results of this survey, see TTYPEs intermediate report "Toward a European Tracking Service for Pensions" from May 2014.

2. Defining the need for a European pension tracking service

European pension providers[5] devote a great deal of effort to informing participants about their pensions. However, demands for this type of information are still increasing. As pointed out by EIOPA[6]:

"Governments, employers and IORPs increasingly shift risks and responsibility for individual retirement planning towards members of pension schemes in a lot of member states. Pension systems in European member states change. First pillar pensions tend to become less generous. Second pillar pensions tend to become more risky. DB pension schemes used to be common, whereas recently DC schemes are becoming more dominant in a lot of countries."

This means that pension scheme members not only need to be properly informed, the information must also be easy to understand and fit for purpose.

The digitisation trend in pension information helps to meet these growing demands. It makes it easier to reach individuals and to make personalisation and on-demand information provision easier. Examples of these trends are personal web environments created by pension providers that supply customised information on specific schemes. Furthermore, pension tracking services[7] providing comprehensive information on multiple schemes and pillars are being introduced in more and more European countries.

Our own research[8] shows that in 2013 (see fig. 1), national tracking services were operational in 16 countries in Europe, some of which are quite successful. For example, the Dutch pension portal 'Mijnpensioenoverzicht' has reported a total of over 1.2 visits per member of the working population between the time in was launched in January 2011 and June 2014. The users gave the website a score of 7.5 (on a scale from 1 to 10). In Denmark, the national tracking service ('Pensionsinfo') reports that the equivalent of 20% to 25% of the total population visits it once a year. For Danish citizens in the 59 to 60 age group, this is about 45%. This shows that these tracking services are meeting a demand.

The same research shows that if we look around Europe, there is great diversity in the way the pension systems work and in the digital communication on pensions. Only in a very few countries can an individual obtain a complete overview of all his or her pension entitlements through a single service.

For mobile workers who have been active in different countries, it is even a bigger challenge to keep track of their benefits and entitlements. If they have not kept in touch with their pension providers, it can be very hard to trace them after many years (language barrier, name change, merger, etc.). The EC sees this as an obstacle to an open labour market. It says that to improve the adequacy of pensions:

"… coordinated EU action is needed to ensure people do not lose their pension rights when moving to another EU country, …"[9]

5. In this report, we use the generic term 'pension provider' for every organization that promises a pension to an individual. Pension providers can be IORPs, 1st pillar pension institutions, book reserve schemes, insurance companies, etc.
6. 'Good practices on information provision for DC schemes' EIOPA, 24 January 2013.
7. We define a pension tracking service as a service that gathers and presents information on pension entitlements from different schemes or pension providers to the individual concerned.
8. 'Towards a European Tracking Service for Pensions'; TTYPE Intermediate report, May 2014.
9. EC citizens' summary of EC's white paper on pensions, 16 Feb 2012.

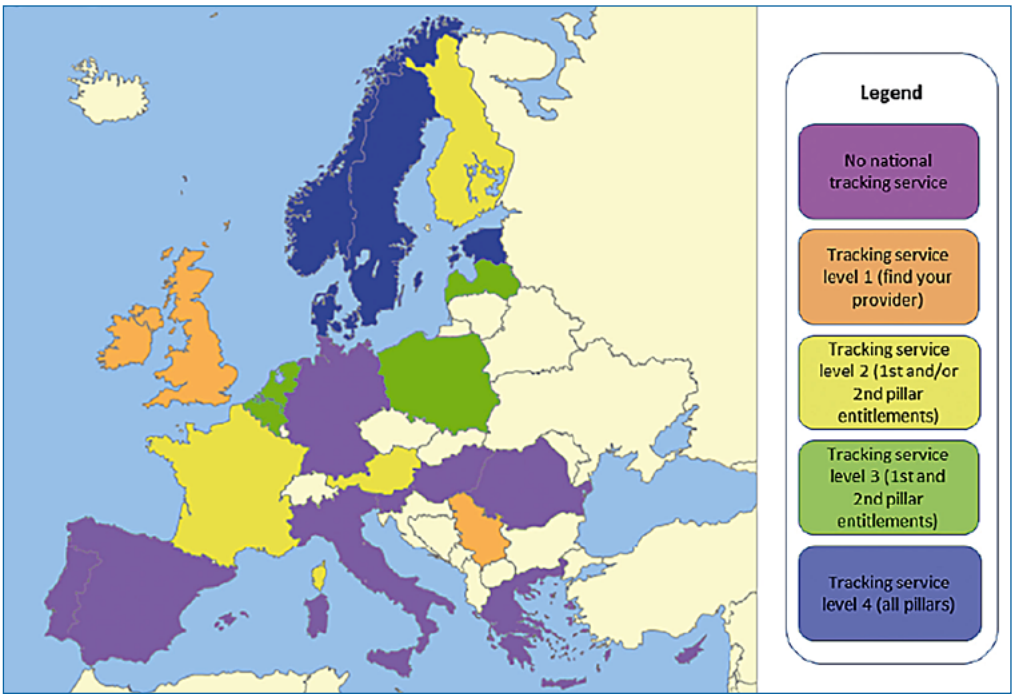

Fig. 1. Countries with a tracking service (source: TTYPE intermediate report, May 2014)

The EC promotes the development of pension tracking services and supports a cross-border tracking solutions that addresses this problem.

Whereas national tracking services benefit citizens working in a specific country, a European tracking service could benefit citizens who have worked in more than one country. It could provide them with detailed information on pension benefits and entitlements they have acquired in their working career across Europe. Additionally, a European tracking service could benefit those citizens that do not have the advantage of a national pension tracking service.

A European tracking service would benefit citizens, especially those who have worked in multiple European countries, by providing them with information on pension entitlements that would otherwise be difficult to obtain.

Although a tracking service has the advantage of being able to supply detailed information on entitlements across different pension providers, the individual provider has the advantage of being able to provide participants with far more comprehensive and up-to-date information on specific entitlements. Providers also have better possibilities to show the results of individual choices – such as early retirement – and to correspond with the individual. Combining these two strengths seems a logical choice. A European tracking service could, with the consent of the individual concerned, provide information on other foreign entitlements. In doing so, it would help pension providers to supply more comprehensive information to their participants through their own channels.

The establishment of a European tracking service also creates other opportunities. It could provide functionality for helping citizens to find the former pension providers they lost track of. Conversely, it could assist providers in tracing beneficiaries (i.e. participants entitled to a pension) they cannot find.

It should be noted that for this type of functionality, personal data will be exchanged between systems and organisations. This exchange needs to be controlled by the individuals concerned, it must be compliant with legislation (e.g. on privacy) and with widely accepted principles of Internet security.

ADRIATIC

3. Identifying the features of a European pension tracking service

If we put together the features we would like to see in a European Tracking Service (ETS), they are not so different from what National Tracking Services (NTS)[10] usually offer. The following list result:

1. It should be able to supply general information on pensions relevant for EU citizens – particularly mobile workers.
2. It should be able to show all pension benefits and entitlements acquired in the EU to potentially all EU citizens.
3. It should offer a service (primarily a web portal) that is potentially accessible for every European citizen with access to Internet.
4. It should be reliable and trustworthy and have a high coverage of administered pensions across Europe.

Much of the information the ETS should show is already available in one form or another e.g. on the websites of pension providers, through NTSs, in digital or printed pension benefit statements. So one of the ETS's main functions is to gather this information from pension providers at the request of the user and make it available to him or her. As a consequence, another requirement for the ETS is that pension providers will need to be able to connect to it, or at least be able to provide data to it. Given the different needs of users (some may need general information on pensions in a specific country, others may want personal information on current entitlements, etc.) and the levels of digitisation of providers, this means that the ETS will need to have different levels of functionality.

The ETS envisioned by the TTYPE project has three levels of functionality:

1. **Finding your way in pensions in Europe**
   This level provides general information on pensions in EU countries and helps individuals to locate their providers.
2. **Finding your pensions in Europe**
   This level shows pension information from pension providers in the form in which the pension provider delivers it, either as a formatted document (e.g. PDF) or as structured data. If information cannot be delivered digitally, it is possible to send a request for information to the provider, who can then send it, for instance, by post.
3. **Understanding your pension**
   This level displays an overview where pension information from different providers is shown in a standardised and structured form, so that it can be compared and correlated – maybe even summarised.

The three functional levels of the European Tracking Service help citizens find the information they need, while accommodating pension providers by connecting in a way that suits them best and – through that connection – helping them to reach more of their participants.

10. We use the term 'National Tracking Service' because all tracking services we found operate on a national level, except for one (the 'Find your pension' portal for public sector researchers).
11. In the addendum the generic term 'pension data provider' is used for all organisations who could provide pension-related information via the ETS. Pension data providers do not necessarily have to be pension providers, but in order to keep things simple, we don't make that distinction in the main report.

Apart from providing information to citizens, the ETS helps citizens to trace the pensions they are entitled to. It facilitates participants and providers in finding each other:

a. through its mere existence and by addressing the problem of providers who cannot find beneficiaries;
b. by offering functionality to users to help them find their pension providers;
c. by offering functionality to users that makes it easier for providers to find them; and
d. by facilitating cooperation between providers who are looking for lost beneficiaries.

The ETS should also give pension providers the option to show ETS information via their own website. This allows them the opportunity to supply more detailed information to their participants. For this functionality, the user's permission is absolutely vital. The providers who submit the information must also have a say. For more information on the ETS's features, see Chapter 4 of the Addendum.

4. Finding a legal framework

The users of the ETS can view the information from their pension providers and national tracking services in a web portal. Consequently, users largely depend on pension providers and national tracking services connecting to the ETS and providing the data. Whether the providers will actually do this depends on the advantages this connection brings. But it also depends on the legal context in which they operate. In most cases, data providers will need a legal basis for providing personal pension data to the ETS. In some countries, legislation (for example privacy legislation) may also limit the possibilities. Legislation can also be supportive to the ETS goal, e.g. where it allows or encourages the use of digital channels for pension communication. From our survey and from discussions with pension experts, we learned that the effects of legislation vary from country to country and from provider to provider[12].

We discussed with several experts the advantages and disadvantages of having additional EU legislation that would require providers to connect to the ETS. We learned that European legislation could be beneficial in some ways because it could help remove legal obstacles, help reduce costs for contract management and, in the end, make more providers connect to the ETS. Likewise harmonisation of pension communication could be helpful in giving ETS-users a consistent overview of their pensions across Europe. However, we also learned that the political process of establishing EU legislation would most likely be difficult, time consuming and may still not help to achieve the goals set out for the ETS. This reinforced our idea that the ETS should have the potential of being successful without additional European legislation. Therefore, the ETS should provide enough added value in itself for pension providers and NTSs to connect to it. The ETS should not depend on EU legislation that either obliges providers to connect or that harmonises pension communication. The idea of having a bottom-up approach and a principle of voluntary participation was discussed with the experts we consulted and it received their broad support.

However, it cannot be ruled out that in some countries legislative measures can be helpful or even necessary to enable providers to connect to the ETS. That should be decided and acted upon by those countries. For the ETS, this means that the consequences of relevant national legislation should be assessed (regarding, contracts or ETS functionality, etc.) before connecting new providers from countries that had no previous connections.

This principle of voluntary connection makes the organisation establishing the ETS very dependent on pension providers and NTSs. It is therefore vital for that organisation to cooperate effectively with the pension providers and national tracking services.

TTYPE does not recommend using EU legislation to force pension providers to connect to the ETS. The ETS should provide enough added value for providers to connect voluntarily.

Legislation not only defines conditions for connecting to the ETS, it also governs its design and operation. With the help of legal experts, we put together a set of basic principles governing the design and operation of the ETS that will assist it in complying with existing EU and national legislation.

12. Within some countries, pension providers may have multiple legal forms for which legislation and taxation rules may have different consequences. Furthermore, 1st pillar providers often have to comply with rules different to those applicable to 2nd pillar pension providers.

These principles are:

1. **The user controls his data in the ETS.**
   User consent is the basis for all data transfer to and from the ETS, for data storage and for the presentation of data, unless legislation dictates otherwise, e.g. where it requires user authorisation logs to be stored.
2. **There will be contracts with pension providers**
   These contracts define the responsibilities of both providers and the ETS organisation.
3. **The ETS will use disclaimers**
   The ETS should make clear to users that it delivers only information from pension providers to users. The providers are responsible for the data and the users are responsible for the interpretations. Moreover, data displayed via the ETS is for information purposes only and cannot be used to make claims for entitlements.
4. **There is a privacy policy**
   A privacy policy (published on the website) informs the user regarding the data processing performed by the ETS and the reasons for it.

We see this legal framework as a starting point. It does not guarantee that exchanging information with the ETS is automatically possible for all pension providers and NTSs in the EU in all situations. Consequently, further research into relevant legislation is recommended, especially when connecting new providers from a 'new' country. In addition, providers should always ensure that their own legal status (e.g. contracts with others) allows them to connect and exchange information with their participants via the ETS. For more information on the legal aspects of establishing the ETS, please refer to Chapter 7 of the Addendum on legal aspects.

5. Designing the ETS

The general features of the ETS and the outlines for the legal framework as described in previous chapters shape the design of the ETS, but there are more aspects to consider. For an ETS to be successful, several additional requirements have to be taken into account:

A. Citizens need to feel they can rely on it.
This means that they feel it provides complete, up-to-date and reliable information.

B. Pension providers, NTSs and citizens need to trust it.
This means that the ETS can be trusted with the information it receives and will keep it secure (see Chapter 3). The ETS will show the information only to the individual concerned. This also means the ETS organisation, which we will hereafter refer to as "STEP"[13], will not use the information for other purposes.

C. It needs to be low cost.
The system must be low cost with regard to operational and connection costs, both for providers and for STEP.

D. It needs to be attractive for pension providers and NTSs to connect to.
The ETS is a system that aims to provide information to citizens, but it can do so only if pension providers cooperate and connect.

Apart from offering the functionality that users appreciate, the ETS will need to be reliable, secure and must operate at a low cost. It will also have to be attractive for providers to connect to.

To meet these requirements, we made a few architectural choices. These choices can be recognised in the functionality of the ETS and in the architecture. The most important are:

a. The ETS is a user-centric system
The users should essentially (1) control and (2) integrate their own data.
1. *User controls the data* means transfer or storage of the data to and from the ETS is only effected with the explicit consent of the user.
2. *The user integrates the data* means that users select their pension providers. Subsequently, data is collected in the ETS using authentication mechanisms of the pension providers or NTSs themselves. By going through these authentication procedures, users combine the information from different providers themselves.

b. The ETS uses existing authentication functionality
he ETS will not create a new authentication mechanism. It will use proven log-in functionality from pension providers or national authentication providers instead. This has advantages for both users and providers. The ETS shows data only if the level of authentication matches the requirements of the pension provider.

c. The ETS uses no central database for storing pension information.
In line with the principle of user control, the ETS should not have a database with pension information on citizens. Data should be retrieved when an individual asks for it. The absence of a database also provides security advantages. There are two exceptions to the rule of not having a central database:
1. The ETS will need to store IDs and authorisation information if it wants to make sure that users do not have to go through the procedure of having to log on to all pension providers each time they use the ETS. This type of storage requires the user's consent.
2. In some cases, pension providers will not able be to submit real-time information. It could take days or weeks to weeks to produce it. For such situations, the ETS should provide the option of storing this information temporarily until the user returns to view it. This type of storage requires the users consent.

13. To establish and maintain an ETS and to connect providers requires an organisational form. In this report, this organisation is referred to as STEP (Service for Tracking European Pensions). See also Chapter 7.

d. **The ETS is a centralised system**
An ETS should have a central system through which all information (gathered from pension providers and NTSs) flows. An alternative solution would be to have a peer to peer design connecting providers to each other. But that would make the identification of a user in decentralised systems far more difficult.

e. **Users can collect ETS information through their own pension provider**
Although the ETS is a centralised system, its data can be forwarded to the provider if the provider supports this feature and the user so wishes. The ETS should provide an interface through which providers and NTSs can obtain ETS information. This gives them the opportunity to incorporate ETS information into their own websites and provide their participants with more comprehensive information on pension entitlements. The primary condition for the transfer of these data to providers is that it is effected on the initiative and with the consent of the individual.

The ETS is designed as a user-controlled system that essentially works real time. The information it receives is not stored, but removed at the end of the user session. The ETS uses the authentication mechanisms of the pension providers instead of creating its own authentication mechanism.

CUSTOMER JOURNEY – EXAMPLE OF FUNCTIONALITIES

To enhance the understanding of the ETS's functionalities, we designed several customer journeys and user stories for each level. Customer journeys give an impression of the steps and ETS screens used in the various levels of functionality. The user stories can be found in more detail in the Addendum chapter 4.
We highlight three customer journeys where the interaction of Yannis and the ETS are shown. Yannis is a (fictional) Greek who now lives and works in Greece and who worked in Denmark a few years ago. He uses the ETS to obtain information about his pensions.

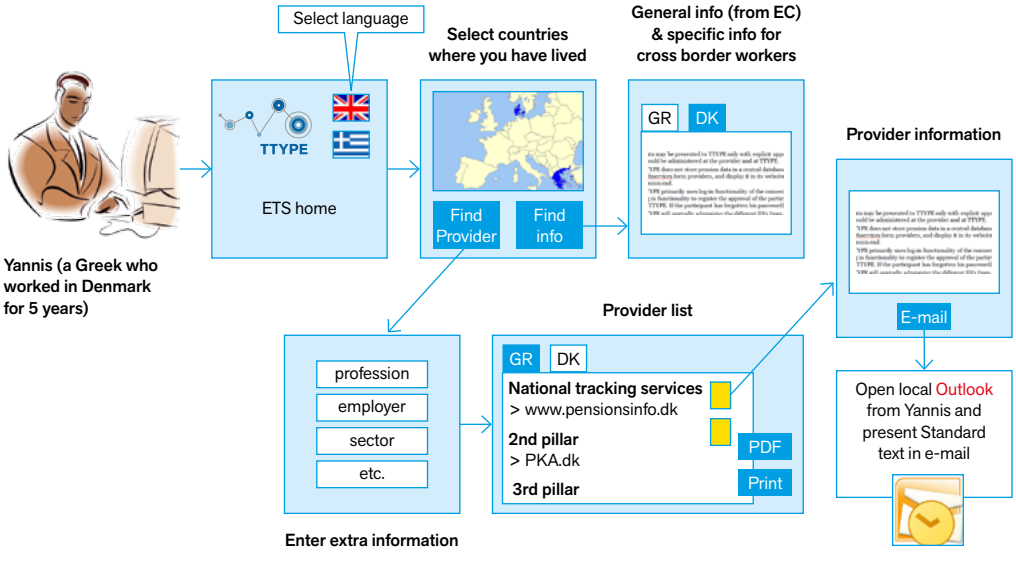

Fig. 2 Customer journey level 1

In the first customer journey, Yannis uses the ETS to find general information on pensions in Denmark and Greece. He also uses the ETS to find his pension provider. To do so, he enters his employment data information, which the ETS compares with general information supplied by pension providers. The ETS shows a list of possible pension providers. To further support Yannis, the ETS delivers a predefined e-mail to the providers Yannis has marked asking whether he is one of their participants. Yannis can then send this e-mail to the listed pension providers.

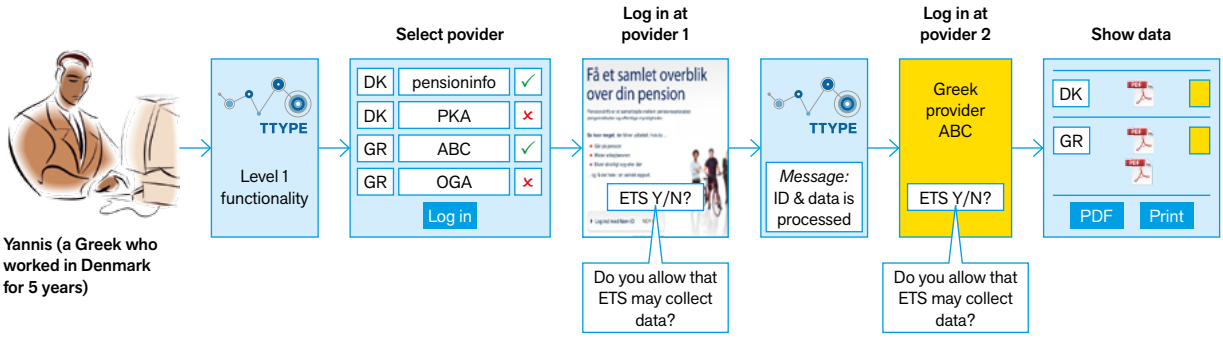

Fig. 3 Customer journey level 2

In the second customer journey (see fig. 3), Yannis first uses the level 1 functionality to find his pension providers. He recognizes two of them, and marks those pension providers as 'his'. The ETS redirects Yannis to the Danish NTS and request Yannis to log in. He logs in using a Danish authentication method and authorises the Danish NTS to deliver data to the ETS. The Danish NTS redirects Yannis to the ETS, which redirects Yannis to his marked (fictional) Greek pension provider, ABC. He logs in and authorises ABC to deliver data to the ETS and is redirected to the ETS. The ETS requests information about Yannis' entitlements from the pension providers. The ETS shows the received PDFs with pension data of all his pension providers.

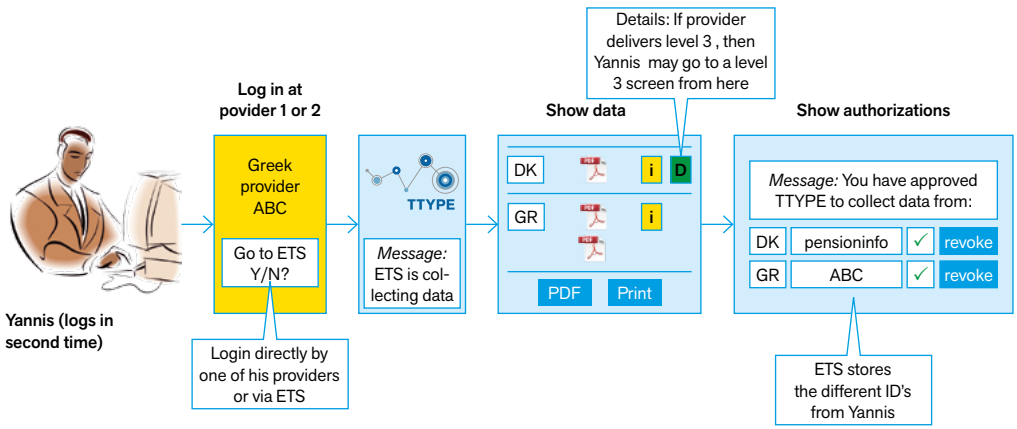

Fig. 4 Customer journey level 2, one year later

The last customer journey takes place a year later. Yannis logs in on his local pension provider, where he can choose to be redirected to the ETS. In this situation, Yannis doesn't have to be re-authenticated by the Danish provider. He can use ETS functionality to collect his actual pension overview.
The ETS uses the authorizations of Yannis to collect the pension data from his marked pension providers. If Yannis no longer wishes the ETS to do so, he can revoke the authorisations in the ETS.

REVIEW OF THE DESIGN

The functional and architectural design was reviewed by four reputable ICT consulting companies: Accenture, Capgemini, CGI and, IBM. They confirmed that the design was feasible and gave valuable comments, some of which led to alterations in the design and in the implementation strategy.
For more information, see the Addendum chapter 5.6.

6. Connecting providers

There is a great variety in the composition of the pension sectors in EU countries. There are also differences in the number and type of pension providers. For example, Germany has over 85,000 book reserve schemes, the United Kingdom and Ireland together have more than 100,000 IORPs, where Bulgaria has 2 IORPs and Estonia has none. By using several reports[14] on the number of the different types of providers, we could estimate the number of pension providers across the EU (for more information on the number of providers per country see the table in paragraph 8.4 of the Addendum) and make a rough assessment of the number of required ETS connections. We concluded that, while there are a few countries that have many pension providers (like Germany, Ireland and the United Kingdom), there are many more that have only a limited number of providers. We counted, for example, 19 countries that have 10 providers or less in 1st and 2nd pillar.

This variety per country and the sheer number of pension providers in the EU have a major impact on possible connection scenarios. Connecting (building, testing, contracting, etc.) them individually would take a lot of time and a huge effort. This means STEP should have an approach to reduce the number of direct connections of pension providers to the ETS.

There are also big differences between the scale and capabilities of individual pension providers, more specifically the quality of the information provision (to their participants) and their administrative and technical capabilities. The number of participants can range from a few to millions.

Consequently, the connection process must be made as easy as possible. How will it be affected? Firstly, as stated above, the ETS has three functional levels. They give pension providers the option of choosing between providing structured (XML) or unstructured information (e.g. they can send in pension benefit statements in the form of a PDF). Secondly, the connections are highly standardised. This makes it easy to create instructions and to provide help in the connection process.
Thirdly, STEP will offer a working sample code to pension providers and NTSs. This code will contain all the functionality for interaction between the ETS and the pension provider (authorisation, data transfer to the ETS). This code will make it far easier for providers to establish the connection.

Even if the connection is made easier, it will still be beyond the financial and technical means of many mostly smaller providers. For those countries where this problem occurs, alternative solutions must be found. One of these alternatives is to build hubs. A hub is a system that has a connection to the ETS and that provides easy ways for pension providers from a specific country to transfer information to the ETS. Hubs can have many functional and technical shapes and forms: with or without a database, with or without user interface, etc. They can be the result of a private initiative but they can also be the result of government intervention. Hubs are country-specific solutions. So another advantage is that contracts between the providers and the hub operator can, if necessary, be concluded in a local language and under national law.

It is neither feasible to connect all pension providers to ETS directly, nor would it be very efficient. Therefore, STEP should use NTSs and support the creation of alternative solutions such as hubs.

14. Sources: 1) EIOPA 2014 Report on Cross Border IORP Market Developments; 2) Report of European Commission, Impact assessment on Proposal for a Directive amending Directive 2003/41/EC on the activities and supervision of institutions for occupational retirement provision, Brussels, 27.3.2014; 3) Insurance corporations and pension funds in OECD countries (2009) 4) Pensions Europe statistical survey 2013.

There are therefore three challenges involved in connecting pension providers:

1. STEP needs to find a way of dealing with the large numbers of pension providers across the EU.
2. It will need to find a way of dealing with the variety of sizes and technical capabilities of pension providers in Europe.
3. It will need to make it as easy as possible for the pension providers to connect.

To meet these challenges, the TTYPE project developed a set of guidelines for the connection of providers and NTSs (see fig. 5).

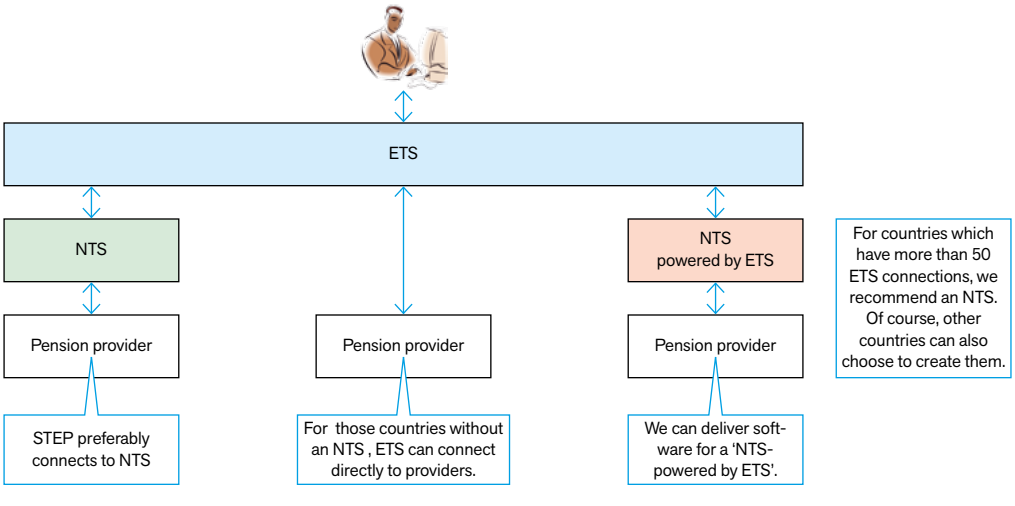

Fig. 5 Connection options

a. The ETS preferably connects NTSs over individual pension providers
b. If no NTS exists in a country, STEP should promote the creation of one. It could also help in establishing an NTS or, where applicable, other solutions (like hubs).
c. If that does not provide a timely solution, STEP should directly connect pension providers, starting with the largest 1st and 2nd pillar providers up to a maximum of 50 per country .
d. If the number of 1st and 2nd pillar providers is larger than 50 and no organization is present to build a NTS or a hub, STEP could create and operate one. This would require a STEP subsidiary that acts under national law and operates the NTS or hub and makes the connections.

The selection of the appropriate connection scenario in a country should follow a country-specific analysis and be part of the implementation plan. Within the boundaries of these principles, countries can make other choices. For example, a country with less than 50 providers could still choose to create an NTS or another solution to connect to the ETS.

15. The maximum of 50 providers per country is the result of a trade-off between having a limited workload for STEP and still allowing for most countries to connect without the need for additional infrastructure.

7. Finding a business model

To establish and maintain an ETS and to connect providers requires an organisational form. In this report, we give this organization the working name STEP (Service for Tracking European Pensions). This is also to make a clear distinction between the IT system (ETS), the TTYPE project and the organisation (STEP).

The mission of STEP should be to reduce the barrier for labour mobility in the EU by:

a. providing European citizens with an overview and giving them insight into the pensions they have acquired across Europe and;
b. providing general information on the effects of cross-border mobility on pensions.

More generally, STEP should aim to make pension information more easily available to all EU citizens, e.g. by supporting national tracking services and pension providers with their communication on pensions.

Establishing and maintaining an ETS requires an organisation. That organisation should aim to reduce the labour mobility barrier and to make pension information more easily available to European citizens. In this report, we give this organisation the working name STEP.

To describe the properties of STEP, we developed a first version for the business model. STEP should have a business model based on creating value for three types of customers: 1) EU citizens (including mobile workers); 2) EU pension providers and existing NTSs; and 3) EU Member States. The added value of an ETS for these customer segments would be:

1. **EU citizens**
   Providing insight into pension entitlements, providing information on pensions in different countries, helping to find pension providers.
2. **Pension providers**
   Helping pension providers to reach and inform their participants and to find lost beneficiaries.
3. **EU member states**
   Helping Member States to publish information about their pension systems and possibly assisting them in setting up national tracking services.

Using the business model canvas template , the following outlines for the business model were developed (see fig. 6).

One of the main aspects of the model is the subject of finance. Basically, there are four options:

- **Users of the ETS pay for the service**
  We do not recommend users having to pay for the service. One reason is that in many countries, it is a basic right to be informed about pension benefits and entitlements. Another reason is that charging a fee could create unwanted barriers to using the ETS.
- **Pension providers and NTSs pay for the connection**
  The ETS provides services to pension providers and existing NTSs, so this is a viable option. But to make sure the added value outweighs the costs for providers, these costs should be kept low, especially since the connection process itself will result in costs for pension providers and NTSs.
- **EU Member States finance**
  If STEP assists in establishing a national tracking service for a specific country and/or operates it, these services should be financed by that country.
- **EC finances**
  Since an ETS serves both public goals (such as the necessity of making citizens aware of their pension entitlements and removing boundaries for intra-European mobility) and private goals (pension providers wanting to reach and inform their participants more effectively), we think having the ETS partially financed by the EC is also a viable option.

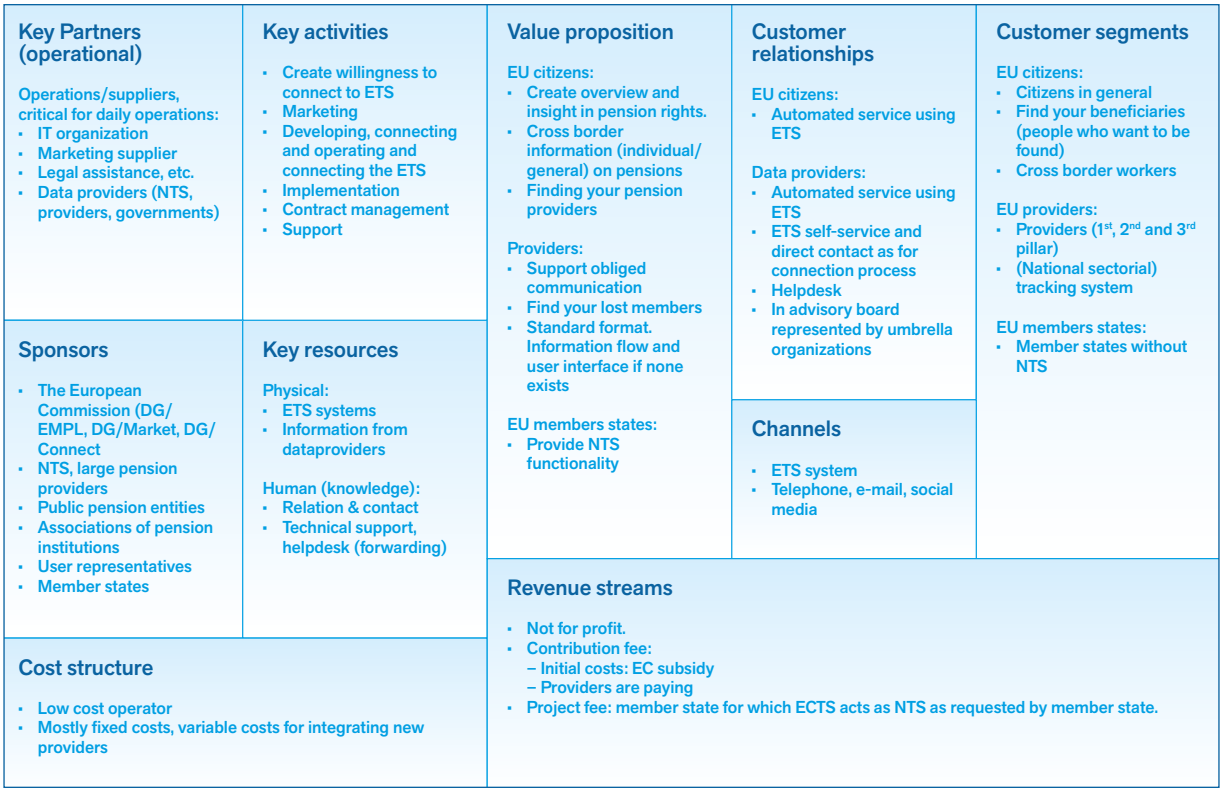

Fig. 6. STEP business model

STEP should be financed both by pension providers (including NTSs) and the EC. In situations where STEP supports a country in creating a tracking service, this should be financed by that country.

In the start-up phase, when the ETS is established and the number of connections is low, investments will be relatively high (as an example the Dutch NTS Pensioenregister cost about 10 million euros to set up[17]) and revenues relatively low when compared with the costs. Given the expectation that this situation will last for several years, it could prove to be very difficult to find organizations that have the financial means and are willing to initiate the establishment of an ETS. We therefore recommend that EC financial support should be in the form of a start-up subsidy.

In order to be successful, STEP will need to cooperate with and get support from many different organisations: public and private, commercial and not-for-profit, etc. To get this support, it is important to convince these organisation that STEP does not serve purposes other than providing information on pensions to EU citizens (either directly or through the providers). This is why TTYPE recommends that STEP should be a not-for-profit organisation and not a part of another body. To enable STEP to keep the support of its key stakeholders, we recommend giving associations of pension providers, tracking services, user representatives (e.g. labour unions) and the EC an active role in STEP's governance structure. This could be achieved through an advisory board. For more details on STEP's business model, please refer to Chapter 6 in the Addendum.

17. Costs serve as example, they cannot be extrapolated to European level because cost elements (communication, connecting costs, etc.) can differ greatly in different countries.

8. Realisation

Having the ingredients (the ETS design, the connection strategy and the organisational outlines for STEP), the question that remains is how this European pension tracking service will actually be realised in full. We expect the establishment of this service to be a complex and long-term process that will require focus, commitment and determination from all those involved. Essential for its success will be the commitment of Member States, NTSs and pension providers. Consequently, STEP should take time to build partnerships, create a shared vision and obtain support and commitment.
STEP should also be able to adapt to changing market conditions. Although this report is based on the current situation in privacy and pension legislation, as well as technology, there will be many changes in these and other areas in the next few years. Even though design leaves room for integrating new developments, these changes will also demand a flexible and proactive STEP organisation.

Given the fact that each country will need its own approach (due to the differences in legislation, pension sector composition and maturity of the pension communication), we recommend that STEP uses a step-by-step approach both where it relates to realising the ETS's functionality and where it relates to connecting NTSs and providers. Aspects of this step-by step approach are:

- Creating an implementation strategy including a high-level roadmap indicating the order in which countries should be connected. An alternative is that the strategy focuses on sectors rather than countries.
- Defining implementation projects and creating implementation plans for each individual country or sector. These plans should include an analysis to develop the connection scenario and define the connection activities and planning.

In this step-by-step approach, the realisation of the ETS could start off with levels 1 and 2 functionality. Level 3 could be addressed in a later phase.

This step-by-step approach, which was suggested by experts, provides STEP with the opportunity to learn from the implementations and connections it has already realised. This approach should also improve the quality of the user experience and help to avoid investments in functionality that are not yet needed.

Communication is vital for STEPs success. It helps to obtain commitment from relevant stakeholders (e.g. in attracting buy-in from governments, NTSs, pension providers, etc.) for the creation and expansion of the ETS. It also helps in promoting it with regard to future users. This means an adequate communication strategy is necessary. Elements of this strategy are:

1. There should be separate communication strategies for pension providers and end-users. The first should aim at informing pension providers and encouraging them to connect. The second should aim at making the ETS known to the public and promoting it.
2. Managing the expectations of users should be an important part of the communication because the coverage of the ETS in terms of countries and providers will grow only over a prolonged period of time. Campaign timing is vital.
3. Although the communication activities to end-users could be split between stakeholders in various countries, STEP will need to direct the central coordination to make sure there are no misconceptions or mixed signals communicated.
4. Wherever the establishment of the ETS faces hesitations from relevant parties, they need to be properly addressed. This could be achieved through individual meetings with stakeholders where the concerns are discussed, as well as the advantages of the ETS solution. STEP should also consider where it can help in alleviating concerns.

9. Making it a success

As described above, our project put a lot of effort into developing a feasible solution. We discussed the technical aspects extensively with ICT consultants[18]. Together with legal experts, we put in place a legal framework that provides a base for the solution. Finally, we discussed the design with pension experts from across Europe that confirmed its feasibility. This does not mean that we expect no technical or legal problems when realising the ETS and connecting providers. It means we think this design is a firm basis to build upon.

However, a feasible solution is not the same as a successfully implemented solution. In the end, the success of the ETS will be measured in terms of its usage, finding lost beneficiaries or raising mobility figures, rather than in terms of functionality. So does the ETS have the potential to become successful in this respect?

Even if we restrict the potential user base only to those citizens that currently do or have worked in other countries or are thinking about taking that step, this group should potentially be large enough[19]. But will all those construction workers, nurses, researchers, engineers, mechanics, seasonal workers in agriculture, etc. actually be using it? The case of the Dutch and Danish tracking services shows they could be, at least to a reasonable extent. A lot will depend, of course, on the way the functionality is presented: the user interaction design. However, it should not be forgotten that the success of the Dutch and Danish tracking services didn't come easily. The Danish tracking service took over 10 years (starting as a private initiative from a few pension providers) of building and expanding plus a smart distribution strategy to get where it currently is. The introduction of the Dutch tracking service was accompanied by a national promotion campaign (including TV and radio) to make the public aware of its existence and added value. These cases also show that promotion of the service is vital to success.

This also illustrates the importance of STEP having a keen and well-considered implementation strategy, where the connection of new providers or tracking services is accompanied by a sound communication strategy. The step-by- step approach we explained in the previous chapters is essential for STEP to be able to focus and to learn.

Key to the success will be the willingness of providers to connect. For them, there will be a trade-off between the costs of making the connection and the value it offers, such as the extra foreign participants they can reach, the additional information on foreign pension entitlements they can offer their participants and the possibilities of finding lost beneficiaries. To make sure the result of this trade-off is positive, costs need to be as low as possible. That is why the connection for providers should be as easy as possible.

All of this can only be achieved by a focussed and smart STEP organisation that has the support, the resources and the long-term commitment of all relevant stakeholders – including the EC – to establish this ETS and make it a success. The positive atmosphere and momentum created by the TTYPE project could boost new steps in this direction.

TTYPE has created a positive atmosphere and momentum for the establishment of an ETS. This should be exploited when taking new steps.

18. For more details, see Chapter 6 of the Addendum on the ETS Design.
19. In 2013, over 8 million EU citizens worked in a EU country other than their own, which is about 3.3% of the workforce. Source: Lecture Lásló Andor, European Commissioner, for University of Bristol "Labour mobility in the European Union – The inconvenient Truth (10 February 2014).

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