Consultation paper

TECHNICAL ADVICE ON THE DEVELOPMENT OF PENSION TRACKING SYSTEMS

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RESPONDING TO THIS PAPER

EIOPA welcomes comments on the Consultation Paper regarding its Technical Advice on the development of Pension Tracking Systems.

Comments are most helpful if they:

▸ respond to the question stated, where applicable;

▸ contain a clear rationale; and

▸ describe any alternatives EIOPA should consider.

Please send your comments to EIOPA by 08 September 2021 responding to the questions in the survey provided at the following link[1]:

[EUsurvey](#)

Contributions not provided using the survey or submitted after the deadline will not be processed and therefore considered as they were not submitted.

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EXECUTIVE SUMMARY

1.   EIOPA received a Call for Advice from the European Commission on the development of best practices for national tracking systems and pension dashboard. As national tracking systems and a pension dashboard service different purposes, EIOPA will split its advice into two separate documents. This consultation paper focuses on practices to facilitate access to individualised pension information. In line with the Call for Advice, it is addressed to Member States (MSs) looking at developing a national Pension Tracking System (PTS).

2.   EIOPA is providing technical advice on the aspects covered in the Call for Advice, drawing on best practices from existing Pensions Tracking Systems. The intention is not to provide recommendations on political choices or public policy, whether at national or at EU level, but only to provide impartial advice and good practices on technical matters for Member States who want to implement a PTS.

3.   National PTSs are tools that provide citizens with an overview of their future retirement income, based on their entitlements from all pension sources to which they contribute. PTSs should give citizens a clear understanding of their estimated financial position in the future in an easily accessible format.

4.   EIOPA has identified **a set of principles, good practices and examples** – drawn from experiences with PTSs that are currently in use or under development – which the relevant MSs can use **to facilitate citizens' access to personal pension information**. To the extent possible, **EIOPA has also drawn on existing expertise, materials and EU legislation**, such as the information disclosure requirements set out in the IORP II Directive[3], Regulation on a pan-European Personal Pension Product (PEPP)[4], General Data Protection Regulation (GDPR[5]) and the Commission's proposal on Digital Operational Resilience Act (DORA). The principles, good practices and examples set in this consultation paper do not seek to infringe upon the practices of PTSs already in place within the EEA.

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[3] Directive (EU) 2016/2341 of the European Parliament and of the Council of 14 December 2016 on the activities and supervision of Institutions for Occupational Retirement Provision (IORPs)

[4] Regulation (EU) 2019/1238 of the European Parliament and of the Council of 20 June 2019 on a pan-European Personal Pension Product (PEPP)

[5] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation); OJ L 119, 4.5.2016, p. 1. and for DORA also a footnote with this link: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020PC0595

5.   In line with the Call for Advice, EIOPA provides some recommendations on the role and scope of the PTS (**section 1**), what information to provide and how to present it to citizens bearing in mind people's cognitive and behavioural biases (front-end of the PTS, **section 2**), the data and technical requirements and standards to establish a PTS (back-end of the PTS, **section 3**) and the governance structure, legal requirements and implementation strategy to effectively launch of the PTS (**section 4**).

6.   EIOPA also considers ways to foster the compatibility of a national PTS with the European Tracking Service on Pensions (section 3.3).

7.   This consultation paper focuses on the 'average' citizens in MSs who do not yet provide a PTS, referred as 'EU citizens'. Moreover, data providers refer to the entities holding and managing citizens' personal information on statutory and supplementary pensions (see **section 1** for pension definitions) such as state pension authorities, pension funds.

8.   To develop its recommendations, EIOPA has built on the experience from existing PTSs, most of which was provided by a group of 17 Practitioners and experts (e.g. academics) EIOPA established in February and is referred to as the Practitioners' Network.

9.   PTS practitioners overwhelmingly agree that a PTS is a long and challenging project. One of the most repeated mottos was "Start small, Think big". As such, EIOPA's advice is that a progressive implementation on how best to roll-out and scale up the service is crucial. Building a PTS takes time, several years at least. In such a timespan, ideas evolve, new insights develop, new technologies emerge. It is also not possible to wait until the very last detail is known[6], hence requiring flexibility at all levels to handle uncertainties. **Annex 4** provides an overview of the main lessons learned from PTS practitioners.

10.   The consultation paper is an opportunity for stakeholders to provide their feedback before EIOPA finalises its Technical Advice later this year. EIOPA acknowledges that there are costs as well as benefits to the establishment of pensions tracking systems. The costs include the collection of additional data from private pension providers by national competent authorities, while the benefits relate to facilitating national pension policy and the overview of individuals pensions information in one place. The responses to the consultation paper will help EIOPA in assessing the costs and benefits of the proposed recommendations. An impact assessment will be included in the Final Advice, while acknowledging the points made in previous paragraphs that EIOPA is not making recommendations on political choices or public policy; and that the costs and benefits accrue beyond EIOPA's immediate stakeholders. **Section 4** covers the aspects of funding and governance choices.

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[6] It is not possible to capture and analyse all requirements in advance.

11.   In line with the Call for Advice and considering people's inertia when faced with too much choice ('choice overload')[7], this consultation paper focuses on the development of a **single digital PTS**, hence disregarding the possibility for running multiple PTSs within the same MS.

12.   Feedback from the Practitioners' Network suggests that PTSs are one of the most popular ways for citizens to receive aggregate pension information. However it is also not a panacea or sufficient by itself. Rather, it must be seen as one item as part of the pension communications and financial literacy toolkit.

13.   The main goal of the PTS is to provide an overview of individualised, objective and impartial information to citizens and savers about accrued entitlements[8] and projected retirement income provided by all possible pension sources in a simple and understandable manner. Once these core functionalities have been achieved, a PTS could ideally also facilitate sensible financial decision-making and sound retirement planning.

14.   Making the pension topic more digestible for the user is the first step towards sensible decision-making and sound financial planning. Correct and understandable information is a necessity for a comprehensive pension system in which consumers make sensible financial choices. Transparency can also be seen as a requirement – in and of itself – for building public trust in the institution in question. A PTS, functioning as a central point of contact that aggregates and combines information from various sources, can remove a significant hurdle to users if information is presented in a meaningful way. Striking the balance between the largest possible amount of accuracy (for example in order to avoid legal liability for incorrectly projected amounts) and understandable information (in order to promote effectiveness of disclosure) is essential for a PTS.

15.   Whilst the PTS itself should not offer financial advice, it can help increase consumer knowledge and raise awareness of their pension situation, and point out possible steps/actions/decisions that can be taken, especially if it is integrated in a wider strategy (e.g. support auto-enrolment reforms, improve financial capability).

16.   The PTS has similarities and differences with the Pension Benefit Statement (PBS). Both are aimed at the pension scheme participant and provide information. They are both part of the broader pension communications toolkit. They differ in the amount and sort of information they provide. Whereas the PBS gives detailed information about a scheme's benefits, costs and

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[7] Iyengar, S., & Lepper, M. (2000). When choice is demotivating: Can one desire too much of a good thing? Journal of Personality and Social Psychology, 79, 995-1006

[8] Accrued entitlements refer to current statutory pension rights and accumulated capital or retirement benefits in supplementary pensions

charges, among other things, a PTS focuses on the overall picture of the pensions' information for citizens. It is important, however, that the figures presented in the PBS and the PTS are consistent.

17.   Furthermore, a PTS cannot be built in isolation and requires engagement and involvement with a number of partners, data sources and stakeholders. Technical (im)possibilities, such as data management and IT infrastructure, privacy and security, or digital identification, should precede discussions and ideas about the scope, which pension sources are included, how much information is given to participants, how that information is presented as well as regular testing with citizens.

18.   Operational risk constitutes the main risk of a PTS as a major IT and technical project. Mitigating operational risk necessitates a well-governed PTS and an implementation seeking a progressive roll-out and scale up the service over time.

19.   The PTS fulfils the characteristics of a public good. This, in turn, has implications on the choice of governance structure and funding modalities of the PTS. A well-governed PTS will foster citizens' trust and should therefore be underpinned by principles of good governance (see **section 4**): non-profit, independence, credibility, and transparency.

1. PENSION TRACKING SYSTEMS: A NECESSITY TO UNLOCK CITIZENS' ACCESS TO THEIR PENSION INFORMATION

20. Pensions are the main source of income supporting living standards of pensioners and hence an important element of social protection, with statutory pensions often redistributing income to reduce old-age poverty.

21. Across developed economies, pensions systems, especially capital funded occupational pensions, are shifting from Defined Benefit (DB) plans, which guarantee citizens a certain income after retirement, to Defined Contribution (DC) plans, where retirement income depends on how the accumulated contributions have been invested. This shift can be seen in the context of, among others, increased life expectancies and ageing population. As a consequence, more responsibility and financial risks are placed on individual citizens for their income after retirement. This holds especially true as some MSs seek to develop supplementary pensions in future to address demographic challenges and foster sustainable public finances.

22. In this context, the European Commission's Call for Advice states that "European public pension systems are facing the dual challenge of remaining financially sustainable and being able to provide Europeans with an adequate income in retirement" and that, "[a]t an individual level, promoting better understanding and wider engagement in occupational pensions is needed." Generally citizens across the EU tend to have little engagement with or ownership of their financial planning after retirement. This can be explained by people's cognitive and behavioural biases such as focus on the present (preference of consuming today over saving), inertia (people know they should save for old age but are reluctant to engage with a future and complex subject), projection bias (people overestimate the degree to which their future preferences remain the same as in the present), or reference dependence (people make decisions involving loss and risk in relation to a particular reference point). Moreover, in some MSs the pension system, defined by law or bargained collectively does not provide people with any reasons or possibilities to take some action, for instance because the statutory and occupational pension rules are fixed and defined in the national law or through collective agreements, leaving possibility for any individual choice.

23. Experiences from countries with a PTS show that a PTS substantially contributes to the extent to which citizens and savers can find out pension information. However, by itself, a PTS will not automatically lead to sufficient understanding of and engagement with pensions. Rather, a PTS

should be seen as one, albeit an important, item in the pension communications toolkit that may be used to achieve sensible financial decisions. Considering their pension system, MSs should define the meaning of 'sensible' in this regard.

24.   EIOPA is of the view that a PTS - developed taking the examples, principles and good practices of this Advice into account - can play a major role in providing simple and understandable information to the average citizen about his or her aggregated pension income, which is a basic requirement for adequate pension communications. In other words, access to a PTS will not necessarily lead to sound financial planning, but it is very difficult to do without unlocking citizens' access to a PTS. In fact, a PTS as a trustworthy 'public good' (see **next section**) can help people better trace their pensions (minimise the risk of 'lost pots' and hence unclaimed pension entitlements), trust in the pension system through greater transparency, provide them with information to engage with their pension fund (e.g. increase contributions), and facilitate financial planning. Nearly the same scope and goals also hold true for the European Tracking Service (ETS). However, its target group are intra-EU mobile workers who are not the average citizen as the typical addressees of the national PTS[9]. In particular, The ETS has the additional challenge to help mobile workers find their pensions in different MSs, as well as help them understand and claim their pension entitlements, which is a more complicated process for cross-border cases.

25.   For citizens in MSs without a PTS it is often arduous and practically impossible to find out information on their accrued pensions and projected future retirement income across statutory and supplementary pensions (for definitions see **section 1.2.1**). Even when this is possible, to put together the pension information an average citizen may need to request the information from various sources, which may have slow response times, lack precision or limit the timeframe during which a citizen can obtain them. These obstacles, also bearing in mind people's behavioural biases, hamper retirement planning and sound financial decision-making, and should be addressed by a well-functioning PTS that provides simple, precise and intelligible information across statutory and supplementary pensions.

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[9] The ETS targets citizens who are not "average" due to their professional mobility. Called for by the European Commission, the ETS is a dedicated service for mobile workers which takes into account their specific needs and supports them in getting access to their pension entitlements.

1.1. ROLE OF A PENSION TRACKING SYSTEM IN RETIREMENT PLANNING

1.1.1. MINIMUM OBJECTIVES OF A PENSION TRACKING SYSTEM

26. Projected pension income as estimated projections based on certain assumptions and a deterministic or stochastic method (see also **section 3**) should be considered as part of the bare minimum of a PTS because it is essential information for the target audience. Experience from existing PTSs indicates that it is the information most users are primarily looking for: what is my pension? And at which age? It is also the most actionable information for average citizens (see also **section 2**).

27. For DC plans and personal pension products, a PTS should provide information on the accrued capital with reference to a specific date and provide pension projections; preferably supplemented with the variance around the best estimate. For DB plans it should as a minimum show a projection of the monthly or annual income, gross or net.

28. Presenting a net, monthly amount would avoid illusion of wealth and would be most meaning and easy to interpret number for citizens, considering people's behavioural and cognitive biases.

29. The reasons for a strong and limited focus on the core functionalities of the PTS are twofold. First, presence of too many functionalities ("over-engineering") can lead to information overload of the user. This then distracts from the core functionalities and decreases the likelihood that the main goal of the PTS is achieved. Second, additional functionalities and further complex calculations place greater burden on the back-end and IT infrastructure of the PTS. The success of a PTS and its functionalities greatly depend on its back-end and infrastructure. Especially for MSs seeking to develop a PTS, it is strongly advised to focus on doing the basics well and only add functionalities when the basics are working well. **Section 2** outlines good practices for presenting key information and functions in a clear, simple and understandable way.

1.1.2. OPTIONAL FUNCTIONALITIES DEPENDING ON MEMBER STATES' NEEDS

30. A PTS can provide optional functionalities seeking to address specific needs of the relevant MS.

31. To that end, these optional functionalities should seek to help PTS users overcome cognitive and behavioural barriers. Moreover, these add-on functionalities should remain focused on the core task of the PTS.

EXAMPLES OF ADD-ON INFORMATION MSS MAY CONSIDER BASED ON EXPERIENCE FROM EXISTING PTSS:

- ACCRUED CAPITAL RELATED TO IORP AND/OR PERSONAL PENSION PLANS WITH REFERENCE TO A SPECIFIC DATE AND PENSION PROJECTIONS FOR A HOUSEHOLD (POSSIBLY JOINTLY WITH SPOUSE OR PARTNER)
- LINKS TO SOURCES OF GENERAL INFORMATION ON THE IMPACT MAJOR LIFE EVENTS SUCH AS MARRIAGE, DIVORCE, HAVING A CHILD, OR DEATH CAN HAVE ON YOUR PENSION
- PERSONAL INFORMATION ON PREPARATION FOR RETIREMENT AND DURING THE RETIREMENT PERIOD
- SIGNPOSTING AND LINKS TO OTHER RELEVANT SERVICES
- GENERAL FINANCIAL AND RETIREMENT EDUCATIONAL CONTENT, WITHOUT APPEARING TO GIVE FORMAL FINANCIAL ADVICE, FOR EXAMPLE, WHICH GENERIC ACTIONS COULD BE TAKEN TO BUILD UP MORE RETIREMENT, SUCH AS WORKING MORE HOURS, WORKING UNTIL AN OLDER AGE, SAVING PRIVATELY, ETC.
- PENSION BENEFITS CONNECTED TO CAREER HISTORY
- DEPENDANT'S PENSION BENEFITS IN CASE OF DEATH OF THE BENEFICIARY
- EFFECT OF CHOICES AROUND EARLY OR LATE RETIREMENT, NAMELY THE IMPACT OF A CHANGE IN RETIREMENT DATE
- EFFECT OF INCREASING OR DECREASING SALARY
- EFFECT OF CHOOSING A DECUMULATION OPTION (E.G. ANNUITIES, PROGRAMMED WITHDRAWAL, LUMP SUM OR COMBINATION THEREOF)
- DETAILED PERSONALISED PENSIONS DATA (FOR EXAMPLE INFORMATION ON SELECTED FUNDS, DECUMULATION OPTIONS, NUMBER OF UNITS, FEES, PAID CONTRIBUTIONS, TAX INFORMATION)
- POSSIBILITY TO CHECK HOW PROJECTIONS WILL BE AFFECTED BY A CHANGE OF CONTRIBUTION LEVELS
- ABILITY FOR INDIVIDUALS TO PLAN FOR A PHASED RETIREMENT (FOR EXAMPLE SLOWLY REDUCING WORKING AND TAKING OUT ONLY A FEW PENSION PLANS, OR PARTS OF PENSION PLANS)
  - POSSIBILITY TO AUTHORISE ACCESS TO A THIRD PARTY SUBJECT TO USER CONSENT (FOR EXAMPLE A FAMILY MEMBER WITH POWER OF ATTORNEY, AN ADVISOR ETC.)

EXAMPLES OF ADDITIONAL FUNCTIONALITY A PTS COULD INCLUDE, AT MSS' DISCRETION, TO ENCOURAGE AN ACTION:

- CONSOLIDATE OR TRANSFER PENSIONS, IF PERMITTED AND IN THE BEST INTEREST OF THE CITIZEN, PROVIDING GENERAL INFORMATION OUTSIDE LANDING PAGE SUCH AS THE CONTACT DETAILS OF THE PENSION DATA PROVIDERS
- HELP USERS TO TAKE FIRST STEP TO TRACE THEIR PENSIONS (E.G. LOST POT ISSUE)

32.   Various MSs also provide an English-language version of the PTS, for example to facilitate international workers. It is up to the MS to decide whether this is feasible and desirable; and, if so, whether such feature should added at a later stage.

1.2. SCOPE OF THE PENSION TRACKING SYSTEM

1.2.1. PENSION DEFINITIONS

33.   While the IORP II Directive[10] and PEPP Regulation[11] provide a framework for pensions across the EU, the European pension landscape remains diverse with various, differing MS interpretations of what constitutes a pension and how it is provided to citizens. With the exception of the upcoming PEPP products, national pension products are regulated by national law, and not all pension funds are covered by the IORP II Directive.

34.   Consequently, MSs have different definitions of what constitutes a pension. Broadly speaking, a pension can be understood as old age income, taking into account challenges such as inflation, longevity, and income replacement, among others.

35.   For the purpose of its Advice, EIOPA will use the following definitions.

Statutory pensions

36.   The Commission in its Pension Adequacy Report 2018[12] defines statutory pensions as pensions established by legislation, which may be universal for all citizens, mandatory for all employed people with a standard employment contract, limited to certain occupational groups (e.g. public sector employees, farmers, workers in arduous or hazardous jobs, etc.). Most statutory schemes are mandatory for the population or group concerned, but some schemes may be voluntary.

37.   Statutory pensions address, among others, the risks of individual myopia, low earnings, and inappropriate planning horizons due to the uncertainty of life expectancies, and the lack or risks of

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10 Directive (EU) 2016/2341 of the European Parliament and of the Council of 14 December 2016 on the activities and supervision of institutions for occupational retirement provision (IORPs); OJ L 354, 23.12.2016, p. 37.

11 Regulation (EU) 2019/1238 of the European Parliament and of the Council of 20 June 2019 on a pan-European Personal Pension Product

12 http://www.ec.europa.eu/social/BlobServlet?docId=19417&langId=en.

financial markets. They are typically financed on a pay-as-you-go basis.[13] Unlike pay-as-you-go systems, statutory funded schemes are legislation-based schemes financed from a collective contribution regime, but accumulated in individual, pre-funded accounts. These should be distinguished from supplementary pensions[14].

Supplementary pensions

38.   The Pension Adequacy Report describes supplementary pensions as "funded pension schemes that can be accessed on the basis of professional activity (occupational pensions) or individual pension savings contracts (personal pensions), and that provide additional retirement savings, complementing statutory pensions"[15].

Occupational pensions

39.   An occupational pension is a pension plan where the employer (sponsoring undertaking) has a role in the establishment and/or funding of the plan itself. Self-employed persons can be considered to be sponsoring undertakings. Occupational pensions can be provided by an IORP, or other pension funds outside of the scope of the IORP II Directive, a financial institution, e.g. a bank, an insurance undertaking or an investment fund, or pension fund management entity[16]).

Personal pensions

40.   The PEPP Regulation defines a personal pension product as a product which is based on a contract between an individual saver and an entity on a voluntary basis and is complementary to any statutory or occupational pension product; provides for long-term capital accumulation with the explicit objective of providing income on retirement and with limited possibilities for early withdrawal before that time; is neither a statutory nor an occupational pension product.

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[13] The World Bank Pension Conceptual Framework,
http://documents1.worldbank.org/curated/en/389011468314712045/pdf/457280BRI0Box31Concept1Sept20081pdf.pdf

[14] Adequacy Report 2018, European Commission

[15] Note, however, that in some MSs there may be non-funded (or partly funded) occupational schemes such as public sector occupational pension schemes.

[16] EIOPA, "Report on the pension benefit statement: Guidance and principles on current practices," November 2018,
https://www.eiopa.europa.eu/sites/default/files/publications/reports/eiopa_pbs_guidance_and_principles_0.pdf

1.2.2. SHOULD A PENSION TRACKING SYSTEM PROVIDE MORE THAN JUST PENSION INFORMATION?

41. Although a majority of MSs include both statutory and supplementary pensions, in a handful of MSs the scope of the PTS is limited to statutory and occupational pensions. These choices depend on a variety of factors, such as administrative issues and technical limitations.

42. EIOPA considers that a PTS should first and foremost cover information in relation to statutory and supplementary pensions, including personal pensions (e.g. PEPP). Although a PTS could include personal information on other sources of retirement income not related to a pension such as long-term investment products, EIOPA is of the view that a PTS should avoid providing information on other financial products that do not constitute a pension.

43. This is partly for practical reasons: as noted in **section 3**, it is important to get the back-end and data infrastructure working before moving on to the front-end. Experience from existing PTSs show that successfully providing coherent information on all types of statutory and supplementary pensions is technically challenging and takes time to implement. Furthermore, considering behavioural and cognitive barriers, the PTS should focus on the most important information for average citizens. For both, it is advisable to limit the scope. Less is more.

44. There are several reasons a MS may choose to include non-pension long-term investment products in the scope of the PTS. The first is that such investments are an important source of pension savings in a particular market. Second, many self-employed workers, who do not build up pension through employer-sponsored schemes, may rely on these sources of savings for their retirement.

45. Currently, all but one MS with a PTS already in place (SK) exclude non-pension related long-term investment products from the scope of the PTS. In SK, investments in UCITS funds are in scope of the PTS, both lump sum and recurring investments. No MS currently developing a PTS is considering the possibility of bringing non-pension related long-term investments in scope.

1.3. PRE-REQUISITES OF A PENSION TRACKING SYSTEM AND MAIN ATTRIBUTES AS A PUBLIC GOOD

46. The following pre-requisites are necessary to implement a PTS:

- Ability to provide accrued and projected pension entitlements in a digital format;
- Existence of a digital ID for user authentication and identification;
- Good record-keeping of the administrative data to provide correct information on accrued and projected pension entitlements;

- National measures already in place to define the pay-out options for supplementary pensions;
- National measures already in place to define assumptions and methodology for calculating pension projections.

47.   In line with the main goal of a PTS, MSs and data providers should be able to provide both the accrued and projected pension entitlements of citizens in a digital format. **Annex 6** describes which MSs provide individual information about statutory pensions to citizens, whether the information is accessible via a portal and whether a projected estimate is provided. While this may be obvious, some MSs and data providers may currently hold and communicate such information in a paper-based format.

48.   Providing a correct figure of both the accrued or projected pension entitlements requires good record-keeping of the administrative data. It also necessitates standardised assumptions and methodology normally laid down in national measures[17], to enable data providers to calculate the projected estimate coherently.

49.   In other situations, as discussed in **section 2**, MSs should also strive to provide a monthly projected amount which would resonate better with PTS users and avoid creating an illusion of wealth. However, in some cases presenting such estimate may not be currently feasible. This may be because pay-out options are not yet defined in the national measures or the national measures only permit to take (certain types of) supplementary pensions as a lump sum.

50.   Another key condition for implementing a PTS is the availability of a digital ID for user authentication.

51.   A PTS should seek to address asymmetrical information issues[18] which are exacerbated by people's bounded rationality[19] and financial literacy levels which are not as high as desired for an average EU citizen. Public intervention is necessary to correct asymmetrical information issues and promote outcomes that rational behaviour would otherwise lead to.

52.   Considering the aforementioned market failures and the main goal of a PTS, EIOPA is of the view that a PTS should be regarded as a public good by fulfilling the following two characteristics of a public good: a PTS is non-excludable and non-rivalrous. Citizens cannot be effectively excluded

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[17] The national measures may also refer to an independent group of experts responsible for defining certain assumptions (e.g. GDP).

[18] Citizens have imperfect knowledge about their pension entitlements which are scattered across and held by different entities managing statutory and supplementary pensions.

[19] A lack of access to adequate information by citizens may further compound this problem. Together, inadequate pension information provision and limited rationality can lead to high costs for individual citizens to access the information that is necessary to keep track of their various pension rights. This, in turn, can lead to suboptimal financial decisions with possibly dire and irreversible consequences. Public intervention can improve outcomes in this regard as well.

from using the PTS. Moreover, the use by one citizen does not reduce the availability of the PTS to others. The public good nature of a PTS brings some implications in terms of the choice of governance model which are further discussed in **section 4**. Establishing a <u>trustworthy</u> service which provides an <u>objective</u> overview of future retirement income is another essential attribute identified by PTS practitioners.

Key messages

The main goal of the PTS is to provide an overview of individualised, objective and impartial information to citizens and savers about accrued entitlements and projected retirement income provided by all possible pension sources in a simple and understandable manner. At a minimum, a PTS should:

1. Project future retirement benefits or income

2. Provide information on accrued entitlements from as many

applicable sources as technically possible

Ideally, these two main goals of the PTS also facilitate:

3. Retirement planning

4. Sensible decision-making

MSs should ensure that additional functionalities which they choose to include are designed in the PTS in such a way which does not exacerbate people's negative behavioural and cognitive biases and limitations (e.g. inertia, present bias or extrapolation).

MSs should assess to what extent a (digital) PTS may exclude some citizens. Depending on the outcome, MSs should consider whether to offer the possibility of non-digital ways of accessing the information of a PTS, for example to facilitate digitally excluded citizens (see Annex 6 for a description of what options are available to digitally excluded or limited users to access their statutory pension information). MSs need to weigh the pros and cons of the complexity of adding this functionality and the size of the group of digitally excluded citizens. Six out of nine MSs with a PTS in place offer the possibility of retrieving information by phone, mail, or a physical appointment, or a combination thereof.

Aside from the statutory pensions managed by the State or public entities, EIOPA recommends to include in the scope of the PTS all the pension plans and products in the scope of EIOPA's database of pension plans and products, which are non-public arrangements and investment vehicles which

have an explicit objective of retirement provision (according to a national social and labour law or tax rules) regardless whether they are of occupational or personal type. Both statutory '1st pillar-bis' pensions available in the Central and Eastern Europe (CEE) and plans/products which are defined in the legislation but not yet offered to the public (or have no members) are also included in the scope.

EIOPA recommends that MSs seeking to implement a PTS exclude non-pension long-term investment products from their PTS. Should MSs nevertheless seek to include such products in the PTS, they should do so on the conditions that it is technically feasible and their inclusion does not take away from the main goal of the PTS.

Questions for public consultation

1) Do you agree with the main goal, the scope and the attributes of a national PTS defined by EIOPA (please explain why)? If not, what is missing or what workable alternative would you propose which meets the principles set out in this consultation?

2) What do you consider to be the main costs in the establishment of a PTS?

3) EIOPA views a PTS as a public good, considering the need for public intervention to address market failures stemming from limited rationality. Do you agree with the public good framework as preferred option to provide objective and impartial pension information to citizens (please explain why)? If not, what is missing or what workable alternative would you propose which meets the principles set out in this consultation?

4) Do you agree that the PTS should provide personal information on statutory and supplementary pensions and should exclude the provision of information on other financial products that do not constitute a pension (please explain why)? If not, what would be the desirability, feasibility and benefits for bringing non-pensions long-term investment products into scope of the PTS?

5) Do you agree that MSs should assess to what extent a (digital) PTS may exclude some citizens and, depending on the outcome, consider offering alternative ways to facilitate PTS access to the digitally excluded citizens (please explain why)? What workable solutions would

you propose to either make the PTS also available to non-digital or digitally excluded citizens or to make the PTS information available in a non-digital format?

2. DESIGNING PENSION TRACKING SYSTEMS WITH EU CITIZENS IN MIND

2.1 ACCOUNTING FOR CITIZENS' BEHAVIOURAL AND COGNITIVE BIASES

2.1.1 BEHAVIOURAL INSIGHTS ON DIGITAL INFORMATION

53.   A PTS designed for an average user like Max[20], should consider his cognitive and behavioral biases (information overload, status quo, present bias, limited rationality, inertia, etc.) and present the basic information in a simple and understandable way, with a smooth user-experience tailored to his needs. In this chapter we have identified a series of principles to be considered when designing the PTS.

Sense of trust

54.   Trust is key. The PTS is a place where people are invited to see their personal information on their pension entitlements. Therefore it is essential that the information is neutral, trustworthy and independent. Users need to perceive that the information comes from an official source, i.e. that there is no selling or marketing objective behind and that their data will be treated confidentially and that they can decide with whom to share. A PTS giving the citizens a seat in the governance (e.g. maybe labour unions or other bodies) is a good way to ensure neutrality. Sharing of accurate and reliable information should help build a sense of trustworthiness in the PTS. This could be relevant especially in MSs where confidence and trust in pensions are low.

55.   **Section 4** on governance outlines the principles for setting up a PTS.

56.   There is a tension between providing accurate information and offering a consumer-centric experience, with less precise but more understandable information. The difficult relation between the completeness (lawyers' views) and the understandability (communication experts' views) is present within many organisations. Therefore, the PTS should involve communication experts in the presentation (or "packaging") of meaningful information to get the average user on-board.

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[20] Max, an average European DC pension scheme member with limited time and motivation to be involved in retirement planning. This cartoon figure is featured in the EIOPA Report on Good Practices on Communication Tools and Channels for Communicating to Occupational Pension Scheme Members. See link to the Report.

Learning curve and piecemeal information

57.   The experience from the Slovak Orange envelope[21] shows that an average user is at first only able to cope with basic information and that during the process he/she goes through a learning curve. To avoid the known overload of information, information is to be shared in a piecemeal and layered approach (must know, should know, nice to know). As time goes by, the user might be open to receive more information, thus explore further layers. This process should be stimulated with the use of nudges (e.g. social norm, live events) and the creation of some incentives for the user to log on to the PTS (e.g. using PTS information for other purposes such as mortgage application).

Use of plain language and testing

58.   Whilst a few MSs (BE, NL and UK) embed in their legislation the need to present information in a clear and understandable way, it is generally left to the pension providers or PTS to implement it. In BE, the PTS had to find alternatives for techno-legal terminology (professional pensions jargon) that does not relate to notions average citizens understand. The challenge was to bridge the gap between how people talk about pensions and how the law or professionals talk about pensions. The solution was to find a word that allows the PTS to be correct in what it says, and that still relates to something people know. Another useful example can be found in the work conducted by NEST in the UK, "The NEST Phrasebook – Clear communication about pensions", which includes vocabulary to promote jargon-free text[22]. Financial literacy of PTS users should not be overestimated. In NL PTS new texts are tested on a B2 proficiency level. Other countries also use various methods of consumer testing or feedback from customer support.

59.   Also good as part of such work is to establish an average reading age of a PTS user. As an example, the Financial Conduct Authority in the UK has issued a factsheet on financial literacy[23], showing the statistics of literacy and numeracy skills, indicating that one in seven adults has literacy skills of a child of age 11 or below and that approximately half of UK adults have a numeracy attainment age of 11 or below. When it comes to use of language and how information is presented, it is important that the assumptions are backed up by evidence about what does and does not work for the target audience.

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[21] This refers to the PTS in Slovakia developed by academics and the private sector, whose name was inspired from the Orange envelope used in Sweden to communicate statutory pension information.

[22] Link: https://www.nestpensions.org.uk/schemeweb/NestWeb/includes/public/docs/NEST-phrasebook,PDF.pdf

[23] See link to the FCA factsheet on financial literacy

Response speed and time of the data

60. Feedback from the Practitioners' Network indicate that users expect to receive feedback very fast, most often up to 30 seconds. Amongst the surveyed PTSs, 6 MSs provided very fast immediate response (up to 5 seconds), 1 MS fast immediate response (up to 30 seconds) and 2 MS with some delay (one up to 3 minutes and one up to 15 min). The PTS should strive to deliver quick and if possible immediate response. The user should be informed on when the data was generated in the system (date of issuance).

Behavioral insights on screens

61. People tend to read much faster on screens[24]. Since we can think about only so much information at once, the size of our mental screen is limited—sometimes more than we would like to admit. Behavioural expert Shlomo Benartzi believes that one responsibility of a good mobile app is to narrow down the multitude of choices to a few good ones and offer a reasonable default selection. The experience from Previnet[25] also shows that most Mobile (app) users do not switch back to the web-based portal. EIOPA recommends that the PTS displays a few elements (the most important information) in a way that stands-out regardless of the device that is used.

62. The visual appeal of a website is crucial in both grabbing attention and connecting with a user. In order to get people to engage, you need to find a way to make your site appeal to a user's subconscious. Building an engaging website requires some visual complexity – that is, a perfect balance of color and detail. For instance, bright, engaging colors are key to grabbing a person's attention.

63. People prefer to look at the centre of the screen and have a higher chance of noticing the content which you place in the centre [half to two-thirds] of the screen. Also, people are more accurate at touching the centre of the screen and are less accurate along the edges—especially along the top and bottom. So if the aim is for user to click on a link, the best place for the link to exist is in the centre of the screen.

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[24] Benartzi S. & Lehrer J. (2015) The Smarter Screen: Surprising Ways to Influence and Improve Online Behavior, Portfolio/Penguin

[25] Is a third party administrator that provides services in outsourcing for pension schemes across Europe.

Key messages

For users to develop a sense of trust on the provision of personal information about their pensions, the PTS should provide information that is perceived as neutral, trustworthy and independent and the PTS should let the users decide what they do with it.

In a PTS, it is important to involve communication experts for presenting (or "packaging") meaningful information for the average user.

EIOPA recommends that MSs produce guidance on the use of plain and jargon-free language in pension communication and adjust it to the average population reading age.

EIOPA recommends that the PTS tests the use of language and how information is presented in the national context early on and only implement what works for the target audience.

The PTS should strive to deliver quick and if possible immediate response.

In a digital environment, where people tend to read fast and can only process a limited amount of information, it is important to show a few elements containing the most important information at the centre of the screen to stand out, regardless of the device that is used, be it a mobile app or a webpage.

EIOPA recommends the inclusion of visual information that is appealing, which is processed more holistically and helps to understand information.

Questions for public consultation

6) EIOPA has identified a set of behavioural principles which should drive the front-end design of the PTS. Do you agree with this approach (please explain why)? If not, what other behavioural principles should apply to the front-end design of the PTS?

2.2. BUILDING ON BEHAVIOURAL INSIGHTS IN THE AREA OF PENSION DISCLOSURE

64.   EIOPA has developed several pieces of work in the area of pension disclosure. In 2013 the EIOPA Report on Good Practices on information Provision for DC Schemes[26], better known as "Max Report", led the basis for the design of pension information and reflected the principles of behavioural economics. In 2018 the Report on the Pension Benefit Statement[27] (PBS) provided guidance and principles on how to implement the IORP II requirements for the annual statement. In 2020 EIOPA issued Model IORP II Pension Benefit Statements[28] for defined contribution schemes, providing a practical tool for NCAs for implementing the PBS[29]. This resulted in a two page user-friendly statements where information is presented from the member point of view key questions.. In In December 2020, Commission Delegated Regulation[30] on the pan-European Personal Pension Product (PEPP) was adopted based on the regulatory technical standard developed by EIOPA[31] which included a template for the PEPP Key information Document and the Benefit Statement (BS).

65.   Two principles defined in the EIOPA Report on the PBS can also apply to a PTS:

- *"The PBS should be designed with a behavioural purpose and the information respond to the member key questions."* In a Defined Contribution (DC scheme) context, where the responsibility over the pension outcome relies on the member of the pension scheme, the response to the key questions should help him/her make sensible financial choices.

- *"The PBS design should integrate and complement the communication tools that are in place within the MSs – such as the availability of an on-line pension dashboard or other pension communication channels to facilitate the insight into the member full retirement situation."* In this regard the PBS is then a "slice" of the overall picture, which provides information on occupational pensions and should be seen in conjunction with other pension sources.

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[26] www.eiopa.europa.eu/sites/default/files/publications/pdfs/report_good_practices_info_for_dc_schemes_0.pdf

[27] www.eiopa.europa.eu/sites/default/files/publications/reports/eiopa_pbs_guidance_and_principles_0.pdf

[28] PBS 1 (pdf): www.eiopa.europa.eu/content/model-pension-benefit-statements_en

[29] Two pager user- friendly PBS designs can be downloaded, edited and adapted as needed (In-design and pdf files).

[30] Commission Delegated Regulation (EU) 2021/473 of 18 December 2020 supplementing Regulation (EU) 2019/1238 of the European Parliament and of the Council with regard to regulatory technical standards specifying the requirements on information documents, on the costs and fees included in the cost cap and on risk-mitigation techniques for the pan-European Personal Pension Product; OJ L 99, 22.3.2021, p. 1. (put full title in footnote)

[31] www.eiopa.europa.eu/sites/default/files/publications/eiopa-20-500_pepp_draft_rtss.pdf

66.   There is a distinct difference in the objective of a PBS and a PTS. The first is a full description of the status and development of a specific pension plan. The second can be used to aggregate multiple different pension plans. It is not an easy task to consolidate all the different values in the PBS for multiple pension plans when the data or underpinning methodologies are not highly standardised. However, a consolidation of an expected payment on retirement should be possible if accuracy is not the primary target. This topic is further discussed in **section 3.2.3**.

67.   Both IORP II and PEPP annual statements, have mandatory set of information requirements specifying the minimum content of the information. In addition, the sequence and format of the PEPP Benefit Statement is defined in a template. Generally the information requirements for the PTS do not need to coincide with those of the annual benefit statement.

68.   For statutory and national personal pensions, the provision of annual statements might also be standardised at the national level. In at least 14 MSs, personalised information provided on statutory pensions includes a pension projection.

69.   With regards the interaction between IORPs and the PTS, some MSs link the PTS with the PBS:

- amongst the PTSs in the EU, only BE has defined the same requirements for both the PBS and the PTS, allowing pension providers to fulfil their obligation of providing the PBS information through the PTS as a way to incentivise their participation in the system;

- DE is considering to use the PBS data to feed the PTS, whilst the presentation to the user will be adapted to the PTS;

- In DK and in NL, the PTS provides a link to the web site of the pension provider. From there it is possible to log on and go to the PBS covering the specific pension plan.

70.   Clearly the PTS has a broader scope (aggregating all pension sources) than the annual PBS (covering occupational supplementary pensions, with focus on the previous year) and an exclusive on-line environment. The main advantage of an online platform is precisely the dynamic flow of information. This opens an array of possibilities to address the behavioural and cognitive biases, presenting 'meaningful' information for the user, with the support of layering and other communication aids, such as videos, visuals, explanatory texts, etc. Therefore, whilst the PTS may benefit from the information provided in the PBS, it should not be constrained by its content/format.

71.   One of the key lessons learnt through consumer testing of the IORP II PBS and PEPP BS conducted by EIOPA is that the annual benefit statement is a rather complex document with many

information that is not easy to process. Even if participants reported they could understand the information, many failed in answering factual questions (e.g. on annual costs and returns). The more information presented the harder it was for users to find and relate to the most relevant information. As can be expected this complexity, especially on costs and investments, will increase further as in a PTS users have more than one pension provider. Against this background, EIOPA recommends to keep costs and investment funds out of scope of the PTS as far as the front-end information presented to users is concerned.

> IT IS A GOOD PRACTICE FOR THE PTS TO PROVIDE A LINK TO THE WEBSITE OF EACH PENSION PROVIDER AND PENSION FUND, WHERE MORE DETAILED INFORMATION (SUCH AS COSTS AND INVESTMENTS) FOR EACH PENSION FUND CAN BE FOUND

72.   This does not, however, prevent MSs to consider using the PBS as a basis to define the data needs of the PTS, in particular for occupational pensions, when developing the back-end (see **section 3**). Neither does it prevent MSs to request data such as costs not presented to users but used for other purpose, for instance as a central data storage gathering information used for supervision.

Key messages

The PTS has a broader scope than a PBS and an exclusive online environment. Whilst the PTS may benefit from the information provided in the PBSs, as a way to feed the back-end of the PTS, the front-end of the PTS should be designed considering the user's behavioural and cognitive biases.

EIOPA recommends to keep costs and investment funds out of scope of the PTS as far as the front-end information presented to users is concerned. It is a good practice for the PTS to provide a link to the website of each pension provider, where the PBS or specific information on costs and investment returns can be found.

Questions for public consultation

7) Do you agree that the PTS has a broader scope than the PBS? Whilst the PBSs can be used to feed the back-end, the front-end of the PTS should not be constrained by (all) the content or format of the PBSs.

8) Do you agree that the information on costs and investment funds should not be part of the front-end of the PTS and that it is a good practice for the PTS to provide a link to the website of each pension provider?

2.3 TAILORING DIGITAL INFORMATION OF PENSION TRACKING SYSTEMS TO EU CITIZENS' NEEDS

2.3.1 FIRST LAYER INFORMATION: KEY INFORMATION/LANDING PAGE

73.   Four MSs with operational PTS (DK, FR, NO, SE) indicate that national measures do not include instructions on the provision of key information by the PTS. In SE, the information the user should be presented with initially has been developed through consumer testing. The other three MSs (BE, NL, DE) report that national measures contain, to a certain extent, elements on which the PTS has to inform, by way of core information on the pension built-up. This mandatory summary information may differ depending on the type of pension plan and product, as is the case in BE and NL. As a common element within the key documentation, we find the accrued pension rights, as well as an indication of the achievable pension. For the latter group, a distinction can be made between the key elements themselves (defined in national measures) and the way in which they should be presented (usually entrusted to the PTS developer).

74.   Evidence from the Practitioners' Network (BE, Previnet) shows that 75% of users do not go beyond the landing page. Therefore the aim is to have a summary/landing page that is simple and understandable for any user. Finding a definition of basic or key information is not a simple task. Behavioural insights show us that the information provided should respond to the member key questions. As defined in the goal chapter, the main goal of the PTS is to provide an **overview of** individualised, objective and impartial information about accrued entitlements and projected **retirement income** provided by possible pension sources in a **simple and understandable manner**. To get the user on board, it is important to split the goal into more manageable pieces of information, presented according to the users' priorities.

75.   A user, as a minimum, seeks to know the answer to two key common sense questions:

1. **By when can I retire?;** and

2. **What will be my retirement income?**

76.   The first question might not have a straightforward answer, as retirement age might depend on statutory law, i.e. for state pension, or could vary depending on the Pension Fund, i.e. be it occupational or private fund. Hence a person might be entitled to a statutory pension at 67, whilst the occupational or private pension is due at an earlier or later age. Moreover, there is the possibility that the person wishes to retire earlier or later than the statutory date. This conundrum of potential retirement dates has been encountered by a number of PTSs. Most MSs opt for establishing a "default" retirement date, usually coinciding with the statutory date, which is the one showed on the landing page.

77.   See example of DK landing page: the summary information (layer 1) is split in two columns: 'Present pension savings' and 'Here are your payouts', with a grey box highlighting the second (the key information). The box shows a default retirement age (67) and the expected payouts in terms of lump sum and yearly instalments.
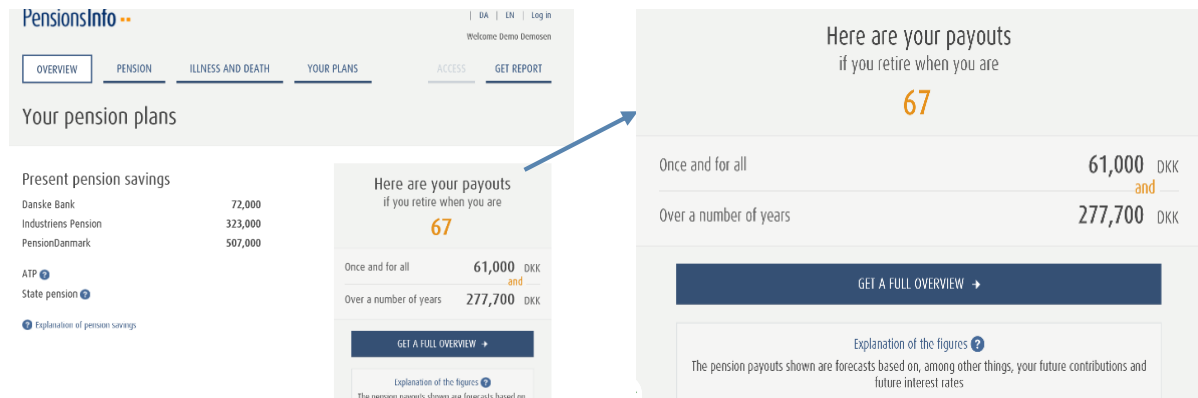
MSs with a developed PTS offer the possibility to the user to adjust the retirement date and to see the impact the change has on the pension. Layer 2 ('Get a full overview') offers the graphical overview of yearly payouts. Each bar is a pension income source.
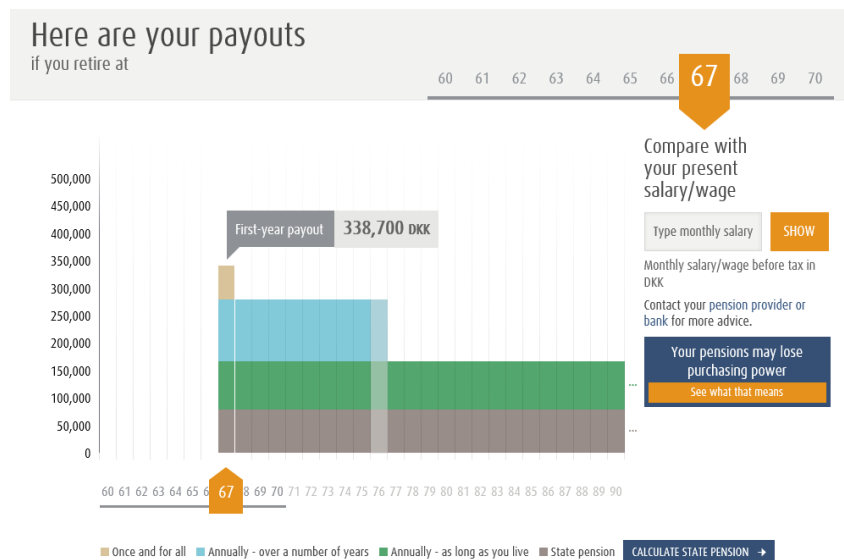
A GOOD EXAMPLE IS THE SLIDING AGE ARROW IN THE GRAPHIC OF PENSIONSINFO IN DK LAYER 2 INFORMATION, WHICH ALLOWS THE USER TO PLAY WITH WHAT-IF RETIREMENT-AGE SIMULATIONS AND DIRECTLY SHOWS THE IMPACT OF THE CHANGE IN THE INCOME BARS OF THE CHART (SEE PICTURE ABOVE AND THE EXAMPLE OF MINPENSION SE IN **ANNEX 3**).

78.   The second question is nor a straightforward one, as it requires the projection of the expected retirement income. On the one hand, one can argue that the objective information is that of the accrued entitlements until date. However, consumers find this information difficult to process as there is no easy mental shortcut they can make use of. In fact, the relatively big amount of total savings could mislead them to think they have enough savings for retirement, hence creating an illusion of wealth.

79.   On the other hand, behavioural research[32] argues that amounts of future retirement income should be depicted as net amounts of pension. This allows the reader to compare the projected amount of net retirement income to the amount of net (earned) income he currently receives on his bank account, and harness to cover his costs of living. This then serves as a reference point and allows the reader to put the information in 'context'. Showing a projection of gross retirement income would render the information not easily comparable, since taxation during retirement is different compared to taxation of earned income and people generally do not know their gross income (reference point). Furthermore, showing a net amount would also enable them to assess whether their pension will be adequate, in terms of purchasing power.

SEE THE EXAMPLE OF THE NEWLY RELAUNCHED NL PTS: ON THE LANDING PAGE THE FOLLOWING MESSAGE CAN BE READ: 'WELCOME (...) IF YOU RETIRE AT 67 YEARS AND 3 MONTHS, THIS IS YOUR EXPECTED RETIREMENT

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[32] Dissertation: "Taxing Pensions in Cross-Border Cases: About Strained Relations and Effectiveness from and Pension Information Perspective", Sander Kramer

AMOUNT. THIS AMOUNT IS THE NET MONTHLY INCOME, INCLUSIVE OF AOW'. AT THE MIDDLE OF THE PAGE, THE FOLLOWING QUESTION 'HOW IS YOUR PENSION BUILT UP?' LEADS TO THE SECOND LAYER: 'YOUR TOTAL CONSISTS OF THE FOLLOWING PARTS', NAMELY, THE BREAKDOWN OF THE PROJECTED INCOME BY SOURCE.
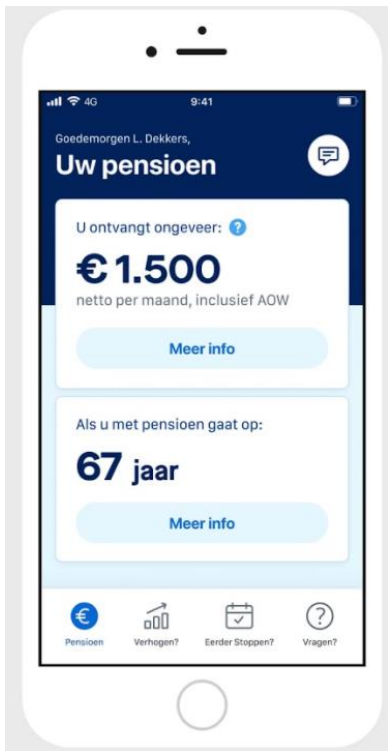
80.   Even if people can understand the concept of "estimate" or "projected" income, they do not fully grasp the assumptions made behind the projections and the inherent risk. For pension funds, this is partly due to the fact that many members are not aware their money is invested. More generally, assumptions need to be made on several variables, including on sensitive political aspects, both at collective level (e.g. the prospects of self-employed, long term unemployed, etc.) and at individual level (e.g .career evolution, possible changes in national rules, uncertainty of financial markets, etc.).

81.   The fact that a PTS targets the whole spectrum of the population is an added challenge to communication. A PTS should always provide realistic expectations and avoid giving a false sense of security to citizens. This is especially urgent for the citizens at the lower end of the income spectrum.Therefore, it is important to communicate the message of uncertainty in the projection: the projected amount is not a pension "promise" and the the amounts of projected benefits could be affected by different factors, as explained above. EIOPA recommends that estimates and projections are accompanied by a disclaimer warning about the nature of projections, e.g. 'Projections are only estimates, your retirement income may be different'.

82.   Information regarding the assumptions used for the calculation of projections should be placed in a second layer. See below the example from the DK PTS, where the key information (grey box) is accompanied by a supporting text 'Explanation of the figures (?)'. When clicking, the following window appears:
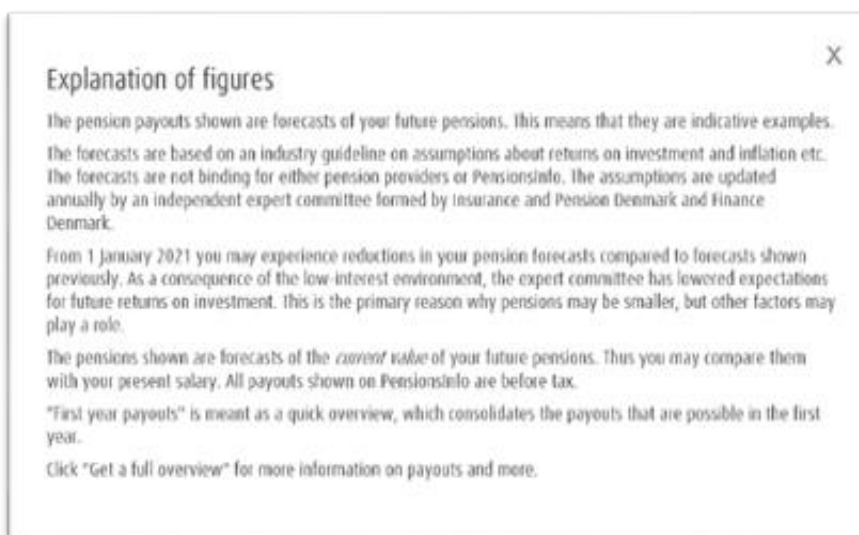
83.   To facilitate the projection of monthly income, MSs should think about designing decumulation (also known as pay-out) options in future (see also **section 4**) so that displayed information is helpful to PTS users based on behavioural research (use monthly figure rather than lump sum). Nonetheless, certain peculiarities of the national pension system may make the aggregation of the retirement income indeed less obvious, for instance, if there is a different decumulation options depending on the type of pension plan or product (e.g. annuities, lump sum only). In this regard, existing approaches can be a source of inspiration, such as the Danish PTS, which landing page shows two amounts: 'once and for all' (lump sum) and 'over a number of years' (annuity).

AN EXAMPLE OF HOW CAN THE TWO KEY QUESTIONS [1) BY WHEN CAN I RETIRE? AND 2) WHAT WILL BE MY RETIREMENT INCOME?] BE USED IN A DIGITAL ENVIRONMENT IS THE A NEW APP THE DUTCH PENSION SECTOR HAS LAUNCHED. THE USER IS PROMPTED TO LOG IN WITH HIS/HER DIGITAL ID. THE 'PENSIOENCHECKER' SHOWS THE NET MONTHLY PENSION INCOME - THE STATUTORY PENSIONS (KNOWN AS AOW) AND SECOND PILLAR - AND AT WHICH AGE HE/SHE WILL RECEIVE IT. IT ALSO SPECIFIED IT IS A MONTHLY, NET AMOUNT AND EXPLAINS THAT THESE ARE PROJECTIONS AND THEREFORE APPROXIMATE FIGURES. THIS APP IS COMPLEMENTARY TO THE PBS AND THE PTS, CONSISTENT TO THESE TWO DATA SOURCES AND A WAY TO ENGAGE CITIZENS AND RAISE AWARENESS.

> ANOTHER EXAMPLE CAN BE FOUND IN THE DANISH PENSION FUND PFA[33], WHERE THEY CALCULATE A 'PENSION ESTIMATE' BASED ON THE CUSTOMERS KNOWN AGGREGATED PENSION ENTITLEMENTS AND OTHER LONG-TERM SAVINGS. THE PENSION ESTIMATE IS A SIMPLE NUMBER USED TO GIVE THE SAVER A MEASURE OF THE 'STRENGTH' OF THEIR TOTAL RETIREMENT SAVINGS (SIMILAR TO A REPLACEMENT RATE THAT COMBINES DIFFERENT TYPES OF SAVINGS SET ASIDE FOR RETIREMENT PURPOSE). A PENSION ESTIMATE OF 75 INDICATE THAT YOUR RETIREMENT INCOME AFTER TAX WILL BE 75% OF YOUR CURRENT INCOME AFTER TAX. PFA GENERAL RECOMMENDATION IS TO HAVE A PENSION ESTIMATE BETWEEN 70 AND 80. A NUMBER AS THE PENSION ESTIMATE IS NOT AN ACCURATE NUMBER, IT CAN BE A SIMPLE WAY TO SUM UP ACROSS MULTIPLE SAVINGS POTS USED FOR RETIREMENT PURPOSE. THIS ROUGH ESTIMATE HELPS CUSTOMERS EVALUATE IF THEY HAVE SAVED ENOUGH FOR RETIREMENT AND IS PARTICULARLY USED FOR CUSTOMERS YOUNGER THAN 55 YEARS.

84.   Annex 3: Examples of current Tracking Systems contains screenshots of the PTS in SE in the display of a landing page (Layer 1) and the approaches on layering (layers 2 and 3). A prototype landing page for UK is also depicted.

2.3.2 SECOND AND THIRD LAYER INFORMATION

85.   Like any other complex topic, details in pension are relevant. Research and experiences show that breaking down the information in layers helps the user 'grow' into the topic and get acquainted with the details. Following the piece-meal approach, the next layer of information should help the user get an answer to the following questions:

> **3.   What's my total savings (How much have I saved up till now?)?**

> **4.   Which pension providers do I have (Where are my savings?)?**

86.   For the information on accrued entitlements, it is important to make use of a layering that goes hand in hand with the priorities of the user. In this regard, it is interesting to look at the layering approach followed by the majority of pension funds institutions in NL[34]: 'Communication about scheme details and how the pension scheme works is not central and is often provided through video clips. Information is offered in a layered way. For example participants may first be shown the overview of their expected retirement income. Then, if they want to know more about how this amount is constructed, or how the pension institution is investing, they can continue to click until they arrive at the next level of information.'

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[33] PFA Pension was founded in 1917 and is the largest privately owned life insurance company in Denmark.

[34] Communication in DC Pension Plans in The Netherlands – Report - 30.10.2020

87.   The PTS should enable users go to the deeper layers, since only there the user can get complete and precise information. To enable that, it is important that links (signposts) to deeper layers and more detailed information clearly and succinctly show what can be found there. They should anticipate the information needs of the user, for example via FAQ (like in the case of the Nordic and Dutch PTSs), and have a logical place on the website.

Communication of difficult concepts

88.   People struggle with the understanding of difficult concepts. This may range from the overall approach to the pension topic, to the more specific underlying concepts, such as the effect of compound interest, purchasing power, the real vs. nominal amounts, the impact of inflation, etc. To render this information meaningful to an average user, EIOPA recommends to present it with the support of visual aids, such as short movies, pictures or additional explanations (pop-up windows).

> TWO EXAMPLES FROM THE DANISH PTS ARE ADDRESSING THE EXPLANATION OF DIFFICULT CONCEPTS: 1) THE WELCOME PAGE OF THE PENSIONSINFO HAS A MOVIE TO EXPLAIN WHAT THE PTS WILL SHOW: 'GET AN OVERVIEW OF PAYOUTS AND COVERS FOR RETIREMENT, ILLNESS AND DEATH: SEE THE PENSIONSINFO FILM'. IT USES THE VISUAL OF A BIRTHDAY CAKE TO INTRODUCE THE USER TO THE PENSIONS TOPIC.
> 2) IN LAYER 2, THERE IS A WARNING ABOUT 'YOUR PENSION MAY LOSE PURCHASING POWER – SEE WHAT THAT MEANS': IN A POP-UP WINDOW, A PICTURE OF AN ICE-CREAM WITH MANY BALLS AT THE BEGINNING OF RETIREMENT IS COMPARED TO THE SAME ICE-CREAM WITH WAY LESS BALLS 20 YEARS INTO RETIREMENT. EXPLANATORY TEXT WITH A MONETARY EXAMPLE COMPLEMENTS THE PICTURE.
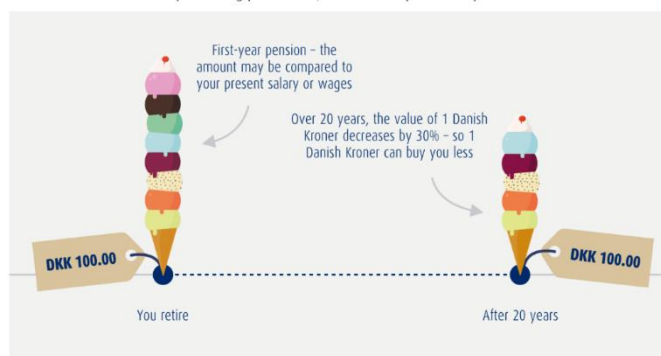
Communication of projections with scenarios

89.   In the case of pensions based on some degree of market risk, without a guarantee (DC schemes and relevant personal pension products), the PTS could make use of the data on projections that is provided in the respective IORP II PBS and PEPP BS. This is presented in at least two scenarios: a best estimate scenario and an unfavourable scenario. However, an average user will need some guidance to understand what these scenarios mean, with support of explanatory text and the use of visuals. In this regard, it is recommended to use a metaphor/visual as a way to convey the range of outcomes.

90.   For instance, the PEPP BS uses a staple of coins with three scenarios (if investments perform poorly, if investments have medium success and if investments perform very well)[35]:

91.   Another good example is that of the 'navigating metaphor' in NL: showing the direction of travel from the current savings to the central scenario of projected retirement income, with two possible deviations, one on the left (negative scenario, 5% percentile) and one on the right (positive scenario, 95% percentile). The Slovak Orange envelope offers interactive graphic, where the user can see the numbers for each scenario (negative, neutral, optimistic) by hovering the mouse over the lines in the graph. **Annex 3** contains the visuals of existing projections with scenarios in NL and SK. It is recommended that the presentation of different scenarios of retirement income should be made available in a subsequent layer (layer 2 or 3) with a clear signposting.

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[35] See full PEPP Benefit Statement template on page 24 of the Commission Delegated Regulation (EU) 2021/473Delegated Acts: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R0473&from=EN.See PEPP BS template on page 24 of the Delegated Acts: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R0473&from=EN

Additional information

92.   Adding additional information – such as the sustainability of investments or environmental, social, and governance (ESG) factors - needs to be carefully assessed, both in terms of information overload and additional development costs. The risk is that users might be distracted from the main goal of the PTS, which is to get an overview of their retirement income. As we have seen, most citizens will only be interested in the landing page results. For that limited proportion of citizens who are adamant to know about the sustainability of the underlying investments, an economic alternative could be link/signposting to the pension provider, who is required to provide specific website disclosures under the sustainable finance disclosure regulation.

93.   In NL information provided to the beneficiary at fund level is provided in the third, i.e. the lowest information layer.

EXAMPLE OF INCLUDING INFORMATION ON SUSTAINABILITY OF INVESTMENTS. IN SE, AS A RESULT OF THE INCREASED INTEREST IN INFORMATION REGARDING THE SUSTAINABILITY OF PENSION SAVINGS, THE PTS HAS CONDUCTED A 'LIGHT' USER TEST WITH MOCK-UPS PRESENTING SUSTAINABILITY INFORMATION. THE FINDINGS SHOWED THAT:

-    THE INFORMATION IS NOT SUITABLE FOR FIRST TIME USERS (INFORMATION OVERFLOW) FOR USE AND SHOULD NOT BE INCLUDED IN THE FIRST LAYER OF INFORMATION BUT BE MORE OF AN IN-DEPTH INFORMATION.

-    THERE ARE MANY TECHNICAL AND TAXONOMY/STANDARD ISSUES THAT NEED TO BE RESOLVED BEFORE A FULL SOLUTION POSSIBLE.

-    TO BE SUCCESSFUL IN THE IMPLEMENTATION THE HOLISTIC VIEW NEEDS TO BE ADDRESSED – THE EXISTING SERVICES CAN ONLY PROVIDE INFORMATION TO EXISTING FUNDS (ISIN-CODE). THE USER EXPECTANCY IS TO GET A FULL VIEW ON ALL PENSION SAVINGS.

Key messages

For the PTS to respond to the user's key questions: By when can I retire? and What will be my retirement income?, the landing page should offer a simple overview of expected retirement income and the default retirement date.

The communication of projections should be accompanied by a disclaimer highlighting that projections are only estimates. The assumptions used for the calculation of projections should be placed in a second layer.

For the user to easily process the information in relation to its current salary, EIOPA recommends that the PTS shows the expected retirement income as an aggregate figure of a net monthly income in today's prices.

Most users would like to see the overview of their expected retirement income first. Therefore, EIOPA recommends that the PTS place additional information, such as the accrued entitlements or the breakdown by source, in a second layer, which can be easily accessed by users who want to know more.

Breaking down the information in layers will help the user 'grow' into the topic and get acquainted with more complete and precise information, to help them answer the following questions: How much have I saved up till now? And Where are my savings?

Links (signposts) to deeper layers should clearly show what can be found there, anticipate the information needs of the user, for example via FAQ, and have a logical place on the website.

The presentation of difficult concepts (such as projections with scenarios, purchasing power, impact of inflation, compound interest, nominal vs. real amounts, etc.) should be made as simple as possible and accompanied with helping aids (explanations, pictures, movies) to make it more digestible for a user with low financial education. And these should be placed in a second or third layer with a clear signposting.

Questions for public consultation

9) Do you agree that the landing page (layer 1) of the PTS should display the expected monthly retirement income and the retirement date in a simple manner whilst the accrued entitlements and pension providers (i.e. breakdown by source) should be disclosed in a second layer easily accessible to users wanting to know more? If so, do you have supportive evidence? If not, what would you propose as the key elements for the landing page (Layer 1) and those for subsequent layers (Layers 2 and 3) considering the scope of the PTS and individuals' behavioural and cognitive biases set in this consultation?

10) Do you agree that difficult concepts, such as inflation, purchasing power, communication of projections, etc. should be accompanied by with visual aids, such as short movies, use of metaphors, pictures or additional explanations (pop-up windows)? Do you have supportive evidence and any examples of such "aids"? If not, what is missing or what workable alternative would you propose considering the scope of the PTS and individuals' behavioural and cognitive biases set in this consultation?

11) Do you agree that information on the assumptions used to calculate projections or projections with scenarios should be placed in second or third layer? If so, do you have supportive evidence and any examples? If not, what is missing or what workable alternative would you propose considering the scope of the PTS and individuals' behavioural and cognitive biases set in this consultation?

12) Do you agree that additional information that is not linked to the goal of the PTS, such as ESG factors, should be accessed via signposting to the pension provider or placed in the third layer of the PTS? If so, do you have supportive evidence and any examples? If not, what is missing or what workable alternative would you propose considering the scope of the PTS and individuals' behavioural and cognitive biases set in this consultation?

2.4. DIGITAL NUDGING AND CITIZENS' ENGAGEMENT

94.   The other optional and more implicit goals of the PTS are to enable retirement planning (subgoal 3) and to facilitate sensible decision making (subgoal 4). From a user perspective, having had the information about when can she or he retire and what will be the estimated amount, this should lead towards the more crucial questions:

> **5. Will that amount** (combined with existing personal wealth) **be enough to continue the life I want to live as a retiree?**
>
> **6. And if not, which steps can I take to improve my retirement prospect?**

95.   From the experience in NL and other countries providing a PTS it can be deducted that just providing the information does not necessarily lead users to take action. Outside the EEA, research conducted in the US[36] yielded some interesting outcomes. On the one hand, the message format has only a limited effect on the message effectiveness, but the receipt of a message improves consumers' intention to plan for retirement. On the other hand, information from a government source is more effective than peer-generated information in improving the willingness to learn more about retirement planning. In this regard, the PTS can be instrumental in conveying the pension raising awareness messages that have been established at national level, as part of a strategic view on pension communication (see also **section 4**).

96.   The ultimate goal is for the average citizen to judge whether the projected amount will be enough for his desired standard of living as a retiree. Whether the answer to that is far from the user's expectations or not, it would be useful to focus on the types of actions that citizens can take, that are 'now' under their control. Hence the PTS could also be used to do simulation, where individual choices are possible, by showing what people can do to increase their future retirement benefits and/or what parameters belong to their personal situation that can be modified (age, contributions etc.). It is essential that such information is presented in a neutral, trustworthy and independent manner. The role for the PTS is clearly not to provide financial advice, but to offer neutral information to help the user understand if he is saving enough and show potential options or steps at hand, especially if it is integrated in a wider strategy (e.g. support auto-enrolment reforms, improve financial capability).

97.   Behavioural research also shows that consumers tend to procrastinate or postpone decisions. Even if provided with the best designed information, they will only take action if actively

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[36] On information provision to improve retirement planning intentions and behavior. Source: Arvid O.I. Hoffmann, Daria Plotkina (2020) Why and when does financial information affect retirement planning intentions and which consumers are more likely to act on them?, Journal of Business Research.

pushed to do it through easy available steps – that reduce the friction between the will to do something and the effort it takes to actually do it. A way to do this is to design a user journey through nudges, interactive tools[37] and signposts to where users can find more help or information. Nudges, interactive tools and signposting could be used to:

- Stimulate the user to familiarize himself/herself with the topic, leading to more information and educational content;
- Prompt the use of on-line calculation tools to play with different scenarios at retirement, with some adjustable parameters (retirement age, contribution, etc.);
- Facilitate contact (through a direct appointment or a call-back option) with an institution that provides generic advice (e.g. Money Advice Service in the UK, consumer associations, etc.).

98.   An avenue for future research would be to test the impact of different nudges on users in an existing PTS.

2.4.1. CUSTOMISATION OF THE PTS OUTLINE

99.   There are several ways to customise the user experience in the PTS. One way is to include certain tools that allow the user to explore 'what-if scenarios'. We have encountered a few relevant examples in the existing PTS:

- **Retirement age slider** (DK, SE): the user can slide the retirement age whilst the projected retirement income adjusts to each scenario (examples available in Annex 3);

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[37] See example of a user-journey video proposed for a cross-border worker by Previnet: 'The Digital Experience of a IORP Member: A Journey Across Countries': http://www.crossborderplans.com/video.html

- **One/Two persons view of the PTS** (DK): to access PensionsInfo, the user is asked to pick one of the two options (One person, Two persons). Below is the screenshot from the demo page.
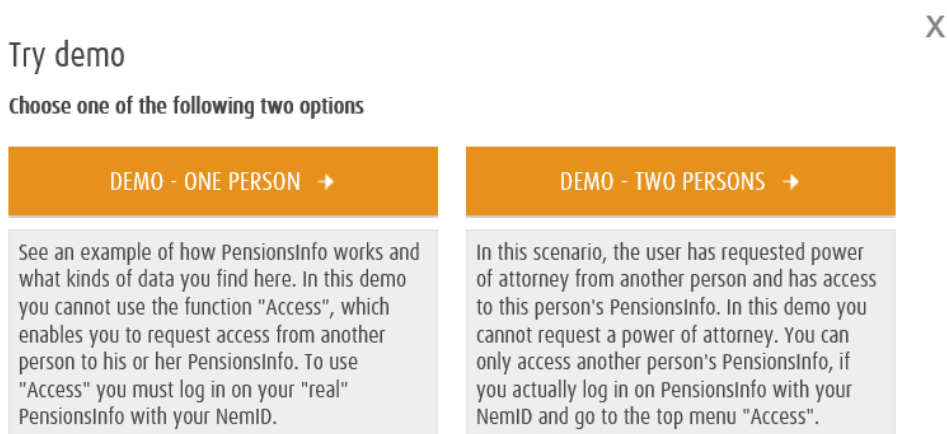
- **Pensions traffic light** (SK): in the demo page of the PTS[38] the pension traffic light starts as 'orange' and it invites the user to turn it green by setting a retirement objective either in the funded or occupational pension tabs. Then once the estimated pension ratio goes over 65% of the current salary, the traffic light turns 'green'.

- **Retirement planner wizard** (SE): this tool, targeted to citizens over 55, is presented as a graphic overview of pensions with breaking points. Users can perform simulation of different scenarios retirement age, withdrawal options on policy level, etc.

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[38] https://www.oranzovaobalka.sk/index.html#!/16/
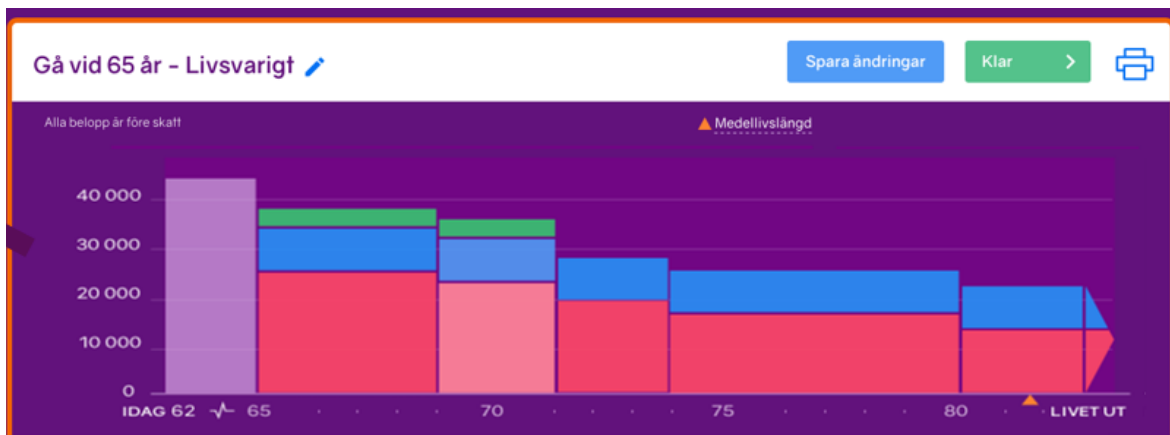
100.   Whilst it is a good practice to allow the user to adjust basic assumptions, such as adjusting the retirement date and seeing the impact the change has on the pension income, the PTS should not allow the customisation of underlying methods, as these are much too complex for the average user. The risk is that users adjust assumptions they do not understand and may be getting a false impression of their projected income. For example if they set the expected returns on investment too high.

> EIOPA VIEWS AS A GOOD PRACTICE THE POSSIBILITY OF CUSTOMISING BASIC ASSUMPTIONS, SUCH AS DESIRED RETIREMENT AGE, OR HAVING A PARTNER OR NOT, OR A DESIRED PENSION GOAL. HOWEVER IT IS NOT IN FAVOUR OF ALLOWING THE CUSTOMISATION OF UNDERLYING METHODS, AS THESE TEND TO BE TOO COMPLEX FOR THE AVERAGE USER.

101.   A second way to customise the user experience is to allow the individual to compile a **'To-do list'**. This feature is included in the newly designed pilot version of the European Tracking System
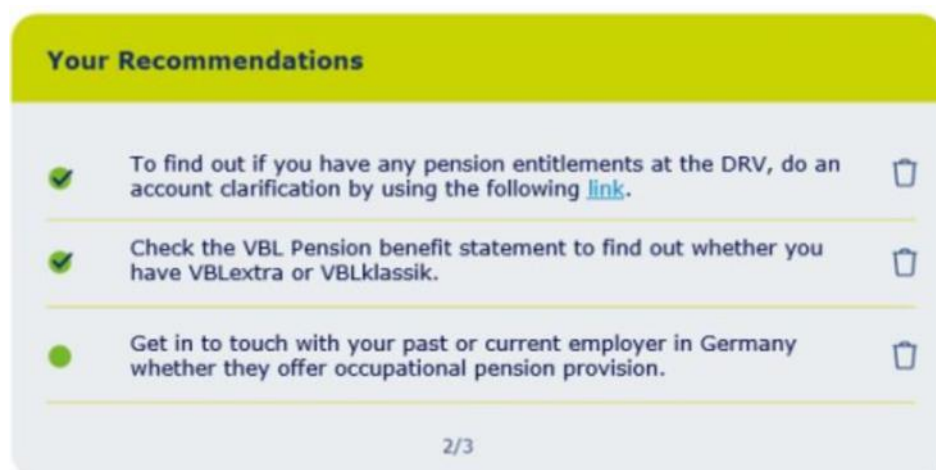
(ETS) portal, called FindyourPension (FYP). Here, short information is accompanied by proposals for recommended actions that can be added to a to-do list and saved in the user's personal Dashboard on the website. The so-called **'recommendations'** can serve as reminders, be ticked off and deleted after the tasks have been completed.

102. A third way to customise the PTS is to showcase different **'personas' and their representative life-situations**. This approach is followed by the ETS portal, which has elaborated several personas[39] in order to provide targeted information to a heterogeneous population of mobile workers. These are about 18 million citizens with multiple pension biographies in different countries and cross-border workers. Information in the ETS is presented according to life situations of users such as: Young and starting career, Family and pensions, Generation 50+.
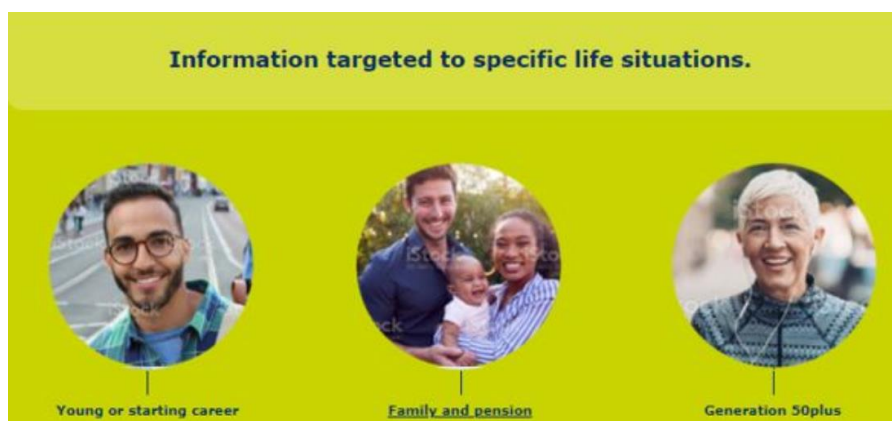
103. Finally, an option to explore is to envisage a customisation of the PTS view according to the user's profile. This option would imply that the user consents the use of his personal data to adjust the information according to preferences/choices made by an artificial intelligent based application.

2.4.2. HOW TO ENHANCE A REGULAR INTERACTION WITH THE PTS?

104. Once the user has been acquainted with the PTS (**section 4.5** covers the Strategic considerations for the effective launch of PTS), the question that arises is: how frequent should the PTS interact with the user and for which reason? The frequency and the aim of the interaction with the PTS depends on both the kind of information that the PTS provides and the frequency with which the underlying data changes significantly. Moreover, what people need may differ

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[39] These personas are created by using the annual Intra EU-Mobility Report and interviews with persons representing or working with the target groups in order to work evidence based.

according to their personal situation and stage of life. A young person in the build-up phase, people experiencing life changing events, like buying a house, marriage/divorce and death, or a retiree will not have the same need of checking the PTS.

105.   As an example in BE, the statutory pensions data are updated each quarter, with a complement for pensioners that is payed around May and that causes a spike in the visits. The supplementary pensions data are updated annually in August. In both cases, automatic e-mail notifications are sent to the users which then visit the PTS and review their data. Some pensioners actually check-in every month to do a follow up of their payments, whilst others in the build-up phase have a less frequent contact. .

106.   In SK there are certain triggers for prompting communication with users: (1) update on key parameters in PAYG scheme (May and November); (2) crucial changes in pension legislation (when translated it into the projection model); (3) Significant changes in performance of pension funds (pension providers); and (4) Updates on PBS are sent to users (January).

107.   Beyond communication via e-mail, there are other trigger events or 'hooks' to nudge members to interact more regularly with the PTS. One way to do this is if the user consents receiving newsletters which remind him on specific information and functionalities that a PTS offers. Another way is allow access to the PTS from other platforms (e.g. providers, app, social media). For instance, in DK it is possible for providers to link to the PTS. A citizen who has logged into their personal page at the bank or pension provider can access PTS via a link and get the relevant information without having to login again.

The following communication practices are being put in place by existing PTSs:

- Inform the user about new payment on pension accounts
- Download the personal report from the PTS that can be sent onto a third party (bank/financial adviser) – BE/DK/NL
- Signposting to the PTS when registering to a pension scheme/personal pension product
- Track existing pensions after changing jobs

For a more advanced PTS:

- Check how life events impact the pension: marriage/partnership, divorce, etc. –DK/NL/SE
- Possibility to trigger an action from the PTS to the pension fund/provider: request a pension transfer, initiate the cash of a pension, change of funds, etc. –AUS, ISR
- Encourage consolidation of pension pots. In DK, pension providers are encouraged to specify pension plans not receiving payments and with little total savings. The saver should consider transferring the funds of these savings plans to another provider where they are making payments.
- Use the power of social norm to prompt users' commitment to save (SE): there is a function on the website to compare your own future pension with others in a similar situation. It is a very popular function that creates engagement and willingness to take action regarding the future pension.

2.4.3. CONSUMER TESTING

108.   It is often difficult to predict the exact effect of applying aforementioned behavioural insights. It is therefore important to test whether they have the desired effect within a certain context. The purpose of testing is to find out what effect an intervention has. It is important to test – in advance – whether the intervention will achieve the intended result. In some cases, an intervention will achieve exactly the opposite of what was intended. Consumer testing is preferably done by means of behavioural experiments (also called RCTs or A/B tests). There are two types of behavioural experiments: field experiments and lab experiments. With a field experiment, people's behaviour in the real world is measured. Field experiments provide the most reliable evidence because they measure actual behaviour. It is therefore advisable to use a field experiment to test the effect of an intervention on people's behaviour. Based on the results, it can then be determined whether it is actually worthwhile to deploy the intervention. With lab experiments, people's behaviour is measured in a more artificial, controlled, and sometimes hypothetical setting. The intention measured here will not always translate directly into what people would actually do. Advantages of lab experiments are that they are faster and cheaper than field experiments and you can collect and more data can be collected more easily. Moreover, researchers have more control over the setting and can make more precise adjustments. This makes lab experiments suitable if the goal is to investigate the effect of small changes[40].

109.   Consumer testing of a PTS at an early phase should be part of the process of developing the tool. This is important to understand if key aspects, such as the behavioural principles identified above and the presentation of the landing page and subsequent layers, are understood and resonate well with the target audience.

110.   The majority of countries did not test citizens' understanding of the information provided in the PTS. This is especially the case of countries with limited experiences in PTSs or where a PTS has been developed only recently. In one case (BE) only some elements of the PTS have been tested with users, which resulted in limiting graphic elements. Two countries (SE, SK) indicate that consumer testing have been widely conducted in developing and refining their PTS. In particular, in SK tests have been done both before the PTS's release (through focus groups of users) and afterwards, by gathering and assessing users' feedback. As a general method, any changes in the platform is usually tested before its implementation. Also in NO users' feedback are collected through a dedicated support-mail. In SE, users' testing has been frequently used over the years in order to find the best way to present the information (in this case, through a combination of visual aid, data table and narrative texts). Consumer testing will be used for developing the PTS in the UK

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[40] AFM-rapport Consumer Behaviour: understanding, guiding and measuring,
https://www.afm.nl/~/profmedia/files/publicaties/2021/report-consumer-behaviour-understanding-guiding-measuring.pdf?la=en

and will be carried out after the delivery of the PTS (with the aim of its continuous improvement) in HR.

111. Getting the right balance between meaningful information, simplicity and understanding is one of the 'success factors' of a PTS. Behavioural research also shows that a well-designed landing page will trigger the citizens' interest on pensions. In this regard, EIOPA could conduct exploratory work to get insights into a newly designed digital interface of a tracking tool, with focus on the landing page with summary/key information and the approach on layering of additional information.

Key messages

PTS should not provide financial advice, but help users understand if they are saving enough and show the types of actions they can take, especially if it is integrated in a wider strategy (e.g. support auto-enrolment reforms, improve financial capability).

The PTS could be instrumental in reducing the time and effort needed to engage with pensions, by designing a smooth user-journey, with the use of nudges, interactive tools and signposting to where users can find more help or information.

EIOPA is of the view that while information on the PTS should be updated as frequent as possible, people should be encouraged to consider their pension position with a long term perspective. Ideally, an 'annual check-up of your pension situation' could be a reasonable approach, ideally to be also promoted with a dedicated education/communication campaign.

MSs planning to develop a PTS should conduct consumer testing in an early phase, as they develop the PTS prototype in pre-production site, to design a tool which satisfies and corresponds to users' needs and desires.

Questions for public consultation

13) Do you agree that the PTS should ultimately help the user understand if he is saving enough for his retirement such that its role is clearly not to provide financial advice, but to show the user in a neutral manner the types of actions he can take, especially if it is integrated in a wider strategy (e.g. support auto-enrolment reforms, improve financial capability)? If so, do you have supportive evidence and any examples? If not, what is missing or what workable alternative would you propose considering the scope of the PTS and individuals' behavioural and cognitive biases set in this consultation?

14) Do you agree that the PTS, by designing a smooth user-journey, can help reduce the time and effort to take actions towards more sensible financial decisions, if facilitated through the use of nudges, interactive tools and signposting to where users can find more help or information? If so, do you have supportive evidence and any examples? If not, what is missing or what workable alternative would you propose considering the scope of the PTS and individuals' behavioural and cognitive biases set in this consultation?

3. FINDING SUITABLE BACK-END SOLUTIONS TO DESIGN PENSION TRACKING SYSTEMS

112.   One the most common risks to PTSs is the operational risk (see also **section 4.1.1)**. This risk can be mitigated by building credible back-end solutions. This entails a model appropriate to the technological environment, secure access methods, data architecture aligned with the purpose of the PTS, data standardisation and transmission methods supported by industry, efficient data quality requirements and robust processes to tackle security and privacy risks. This section discusses these back-end solutions.

113.   Back-end solutions are subject to fast technological development. Consequently, identifying good practices for back-end solutions could be outdated in a few years or less. Therefore, this section aims to define principles, which should hold independently of the technology used rather than suggesting good practices based on the currently existing technological solutions.

3.1 ACCOUNTING FOR MEMBER STATES' DIFFERENT STARTING POINTS

3.1.1 DIFFERENT STARTING POINTS CAN INFLUENCE BACK-END SOLUTIONS

114.   While some countries already have PTSs in place or are establishing these, many MSs are still undeveloped. In addition, in some countries legacy systems exist which define data transmissions between pension data providers and/or a central database. In other countries, the starting point is a blank page.

115.   Depending on the solutions already available, it will be easier in some MSs to also start from a blank page despite the legacy systems while other MSs could build their PTSs around the existing systems.

116.   However, regardless of their starting point, MSs need to assure that their PTSs follow the technological developments and have a database model as well as other technological solutions which are aligned with their purpose and scope**.**

3.1.2 TWO MODELS: LIVE ACCESS AND CENTRAL DATA STORAGE

117.   The data to present to the users can either be stored centrally or the PTS can connect to the data providers each time if a user has been authenticated and identified and delete the data from its system after the user has logged off. The boundaries between both models might disappear as

the scope of the PTS evolves. Some data in a live access model could still be centralised, for example the data received from non-web enabled pension providers. But also in a central database storage model, multiple database could be connected with each other.

118.   Existing PTSs in BE, SE,SK , AUS and FI make use of a central data storage whereas existing PTSs in DK, EE, NL, NO and IS use live access to gather the data (see **Annex 2**).

119.   One of the **main advantages of using live access is the increased data protection** and the reduced risk of data being shared inappropriately. Indeed, if users do not log-in to the PTS, their data is not transferred. These advantages were also the main reason why the PTS in DK had changed its model from central data storage to a live access model. On the other hand, as the systems always need to be in a secure and reliable connection, there is an increased potential for disputes if data would be incomplete or inaccurate. There are also fewer options to make use of the PTS for other purposes than presenting the data to the users as compared to a central database.

120.   The disadvantage of live access is also the main advantage of storing the data: the PTS does not always need to rely on having constant access to all pension data providers. This makes the architecture of the PTS simpler and reduces IT requirements on pension data providers. On the one hand, due to the data stored, it can also become a significant target for hackers. On the other hand, this is mitigated by the focus of the cyber security being concentrated on the PTS, and partitioning of the data.

121.   The question of **which model to adopt is mainly of a legal and technical nature**. It is closely linked to the purpose and scope of the national PTS (see **section 1**) and should take into account what the data providers are able to deliver. If there is a risk for connection disruptions, slow response times by data providers or a need for other functionalities of the PTS beyond showing the data to the users, a centralised approach might be beneficial. If data protection rules prohibit the centralisation of personal (pension) data, a live access system is the only possible solution. If both solutions might work in a MS, then the decision becomes a governance issue.

122.   Independent of the model choice, EIOPA recommends a pilot project to understand the technological feasibility and assess if the PTS could build on a national legacy system.

123.   This pilot should also check the performance in case multiple active users look for their data using the PTS to ensure acceptable response times, that there are no workload problems on the side of the PTS or data providers, that the creation of the response files is proceeding according to the plan, that no other unforeseen problems occur due to high workload for a longer period of time, like memory leakage.

Key messages

EIOPA is of the view that:

- PTSs should follow the technological developments and have a database model as well as other technological solutions which are aligned with their purpose;

- Live access is the preferred database model due to the increased data protection if (i) it is technologically feasible, (ii) there are no legacy systems to build upon; and (iii) there are no other features linked to the PTS which might require a central database;

- MSs should perform a pilot project to understand the technological feasibility of their preferred database model.

Questions for public consultation

15) The main advantage of a live access model is the increased data protection. Do you agree that if one can start the PTS from a 'blank page', if it is technologically feasible and if the only aim of the PTS is to show the data to the user, then a live access model is the optimal solution?

16) Do you agree that a pilot project should be conducted to test its technological feasibility? In which circumstances would it not be necessary to conduct a pilot?

3.1.3 DIGITAL ID AS KEY PRE-REQUISITE OF PENSION TRACKING SYSTEMS

124.   A prerequisite to PTS success is to have a secure digital ID system in place: users seeking to access the PTS will need to prove their identity by means of a digital ID – a secure system that consumers can use to authenticate and verify their identity online. Authentication methods should be sufficiently robust to adequately and effectively ensure that access control policies and procedures are complied with. In addition, it should be adapted to the technological environment.

125.   Currently we see that most PTSs use more than one method for digital identification. There are many different implementations possible and there are many innovations in this field. Most systems apply a governmental digital identification in combination with a 'commercial digital identification method' (see **Annex 2**). Where there is no governmental method set up, there is often a digital identification method set up specifically for the tool or institution.

126.   In the existing tools, eIDAS compliant digital IDs were often not considered because of the low usage in combination with the budgetary implementations. This also implies that while users living abroad have similar functionalities of the system as those in the country, they still need to possess the national means to access the PTSs. However, some existing PTS highlighted that this might change in the future. Indeed, when considering only those PTSs currently being developed, there is a trend towards using eIDAS for the digital identification and authorisation while also some existing PTSs had indicated considering eIDAS as a future means to access their PTSs. In such context, Member States should take account of future changes stemming from the Commission's proposal for a framework for a European Digital Identity amending Regulation (EU) No 910/2014 as regards establishing a framework for a European Digital Identity[41]. Amongst others, the new framework would allow EU citizens to prove their identity and access online services with their national digital identification, which would be recognised throughout Europe[42].

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[41] https://ec.europa.eu/newsroom/dae/redirection/document/76608

[42] Under the new Regulation, Member States will offer citizens and businesses digital wallets which would link their national digital identities with proof of other personal attributes such as driving license, diplomas, bank account. These digital wallets may be provided by public authorities or by private entities, as long as they are recognised by a Member State.

> GOOD PRACTICES OF DIGITAL ID'S
>
> - THE eIDAS REGULATION ENABLES THE USE OF ELECTRONIC IDENTIFICATION MEANS AND TRUST SERVICES. IT ENSURES THAT PEOPLE AND BUSINESSES CAN USE THEIR OWN NATIONAL ELECTRONIC IDS TO ACCESS PUBLIC SERVICES AVAILABLE IN OTHER EU COUNTRIES. THE EU TRUST SERVICES DASHBOARD[43] INCLUDES A LIST OF QUALIFIED TRUST SERVICE PROVIDERS IN ACCORDANCE WITH THE eIDAS REGULATION.
>
> - THE OPEN IDENTITY EXCHANGE (OIX)[44] IS AN ORGANIZATION AIMING TO ACCELERATE THE ADOPTION OF DIGITAL IDENTITY SERVICES BASED ON OPEN STANDARDS WORKING ACROSS THE PRIVATE AND PUBLIC SECTORS. IT IS DEVELOPING GLOBAL INTEROPERABILITY STANDARDS AS WELL AS BEST PRACTICE GUIDELINES IN THIS RESPECT WHICH ARE FREELY AVAILABLE ON THEIR WEBSITE.

127. The access for users through the digital authentication and identification should be secure and unique. Ideally, it should be possible to use the digital identification method on multiple platforms. MSs should also pay attention to future guidance from the Open Identity Exchange (OIX).

128. Access methods are used which are user friendly.

129. However, not everybody has a digital identity: not every adult has a government issued identity document (e.g. passport, driving licence) or a credit record. In these cases, the identity provider will need an offline process for guiding people through identity creation and authentication steps in an efficient manner.

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[43] https://esignature.ec.europa.eu/efda/tl-browser/#/screen/home

[44] https://openidentityexchange.org/members/anon/new.html?destination=%2Findex.html

Key messages

EIOPA is of the view that digital ID's should be:

- Sufficiently robust to adequately and effectively ensure that access control policies and procedures are complied with;

- Adapted to the technological environment;

- Secure and unique;

- Able to be used on multiple platforms;

- User friendly.

Due to their enhanced authentication methods and compatibility with other tracking services and uses, EIOPA recommends Member States to use eIDAS compliant identification methods and pay attention to the OIX guidance.

Questions for public consultation

17) Which additional principles should apply to ensure a secure digital access to the PTS?

3.2 BACK-END REQUIREMENTS OF PENSION TRACKING SYSTEMS

3.2.1 DATA ARCHITECTURE

130.   The data requested from providers and presented in the PTS should build on the purpose of the PTS. This purpose defines the scope. Only when there is a clear purpose and scope, one can decide which data the PTS and the data providers should exchange. Where possible, these data requirements should be similar for providers offering similar products or plans. Once the purpose and scope are clear, the data architecture should decide on the general principles of the PTS back-end solutions, for example record keeping.

131.   The development of a PTS is not a once-only event, but rather a process in which the functionalities of the PTS can vary. With further expansion, the underlying data needs change. In order to minimise future costs, it is crucial to request the data anticipating as much as possible the future evolution of the PTS and flag any envisaged changes well in advance. Only a limited dataset required for each phase in the evolution of the PTS should be mandatory at that point in time. While this might slow down the initial launch, it will accelerate future evolution and reduce the mid- and long-term costs. This is even more relevant when most, if not all activities of the PTS are outsourced (see also **section 4)**.

132.   It is also vital that each phase in the evolution of the data architecture is compatible with earlier versions. Not all data instances might be able to follow evolutions at the same pace, nor might every data instance be required to follow all evolutions. Maintaining the compatibility of the data architecture with earlier versions will reduce costs because the PTS has to maintain only one protocol, instead of the most up to date and multiple older versions.

133.   As a theoretical starting point, the PTS may limit itself to the most critical information about the pension build-up. This contains the following data:

- Information necessary to authenticate the user and match the user to his/her data. This should consist of unique identification key[45]s, e.g. social security number for the user and LEI code for the employer or pension provider;

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[45] Unique identification keys comprise two aspects: (1) unique number which relates to only one person and only one person has this number, an (2) unique over time. As pension administration is a long-term necessity, the unique number-person relation must preferably stay unique and stable over the duration of the citizen's life and beyond (e.g. death benefits).

- The most essential information as determined in the purpose and scope of the product (e.g. accumulated savings and estimated retirement income);

- Information that allows the user to contact the provider so users would be able to request additional information or to report errors.

134.   Consequently, the number of data fields can be limited as long as the above mentioned data would be reported and if the main goal of the PTS would be to deliver only the most critical information. The absolute bare minimum of data would be six fields: **user ID, provider ID, accumulated savings/accrued entitlements, projected retirement income, retirement age** (by pension types if these differ) and **provider email or telephone number**. In theory this should not be different depending on if live access to data or a central database would be used.

135.   When attempting to offer a deeper understanding of the pension build-up, additional data could be requested from data providers and other sources (e.g. government databases). These could be grouped around the following categories:

- Who is the user (age, marital status etc.)?

- When can I take out the pension income?

- How much have I and/or my employer paid in and what are the contributions received so far?

- What are the tax benefits linked to my contributions?

- What are the cost related to my pension?

- What are my savings invested in (underlying assets, ESG credentials etc.)?

- What would the impact of changes in my behaviour be, for example when part time work is considered?

136.   It is important to consider the reliability of the data to be provided in terms of who originally holds and updates the personal information and whether the information requested is factual or an assumption. In some cases, information may be better requested directly to the original source, for instance, the public entity keeping records of citizens' civil status.

137.   While additional information as included in the above paragraph could enhance the understanding of the pension build up, the PTS could also consider features that benefit the providers. For example, the PTS could provide regular updates of the core data: changes in address, marital status, taking up legal pension, death of the member etc. If such features would be included, not only the legal basis but also the back-end solutions need to be included in the data architecture. In this example, data exchange with social security institutions should have been included in the data architecture.

Key messages

EIOPA is of the view that data architecture should:

- Build on the purpose of the PTS;

- Be compatible with earlier versions;

- Anticipate as much as possible the future evolution of the PTS and flag any envisaged changes well in advance.

Questions for public consultation

18) Do you agree that a PTS in its bare minimum could consist only of the following fields: user ID, provider ID, accumulated savings/accrued entitlements, projected retirement income, retirement age and provider email or telephone number? If not, which elements are missing and should be added to operate the PTS? What would be the impact on providers of pension data to the PTS?

19) Can the PBS be used as a basis to define the data needs for the PTS related to occupational pensions? Which elements would need to be added, which are redundant? What would be the impact on providers of pension data to the PTS?

3.2.2 DATA STANDARDISATION

138.   Data standardisation is crucial. Structured data cannot exist without standardisation at a national level. While it might take additional time to define the data standards, it reduces immediate and long-term costs. The model choice between live access or a central database does not affect potential recommendations with regards to data standardisation.

139.   EIOPA recommends that a legislation is introduced that prescribes the data standards and that a body is empowered - independent from government, users and data providers - to define and manage data standardisation. MSs should decide whether such responsibility would sit with the PTS itself or a separate, independent entity (e.g. pension regulator). This body should

collaborate and receive input from regulators, industry, PTS and consumer bodies but assume final responsibility for all decisions. While the establishment of such body might increase the costs of running a PTS, it increases the flexibility of the system as updating rules does not require legislative changes, and ensures accountability.

140.   Data standardisation should follow some basic principles:

- The data should be structured. The requested data should be combined in subsets. For each subset, it should be clearly defined what is needed and for what the information is needed. What is included, what is not. Also if some data would not be included, it should explain 'why' the data should not be reported so it can be referred to in the future;

- Use clear definitions for each data field. For each data field, include all the details necessary: What data is requested, under which circumstances it applies and when not, at which point in time, for which reference data, in which currency, etc?;

- In the absence of real-time calculations and in order to ensure conformity across the data collected and with other sources of information on pensions such as the PBS, it is highly recommended that a single reference date is used across providers (e.g. January 1) and that the data is updated at least annually;

- Align agreed technical standards with each data field (ISO standards, formats) wherever this is possible;

- Define the necessity of the requested information: mandatory, conditional, optional.

141.   The data standards should be publicly and freely available for transparency. However, this should not compromise data security. The body would define the standards in terms of data content and cardinality, with transmission and security layers following established industry best practice.

Key messages

EIOPA is of the view that data standardisation should:

- Be structured;

- Be clear;

- Make use of agreed technical standards wherever possible;

- Aim to use a single reference date;

- Define the necessity of the requested information;

- Be publicly and freely available.

EIOPA recommends that a legislation is introduced that prescribes the data standards and an independent body is empowered to define and manage data standardisation with input from all stakeholders.

Questions for public consultation

20) Do you agree that setting the data standards (data standardisation, transmission) should be done by an independent body after consulting the various stakeholders?

21) EIOPA recommends that data standardisation should be structured, include clear definitions, make use of a uniform reference date, align with agree technical standards and determine the necessity. Do you agree with this approach? If not, what other principles should apply to data standardisation? What would be the impact on providers of pension data to the PTS?

3.2.3 DATA PROJECTION

142.   The provision of data on the estimated benefits at retirement age is crucial to give citizens an insight in their retirement situation and allowing them to make sensible decisions when such projections could have a substantial impact on their final pension.

143.   Pension projections are defined as the projected values of a citizen's accumulated future benefits that the provider will provide at retirement given a chosen set of assumptions.

144.   In any case, the data provided to the PTS should be consistent with the data provided in the Pension Benefit Statement (for IORPs) or annual information to consumers (3rd pillar) as required by law. If different parties would be communicating on the same issues in a different manner, the citizen would be more confused instead of more informed. Although outside the context of this section, it might be worthwhile to consider reducing the number of channels providing similar information; for example by allowing to transfer the obligation to send benefit statements to the PTS, if that is possible, following the design and the front end of the PTS.

145.   Standardisation of technical requirements on projections of supplementary pensions allows for comparability between occupational and personal pensions and should be identified as a good practice. However, such standardisation might not be possible when it is not established in the Member State, due to the differences in rules or legislation for the different providers. Therefore, in a basic version the PTS should allow for the diversity of methodologies underpinning the data on projections and disclose that the methodologies diverge.

146.   In a more evolved version, uniform assumptions could be set for all statutory and supplementary pensions, taking into account national legislation. This could be done either through a new legislation or through guidelines. Some assumptions could also be defined by an independent expert panel. Furthermore, a coherent approach could be set between statutory and supplementary pensions so users could receive the most accurate and realistic information about their future retirement income.

147.   As with data standardisation it is vital that decisions on these assumptions follow from a close collaboration with all stakeholders involved. In the case of pensions based on some degree of market risk, without a guarantee (DC schemes and relevant personal pension products), EIOPA recommends that data on projections should be composed of a best estimate scenario, a favourable and an unfavourable scenario. EIOPA recommends those MSs in need of guidance to consider the projection methodology suggested in the PEPP.

GOOD PRACTICES OF UNIFORM PROJECTIONS

- IN DK, ITS COUNCIL FOR RETURN EXPECTATIONS DEFINES THE RETURN EXPECTATIONS AND ASSUMPTIONS THAT PENSION AND OTHER FINANCIAL INSTITUTIONS USE TO CALCULATE THEIR PROJECTIONS IN THE NEXT CALENDAR YEAR. THE AIM OF THE COMMON ASSUMPTIONS ARE ENSURING COMPARABILITY AND ENSURING THAT PROJECTIONS ARE AS REALISTIC AS POSSIBLE.

IN THE PAST, THE ASSUMPTIONS WERE DEFINED BY INDUSTRY STANDARDS. HOWEVER, SINCE 2018 AN INDEPENDENT COUNCIL FOR RETURN EXPECTATIONS WAS SET UP. THE COUNCIL FOR RETURN EXPECTATIONS IS APPOINTED BY INSURANCE & PENSION DENMARK AND FINANCE DENMARK. BOTH ARE BUSINESS ASSOCIATIONS FOR FINANCIAL INSTITUTIONS.

- IN NL, THE ASSUMPTIONS FOR PROJECTIONS OF OCCUPATIONAL PENSIONS HAVE BEEN DEFINED IN LEVEL 3 OF THE NATIONAL LEGISLATION. PERSONAL PENSION PRODUCTS ARE NOT INCLUDED IN THE DUTCH PTS.

- IN IT, THE ASSUMPTIONS FOR PENSION PROJECTIONS ARE PROVIDED BY THE SUPERVISORY AUTHORITY ON PENSION FUNDS AND ARE COMMON FOR OCCUPATIONAL AND PERSONAL PENSIONS.

148.   Experience from existing PTSs shows that if assumptions are set at a national level, they mostly apply to all pension products. However, if no assumptions are set at a national level, projections are better defined for occupational pensions than for personal pension products because of the existing EU regulation on IORPs. Indeed, its rules on the Pension Benefit Statement (PBS) which includes a description of the projection methods has had a positive impact in achieving more comparable projections of occupational pensions in a MS, even without standardisation of methodology and underpinning assumptions included in IORP II.

- Hence, data on projections might not be standardised with regards the approach used, deterministic or stochastic, at national and European level;

- A deterministic approach is a calculation in which the assumptions regarding the economic and financial variables, such as the rates of return, are pre-set. This means for example that the return on investments is x% in year n and y% in year n+1. This leads to an extrapolated outcome given a certain starting position of the member's savings and the characteristics (and possibly the financing agreement) of the pension plan;

- A stochastic approach is typically a more complex and sophisticated calculation compared to a deterministic approach. It takes into account hundreds or thousands of scenarios in which the economic variables contain a certain degree of volatility. The difference with a deterministic approach is that in the stochastic approach multiple scenarios are used to calculate the projected

pension benefits. After calculating these scenarios, the pension provider can pick percentiles of these scenarios to show a best estimate (moderate) and an unfavourable scenario of the projected income. It can also show an optimistic, most favourable projection;

- The outcome of projections are dependent on the assumptions underlying the calculations. Often the scenarios show the best estimate and the unfavourable scenario. This holds for both deterministic and stochastic models. Commonly used assumptions are the interest (discount) rate, the return on investments, contributions paid during the year, real wage growth, inflation, the volatility of asset classes, correlations between asset classes and state incentives – tax discounts, costs of pension plan and retirement products, assumed longevity.

149. Projections can also differ in terms of whether they are expressed in real terms and whether they present future lifetime monthly income or as the projected lump sum amount. Please refer to **section 2.2.2** on the communication of projections.

Key messages

EIOPA recommends that:

- The data provided to the PTS should be consistent with the data provided in the Pension Benefit Statement (for IORPs) or annual information to consumers (3rd pillar) as required by law;

- MSs should conduct a legal analysis on the consequential impact of introducing new legislation to implement the PTS into existing national measures. The legal analysis seeks to identify links between the new legal provisions on the PTS and existing national measures and where clarification may be necessary introduce consequential amendments. In addition, the legal analysis could help identify the extent to which there is scope to achieve more uniform assumptions for the calculations and coherent projections of statutory and supplementary pensions.

Questions for public consultation

22) Primarily EIOPA stresses that the methodology for projections included in the PTS should not differentiate across pension sources. It also referred to solutions in case there could be a differentiation in projection methodologies or assumptions used. However, EIOPA also suggests a legal analysis to assess if there is scope for coherent projections of statutory and supplementary pensions. What are your views about coherent projections between statutory and supplementary pensions and uniform projections for supplementary pensions? Which barriers should be removed to achieve coherent projections for all pension products? What would be the impact on providers of pension data to the PTS?

23) Are the following assumptions commonly used for calculating projections complete: interest (discount) rate, the return on investments, contributions paid during the year, real wage growth, inflation, the volatility of asset classes, correlations between asset classes and state incentives – tax discounts, costs of pension plan and retirement products, assumed longevity?

3.2.4 DATA QUALITY AND RECORD-KEEPING

150.   Both the data provider and the PTS should implement data quality measures independent from the model used. In case there is no data manipulation (e.g. calculations) in the PTS, the data provider is responsible for the presented data. If the PTS does calculate some data, and there is an error in what the PTS does – to be distinguished from an error in the data at the basis of the calculation – it is the responsibility of the PTS. Recording and keeping track of what happens with the data and by whom is therefore essential.

151.   Data quality checks should comprise at least two aspects: checks on internal and external anomalies:

- Checking internal anomalies means compliance with the standards and can be checked through automatic validations. Examples of such checks are checking if the syntax was respected, if different fields are completed with values that cannot co-exist, absence of required data, etc.;

- Checking external anomalies means checking the 'correctness' or plausibility of the data provided. This could also include crosschecks of different datasets for inconsistencies or fraud.

152.   When errors are found in the data received by the PTS, the PTS could either refuse the data and require a resubmission or accept the data but send a warning to the data provider and if appropriate include an additional disclaimer when presenting the data to the user. In case of live access, these checks should already be implemented by the providers in order to avoid that errors are only detected when data is requested.

153.   The data should be complete. Missing data could result in a wrong representation of users' pension information and finally his/her possible decisions. Often the more functionalities a PTS has, the more complete it will be.

154.   The data should be updated timely as this has a strong correlation with its reliability. As a general rule, data should be updated if there are any intermediate events that could influence the users' pension decisions and for each new calendar year. More frequent updates could also risk that there is an overflow of data for the users which in the end does not help their decision making process.

155.   The data received should be consistent. For users, checking its reports on different dates should result in similar (if there are no unexplained changes to the data at an equal reference date) and comparable results. Therefore, it is important to decide on data protocols, data standards and data structure.

Key messages

In order to ensure data quality, EIOPA recommends that the data should:

- Be verified by both the PTS and the data providers;

- Be complete;

- Be updated timely;

- Be consistent.

Question for public consultation

24) EIOPA recommends that data quality checks are the responsibility of both the provider and the PTS. The data transmitted to the PTS should be complete, timely updated and consistent. Which other principles would further enhance the data accuracy of PTS?

3.2.5 DATA TRANSMISSION

156.   PTSs need exchange of information with the providers of the pension data and possibly also other sources of information. Therefore, a protocol for the exchange of information should be set up. Such protocol is a standard set of rules that ensure that the systems used by data providers and data receivers is able to communicate with each other. These rules include which data should be shared, which data type they are, how to detect errors, which commands are used to send and receive data, and how to confirm that transfers took place.

157.   For each PTS there will also be a need for a fixed and secure data format to transmit the data (e.g. XBRL for Solvency II and Pension reporting to EIOPA). Currently there is not one prevailing data transmission method used by existing PTSs or by those under development. Most make use of XML, JSON or a combination thereof. Although not to be promoted, some also use CSV in some instances as no other solutions could work. In any case, the data transmission method should be future-proof, standardized, easy to implement, meeting the security requirements for authentication, signing, confidentiality and inadmissibility and follow industry good practice.

158.   As with data standards, EIOPA recommends that legislation empowers a body - independent from government, users and data providers – but with legal empowerment to set up the data transmissions protocols and transmission language. This could be the same body as the one deciding on the data standards. It should closely collaborate with regulators, industry, PTSs and consumer bodies but assume final responsibility. This body will also need to reflect how to digitise non-web enabled pension providers.

GOOD PRACTICES OF DIGITIZING NON-WEB ENABLED PENSION PROVIDERS

IN BE, ALL PROVIDERS OF PENSIONS ARE SUBJECT TO THE SAME STANDARDS TO UPLOAD DATA TO THE PTS. THIS MEANS THAT ALSO NON-WEB ENABLED PROVIDERS SHOULD UPLOAD DATA TO THE CENTRAL DATABASE. IN A LIFE ACCESS MODEL, THE DATA SHOULD BE UPLOADED TO A SEPARATE DATABASE COLLECTING THE DATA FROM ALL NON-WEB ENABLED PROVIDERS.

NON-WEB ENABLED PROVIDERS MANUALLY NEED TO UPLOAD THE RELEVANT DATA TO AN INTERFACE WHICH THEN GENERATES A LINK TO THE CENTRAL DATABASE. THIS IS FEASIBLE AS THESE PROVIDERS OFTEN DO NOT HAVE MANY ACCOUNTS.

> **Questions for public consultation**
>
> 25) Do you agree that there should be a level playing field on data transmission between all pension providers meaning that if a certain product or product category is included in the scope of the PTS, then the protocol for the exchange of information should apply to all providers of these products, independent from the provider type, their size and their technological capacities? What would be the impact on providers of pension data to the PTS?

3.2.7 DATA SECURITY AND PRIVACY

159.   The complexity of ICT is increasing and the frequency of ICT related incidents is also on the rise. With the amount of personal information PTSs store or can collect, cyber incidents could have a detrimental impact on PTS reliability and further operations. For this reason, ICT and security risk management is fundamental for PTSs.

160.   For authentication, EIOPA suggests a double factor authentication like OTP (one-time password). Such OTP can be delivered through a dedicated Mobile App (provided by the PTS), Google Authenticator or through text message. Authentication and identification are necessary to ensure that data are not transmitted to the wrong person, but they are not sufficient. The data source and the data receiver must be equally secured, to make sure that the whole chain is verified and protected.

161.   In this context, there is a need for a protocol between the data providers and the PTS stipulating all the necessary security requirements and arrangements. This protocol should include clear information on the security objectives, focusing on ICT systems and services, staff and processes. Furthermore, it should map all security risks they are exposed to and how to manage them.

162.   PTSs should implement the protocols by establishing policies[46], procedures and processes and by monitoring potential internal and external threats. This includes also setting up prevention measures, business continuity policies and disaster and recovery plans. It should maintain resilient ICT systems and tools to minimize the impact of potential ICT incidents. In future, systems should also be aligned with the Commission's proposal on Digital Operational Resilience Act (DORA).

163.   There is a need for clear identification of authorised users/data sources; secured, logged, timestamped access and; secured, logged and timestamped actions. Furthermore, PTSs should

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[46] For instance, a common practice is to set up a policy statement defining the security levels of the PTS.

implement network segmentation, data leakage prevention systems and the encryption of data at rest, in transit and the traffic.

164.   There should be an annual audit on cyber security and data protection governance, systems and processes by auditors with sufficient knowledge, skills and expertise in ICT and security risks to provide independent assurance of their effectiveness. Introducing national legislation on this also helps to address privacy and data protection issues not covered by the GDPR.

165.   There is a need for safety certificates. This will equally enhance trust with the data providers and the users for which the PTSs has been designed.

Question for public consultation

26) Notwithstanding that the requirements on data exchange identified in this consultation are not specific to PTSs, what other safety certificates and requirements would ensure the security of the PTS?

3.3 CONNECTIVITY WITH THE EUROPEAN TRACKING SERVICE

166.   In line with the principle of free movement of workers, several legal provisions in the EU legislation[47] ensure that migrant workers do not have any disadvantages while executing professional mobility in terms of social rights and pensions. One important aspect is the right to information as a precondition to exercise these rights. Therefore, a European Tracking Service as a central access point to find pensions in different countries is an important and adequate means to achieve this goal. A prerequisite to collect individual pension information from different countries via the ETS, is, that national PTS connect to the ETS. In this chapter EIOPA looks at the conditions for a technical connection.

167.   In order to achieve a PTS at international level, similar issues as at national level are to be tackled but at a much larger scale. This will increase the complexity of the process but should not alter any of the above mentioned principles.

168.   First is the connection. The ETS Proof of Concept includes authentication via the eIDAS framework as it is an EU application fulfilling common standards. Therefore, EIOPA recommends

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[47] e.g. Regulation (EU) No 492/2011 of the European Parliament and of the Council of 5 April 2011 on freedom of movement for workers within the Union

PTS to also include eIDAS compliant authentication digital IDs in order to allow a connection with the ETS.

169.   A second hurdle for the ETS is the identification as to connect the user to his/her data. In that respect, a register or another database might be needed that establishes the connections from which the user data needs to be obtained. One possibility might be an additional module in the eIDAS methodology.

170.   Third is the model used and the conversion of the data exchange. For the model, the same assessment as for the national PTS should be made. However, the ETS will probably not have many other use cases for the data that could justify the data being stored. In addition, in as far as an ETS is connected to the PTSs, it should already rely on much more stable and reliable data sources. From that perspective, a live access system might be more attractive. For the data exchange, an API would need to be set up between the ETS and the national PTSs.

171.   Fourth, the modality of the information will need to be defined. This could entail a common data model and data standardisation, safety certificates, legal solutions, regulatory changes etc. The work of the ETS in this regards has recently started in cooperation with different PTS representatives and will be discussed more broadly in the framework of an ETS/PTSs workgroup. Its implementation will have the biggest impact as it may require the largest changes from existing PTSs. In any case, it should be avoided that pension providers need to provide multiple standards on the same data, for example national and European standards. Therefore, EIOPA recommends that national data standards and solutions are compatible with the standards set by the ETS, even if the national PTS is not yet connected to the ETS. As such, countries could benefit from the experience of the ETS. It would also ensure cost and implementation efficiency if it would be willing to join the ETS at a later stage. Equally, EIOPA strongly recommends the participation of PTSs in the process and considerations of the ETS data model and standards. This would ensure a wider scope of agreement on the standard considering the diverse pension landscapes. Furthermore, taking part in a forum of PTS and experts on pension communication would be a useful enrichment for all existing PTSs and those under development.

172.   Finally, in some MSs PTSs might have restrictions to transfer personal data to the ETS without a legal basis. Therefore, setting a (European) **legal basis for delivering data to the ETS** linked to the principal of free movement of workers might be considered.

Key messages

In order to enhance the development of an ETS, EIOPA has the following recommendations:

- use eIDAS compliant authentication methods,

- setup a register for identification,

- live access will be the optimal model,

- national data standards should follow the standards set by the ETS,

- participate of PTSs in the process and considerations of the ETS data model and standards and take part in a European forum on pension communication,

- develop a legal basis for transferring data to the ETS.

Questions for public consultation

27) Do you agree with the recommendations made by EIOPA on the connectivity with the ETS? Which other recommendations would be needed to make the ETS a success?

3.4 FUTURE TECHNOLOGICAL ENABLERS OF PENSION TRACKING SYSTEMS

173.   The digital identification solutions should be adapted to the technological environment. If eIDAS continue to develop, PTSs will automatically follow. Equally, if **biometric solutions** would be accepted in the eIDAS framework with a sufficiently high level of acceptance, all eIDAS-users will follow.

174.   A new method that has recently gained ground when it comes to information exchange is **blockchain**. Blockchain methods guarantee the data integrity during the exchange among different stakeholders involved. However, one can question if there is a real benefit that would not be obtained by 'conventional' data transmission methods. In addition, the adoption/acceptance of the new technology among a very large base of data providers could be considered as a risk. Especially considering the concerns around the security of the 'wallets'.

175.   **Multi-party computation** ensures that the data shared between the different entities remains private. It consists of cryptographic techniques allowing multiple parties to make calculations as if they have a joint database. Because of the security brought by the cryptographic keys, data can be analysed without seeing the data provided by others. The involved parties decide who can see the results. The main advantages are that it allows for calculation over multiple parties while keeping the results secure, maintaining control over the outcome, confirmation on the correctness of the calculations. There is no doubt that these advantages would very well suit in a context of tracking services for which data protection is a key element.

176.   **Self-sovereign identity** is an approach that users retain control over their personal data and over the representation of their identity. This provides users with the ability to control who can access specific information about them. In order to be self-sovereign, the users should own their data and should not rely on another entity to prove claims about themselves; the users should have all control on the information which is shared about them and with whom; and it should be applicable on multiple platforms and locations. This should further facilitate authentication and identification.

Question for public consultation

28) To what extent do you see the technological developments identified in this consultation as enablers for the development of future PTSs? Which other technological developments could enhance the establishment of PTSs or support the connection to the ETS?

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4. GOVERNANCE AND IMPLEMENTATION OF PENSION TRACKING SYSTEMS

177.   The public good attributes of PTS and need for a trustworthy service providing an objective overview of citizens' accrued entitlements and future retirement income (**see section 1)** have implications on the choice of governance structure PTS may take and on who is responsible for making the PTS happen. Annex 2 provides an overview of the governance model from existing PTSs.

4.1 A GOVERNANCE STRUCTURE TO FOSTER CITIZENS' TRUST

178.   The launch of a PTS should be set in the broader context of citizens' trust and confidence in the national pension system also bearing in mind that people generally find pensions complex and hence not easy to understand. Overall, there is a consensus amongst PTS practitioners that trust is fundamental to the design of the PTS.

4.1.1 PRINCIPLES OF GOOD GOVERNANCE FOR OPERATING A PENSION TRACKING SYSTEM

Non-profit

179.   The non-profit status should ensure that the PTS is not tied by business or private incentives which may risk impeding on the interest of citizens who are PTS users.

Independence

180.   Providing an objective overview of citizens' accrued entitlements and future retirement income in one place necessitates a governance structure that is free from any inappropriate influences and constraints that would prevent a course of action being taken in the interest of citizens. Furthermore, supplementary pensions are based on the contributions of members (their sponsors) and policyholders. Therefore, providers should not restrict reasonable access for citizens to know the level of pension rights.

181.   Therefore the governance structure of the PTS should be set up in a way that there is separation of interests to ensure an impartial service serving the interests of citizens. Israel opted for a commercial model where private sector entities can access the PTS i.e. data clearing house to

provide commercial dashboards[48]. However, to ensure that the PTS is free from conflicts of interest the PTS is owned by the government who tenders the management and maintenance of the PTS to a private sector company.

Credibility

182. In governance terms, credibility necessitates that the persons responsible for running the PTS have relevant qualifications, knowledge and experience in areas such as pension communications and disclosure, Open Finance, digital services, API/data integration. They should also be of good repute and integrity.

183. Since the purpose of the PTS is to present personal data to citizens about their pensions, operational risk constitutes the main risks of a PTS (e.g. poor record-keeping of administrative data). Depending on its nature and scale, operational risk may also lead to reputational risk (e.g. errors in pension projections). To mitigate such risks, credibility is essential and should be achieved through a clear separation of responsibilities between the PTS/persons responsible for running the PTS, data providers and other relevant independent body in respect of data ownership, data standards, projection calculations and assumptions. The roles and responsibilities of each party should be well-defined in order to establish who is accountable and liable for operational failure and mistakes. Such accountability will differ depending on the model choice. If the PTS provides live access, data providers remain responsible for providing accurate and complete administrative data including projections. If the PTS is a central database collecting administrative data of current entitlements but making its own pension projections, data providers remain responsible for the data they send but the PTS is accountable for projections.

184. Credibility also necessitates the implementation of common standards and processes for the transmission of personal data and calculation of pension projections (see also **section 3**).

185. The persons responsible for running the PTS should also remain accountable for all the activities of the PTS even if they delegate or outsource all or part of the day-to-day functions. They should therefore monitor and oversee how the PTS is run.

Transparency

186. As a public good, PTS are subject to public scrutiny. Therefore, a PTS should act in a manner which is visible, predictable and understandable to members of the public. As for any public good, the PTS should provide open and transparent information that is easily accessible in the public domain (e.g. dedicated page on the PTS website). MSs should therefore stipulate the transparency obligations to which the PTS is subject such as:

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[48] Source: The People's Pension (2019) Delivering Pensions Dashboards in the public interest.

- Appointment process. Opaque recruitment practices can prevent attracting high calibre recruits and foster an image of exclusion. The PTS should have a section of its website dedicated to current vacancies. It should also provide a statement or policy document outlining their recruitment procedures;

- Formal status and legislative basis. Such status is to help understand how independent the PTS is, how it operates and how it is funded (see also next section). The PTS should demonstrate its accountability arrangements for instance in relation to the national Parliament (e.g. public entity model), its strategic partners. For a publicly funded service (partly or fully), the legislative basis for operating a PTS should also indicate the level of ministerial oversight it is subject to as well as identify the sources of funding (see also **next section**);

- Partner organisations i.e. entities with whom the PTS works closely e.g. strategic partners, contractors;

- Board composition: The PTS should publish the names of the persons responsible for running the PTS, their biographies, specific responsibilities, whether they represent an entity or group involved in the PTS (national authority, pension funds, user group);

- Governance structure (see **next section**);

- Selection procedure of service providers to whom activities are outsourced[49] which should be based on explicit qualitative and quantitative criteria and comparisons of offers;

- Standards of service citizens can expect from the PTS e.g. performance standards such time for gathering personal information, user complaint process;

- How users can contact and provide feedback to the PTS;

- Publication of annual report setting out financial information such as revenue (e.g. grant-in-aid) and spending (e.g. operations), key performance data including service level agreements with different parties, risk register, lists of outsourced activities and service providers.

4.1.2 OWNERSHIP AND GOVERNANCE MODEL

187.   A PTS should involve and engage with the actors participating in the PTS to understand the impact of the latter and design appropriate technical solutions addressing concerns whilst minimising cost implications.

188.   A public-private partnership facilitates the direct involvement of the relevant parties required to provide personal data as representatives of the latter would be part of the PTS governance (e.g. Board-nominated member). It may also bring cost-effective opportunities for strategic partnership on activities that would otherwise be outsourced to third parties. As public-

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[49] A strategic partner delivering services and directly involved in the governance structure of the PTS may, however, be exempted.

private partnerships take different forms e.g. mutual company, joint venture, MSs should tailor the design of a public-private partnership to their situation and desired ownership model, also considering how to ensure that the governance structure of the PTS achieves a balanced decision-making between the different partners with the best interest of citizens at its heart. In situations where a public entity may be the only option (e.g. a PTS building on existing public service entity providing statutory pensions information), MSs should make due consideration on how to best involve the actors who should be involved in the implementation of a PTS (e.g. sponsors, social partners, consumer groups) e.g. create an advisory committee, conduct public consultation.

189. Regardless of its legal and governance set-up (i.e. public entity or public-private partnership), the PTS should therefore find ways to involve the different actors concerned by the PTS e.g. holders of personal data on pensions, consumer groups. This can be done either through some participative form in the governance structure (e.g. Board representation, technical expert panel) or through a legal obligation to engage with them (e.g. public consultation). **Annex 5** provides examples of PTS governance structure in BE, DE, NL, SE and UK.

Key messages

EIOPA is of the view that a well-governed PTS will foster citizens' trust and should therefore be underpinned by principles of good governance listed below:

- Non-profit;

- Independence;

- Credibility;

- Transparency.

The public good attributes of a PTS would rule out a commercial governance model such as privately-owned, for-profit entities, hence leaving two possible governance structures of non-profit PTS: a public entity and a public–private partnership. In EIOPA's view, the public-private partnership model provides additional advantages such as pooling together resources, expertise and innovation from both public and private sectors and fostering the involvement from representatives of pension funds and providers.

Questions for public consultation

29) To foster citizens' trust, do you agree that the governance structure of the PTS should be set in national measures, which should specify the development and delivery of a non-profit, independent, credible and transparent service run through a public-private partnership or by a public entity? If not, what is missing or what workable alternative would you propose which meets the principles set in this consultation?

4.2 LEGISLATIVE REQUIREMENTS

190.   Introducing national measures should not only formalise the public good nature of PTS but it is also necessary to ensure that the PTS covers over time all the different types of statutory and supplementary pensions available in the relevant MS. Although national legislation was not a necessity to establish some PTS (e.g. DK, SE), more recent experiences (e.g. AUS, BE, ISR, NL, UK) showed that introducing national measures is a necessity to ensure that data providers transmit individual information to the PTS. It can also address legal issues, for instance personal data held on paper is not covered by the GDPR. National measures can also clarify legal frictions between different sets of legislation such as GDPR's right to be forgotten principle, enabling the collection of personal pension data without prior consent.

191.   As a minimum, the national measures would include:

- The purpose of the PTS i.e. provide an aggregated and objective overview of accrued entitlements and projected retirement income from all possible pension sources in a simple and understandable manner and any additional goals identified by the MS;
- The governance principles in which the PTS should be established i.e. non-profit, independence, credibility, transparency. The national measures should also explicitly specify that the persons responsible for running the PTS should act in best interest of citizens;
- The modalities for appointing the persons responsible for running the PTS;
- The governance structure (i.e. public-private partnership, public entity) and a description of the ownership structure and relationship with relevant parties involved in the PTS;
- A legal obligation to involve (e.g. advisory panel, consumer association) or engage with data providers such as pension funds, social partners, pension providers;
- A legal obligation for mandating data providers to transmit individual data the PTS (see also **section 3**);
- The persons responsible for running for the PTS remain accountable for all the activities of the PTS even if they delegate or outsource all or part of the day-to-day functions;
- Responsibilities of the PTS, data providers and other relevant independent body in respect of data ownership, data standards, projection calculations and assumptions (e.g. supervisor, expert panel);
- Whether the PTS is subject to conduct supervision if relevant (e.g. the PTS makes own projection calculations). As a minimum, the PTS will come under the supervision of the national data protection authority in the relevant MS;
- The modalities for funding the PTS (see also **next section**)

- What information the PTS should provide considering the need for layering it in light of people's cognitive and behavioural biases (see proposal for key information/landing page in **section 2.2**);
- National measures should also be used to provide legal clarification on data security and data privacy issues, where relevant and necessary, to permit the exchange or collection of personal data as well as to enable the connectivity with the ETS. MSs should consider introducing national measures at an early stage supported by a legal analysis of consequential amendments to existing national measures (see **section 3**), before implementing the PTS, to lay the foundation for achieving common data standards (e.g. record-keeping) and assumptions for pension calculations. To reduce the number of missing and lost contributions and make managing and reporting on contributions simpler, AUS introduced in 2012 the so-called 'SuperStream' legislation. The legislation is a further improvement toward achieving common data and payment standards for superannuation schemes, which also benefit to the PTS.

EXAMPLES OF NATIONAL MEASURES INTRODUCING A PTS

IN BE, NATIONAL MEASURES WERE INTRODUCED TO:

- ESTABLISH THE SUPPORTING DATABASE (WWW.DB2P.BE) AND THE DATA BASE MANAGER (SIGEDIS) RESPONSIBLE FOR THE RUNNING OF THE PTS ON OCCUPATIONAL PENSIONS;

- DEFINE THE MINIMUM LEVEL OF DATA POINTS TO BE INCLUDED IN THE SUPPORTING DATABASE AND SPECIFY THE CONTENT OF THE FRONT-END ENVIRONMENT ACROSS THREE LAYERS.

IN NL, NATIONAL MEASURES EXPLICITLY STATE THAT THE PTS AIMS TO ENABLE THE CITIZEN TO OBTAIN INFORMATION IN A 'CLEAR AND UNDERSTANDABLE' WAY ABOUT THE ACCRUED PENSION OR PENSION INCOME, ABOUT THE PENSION THAT CAN POTENTIALLY BE OBTAINED AND ABOUT THE CHOICES THAT HAVE TO BE MADE AND THEIR RESULTS. THE NATIONAL MEASURES ALSO PRESCRIBE THE PRESENTATION OF THREE POSSIBLE SCENARIOS FOR OCCUPATIONAL PENSIONS I.E. EXPECTED, OPTIMISTIC AND PESSIMISTIC. THEY ALSO APPOINT THE PTS TO CARRY OUT THE PROCESSING OF SENSITIVE INDIVIDUAL INFORMATION IN RESPECT OF THE GDPR. THE NON-PROFIT ORGANISATION THAT OPERATES THE PTS FALLS BY LAW UNDER THE SUPERVISION OF CONDUCT SUPERVISOR AFM.

Key message

MSs seeking to launch a PTS should introduce national measures to specify the PTS requirements.

Questions for public consultation

30) To ensure full participation in PTS, do you agree that MSs planning to implement a PTS should introduce national measures specifying the modalities for setting up and funding the PTS as well as the legal duties and responsibilities of both the PTS and the different parties involved in the PTS? What would be the impact of this approach on your organisation/sector? If not, what is missing or what workable alternative would you propose which meets the principles set in this consultation?

4.3 PROGRESSIVE IMPLEMENTATION

192.   Building a PTS is a major IT and technical project. Therefore, it is not surprising that existing PTSs have sought to mitigate their operational risks by adopting a progressive implementation on how best to roll-out and scale up the service over time as opposed to taking a 'big bang' approach. Whilst it is essential for the PTS to have a well-defined strategy with detailed business and IT requirements of PTS back-end[50], there is more flexibility to decide on how to roll out and scale up the PTS over time.

4.3.1 STRATEGY FOR PROGRESSIVE ROLL-OUT OF PENSION TRACKING SYSTEMS

193.   The progressive roll-out of a PTS should be placed in the context of the respective role of statutory, occupational and personal pensions in the national pension system. When it comes to roll-out and coverage, established PTSs focus on providing individual information, at least initially, on statutory and occupational pensions. This may not be surprising in that statutory and occupational pensions constitute citizens' main sources of future retirement income in the relevant MSs. Therefore, as a first step one can conceive that a national PTS would initially cover both statutory and occupational pensions. Evidence from established PTSs shows that incorporating personal pensions may present additional difficulties of a technical nature which may take time to resolve. Within the EEA, DK, EE, NO, SE and SK have developed PTSs covering all pension types (See **Annex 2**). In case of technical issues specific to personal pensions, participation of personal pension providers could be voluntary as a first instance. However, national measures should aim to prescribe their mandatory participation in the medium-term so as to encourage the resolution of technical issues.

194.   Readiness levels may vary greatly depending on the extent to which data providers have to adapt their current practices (e.g. reporting templates, projection assumptions) to new standards and requirements necessary for the PTS implementation. The PTS should strive, to the extent possible, to provide cost-effective solutions.

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[50] Adding or changing functionalities not initially identified in the business and IT requirements may result in additional costs especially in the context of outsourcing key activities of the PTS.

Key message

The progressive roll-out and scale up of the PTS should also take a proportional approach which considers the technical challenges and different levels of readiness by type of data providers and by type of pensions.

Questions for public consultation

31) To facilitate the effective implementation of the PTS, do you agree with a progressive roll-out of the PTS over time based on a well-defined strategy which accounts for data providers' different readiness levels and adjustments to new requirements ensuring the complete and accurate transmission of personal data to the PTS? What would be the impact of this approach on your organisation/sector? If not, what is missing or what workable alternative would you propose which meets the principles set out in this consultation?

4.4 FUNDING OF PENSION TRACKING SYSTEMS

195.   The public good attributes of a PTS implies that the service should be free for users.

196.   Looking at existing experiences, the one-off and on-going costs to respectively set up and run a PTS vary greatly. This is mainly because MSs have different starting points leading to different needs (see **section 3**). Therefore, it would erroneous to compare costs between existing PTSs, considering that these launched at different points in time and technology (and associated costs) has evolved and will continue to do so.

197.   The study should consider the functionalities of the PTS, the business and IT needs and how these will be met considering the governance structure and extent of outsourcing. It should also account for different scenarios to estimate take-up over time in terms of projected number of users and pension coverage by type of data providers and pensions in line with the implementation plan (see also **previous section on progressive implementation**). Such cost estimate scenarios should also consider the potential effect of different communication campaigns (see also **next section**).

198.   MSs should use the feasibility study to define their expectations on the PTS running costs which may be expressed as total cost per user[51]. For instance, the total running costs of the Dutch PTS is estimated at 50 eurocents per participant.

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[51] This should not be confused with the number of visitors

Key messages

MSs should therefore carry out a feasibility study of the costs for establishing and running the PTS.

PTS should be free of charge for users. EIOPA identifies but makes no recommendation on three broad ways to finance the PTS: through general taxation, through a levy on providers of supplementary pensions or through a combination of both. The levy may be determined according to size of the pension (e.g. total scheme membership, pension / business line value).

Government and partner organisations may also agree to cover some costs. For instance, in the UK, the government will cover the running costs of the state pension element of the non-commercial dashboard whilst remaining costs will be funded by a levy on pension providers.

When deciding on the type of PTSs (i.e. live access vs central database, governance structure) and how to finance it, MSs should pay attention to the degree to which the activities of the PTS will be partly or fully outsourced. MSs should also consider to what extent a strategic partnership in the situation of public-private partnership may help reduce outsourcing needs and hence costs whilst harnessing the technical competence of the relevant partner organisation.

Questions for public consultation

32) Do you agree that the PTS should be free of charge for users? Do you agree on the identification of the alternatives to user charges: financed through general taxation, or a levy on providers of supplementary pensions or a combination of both?

4.5 STRATEGIC CONSIDERATIONS FOR THE EFFECTIVE LAUNCH OF PENSION TRACKING SYSTEMS

199.   EIOPA's Report on Good practices on information provision for DC schemes (2013) shows that information provision is not a panacea by itself: rather, it is only one aspect of the broader regulatory setting and should be used in combination with other policy instruments, such as default options. Whilst the PTS can improve transparency and citizens' access to information, there are also limits to what the PTS, as an information provision tool, can do to trigger hard action (e.g. increase pension contribution, switch funds). To optimise successful take-up, it is important to combine the PTS with other effective policy instruments seeking to help citizens overcome their behavioural biases (e.g. continue to procrastinate).

200.   For instance, a national strategy seeking to improve financial capability could help develop plain language guidance on pension communications tailored to citizens' average financial literacy age[52]. NL organises annually a three-day pension campaign on which the PTS can leverage to attract existing and new users.

201.   As mentioned in **section 2**, MSs should also explore how to catch users' low attention on digital platforms as well as harness on-going inertia. Positioning the PTS in a wider strategy could also consist of exploring the potential for digital nudges relative to other public services such as those providing generic advice on financial or retirement planning matters. A digital nudge may, for instance, take the form of prompting PTS users on screen to directly book an appointment (e.g. phone) with the generic advice service, request a call back from the latter or to generate a pre-populated form which can submit to their pension provider for a specific query (e.g. how to increase pension contribution).

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[52] See link to the FCA factsheet on financial literacy

Key messages

The role of the PTS as an information provision tool should be defined as part of a wider strategy, which for instance seeks to improve financial capability or develop supplementary pensions.

MSs should also define and explore how existing and future strategies, tools and services may contribute to the effective implementation of the PTS.

Questions for public consultation

33) Do you agree that the successful implementation of the PTS necessitates integrating the PTS in a wider strategy (e.g. support auto-enrolment reforms, improve financial capability) which also aims to provide useful tools for the development of the PTS (e.g. national guidance on pension communication/language)? If not, what is missing or what workable alternative would you propose which meets the principles set in this consultation?

ANNEX 1: CONSULTATION QUESTIONS

Scope of a national PTS

1) Do you agree with the main goal, the scope and the attributes of a national PTS defined by EIOPA (please explain why)? If not, what is missing or what workable alternative would you propose which meets the principles set out in this consultation?

2) What do you consider to be the main costs in the establishment of a PTS?

3) EIOPA views a PTS as a public good, considering the need for public intervention to address market failures stemming from limited rationality. Do you agree with the public good framework as preferred option to provide objective and impartial pension information to citizens (please explain why)? If not, what is missing or what workable alternative would you propose which meets the principles set out in this consultation?

4) Do you agree that the PTS should provide personal information on statutory and supplementary pensions and should exclude the provision of information on other financial products that do not constitute a pension (please explain why)? If not, what would be the desirability, feasibility and benefits for bringing non-pensions long-term investment products into scope of the PTS?

5) Do you agree that MSs should assess to what extent a (digital) PTS may exclude some citizens and, depending on the outcome, consider offering alternative ways to facilitate PTS access to the digitally excluded citizens (please explain why)? What workable solutions would you propose to either make the PTS also available to non-digital or digitally excluded citizens or to make the PTS information available in a non-digital format?

Front-end design of a national PTS

6) EIOPA has identified a set of behavioural principles which should drive the front-end design of the PTS. Do you agree with this approach (please explain why)? If not, what other behavioural principles should apply to the front-end design of the PTS?

7) Do you agree that the PTS has a broader scope than the PBS? Whilst the PBSs can be used to feed the back-end, the front-end of the PTS should not be constrained by (all) the content or format of the PBSs.

8) Do you agree that the information on costs and investment funds should not be part of the front-end of the PTS and that it is a good practice for the PTS to provide a link to the website of each pension provider?

9) Do you agree that the landing page (layer 1) of the PTS should display the expected monthly retirement income and the retirement date in a simple manner whilst the accrued entitlements and pension providers (i.e. breakdown by source) should be disclosed in a second layer easily accessible to users wanting to know more? If so, do you have supportive evidence? If not, what would you propose as the key elements for the landing page (Layer 1) and those for subsequent layers (Layers 2 and 3) considering the scope of the PTS and individuals' behavioural and cognitive biases set in this consultation?

10) Do you agree that difficult concepts, such as inflation, purchasing power, communication of projections, etc. should be accompanied by with visual aids, such as short movies, use of metaphors, pictures or additional explanations (pop-up windows)? Do you have supportive evidence and any examples of such "aids"? If not, what is missing or what workable alternative would you propose considering the scope of the PTS and individuals' behavioural and cognitive biases set in this consultation?

11) Do you agree that information on the assumptions used to calculate projections or projections with scenarios should be placed in second or third layer? If so, do you have supportive evidence and any examples? If not, what is missing or what workable alternative would you propose considering the scope of the PTS and individuals' behavioural and cognitive biases set in this consultation?

12) Do you agree that additional information that is not linked to the goal of the PTS, such as ESG factors, should be accessed via signposting to the pension provider or placed in the third layer of the PTS? If so, do you have supportive evidence and any examples? If not, what is missing or what workable alternative would you propose considering the scope of the PTS and individuals' behavioural and cognitive biases set in this consultation?

13) Do you agree that the PTS should ultimately help the user understand if he is saving enough for his retirement such that its role is clearly not to provide financial advice, but to show the user in a neutral manner the types of actions he can take, especially if it is integrated in a wider strategy (e.g. support auto-enrolment reforms, improve financial capability)? If so, do you have supportive evidence and any examples? If not, what is missing or what workable alternative would you propose considering the scope of the PTS and individuals' behavioural and cognitive biases set in this consultation?

14) Do you agree that the PTS, by designing a smooth user-journey, can help reduce the time and effort to take actions towards more sensible financial decisions, if facilitated through the use of nudges, interactive tools and signposting to where users can find more help or information? If so, do you have supportive evidence and any examples? If not, what is missing or what workable alternative would you propose considering the scope of the PTS and individuals' behavioural and cognitive biases set in this consultation?

Back-end design of a national PTS

15) The main advantage of a live access model is the increased data protection. Do you agree that if one can start the PTS from a 'blank page', if it is technologically feasible and if the only aim of the PTS is to show the data to the user, then a live access model is the optimal solution?

16) Do you agree that a pilot project should be conducted to test its technological feasibility? In which circumstances would it not be necessary to conduct a pilot?

17) Which additional principles should apply to ensure a secure digital access to the PTS?

18) Do you agree that a PTS in its bare minimum could consist only of the following fields: user ID, provider ID, accumulated savings/accrued entitlements, projected retirement income, retirement age and provider email or telephone number? If not, which elements are missing and should be added to operate the PTS? What would be the impact on providers of pension data to the PTS?

19) Can the PBS be used as a basis to define the data needs for the PTS related to occupational pensions? Which elements would need to be added, which are redundant? What would be the impact on providers of pension data to the PTS?

20) Do you agree that setting the data standards (data standardisation, transmission) should be done by an independent body after consulting the various stakeholders?

21) EIOPA recommends that data standardisation should be structured, include clear definitions, make use of a uniform reference date, align with agree technical standards and determine the necessity. Do you agree with this approach? If not, what other principles should apply to data standardisation? What would be the impact on providers of pension data to the PTS?

22) Primarily EIOPA stresses that the methodology for projections included in the PTS should not differentiate across pension sources.. It also referred to solutions in case there could be a differentiation in projection methodologies or assumptions used. However, EIOPA also suggests a legal analysis to assess if there is scope for coherent projections of statutory and supplementary pensions. What are your views about coherent projections between statutory and supplementary pensions and uniform projections for supplementary pensions? Which barriers should be removed to achieve coherent projections for all pension products? What would be the impact on providers of pension data to the PTS?

23) Are the following assumptions commonly used for calculating projections complete: interest (discount) rate, the return on investments, contributions paid during the year, real wage growth, inflation, the volatility of asset classes, correlations between asset classes and state incentives – tax discounts, costs of pension plan and retirement products, assumed longevity?

24) EIOPA recommends that data quality checks are the responsibility of both the provider and the PTS. The data transmitted to the PTS should be complete, timely updated and consistent. Which other principles would further enhance the data accuracy of PTS?

25) Do you agree that there should be a level playing field on data transmission between all pension providers meaning that if a certain product or product category is included in the scope of the PTS, then the protocol for the exchange of information should apply to all providers of these products, independent from the provider type, their size and their technological capacities? What would be the impact on providers of pension data to the PTS?

26) Notwithstanding that the requirements on data exchange identified in this consultation are not specific to PTSs, what other safety certificates and requirements would ensure the security of the PTS?

27) Do you agree with the recommendations made by EIOPA on the connectivity with the ETS? Which other recommendations would be needed to make the ETS a success?

28) To what extent do you see the technological developments identified in this consultation as enablers for the development of future PTSs? Which other technological developments could enhance the establishment of PTSs or support the connection to the ETS?

Governance and implementation of a national PTS

29) To foster citizens' trust, do you agree that the governance structure of the PTS should be set in national measures, which should specify the development and delivery of a non-profit, independent, credible and transparent service run through a public-private partnership or by a public entity? If not, what is missing or what workable alternative would you propose which meets the principles set in this consultation?

30) To ensure full participation in PTS, do you agree that MSs planning to implement a PTS should introduce national measures specifying the modalities for setting up and funding the PTS as well as the legal duties and responsibilities of both the PTS and the different parties involved in the PTS? What would be the impact of this approach on your organisation/sector? If not, what is missing or what workable alternative would you propose which meets the principles set in this consultation?

31) To facilitate the effective implementation of the PTS, do you agree with a progressive roll-out of the PTS over time based on a well-defined strategy which accounts for data providers' different readiness levels and adjustments to new requirements ensuring the complete and accurate transmission of personal data to the PTS? What would be the impact of this approach on your organisation/sector? If not, what is missing or what workable alternative would you propose which meets the principles set out in this consultation?

32) Do you agree that the PTS should be free of charge for users? Do you agree on the identification of the alternatives to user charges: financed through general taxation, or a levy on providers of supplementary pensions or a combination of both?

33) Do you agree that the successful implementation of the PTS necessitates integrating the PTS in a wider strategy (e.g. support auto-enrolment reforms, improve financial capability) which also aims to provide useful tools for the development of the PTS (e.g. national guidance on pension communication/language)? If not, what is missing or what workable alternative would you propose which meets the principles set in this consultation?

34) Do you have any other comments to share with EIOPA?

ANNEX 2: OVERVIEW OF PENSION TRACKING SYSTEMS WITHIN AND OUTSIDE THE EEA

PROVISION OF DIGITAL PERSONAL INFORMATION BY PENSION TYPE[53]

	Statutory	Occupational	Personal	Web address
WITHIN EEA				
AT	X	planned	planned	
BE	X	X	planned[54]	www.mypension.be
BG				
CY	X			
CZ	X			https://eportal.cssz.cz/
DE	X	planned	planned	
DK	X	X	X	www.pensionsinfo.dk
EE	X	X	X	Website: www.lhv.ee/en/pension Minu Pension app in App Store: https://apps.apple.com/ee/app/minu-pension/id1422673407 Minu Pension app in Google Play: https://play.google.com/store/apps/details?id=ee.lhv.minupension

[53] Note that this table apply the definitions of statutory, occupational and personal pensions provided in **section 1**.

[54] The current coalition agreement states that 'all pensions' should be added to mypension.be.

EL	planned			www.atlas.gov.gr/ATLAS/Pages/Home.aspx
ES	planned			
FI	X			www.tyoelake.fi/en/pension-record/
FR	X	planned	planned	www.info-retraite.fr/portail-info/home.html
HU				
HR	planned	planned	Planned (voluntary)	
IE				
IS	planned	X	planned	www.lifeyrismal.is/is/lifeyrisgattin
IT	X			
LI				
LT	X[55]			www.sodra.lt/lt/situacijos/informacija-gyventojams
LU				
LV	X	X	X	www.manapensija.lv/en/
MT	X			https://mysocialsecurity.gov.mt/Views/Login.aspx

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[55] When a user logs on his/her Sodra account, the calculator uses his/her personal data including remaining time before retirement age to calculate the user's projected statutory pension. For supplementary pensions, a user would need to enter their personal information manually into the calculator.

NL	X	X		www.mijnpensioenoverzicht.nl
NO	X	X	X	www.norskpensjon.no
PL	X			www.zus.pl/portal/logowanie.npi
PT	X			www.seg-social.pt/inicio
RO				
SE	X	X	X	www.minpension.se also via 3rd parties implementation (API and SSO)
SI				
SK	X	X	X	www.oranzovaobalka.sk/web/sk/
OUTSIDE EEA				
AUS		X		www.ato.gov.au/Calculators-and-tools/ATO-online-services-simulator/#Clientaged1859nodebtsorprefill
CH		planned		
ISR		X		
UK	X	planned	planned	

DIGITAL ID USED BY PENSION TRACKING SYSTEMS FOR AUTHORISATION AND IDENTIFICATION[56]

	Digital ID developed for some public services or national digital ID	Pension Tracking System's own digital ID	Digital ID developed by private sector e.g. banks	eiDAS access / compatibility
WITHIN EEA				
BE	X		X	X
DE*	X			X
DK	X			
EE	X			
FI	X		X	
HR*	X			X
IS	X			
NL	X			X
NO	X			
SE	X		X	
SK		X		

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[56] MSs with an asterisk indicate that the creation of a national PTS is planned.

OUTSIDE EEA				
AUS	X			
CH*			X	
ISR			X	
UK*		X		

PENSION TRACKING SYSTEM MODEL[57]

	Live access	Central data storage
	WITHIN EEA	
BE		X
DE*	X	
DK	X	
EE	X	(only for statutory pensions upon the user's request)
FI		X
FR*		X
IS	X	
NL	X	

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[57] MSs with an asterisk indicate that the creation of a national PTS is planned.

NO	X	
SE		X
SK		X
OUTSIDE EEA		
AUS		X
ISR		X

PENSION TRACKING SYSTEMS BY ENTITY TYPE[58]

	Public entity	**Public-private partnership**	**Private entity**
	WITHIN EEA		
BE	X		
DE*	X		
DK			X
EE			X
FI		X	
HR*	X		
IS			X

[58] MSs with an asterisk indicate that the creation of a national PTS is planned.

NL		X	
NO			X
SE		X	
SK			X
OUTSIDE EEA			
AUS	X		
ISR		X	

# ANNEX 3: EXAMPLES OF CURRENT TRACKING SYSTEMS

EXAMPLES OF A LANDING PAGE/KEY/SUMMARY INFORMATION

SWEDEN: MINPENSION – LAYERS 1 AND 2

In Sweden, the summary information the user should be presented with was developed through consumer testing: how much your total pension at your retirement age is estimated to be in comparison with your present (monthly) wage. The information is provided in a graph combined with explanatory text (which pension scheme, the calculation considers already accrued pension, it expects you to go on working with the same employer with same salary until your retirement age). The aim being to raise the user's interest.
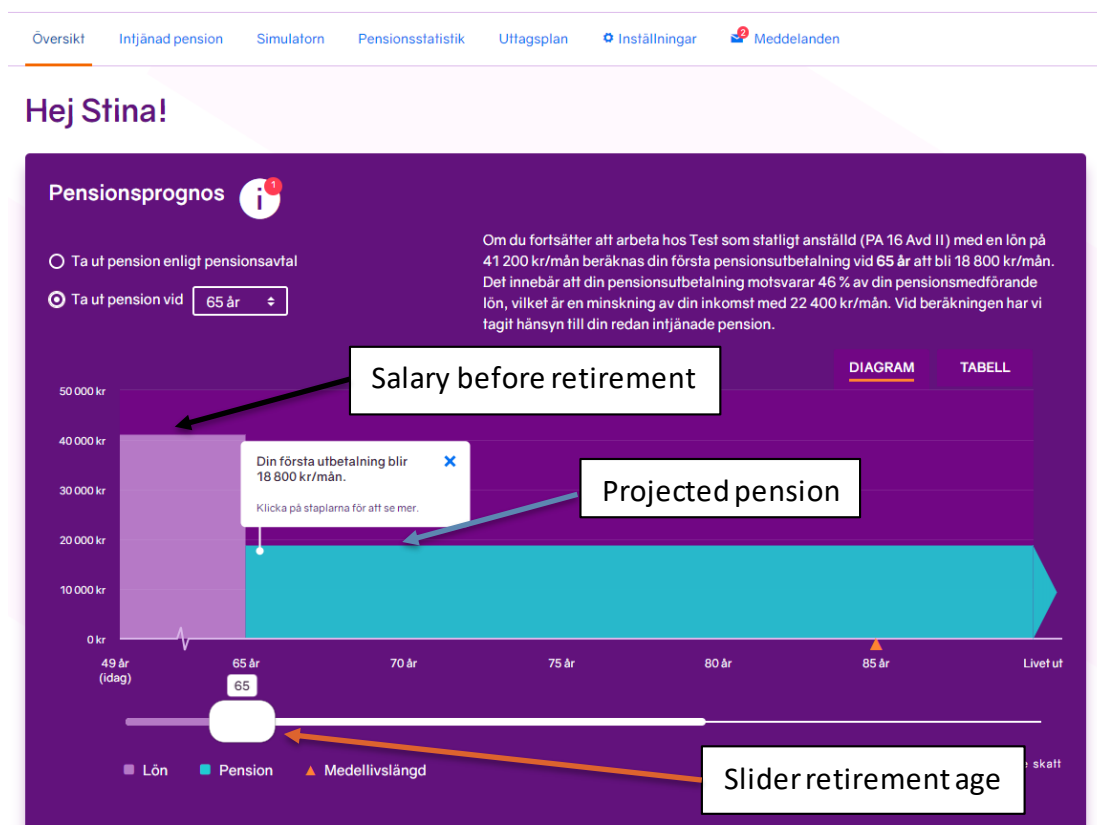
Here the same information is available in a diagram view or a table view (tab 'tabell').
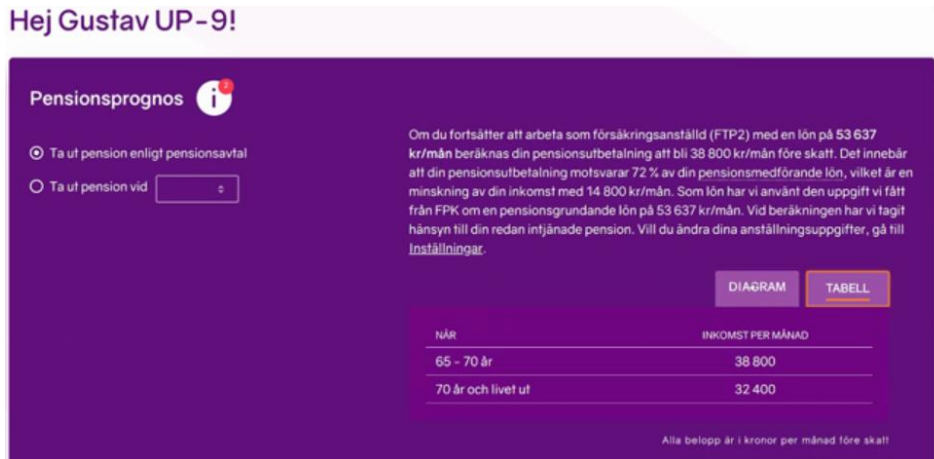
Below the information is breakdown by source of pension (layer 2).
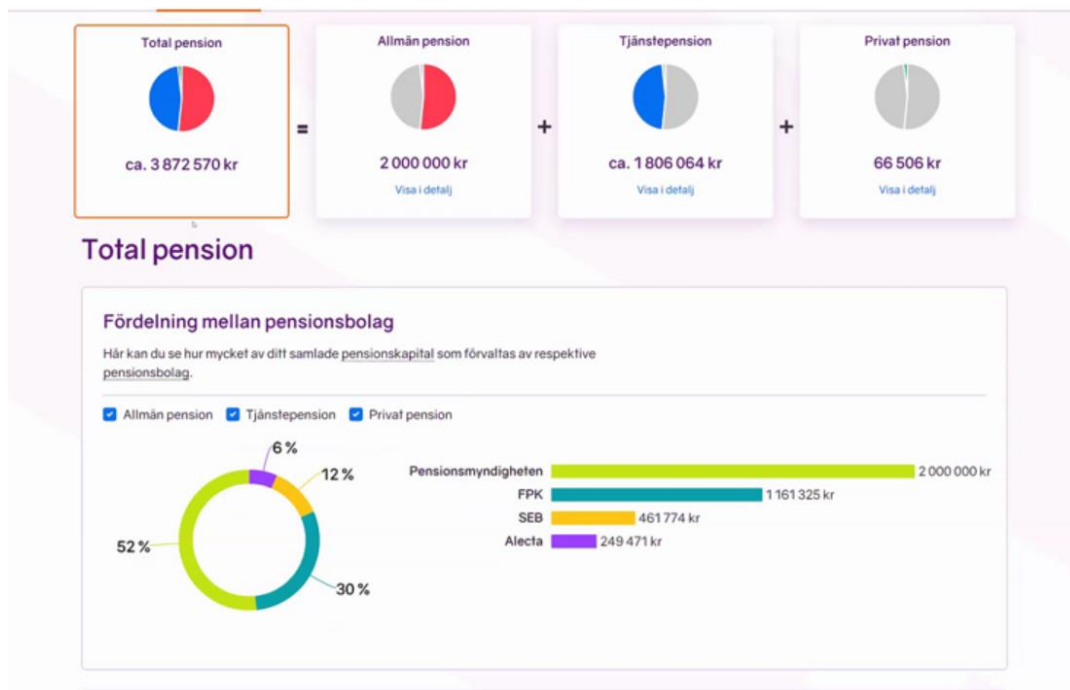
UK: PENSION DASHBOARD – PROTOTYPE LANDING PAGE

Here the key information is provided at the top: number of pension "pots" found, age of retirement, annual pension/monthly income. The age parameter can be adjusted. The retirement income information is broken down by pension source, showing the projected amounts from the retirement point (this can vary).
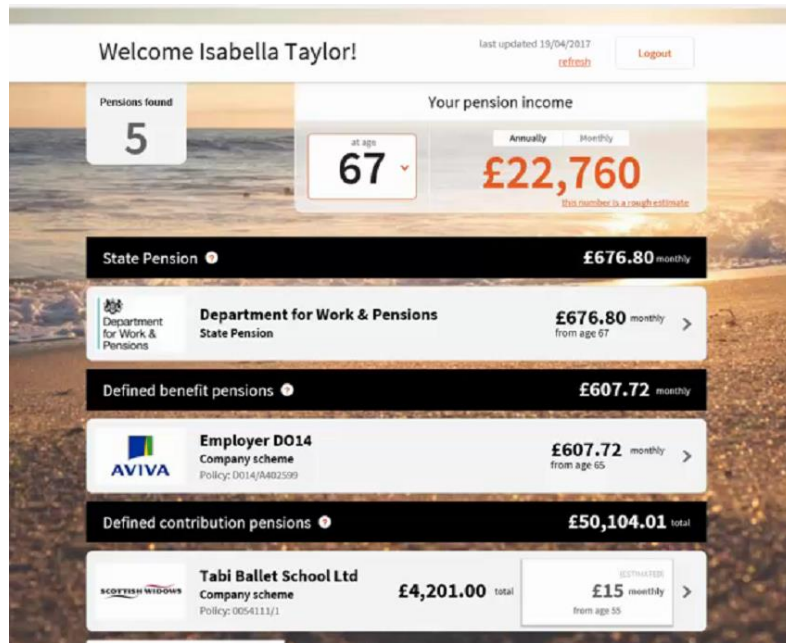
EXAMPLES OF INCLUSION OF SCENARIOS IN THE PROJECTIONS

Out of the surveyed Tracking Systems, only in three MSs (NL, SK and SE) projections include different (economic) scenarios.

THE NETHERLANDS: THE NAVIGATION METAPHOR

The projections are based on economic scenarios: 5%, 50% and 95% percentiles are shown to the citizen. The navigation row shows the direction of travel from the current savings to the expected benefits (middle), a negative scenario (left) and positive scenario (right). This is a prescribed design that is mandatory in the PBS and the PTS.

THE SLOVAK REPUBLIC – ORANGE ENVELOPE:

The modelling of projections is based on presenting percentiles (10th percentile of all simulations = negative scenario; 50th percentile = neutral scenario; 90th percentile = optimistic scenario). The key financial information is compared to the pre-retirement income to evidence the impact of retirement on their living standards. The graph is interactive, allowing the users to see the numbers for each scenario by hovering the mouse.

ANNEX 4: MAIN LESSONS LEARNED FROM EXISTING PENSION TRACKING SYSTEMS

The following pictogram outlines some of the main lessons learned from existing PTSs.

Have a digital identification

Improve data quality

Seek standardisation

Address reporting delays

Avoid changing priorities

Have a well-defined scope

Start small Think big

Be scalable and future proof

Be structured but retain flexibility

Engage with stakeholders/providers

Manage expectations

Publicise PTS benefits to providers and users

ANNEX 5: GOVERNANCE STRUCTURE OF ESTABLISHED PENSION TRACKING SYSTEMS

EXAMPLE 1: BELGIAN PENSION TRACKING SYSTEM

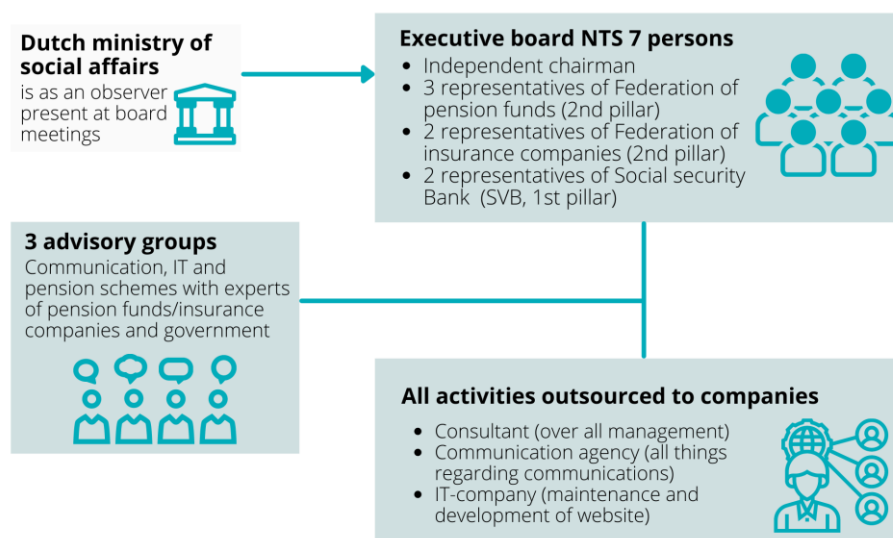## Governance *of the 'mypension'-tracking tool**

Federal Pension Service (FPS)
calculation of pensions of employees & civil servants
Payment of all 1st pillar pensions

National Institute for the Social
Security of the Self-employed (NISSE)

Career and second pillar data

Social partners
Minister for pensions

High level **vision** on **pension communication**

my pension.be
votre dossier de pension en ligne

* The governance of each of the three individual entities differs, reflecting the other activities they conduct outside the online tool

The three entities are equal partners. However, because the majority of the functionalities come from statutory pensions led by FPS.

EXAMPLE 2: DUTCH PENSION TRACKING SYSTEM

Dutch ministry of social affairs
is as an observer present at board meetings

Executive board NTS 7 persons
- Independent chairman
- 3 representatives of Federation of pension funds (2nd pillar)
- 2 representatives of Federation of insurance companies (2nd pillar)
- 2 representatives of Social security Bank (SVB, 1st pillar)

3 advisory groups
Communication, IT and pension schemes with experts of pension funds/insurance companies and government

All activities outsourced to companies
- Consultant (over all management)
- Communication agency (all things regarding communications)
- IT-company (maintenance and development of website)

EXAMPLE 3: GERMAN PENSION TRACKING SYSTEM

The central authority for the development and operation of the PTS (Zentrale Stelle für die Digitale Rentenübersicht – ZfDR) is embedded in German Federal Pension Insurance (Deutsche Rentenversicherung Bund – DRV Bund). A regulation will set out the composition of the steering committee with representatives from the Ministry of Finance (BMF) and the Ministry of Labour and Social Affairs (BMAS), a member representative for each pillar and one member representative for consumer protection. There are five advisory boards where stakeholders are directly involved in the development of the PTS.
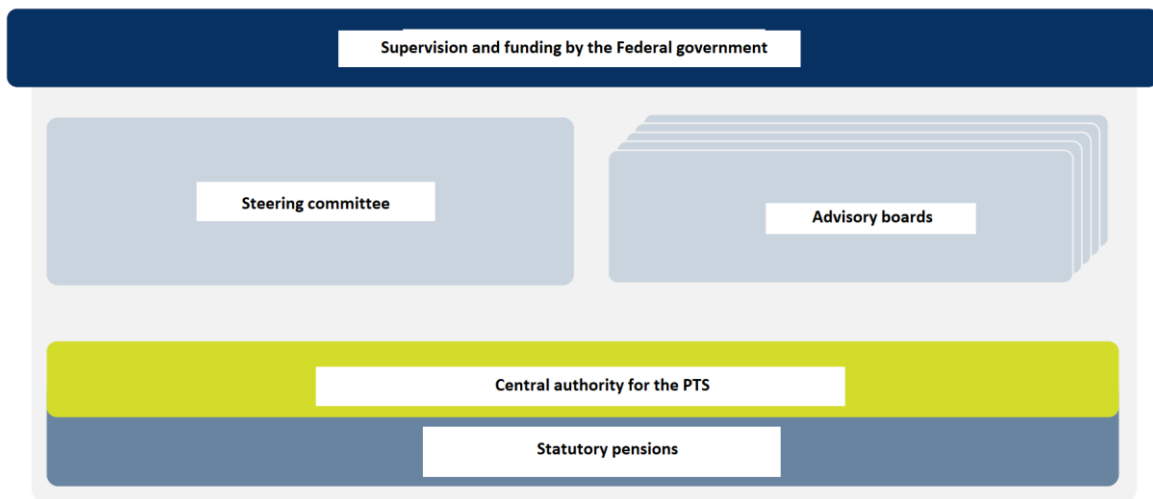
EXAMPLE 4: SWEDISH PENSION TRACKING SYSTEM
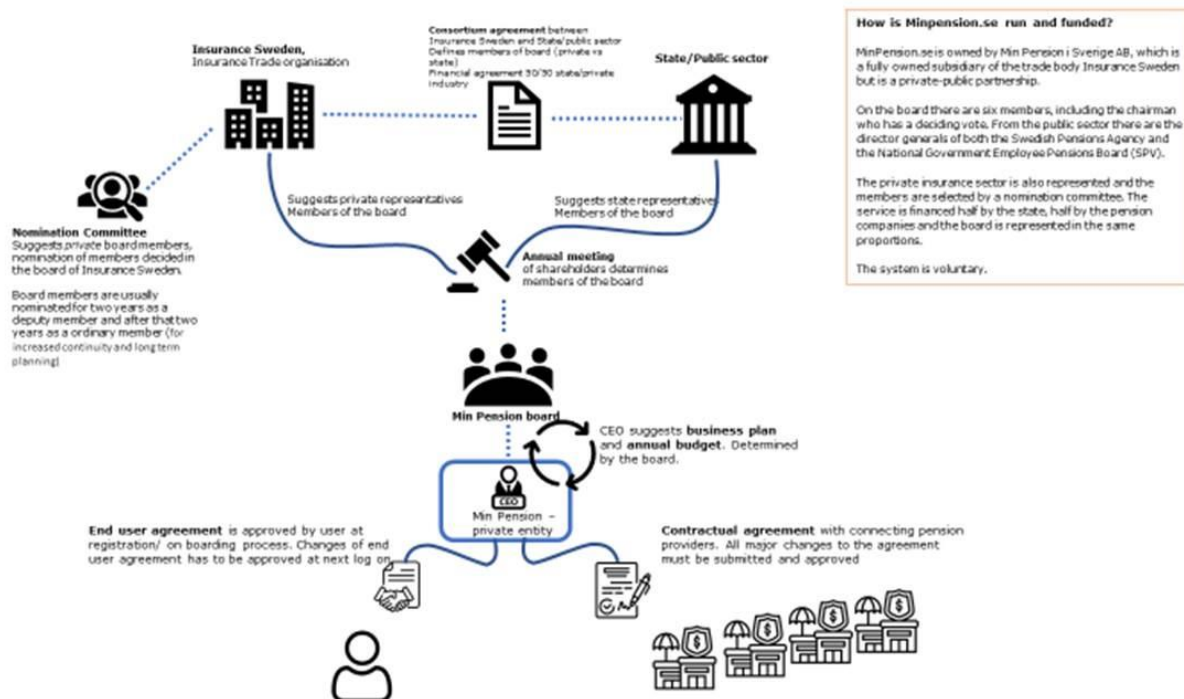
## EXAMPLE 5: UK PENSION TRACKING SYSTEM

For the non-commercial dashboard, the Department for Work & Pensions has delegated responsibility to the Money And Pensions Service (MAPS). The governance of the service itself is still to be decided.

The elements are: the Pension Finder Service which includes a governance service electronically checking the dashboards are authorised, and an identity hub.

Each element is expected to be outsourced subject to tender.

It is expected the governance service will connect to the Financial Service Authority's online register[59] to confirm to which advisers consumers can delegate access to. The following pictogram describes each element:

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[59] https://register.fca.org.uk/s/
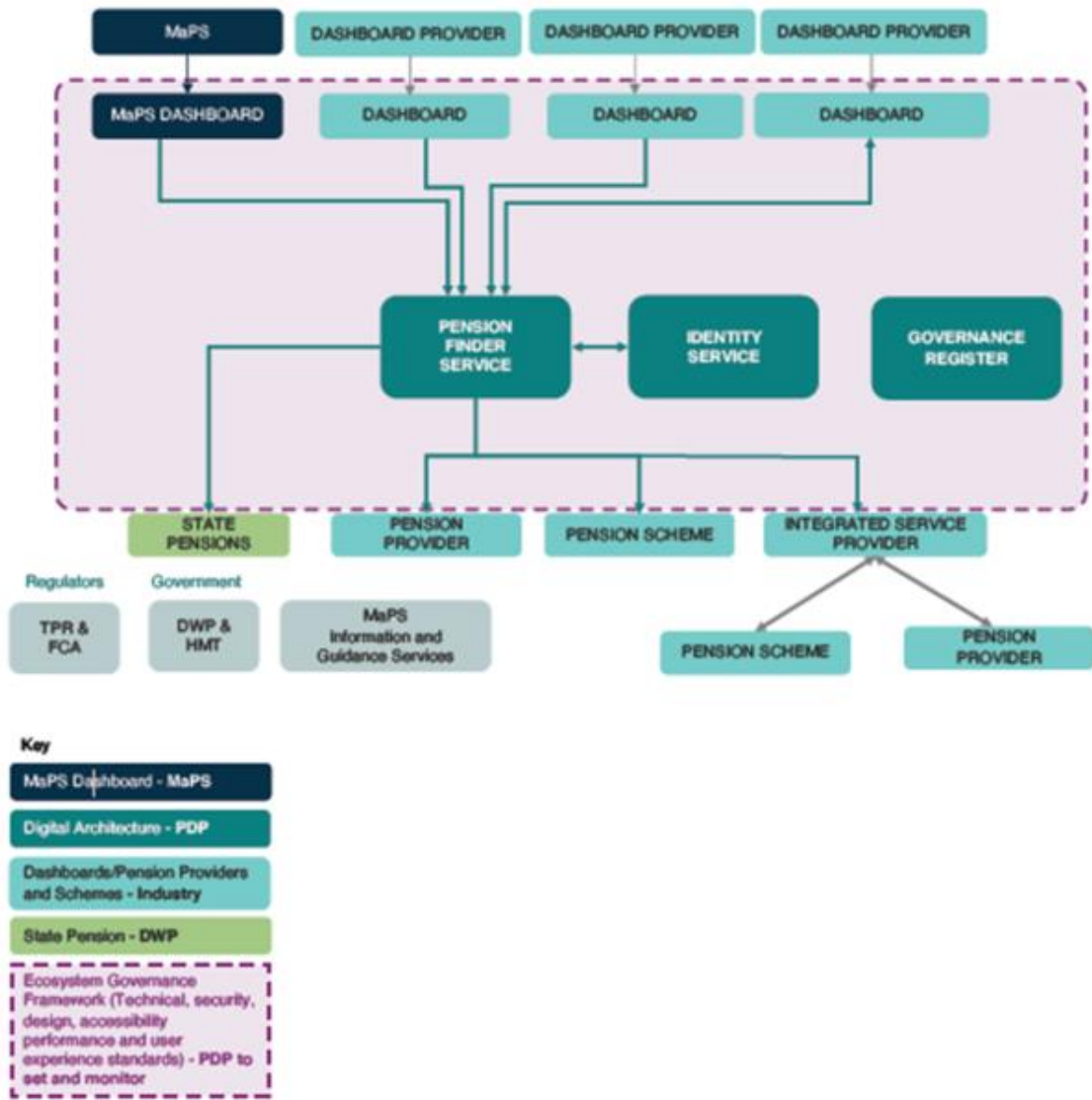
ANNEX 6: PROVISION OF PERSONALISED INFORMATION ABOUT STATUTORY PENSION(S)

MAIN ELEMENTS CONCERNING THE PROVISION OF PERSONALISED INFORMATION[60] ABOUT STATUTORY PENSION(S) TO CITIZENS

Most MSs mandate the provision of personalised information about statutory pensions to citizens and provide access to this information to citizens via a portal.

The provision of personalised information is defined by law in at least 12 MSs: DE, EE, EL, FI, FR, HR, HU, PT, RO, SE, SI and SK. However it is not always the case that the MS has an obligation to provide personalised information to citizens about statutory pensions -- in NL and LT it is not required by law.

In BE the provision of personalised information is mandated via periodically renewed management contracts between the Federal Government and the Federal Pension Service in which (amongst others) the nature and level of the proposed services to citizens are defined. In this framework, the Federal Pension Service is mandated to develop and maintain an online pension portal, called mypension.be and our other communication channels.

Statutory pensions are diverse across the European Union, and may be composed of:

* flat rate (Ireland);
* pensionable income;
* combined pensions composed of pensionable income as part of Pay-as-you-go system and funded scheme (SE, DK, EE and HR). In Denmark, statutory pensions are composed of a non-contributory, residence-based scheme financed from general taxation on a pay-as-you-go basis as well as of a mandatory, fully funded defined-contribution scheme financed from small nominal contributions from all employed persons.

The personalised information provided to citizens is commonly composed of social security payments/earnings with information on the reference periods and type of contributions. It might also include a forecast of the amount of the expected standard old-age pension.

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[60] By personalised information, we mean information on an individual's pension entitlements. As a minimum, the pension entitlements will consist of the pension rights accrued so far by the citizen in the statutory / first third pillar. Additional (optional) personalised information may include a projection of the pension entitlement at retirement/state pension age.

INCLUSION OF A PROJECTED AMOUNT(S) AT STATE PENSION AGE

In the majority of MSs the personalised information includes a projection amount at state pension age. This is the case in 14 MSs - BE, HR, CY, DE, DK, IT, LV, NL, PL, MT, PT, ES, SE and SK, from which in two it is on demand.

In SK the Old-Age Pension Saving Scheme is a 1bis pension pillar. Pensions are stochastic, individualised and based on several scenarios.

In addition there are 4 MSs where projections are available only at pre-retirement age: in AT this is 10 years before state pension age, in LU and in FR as of age 55, in FI when retirement date is confirmed, in SI as of age 58.

Inclusion of projections

■ Yes ■ Only at pre-retirement □ No
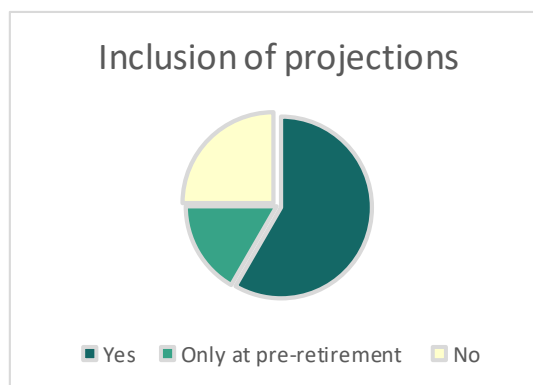
In some MSs projections are only available on demand, for instance in HR, only for PSYG component.

In some MSs a generic pension calculator is available instead of a personalised projection (EE, LT, LV, HR for funded pensions).

In SE the projection tool is integrated into the PTS (minPension) as an Application Program Interface. The API provides an aggregated prognosis and includes the statutory pension, occupational pensions and private pension savings.

However, personalised information does not include projections in 6 MSs: EE, LT, HU, EL, IE and RO.

Projections in personalised information

- Included
- Only at pre-retirement
- Excluded
- No available data
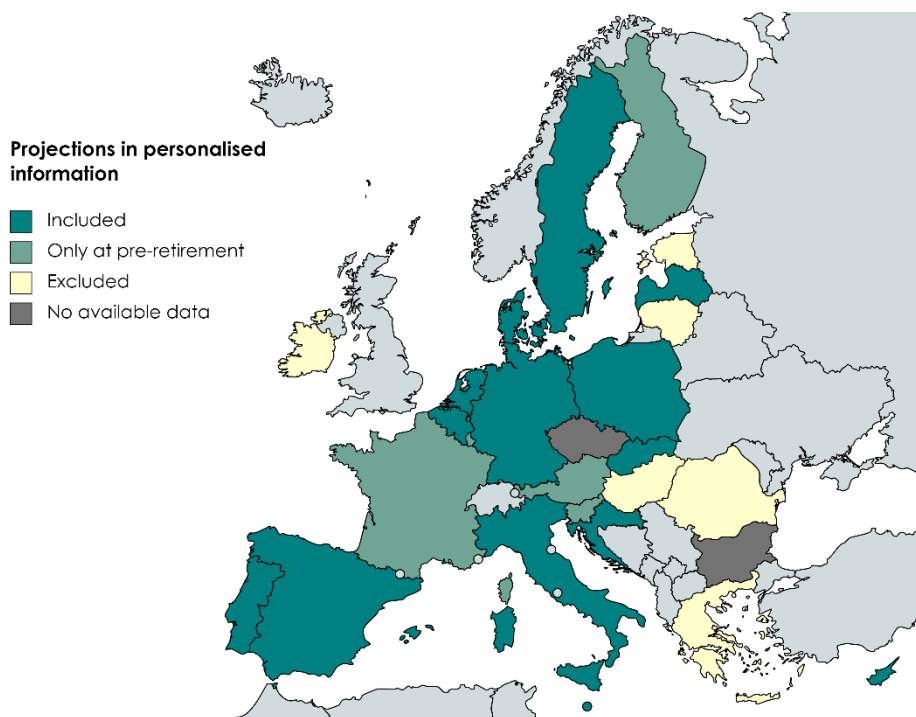
ACCESS OF CITIZENS OF WORKING AGE TO PERSONALISED INFORMATION

Citizens of working age can access the personalised information in most MSs (22): AT, BE, CY, DK, EE, EL, ES, FI, FR, HR, HU, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SK. In few MSs there is a low age threshold: in DE it is 27, in DK it is 15.

Mostly this information is available on-line, for instance in MT, NL, PL, PT, RO, SE or SK; available all the time (NL, PL, PT, RO, SE)

With regards the access, in LU and FI the information is sent annually while in IE or SI it is only on request. In many MSs there are no restrictions to the access to the personalised information.

In some MSs more information is available at pre-retirement. For example, in FI persons who have five years or less to the retirement age receive a record statement every year.

In FR, an individual statement is sent each year to people aged 35, 40, 45 and 50. This statement can also be requested from the pension fund at any age. An overall indicative estimate is sent to people aged 55 and then every 5 years until their retirement.

FORMAT OF PERSONALISED INFORMATION (ONLINE, PAPER-BASED)

In most MSs (14), personalised information is available on-line and on paper: AT, CY, EE, DE, EL, FI, FR, HU, IE, MT, PL, RO, SI, SK. In some MSs information is mostly available on-line, for instance in BE, DK, EE, IT, LV, NL and PT. Citizens might be able to print out the information provided on-line or request a paper version on the on-line portal.

Mostly on-line access is via a website. In some MSs it is also possible to receive personalised information by e-mail (BE, MT, RO).

In few MSs such as in ES or SE information is also available on the phone or by a meeting request.

Finally in LU, personalised information is only available on paper.

AVAILABILITY OF OPTIONS FOR DIGITALLY EXCLUDED CITIZENS OR LIMITED USERS

In most MSs (**18**) digitally excluded citizens otherwise limited users can request the **personalised information on paper**. That is possible in AT, BE, CY, DE, EE, ES, FI, FR, HR, HU, IE, LT, LU, MT, NL, SE, SI, SK.

Provision of personalised information for digitally excluded
- Paper-based
- Other
- No available data
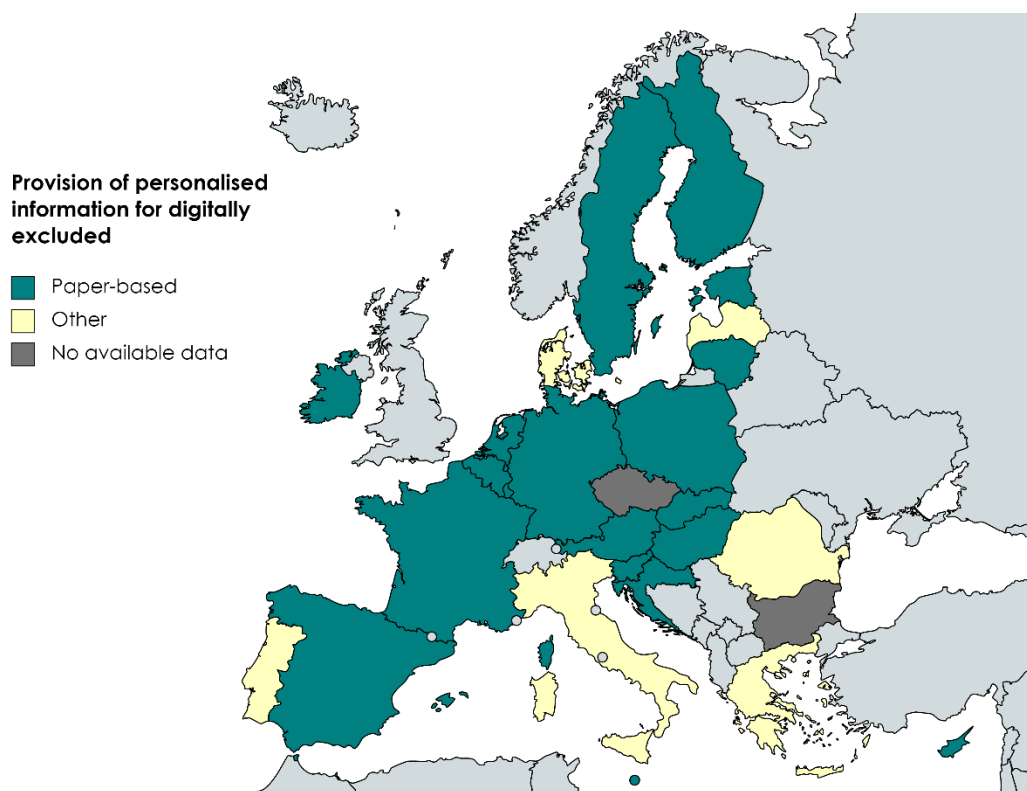
Other options than provision by paper are also commonly available, for instance:

- Face to face meeting: BE, EE, IE, LV, PL, LT
- Phone: BE, EE, IE, LV, LU, MT, SE, NL, LT
- E-mail: BE, LU, LT

Only in few MSs it is not possible to request information on paper. Nonetheless, in three MSs (DK, PL and RO) excluded citizens have access to counselling and guidance at their local municipality or pension authority. In PT, the accessibility of public administration sites on the internet by citizens with special needs is guaranteed. In EL, access is ensured through registered accountants and in IT it is possible to contact intermediaries or pension institutes' offices. In LV, there is an option for visually impaired persons on the State portal www.latvija.lv.

State pension age

In **most MSs state pension age can differ from age of claiming a supplementary pension**. That is possible in AT, BE, CY, DE, DK, EE, EL, FI, IE, LU, LV (third pillar only), MT, NL, PL, PT, SE.

In few MSs, the state pension age is the same as supplementary pension age: FR, HR, HU, IT, RO. The right to supplementary pension is acquired at the time when requirements in the compulsory scheme are achieved.

ANNEX 7: LIST OF COUNTRY ACRONYMS

	Country
AT	Austria
AUS	Australia
BE	Belgium
BG	Bulgaria
CH	Switzerland
CY	Cyprus
CZ	Czech republic
DE	Germany
DK	Denmark
EE	Estonia
EL	Greece

	Country
ES	Spain
FI	Finland
FR	France
HU	Hungary
HR	Croatia
IE	Ireland
IS	Iceland
ISR	Israel
IT	Italy
LI	Lichtenstein
LT	Lithuania

	Country
LU	Luxemburg
LV	Latvia
MT	Malta
NL	Netherlands
NO	Norway
PL	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovakia
UK	United Kingdom