European Network of Public Employment Services

New forms of PES service delivery

Thematic paper

Written by ÖSB Consulting
Eamonn Davern
April 2023

Social
Europe

New forms of PES service delivery

Thematic paper

The European Network of Public Employment Services was created following a Decision of the European Parliament and Council in June 2014, amended in 2020. Its objective is to reinforce PES capacity, effectiveness and efficiency. This activity has been developed within the work programme of the European PES Network. For further information: http://ec.europa.eu/social/PESNetwork.

This activity has received financial support from the Employment and Social Innovation (EaSI) strand of the European Social Fund Plus (ESF+) for the period 2021-2027. For further information please consult: https://ec.europa.eu/european-social-fund-plus/en/esf-direct-easi

TABLE OF CONTENT

List of boxes

1. INTRODUCTION

The state has a vital role in the delivery of a wide range of public services. The OECD[1] defines service delivery as any contact with public administration during which customers – citizens, residents, or enterprises – seek or provide data, handle their affairs, or fulfil their duties. Good service delivery requires government to understand the need to promote citizen orientated administration, define good administration as a policy objective and put this into practice, and ensure accessibility to public services.

This paper explores new forms of service delivery in Public Employment Services (PES). The purpose of the document is to provide information for PES on the evolution and implementation of new forms of service delivery, particularly developing themes explored during a PES Network Thematic Review Workshop held in Athens on July 5th and 6th 2022.

The event was hosted by the Greek PES DYPA with representatives from 15 countries[2] and the European Commission. It focussed on how PES can improve services to citizens so that they can address challenges in a rapidly evolving labour market. The practices presented by PES[3] illustrated the importance of focussing on improving the customer experience. The importance of efficient change management and effective project implementation was highlighted in innovative approaches showcased at the event. These recognised that the key to taking customers along the smoothest possible journey to labour market integration is to optimise benefits from digital technology to deliver excellent service.

Discussion at the Workshop identified several features as conducive to developing enhanced service delivery models. Practices from France, Germany, Greece, Lithuania, Norway, and the Netherlands showcased aspects of new service delivery.

This Paper draws upon both examples of developments in service delivery presented at and discussed during this event and also refers to other examples of good practices identified from wider desk research. A PES Network Toolkit is being developed to provide practical guidance on the implementation of practices to promote customer centric service delivery as described in this Paper.

The document describes the context for reform, particularly the **Twin Transitions towards a digital and green economy** and explores the implications for PES of the increasing application of Artificial Intelligence (AI) for the modernisation of PES delivery systems. It particularly highlights how PES are developing a more customer centric and data driven approach to service provision with new practices generated from an explicit commitment to promote innovation to introduce new hybrid and in-person services. This Paper also illustrates the service delivery advantages and implications for PES from increasingly operating as part of a broad employment service ecosystem describing the logic of developing market-based segmentation approaches to optimise customer service.

Various service approaches and policy responses to maintain and further economic and social integration are discussed. The Paper explains how the digital revolution is both driving and enabling the evolution of a new delivery paradigm with the development of the employment service ecosystem. This has been possible because PES have increasingly used technologies to enhance their effectiveness and make the transition towards becoming increasingly data driven organisations. PES have therefore been able to take

---

[1] See OECD/EU Sigma initiative

[2] Austria, Croatia, Cyprus, Denmark, Estonia, France, Germany, Hungary, Latvia, Lithuania, the Netherlands, Norway, Poland, Portugal and Slovenia.

[3] See Germany PES New Plan and Greece PES MyDYPAlive section 2.2, France PES Soft skills identification through gaming and Lithuania PES Career Centre Project section 3.7, and Norway PES Co-creation of services with young users section 4.4, and Netherlands PES Capacity to act using behavioural analysis section 5.4.

advantage of increasingly interconnected networks to improve both their internal organisations and the management of relationships with other public and private providers.

Further sections address how to identify the impact of modernisation and explain how new forms of service delivery can promote the realisation of a vision for enhanced service delivery.

The **employment service ecosystem** also provides a foundation for PES to support the pathways of Member States (MS) towards the Twin Transitions and assist in the establishment of data driven and carbon neutral economies and labour markets. This development has significant implications for the role of PES. New forms of service delivery will be essential to enable PES to address labour market disadvantage to promote both social and economic inclusion.

PES customers can potentially be offered much greater choice and provided with the opportunity to influence the design of support packages including through **co-production of delivery processes**. The Paper introduces an approach for segmenting customers to support jobseeker matching to reduce the risk of long-term unemployment and inactivity. This is particularly important in an environment where a job for life is becoming increasingly rare and PES will need to develop a role supporting customers through several career transitions.

PES must develop a **culture of innovation** to maintain their relevance, and particularly to continue to receive the political support which they require to secure investment needed to improve delivery models and ensure that the services which they provide keep pace with public expectations. However, encouraging experimentation has important political, policy, administrative, and customer service implications. The relevance of these factors will vary according to the institutional setting of individual PES. Therefore, each PES must review and amend its governance arrangements to ensure that appropriate accountability mechanisms are in place to promote and encourage new forms of service delivery.

PES must also provide evidence of the **outcomes** from implementing new services and develop systems to evaluate the impact of innovation. The Paper considers the need for systems for PES to identify and manage risks from automation and machine learning. This can ensure that PES customers can realise the full benefits from service modernisation.

The Paper concludes with a description of a **possible future PES service delivery** vision taking as its starting point the most recent PES Network mission, vision, and strategy[4] .

2. IMPLEMENTATION CONTEXT FOR NEW FORMS OF SERVICE DELIVERY

Over the last two decades PES have evolved from primarily delivering job matching services through face-to-face contact methods to data driven organisations offering a variety of channels to enable customer access.

Labour market integration services are increasingly offered through on-line methods and video conferencing removing the need for physical contact for many clients and types of interventions. There has also been a considerable growth in automation. This means that the main distinction in the type of support offered by PES is between services requiring the intermediation of a PES counsellor and self-service support.

---

[4] See PES [Network Strategy](#), Publications Office – European Union.

2.1 Policy Context

PES have a particularly important role in the operational delivery of the **European Pillar of Social Rights**[5] providing services defined in the legal mandate provided by the **PES Network Decision**[6].

The European Pillar of Social Rights sets out 20 key principles and rights essential for fair and well-functioning labour markets and social protection systems. Principle 4, Active support to employment is especially relevant stating that "Everyone has the right to timely and tailor-made assistance to improve employment or self-employment prospects. This includes the right to receive support for job search, training and requalification." The **related *Action Plan*** turns the Social Pillar principles into concrete actions. It proposes headline targets for the EU to reach by 2030, can assist PES in mainstreaming Social Pillar priorities.

The ***legal mandate*** for the Network encourages PES *'to promote the employment of all vulnerable social groups with high unemployment rates, especially older workers and young person's not in employment, education, or training as well as people with disabilities and people facing discrimination on multiple grounds.'* Together with the PES Network Strategy the legal text provides a forward looking and flexible framework to assist PES in meeting future challenges.

PES are delivering their key role as labour market mediators in the context of ***Twin Transitions*** steering the evolution of increasingly digitalised and environmentally sustainable economies being transformed through the 4th Industrial Revolution.

2.2 Developing online and in-person services

New forms of PES service delivery are being designed and implemented in the context of a number of ICT-related trends that will determine the direction of PES operational development in forthcoming years[7].

- The Covid pandemic has galvanised citizens' demands for more digital public services.
- An increasing blended experience between physical and virtual delivery.
- Increasing use of technologies that foster social connection with less physical contact.
- Growing importance of person-centric services driven by datafication.
- Greater use of Artificial Intelligence enhancing capacity to make decisions, act, and learn.
- Growing need for on-line security in an ever more connected digital world.
- Growth of technologies to support the building of hyperlocal networks.

Two examples from **Germany** and **Greece**, presented during the Thematic Review Workshop in Athens, illustrate how PES respond to these trends, laying the foundation for creating an implementation context for new forms of service delivery.

---

[5] European Pillar of Social Rights proclamation of the European Parliament, Council, and Commission, approved by European Parliament, Council, and Commission, November 2017.

[6] Decision (EU) 2020/1782 of the European Parliament and of the Council of 25th November 2020 amending Decision No 573/2014/EU on enhanced co-operation between Public Employment Services.

[7] See O'Driscoll E, Civica North Star, blog 9th December 2020.

Box 1: Germany: New Plan

> The **German** PES' New Plan, a tool for vocational orientation for people in working life, was developed to help people deal with fundamental labour market changes. For the development of New Plan the PES identified demographic changes, transformation from digitisation and technological transformation, economic and social transformation, and ecological changes as presenting particular challenges for workers and jobseekers. The analysis identified that people will have longer working lives and will change jobs and careers more frequently. The key conclusion was that workers can be discouraged by information overload on the internet and can be unaware of career development opportunities.
>
> The lack of transparent systems to identify strengths and professional development opportunities can make it difficult for PES clients to make decisions on the support programmes best suited for meeting their needs. **New Plan** therefore offers professional guidance and career counselling either on-line or face to face. The New plan on-line tool enables users to evaluate their talents and offers inspired ideas for changes of careers. The tool introduced in 2022 evaluates individuals' talents through a test, shows possibilities for development, offers inspirational ideas for career changes and presents possibilities for development. It is available at any time, and in addition to being used as a self-service instrument can support face to face counselling sessions.

In response to the Covid pandemic the **Greek government** invited public service delivery organisations to **develop digital services** to replace face to face meetings:

Box 2: Greece: My DYPA live

> The Greek PES (DYPA) introduced an on-line platform My DYPA live in December 2020 offering counselling services to jobseekers and employers with interpretation in 14 languages and sign language. A network of 75 counsellors works from home to provide a nationwide service supporting customers including potential to arrange follow up activities.
>
> **My DYPA live** also offers training and team building opportunities with regular follow up meetings organised with counsellors. Feedback from citizens is also provided through regular measurement of customer satisfaction with 88% of employers and 87% of jobseekers satisfied or very satisfied with services in 2022. The on-line service has been developed in tandem with a nationwide map of career opportunities which is now available on the PES website. Introduction of a virtual, as opposed to geographically bound, service has had an added benefit of increasing the labour market knowledge of counsellors increasing the range of advice available for jobseekers.

2.3 The potential of automation

Data, automation, and new technologies offer the opportunity for PES to respond more rapidly to adequately address trends in IT development.

Clearly increased IT functionality presents enormous potential to develop PES service delivery. There are opportunities to broaden customer choice and enhance personalisation

with the evolution of platform technology. To take full advantage of this PES must however resolve **two fundamental dilemmas**[8] namely:

- How do PES become an open platform that allows people inside and outside to innovate in service delivery?
- How to design a system in which all the outcomes are not specified beforehand, but instead evolve through interactions between government and its citizens, as a service provider enabling its user community?

Recent **developments in the use of Artificial Intelligence (AI)** can assist PES in resolving these questions through opening opportunities for PES to adopt incremental improvements to service delivery. This can be achieved through fostering a culture of innovation through an iterative approach testing new models to develop a customer centric orientation, through testing and learning. Lawless and Sofge (2017) defined AI as *computer-based technology capable of solving multifarious problems under different solutions and contexts in a cost effective accurate and easy manner without the help of human beings. AI can be a very significant driver of innovation in service delivery.*

However, the willingness of PES staff to take advantage of new tools is a key dependency for realising benefits from potential service improvements. Ahn and Che-Chen (2022) in a recent study found that the **attitude and willingness of government employees to using AI** played a critical role in the adoption and use of new AI technology in government. Perceptions of AI regarding future impact on jobs, ethical and moral judgements, and past staff experience of AI use influenced attitudes. The study also found that training to improve understanding and perceptions of modern technologies was essential to improve understanding and foster a culture of innovation towards sustainable and impactful digital transformation.

Chatterjee (2019) suggested a set of criteria which can be helpful for PES when determining when and how to apply AI considering the following: **what factors would impact on individuals' (PES staff and customers) usage of AI, what impact will regulations have on predicted and intended usage, and to what extent can intentions to use AI influence the quality-of- PES service delivery for citizens?**

3. THE EMPLOYMENT SERVICES ECOSYSTEM

Improvements in digital connectivity, the potential for organisations to share data, and the increasing need to integrate people farthest from the labour market are driving closer inter agency cooperation.

Previously inactive persons, discouraged job seekers, and the Long Term Unemployed (LTU) are becoming increasingly important priority customers for PES. PES increasingly deliver their role as labour market brokers through combining their services with those of other stakeholders in **delivery ecosystems**. These established more integrated supply chains to assist customers as well as expanding customer choice, enhancing scope for delivery of personalised services.

3.1 The advantages of the employment service ecosystem

PES are increasingly operating as part of **employment service delivery ecosystems.** An ecosystem is comprised of a range of public private and NGO agencies which can develop links, especially through using improved digital capability, combining to provide a

---

[8] See O'Reilly T (2010) Government as a Platform in "Open Government Collaboration Transparency and Participation in Practice" Lathrop D and Ruma I.

wide range of employment support services. These will include the utilisation of open system architecture which enables customers to access a range of services supplied by a variety of providers through shared platforms.

Agencies which can improve the co-ordination of their service offerings can deliver more personalised support and promote choice through increasing the range of options available to customers. This can maintain the labour market attachment of jobseekers and optimise the chances of smooth career transitions for jobseekers in an increasingly volatile and unpredictable macro-economic climate.

3.2 Developing digital connectivity in the ecosystem

An enhanced focus on the development of the delivery ecosystem taking advantage of the increased automation of employment services can support more efficient matching and assist in improving performance management. Enhanced digital connections can promote data sharing between PES and their stakeholder partners enabling them to make more effective use of Labour Market Information (LMI) and PES client data. PES can upgrade their matching services so that these can provide more effective responses to labour and skill shortages. This is especially important for employment service providers who must deal with labour and skills shortages including demographic pressures from an ageing workforce across Europe.

3.3 Access, use and sharing of Labour Market Information

Asymmetry in access to Labour Market Information (LMI) is a major contributor to labour market and social exclusion and long-term inactivity. Customers of employment services therefore require access to good Labour Market Information (LMI) and advice on the availability of skills training. Improved access to LMI systems and improved communications between delivery organisations are a fundamental building block of the employment service ecosystem. These can significantly improve customer access to information on employment and training opportunities including providing information to encourage voluntary sectoral and geographical mobility.

3.4 Use of Artificial Intelligence and Behavioural Analytics

PES can improve their service delivery models through increasing investment to both, upgrade existing service delivery infrastructure and take advantage of emerging technologies. PES can make substantial improvements through **utilising Artificial Intelligence (AI)** to apply **Behavioural Analytic** techniques and tools. This can increase their ability to personalise services through analysis of more granular data on individual customers job search activity, skills, and motivations.

PES must therefore re-review their longer-term strategies using modernised systems to **align service design and customer targeting**. In addition to enabling significant increases in personalised service delivery, digitalisation is greatly enhancing the capability for data exchange between organisations. The OECD[9](2022) has described the major opportunity presented by the employment services ecosystem as the opportunity "*for both public (PES) and Private (PrEAs) Employment Services to reach out and provide services to large numbers of clients with diverse needs, while co-operating with providers and other partners.*"

---

[9] [Harnessing digitalization in Public Employment Services to connect people with jobs](#), OECD policy brief June 2022

3.5 Personalising customer support systems

The emerging PES ecosystem can improve jobseeker integration through increasing the transparency of service options. This can increase opportunities for PES and other providers to collaborate in developing person-centred packages and improving tools for engaging inactive persons. Services for the hardest to integrate persons with multiple problems need to be interconnected and streamlined. This requires collaboration between PES, employers, other public bodies, NGOs, and both public and private employment agencies.

The inception of more **integrated support services in The Netherlands** is an example of enhanced links with stakeholders being achieved through the evolution of the PES delivery ecosystem. Provision of labour market services in The Netherlands have traditionally been split between municipalities (with responsibility for supporting the long term unemployed) and the PES (supporting persons receiving unemployment and disability benefits). **Regional Transition Teams** have been introduced and brought stakeholders together combining inputs from PES and municipalities. The latter work with trades unions, employer associations, and educational institutes to provide a joined-up response to support the unemployed. Improved cooperation between PES and regional actors has enabled more flexible utilisation of budgets allowing individual stakeholders increased scope to facilitate labour market transitions.

The potential for designing **individualised interventions** is being assisted in several PES through use of AI, with data mining central to the establishment of the delivery ecosystem. PES therefore require support and strategic leadership from government policy makers, especially to bridge the digital divide for an estimated 5%-20% of the EU population[10] lacking any digital skills and in facilitating beneficial public/private partnerships.

3.6 Taking advantage of machine learning.

Since early 2022 the **PES in Wallonia (Belgium)** has been using machine learning to apply a new predictive job proximity model. The **Luxembourg PES** has developed a system to deploy AI to exploit the potential from this broader ecosystem providing improved connections between PES and other support agencies. A current project is illustrating the use of tools allowing jobseekers to identify the integration services which they find most useful selecting these from a menu of options to help develop a customer profile. This increases the choices available to jobseekers and promotes their autonomy thereby boosting an individual customer's chances of returning to work.

The **Korean PES** now uses deep factorisation machine (FM) technology[11] to significantly increase predictive capability. This technology overcomes limitations inherent in classic profiling models which use linear data analysis of interactions. These fail to capture the real-world situation regarding factors influencing individuals' labour market attachment which are frequently complex and non-linear.

During 2022 the **Estonian PES** has further developed an AI driven profiling tool (which was first introduced in 2020) to design service streams for different segments of jobseekers. As this tool can assess the probability of re-integration to 95% accuracy the PES are now able to assess the main factors influencing an individual's return to employment or further spells of unemployment (see Leinuste 2021 and 2022).

---

[10] See ESF Transnational Employment Platform/AEIDL report: Being digitally competent in 2020 and beyond: A Skills Deal for Europe 2020.

[11] See Deep FM: A Factorization -Machine based Neural Network for CTR Prediction, Huifeng G, Ruiming T, Yunming Ye, Zhenguo L, Xiuqiang H – Shenzhen Graduate School, Harbin Institute of Technology, China reserach paper, (2017).

The **Lithuanian PES** has within the last year introduced machine learning to supplement administrative data in implementing a profiling tool to replace a legacy segmentation system which relied only upon summary survey data (OECD 2022).

An obvious benefit of the establishment of an employment services ecosystem is the potential to offer dedicated digitalised services to individual employers building upon higher specification infrastructure shared between PES and other labour market stakeholders. The **Chilean PES Bolsa Nacional de Empleo** takes advantage of data exchange with PrEAs to improve the capacity for jobseekers to identify suitable vacancies through job search portals. It has utilised AI and modelling techniques to improve matching increasing the benefits from such cooperations. The **PES in Mexico** has similarly embedded AI into a newly developed job search web site to enhance identification of employment opportunities for job seekers.

The **PES in Japan** is currently (2022) expanding its existing on-line employer portal facility. The current system enables employers to create their own pages to post and amend vacancy information and accept applications. Soon it will also allow employers to contact registered jobseekers directly to request applications for vacancies.

3.7 New systems for the identification of soft skills and skills gaps

A feature of the employment services ecosystem is the development of dynamic functionality enabling close to real time responses to changing labour market conditions. By replacing previous static mechanisms with more responsive models PES can significantly upgrade services for employers and assist jobseekers through providing them with the most up to date information on employer needs and requirements. A current **Workforce Australia** reform is prioritising the introduction of functionality to match, and shortlist registered unemployed people to meet the most recently identified employer needs. This new digital delivery model will enable job seekers to manage their own reintegration journeys through accessing online self-service tools.

During the Thematic Review Workshop in Athens, France presented its approach towards soft skills identification through gaming as a lever to identify and promote new career paths for job seekers (see Box below).

Box 3: France: Soft skills identification through gaming to promote new career paths

> The **French PES** is testing the use of gaming as a lever to identify and promote new career paths for jobseekers through a project to improve **Identification of Soft Skills through Gaming.** Analysis by the PES has identified that 44% of companies deem behavioural skills to be key hiring criteria and that of these four are most frequently referred to in job offers: teamwork, rigour, perseverance and adaptation. The PES is currently assessing a web based soft skills identification system which has been developed by a software provider and initially tested in an experimental phase with 1,000 jobseekers.
>
> 90% of participants in the **French PES trials** found soft skills assessments to be useful and counsellors reported that these aided the evaluation of skills potential and assisted their approaches to potential employers. Cost and intellectual property issues were identified in this trial, the PES is therefore currently embarking on a collaboration with universities where they will maintain property rights and part fund research students to develop an open-source solution.

The employment services ecosystem provides scope to significantly increase the **speed and volume of data exchange** between PES and their stakeholder partners. This means that PES can develop systems to better identify labour market skills gaps and orientate

jobseekers towards appropriate training and support programmes. Such developments are enabling PES customers to take advantage of emerging opportunities and keep pace with labour market developments.

At the end of 2020 a new tool was introduced in the **PES in Denmark to improve analysis of skills gaps.** Textual analysis of posted vacancies is used to identify skills currently most in demand by employers. PES counsellors can use this information to advise their clients on how to best target their job search and direct them towards programmes providing training to equip people to compete for jobs in growing sectors (Westh Wiencken Vizel, and Opstrup Hansen 2021).

During the Thematic Review Workshop, participants had the chance to hear more about the Lithuanian PES approach to career counselling for youth using Regional Career Centres.

Box 4: Lithuania: Regional Career Centres

> The *Career Centre project in Lithuania* has been introduced to create a support ecosystem for young people through a cooperation between the PES and a range of social partners including youth organisations, schools and universities, business support organisations, public institutions, and municipalities. The project targets unemployed people aged 15-29 years offering counselling and advice through combined service centres managed through a consortium of participating delivery agencies, with a premium placed on the involvement of employers.
>
> Participating agencies in the **Lithuanian** initiative have rapidly overcome previous institutional barriers to closer co-operation. The project has "collapsed" administrative silos through collective agreements between agencies to prioritise and meet jointly agreed and recognised customer requirements.

The success of this initiative emphasises the importance of ensuring good levels of cooperation and positive engagement between PES and other stakeholders to enable the customer benefits of the PES ecosystem to be delivered. It will not be possible for PES to take full advantage of higher specification IT solutions to improve their services unless sound governance frameworks are introduced to underpin positive collaboration.

4. DEVELOPING CUSTOMER FOCUSSED SERVICES AND MARKET SEGMENTATION

PES have traditionally applied profiling techniques to determine the nature and depth of support which should be offered to jobseekers based upon an assessment of their distance from labour market integration. More recently market-based customer segmentation approaches have been introduced. These allow for a more sophisticated analysis of the potential support needs of PES customers through considering a broader range of characteristics.

Segmentation provides for deepening the scope to offer personalised support evaluating a wide range of behavioural, demographic, and situational criteria to supplement consideration of educational and skills status and labour market analysis.

4.1 Applying a segmentation model

Innovative PES service delivery can be interpreted as enhancing the capability of PES to meet the **labour market needs of a specific customer cohort (market segment)** through the application of a practice impacting upon one or more of the following (see figure below):

- Geographical coverage.
- Interpretation of behavioural insight.
- Addressing demographic issues.
- Psychographic factors[12].

Figure 1: Meeting the labour market needs of a specific customer cohort.

Source: Rachel Proctor Opportunity Marketing blog info@opportunity.co.uk accessed 20/1/23

Over the last decade **Electronic Government (e-government)** has been a prime driver for more efficient delivery of PES services**.** PES have increasingly moved on from considering service improvements exclusively within their own organisational silos to participating in joined up whole government initiatives to introduce citizen focussed service delivery practices. This new approach to PES service design has increasingly featured analysis of and response to customer insight.

Applying **market segmentation** approaches as described above can provide a framework to make optimum use of customer insight. Through identifying those factors of most importance to customers PES can formulate innovative delivery practices. This can be achieved through use of tools for increasingly sophisticated analysis of information gained during transactions between PES and their customers. This data is filtered through considering; behavioural insight, jobseeker attitudes towards the labour market, different responses from specific demographic groups, and locational factors.

Technological developments have facilitated both **horizontal and vertical service integration[13].** This has supported the development of improved customer/provider relationships, including a strong emphasis on the evolution of employment service delivery partnerships. Most importantly, digitalisation of PES services provides opportunities for the construction and delivery of bespoke personalised support packages and expands the potential for co-construction and customer input to service design.

---

12 The Geographical criteria refer to the location of a customer, Behavioural Insight criteria combine insights from psychology, cognitive science, and social science with empirically tested results to ascertain how individuals make choices about potential employment opportunities, Demographic criteria refer to factors including age, ethnicity, gender, family size, income and education, Psychographic criteria refer to personality traits, attitudes, interests, values, and other lifestyle factors.

13 Vertical integration refers to providers at different stages of the service delivery processes combining to link the supply chain. Horizontal integration describes providers at the same stage of the service delivery processes combining. See Investopedia

4.2 Customer centric delivery models

Customer centric PES delivery models can be defined as those *which ensure that an organisation's primary focus is to meet customer needs.* The aim is to ensure that all PES activities from service delivery to communications are developed paying particular attention to how these will be received and perceived by jobseeker and employer service users. Various studies define customer centric delivery models[14], examples of the features of good practices in PES service delivery can be summarised as:

- Ensuring an engaging PES service offering.
- Providing excellent customer service and support.
- Building opportunities to grow awareness of PES services through structured and tiered communication campaigns.
- Ensuring efficient operating processes across all PES departments.

A paradox in the improvement of PES services is that changes providing more personalised, multi-faceted, support to address complex problems and resolve barriers to employment can frequently result in more complex customer journeys. **Effective customer portals** are therefore necessary to ensure that PES customers can access services easily. Essential features of customer focussed PES IT applications are[15]:

- Self-service functionality.
- Search capabilities.
- Personalisation.
- In-depth analytics.
- Flexibility.
- Availability and scalability.
- *Integration*.

4.3 Personalising integration services

A key feature of new forms of employment service delivery is the provision of **increasingly personalised integration services** *through* support packages built around individual needs. This development can rebalance the relationship between the customers and providers of employment services, allowing customers to exercise greater choice and more input into the design of reintegration programmes. There can be increased opportunities to better match customer requirements with employment opportunities to facilitate improved labour market outcomes.

For PES to make full use of digital tools they need to identify specific **customer segments**, such as older workers in an ageing population. Identified customer groups should be directed towards service streams within which they can receive appropriately tailored services from PES. Whilst AI and data mining are key enablers for delivery of personalised customer focussed services it is essential that they are designed to focus on identified user requirements.

Several recent innovations in PES illustrate the potential for improving services through upgrading delivery infrastructure. PES need to adapt solutions which improve employment services for citizens to match local situations. This is necessary so that they can balance delivering improved employment outcomes with increasing efficiency and reducing waste.

---

[14] See What is a customer centric business model; And why you should embrace it, Noah Rue, Colorado Business Magazine December 8th, 2021.

[15] See Liferay 7 Must have features in your Customer Portal.

Successful examples illustrate the benefits from PES developing flexible responsive service delivery models reflecting the increased dynamism of the modern labour market.

Increased cost-efficiency is especially important to provide governments with the fiscal space to invest in ongoing service modernisation. A success criterion for this strategy is reducing failure demand[16] minimising nonvalue added contacts through reducing bureaucracy and administration.

4.4 Customer co-design of services

An especially significant consequence of customer-centric service delivery is the opportunity for citizens to *co-design integration programmes*. This is becoming more relevant as jobseekers are increasingly unlikely to be matched by PES into a job for life in the modern labour market. Job seekers will in many cases contact PES for support in managing transitions several times during their careers. Consequently, PES are increasingly adopting design methods such as co-creation and prototyping to apply user insight to design more efficient and effective services.

During the Thematic Review Workshop, the Norwegian PES representative described their way to collaborate and co-create with young users (see the Box below).

Box 5: Norway: A new way to collaborate and co-create with young users

> As part of its well-established agenda to develop more client friendly services the **Norwegian PES** has been exploring how to collaborate with customers to co-create more effective service delivery approaches. Between January and June 2021, a joint team of PES staff and representatives of youth organisations researched how digital learning opportunities for young people could be improved, with a particular focus on those with disabilities and mental health issues. The findings from this collaboration project to explore **Co-creation of Services with Young Users** have led to the **co-creation of a new digital learning** arena for PES youth counsellors.
>
> In a further development from *the **Norwegian PES*** collaboration with young service users, representatives of youth groups now act as advisors in the development of PES digital information and guidance services. The project has enhanced PES awareness of young person's needs and user trust. This process has taken time and needed careful expectation management and increasing input from young people especially at the early stages of system design and in strategic discussions.

The **Greek PES** has identified specific **requirements for its SME customers**, who represent a particularly significant proportion of the employer base. The PES is therefore currently developing new support tools for employer counsellors with a methodology based upon business needs analysis of SME's requirements.

4.5 Applying analysis to develop services

The **Job Market Finland** service utilises a range of smart tools. These apply analytical techniques to interpret information provided by jobseekers and employers and cross reference this with taxonomies providing detailed descriptions of the tasks and skills required for specific occupations. A machine learning process enables jobseekers to

---

[16] Failure demand describes customer interactions caused by a failure to do something or do something correctly for the customer. See Seddon J Freedom from Command and Control (2003).

enhance their profiles and employers to develop better vacancy descriptions. This balance contributes to more successful matching with more specific data regarding skills, competencies, and job seekers' aptitudes (Vanska 2020, Nittyla 2020, Nittyla 2021).

The **Belgian - Flanders PES (VDAB)** has recently introduced a tool to enable sophisticated segmentation based upon characteristics including location, skills, and experience. The system **Talent API** utilises AI to improve job matching and enhance the profiling tool (now based on various machine learning models) used to predict the time jobseekers are unemployed. The system enables segmentation and customer focussed personalised support through reviewing a jobseeker's browsing history on the PES vacancy web site. Through investigation applying semantic textual analysis the tool develops synonyms to identify jobs with similar characteristics to those previously applied for. The effectiveness of customer self-service channels has been enhanced whilst counsellors now having access to a richer source of information to guide jobseekers (Flemish Parliament 2021).

The **French PES Emploi Store** initiative has been driven by a strategic focus on optimising resources taking advantage of the benefits from increasing customer choice. The system guides service users through an ecosystem of online services for job search, training, and skills development provided by PES and a range of employment training professionals, public institutions, and private firms. The system encourages autonomy and client ownership of their career trajectories. It uses AI, including access to a deep learning tool, to process information to identify the top services most reflecting client need. These are selected from a range of job search, training, application assistance, and self-employment options.

This deep learning-based recommender system helps jobseekers find relevant applications and tools in the 'Employment App Store' (emploi-store.fr) based on their personal situation. Customers are encouraged to make independent use of online services/applications from a service catalogue thus freeing up counsellors' time to aid clients requiring more intensive support. The Emploi Store provides a single online point of access for both jobseekers and counsellors to a range of internal PES, and external digital employment support services. This saves staff and customers' time through allowing for more focussed search of continuously evolving information which can be scattered across the web.

5. ENCOURAGING AND MANAGING INNOVATION

To promote innovation PES, need to encourage staff creativity. This means that several priorities need to be balanced and robust governance systems and transparent accountability are essential for the successful delivery of new PES services.

Whilst it is not possible to improve PES delivery models without trialling new approaches and processes PES must also remain accountable for the use of public resources and maintaining the existing service level required. Consequently, well-established **risk management and transparent accountability systems** are essential. This is to ensure that PES can both innovate to improve delivery and meet the existing expectations of PES employer and job seeker customers.

5.1 Promoting innovation

The OECD (2016) has **defined public sector innovation** as 'the implementation of new or significantly improved processes, methods, or services aimed at improving a public sector unit's operations or outcomes. These approaches create services that are user focussed better defined and better target user demand. Innovation can alter both the supply of services by improving their characteristics and demand for services, by

introducing new ways to articulate demand for and procure them. [17] The OECD Observatory of Public Sector Innovation (OPSI)[18] uses this definition in criteria to decide if practices can be considered innovative and listed on its database. Kergroach (2016) has summarised innovative practices as those applying instruments to several areas of organisational activity , these can be applied to PES, namely:

- Human Resource Management.
- Rules, procedure, and regulations.
- Budgeting.
- Knowledge management.
- Innovation in organisational design.
- Managing risk and uncertainty.

PES are developing and implementing innovative practices in these areas to improve their service delivery capacity. Introducing new service delivery processes is essential for PES to meet the needs of an evolving customer base and address challenges from the changing world of work. Structural upheaval in the labour market and skill shortages mean that PES are dealing with new customer groups beyond their traditional client base. Supporting a broad range of jobseekers from the most employable to those farthest from the labour market needs a range of approaches to be applied.

5.2 Balancing automated self-service and manual contact pathways

The aim of the **Swedish PES customer service strategy** is to develop a fully self-service journey for the large majority, over 90%, of jobseekers who register on-line. This approach seeks to exploit synergies with the 98% of employers who also transact their business with the PES, placing their vacancies online. An important issue for PES is how to manage innovation and embed new delivery systems whilst still maintaining legacy processes which some customers still need without holding back overall process improvement. The Swedish PES identified several legacy processes which were impeding the development of a seamless automated customer journey. These were preventing full realisation of a revised PES customer strategy. This is based on principles of: '*digital first but not only, clearly defined and shared responsibility for delivery across all channels, an integrated (but not by choice) multi-channel approach, and challenging customers who can be fully autonomous.*'

Currently 10% of jobseekers identified as having a clearly defined job search programme for the subsequent 90 days are immediately referred to the self-service channel. The remainder of customers have a remote planning meeting with a PES counsellor. If the customer lives in one of a growing number of areas where an AI profiling tool is in use data from an AI assessment provides the basis of the employment integration discussion. Following this, customers are referred to one of three manual pathways, with the degree of contact with PES staff determined by assessed distance from the labour market, or a self-service pathway. The latter is for the most employable segment identified as able to self-manage their re-integration. A further aim of the Swedish PES strategy is to analyse data collected to enable improvements in the speed and accuracy of the process for assessing client needs. This approach has raised legal issues which are being investigated concerning the extent to which personal customer intervention should be used in the design of PES processes. In a further phase it is planned to use data analysis for the predictive targeting of service offers. This will enable segmentation of the customer base offering a variety of integration pathways.

---

17 OECD Science, Technology, and Innovation Outlook Policy Profile 2016.
18 See OPSI.

5.3 Service mapping and considering legal requirements.

There are several pre-requisites for the successful upgrading of PES services. The introduction of new PES service delivery models requires improved design and implementation of active labour market policies (ALMPs), referral mechanisms and employability programmes.

Firstly, it is essential to **map the existing delivery model** and consult stakeholders to identify the strengths and weaknesses of the current system. A thorough **review of administrative processes and legislative frameworks** is required to clarify the implementation context and confirm the feasibility of proposed service enhancements. This is especially important where PES operate in decentralised federal systems.

An **accommodating legal framework** within which PES operate can be an important enabler encouraging innovation. The **PES in Denmark** is delivered by municipalities, which operate within a less defined legal framework than central government agencies. This has supported devolution in the PES and increased the autonomy of local offices operating under municipal governance. It has therefore been able to develop service solutions best suited to the specificities of local labour markets. Consequently, local PES have been able to operate as laboratories for testing service delivery models.

5.4 Process design to optimise the impact of policy changes.

To ensure adequate **monitoring and evaluation** of modernisation initiatives PES must often increase their focus on defining, measuring, and rewarding good performance. Ultimately new forms of PES service delivery must aim to increase the employability of customers and support improvements in the effectiveness of ALMPs.

During the Thematic Review Workshop in Athens, the Netherlands PES described how they are using behavioural science for better policies and services design (see the Box below).

Box 6: The Netherlands: Using behavioural science for better policies and services design

The **Netherlands PES** has been exploring the use of behavioural insight since 2010. The PES strategy for the 2021-2025 period prioritises the implementation of personalised services, emphasises the human dimension to delivery, and has initiated a programme to enhance **Customers Capacity to Act.** This approach was developed following a study by The Netherlands Scientific Council for Government Policy (WRR) which raised the issue of incomprehensibility of legislation and public service information to the Dutch State Secretary of Security and Justice in 2017. Registered unemployed jobseekers who have not applied for jobs within a particular timeframe now receive reminders from the PES, and the number of sanctions has significantly decreased. A "nudge" encouraging jobseekers to broaden their job search parameters has increased the number of applications per jobseeker.

The **Netherlands PES** has also identified regional level administrations as a particularly rich source of innovative thinking which can provide an essential 'bottom up' input to strategic development. The initiative and enthusiasm of staff has been further used with the introduction of design days. These activities provide opportunities for PES employees to focus on design thinking outside of their day-to-day work.

An important element and real innovation aspect of its revised customer centric delivery strategy is **an ex-ante evaluation of new**

legislation and its impact on PES operations[19]. This involves PES seeking to assess the potential impact of proposed legal changes on customer service delivery before they are presented to PES for implementation. The aim is to deliver new employment policy solutions in a user-friendly fashion so that they have the intended impact on PES customers. This is to avoid PES having to redesign and retrofit processes because changes do not fit well with existing delivery approaches.

The Netherlands PES also aims to widen the range of in-house experts involved in the planning of new services and expand staff expertise in behavioural science to best take advantage of new design tools.

5.5 Developing staff innovation skills.

The **German PES** is **developing staff** so that they become advocates and drivers for innovation. This is being delivered through **use of behavioural insights in the PES leadership academy**. This provides initial education and further training of new recruits for executive positions. The aim is to develop executives who can manage their current core business well and, at the same time, develop a view of upcoming tasks and challenges to be able to shape the organisational future. This outcome-based training approach looks at ways to deliver performance results and structural coherence for teams. It also seeks to create strategies and promote longer term people development. Applying behavioural science, the training considers how leadership development is influenced by external market conditions and the needs and expectations of stakeholders. The German PES has also introduced a social intranet to encourage the systematic exchange of staff ideas.

The **French PES now operates Innovation Units** which explore enhancements in the fields of, strategy, digitalisation, and human resources. To balance encouragement of innovation and sound risk management the PES operates a "Challenge System". Strategic teams are invited each year to describe the main challenges which they face in day-to-day service delivery and their proposals for addressing these. A systematic process is applied to select ideas for further investigation in an incubator (see Mogollon 2021). The testing of new services is managed through several stages; exploration (identifying the problem and potential solutions), experimenting (validating the most appropriate solution), launching, upscaling, and assurance of continuous improvement and growth. A dedicated and "ring-fenced" risk budget is available for investment in researching projects assessed as having the most potential for service improvement and where appropriate these are upscaled for wider implementation. To identify potential improvements in service delivery the PES prioritises learning from research and pilot studies. Both successful and unsuccessful initiatives are reviewed to increase learning of what does and does not work. Innovation Units have a mandate with **"a licence to fail but an obligation to learn".**

An innovation culture has to be combined with an appropriate infrastructure to successfully embed innovative proposals to improve service delivery. Pieterson and Ebbers (2020) have identified the necessary conditions favouring a shift in public services towards on-line channels. PES are more able to manage transitions to new service delivery channels and develop appropriate services if they; operate on mature internet infrastructures, have mature online offerings, and combine these with nudge[20] policies and assistance.

---

[19] See Weten is nog geen doen (Why knowing what to do is not enough) WRR study 2017.

[20] A nudge is any aspect of choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives. See definition here.

6. ASSESSING THE IMPACT OF SERVICE DELIVERY INNOVATIONS

An important component of any programme to enhance PES service delivery is the monitoring and evaluation of new processes to assess whether changes have had the intended impact.

Significant recent developments in PES infrastructure involving; shifts in the nature of the customer/PES interface, the role of PES staff, the design of delivery architecture and particularly the increasing importance of PES/stakeholder relationships have all contributed to a need for enhanced assessment tools.

6.1 Applying review methodologies.

The **incubator methodology** introduced into the **French PES** (see section 5) is applied to ensure that new service delivery technology; adds value, is user friendly, and can be sustainably deployed. At each development stage there is a focus on identifying added value and further opportunities for improvement.

Assessment of customers' feedback and perspectives and monitoring user volumes are important and useful indicators of the impact of changes to service delivery processes. However, they do not specifically address the fundamental issue of how to establish the effectiveness of changes to delivery programmes for PES jobseeker and employer customers. **Counterfactual Impact Evaluations** (CIEs) can be used by PES to identify plausible causal links between changes to service delivery and labour market outcomes. These can be deployed in conjunction with, assessment of whether a service change has been fully embedded within a PES operational delivery model, and cost benefit analyses.

The **Spanish PES** is currently using **Randomised Control Trial** (RCT) methodology to evaluate the effectiveness of a new digital tool being developed to assist counsellors in their provision of individualised advice on job search and training[21]. CIEs are being applied to establish the effectiveness of the new tool in supporting jobseekers to find good jobs and employers to recruit suitably skilled staff.

6.2 Use of Labour Market Information to assist integration.

The **German PES** has been a pathfinder in its use for a number of years of a **Treatment Effects and Prediction tool (TrEffeR)** for impact evaluation of ALMPs. At present this system remains as semi rather than fully automated requiring twice yearly manual intervention (see Buttner, Schewe and Stephan 2015, and Schewe 2017).

Increased capability to collect digital data on PES service delivery and labour market information can be used to support the design, evaluation, and implementation of proposed new service delivery models. The **Estonian PES** is applying statistical software and a Business Intelligence tool to fully automate evaluation of the labour market impact of a series of ALMPs. The PES has therefore been able to identify causal links between changes to training programmes, employment incentives, and work-related rehabilitation schemes using near live data in the PES Data Warehouse, (see Leetmaa 2022).

Commencing this year data from the **Slovak PES** and the European Commission Labour Market Policy Database has been used to automatically generate ALMP evaluation reports (see APVV 2022).

Enhancements in PES processes illustrate the obvious potential to improve ALMP delivery structures. Aligning administrative procedures with service lines for identified customer

---

[21] Support for this Spanish PES evaluation is through a project 'Implementing a new approach to the management of statistical and analytical information in the Spanish labour and social security administration', supported by the OECD and the European Commission – Directorate General for Structural Reform Support.

support segments can; increase capacity, identify, and meet customer needs, and better target assistance. The **machine learning capability** of AI tools has opened possibilities for PES to operate dynamic services which update automatically through analysis of interactions. **Big Data** is transforming service delivery with PES able to utilise AI algorithms to systemise unstructured data from job descriptions and clients on-line job search behaviour. This has the potential to produce much richer, realistic, and person-centred analysis of an individual's position regarding the labour market than was possible from the previous generation of algorithms. These were constrained by normative evaluation of administrative data drawn from PES registration data, social insurance, and tax records.

6.3 Consideration in ensuring appropriate use of algorithms.

The OECD (2022) has concluded that in principle where PES service delivery is driven by analysis of Big Data drawing upon AI algorithms it should be possible to make more accurate predictions for jobseekers. It is however crucial that PES take full account of risks from increasing reliance on automated data driven service delivery models.

Several studies have identified implicit bias in automated profiling systems. Persson (2020) noted that algorithms can be informed by outdated data (unless organisations take especial care to monitor automation – which might undermine a business case to introduce AI based on reduced staffing). He also found that predictive data mining tools had the same implicit biases as humans. Far from increasing objectivity these tools were as likely to directly or indirectly discriminate against harder to place clients in the employment market as were PES staff. In more recent research Sloane, Moss, and Chowdhury (2022) conducted a study of technical audits of AI based employment profiling systems and outcomes for minority groups. They found that whilst the systems themselves did not inject additional biases into recruitment processes the assumptions that underpin the claims made for the objectivity of tools may be flawed – with the same negative outcomes.

The risks for PES are clear and have been summarised in a forthcoming study by Salvi Del Pero, Vourch and Wyckoff. They echo Persson's (2020) findings on the problem (which pre-dates AI) that poor quality data produces poor outcomes. They also concur with Sloane et al (2022) in noting that unless tools are designed with the fullest possible understanding of the reality of the situation of the most marginalised jobseeker, even tools produced to high level specifications and with advanced functionality may inevitably perform less well for the most disadvantaged people in the labour market. They also highlight the ethical issues of accessing increasing amounts of personalised data and how this should or can be used. This raises the most pertinent, and largely unresolved question of who is accountable of incorrect discriminatory decisions informed or made by an algorithm?

A profiling tool *Powiatowe Urzedy Pracy* introduced by the **PES in Poland in 2012** was subject to wide criticism from staff and clients. Following repeated complaints that it was non-transparent, unfair, and potentially discriminating against certain groups it was abandoned in 2019 following a ruling by a Constitutional Tribunal that its use was unconstitutional[22].

The "**Robodebt scheme" introduced in Australia** in 2016 used an Online Compliance Intervention AI tool which automated assessment of citizens' circumstances to determine decisions on recovery of welfare benefits. Concerns at the legality of the tool and issuance of incorrect determination led to the system being terminated in 2020 (see Henriques-Gomez 2022).

---

[22] See European Commission Joint Research Centre (2020) AI watch, artificial intelligence in public services: overview of the use and impact of AI in public services in the EU. Publications Office.

A (2018) OECD study found that standard PES profiling systems could be criticised for a lack of transparency and explainability. A subsequent study (OECD 2022) concluded that PES need to introduce more stringent and frequent monitoring to AI based systems. The research noted that machine learning can result in adverse as well as positive evolution of systems, with a risk of the development of systematic biases. This study also addresses concerns at the implications for the protection of personal data from the complex data mining techniques employed by AI tools. These sometimes use unstructured data with little transparency regarding the processes used to analyse the information. *Notwithstanding the benefits for PES from AI the report strongly suggests that it must be carefully managed and accompanied by safeguarding measures for both PES staff and customers.*

Salvi Del Pero et al whilst recognizing the role that data protection legislation can play in partly mitigating the risks from AI suggest that PES must themselves do more to ensure the safe and responsible use of algorithms. PES are responding to these cautionary messages through increasingly applying risk reduction techniques to data driven service development initiatives which use AI tools. A notable example of this is the **French PES** which has this year launched a" **Charter for an ethical use of AI"** (Pôle emploi 2022).

7. THE FUTURE PES DELIVERY VISION

The EU PES Network strategy describes a vision to enable PES to deliver their role as key actors in the employment services ecosystem driven by a need to increase outreach to vulnerable citizens, facilitated by the potential to utilise AI and Big Data, to provide more personalised support to all customers.

PES both across Europe and globally are currently developing visions for innovative services. These are intended to optimise benefits through increasing the focus on PES customers within the wider ecosystem.

7.1 Developing holistic customer centric services.

The **Brussels Region PES (Actiris)** is developing a holistic customer centric service strategy. This is intended to take advantage of opportunities from technological developments and increased digitalisation to respond to societal and labour market changes. To realise its vision, it plans to build on themes of using AI and harvesting customer information to develop a data driven PES. By *2030 the PES aims to help all citizens to become and remain active in the labour market and to develop their careers by providing lifelong solutions.* The PES seeks to review its market position, reconsider its service offerings, and develop digitalisation as a strategic instrument providing opportunity for all customers. A '**Guaranteed Solution for All'** will be provided to customers accessing services through a digital key which opens their Unique Citizen File (UCF). This will provide them with access to a range of employment and social support from a range of service providers forming a support ecosystem. PES will have a key role within this including through profiling and segmenting customers seeking employment opportunities.

7.2 The establishment of automated PES delivery

The **Korean PES (KEIS)** has a vision to deliver a primarily automated system. It is therefore already employing sophisticated approaches using ontological and network analysis, and deep learning methodologies. Its **WorkNet system** provides a very practical example of **a digital platform** which can provide a catalyst for the evolution of a data driven employment service ecosystem. It connects thirty-one public and private job search websites in a one stop platform and provides a single point of access for all information related to careers, jobs, vocational training, and oversees employment. It enables customised job search by location, age, salary, working conditions and numbers of employees. Furthermore, it particularly supports provision of information to support young

people entering the labour market. Use of big data is crucial to the success of the WorkNet system, which currently (2022) attracts 800,000 users per day[23].

The Korean government attributes the success of the platform to the ability of Korean Government ministries and agencies to share information. A government official has described how '*by establishing interoperable registries with other public institutions or private companies to link relevant information (data on individuals and enterprises), administrative processes can be streamlined through minimising documents required for claiming, complaints, and implementing the automatic screening system on the requirements, depending on the scope of the programme.'*[24]

Kring and Elder (2022)[25] have summarised the Korean PES as "optimising the use of well-functioning LMI systems which are fundamental to a successful PES". They further identified key factors necessary for PES to be effective through successfully taking advantage of opportunities from e-government. These require *centrally driven policies to address the digital divide, develop capacity, embrace public private partnerships, good high level strategic leadership, enabling institutions and laws to encourage digitalisation and guide processes. Stakeholder input and monitoring, and a whole government approach to the sequencing of the development of core infrastructure are also crucial.*

The **Netherlands PES** has developed an application that detects potentially fraudulent behaviour by welfare recipients based on click data. The PES also uses fully digitalised profiling tools that make it possible to identify the online services that are the most suitable for every client. The **Belgian-Flanders PES (VDAB)** auto matching system (see section 4) is central to the realisation of its vision for optimum digitalisation and self-service. To best target available resources support from professional caseworkers will be reserved for interventions where counsellor contact (on-line or face to face) clearly adds value to the integration support process. Other VDAB online tools include online guidance services and advice for highly educated young people who are encountering difficulties with accessing the labour market.

7.3 Preventing digital exclusion

Despite the focus in the **Swedish PES vision** on a digitally driven self-service model (see section 5) the organisation has also noted the importance of ensuring an inclusive approach. These require equal and equivalent access to be provided to all services including for those persons farthest from the labour market, especially those unable to access automated support systems. The PES has therefore engaged with the EU funded '**Democratic Digitalisation' project**. The purpose of the project is to ensure that easy and quick navigation, including a digital first approach enabling PES customers to self-serve, is combined with design features to identify clients unable to use digital contact methods.

Box 7: When to use which service delivery format

> **When are online, hybrid or face-to-face service delivery models appropriate?**
>
> Participants to the Thematic Review Workshop highlighted that face-to-face meetings can be more likely to build trust. They are often preferred by people furthest from the labour market. Online consultations are frequently effective for people nearer employment

---

23 KEIS data reported in ILO study Digital solutions and formalization E-formalization case study on the Republic of Korea Sriani Kring and Sara Elder 2022.

24 20 ibid quote from Korean Ministry of Employment (MOEL) official.

25 20 ibid.

or for catch-up review meetings. Digital literacy is necessary for effective use of online services, increased digital proficiency amongst job seekers is a clear benefit for employers being needed for most occupations. Many, but not all, young people are online service users. Some prefer video contact to using online platforms, people used to gaming may not have the necessary attention span to embrace self-service platforms.

During the pandemic many services went online, but some clients subsequently disappeared. For some, especially vulnerable, clients face-to-face contact is recommended for first meetings, for private discussions, and psychological counselling. It is however important to avoid generalisations. Where PES offer a variety of channels with the option for channel shift as needed increased client self-sufficiency can be encouraged.

PES had less experience with hybrid meetings which they saw as difficult to prepare, especially for contacts with clients. Hybrid formats could be useful for staff or group meetings.

8. CONCLUSIONS

The Thematic Review Workshop illustrated the **great advantages from knowledge sharing** whilst also acknowledging the need to adapt practices to the specific situation of a particular country. A **culture of innovation** was a particularly important enabler for improving customer service, this environment could be promoted through the development of Key Performance Indicators (KPIs) that demonstrate that innovation improves customer satisfaction. PES developing their **Partnership working agenda** could particularly attract investment in services to improve connections between government policy agents and service users. Inputs to the Workshop illustrated how Behavioural Insight and data mining can help to create increasingly personalised services, these should be applied together with drawing upon the knowledge of front-line staff.

The Workshop also identified the need for PES to manage risks associated with testing new practices with a **pragmatic and flexible approach** terminating projects which are not delivering intended benefits, piloting before full implementation and always maintaining a practical perspective ensuring clarity regarding the problems which a new initiative is intended to address. A paramount conclusion from the Workshop was that notwithstanding the importance of IT in improving delivery maintaining a **focus on the human dimension** is key to improving customer service and achieving better results.

As became clear during the Workshop discussions, advances in digital communication technology, the increased move to on-line delivery because of the COVID-19 pandemic, and the policy drivers promoting the Twin Transitions are having a profound impact on the development of PES delivery models.

The labour market consequences of the **4th Industrial Revolution** and the necessity for PES to modernise their services to be able to maintain their capacity to deliver support services are determining the nature of new forms of delivery models.

In some regards the implementation by PES of systems utilising **AI and Behavioural Analysis** represents a new model delivery paradigm rather than an incremental development from previous approaches. This presents PES with great opportunities to develop a strong market position, offering automated services for many customers. PES can deliver improved co-ordinated support packages for jobseekers farthest from the labour market. This provision will position PES as a vital part of the **emerging ecosystem** built upon a multi-faceted and interconnected network.

In considering potential individual service delivery enhancements PES will first need to consider the fit between a specific proposal and their **institutional setting**. This necessitates appraisal of legal and administrative arrangements, government policies regarding public service delivery, and consistency with PES policy and strategy. It will be essential to ensure that proposed changes to PES service delivery fit within and are consistent with wider changes across public service operations. It will be especially important to ensure a match between PES specific **IT enhancement, cross government digital strategy**, and pan-government service automation plans.

A largely automated PES delivery model will introduce many new issues which will need to be addressed. These include accountability questions, and new relationships between customers and suppliers of employment services. It will be particularly important to develop and maintain robust risk management protocols especially related to **Data Protection**. Management systems will need to be fit for purpose to protect customer interests in an environment where the increasing utilisation of Big Data raises policy, political, and ethical questions. These particularly apply to **protections to prevent biases** emerging through the development and application of algorithms to determine service patterns for customers.

However, resolving these issues to ensure **responsible use of systems** can release great potential for delivery of customer focussed employment services on an unprecedented scale. This will include significant new opportunities for clients facing barriers to integration to receive the support, especially from upskilling, which will equip them to access employment opportunities in growing sectors.

In conclusion an initial consideration of the feasibility and desirability of a proposal for a new PES service delivery process could usefully consider the following questions:

To what extent do proposed changes in PES service delivery:

- Introduce quicker responses to changes in the labour market?
- Enhance the profile of the PES as part of the employment service delivery ecosystem?
- Increase value added customer engagement?
- Increase PES efficiency?
- Enhance the skills of PES employees?
- Make more appropriate use of technology?
- Reduce waste and improve quality?
- How can the needs of different target groups be considered? (i.e., skilled workers who can access support autonomously through sophisticated online services and vulnerable groups who require hybrid or in-person service delivery offerings.

BIBLIOGRAPHY

Ahn, MJ, Che-Chen Y, Digital transformation towards AI – augmented public administration: The perception of government employees and the willingness to use AI in government, Government Information Quarterly Volume 39 Issue 2 April 2022.

APPV (2022) Studie kvantifikujuce dopad nastrojov aktivnej politiky trhu prace

Buttner T, Schewe T and Stephan G (2015) "The effectiveness of active labour market policy instruments in Germany" IAB Brief Report Volume 8.

Chatterjee S, the impact of AI regulation on intentions to use robots: From citizens and governments' perspectives. International Journal of Intelligent Unmaned Systems 10 December 2019.

Flemish Parliament (2021) Written Questions to the Flemish Minister for Economy, Innovation, Work, Social economy, and Agriculture

Henriques-Gomes L (2022) A failure as shameful as robodebt leaves questions only a royal commission can examine

Lawless WF, Sofge DA, Evaluations: autonomy and artificial intelligence: a threat or saviour? in Lawless WF, Mittu R, Sofge D, and Russel S (Eds) Autonomy and Artificial Intelligence A Threat or Saviour? Springer International Publishing 2017.

Leetmaa R (2020) Applying an automated tool for impact evaluation of active labour market measures – MALLE.

Leinuste K (2022) Decision Support Tool – OTT, Conference proceedings.

Leinuste K (2021) Decision support tool OTT for employment counsellors in the Estonian PES, OECD

Mogollon M (2021) Pol Emploi, Incubator Methodology

Nittyla H (2021) Using AI for jobseeking. Job Market Finland – Current issues.

Nittyla H (2020) Utilising artificial intelligence in the application process for ESCO competence, Job Market Finland – Current issues

OECD (2022) Impact Evaluation of Vocational Training and Employment Subsidies for the Unemployed in Lithuania. Connecting People with Jobs. OECD Publishing, Paris.

OECD (2022) Harnessing digitalization in Public Employment Services to connect people with jobs. OECD policy brief on Active Labour Market Policies.

OECD (2021) Impact Evaluation of Send@ - a digital tool for PES counsellors in Spain

OECD (2018) Profiling tools for early identification of jobseekers who do not need extra support. Policy brief on Activation Policies OECD Paris

O'Reilly T (2010) Government as a Platform in "Open Government Collaboration Transparency and Participation in Practice" Lathrop D and Ruma I.

Persson A, (2020) Implicit Bias in Predictive Data Profiling within Recruitments.

Pieterson W and Ebbers W (2020) Electronic Government, Re-thinking channel management.

Pôle Emploi (2022) Pôle emploi se dote d'une chatre pour une utilisation éthique de l'intelligence artificielle, Communique de presse

Salvi Del Pero A, Vourch A, and Wyckoff P (forthcoming) "Using AI in the workplace what are the main ethical issues?" OECD Social, Employment and Migration Working Papers OECD publishing Paris.

Schewe T (2017) TrEffeR (Treatment Effects and Prediction)

Sloane M, Moss E, and Chowdhury R (2022) A Silicon Valley love triangle: Hiring algorithms pseudo-science, and the quest for auditability

Vanska M (2020) The Good AI, Job Market Finland – Current issues

Westh Wiencken Vizel D, and Opstrup Hansen E (2021) The skills tool, OECD

GETTING IN TOUCH WITH THE EU

In person

All over the European Union there are hundreds of Europe Direct information centres. You can find the address of the centre nearest you at: https://europa.eu/european-union/contact_en

On the phone or by email

Europe Direct is a service that answers your questions about the European Union. You can contact this service:

– by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),

– at the following standard number: +32 22999696 or

– by email via: https://europa.eu/european-union/contact_en

FINDING INFORMATION ABOUT THE EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website at: https://europa.eu/european-union/index_en

EU publications

You can download or order free and priced EU publications at: https://publications.europa.eu/en/publications. Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see https://europa.eu/european- union/contact_en).

EU law and related documents

For access to legal information from the EU, including all EU law since 1952 in all the official language versions, go to EUR-Lex at: http://eur-lex.europa.eu

Open data from the EU

The EU Open Data Portal (http://data.europa.eu/euodp/en) provides access to datasets from the EU. Data can be downloaded and reused for free, for both commercial and non-commercial purposes.