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Pôle emploi
'Profiling and Segmentation'



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1. INTRODUCTION

The sixth Thematic Learning Dialogue (TLD) on "Profiling and Segmentation" was held on 24–25 September 2019 in Noisy le Grand, France. It was hosted by the French PES, Pôle emploi (Pe), with Participating PES coming from Estonia, Spain and Sweden. The Spanish delegation consisted of three experts, the delegation from Sweden had five experts, while due to complications only one expert from Estonia could attend the TLD. In addition, the peer PES in Belgium/Flanders sent two experts to act as supporting peers to the Participating PES. The lead expert from the ICON team was in charge of moderating the TLD. Finally, an additional member from the ICON team attended the TLD, as well as a representative from DG EMPL in the European Commission. Dossiers on the Participating PES and the Host PES had been drawn up, checked and sent to all participants before the event. A preparatory 'virtual kick-off meeting' was held on 29 August. This helped to clarify the roles of all the participants. The final agenda and participants' expectations regarding the TLD were discussed there as well.

2. PRESENTATIONS BY HOST PES

After the official welcome to all participants and a short 'tour de table', the participants were given a first general introduction into the Pe's approach to profiling and segmentation, followed by four in-depth presentations each addressing individual aspects of the strategy: (1) "Case Management", a new tool for counsellors was presented, as well as (2) the "Starting pack for newly registered jobseekers" (a new approach to profiling currently piloted at the Pe). This section concluded with (3) a presentation of the Pe's human resources strategy as well as (4) a more general presentation on the use of AI (Artificial Intelligence) in the French PES ("Intelligence emploi") on the second day of the TLD.

Between the creation of the Pe in 2009 and up to 2012, it was mandatory for jobseekers to meet their counsellor in person once every month. This approach changed in 2012 and gradually evolved into the current approach to profiling and segmentation at the Pe which is still being continuously adapted for new developments and challenges. These new strategies have been an integral part of the Pe's Change Agenda as described in the Strategic Plans for the years 2015, 2020 and 2022.

In 2012, a new personalised approach to supporting clients was introduced. It differentiates between different modalities depending on the level of autonomy of the individual jobseeker. The use of online registration and online applications for unemployment benefits in 2015 marked a crucial development in the profiling and segmentation process at the Pe. This channel for enrolment is the first step when jobseekers register with the Pe and it has become common practice. At the time of the TLD, 94 % of all jobseekers autonomously registered online with the Pe, while only the remaining 6 % received on-site support from counsellors in this process. This new practice is not only looked upon favourably with a 90 % satisfaction rate from jobseekers, it has also freed up resources. Due to this change, counsellors now have about 18 % more time for in-depth counselling since they do not have to deal with the registration procedure anymore.

The second step in this process is an initial exploratory interview conducted face-to-face between the counsellor and the jobseeker. This interview usually takes about 45 minutes and is focused on making a 'diagnosis'. During this interview, the counsellor makes use of a diagnostic tool known as "FOCUS" to address three relevant factors:

1. career mobility and projects;
2. job search;
3. personal barriers to employment.

For each of these three spheres, guiding questions are offered by the software programme which also takes into account the competences and skills of jobseekers. Based on the outcome of this assisted profiling process that measures the degree of the jobseeker's autonomy in the process of job search, the counsellor chooses between three main support modalities and associated services for each jobseeker. The categories of this segmentation are "guided", "intensive" and "overall support".

This change in the Pe's approach to profiling and segmentation is, on the one hand, driven by the need to adapt to the changing environment, especially with regard to the changing job market, and the growing need for competences and the overall process of digitalisation. On the other hand, this development also addresses growing expectations among users demanding the simple and autonomous use of services, relevant guidance from their counsellors and individualised services meeting their specific needs. Finally, the overall aim is speeding up recruitment which is the Pe's core strategic ambition. This core ambition in turn is connected to three conditions:

1. knowing and anticipating jobseekers' needs better, leading to more personalised and holistic support;
2. focussing even more on those who need more support, especially unskilled workers and employers facing recruitment difficulties;
3. acting in good time by offering targeted services at the right time to maximise the impact on recruitment.

The process of profiling and segmentation is most strongly connected to the first condition, but it can also be regarded as a prerequisite for the other two conditions.

The assessment approach in the "Starting Pack" is currently being tested as an integral part of the further development towards a more comprehensive understanding of jobseekers and their needs. The main idea behind the "Starting Pack" is to focus the investment of PES resources on the beginning of an individual's unemployment spell when transitions into the labour market are more likely to occur. More in-depth knowledge of the jobseeker and his or her competences and objectives from the very beginning facilitates the provision of more individualised, targeted and timely services, thereby speeding up the process of (re-)integration into the labour market, avoiding longer spells of unemployment.

In practice, "Starting Pack" consists of two half-days of assessment using the facilities of the local Pe office, conducted by Pe counsellors. These two half-days do not necessarily have to take place on consecutive days and they include both individual talks between the counsellor and the jobseeker, and group work/discussions with four or five other people facilitated by counsellors. The first half-day is focused on orientation and diagnosis by introducing jobseekers to the different services offered by the Pe and assessing his/her skills and proximity to the labour market. The second half-day is dedicated to determining the jobseeker's concrete actions towards gaining employment which can include activities like deciding on a job or career path, identifying training needs, setting up a company, advice on applications or the preparation of an application.

The implementation of this approach is very labour intensive and based on the assumption that this investment of Pe resources will pay off in the long run. As for now, there is no robust evidence on the success of "Starting Pack" although there is initial positive feedback. A national roll-out of this new profiling process that covers all new jobseekers is scheduled for April 2020.

One key point in the implementation of "Starting Pack" lies in the gathering of data on jobseekers and the process of job search that can be used to generate statistical evidence on "what works for who". This points to the relevance of Artificial Intelligence as another important aspect of the process of profiling and segmentation. The Pe's endeavours in this

context are bundled in "Intelligence emploi", an AI committee that controls the organisation's AI initiatives. "Intelligence emploi" is made up of representatives from the different divisions of the Pe. There are three main tasks for the AI Committee:

1. organisational engineering and change with regard, for example, to the communication of change, ethical matters and required competences;
2. external relations with other institutions, partners and stakeholders;
3. the development of AI solutions such as the management of algorithms or AI components.

The main challenge for AI in the context of profiling and segmentation concerns exploiting the available internal and external data and using the data to improve the services provided to counsellors and jobseekers.

One relevant application in the sphere of profiling and segmentation that makes use of AI is currently under development at the Pe: "Caseload Management", which is a tool for counsellors based on segmentation according to the jobseeker's autonomy in the process of job search. This tool takes into account individual needs, career paths, preferences and competences. Starting from this data, the tool provides the counsellor with a user-friendly interface to organise his or her caseload according to different criteria and helps the counsellor decide on concrete case-specific actions based on the results of the analysis. The ultimate aim is to "offer the right service at the right time using the appropriate communication channel while ensuring that the jobseekers who are most in need are identified and supported". It is also meant to facilitate the process of decision-making among counsellors. To achieve this, there are several features, among them a notification system to identify priorities requiring immediate action ("acting at the right time"), suggestions for concrete actions to be undertaken ("facilitating the process of decision-making") and the opportunity of direct contact with jobseekers via email, phone, text or chat (an "appropriate communication channel"). The 'suggestions' feature in particular is strongly linked to the application of AI. Based on evidence from the existing data, several case-specific suggestions for actions are made to counsellors. On the one hand, this provides counsellors with evidence-based suggestions on "what works for who" while leaving the final decision up to the counsellor. On the other hand, the decisions taken by the counsellor in each new case can be fed back into the system to gather new data and subsequently improve the algorithm on which the suggestions are based.

An indispensable prerequisite for the successful implementation of this tool – as for any advanced use of AI – is the willingness and skills of counsellors to gather the required data and exploit the potential provided by AI. This is why the related Pe Human Resources (HR) strategy was also presented to the participants at the TLD. In the Pe, AI is not regarded as a threat to reduce the workforce, instead it is an opportunity to provide additional time for in-depth counselling by automating certain routines and data-driven aspects of the counselling process. Therefore, HR has to address the change in the tasks and job profiles of counsellors and provide them with adequate training to work with new tools and adapt to the ongoing technical change process at the Pe and the working world in general. But automation also raises more fundamental questions for counsellors and even PES in general: what role does AI play in the process of decision-making with regard to the autonomy of humans in charge of the process? As a consequence, the change of attitude among job counsellors towards AI has to be taken into account by an HR strategy just like the technical aspect of training counsellors to use new tools. Accordingly, the Pe has developed several learning methods to tackle these challenges with the expressed aim of "keeping a human being at the centre of AI": coaching as a support to both managers and counsellors, job shadowing, the sharing of best practices and the initiation of learning communities to foster

exchange among counsellors. The aim is to support the change process towards an increased use of AI by changing the attitude of counsellors through offering customised methods.

The discussion among the participants of the TLD focussed quite strongly on the aspect mentioned above: what decisions could/should be automated by the use of AI and how much discretionary power should be left with the counsellors? While some PES tend to automate at least the initial prioritisation of jobseekers based on the available data, other PES deliberately leave all these decisions up to counsellors. This is basically an ethical matter since it involves such questions as possible discrimination by algorithms, and the acceptance of automated processes among jobseekers and the general public. The TLD participants agreed that the acceptance of these changes is at least partly determined by the culture of each country, but acceptance is also subject to a suitable communications strategy which can open opportunities for public administrations wanting to increase the use of AI. This is why communications should be directed at all relevant groups: jobseekers, staff, the general public and supervising authorities.

Another more practical aspect that was discussed several times by participants during the TLD concerned the data requirements and strategies for gathering data among jobseekers. This included questions such as the integration of competences into profiling, the automated collection of data, a system of self-service for jobseekers when they register, data protection issues such as what kind of data can be collected and stored as well as finding the right balance between a comprehensive data set/questionnaire in the process of profiling while at the same time avoiding giving jobseekers too many questions.

3. WORKING GROUPS AND THEIR RESULTS

There were two group work sessions in total, the first one (on day one of the TLD) lasted around two hours, and the second one (on day two) lasted around one and a half hours. At the end of each working session, the results were presented and discussed in a plenary session. For the working sessions, the following pairings were made between Participating PES on the one hand and the Host PES or supporting peer PES on the other hand: a representative from the Host PES was the supporting peer for the Spanish delegates, while both the Estonian delegation and the Swedish delegation were supported by one representative each from the Flemish/Belgian PES.

3.1 FIRST WORKING SESSION: STOCKTAKING

The first working session aimed to identify those elements of the Host PES that offer interesting ideas for the Participating PES in their specific situation. Since the context, mandate and current challenges faced by the Participating PES are different, different aspects of the Host PES were highlighted. In addition, the supporting peers from Flanders/Belgium provided additional input, based on their specific experiences.

Estonian Unemployment Fund (EUIF)

In general, the Estonian PES, the EUIF, was found to be one of the most mature PES according to the Feedback Report of the 2nd PES Benchlearning cycle. However, there were still some suggestions given by the external assessors which also referred to the topic addressed by this TLD: the expansion of online services, the use of self-service by customers, as well as a systematic approach to channel management, were all deemed useful steps in the expansion of the EUIF's digital services. The newly developed automatic profiling tool is meant to both increase self-service among 'autonomous' jobseekers as well as providing a basis for choosing adequate service channels for every customer. By applying this approach, the EUIF also makes more use of the data already in their system.

The core of the newly developed profiling tool is providing counsellors with additional information on the individual risk of long-term unemployment for every jobseeker. This information, in turn, is linked to decisions determining the intensity of counselling as well as the choice of a suitable channel for counselling. The main aim connected to the introduction of this tool is to save time in the process of evaluating a jobseeker's situation. These resources can then be used to focus on in-depth support for those jobseekers most in need, while spending less time on autonomous jobseekers. The 'most in need' jobseekers require more frequent and personal counselling, while the autonomous group can focus on digital self-service that requires less resources from counsellors.

By the time of their participation in the TLD, the technical side of the development of this tool had already been completed. Since there was a large consensus on the necessity and helpfulness of this approach among the different levels staff in the EUIF, there was no need to mobilise staff support for this initiative. Still, several remaining practical and legal challenges were identified and addressed during the group work session that will have to be tackled as the process of implementation continues:

- On the practical side, there is the need to train counsellors and managers in the practical application of the new tool. Furthermore, they also have to be provided with a basic technical understanding of the workings of the algorithms and how their decisions feed back into the learning of the algorithm. Another related issue refers to (potentially) sharing the results of the profiling with jobseekers and explaining their meaning to them. For now, this information is only available to counsellors and exclusively used by them. This extended use of the profiling results would have to be carefully integrated into the process of counselling.
- On a strategic level, the matter of a proper PR strategy has to be tackled, especially with regard to jobseekers and the general public. The opportunities posed by this new tool should be systematically and pro-actively communicated to all relevant external stakeholders to secure broad acceptance for its introduction. The main challenge in this context is to avoid the expected criticism for "rating" jobseekers with the new profiling tool, which might imply possible discrimination based on automated decisions.
- Finally, there are legislative challenges. At the moment, it is mandatory for counsellors to meet all their clients once a month. In addition, the use of e-services is limited to the first three months of the individual unemployment spell for legal reasons. These legal regulations currently hamper the focussing of resources in the counselling process and the expansion of digital services.

Matters of communication and training were intensely discussed during the group work sessions, and initial ideas for dealing with these matters were developed. Furthermore, approaches to quality insurance, like the setting-up of a suitable PDCA (Plan Do Check Act) cycle were addressed, as well as evaluation strategies for the implementation of the new profiling tool.

Servicio Público Empleo Estatal (SEPE)

The Spanish PES, the SEPE, not only operates under quite different political and institutional conditions from the Estonian PES, but it is still in the process of developing a statistical profiling tool. This step was also a key recommendation of the external assessors in the 2nd PES Benchlearning cycle. It was suggested to the SEPE that they should develop and establish a holistic profiling tool taking into account formal qualifications, work experience and informal competences. This was also meant to strengthen the cooperation between the SEPE and the country's 17 regions which have a high degree of autonomy in providing employment services in their regions.

At the moment, there is already a certain degree of shared practices and common services among Spain's regions which are coordinated by the SEPE: a common 'service catalogue' has been established, common pathways for jobseekers have been defined and put into action, there is a shared approach to labour market research and at least 10 out of the 17 regions currently apply a common questionnaire for the process of profiling jobseekers. To further progress profiling and segmentation among the SEPE and all regions, a formal agreement was reached for developing and implementing a tool for statistical profiling that will be uniformly implemented and used in every region. This tool is also meant to facilitate the process of decision-making for counsellors by giving evidence-based suggestions based on the results of the profiling. The achievement of this goal is scheduled for the end of 2020.

Also, some practical steps have already been taken in the implementation process. A budget for this new tool has been allocated at a national level although it has not been provided yet. This also includes the decision to hire 3,000 additional counsellors nationwide. Furthermore, SEPE have set up a team that will be in charge of the implementation process. In the current (initial) phase of this change project, there are two major challenges:

- First of all, it has to be determined which key parameters relevant to assessing the individual jobseeker's employability have to be included in the profiling tool. Basically, it should contain information on jobseekers' professional experience, training, personal skills and their labour market situation. How to gather this data and how to phrase the corresponding questions still has to be decided.
- A second challenge concerns the homogenisation of data between the regions. Due to the relatively high degree of autonomy, the quality and structure of the data gathered varies strongly. However, the implementation of a common profiling tool requires a harmonised database between all regions.

Based on an agreed questionnaire and homogenised data, the tool itself has to be developed and put to work. During this second phase of implementation, there are two main tasks to be performed:

- A suitable training structure has to be set up to provide all counsellors with the required skills to apply the new tool and interpret the results provided by the algorithm.
- Furthermore, the outcome of the profiling will be linked to segmentation. This segmentation, in turn, will be connected to different pathways for jobseekers. This means that standardised processes based on the results of the profiling have to be developed and established on a national basis.

Because the change project of the SEPE is still in a relatively early stage, the focus of the group work during the TLD was on defining the most essential prerequisites regarding data structure on the one hand, while, on the other hand, the focus was on determining the next steps while identifying possible obstacles based on the experiences of more mature PES like the Pe. One problem that is not to be underestimated in this process is Spain's unique 'institutional constellation' in terms of its regions. The SEPE is faced with the task of furthering cooperation between the relatively autonomous regions, which requires substantial amounts of harmonising that will not easily be achieved.

Arbetsförmedlingen (Af)

An altogether different political situation poses one of the main challenges for the Swedish PES, the Arbetsförmedlingen (Af). There have been major political uncertainties in recent years which have directly affected the Af and its mission. This led to the start of a politically

motivated and complex reform process that should be completed by 2021. One core element of this reform process is the strengthening of external providers in the process of counselling and placement. To facilitate and monitor the work of external providers, the Af is to provide them with sufficient support and tools, including profiling tool. Furthermore, there have been sharp budget cuts drastically reducing the number of Af employees. These developments will require a greater automation of processes.

The current main objective for the Af, regarding the TLD, is to develop an AI-based application that will rank, profile and target jobseekers by measuring their individual distance from the labour market. With regard to *external* providers, the outcome of this profiling process is also linked to the fees paid to them for placing jobseekers. There is no need to "sell" the idea of developing a new profiling tool, since it has already been decided by the supervising authorities. However, there are different technical but also legal and ethical matters that have to be tackled in the process of its development and implementation:

- Regarding technical matters, it still has to be decided which data to include in the processes of targeting and profiling. This also entails the questions of how to integrate AI into the improvement of assessment and decision-making and how to technically implement machine learning¹ in this process. A third aspect concerns the user-friendliness of the tools and the interfaces.
- A main strategical challenge is posed by the creation of trust, both externally and internally. The current profiling tool is unfortunately only used by a few counsellors, since its use is not mandatory and there is relatively little trust in its helpfulness. Therefore, trust in the accuracy and usefulness of a new profiling tool has to be built among counsellors to encourage its use, e.g. via their inclusion in the development process. Externally, criticism is anticipated regarding possible discrimination and lack of transparency because of the introduction of an automated processes. In this situation, a suitable PR and communications strategy needs to be developed to create trust among both political actors and the general public.
- Finally, there are currently some restrictions due to national legislation and EU-wide GDPR regulations. These generally hamper the use of certain types of data for automated profiling processes and also prevent the inclusion of 'transversal' soft skills (that work across different departments) in the IT system. Overcoming these obstacles, and working out technical solutions that are in line with GDPR regulations, will mainly be a matter of achieving legal changes at the national level.

Since the Af is undergoing a fundamental change at the moment and the political situation regarding the Af's future remains somewhat unclear, implementing this change process in a relatively short span of time can be regarded as highly challenging. And although there is a very clear idea of what tasks have to be performed and which obstacles have to be tackled, there remains a relatively high degree of uncertainty about actually ensuring this change process happens. In this context, exchange with other PES which have had similar experiences of dealing with fundamental changes are of further interest to the Af.

3.2 SECOND WORKING SESSION: ADAPTATION

The objective of the second working group session was to build on the first session, this time with concrete ideas for activities supporting the change process within PES, based on the example presented by the Host PES. Assisted by supporting peers and experts from the Host PES, all the Participating PES managed to elaborate an Outline of Change with milestones, in line with their identified needs. They also pointed out potential activities and

¹ Machine learning is an application of AI that creates systems with the ability to automatically learn and improve from experience without being explicitly programmed.

sub-tasks, potential deadlines, responsibilities and relevant stakeholders that need to be included in the next steps.

4. GENERAL CONCLUSIONS FROM THE TLD

As can be seen in the documentation from the working group sessions, the institutional and the political conditions under which the Participating PES operate differ vastly. This includes the specific focus of their relevant projects, and where they are in terms of their implementation. However, some aspects were of relevance to all participants and were discussed not only against the backdrop of the approach presented by the Pe, but also in more general terms:

- a) **Data requirements:** for all PES, one fundamental practical question concerns the decision on the data that needs to be included in the profiling process, e.g. on qualifications, work experience and labour market conditions, but also soft skills and the personal situation of the jobseeker. In this regard, it is essential to strike a balance between the inclusion of significant and relevant data on the one hand without burdening the process of information gathering with long questionnaires on the other hand.
- b) **Training:** the use of new profiling software inevitably creates a need for staff training. This refers not simply to the technical application of the tool but also to the interpretation of the results provided, and the actions based on them. Furthermore, this change in the approach to counselling has to be taken into account when training staff as automation significantly changes some aspects of their work.
- c) **Internal and external trust:** connected to the new approach to profiling is the issue of staff trusting these changes. Counsellors should not be made to feel superfluous but instead they should recognize the opportunities provided by this change. Externally, possible concerns regarding discrimination through automated processes and the compliance with GDPR regulations also require the creation of trust.
- d) **Ethical matters:** finally, it has to be decided how far decisions in the profiling and subsequent counselling process can and should be automated. While in some PES the final decision always remains with the counsellor, other PES tend to automate at least some processes, especially the prioritisation of jobseekers. Whether or not this should be done is fundamentally an ethical question and the answer is always related to the cultural background of each PES.

According to the post-event survey, there was a broad consensus among the participants that the contents presented by the Pe were helpful. 85% rated both the general introduction of the Pe's approach to profiling and segmentation as well as the in-depth presentations on particular elements and tools as being either "good" or "very good". The same rate of approval was also expressed for the working in groups sessions. Some room for improvement was seen for the balance of group work and presentations as only 38% considered the balance "exactly right". Furthermore, 29% rated the wrap-up sessions on day two of the event as "average", which points to another opportunity for improvement. One concrete suggestion from a participant was an extension of the role of the supporting peer PES: it could be helpful if supporting peers also got the opportunity to present their approach to the issues discussed.