

# Increasing the efficiency of the public employment services with the reform of its ICT systems

CATALOGUE OF REQUIREMENTS

**Technical Support Instrument**

*Supporting reforms in 27 Member States*



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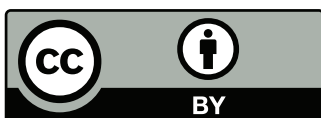
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## Table of abbreviations

<b>AMS</b>	Arbeitsmarktservice (Austrian Public Employment Service)
<b>DG REFORM</b>	Directorate-General for Structural Reform Support
<b>EURES</b>	European Employment Services
<b>FPIR</b>	Financial Information system for Employment Policies
<b>HMIT (HU: ITM)</b>	Hungarian Ministry for Innovation and Technology
<b>ICT</b>	Information and Communication Technology
<b>IR</b>	Integrated IT System for Employment Policy
<b>IT</b>	Information Technology
<b>NISP (HU: NISZ Zrt.)</b>	National Infocommunications Service Company
<b>PES</b>	Public Employment Service
<b>RINA</b>	Reference Implementation for a National Application

## 1. Executive summary

This report is the third deliverable of the project to provide consultancy services for **“Increasing the efficiency of the public employment services with the reform of its ICT systems”** within the contract signed with the Directorate General for Structural Reform Support (DG REFORM) of the European Commission, for the **benefit** of the **Hungarian Ministry of Innovation and Technology** (HMIT for short). The project is implemented by NTT Data in consortium with AARC Ltd. and with AAM Management Information Consulting Ltd as the subcontractor of NTT Data (the Consultant), with the aim to prepare, in line with Article 3 of the TSI Regulation, **a structural reform in Hungary in the area of Digital Public Administration**, particularly as it relates to **employment policy**. The expected outcomes of the project are that the Hungarian administration is ready to renew the IR system to support simplified client services processes and serve as a reliable data source on employment policy data, especially the registered unemployed.

After the completion of the current situation assessment, and having discovered the problems and constraints of the current operation and IT support of the PES client management processes, this report focuses on the **requirements identified regarding the future processes and system**. The report and annexes describe in detail the creation and content of the **Catalogue of Requirements** and the **PES Network information exchange** that is another important part of this phase of the project, focusing on learning from the experience and best practices of other PES Network members relevant to this topic.

During the creation of the Catalogue of Requirements, the consultant team used GAP requirement analysis to create a preliminary list of requirements, based on the identified problems and constraints from the current situation assessment. The preliminary list of requirements was validated and completed during a set of workshops with the experts of the Beneficiary (HMIT), NISZ Zrt. and the Prime Minister’s Office. After these workshops, the completed Catalogue of Requirements was consolidated by the consultant team (the requirements were categorized, similar requirements were merged, and all requirements were elaborated in detail, based on different aspects).

The final Catalogue of Requirements (Annex 1) contains 94 different requirements in 24 groups and 38 different sub-groups. The requirements are elaborated in detail based on 15 aspects (requirement group ID, group name, sub-group ID, sub-group name, description, potential solutions, urgency, importance, legal/ regulatory effect, legal level, legal area). Additionally, on a separate sheet, it contains 14 out of scope requirements, which are elaborated in detail, based on 5 different aspects (sub-group name, description, legal/ regulatory effect, legal level, legal area).

Besides the Catalogue, the consultant team created a detailed questionnaire for European PES Network members in order to discover similarities between the operation and client

management of other PES Network members and the Hungarian PES, and learn from their good practices, pitfalls and overall experience. The questionnaire (Annex 2) was distributed among 7 PES Network members (Netherlands, Austria, Estonia, France, Slovenia, Slovakia and Sweden). From these 7 countries, 5 responses (Annex 3) were received from the Netherlands, Austria, Estonia, Slovenia and Sweden. After the analysis of the responses, the consultant team recommended 2 specific entities (Austria, Estonia) for further and more detailed information exchange. The analysis and recommendation (Annex 4) focused on similarities with the current operation and structure of the Hungarian PES, as well as similarities with the requirements identified in the Catalogue of Requirements. After acceptance of the consultant's recommendation, 2 interviews were organized with the relevant representative of the Austrian AMS (Arbeitsmarktservice) and the Estonian PES (Eesti Töötukassa). The interview questions can be found in Annex 5.

The details and main learning points of the 2 interviews are elaborated in the 4<sup>th</sup> chapter of this report. The interviews helped to validate and complement the Catalogue of Requirements and will act as a useful source of information for the upcoming phases of the project (assessment of alternative to-be scenarios and specification of the desired future state).

## 2. Methods used

### 2.1 Approach for the creation of the Catalogue of requirements

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During the current situation assessment phase the consultant team collected a detailed list of issues, constraints and problems concerning the current operation and IT support of the PES client management processes.

Using GAP requirement analysis, based on the list of these issues, constraints and problems, a preliminary catalogue of requirements document was created. The document contained 119 different issues, with detailed elaboration in 5 aspects (issue type, issue group, name of the issue, description, and source). For each of these issues, one or more preliminary requirements were specified by the consultant team and were detailed, based on 5 different aspects (description of the requirement, potential solutions, legal and regulatory effects connected to the requirement, legal and regulatory level, and legal area).

At this stage of the project phase, the consultant team organized and facilitated a round of workshops with the experts and stakeholders of the Beneficiary, and two additional organizations (NISZ Zrt. and the Prime Minister's Office). During these workshops the contents of the preliminary catalogue of requirements were validated, complemented, and prioritized, based on 2 additional aspects, urgency and importance.

After these workshops, the requirements have been consolidated and organized into groups, and the catalogue of requirements document was finalized and completed.

The main focus of the created document is to list and categorize the high level gaps and requirements discovered during the process. As it was developed based on a GAP requirement analysis, it does not contain the required (technical and operational) features of the future processes and IR system, which already exist and are already in use for client management and its current IT support.

## **2.2 PES Network peer research and review approach**

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During the third phase of the project, the consultant team reviewed the current operation and client management processes of some selected PES Network members. The main goal of this activity was to discover similarities between the operation and client management of other PES Network members and the Hungarian PES, and learn from their good practices and experience.

As the first step of the PES Network review, the consultant team created a detailed questionnaire focusing on the current operation and structure of other PES Network members, in order to see how similar the reality of each member, compared to the Hungarian PES is, and in order to see good practices, pitfalls and success stories from the PES Network. The questionnaire consisted of 3 main sections, containing 27 questions.

The first part focused around the range and volume of different case types handled by the entities, and their level of digitization and e-administration. The second section aimed at discovering the structure, operation and the responsibility sharing between the local organizations of the specific PES Network members. Last, but not least, the third section contained several questions about the IT support and IT systems behind the client management of the entities.

Based on the recommendation of the HMIT, the questionnaire was sent to 7 PES Network members (Netherlands, Austria, Estonia, France, Slovenia, Slovakia and Sweden). Upon the receipt of the questionnaire results, the submitted answers were analyzed by the consultant team.

Based on the analysis of the questionnaire results, the Consultant recommended 2 PES Network members for further exchanges via personal meetings, taking into consideration their similarity to the Hungarian PES and their experience in overcoming similar difficulties regarding client management.

## **3. Catalogue of Requirements**

After finishing the round of workshops with the experts of the Beneficiary and additional stakeholders, the project team organized the collected information regarding the Catalogue of Requirements. The validated requirements were re-organized, based on their similarities to each other, considering the areas and/ or processes related to them and affected by them. Similar requirements were grouped into 24 different requirement groups (requirement group ID). An additional group was separately created for

requirements that were mentioned during the workshops, but are out of scope for the project and these have been moved to a separate worksheet.

The 24 different groups were organized into sub-groups containing identical or close to identical requirements. Then the identical requirements were merged, together with their root issue and legal connections. This step was necessary in order to remove redundancies and make the catalogue more consistent.

The consolidated Catalogue of Requirements contains 94 different requirements in 24 groups and 38 different sub-groups. The requirements are elaborated in detail based on 15 aspects (requirement group ID, group name, sub-group ID, sub-group name, description, potential solutions, urgency, importance, legal/ regulatory effect, legal level, legal area). The reason behind the detailed analysis of the requirements' and potential solutions' legal effect is that the potentially needed legal changes behind specific requirements might influence the way they can be implemented. This affects the decisions between alternative to-be scenarios and solutions. There are 14 out of scope requirements, which are elaborated in detail, based on 5 different aspects (sub-group name, description, legal/ regulatory effect, legal level, legal area). The problems (discovered during the current situation assessment) behind the same requirements were merged and elaborated based on 2 aspects (name and description).

The priorities of requirements (urgency and importance) were given on a 1-3 scale by each expert, where 1 represents high priority and 3 represents low priority. In case different experts gave different priorities to the same (later merged) requirement, the average of the different priorities is displayed.

The requirement groups in the catalogue of requirements are the following:

- System architecture: containing 1 sub-group and 1 requirement
- Administrative process: containing 4 sub-groups and 8 requirements
- Data validation: containing 1 sub-group and 2 requirements
- Process support: containing 1 sub-group and 2 requirements
- User interface: containing 1 sub-group and 1 requirement
- Authorization: containing 1 sub-group and 4 requirements
- e-Administration: containing 1 sub-group and 7 requirements
- Online data-connections: containing 2 sub-groups and 5 requirements
- FPIR integration: containing 1 sub-group and 1 requirement
- Electronic document registration: containing 1 sub-group and 2 requirement
- Document templates: containing 2 sub-groups and 3 requirements
- Statistical functionality support: containing 4 sub-groups and 23 requirements
- Framework handling: containing 1 sub-group and 1 requirement
- System performance: containing 1 sub-group and 3 requirements
- RINA data-connection: containing 1 sub-group and 1 requirement
- EURES support: containing 1 sub-group and 2 requirements
- Development process: containing 4 sub-groups and 10 requirements
- Internal audit: containing 1 sub-group and 1 requirement
- Performance measurement: containing 1 sub-group and 1 requirement



- PES interface: containing 1 sub-group and 1 requirement
- Job seeker – employer matching: containing 2 sub-groups and 4 requirements
- Trainings: containing 2 sub-groups and 3 requirements
- Organization of work: containing 2 sub-group and 7 requirements
- Multi-channel customer service: containing 1 sub-group and 2 requirements
- Out of scope requirements: 14 requirements

The complete, consolidated Catalogue of Requirements can be found in Annex 1.

The consultant team will use this document during the preparation of Deliverable 4 (Evaluation of alternative to-be scenarios and Recommendation Report) and Deliverable 5 (To-Be situation report and technical specifications) as well, in order to recommend and find potential to-be scenarios that react on the gathered issues and fulfil the gathered requirements as well. However, it is important to mention that the Catalogue of Requirements does not cover the detailed requirement specification of the future IR system, only the high level gaps between the current situation and the desired solution. Detailed technical requirements will be analyzed during the upcoming phases of the project.

#### **4. PES Network peer research and review**

Out of 7 PES Network members, who were targeted by the PES Network questionnaire, the consultant team received answers from 5 countries (Netherlands, Austria, Estonia, Slovenia and Sweden). The received answers were analysed, based on 4 main aspects:

- Functional similarity to the operation of the Hungarian PES
- Modernity and development period of the PES Network members' IT support system(s)
- Maturity, flexibility and level of integration of the PES Network members' IT support system(s)
- Organizational and operational similarity to the Hungarian PES

Based on the analysis, 2 PES Network members were chosen, and recommended by the consultant team, for further information exchange, Estonia and Austria. The reasons behind the recommendation are the following:

- Based on modernity and period of development of the IT support system, the Austrian PES is the most relevant. Besides them, the Estonian PES can also provide valuable information based on their current experience with planning the development of IT support systems.
- When it comes to e-administration capabilities, flexibility, maturity and level of integration, the Austrian and Estonian IT systems stand out from the PES Network members' IT solutions.
- Regarding the organization of operation of PES, the Austrian model is quite similar to the cooperation of the Hungarian PES and NISZ Zrt. in Hungary.

Additionally the Estonian model can provide valuable inputs for the preparation of the Hungarian system development with their experience in outsourcing.

- When it comes to the remaining 3 PES Network members, the Dutch PES is less relevant due to differences in handled case types (no active labour market programmes). The Slovenian system was developed in 2004 so it is less relevant when it comes to modernity. Last but not least, even though the Swedish PES is outstanding in modernity and e-administration, the organizational setting is different from the Hungarian PES (the IT development is handled within the Swedish PES).

The detailed analysis of the answers, and the recommendation, can be found in Annex 4.

Upon the approval of the Beneficiary, regarding the 2 PES Network members recommended by the consultant, 2 interviews were organized with the Austrian and Estonian PES.

During the information exchange interview with the Austrian PES, the interviewee was the Head of AMS's (Arbeitsmarktservice) Executive Office. In general what we learnt about the Austrian system is that its development started between 1980 and 1990, and it is going through continuous improvements, containing modules that are around 35 years old, while having modules and features that are less than a year old.

As there are no nationally developed IT functions and features in Austria, the IT support system is 95-98% custom made for AMS. Even though the regions in the country have a greater autonomy than in Hungary, the Austrian PES is a federal organization, thus the IT infrastructure and the development of the system is centralized.

The system's functionality covers the administration of unemployed citizens, enterprises with vacancies, ALMPs, foreign workers and more. It also supports the matching process of job seekers and employers since more than 20 years and it is capable of supporting the posting of vacancies for enterprises and profiles for job seekers as well. These features and modules are integrated in one system, and are connected to the same database as well. When it comes to data handling, the system has active interfaces with multiple other databases of other organizations (e.g. social security system, refugee database, work permit database) and is able to use them for data validation.

As mentioned before, the AMS is quite experienced in e-administration and self-service capabilities when it comes to client management processes. The self-service capability in their system was developed more than 10 years ago, and now is capable to handle all services and features available for clients through their accounts regardless of what device they use, personal computers, laptops or mobile phones. With some exceptions, the clients have the free choice of channel, which means they can use the system's self service capabilities or handle their cases in person.

When it comes to the support of case workers and the employees of AMS, the current IT system has workflow support for all processes, and is built to handle electronic filing. In case of self-service, the cases are assigned automatically to case workers, and in case it is

paper-based they are distributed automatically on a regional level and the assigned manually to case workers.

Regarding future developments, they have a strategic and financial plan ready, to improve the system, specifically in the areas of matching and self-service in order to provide a better customer experience.

The main learning points from the AMS information exchange were the following:

- If it is possible, completely rebuilding a system like this, is less expensive and difficult in the long term, than continuously improving the current system, and adding new features to it
- It is important to have access to other data bases in order to exchange data with other organizations in order to improve data quality through validation and the efficiency of administrative processes
- It is important to separate outdated, potentially unnecessary data and have an archiving methodology in place, to ensure the efficient operation of the system
- If possible, it requires less resource to re-use nationally developed features and functionalities, than managing custom developments

When it comes to the Estonian PES (Eesti Töötukassa), the consultant team interviewed 3 experts from the organisation, including the Head of International Relations and the Head of Information System Development.

In general, the Estonian IT system supporting the processes of PES is quite new and has a high level of automation, work-flow based operation and e-administrative capabilities. The development of the current IT system is continuous, but started after the previous system (developed in 2009) was already 10 years old, and needed to be replaced. Due to the size of the old system, and in order to ensure the continuous operation, the new system was developed step-by-step. First, a draft, 5-7 year-long implementation and development plan was created, based on the main priorities of the administration and legal, regulational changes. The second most important aspect was the interdependence and connections between the system components. By following the priorities, and adjusting the plan if needed, the new system (first the registration of unemployed, later the support of available services etc.) was developed.

In terms of development, similarly to the Austrian system, the Estonian IT system is a result of custom development. There is a separate system for bookkeeping, finances and supporting human resources, which is a standard solution, Microsoft Navision. The only nationally developed component is the 'TARA' authentication system that is used by all governmental institutions and their systems. Additionally, there is a central portal in place, where clients can access all governmental services through links. However other than this common platform, all systems are developed independently.

The development, maintenance and operation of the IT system is fully outsourced to private companies, through public procurement and framework contracts, which makes the development and implementation of continuous changes faster and more efficient.

As mentioned, due to the recent development of the IT system, and in general, the high level of digitalization in Estonia allows the IT support system to be almost fully automated and work-flow based, with high e-administrative capabilities. The ratio of manual documentation is around 5% only as the system has automatic access to data from multiple other institutions and their databases (population, tax & customs board, social insurance board (pensions), education and business register, army register etc.) with reliable data available online. This supports flexible document generation and management with automatically imported data, and automated decision making in less complex cases as well. Documents and templates can be easily modified by the system administrators, in case it is needed.

Besides the advanced e-administrative capabilities and developments from the Estonian PES, the citizens also have a high demand in terms of e-administration. All cases, where no in person consultation is needed, can be handled electronically, without paper-based documentation. The clients can check, correct their data online and see the decisions made in their cases as well. The most common cases, where the data is not available online, are connected to work or studies abroad.

When it comes to the support of case workers and the assignment of cases, the system is quite advanced. It shows the current steps and tasks for each case and supports the case workers with reminders as well. One case and workflow can go through multiple colleagues, as everyone has different roles and privileges based on their position. In general, back office tasks are assigned automatically, and client cases are individually assigned, based on their complexity and the colleagues' experience. Even though it is not commonly used, the system supports performance assessment and the recorded data can be analysed to find the bottlenecks of different processes and cases.

Last, but not least, when it comes to future developments, in general the business needs and the business strategy are the most important. Based on the business strategy, bigger development projects are identified, and all developments are planned, based on further business analysis. Other than this, urgent legal and regulational changes can always influence the developments. For these cases, if there is enough preparation time, the development starts before the legislative changes, in other cases the development is parallel, or starts without the finalised legal change.

The main learning points from the Eesti Töötukassa information exchange were the following:

- It is important to continuously develop the existing IT systems in alignment with the business needs and strategies, besides the implementation of legal changes
- When it comes to replacing large IT systems, step-by-step development and prioritisation can be more efficient for the implementation of the new system

- Having connections with external data sources makes it easier to automate process, thus making the operation faster and more reliable by eliminating the possibility of manual mistakes
- Work-flow based IT systems make processes more efficient, faster and support the case workers as well, even in case of methodological changes

## 5. Annexes

### 5.1 Annex 1. Catalogue of Requirements

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Attached as a separate file // külön fájlban csatolva:  
*Annex1\_Kovetelmenyjegyzek\_v2.0.xlsx*

### 5.2 Annex 2. PES Network Questionnaire

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Attached as a separate file // külön fájlban csatolva:  
*Annex2\_Questionnaire\_for\_PES\_Network\_members\_v1.0.docx*

### 5.3 Annex 3. PES Network Questionnaire Responses

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Attached as separate files // külön fájlokban csatolva:  
*Annex3.1\_Client\_management\_processes\_and\_supporting\_IT\_systems\_Austria.docx*  
*Annex3.2\_Client\_management\_processes\_and\_supporting\_IT\_systems\_Estonia.docx*  
*Annex3.3\_Client\_management\_processes\_and\_supporting\_IT\_systems\_Netherlands.docx*  
*Annex3.4\_Client\_management\_processes\_and\_supporting\_IT\_systems\_Slovenia.docx*  
*Annex3.5\_Client\_management\_processes\_and\_supporting\_IT\_systems\_Sweden.docx*

### 5.4 Annex 4. PES Network Questionnaire Analysis and Recommendation

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Attached as a separate file // külön fájlban csatolva:  
*Annex4\_PES\_network\_kerdoiv\_ertekeles\_es\_javaslat\_v1.0.docx*

### 5.5 Annex 5. PES Network Interview questions

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Attached as separate files // külön fájlokban csatolva:  
*Annex5.1\_AMS\_PES\_interview\_questions\_v1.0.docx*  
*Annex5.2\_Eesti\_Tootukassa\_PES\_interview\_questions\_v1.0.docx*

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