

## **ANNEX VIII**

### **PES information technology systems: interoperability and automated support tool**

# CONTENTS

<b>1. INTEROPERABILITY: NO SINGLE SOLUTION BUT COMBINED USE OF COMMON DATA PLATFORMS AND APPLICATIONS.....</b>	<b>1</b>
1.1. In France: scattered customer information systems with little communication ..1	
1.1.1. <i>The scope of the study concerns information systems for the management of career paths .....</i>	<i>1</i>
1.1.2. <i>Diverse information systems without unified governance.....</i>	<i>2</i>
1.1.3. <i>On the perimeter of the support, a lack of interoperability.....</i>	<i>4</i>
1.2. In Germany: a single tool covers most of the paths of job seekers.....5	
1.2.1. <i>Main ways in which the PES actors take charge of the situation .....</i>	<i>5</i>
1.2.2. <i>In the majority of cases, the accompaniment of job seekers is monitored in a common tool.....</i>	<i>5</i>
1.2.3. <i>An efficient system for collecting control data through a common platform .....</i>	<i>6</i>
1.3. In Belgian Flanders: a <i>minimal</i> solution based on sharing the VDAB application, pending better IS interconnection .....	8
1.4. In Denmark: IS unified around common tools and platforms .....	9
1.5. In South Korea: a common database ensures interoperability of information systems.....	9
1.5.1. <i>Organization of the PES and IS: the central organization of the PES allows for centralized management of information exchanges .....</i>	<i>10</i>
1.5.2. <i>Interoperability is ensured while maintaining the IS of each of the players .....</i>	<i>10</i>
<b>2. AUTOMATED DECISION SUPPORT: APPLICATIONS FOR ORIENTATION AND DIAGNOSIS, BUT STILL CAUTIOUS USE.....</b>	<b>11</b>
2.1. In Germany: tools for career guidance .....	11
2.1.1. <i>Automation is carefully used and supervised by an ethical committee .....</i>	<i>11</i>
2.1.2. <i>Automated decision support to enrich career guidance .....</i>	<i>12</i>
2.2. In Belgian Flanders: an offer of help from diagnosis to placement.....	13
2.2.1. <i>A dedicated production structure and several decision support applications deployed.....</i>	<i>13</i>
2.2.2. <i>Applications ranging from initial diagnosis to matching.....</i>	<i>13</i>

## INTRODUCTION

The subject of information technology (IT) systems cuts across the five themes identified by the mission with its sponsors. Two priority areas have been identified as a result of the initial scoping work:

- ◆ the interoperability of information technology systems which, in addition to the disadvantages of fragmented or redundant information systems for their operators and users, often reflects problems of governance between the players;
- ◆ the exploitation of data and the use of automated decision support tools in the support process.

### **1. Interoperability: no single solution but combined use of common data platforms and applications**

#### **1.1. In France: scattered customer information technology systems that communicate little**

The mission had to carry out, within the timeframe available, an assessment of the information systems of the PES actors in France in order to define the benchmark's areas of work. These analyses were carried out under time pressure and should be completed by a more in-depth study of the French PES information systems.

The subject has been little documented publicly. For example, it has not been addressed in the last two evaluations of the tripartite agreement between the State, the French state agency and Pôle Emploi. The mission relied on the report of the Cour des Comptes on the digital services of Pôle Emploi, written in 2020<sup>1</sup>, and on thematic reports, such as the one on the IS of local missions<sup>2</sup>. The study of these reports was supplemented by interviews and documents provided by stakeholders.

##### **1.1.1. The scope retained concerns the information technology systems for the management of career paths**

The PES actors each have their own information system that meets their business needs, which can be classified into three functional categories according to the main uses:

- ◆ **Client IT** manages the administrative and financial situation and the career path of job seekers;
- ◆ The **Enterprise IT** ensures the collection and distribution of job offers and applications;
- ◆ **Support IT** contribute to the internal functioning of the organization, such as for HR, accounting and finance missions.

---

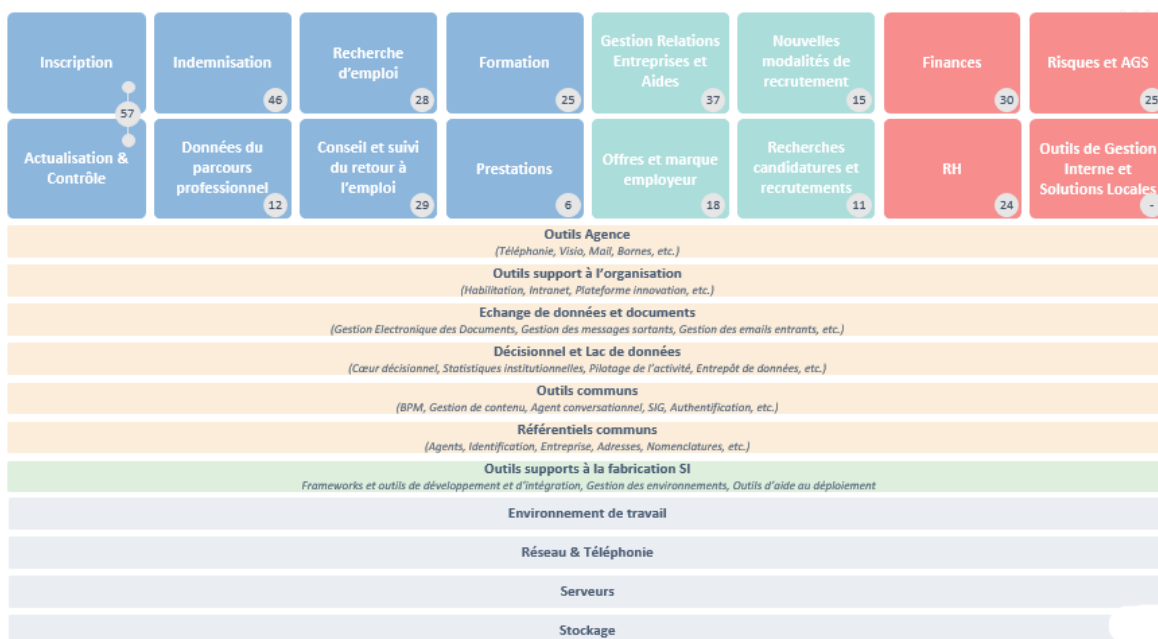
<sup>1</sup> Cour des Comptes, February 2020: "*Les services numériques de Pôle Emploi: une transformation stratégique, des défis importants*".

<sup>2</sup> [IGAS report 2018-058R](#): "Evaluation of the strengthened partnership between Pôle Emploi and local missions." Chapter 3.3.

## Annex VIII

The following diagram (cf. chart 1) shows this classification applied to the Pôle Emploi information technology systems.

**Chart 1 Classification of the Pôle emploi IT systems**



*Source: Pôle Emploi.*

*Note: The diagram distinguishes between Customer IS in dark blue, Business IS in light blue and Support IS in red.*

### 1.1.2. Diverse information systems without unified governance

#### 1.1.2.1. Information technology systems are multiple and not very interoperable

The lack of interoperability between information technology systems has several drawbacks:

- ◆ redundant data entry, which is time-consuming and a source of complexity and even error for both users and operators;
- ◆ a process of data transfer between IT systems that can lead to loss of information and a loss of opportunity for the job seeker;
- ◆ more generally, the actors lack a global vision of the care provided, which individualizes the management of performance, whereas the success of a sustainable return to employment is most often the result of a combination of different factors and the contribution of several actors.

#### 1.1.2.2. A lack of unified governance leading to the development of point-to-point interconnections

The interoperability of information systems and the exchange of data between PES operators are the subject of a position of principle, recalled in Appendix 3 of the 2019-2022 tripartite agreement (3.4): "Pôle emploi and the other players in the Public Employment Service (PES) and the social sphere, as well as the Caisse des dépôts et consignations in the context of the implementation of the Personal Training Account (CPF), are working together to strengthen the interoperability of their operational information systems and the exchange of data, in order to make the paths of jobseekers and companies more fluid and to promote the development of digital services."

## Annex VIII

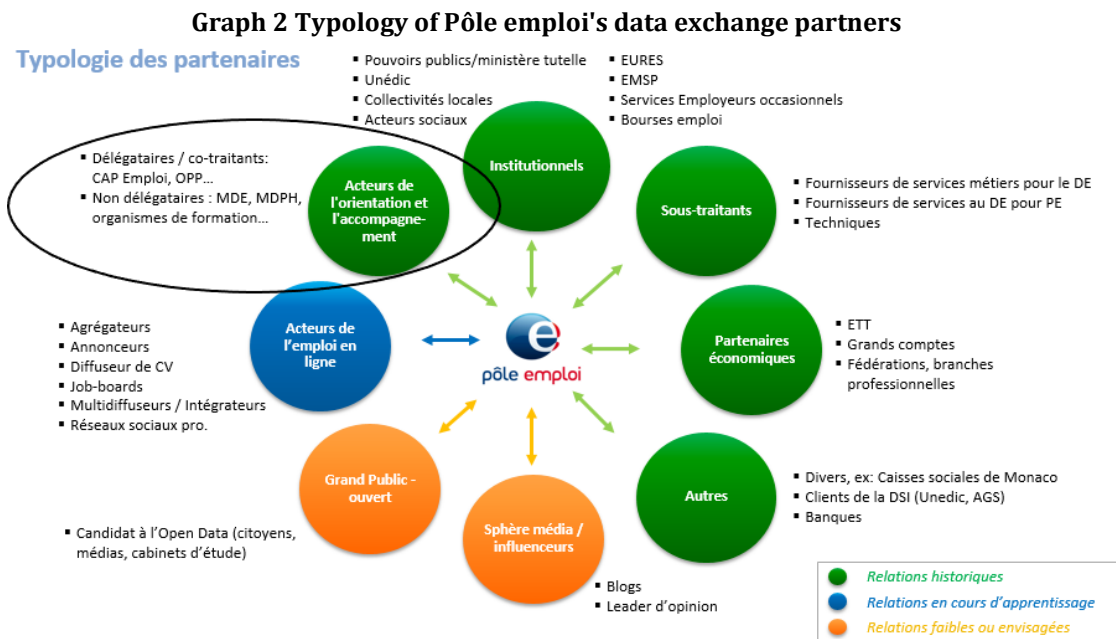
**The development of IT systems interoperability takes place in the absence of unified governance.** Each institution of the PES develops its own IT system according to its individual needs outside a common framework of reflection. The mission observed the following:

- ◆ the tripartite agreement provides, in an *ad hoc* annex, for the provision of Pôle emploi data to the State and UNEDIC in the context of the delegated missions that the operator carries out on their behalf;
- ◆ the State provides governance for the Ouiform application for vocational training and I-milo for local missions;
- ◆ Departments are free to administer themselves and determine their own customer information system, generally provided by specialized software publishers.

In this context, interconnections have developed mainly on a bilateral basis rather than around a common base. For example, Pôle Emploi has concluded nearly 129<sup>3</sup> exchange protocols with the players in its ecosystem.

### 1.1.2.3. Exchanges marked by the central place of Pôle Emploi.

Most of the interconnections are organized around the Pôle Emploi information system. The operator claims to be connected to almost all the stakeholders in the PES, including those involved in the support system of interest to the mission (cf. graph 2).



*Source: Pôle emploi.*

The Pôle emploi information system is accessible in two ways:

- ◆ **an extranet portal** (employment portal) provides direct access to certain applications reserved for partners, such as the DUDE (unique job seeker file). This is the preferred method for establishing contact with other PES support actors (local missions, departments, employment centers). This solution does not ensure interoperability with the partner's IS;

<sup>3</sup> Pôle emploi only provided data for the year 2015, with no update

- ◆ alternatively, protocols allow to exchange data by various modalities such as file exchange, Web services or APIs<sup>4</sup> - accessible through the pole-emploi.io website.

### 1.1.3. On the perimeter of the support, a lack of interoperability

Although data exchange is provided for both in its conventional and technical aspects, the interoperability of the PES actors' information systems in the support process is still marginal. Without establishing a detailed inventory, the mission was able to observe at least four interoperabilities between the main PES information systems.

#### 1.1.3.1. A single platform operated by Pôle Emploi and piloted by the State ensures the management of training

**The job seeker training information system is a centralized platform implemented and managed by Pôle Emploi.** The governance of the IS is ensured by the General Delegation for Employment and Professional Training (DGEFP) of the Ministry of Labor and Employment. The information system is organized around a common *backend* accessible through various user interfaces.

**Ouiform is the interface specific to the partners of the PES<sup>5</sup>.** It allows the search, positioning and continuous monitoring of job seekers in their training pathway. Ouiform is used by local missions, certain departments and Cap Emploi. Consultation of Ouiform does not ensure data interoperability with the partners' IS. However, data exchange is possible through an API developed by Pôle Emploi.

#### 1.1.3.2. Several IS deployed in the departments

**The departments do not use a single application to manage RSA (minimum income) beneficiaries (BRSA).** Software publishers offer different specialized solutions to the departments, which are articulated within the departments' IS. Several solutions can be used simultaneously by the departments to monitor BRSA, such as

- ◆ a software to manage the file and the course;
- ◆ a software for the management of training and the positioning of candidates;
- ◆ software for tracking social actions, often used for all beneficiaries in addition to BRSA;

These applications are not necessarily interfaced with each other.

The departments can access the DUDE and Ouiform applications (without ensuring interoperability). The data exchanges observed by the mission were limited in scope (administrative registration data) and were carried out in the form of data files.

#### 1.1.3.3. Local missions are equipped with a unique i-milo tool

**The DGEFP provides governance for the local missions' information system, i-milo.** This system is developed and operated by a software publisher. Access is provided for the use of the DUDE and Ouiform applications.

---

<sup>4</sup> 66 APIs (application programming interfaces) are accessible to all Pôle Emploi partners

<sup>5</sup> There is also Audeformation used by Pôle Emploi, and Kairos for training organizations.

## Annex VIII

According to the interviews conducted by the mission, data exchanges between information systems are minimal. Apart from administrative information (for example, to avoid double registration of "youth commitment contracts" in the two networks), essential data relating to career paths are not exchanged between the local missions and Pôle emploi.

The Appli CEJ application, developed by a State start-up with the objective of producing a single management interface, has the disadvantage of not being interfaced with i-milo, and seems to be rather heterogeneously appropriated within the local missions.

### **1.1.3.4. *The merger of Cap Emploi and Pôle Emploi did not result in a complete merger of the information technology systems***

With the rapprochement of the places of support, the Cap Emploi advisors now work within the Pôle Emploi agencies. However, **two information technology systems continue to coexist, without being interfaced**. The network has kept its application in charge of maintaining workers in employment, and uses, in parallel, the tools of Pôle Emploi for the placement of job seekers.

## **1.2. In Germany: a single tool covers most of the job seekers' paths**

### **1.2.1. Main modalities of care by the PES actors**

The German PES takes care of jobseekers through the network of agencies of the *Bundesagentur für Arbeit* (BA), a federal entity, and through the *jobcenters* of the *Kreis* (inter-municipalities) for people receiving minimum social benefits (SGB II). The *Kreis* can decide to run their *job center* either in partnership with the BA (there are 301 *Gemeinsame Einrichtungen*, GE) or independently (there are 100 *Zugelassene kommunale Träger*, zkT).

### **1.2.2. In the majority of cases, the accompaniment of job seekers is monitored in a common tool**

#### **1.2.2.1. *A common application used to monitor common law job seekers and most recipients of minimum social benefits***

The BA's client information system is organized around four major functional blocks that interface with each other: compensation; access to employment (VERBIS); basic data (STEP); and a log for monitoring activation actions (training). These different blocks are interfaced with each other.

This information system is also used to support jobseekers receiving minimum social benefits (SGBII), which concerns about three quarters of the *Jobcenters*. It integrates certain business needs of the intermunicipal *Jobcenters*, in particular the management of the benefit.

### 1.2.2.2. No interoperability project planned for stand-alone Jobcenters

The *job centers* of the autonomous municipalities (zkT) are not obliged to use the BA's information system. They purchase software from four different vendors (according to the Federal Association of Municipalities) or develop their own applications. The exchange of data between the BA and the zkTs remains incomplete. The municipalities can receive job offers submitted by employers to the BA. The information systems of the zkTs are not necessarily interoperable with each other if the publishers are different.

At their request, the zkTs can also receive a summary file of the BA (pdf or xml) when a new job seeker is registered and integrate it into their information system. According to the association of municipalities, this option is rarely used and the registration of a new jobseeker in the SGB II most of the time requires a complete re-entry of the information in the IS.

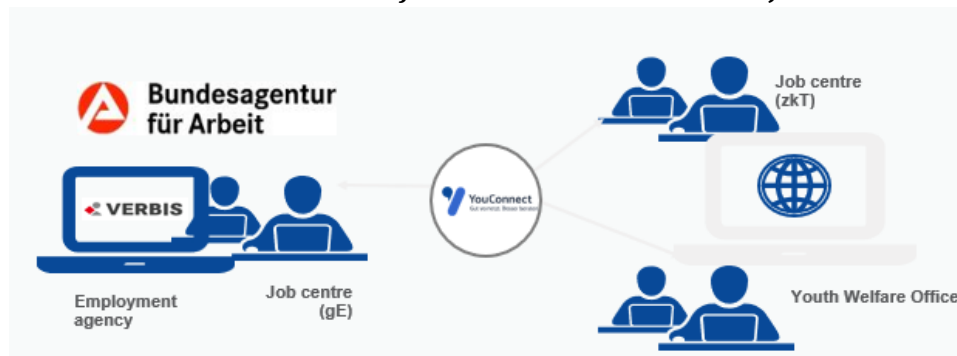
### 1.2.2.3. For the follow-up of young people, a platform IS is being deployed

Since 2020, the care of young people has been provided by a one-stop shop housed in the BA agencies (*Jugendberufsagenturen, JBA*), which brings together the three competent actors: the BA for questions relating to orientation, the *Jobcenters* for the administration of benefits, and the *Youth Welfare Office* for medical and social care.

As their information systems are not systematically interoperable, this grouping has been supported by the creation in 2021 of a common digital service called *Youconnect* (see chart 3). It ensures the exchange of data on a fairly broad base of information. Each institution retains its own information system to cover its own business needs.

The application is managed by the *Bundesagentur für Arbeit* in cooperation with the Ministry of Labor and the associations of communities. Arrangements could be made to meet the demanding German data protection legislation (collection of consent, access control, document production).

Chart 3 Articulation of *Jobconnect* between the three JBA actors



Source: Bundesagentur für Arbeit.

Membership in the *Jobconnect* service is optional. To date, deployment remains heterogeneous, with only a third of the 148 JBA agencies having opted to use it, the others using specific devices. It should be noted that access to the service is billed at €18 per month for each job seeker receiving minimum social benefits from the BA at the *Jobcenter*.

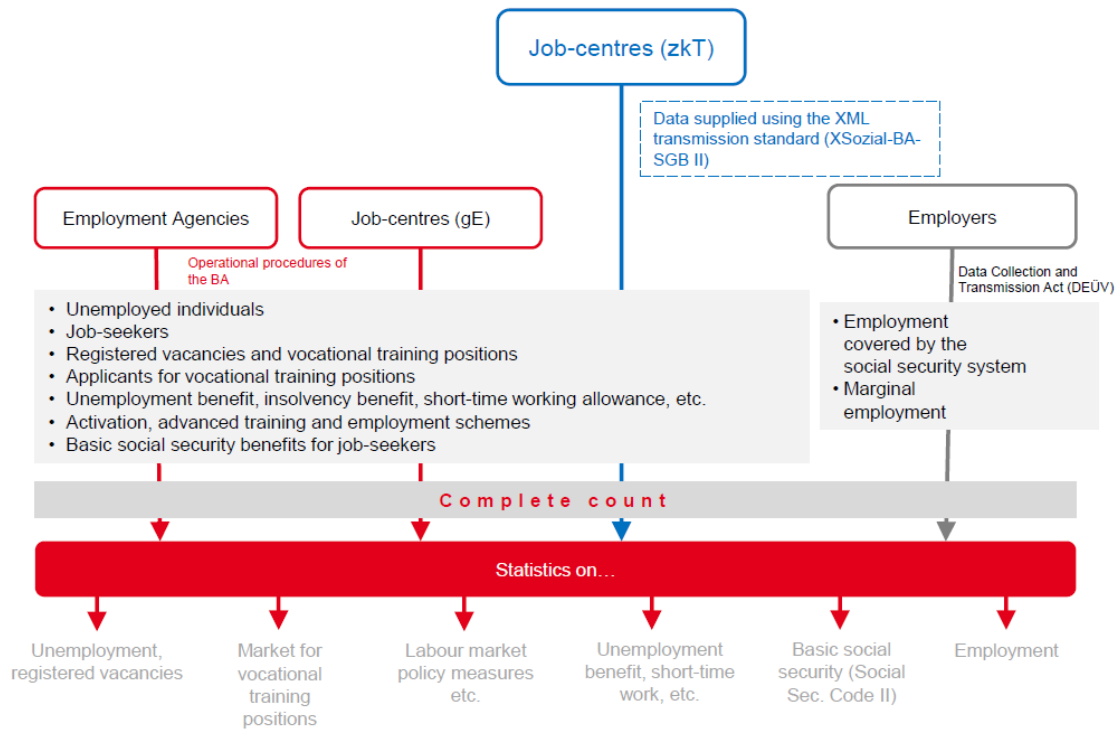
### 1.2.3. An efficient system for collecting control data through a common platform

A centralized database, managed by the BA, is used for statistical purposes and to monitor network performance (monthly publication of indicators).



## Annex VIII

**Figure 4: Data collection for statistical purposes by the *Bundesagentur für Arbeit***



*Source: Bundesagentur für Arbeit.*

The organization of this infrastructure is provided for by law. In § 53 of the second social book, the BA is the central data collector, and the municipalities are obliged to transmit their data. Employers are also obliged to transmit data by different legislation.

**Box 2: Excerpt from § 51b of the German Second Social Book, amended by the law of 24 December 2003**

**§ 51b Data processing by basic insurance institutions for job seekers**

(1) The bodies responsible for basic insurance for jobseekers shall continuously collect the data required for the implementation of basic insurance for jobseekers. **The Federal Ministry of Labour and Social Affairs shall be empowered to define by regulation, with the consent of the Bundesrat, the data to be collected in accordance with the first sentence, which are necessary for the purposes referred to in paragraph 3, including the procedure for their development.**

(2) **The communal bodies and the authorized communal bodies shall transmit to the Federal Agency the data referred to in paragraph 1 with an unambiguous identification feature, the personal data records with the customer number and the community of need number in accordance with section 51a.**

(...)

(4) The Federal Agency shall, in consultation with the central municipal associations at federal level, determine the exact scope of the information to be transmitted in accordance with subsections 1 and 2, including an inventory report, and the deadlines for its transmission. It shall also regulate the nomenclatures to be used, the method of data transmission, including the data formats, and the structure, allocation, use and deletion periods for customer and community of need numbers in accordance with Article 51a.

*Source: Gesetze im Internet; mission (translation by www.deepl.com).*

Box 3: Excerpt from § 53 of the Second Social Book

**§53 Statistics and statistical reporting**

**(1) The Federal Agency shall compile statistics on the basis of the data it receives in connection with the implementation of basic insurance for jobseekers in accordance with section 51b and on the basis of the data submitted to it by the municipal bodies and the approved municipal bodies in accordance with section 51b. It shall be responsible for permanent reports and shall integrate the benefits provided for in this Book into labour market research and vocational training.**

**(2) The Federal Ministry of Labour and Social Affairs may specify the nature and scope as well as the facts and characteristics of the statistics and reports.**

**(3) The Federal Agency shall submit the statistics referred to in subsection (1) to the Federal Ministry of Labour and Social Affairs and publish them in an appropriate form. It shall ensure that the short-term information needs of the Federal Ministry of Labour and Social Affairs can also be met.**

**(...)**

**(5) The Federal Agency may make available to the Federal Statistical Office and the statistical offices of the Länder data and tables on labour market and basic protection statistics within its area of responsibility for the purpose of planning support and social reporting. It is authorized to transmit anonymized and pseudonymized individual data to the Federal Statistical Office and the state statistical offices for further analysis. (...)**

**(6) The Federal Agency shall be entitled to pass on data and tables from the statistics on the labour market and basic protection as well as anonymized and pseudonymized individual data (...) for exclusively statistical purposes to the competent departments of the municipalities and associations of municipalities which are responsible for carrying out statistical tasks in their area of responsibility.**

*Source: Gesetze im Internet; Mission.*

### **1.3. In Belgian Flanders: a *minimal* solution based on sharing the VDAB application, pending better IT systems interconnection**

In Belgium, a separate operator manages the compensation of job seekers (INEM). This institutional division has necessitated an exchange of data with the operator in charge of support, the VDAB: sanctions and support mode are sent to the payer on the one hand, and benefit amounts to the VDAB on the other. This interconnection is not relevant to the French system (compensation is provided directly by Pôle emploi) and was not examined in depth by the mission.

The PES actors have access to the VDAB's MyCareer application in ways that are more or less limited by the constraints of the GDPR. On the other hand, the VDAB is not able to access the partners' applications, for example to find out about the support measures put in place by the municipalities.

Each PES actor has its own information system. A common base supplied by the social security organizations ensures the consistency of data such as the civil status or the professional situation of job seekers. Finally, direct exchange protocols have also been established between the VDAB and the municipalities (OCMW), which are in charge of social support, but according to the actors we met, there are gaps in the system, although this point could not be precisely documented by the mission. For example, the system does not manage the risks of double registration with the VDAB (voluntary registration and registration under the OCMW).

#### 1.4. In Denmark: unified information technology systems based on common tools and platforms

The Danish law requires the *Jobcenters*, which are run by the municipalities, to use the information systems shared by the governmental actors (in particular the national agency STAR). The Ministry of Employment provides the PES actors with common databases and tools, the three main elements of which are

- ◆ a common data base for the administrative management of recipients by the unemployment insurance funds (*A-kasse*) and the *Jobcenters*. This platform is interoperable with the municipalities' and the unemployment insurance funds' own IS;
- ◆ *Jobnet* job search site;
- ◆ a reporting tool (*Jobindsats*) fed by a common data warehouse, which is used to evaluate the activity of the *Jobcenters* and to produce statistical data.

The STAR Agency is responsible for the development, maintenance and operation of these computer systems on behalf of the Department of Employment.

The common database contains some of the data from the *A-kasse* and the *Jobcenters*. It is used for the control and statistical monitoring of job search activities and for calculating the payment periods of public benefits. As a rule, access to the data is limited by organizational criteria, so that, for example, a specific unemployment fund only has access to data about its own members, and a municipality only has access to information about its own citizens who are registered with the *Jobcenter*. The database is accessible to the municipalities and the *A-kasse* via open interfaces so that it can be integrated with their own information systems.

The public job search website *Jobnet* includes a CV database for job seekers on the one hand, and a database of job offers submitted by employers on the other. *Jobnet* also allows recipients to manage their file, for example to declare individual situations (illnesses, disabilities), to communicate employment plans, to keep a job log... The tool is accessible to companies which, in addition to posting offers, can contact job seekers directly.

Concerning *Jobindsats.dk*, it is a statistical data warehouse and a tool for evaluating and monitoring the performance of the *Jobcenters*. It is also used to produce, at an aggregate level, statistical data on the labor market and to provide a basis for analysis and evaluation of employment policies in public policy making. The measurement system is publicly accessible but does not allow for the retrieval of information at the individual level, only in aggregate. *Jobindsats* is based on a statistical data warehouse fed by data from STAR as well as other public providers related to the labor market.

#### 1.5. In South Korea: a common database ensures interoperability of information technology systems

The interoperability of PES information systems in South Korea was the subject of a note from the International Labor Organization, produced at the request of the mission, the main elements of which are outlined below.

### 1.5.1. Organization of the PES and information technology system: the central organization of the PES allows for centralized management of information exchanges

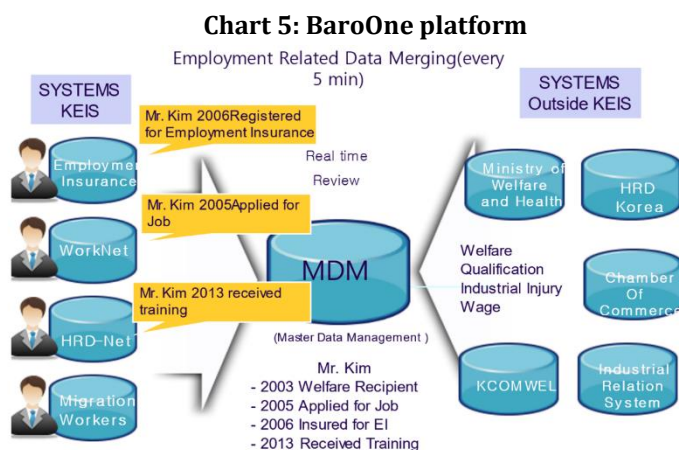
The Korean PES is administered by the Ministry of Employment and Labor, and operates through 174 state *job centers* and local government agencies. The services offered by these agencies include compensation, training, counseling and guidance, job search, and information services.

Six information technology systems operated by the specialized agency of the Ministry of Employment and Labor, *Korea Employment Information Service (KEIS)*, provide technical support for the services offered by the PES to job seekers. The mission was able to distinguish two main applications and four additional applications:

- ◆ two main applications: on the one hand, the employment portal, *WorkNet*, bringing together 35 public and private job search sites, and on the other hand, *HRD Net*, the centralized information tool on professional training;
- ◆ four complementary applications: *Employment Insurance* for unemployment insurance, *Employment Permit System* for foreign worker permits, *ILMOA* public employment portal, and *EIS* for statistical data production.

### 1.5.2. Interoperability is ensured while maintaining the IT systems of each of the players

Under the guidance of the KEIS agency, the *BaroONE* platform was developed in 2014 to improve the efficiency and reliability of PES services. It is the single portal for internal use by PES operators. *BaroOne* is organized around a master data base (*Master Data*) gathering scattered information from different information systems.

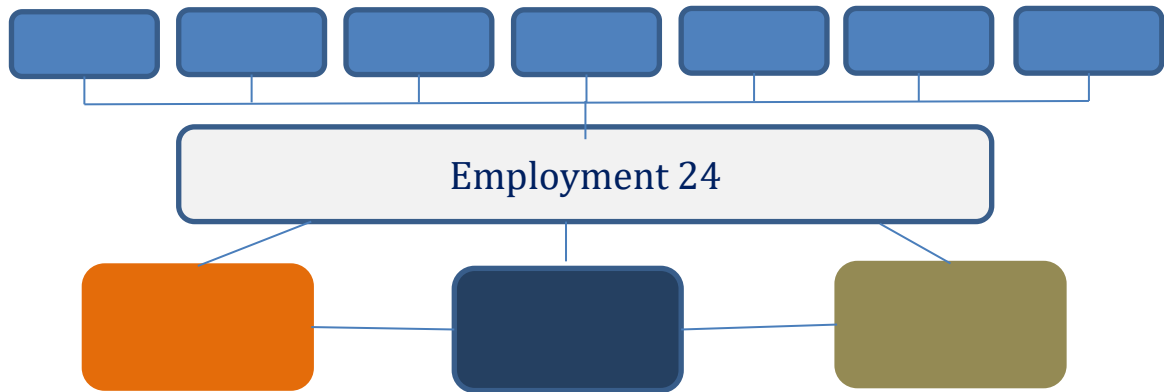


Source: ILO.

The Korean government wanted to evolve the infrastructure by opening it up to PES users (jobseekers and employers) and undertook the development of a new project "*Employment 24*" which will offer three types of online services: dematerialization of registration documents; calculation of projected benefits; and recommendations for training and jobs. Ultimately, the project will:

- ◆ facilitate access to users with a unique identifier;
- ◆ avoid redundancy by using information that already exists in the IS without having to ask users for it (such as pay slips and work contracts);
- ◆ reduce the time job seekers spend in the *Jobcenters* from 30 to 10 minutes by reducing the administrative phase.

Figure 6: *Employment 24* Project Diagram



Source: ILO; mission.

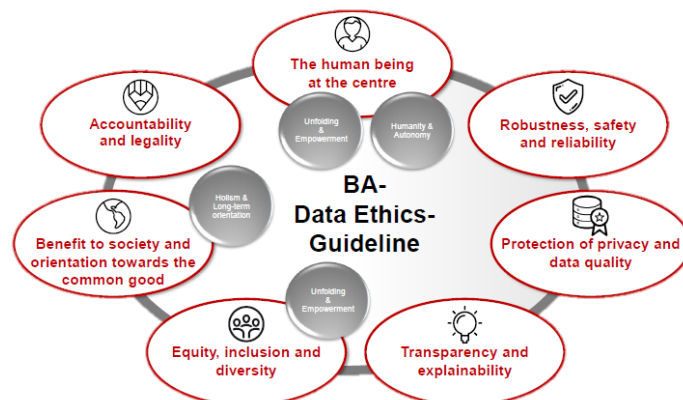
## 2. Automated decision support: applications for orientation and diagnosis, but still cautious in their use

### 2.1. In Germany: career guidance tools

#### 2.1.1. Automation is carefully used and supervised by an ethics committee

Because of the caution that is claimed in Germany regarding the automated processing of individual data, decision-support system projects are subject to a validation procedure. The *Bundesagentur für Arbeit* has drawn up an internal code of ethics and a charter of values for "human-friendly automation<sup>6</sup>" (cf. figure 77). Each project is checked for compliance with the internal regulations and an ethical risk assessment is carried out.

Figure 7 : *Data Ethics* Policy Guidelines of the *Bundesagentur für Arbeit*

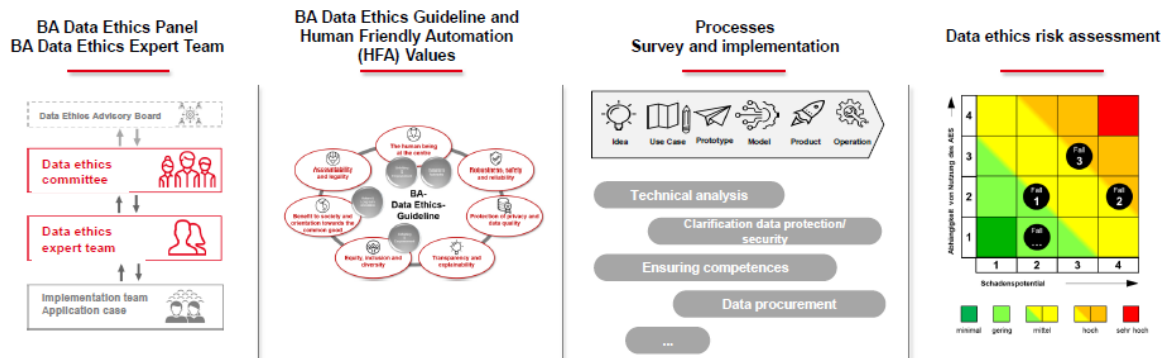


Source: BA.

The conformity assessment is carried out according to two criteria: dependence (criteria of autonomy, freedom of choice, traceability, contestability) and damage (monetary, intangible, loss of reputation). According to this classification, projects can be rejected or be subject to an additional external evaluation (cf. chart 88).

<sup>6</sup> Human Friendly Automation.

Chart 8 : Ethical validation process for AI-based projects



Source: Bundesagentur für Arbeit.

Reading note: projects for which the IA has assigned the color red are rejected, projects in orange are subject to further external evaluation.

2.1.2. Automated decision support to enrich career guidance

The automated counseling services developed by the Bundesagentur für Arbeit only concern job placement and guidance. The agency indicated that it has no current plans for the diagnostic phase. The job placement module is integrated into the Verbis software, which is used by the counselors or in the client area of the users. It works according to a traditional matching logic between the job seeker's wishes and professional profile, and the requests posted by employers.

The BA has also deployed a career guidance decision support service. The New Plan is accessible to the general public in order to respond to all the deliberate steps taken by users, whether they are job seekers or not. Two services are offered:

- ◆ "Test" is an upskilling reskilling service based on the identification of competencies according to a taxonomy developed by the BA. The service uses tests to match the results with a repository of skills expected on the training market (cf. graph9). This repository integrates the skill requirements of 88 types of studies and 604 training courses;
- ◆ "Inspiration" suggests career development paths. More precisely, the service proposes a comparison of the user's situation with the historical data of "comparables", taken from the data of the social security organizations.

Graph 9 : New Plan, matching the user's skills with those expected by the training with those expected by the training



Source: Bundesagentur für Arbeit.

## Annex VIII

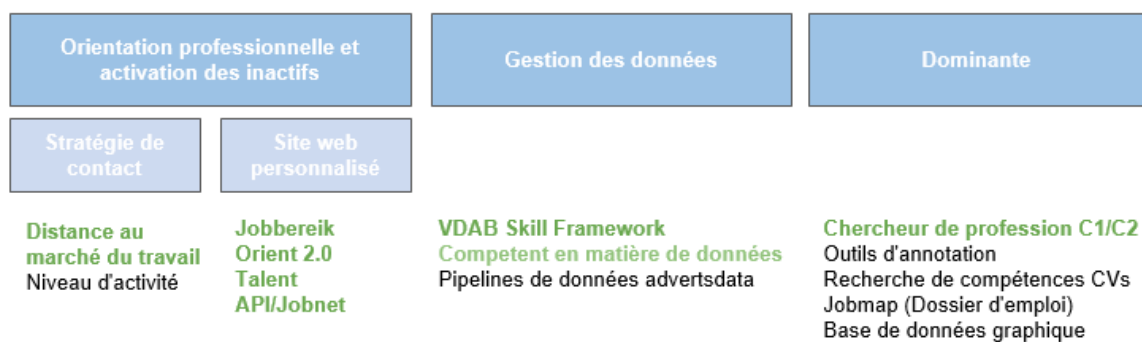
Progressively deployed over the past 18 months, New Plan has counted more than 300,000 users in 2022, mainly in the 'Test' component of career guidance.

### 2.2. In Belgian Flanders: an offer of assistance from diagnosis to placement

#### 2.2.1. A dedicated production structure and several decision support applications deployed

As part of its digitalization strategy, the VDAB agency has strongly developed predictive models in the areas of coaching, guidance, and matching of job supply and demand. In 2021, VDAB is structuring its ecosystem around 14 apps (up from just 2 in 2018). Of these 14 apps, some are already operational, while others are under development. The AI & Innovation department in charge of these developments employs 29 people.

**Graph 10: Mapping of VDAB AI applications**



*Source: VDAB.*

Of the seven applications in production (see graph), four are used directly for the orientation and activation of job seekers and are described below. The others are intended for partners and companies:

- ◆ Initial diagnosis: "Distance to the labour market", accessible only to advisors;
- ◆ orientation: *Orientatie* and *Jobbereik* (access to employment), tools shared between the job seeker and the counsellors;
- ◆ placement : Talent API for job offers.

#### 2.2.2. Applications ranging from initial diagnosis to matching

##### 2.2.2.1. An application estimates the job seeker's distance to the labor market

**The predictive model is used as soon as the job seeker registers.** A diagnosis is established with an employability score calculated on the probability of finding a job in the next 180 days. It is used to prioritize the intervention of the counselors, and to reduce the delay of the initial diagnosis.

To establish the distance to employment, the model uses two types of data which are:

- ◆ individual data relating to: career path, cross-referenced with the declaration sent by the employer to the social security system; activity on the *MijnLoopbaan* user portal; information on skills;


## Annex VIII

- ◆ macro-economic data on the labor market, injected by the VDAB services.

Job seekers are then divided into three categories according to their probability of finding a job (see chart 41) :

- ◆ high probability of finding a job, in green ;
- ◆ average probability of finding a job, in orange ;
- ◆ low probability of finding a job, in red.

**Chart 41: Technical details of the assessment of distance to the labor market**



Human digital  
Inschatting en actieve opvolging

rank	Naam wz & IKL	prio	% kans op werk < 180d
1	3454 Bart B	Red	37%
2	1134 An A	Yellow	55%
3	9876 Jan J	Green	78%

*Source: VDAB.*

The score obtained by the AI does not trigger an automatic decision, but is used as a basis for discussion during interviews between the job seeker and the counselor to personalize the support.

### 2.2.2.2. *The Orientatie ("Orientation") application*

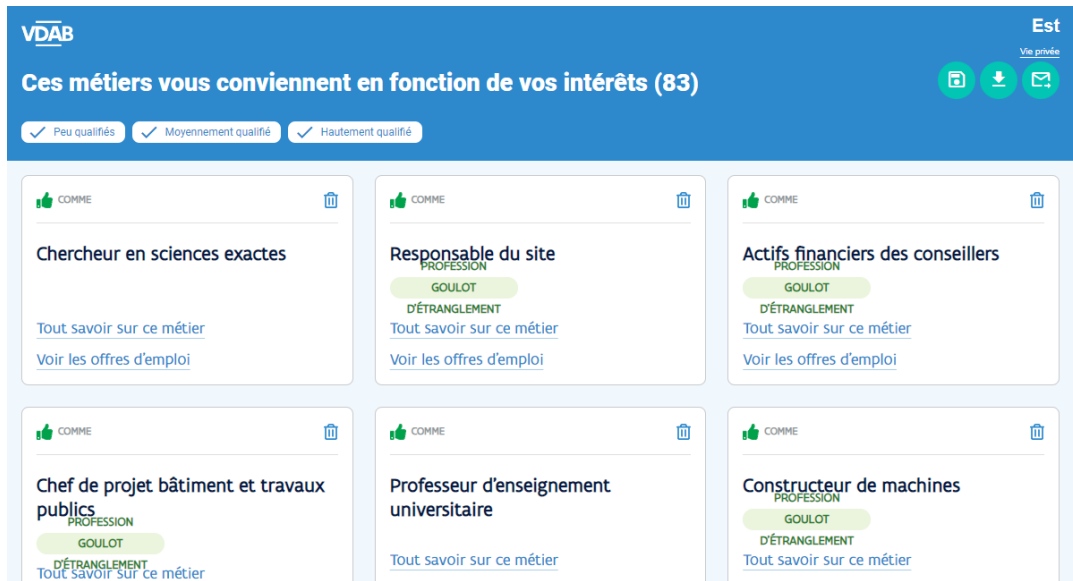
*Orientatie* offers career guidance according to the interests declared by the job seekers. This application is accessible on the VDAB website and is open to everyone<sup>7</sup>. The application is based on an online evaluation questionnaire with up to 115 indicators on professional interests.

---

<sup>7</sup> <https://orientatie.vdab.be>



Chart 52: Example of recommendations made by the *Orientatie* website



Source: VDAB.

The matching proposals are made according to the criteria of competences and know-how. The VDAB uses *Competent*, a classification of competences established by the Economic and Social Council of Flanders based on the ROME 3 standard.

### 2.2.2.3. The *Jobbereik* application (access to employment)

*Jobbereik* is a labor market orientation service, available in the user area of job seekers. It works by matching identified skills (not those declared in the *Orientatie* test questionnaire) with corresponding occupations. Each occupation proposal is accompanied by an estimate of the skill gap.

Chart 63: Example of an occupation suggestion



with indicators of proximity of skills

Source: VDAB.

The prediction strives to find a balance between rapid job search (*job first*) and possible skill development. The model favors job opportunities over training measures, but skill development can be proposed when employability is insufficient (less than 50% chance of finding a 'sustainable' job within 180 days).

## Annex VIII

The difference with the "Orientatie" application, described above, is that the predictive modeling is no longer based on a test questionnaire, but on two different sources:

- ◆ the job seeker's professional data;
- ◆ observation of browsing behavior on the VDAB website or similar job search sites.

In addition, the model enriches the matching of skills with profiles of similar users who have obtained employment, training or interviews.

### **2.2.2.4. The Talent API application**

**Talent API is an AI engine for matching candidates to job vacancies.** Like *Joberreik*, the algorithm compares the search behavior of a job seeker with those of similar profiles. The tool accompanies the offer with the reasons that led to its selection. These proposals can be discussed and deepened with a consultant.