



# Powering Innovation in Public Employment

## **Context-Driven Matching**



**Software  
that matters**

# Challenge

## Complexity and Dynamism

Workforce management is crucial for the wealth of a nation and its citizens. It is complex as it involves multiple stakeholders, and its processes include a multitude of systems and policies.

It is dynamic because of the continuous changes at a global level, where politics often play an important role in setting priorities.

Workforce management has to effectively and efficiently manage labor supply and demand.

A nation's education system, economic development, political organizations, and its businesses must work together to continuously adapt to an ever-changing environment and optimize the workforce value. Each country has its unique demographics, culture, economic development, and political system, therefore the way its workforce is managed differs from others.

A nation's or region's Public Employment Service (PES) usually plays a major role in managing the country's workforce. At times, the role is limited to getting unemployed people back to work and handling the disbursement of unemployment benefits. In other instances, PES has a broader and more strategic role. It also aims to manage the employed, underemployed, and unreported workers. It holds the responsibility of optimizing the overall value of the entire workforce. It detects and monitors the labor market trends and utilizes this information to advise the unemployed to train for jobs with increasing demand, and to develop special programs targeting specific unemployed segments such as youth or over 50s. It can also facilitate employed people in personal development to keep them employable during their work life and maximize their economic value. This market intelligence also supports public organizations to develop new curricula in schools, adjust government agencies' policies addressing underemployment and unreported employment, and develop programs for specific economic development. Defining skills and levels that will be needed in the future decreases the chance of people becoming unemployed.

Supporting people find sustainable jobs is economically more effective, than getting them temporary jobs.

## SOLUTION

### Enabling Public Employment Services

WCC has been working closely with Public Employment Services since 1997.

WCC understands what is important when managing a nation's workforce, and the challenges Public Employment Services meet in doing so. Our solutions, technology, expertise, and support empower Public Employment Services worldwide to take a more active role in workforce development and actively influence labor markets, reduce unemployment figures, and improve a nation's employment potential. Reliability and transparency are vital to the operational role of Public Employment Services as thousands of people depend on them, while accountability is an increasingly important aspect of management.

One of the most important functions of Public Employment Services is helping the unemployed back to sustainable employment providing significant labor market information and by collecting and providing data on job vacancies.

Advising a person back to work starts with assessing the position of the unemployed. WCC's solutions help determine the unemployed's skill and competence gaps in relation to the desired job. In addition, our solutions are able to provide suggestions on suitable training and/or education to reduce these gaps. Additional assessment tests may be necessary, their results can be added to the unemployed's data and used to suggest potential matches.



### **WCC ELISE Smart Search & Match Platform**

A powerful WCC matching solution for Public Employment Services. Our Smart Search & Match technology boosts job matching and candidate searching. ELISE Smart Search & Match Platform makes it uniquely easy to match candidates to vacancies based on their skills, competences, education, background, and capabilities. The high performance of our matching technology returns results within fractions of a second on valuable details about candidates, vacancies, competences, and skills, in addition to delivering instant insights into the talent pool's quality. ELISE Smart Search & Match Platform helps Public Employment Services to work more effectively.

### **WCC Employment Platform**

A fully customizable, flexible and scalable modular solution created to meet the needs of Public Employment Services. It provides excellent added value for a wide range of user groups such as jobseekers, employers, and PES counselors. It includes a wide range of powerful software modules to support the largest PES by automatically scaling to match demand.

WCC's flexible Employment Platform modules reduce the cost of implementation allowing users to deliver custom Employment Services with minimum effort.

## Employment Platform Key Modules

### Match Manager module

The Match Manager module delivers multiple match models enabling Public Employment Services to cross-match data from jobseekers and employers in a single operation. This matching process takes both parties' requirements into account, while reducing costs and resources. In addition, administrators can quickly and easily configure the match models to meet their specific needs.

Using an easy-to-use match management interface, users can apply multiple filters to all job and jobseeker properties, such as salary and location. PES can actively steer the matching results to effectively and efficiently support case managers. With the Match Manager module highly configurable behavior and transparency in matching jobseekers to jobs, every PES can take full advantage of WCC's advanced self-service applications to create optimized matches between jobseekers, and employers.

### Profiling Manager module

Another key module is the Profiling Manager designed to help PES handle different categories of jobseekers. For example, they can classify jobseekers into segments based on their recent employment history, and also identify long and short-term unemployed. Segmentation is beneficial for implementing targeted Active Labor Market Policies (ALMPs) displaying specific matching jobs to accelerate the jobseekers' chances of employment.

### Enrollment Manager module

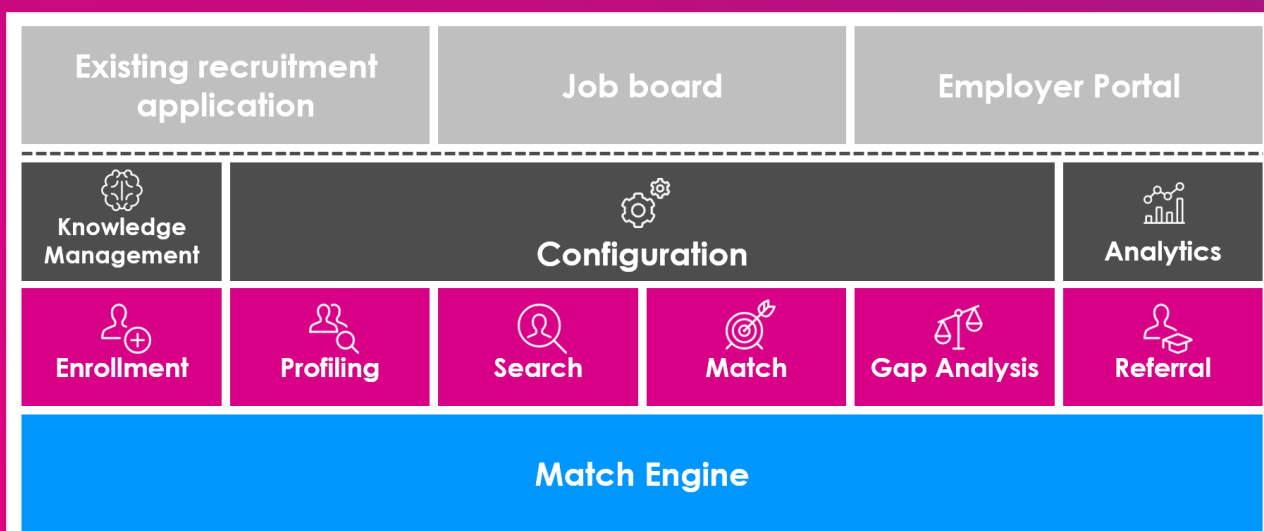
The Enrollment Manager module improves the quality of user data, such as jobseeker and employer-generated data. The module interprets users' free text content, using taxonomies created with the Taxonomy Manager. For example, in response to job titles or occupations entered by the user, the Enrollment Manager module returns smart suggestions for the most suitable values. This dynamic assistance helps standardize and match user-generated content.

### Gap Manager module

The Gap Manager module helps jobseekers to identify gaps in their skills, competencies, certifications, experience, salary expectations, education, and location. It identifies factors that may prevent jobseekers from obtaining their dream job. With this in mind, Gap Analysis guidance will help jobseekers create personal development and training plans, and ultimately achieve their goals.

### Referral Manager module

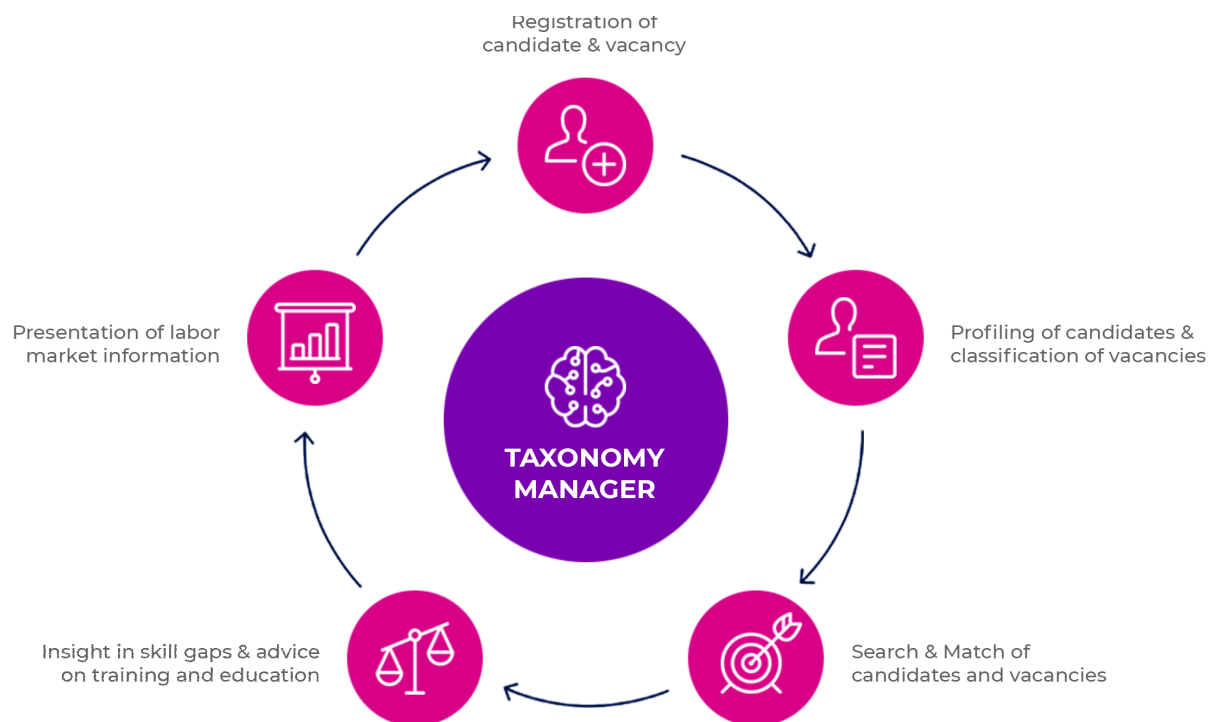
The Referral Manager module guides jobseekers towards support measures, specifically in the form of education and upskilling. Among other options, skill improvement could entail vocational training, or the creation of a more general education plan. When these measures are applied, and jobseekers complete their training, their chances of getting the role they desire in the labor market will be substantially higher.



## Taxonomy Manager

The amount of information available on people, jobs, and education has grown rapidly, making it a challenge to know which data is reliable and relevant. Effective and efficient job matching requires people's qualifications, experiences, and skills to be well understood. Common standards need to be clarified and shared too. A Taxonomy Manager or Knowledge Base is the perfect solution as it creates a vocabulary that can be shared by all parties in the Employment Service system.

WCC's **Taxonomy Manager** is specifically designed to enhance the knowledge management process. The module supports a number of crucial functions such as semantic searching, the provision of high-quality data, and augmented matching results. In addition, it optimizes gap analysis to show which skills or qualification jobseekers may lack to reach a good job match. This means jobseekers can be advised on training or suggestions on measures aiming to improve their chances in the job market. In other words, our Taxonomy Manager helps Public Employment Services make sense of data from a large number of sources, in different formats.



High-quality data is clearly essential for Public Employment Services as a large amount of labor market data is currently available in taxonomies such as ESCO, ISCO, ASOC, ROME3. However, taxonomy management can be challenging, therefore most PES use taxonomies only as a basis for reporting. But PES must offer specific sets of services, which can be delivered when a PES is able to make sense of the data obtained from many sources, while transforming it into useful information. In order to offer a wider range of benefits, taxonomies need to be updated and enriched with data about the local labor market.

Our Taxonomy Manager can resolve these challenges because it serves as a single central knowledge base for the entire organization, and in doing so, it optimizes all employment services.

WCC's Knowledge Base is powered by Artificial Intelligence (AI), it uses automatically updated taxonomy manager data, ontologies, and configurable rules, and advanced language technology. This enables input completion to guide users through the registration process, which includes requesting information, as well as presenting clear and personalized suggestions. These suggestions are based on the collection of the most recent labor market data. In addition, jobseekers receive tailored digital career guidance, that helps them learn how they can best close gaps between suitable jobs and their ambitions.

**Analytics & Reporting** offers advanced user data and system insights. Jobseeker and vacancy data aggregations provide the current state of a country's labor market, which monitors supply and demand, and the effects of policies and measures aimed to improve opportunities for certain target groups. Data aggregation can be configured and delivered as reports.

Reports on queries and queries results provide insights into the system's behavior. Reports can be also be made available to third-party BI systems as data services or integrated with end-user portals as visual charts or tables.

## Data Ingestion Tools

### Extraction Tool

Variable data quality on jobseekers and job postings can affect search results unless adjusted. WCC's extraction tool manages variations in data quality from different data sources. For instance, job databases may contain duplicate postings which can be removed with the extraction tool to avoid search inefficiencies. In addition, WCC's text analysis offers in-depth analysis of CVs and job postings.

### Harvester Tool

WCC harvester tool crawls the web to gather relevant data from corporate job websites. It also gathers data from multiple sources such as social websites, job websites, CVs and job posts used to populate custom vacancies databases.

### Curation Tool

When CVs and job postings are imported into ELISE, data on skills, competencies, certifications, experience, education, and location, is extracted and curated to identify the most important information. For instance, a CV may list experience in product design, and a more recent experience in managing product design teams, making the latter more relevant. Such curation can take place after data extraction from job postings. The curation tool utilizes WCC taxonomy manager in its decision making.

### Fuzzy Logic

ELISE Matching uses "fuzzy logic" to determine the best candidate for a position or the best position for a candidate. It identifies candidates or jobs that are the closest match providing meaningful results according to customer preferences and search criteria. Results can also be bi-directionally matched to determine mutual interest. ELISE's match behavior can easily be fine-tuned to specific needs with its "rule-based" approach to allow greater control of the match result as opposed to standard search based on keywords. Matching rules are configured and fine-tuned for each criteria, policy, or profile. Fuzzy matching allows to define search criteria ranges or approximations vs exact value, for instance, it can search for a salary range instead of a precise salary.

### Semantic Values

Many languages contain words that are similar in meaning. [ELISE Smart Search & Match Platform](#) makes it easy to capture these words and determine their degree of similarity. This type of data can be used during a search to find job openings that are similar although the words used to describe the vacancy are not the same.

# About WCC

A leading advanced solutions provider for Public & Private Employment Services and ID/Security government agencies. Built on its unique search & match platform, WCC software solutions see 1/3 billion people every day, enabling organizations to seamlessly capture, generate, and analyze big data from multiple sources gaining valuable insights paramount to effective decision-making.

Our team of professional services experts provides exceptional support and consulting, allowing our customers to maximize their investment.

For more information, visit [www.wcc-group.com](http://www.wcc-group.com).



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