



12th WAPES WORLD CONGRESS
PES In(novative) Action
27.04-29.04.2022

ANALYSIS OF THE LABOUR MARKET FOR THE EARLY DETECTION OF SKILLS SHORTAGES AND TRAINING NEEDS

Challenges and innovative action by
Public Employment Services in a
rapidly changing labour market.

Gerardo Gutiérrez Ardoy
General Director of SEPE
(the Spanish State Public
Employment Service)

**Autonomous body attached to the
Ministry of Labour and Social Security.**

Total number of staff:
8 848
(6 675 permanent and
2 173 temporary)



El SEPE, junto con
los Servicios Públicos
de Empleo de las
Comunidades Autónomas,
forma parte del Sistema
Nacional de Empleo.



Desde la estructura estatal
se promueven, diseñan
y desarrollan medidas y
acciones para el empleo,
cuya ejecución es
descentralizada, ajustadas
a las diferentes
necesidades territoriales.

The ongoing **analysis and detection of the training needs** of the production system:

- Identify the needs of the labour market and detect the training needs of the production system.
- Highlight the training to be delivered, responding to a diagnosis of the reality and an analysis of the current and future needs of companies and workers.
- Strategic planning (sectoral, cross-sectoral, territorial and by specific group).



Develop an **integrated career guidance service**, accessible to workers and businesses:

- Individual professional profile diagnosis.
- Design of personalised route to employment plan.
- Advice, motivation and guidance in career transitions.

Cartera Común de Servicios
del
Sistema Nacional de Empleo

Time to act: a call to action and next steps



Plan de Recuperación,
Transformación y Resiliencia



GOBIERNO
DE ESPAÑA
**ESPAÑA
PUEDE.**



Our response: Main Actions



Development of a methodology to detect training needs and a tool that provides information to workers and businesses.

Creation of a network of Centres for Guidance, Entrepreneurship and Innovation for Employment (COEs)

Regulation of common vocational guidance programmes in the National Employment System.

SEND@, a smart tool for guidance support



Main actions

Detection of training needs

- Establish a **shared methodology** for detecting training needs in occupational and sectoral areas.
- Develop a **multichannel IT tool** that supports the detection of needs and provides easy access to information for the employed, unemployed and businesses on training needs that match their profiles.
- Methodology and IT Tool for the detection of needs fully operational in **2023 (Q4)**.

COE network

- New infrastructure for the National Employment System in the areas of guidance, employment intermediation and analysis, and entrepreneurship: **Centres for Guidance, Entrepreneurship and Innovation for Employment**.
- Its **functions**:
 - the design of innovative actions;
 - the development of experimental and pilot projects;
 - the evaluation of programmes of good practices;
 - the implementation of an ongoing training plan for staff working in this area;
 - dialogue with association representatives.

Common vocational guidance programmes in the National Employment System

Three common programmes to stimulate employment:

- Career guidance for employment and self-employment.
- Collaboration for business analysis and employment intermediation activities.
- Integrated employment projects.

For its direct management, a further 3 000 people will be added to the network for guidance and analysis, created with the Youth Employment Plan 2019-2021.

Public-private or public-public partnerships may be used for the management of business prospecting and employment intermediation programmes.

SEND@



¿Qué es?

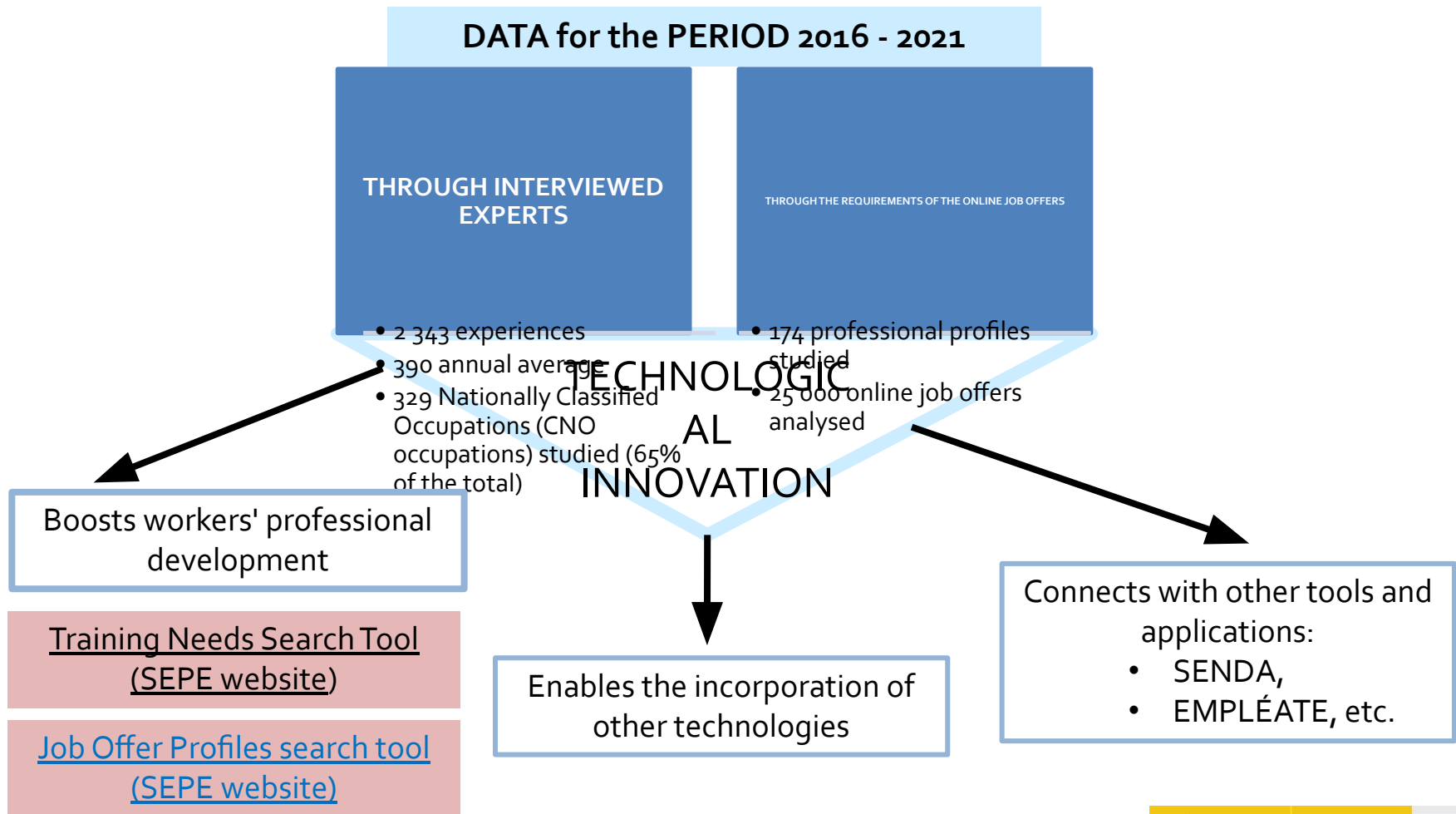
La herramienta ofrece soporte al orientador/a en su toma de decisiones a partir de **información estadística cuantitativa**, reflejando:

- ✓ **Datos personales** de la persona demandante.
- ✓ **Estadísticas** en relación a las **ocupaciones solicitadas por la persona demandante**.
- ✓ **Información** sobre las **necesidades formativas de las ocupaciones solicitadas** por el demandante de empleo.
- ✓ Posibles **orientaciones** en relación a las **ocupaciones a demandar** o a los **servicios a ofrecer**.
- ✓ Posibles **orientaciones** para la **promoción de la inserción laboral** del demandantes **adaptadas a la casuística especial del COVID-19**.



La herramienta facilita la toma de decisiones de los/las orientadores/as, así como la agilización del servicio ofertado.

The ongoing **analysis and detection of the training needs** of the productive economy.



Empléate, Portal of job offer portals within the National Employment System (NES), knowledge sourced through Artificial Intelligence

Aim

To become a source of labour market knowledge in real time by the capturing and systematic sorting of the information contained in job offers published through different portals.

Mechanism

In June 2020, the SEPE Observatory started **working on the detailed analysis of the Empléate job offers database**. At this stage, the occupation classification (CNO) was not included in the offers registered in the Empléate database.

Issue

The offers contain valid and useful information: in-demand occupations, geographic location, skills, conditions offered, required profile, training, etc.

Need to develop a solution based on natural language processing (NLP) algorithms.

Trajectory (between February and July)

The objective was the **automatic assignment of the CNO** to the job offers through the use of Artificial Intelligence (AI) models.

In January 2021, a pilot scheme was carried out to verify whether the AI model was assigning the correct classification.

Solution

Through natural language processing (NLP) algorithms, the AI model is capable of **identifying the correct occupation with a 90% reliability rating**.

The automatic assignment of the occupation is applied to all Empléate offers regardless of the portal of origin and provides a link to the training needs of the occupation assigned to the offer.

Results

The Google Analytics application shows the increase in the number of visits per day to the SEPE Observatory page since the technological upgrades were implemented.

POTENTIAL USES AND ADVANTAGES OF THE AI MODEL

- ✓ **Improve how job offer information is utilised**, thanks to systematic classification through reliable and homogeneous occupation codes. Furthermore, during a second phase, this technology could be used to extract additional information such as experience, training, etc.
- ✓ **Strengthen the leadership of SEPE** in the National Employment System.
- ✓ **Link the training needs detected with** the training offer.
- ✓ **Detect emerging occupations in the labour market** through the analysis of errors or mistakes in the assignment of occupations in some offers.
- ✓ **Help** staff members in employment offices **determine the most suitable CNO** when recording employment demands and offers.
- ✓ **Enable offers to be sent to EURES** with the associated occupation showing in ISCO or ESCO format.

THANK YOU
FOR LISTENING!

