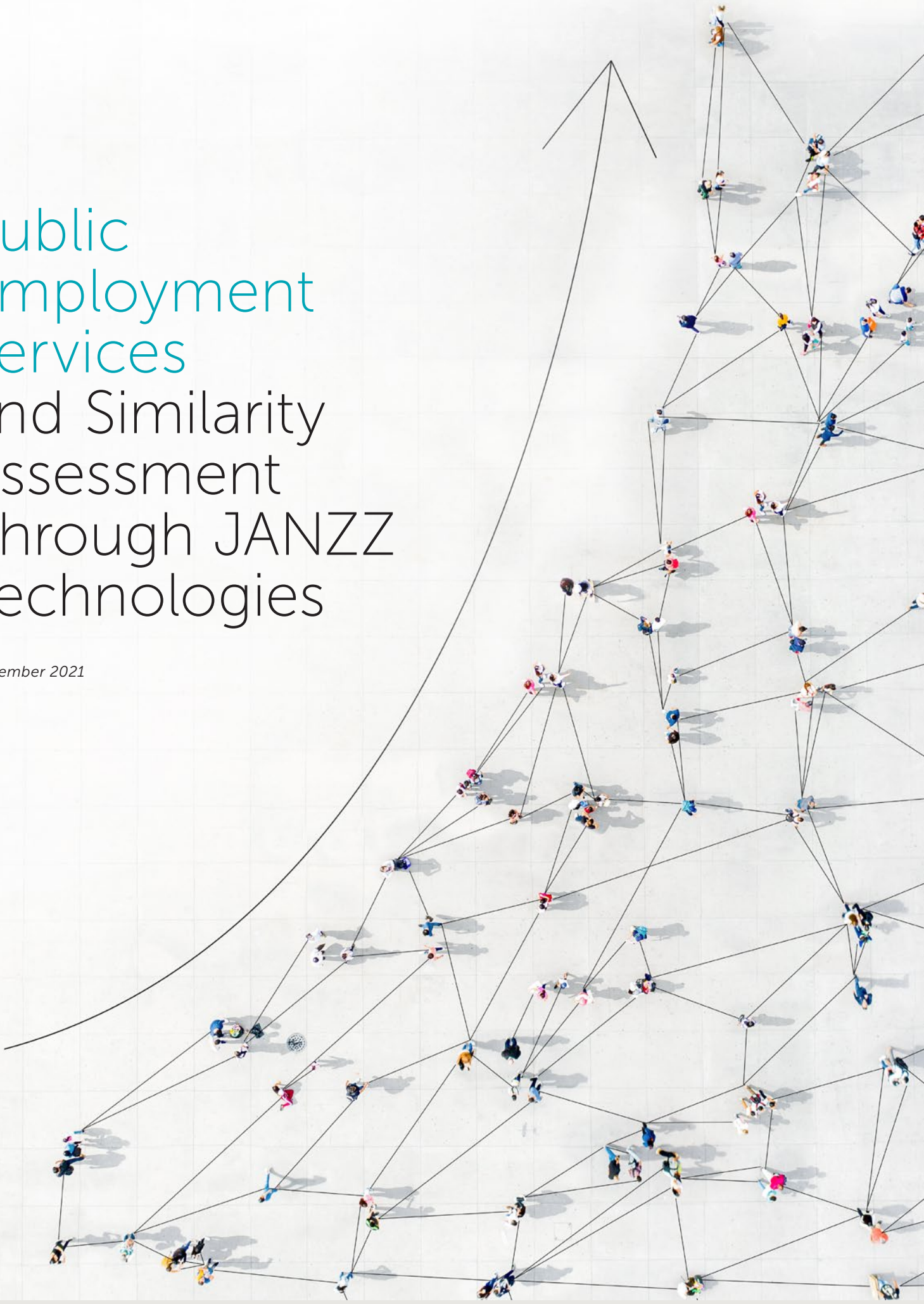


Public Employment Services and Similarity Assessment Through JANZZ Technologies

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As countries embark towards a digital transformation, public employment services (PES) are upgrading outdated job platforms and using smart matching for job placements and labor market intermediation. JANZZ.technology is a Swiss technology and consulting startup founded in 2008 that masters complex occupation data with a unique semantic system to transform big data into smart data for jobs and skills matching. Using the latest semantic technologies, JANZZ solutions can parse, classify and match occupations to job titles, qualifications, hard and soft skills across more than 40 different languages.

Around the world, PES are seeking the right digital solutions to help solve asymmetric information problems in labor markets. People are looking for work and companies need workers, but the dynamics of mismatches between job seekers and vacancies result in less efficient allocation of labor and resources. JANZZ.jobs is a jobs and talent marketplace and white-label solution built on the latest semantic technologies – AI-driven technology that truly understands concepts and their semantic meaning to guarantee successful matching results. This platform puts an end to “searching” by instantly and precisely matching people, businesses, jobs and projects based on multiple criteria such as occupation, skills and experience.

JANZZ covers the entire value chain to optimize the **assessment of similarity** in its matching using AI and supervised machine learning to deliver relevant job offers and suitable profiles for users’ search and matching requests. JANZZ has built the world’s most comprehensive knowledge graph for labor markets with over 140,000 occupations across all industries, with more than 160 standard and custom classifications and taxonomies mapped into the ontology (O*NET, ESCO, ISCO-08, KldB 2020, JSOC, NOC-2021, SSOC, NAICS, MUPCS, EEO-1, LinkedIn skills, Emsi skills, etc.) coupled with 2 million skills, competences, specializations, certifications, etc.

Six flagship solutions are offered to PES to address labor market challenges: **JANZZon!** (*ontology/knowledge graph*), **JANZZclassifier!** (*classification tool*), **JANZZparser!** (*parsing tool*), **JANZZsme!** (*semantic matching engine*), **JANZZ.jobs** (*platform and white label solution*), and **JANZZdashboard!** (*real-time big data dashboard*).



PES in Norway and Paraguay use JANZZ’s labor market solutions powered by cognitive computing to strengthen their countries’ workforces. Despite vast differences in their labor markets (Norway ranks #1 and Paraguay ranks #98 in the 2019 Human Development Index), both PES currently benefit from the most innovative and intelligent labor market knowledge graph that continuously learns to support job matching. Norway’s **Arbeidsplassen** and Paraguay’s **ParaEmpleo** platforms have taken different approaches to finding a successful matching solution.

ParaEmpleo is a JANZZ.jobs white-label solution bundle (*Model A*) customized to Paraguay’s labor market and deployed in under 180 days. The white label products are produced by JANZZ and rebranded

with design and logos tailored to the specific platform, as well as with an ontology adapted to the specific labor market. Paraguay had no PES until a few years ago and now runs the first modern PES platform in Paraguay financed by the Inter-American Development Bank with all six solutions and customer relationship management (CRM) software. ParaEmpleo matches job seekers to jobs with a special focus on youth and gender, guided by the highest standards of the OECD’s AI principles and the EU’s General Data Protection Regulation.

Developing intelligent matching technologies takes several years and is costly, especially for smaller PES. The scalable white-label solutions offer modular components that easily and cost-effectively meet the needs of PES of all sizes. In addition, JANZZ works closely with the PES to provide advisory and consulting services related to labor markets and platform deployment (i.e. training manuals, training workshops with PES career counselors, businesses, etc.). Model A is a good option for PES that want to set up a job platform from scratch in a timely manner in countries where no solutions were previously available.

Norway’s **Arbeidsplassen** is built on JANZZ’s back-end technology solutions relying on the JANZZjobsAPI as an interface to the Norwegian front-end user interface (*Model B*). Back-end technologies include components such as IT architecture, server, application and database that enable the user side of the platform to exist. The Norwegian PES handled the front-end and the web design of the platform.

The back-end technology delivers a highly performant system with complex job matching tasks taking less than one second and with the highest level of ISO/IEC 27001 certification.

Norway has a long history of employment services and social protection, but its technological solutions needed to be updated for better matching and greater uptake. **Arbeidsplassen** is widely used by Norwegian job seekers and businesses alike, as well as by the PES piloting new applications with real-time big data and labor market trends.

Recently, **Arbeidsplassen** registered more than 400,000 new job seekers at the start of the COVID-19 pandemic in March 2020. Two months later approximately 1 in 4 people or 97,000 had already found a new job thanks to the platform.

Today, **ParaEmpleo** and **Arbeidsplassen** are helping Paraguay and Norway navigate the COVID-19 pandemic by supporting people and businesses to leverage digital solutions.

Your Contacts

Stefan Winzenried
 Founder & CEO
 T +41 43 499 71 04

s.winzenried@janzz.technology

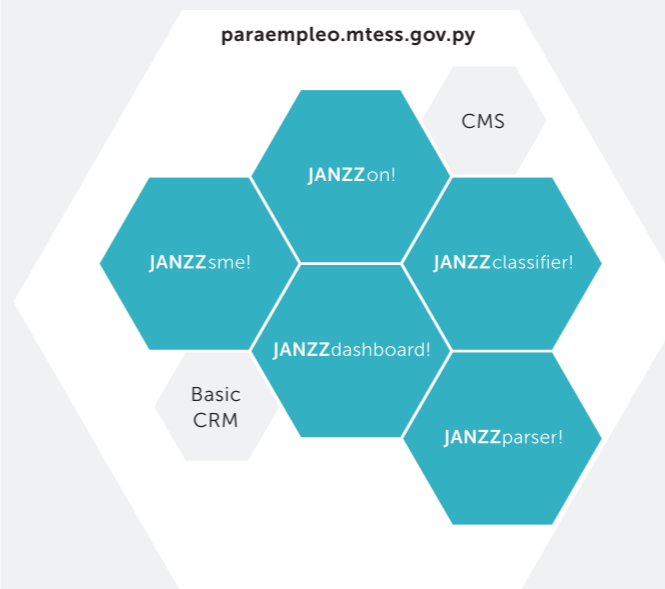
Jimena Renée Luna
 VP of Customer Integration,
 Emerging Markets
 T +41 43 499 71 04

j.luna@janzz.technology

Two Different Approaches For a Successful Digital Solution

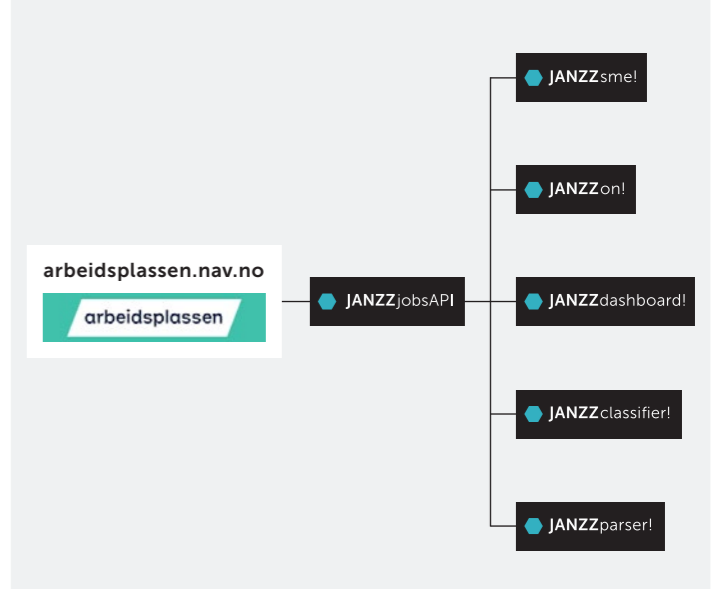
Model A

JANZZ.jobs White-Label Solution Bundle
 (e.g. <https://paraempleo.mtess.gov.py>)



Model B

3rd Party Front End
 (e.g. <https://arbeidsplassen.nav.no/>)





Let's Shape the Future of Work.
With Labor Market Solutions That Are
Powered by Cognitive Computing.

More than 140,000 occupations and 1,000,000 skills in more than 40 languages are stored in the world's largest knowledge database for the labor market. They form a vast and searchable semantic network: a constantly learning repository of knowledge that supports AI-driven labor market solutions and data analytics.

We help organizations like the Norwegian Labor and Welfare Administration, MTESS/Paraguay, USAID and the Inter-American Development Bank and global leaders in HR software and services capitalize on the extensive intelligence of our unique smart data solutions, creating entirely new possibilities.

Discover more at janzz.technology



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