



# **Korea's Labor Market Information System and Utilization**

Korea Employment Information Service

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KOREA EMPLOYMENT  
INFORMATION SERVICE

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**23**

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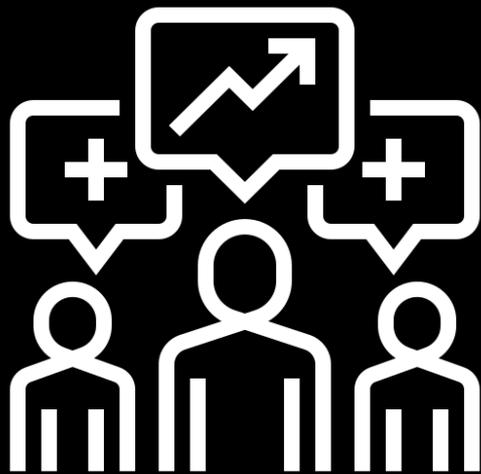
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# I. Overview & Status

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- Introduction of LMI
- Framework of LMIS





**“Why and for what**

**purpose do we need labor market information?”**

**“Who needs that?”**

**“When we need that?”**

# CHARACTERISTICS OF **LABOR MARKET INFORMATION**



- 1** The data, the structure, characteristics, and dynamics of the labor supply and demand



- 2** The country's economic and labor market conditions



- 3** Numbers and composition by age and education attainment, skills, or qualifications, coming from administrative data.



- 4** Providing labor market analysis and intelligence in the country's economic context

# SOURCE OF LABOR MARKET INFORMATION

## LABOR DEMAND SURVEY

“**T**o find out about the situation of labor demand in establishments, such as the current number of employees, the number of vacancies, the number of employees to be hired, the number of job openings, and the number of filling job openings by industry, occupation and establishment size, and use it for the adequate adjustment of labor demand. ”

## EMPLOYMENT FORECASTING

“**M**aking projections on changing trends in the Korean labor market by industry and occupation. Thus contributing to building a more efficient market mechanism for development, allocating national human resources, and providing essential information for government employment-related policymaking.”

## REALTIME LMI

“**J**ob matching, UI data, HRD data(employment rate 6mts after graduate) (Korea Employment Information Services)”

# WHAT IS LMIS?



“**LMIS**, or the Labor Market Information System, is a network involving various entities and individuals with recognized roles and responsibilities, working together to gather, store, disseminate, and utilize labor market-related information. Its primary objective is to generate valuable data and analysis for policy makers and other labor market stakeholders. For instance, the European Employment Observatory contributes to European employment strategies by providing information, conducting comparative studies, and evaluating employment policies and labor market trends. Establishing institutional arrangements and ensuring wider access to information and analysis are crucial aspects of LMIS.”

# 01 Labor Market Information System

## LMIS Classification

Table LMS Classification

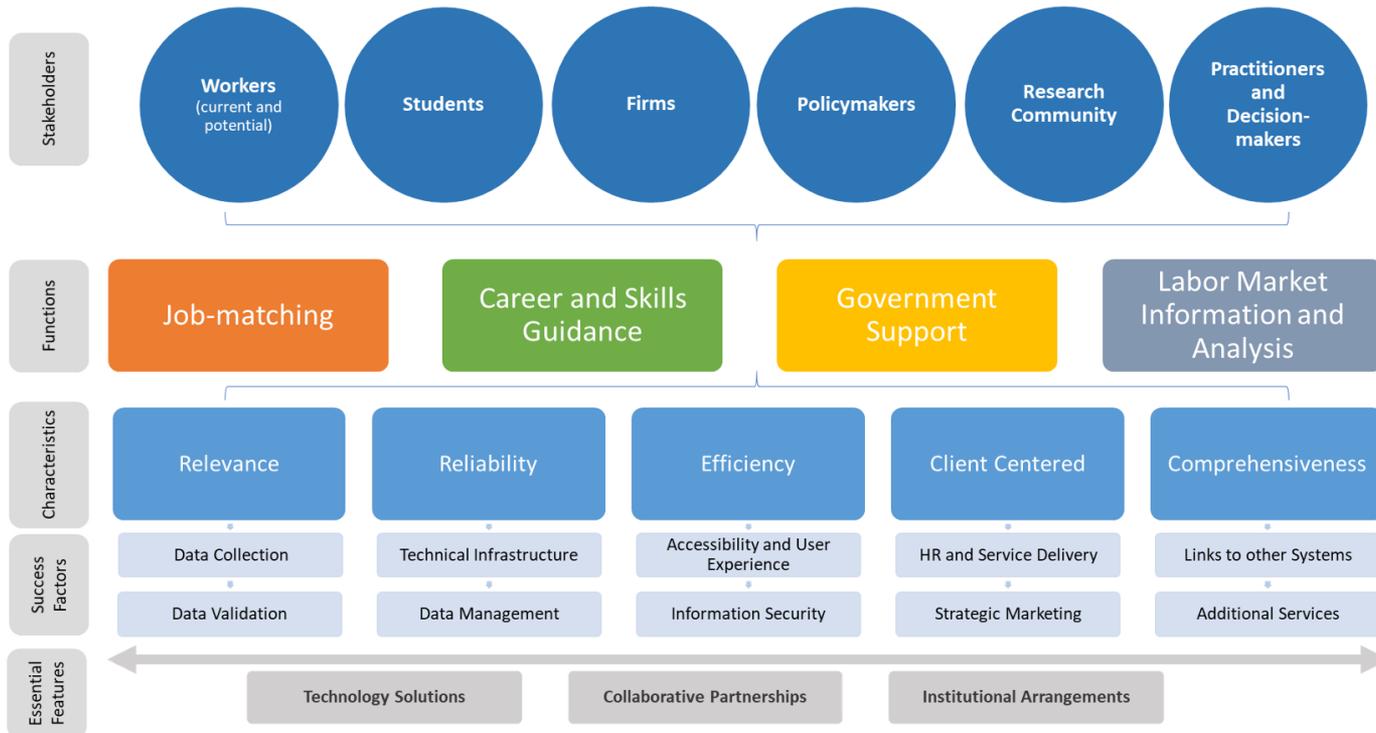
Element	Basic	Intermediate	Advanced
Information	Provides basic information via <b>statistical indicators</b> using national surveys and administrative data	Provides market intelligence using different data sources <b>beyond surveys</b>	Provides several subsystems of information and digital tools to collect, produce, evaluate, and disseminate updated (often real-time) information using <b>big data</b>
Services	None	Provides basic services to different stakeholders— in particular, job seekers and firms	Provides several services tailored to different users
Actors	Involves a small number of <b>public sector actors</b>	Involves <b>more public sector actors</b> , including education systems, job-counseling and job-matching services, social security, statistics offices, and <b>business registries</b>	Involves both <b>public and private sector actors</b> as users and producers of data and services

Source: World Bank adaptation from Sorenson and Mas 2016.

- LMISs can be classified according to the quality of information they produce, the involvement of stakeholders, and the strengths of the connections between institutional partners. (Sorenson and Mas 2016).

# 01 Labor Market Information System

## Framework to Understand LMISs



# 01 Labor Market Information System

## Key Functions of LMISs

The key functions of an advanced LMIS are to provide direct services to different users as well as to provide data and information analyzed and processed by users.

The LMIS includes the following key functions:

- **Job matching.** Core services that help unemployed or employed workers—looking to improve their working situation
- **Career and skills guidance.** Services that guide current and future workers in identifying the skills that are, or will be
- **Government support.** Services that help individuals and practitioners to identify potential government programs
- **General labor market information and analysis.** Information that provides policy makers, practitioners, and researchers with comprehensive information on labor market outcomes and the impact of different policies
- and programs, largely with the purpose of informing policy formulation.

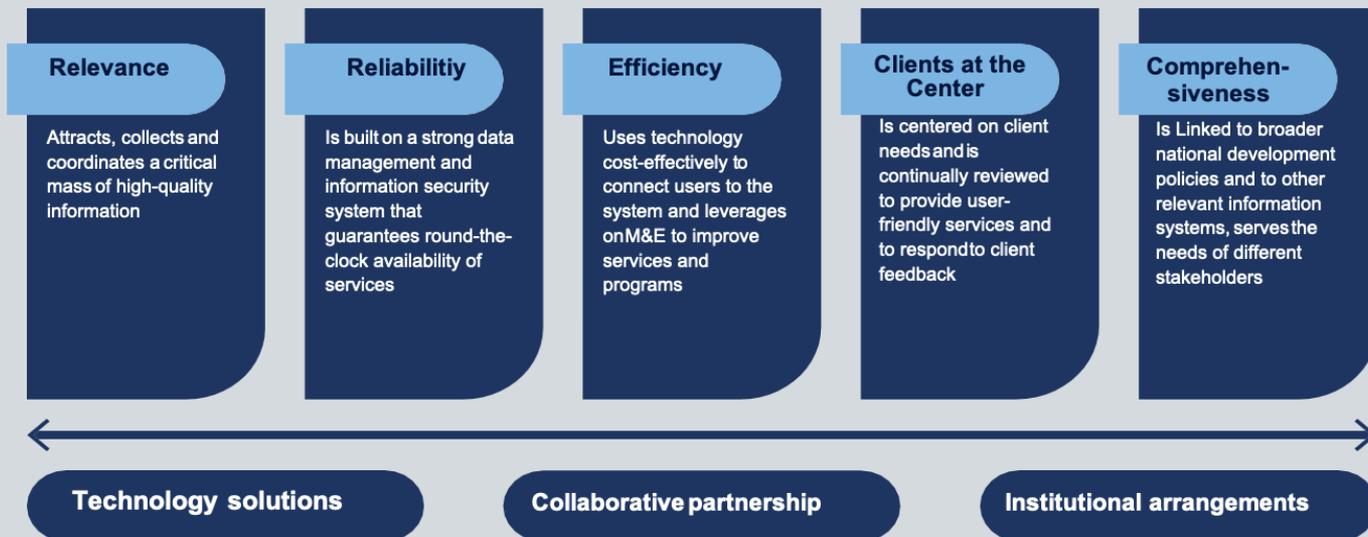
# 01 Labor Market Information System

## Key Characteristics advanced LMISs

- Five key characteristics are at the core of the vision that could take LMIs to an advanced level

Figure Vision of a World-Class Labor Market Information System

### Five key characteristics of an advanced LMIS

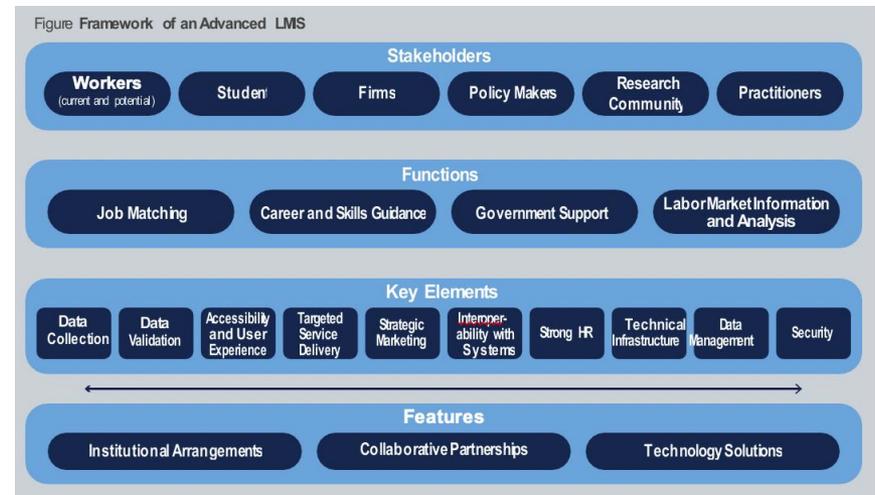


# 01 Labor Market Information System

## Key Elements and Features

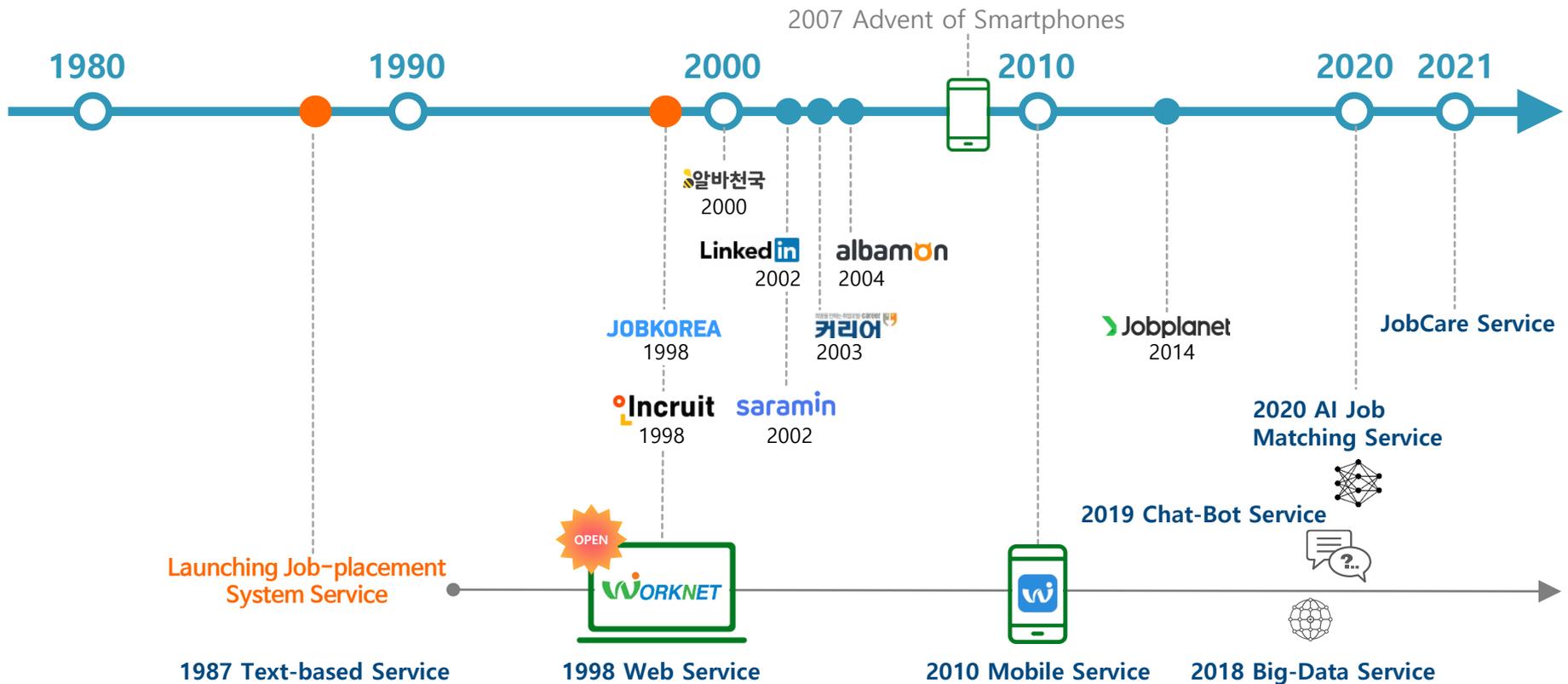
A well-functioning LMIS has the following key elements

- Data collection
- Data validation
- Accessibility and user experience
- Targeted service delivery
- Strategic marketing
- Interoperability with other systems
- Human resources serving the system and its users
- Technical infrastructure
- Data management
- Information security.



# 02 Employment service in Korea

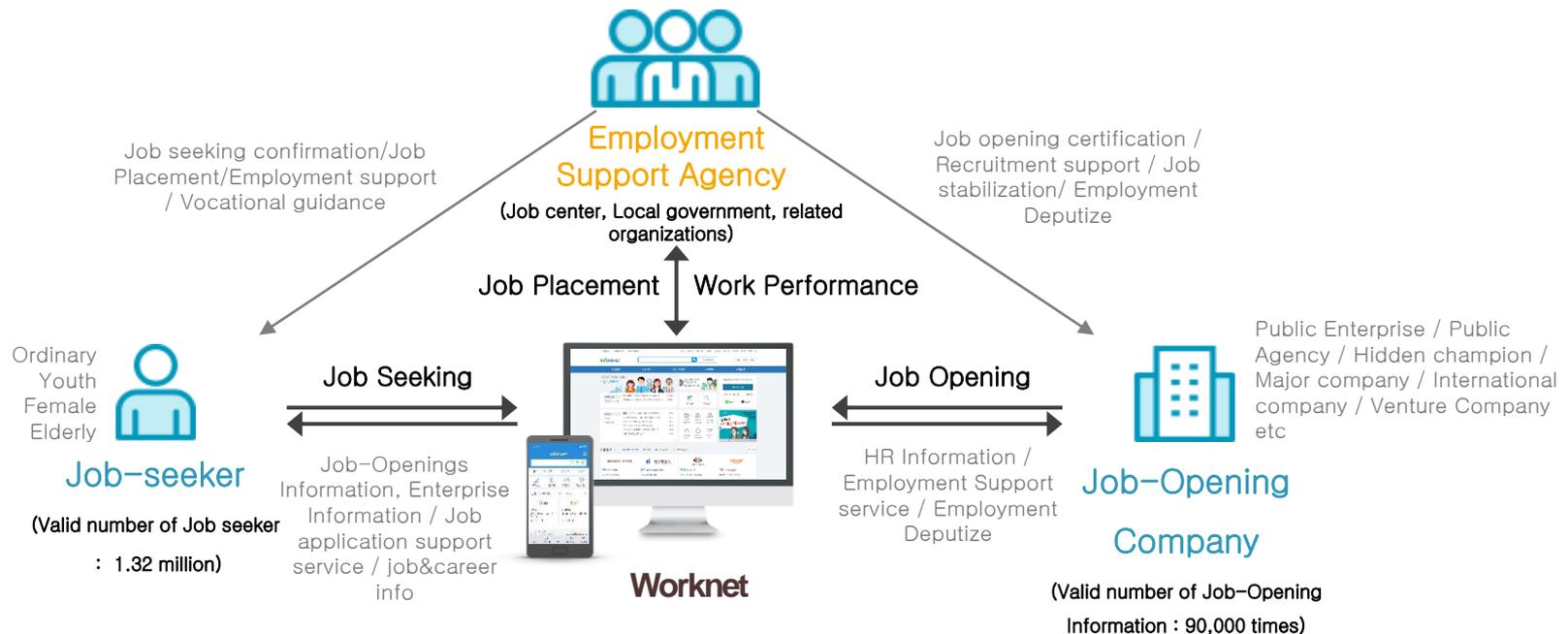
## Worknet's Past, Present and Future



# 02 Employment service in Korea

'Worknet(work.go.kr)' Service launched in 1998 by the Ministry of Employment and Labor

- **[Job Opening]** Provide 'Human Resources Seeking Service' which is useful, contextual for job-provider company
- **[Job Seeking]** Provide comprehensive job information by combining public and private sector in one place.
- **[Job · Career]** Provide Job & Career Service such as job information(10,000 times), Occupation Psychological Test (20 types) and On-line career-counseling service



# 02 Employment service in Korea

## Overall Status (As of Aug 2023)

Cumulative Download number  
of Worknet Application

**10** million



Valid number of  
Job-Openings

**130,000**



Daily Average number  
of Visitors

**1** million



▣ Visitors by countries : Germany 200,000, Japan 460,000,  
France 120,000, Netherlands 180,000

Registered Integrated  
Corporate Information

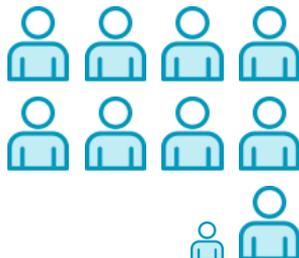
**2.18** million



▣ Youth-friendly Unicorn Company : 1,127

Worknet Members

**9.5** million



Job-Information  
Connection of nationwide

**161** Places



▣ Public Institution 22, Local Worknet 122, Private Portal 10

## II. Work-Net's Strengths

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- **Worknet's Main Services**



# 01 How is Work-net used?

## Work-net's Main Functions



# 01 How is Work-net used?

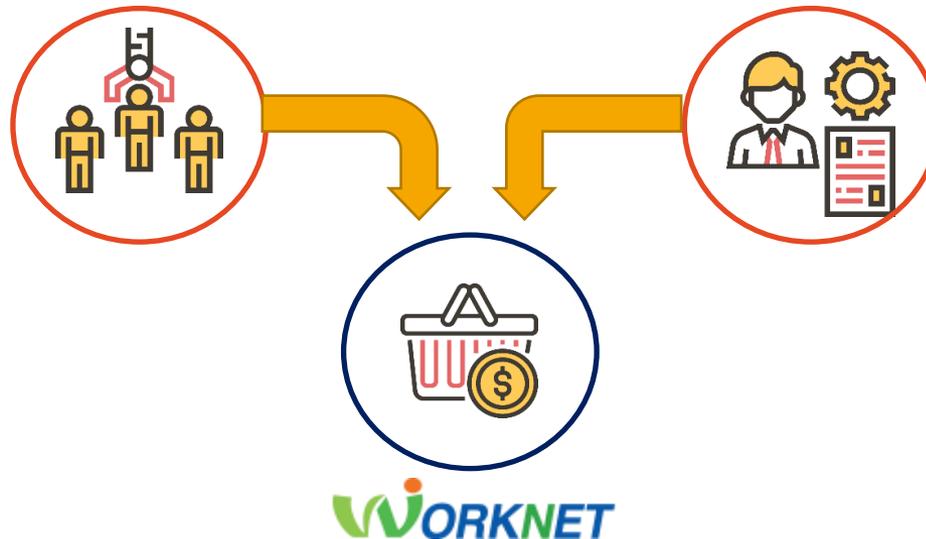
## Rich job-related data

### Vacancies

- Direct on-line postings
- PES Offices (in office, visits)
- Targeted outreach to SMEs
- Collaboration with private and public portals

### Job-seekers

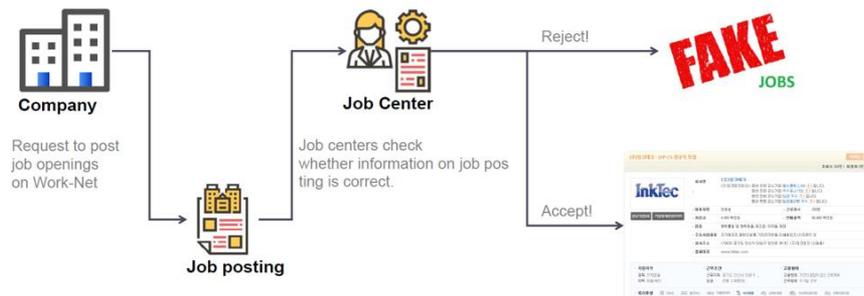
- Direct on-line postings
- PES offices
- ALMP participants
- Unemployment insurance beneficiaries



# 02 Validating Information

## Reliable Public Employment Information website

- Work-net monitoring system is strict so only 60 percent of job vacancies submitted are posted after review.
- 4-step verification process
  - Local PES offices, and by verification in the Call Center of KEIS
  - Algorithm to check reliability and vet out “illegal” jobs
  - Coherence with other systems helps remove inactive (filled) jobs



# 03 User-friendly and accessible services

## Introduce user-oriented services to secure competitiveness

Work-net continues to enhance the design and convenience of the website by investigating how easy the website is to use and the overall experience of the website

- UX based fast and accessible system
- Feedback system
- Single log-in on several systems
- Open API services
- Interaction on several interfaces
- Mobile application
- Tailored services
- Chatbot service and other customer response systems

**Job Seekers**

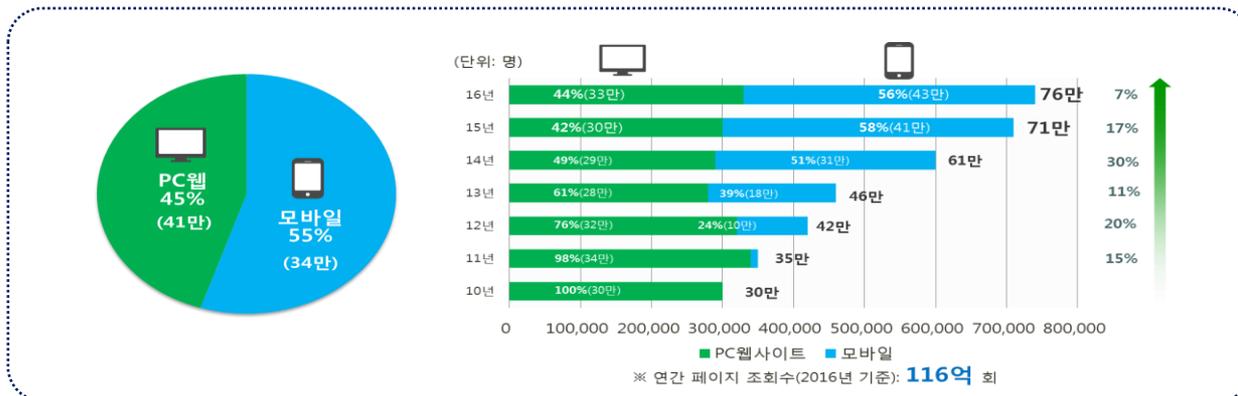
회사명/기업형태	회생제책/업종/근무지역	학력/경력	등록일	대금명	제공처
<input type="checkbox"/> (주)에이컴엔지니어링	상장법/주식법, 시대지침 / 경영, 회생제책에 등록 사용 간담구	선 0, 학력당관 신임/경력1년	18-06-26	채용시까지	
<input type="checkbox"/> 해전드코리아	대한민국 상륙1프로 발당자산관, 회생제책에 등록 사용 간담구	선 0, 학력당관 신임/경력	18-06-26	채용시까지	
<input type="checkbox"/> 부디아 프로그래밍스	사망보조, 매출 C5관리, 사무직 2,000 만원 ~ 2,200 만원 사용 간담구	선 0, (대졸(2~3년) 신임/경력1년	18-06-26	18-07-24	
<input type="checkbox"/> 세이브뱅크	[신입(8명씩) 0원당관리, 기획, 회생제책에 등록 사용 간담구	선 0, (대졸(2~3년) 신임/경력	18-06-26	18-07-11	

**Company Filter:**  대졸(2~3년)  선 0,  선 1,  선 2,  선 3,  선 4,  선 5,  선 6,  선 7,  선 8,  선 9,  선 10,  선 11,  선 12,  선 13,  선 14,  선 15,  선 16,  선 17,  선 18,  선 19,  선 20,  선 21,  선 22,  선 23,  선 24,  선 25,  선 26,  선 27,  선 28,  선 29,  선 30,  선 31,  선 32,  선 33,  선 34,  선 35,  선 36,  선 37,  선 38,  선 39,  선 40,  선 41,  선 42,  선 43,  선 44,  선 45,  선 46,  선 47,  선 48,  선 49,  선 50,  선 51,  선 52,  선 53,  선 54,  선 55,  선 56,  선 57,  선 58,  선 59,  선 60,  선 61,  선 62,  선 63,  선 64,  선 65,  선 66,  선 67,  선 68,  선 69,  선 70,  선 71,  선 72,  선 73,  선 74,  선 75,  선 76,  선 77,  선 78,  선 79,  선 80,  선 81,  선 82,  선 83,  선 84,  선 85,  선 86,  선 87,  선 88,  선 89,  선 90,  선 91,  선 92,  선 93,  선 94,  선 95,  선 96,  선 97,  선 98,  선 99,  선 100,  선 101,  선 102,  선 103,  선 104,  선 105,  선 106,  선 107,  선 108,  선 109,  선 110,  선 111,  선 112,  선 113,  선 114,  선 115,  선 116,  선 117,  선 118,  선 119,  선 120,  선 121,  선 122,  선 123,  선 124,  선 125,  선 126,  선 127,  선 128,  선 129,  선 130,  선 131,  선 132,  선 133,  선 134,  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# 04 Strategic marketing

## Increase users by leveraging marketing strategies

- Active advertising
- Target group outreach
- Job fairs and other events (on-line, off-line)
- Campaigns
- Partnerships with many organizations
- Dissemination of research

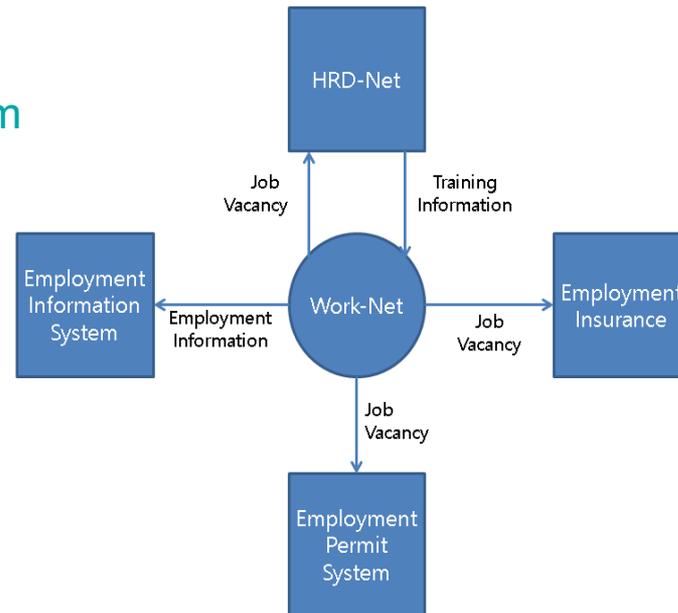


# 05 Links / interoperability with other systems

## Improve labor market understanding by linking systems

Interlinked with several relevant information systems and services:

- Employment information system
- HRD-net (training)
- Employment insurance
- Foreign worker permits



# 06 Additional services beyond job-matching

Provides employment information as well as vacancy information throughout the lifelong of job seekers

- Comprehensive career guidance services (KNOW, HRD-net):
  - Detailed occupational information (prospects, content)
  - Vocational/career exploration information
  - Vocational tests to match aptitude, preference, capacity
  - Links to vocational training opportunity (HRD-net): course contents, training objectives, application requirements, employment outcomes, etc.
- Information on employment policies, labor market programs, social welfare
  - Simulation services to determine eligibility
- Online application possible for support

# 07 Human resources and service delivery

Leverage human resources to provide services as well as link with offline organizations

- For PES service delivery, Work-net is used by:
  - the local job centers (232),
  - nearly 1,800 private agencies
  - specific college-campus based job centers
  - specific job centers for various target groups.
- For labor market research KEIS (Work-net is a central node) draws on a significant pool of researchers to provide high quality analysis (in July 2019, some 154 researchers were employed).
- For continuous improvement and development of the LMIS content and user-friendliness, KEIS employs more than 170 staff for operating the system.
  - There are 46 employees at the Call Center to assist with customer consultation and monitoring and verification of the Work-net information

# 08 Data management & Security

Manage data to generate reliable and meaningful information



- Established data quality system (standards)
- UX/UI design reduces errors
- Data quality evaluation, refinement procedures
- Integrated information management system (connecting WN, HRD, etc.)



- Administrative security
  - Security training, Security checks, Management and inspection
- Physical security
  - Access control/authentication systems
- Technical security: firewall, vaccine, network separation
  - Program operation and inspection from program source to end-user security
  - Separate internal and external networks

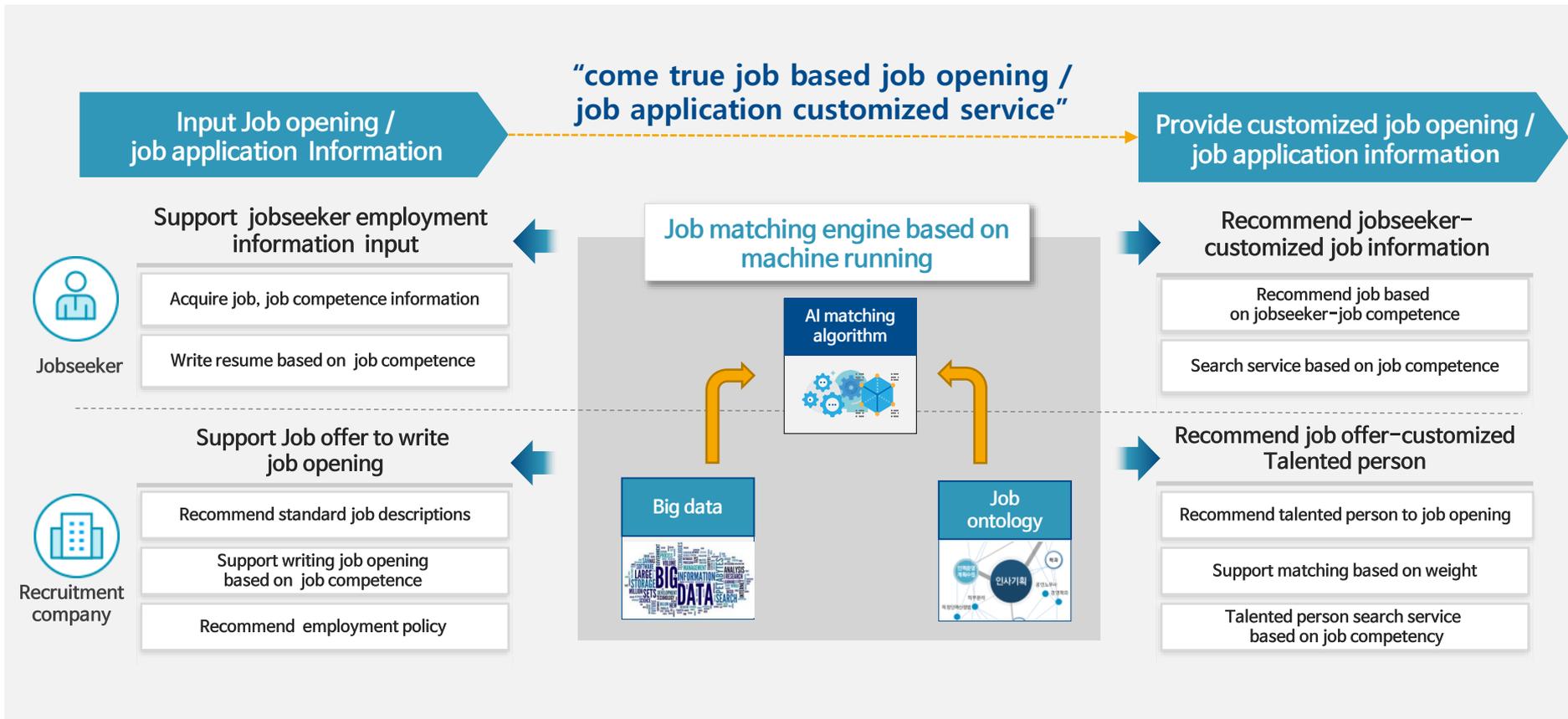
### III. Data Based Services

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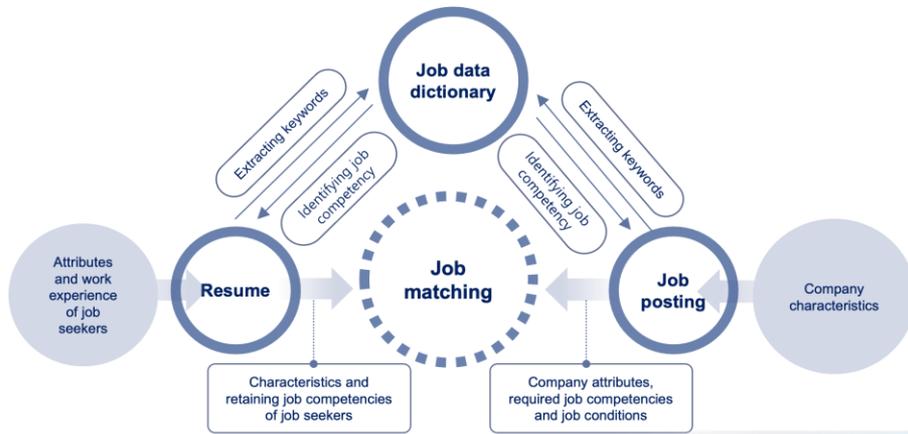
# 01 AI Job Matching System

Application of job based job opening / job application customized service



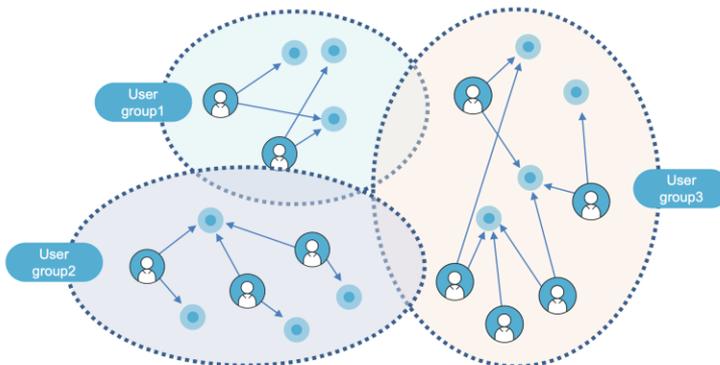
# 01 AI Job Matching System

## Job-based job matching



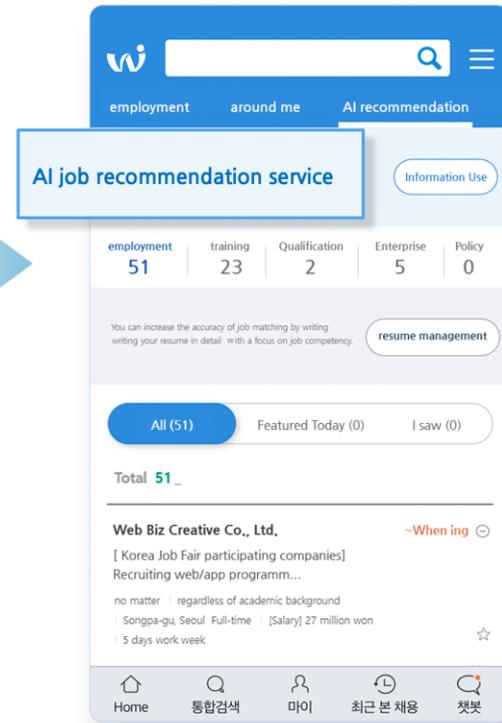
## Behavior-based job matchin

Analyzing job positions that people like you are interested in or searche



It uses big data and machine learning technology to recommend jobs to job seekers based on job function and behavior and provides AI job matching service that recommends suitable talent for the job to recruiting companies.

[AI job recommendation service screen on WorkNet]



# 02 Employment trend monitoring system

- In order to quickly respond to the COVID-19 employment crisis, the employment trend monitoring status board was established by using the Employment Information DB.
- Daily report to the Ministry of Employment and Labor and the Office of the President

## Employment trend monitoring status board



# 03 Employment service performance management system

- A system for evaluating the performance of employment service delivery organizations(Job centers, local governments, private outsourced employment service organizations) using the employment and labor DB
- Work-net employment performance achievement rate through employment service provision

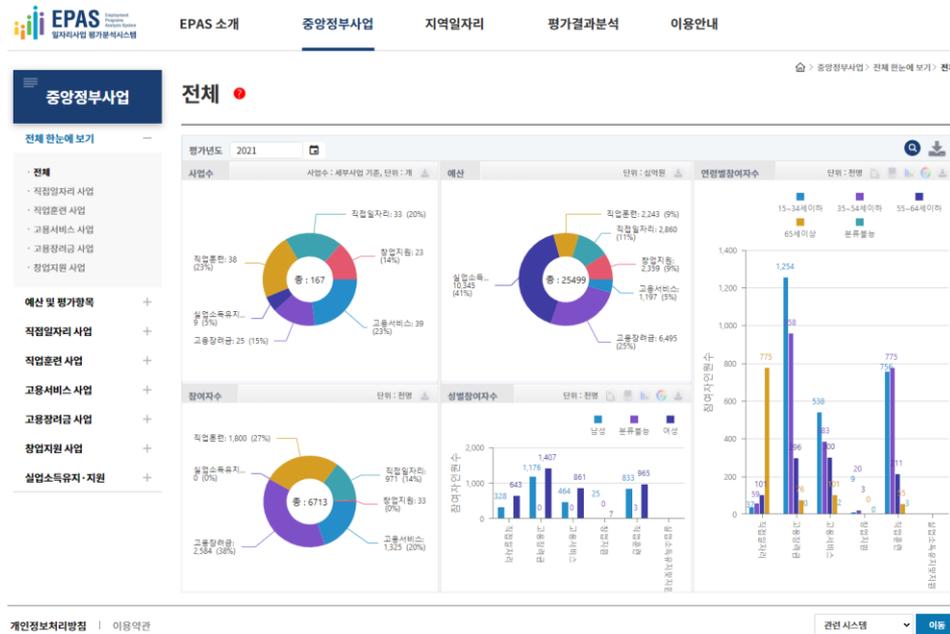
ESPM System structure diagram



# 04 Employment Project Analysis system

- Identification of the effectiveness of policies through evaluation of employment projects in which national finances are invested

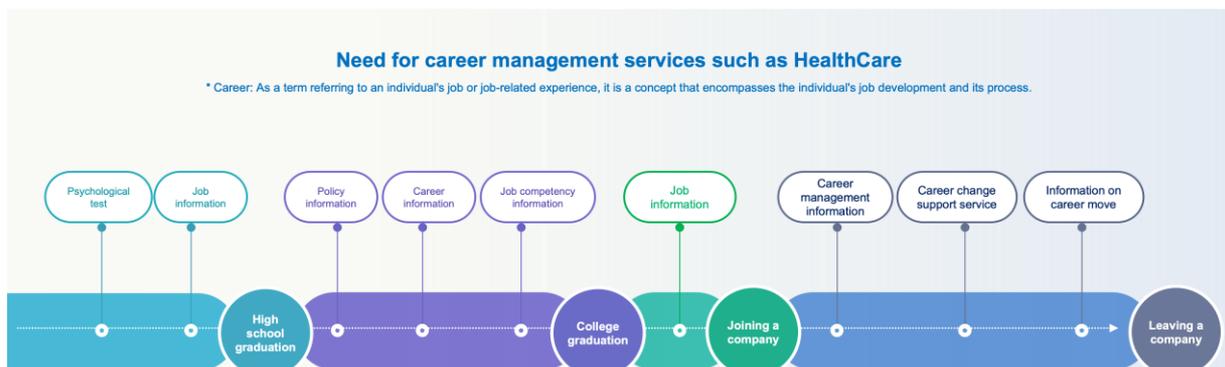
## EPAS System User Homepage



# 05 Job Care Service Using AI

## The need for Job Care

- High costs are incurred in entering the labor market due to lack of job competency of job seekers at the time of employment
- AI analyzes employment-related data\*, analyzes the jobs required by the job, and prepares job seekers in advance to eliminate mismatching can be solved and the cost of job search activities can be minimized
- Through this service, beyond simple matching, it can be used for job competency reinforcement and job selection suitable for the current job

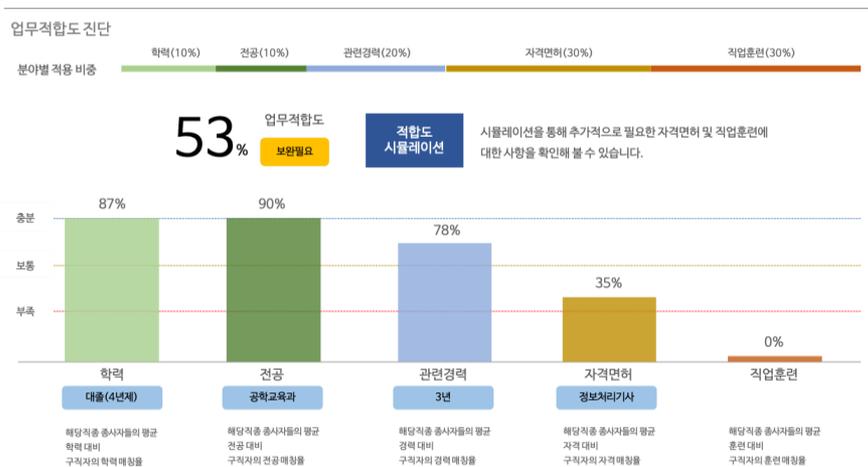


**Job care service provision method:** by providing useful information for each episode according to the implementation of the labor market in life through online and offline timely maximizing individual time spent in the labor market

# 05 Job Care Service Using AI

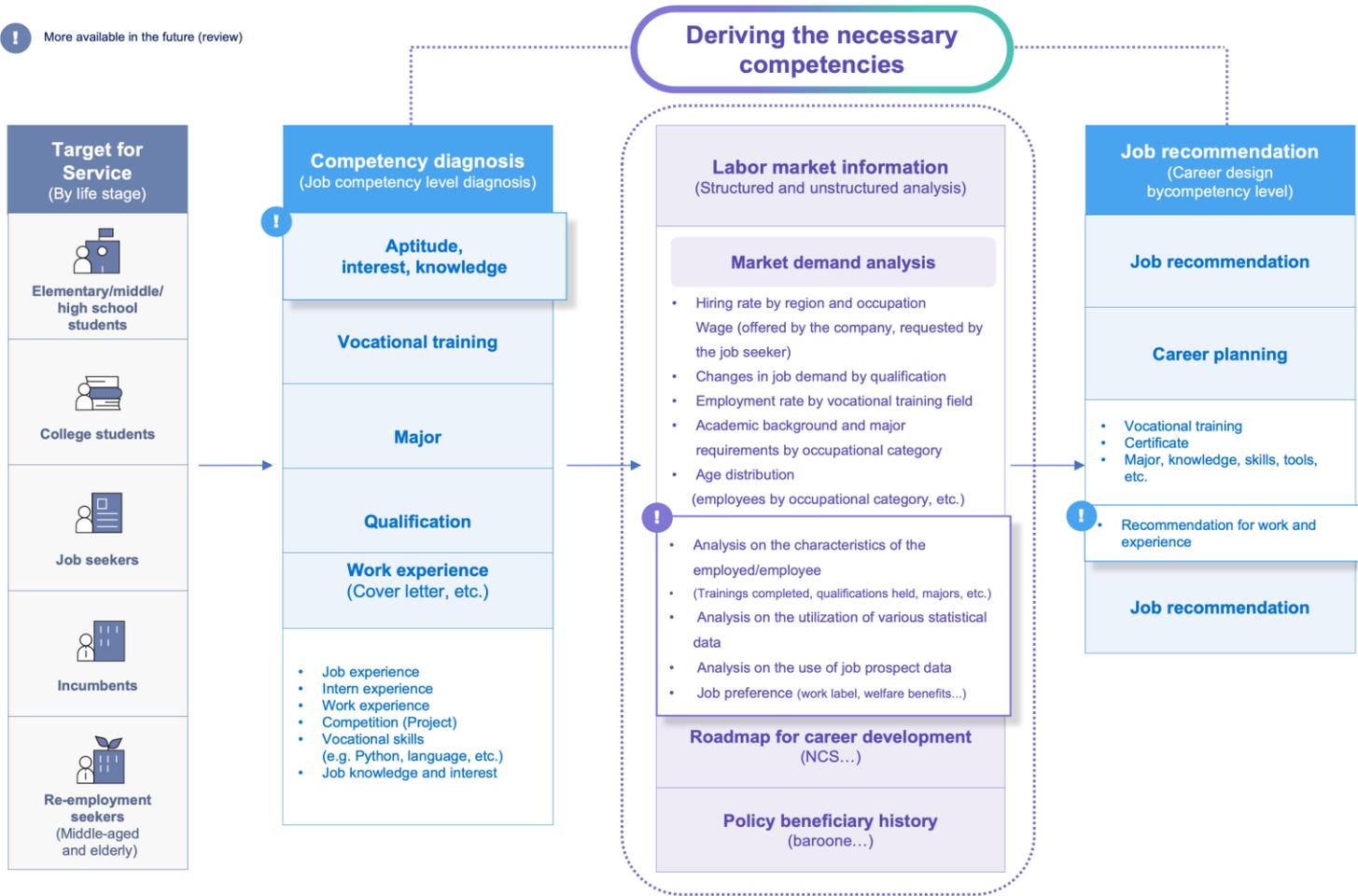
## Contents of Job Care Service

- Assists in job selection by providing various information for job competency improvement based on personal data during job counseling
- Based on the basic information of job seekers, job suitability with the desired job type, psychological test type, AI-based recommended employment information, etc. are provided.
- In the case of job suitability, the degree of suitability with the desired job in terms of academic background, major, related experience, qualification, and vocational training is provided



# 05 Job Care Service Using AI

! More available in the future (review)



# Thank You!

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