New Digital Technologies to be adopted in Korean Civil Service HRM

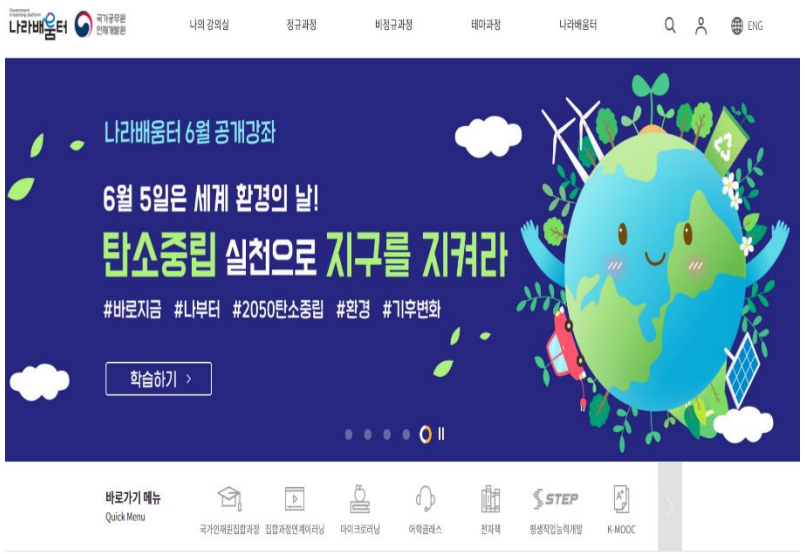
October 29, 2021

Ministry of Personnel Management

1. HRD Intelligent Open Platform

Korean Government's E-Learning system

☞ The Korean government's **first e-learning center** was established **in 2000** and it was upgraded to be the **current E-learning System** named "Nara Baeum Teo(National Learning System)" **in 2017**.



☞ More than 3,000 learning content created by the government are available on this website.

☞ Most of these are the **Mandatory courses** for civil servants defined in the legislation (ex. integrity, gender sensitivity), **General and Specialized Job Skills**, **Administrative Philosophy & Agenda.**

☞ They are jointly used among all the ministries.

Environmental Change and the Limitations of Traditional Methods

Increase in demand for non-face-to-face training amid Covid-19

☞ Covid-19 making it difficult to operate offline courses and generalizing non-contact learning

☞ Traditional offline courses representing difficulties to invite famous lecturers and for learners to travel

Environmental Change and the Limitations of Traditional Methods

New environment allowing easy access to contents of good quality via diverse private platforms

Google

YouTube

TED

☞ In the past, civil servants' e-learning system was built based on content created by the government

☞ Now, private platforms, such as Youtube and Google, allow to retrieve learning information over the world and to access easily

☞ Content is produced and provided more rapidly and abundantly by private suppliers

☞ Recently provided e-learning resources are less-than-15-minute-long called micro-learning content and characterized by its efficiency and condensation

HRD Intelligent Open Platform

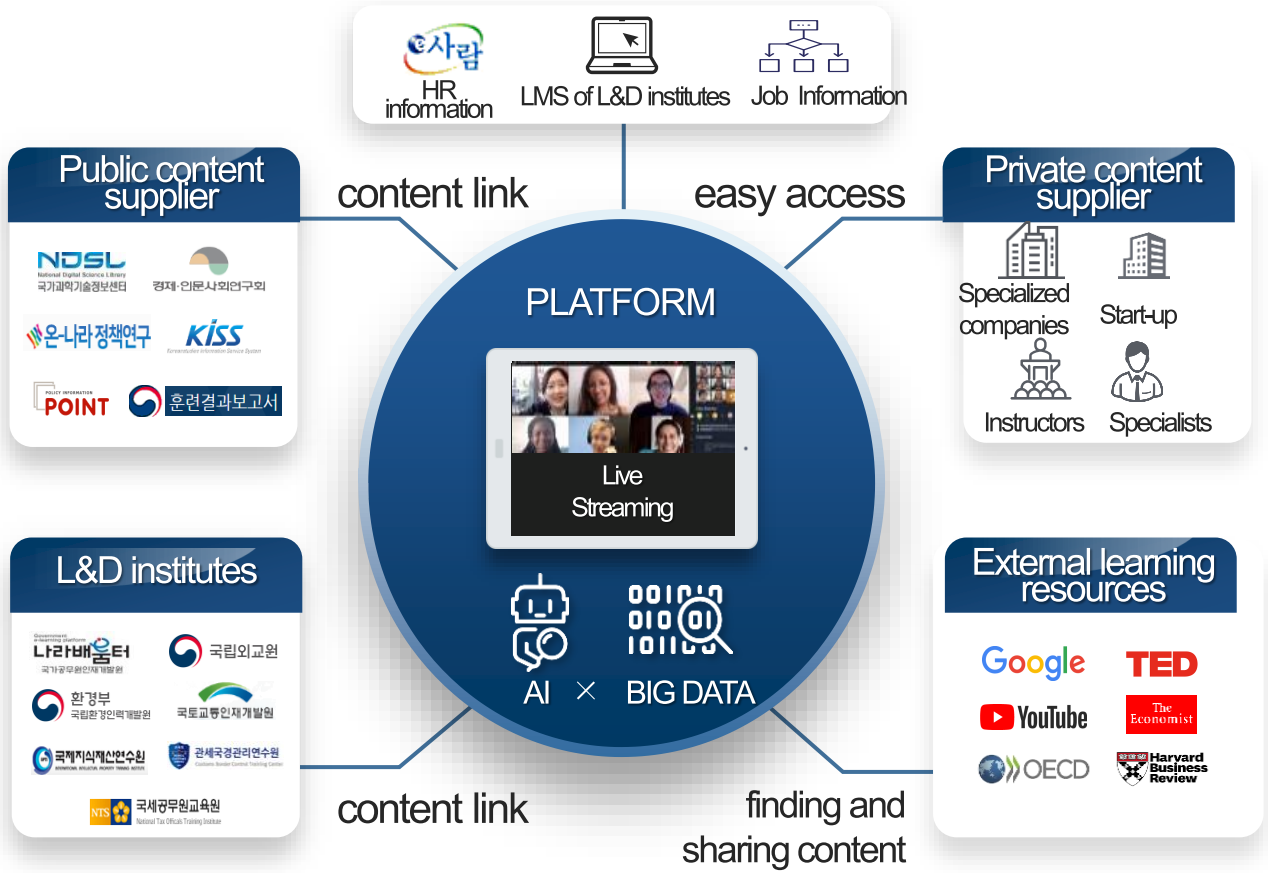
Objective

- ☞ Provide stable online learning environment
- ☞ Encourage ‘informal learning’ allowing on-the-job training
- ☞ Use diverse learning resources supplied from both public and private sectors

To set up more efficient learning environment based on online platform

HRD Intelligent Open Platform

Main functions



- ☞ Build **informal social leaning** to encourage learners' participation and communication
- ☞ Create **learning hub** collecting and distributing a wide range of content from the public and private sectors
- ☞ Provide **personalized learning content** based on AI and big data
- ☞ Establish **real-time video learning system** enabling **two-way communication** while enhancing **security and stability**

HRD Intelligent Open Platform

※2020년 1단계까지 구축된 결과물임

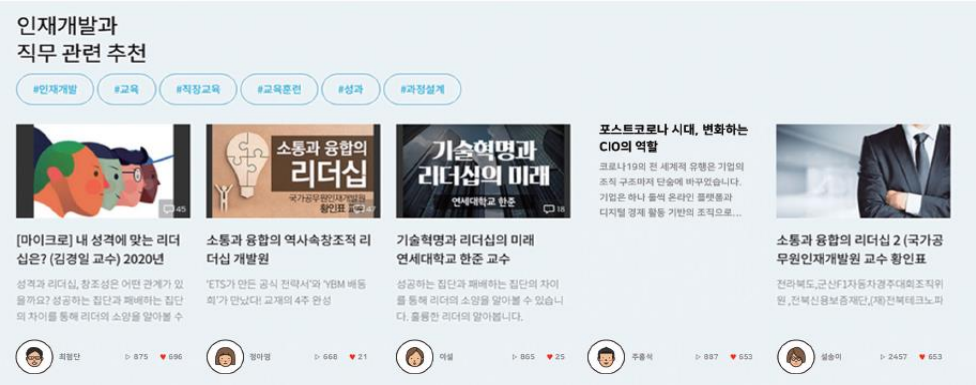
Social Learning

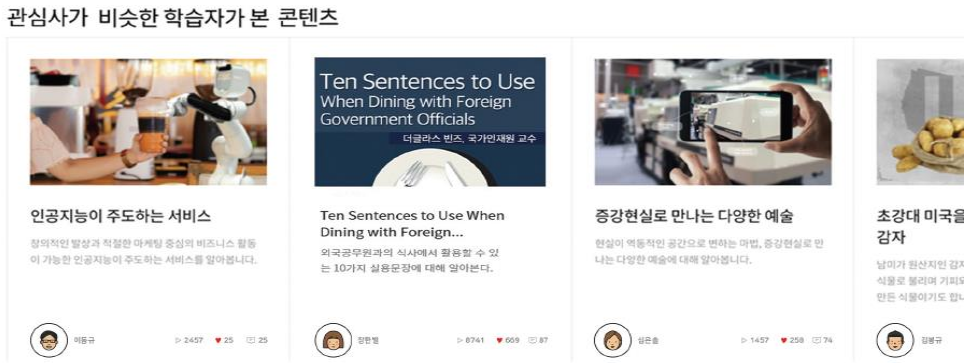
☞ **Managing individual learning records displayed on the Dashboard**

☞ **Sharing external learning resources such as Youtube by registering its' URL**

☞ **Interacting among users by learning the content shared by others and commenting on it**

HRD Intelligent Open Platform





* Products up to the present

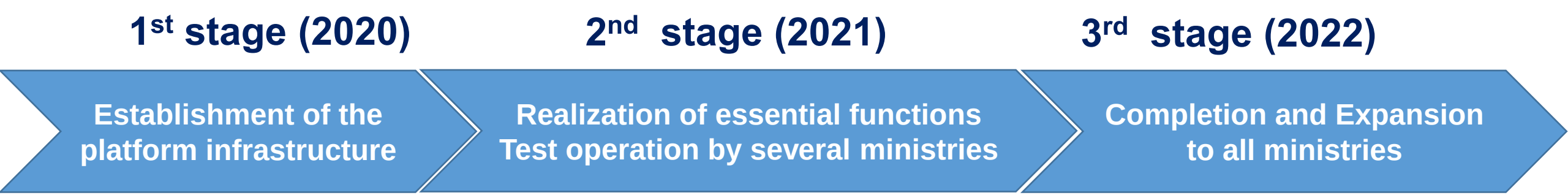
AI-BigData based Customized Recommendation

- ☞ Links to more than 300,000 contents provided by public and private suppliers
- ☞ AI analysis on each official's position, interest and learning records
- ☞ Recommendation of individually customized contents

Real-time Video Lecture System

HRD Intelligent Open Platform

Roadmap



☞ **Ongoing establishment for three years from 2020**

☞ **Test operation by several ministries from February 2021**

☞ **Expansion of the platform service to all ministries from 2022**

2. Intelligent Talent Referral Service

National Human Resource Database (NHRDB)

State-operated Database system which collects and manages information on candidates for public offices to ensure the selection of individuals for high-ranking positions based on objective date

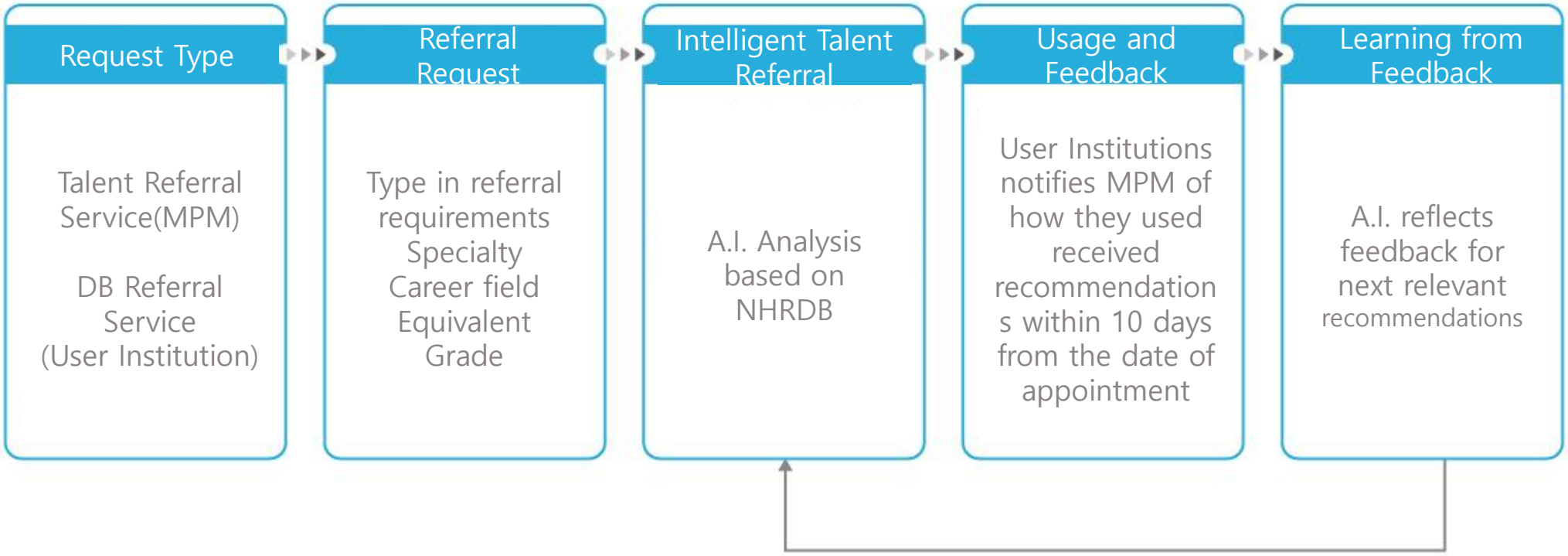
User Institution

Central Gov't Ministries / Agencies, Local Gov'ts and Public Institutions

Scope of Referral position

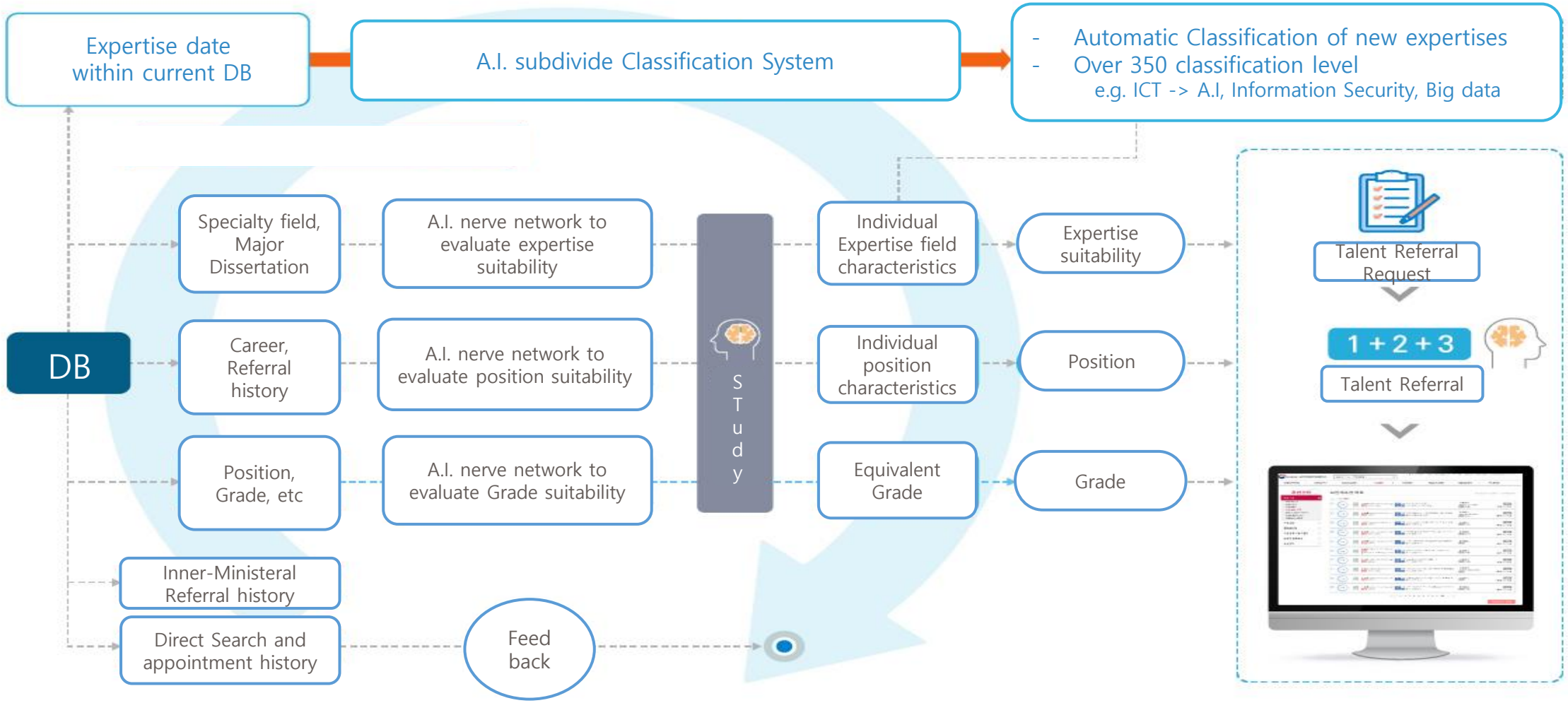
Political Service(excluding elected officials),
Positions filled by open/public recruitment,
Members of a state-oriented committee,
Members of public committee,
Examiners of public institutions

Talent Referral Service System



A.I. studies NHRDB data and recommend candidate pool for requested positions

A.I. Talent Referral Algorithm map



A.I. Talent Referral

Data, Statistics based

Limited Classification
(31 Expertise field level)

Major Classification

Education	ICT
Diplomat/Unification/Patriots and Veterans Affairs	Trade and commerce / Customs / Procurement
Firefighting/Disaster prevention/Weather service	Finance / Budget/Tax

- Talent Referral based on simple statistics

- Absence of management on position-suitability

- Absence of management on Grade-suitability

AI Study based

Intelligent / A.I. based classification of expertise field

- Over 350 medium level classification of expertise field
- Expanded Talent referral enough related field analysis

Enhanced Accuracy of Talent Referral by utilizing Data-studied Algorithm

A.I. Referral service on Primary Position
- Talented Referral after AI Analysis on career characteristics

A.I. Management on position/grade suitability

3. Use of A.I. Technology for Recruitment

Recent Trends in Recruitment Practices

☞ Use of Artificial Intelligence technology, Digitalization of Recruitment Process, and Un-tact/Video interview practices emerged as trend of Recruitment Innovation for the last years.

- Use of A.I. tool for staff recruitment process(e.g. personal statement screening/scoring, A.I. Interview) practiced among public institutions and private companies.
- A.I. Interview tool reflects respond text, verbal speed/tone, intonation, eyeline, and facial muscle reactions, etc. for scoring each candidate.
- Samsung conducted first online recruitment test which invited job applicants to take the test at home using their personal computers.

☞ Trend accelerated from companies' demand to administer large scale recruitment test in Pandemic situation, and the recognition that use of A.I. technology can support fairer recruitment

Digital tools used for Civil Service Recruitment in Korea

☞ Annoucement

- Job openings and exam announcements are provided online through Government-run portals.
- Online Civil Service Job Fairs adopting Metaverse tools run by MPM.

☞ Document screening

- Some ministries/agencies administer document screening to detect plagiarism

☞ Written test

- MPM provide computer to support handicapped applicant’s written test(for essay-type test)

☞ Interview test

- MPM provide video interview for self quarantine applicants

Applicability Review on A.I. use for Civil Service Recruitment

Is A.I. technology effective for selecting talented civil servant?
How can it be used to reduce cost and support selection?
What should government consider/prepare before adopting the A.I. tool?

☞ **Expectations**

- **Fairer/more transparent recruitment**
- **Enhanced accessibility**
- **Cost reduction for recruitment**
- **More efficient process management**

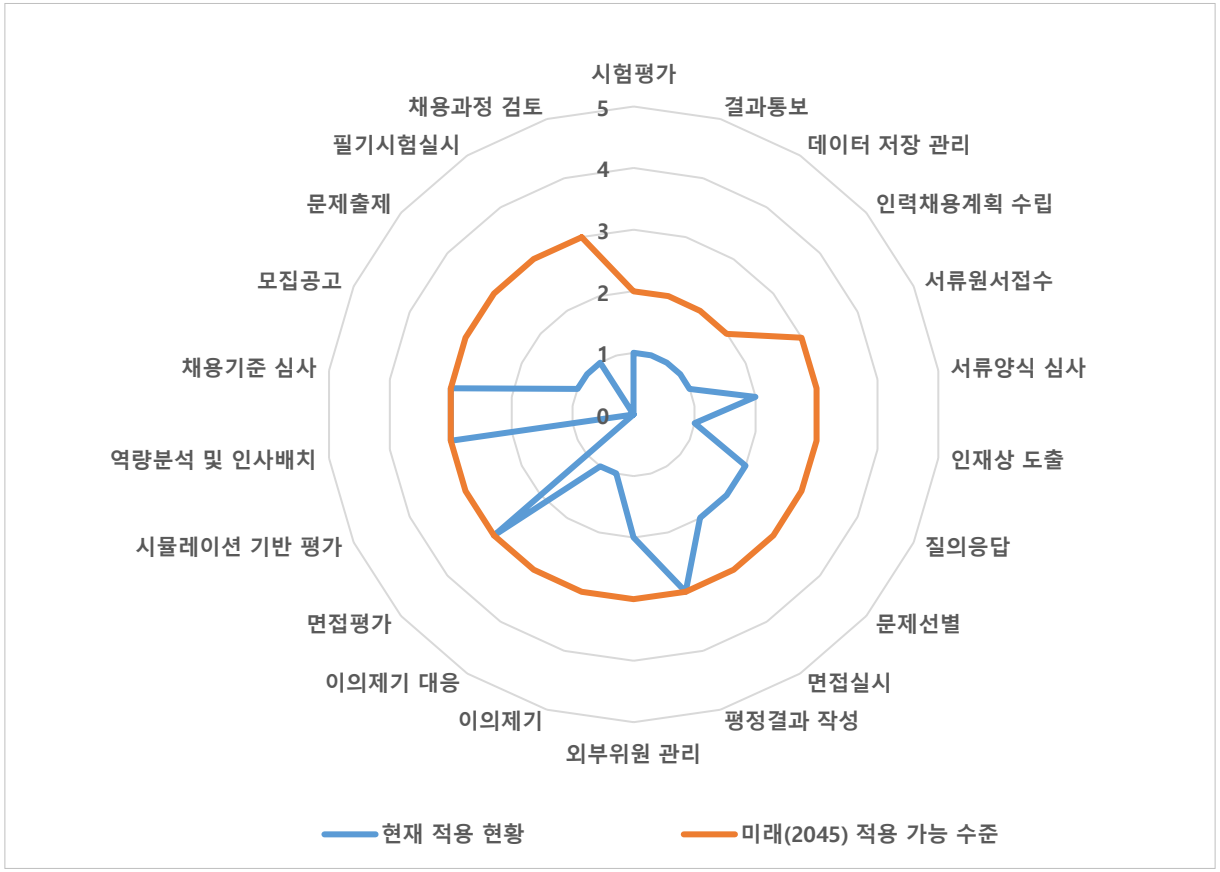
☞ **Worries**

- **Validity/credibility of Algorithm**
- **Issue of Fair management of the DB**
- **Data Storage and Privacy**

Applicability Review on A.I. use for Civil Service Recruitment

☞ **Technological perspective**

- **Current level of A.I. technology can provide data-based opinion for interviewers' reference**
- **A.I. technology can be advanced/applied to most of recruitment process by 2045**



Application principle/requirement

- **Transparency of Data/Algorithm**
- **Explainability of A.I.'s judgement Criteria**
- **Reliability of A.I.'s judgement**

Applicability Review on A.I. use for Civil Service Recruitment

☞ Legal and Institutional Foundations

- Along with overall reform of the recruitment system, Legal foundation on the introduction of A.I. technology could be necessary.
- Basis/measures to manage applicant data transparently for proper purpose, and to securely store/use them to update the Algorithm
- Regulations on responsibility issue related with the result from the A.I. use

☞ Level of technical advancement, Application cost(Data management, Platform/tool development, etc), Level of applicant's Embracement, and other issues should be considered as well.

Thank you

인사혁신처