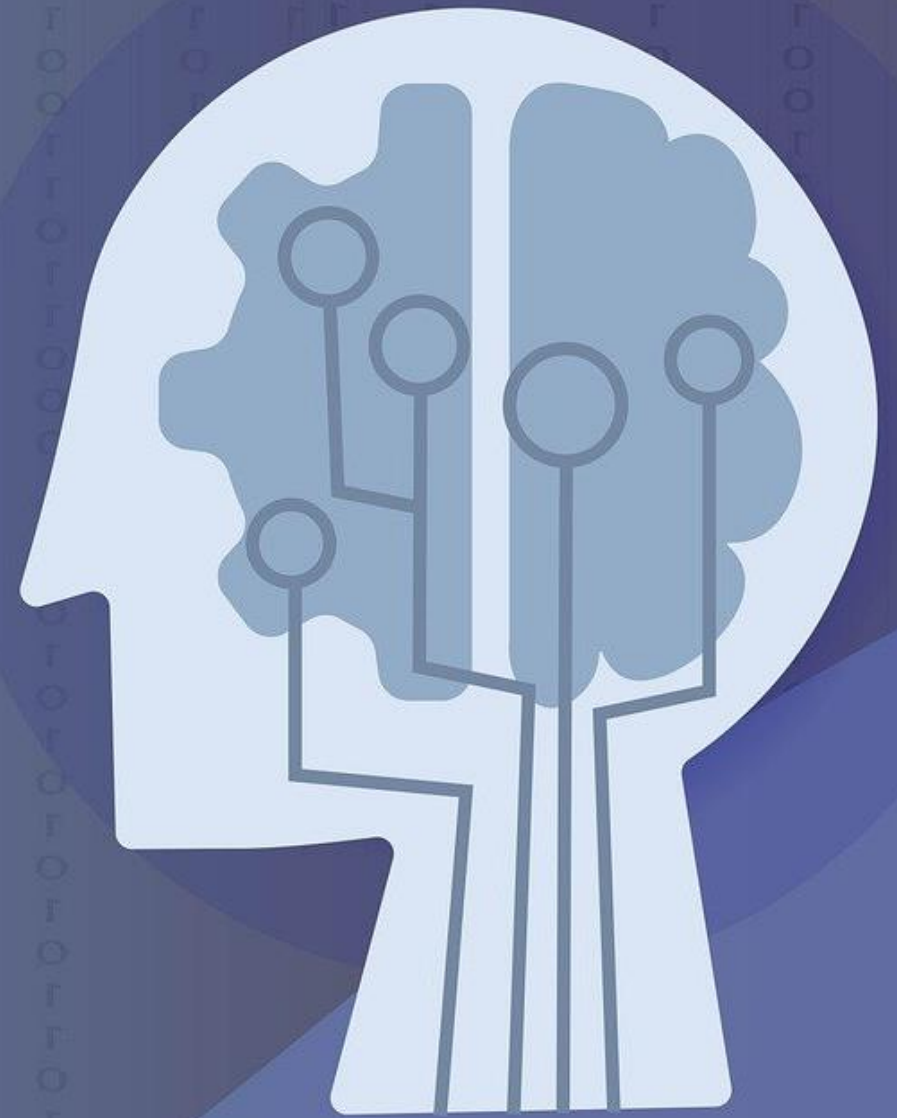
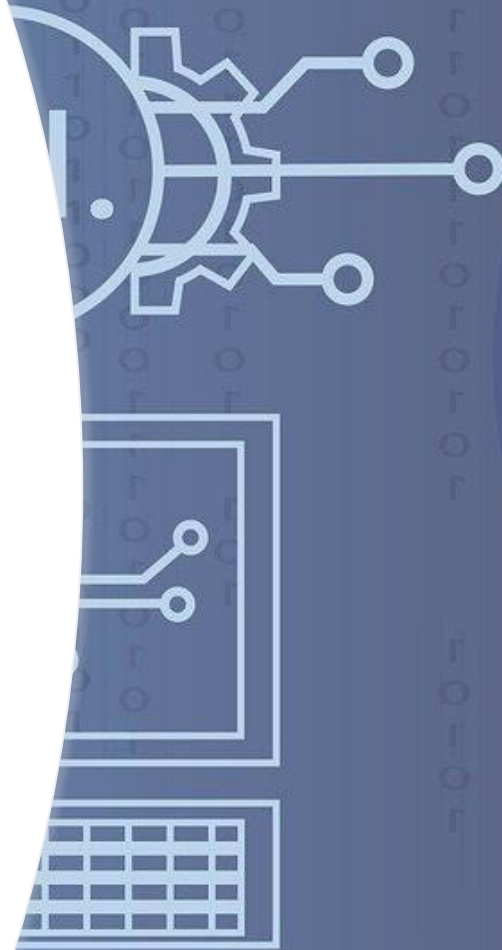


# Coexistence through collaboration with AI toward HR well-being

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2020. 11. 12. Thursday

Seoul National University  
Professor Chan Lee

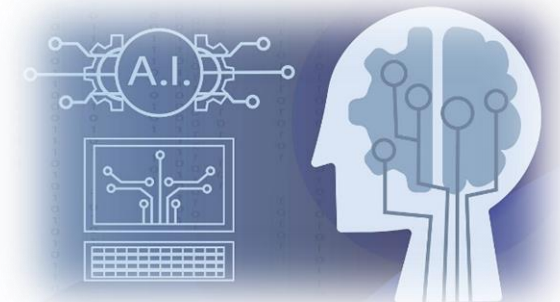


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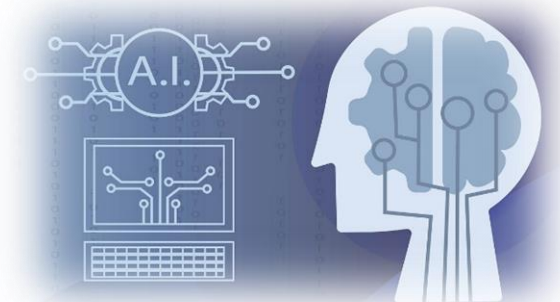


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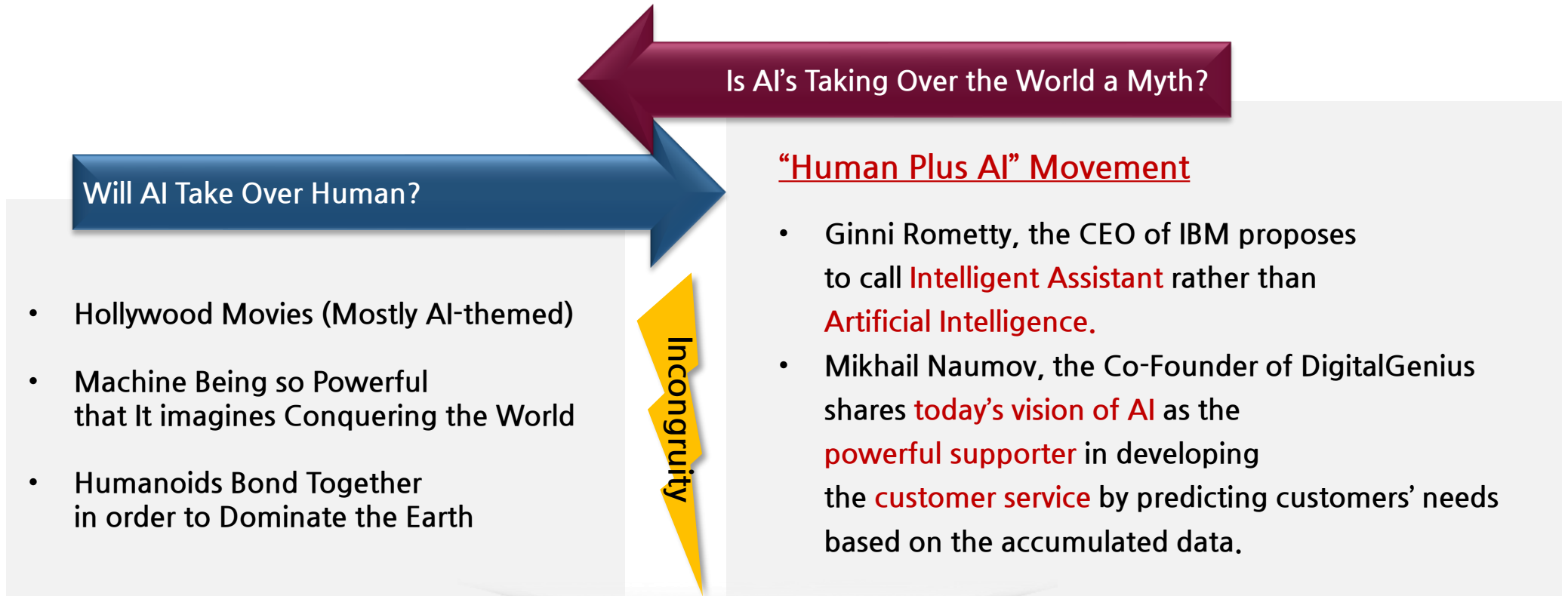
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# I . Digital transformation at work

## AI Takeover Myth



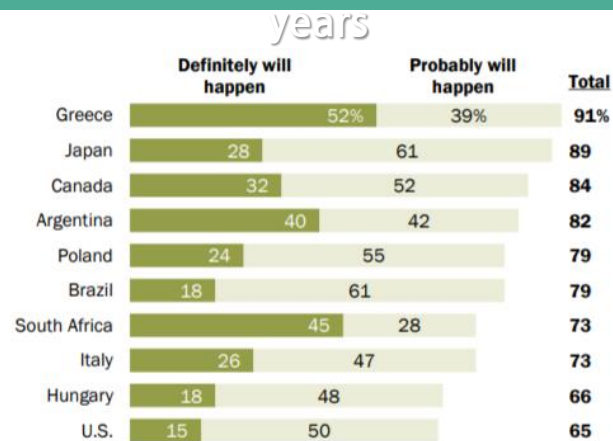
The portrayal of AI as a rebellious super intelligence **delivers the unrealistic picture** of the current transformation that we are facing.

Source: Forbes (2017. 12. 17.) "Will AI Take Over The World" Retrieved from : <https://www.forbes.com/sites/shephyken/2017/12/17/will-ai-take-over-the-world/#108b69425401>

# I . Digital transformation at work

## Trepidation about Job Automation (1/3)

### The Perceived Possibility of AI Replacing Human Workforce in 50



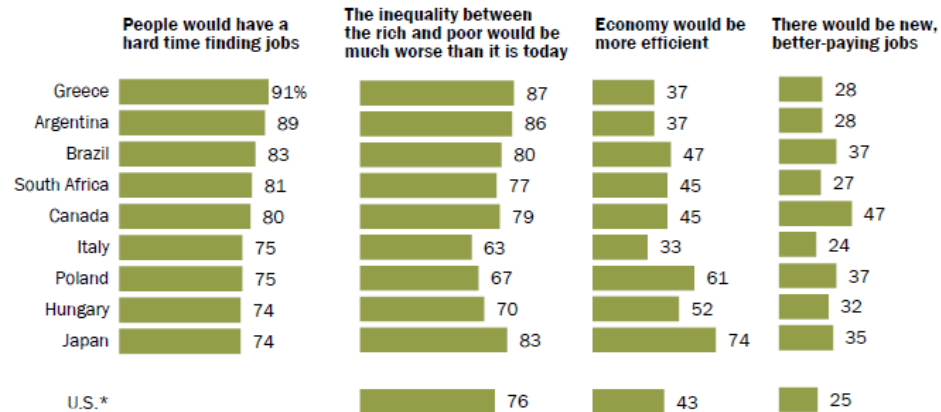
Note: U.S. data from survey conducted June 10-July 12, 2015.  
Source: Spring 2018 Global Attitudes Survey. Q80.

- According to the Pew Research Center study of public opinion in 10 countries, including Japan, U.S., Canada, South Africa, Brazil, Italy, **over the 50% of the publics expect the machines would takeover their job** (Pew Research, 2018)
- OECD estimates that **14% of jobs** in developed economies would be **vulnerable to automation** and **another 32 %** would go through **substantial changes** (OECD, 2018).

# I . Digital transformation at work

## Trepidation about Job Automation (2/3)

### People Being More Persuaded by the Negative Consequences than Potential Benefits of Job Automation



Note: U.S. data from Pew Research survey conducted May 1-15, 2017. No U.S. data for "people will have a hard time finding jobs." In the U.S., the efficiency question referred to "economy as a whole" and the jobs question read "economy will create new, better-paying jobs."  
Source: Spring 2018 Global Attitudes Survey. Q81a-d.

- The main reason of trepidation about job automation stems from **the fear of ordinary people perceiving the downside of Job automation**
- More than 80% of adults in Greece, Argentina, Brazil, South Africa and Canada as well as 70% in Hungary, Poland, Italy and Japan expresses the worries.
- Interestingly, **people who see their current state of economics positive more likely agree with the perks that job automation would bring.**

The fear over job automation results from various reasons, including **their perceived state of economy**

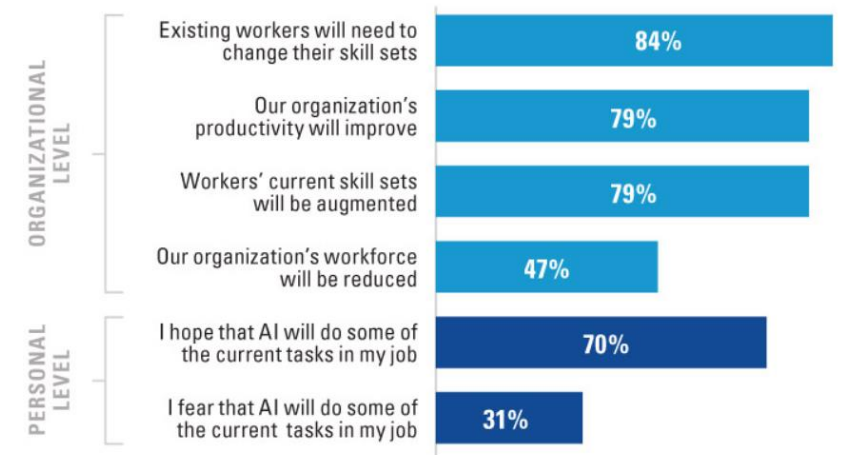
# I . Digital transformation at work

## Trepidation about Job Automation (3/3)

“The current perceived trepidation about job automation might be overblown”

- The fears around AI taking over the universe might be exaggerated.
- Job automation brings **Multiplicity**, not Singularity, which enables **the diverse workforce** including human and artificial intelligence **to collaborate**
- The result would be not the replacement but the job creation; repetitive jobs will be replaced by more creative jobs.

At the organizational level, cautious optimism about the upcoming changes is more general.



Percentage of respondents who somewhat or strongly agree with each statement

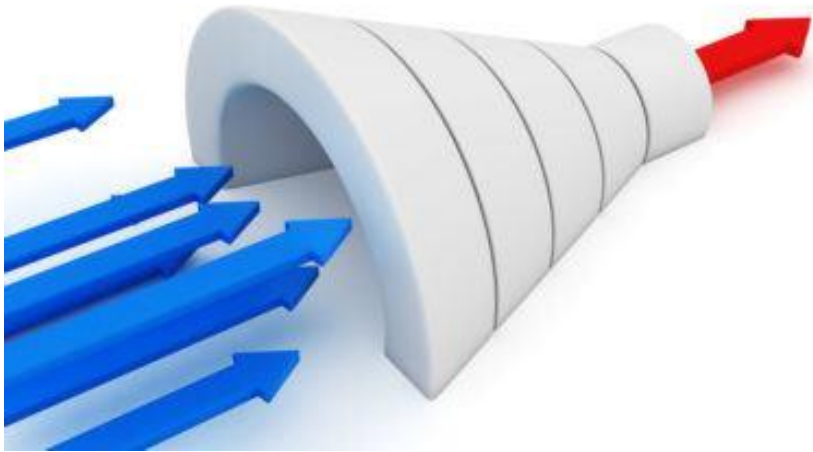
Source : Forbes (2019. 4. ) “Will AI And Robots Force You Into Retirement?”. <https://www.forbes.com/sites/stephenchen/2019/04/04/will-ai-and-robots-force-you-into-retirement/>  
MIT Sloan Management Review (2017). “Findings from the 2017 Artificial Intelligence Global Executive Study and Research Project”. <https://sloanreview.mit.edu/projects/reshaping-business-with-artificial-intelligence/>

# I . Digital transformation at work

## Do AI really Replace Human Workforce? (2/2)

Albeit the rapid shrink of types of tasks that AI cannot perform,  
**three types of tasks corresponding to engineering bottlenecks are hard to be replaced by automation**

“Engineering Bottleneck  
(Frey & Osborne, 2017)”



1

### Perception and Manipulation Tasks

Tasks requiring the high and deep level of perception and manipulation

2

### Creative Intelligence Tasks

Tasks requiring creativity, such as proposing original ideas appropriate to creative values

3

### Social Intelligence Tasks

Tasks requiring human social interaction and cognition of human emotions

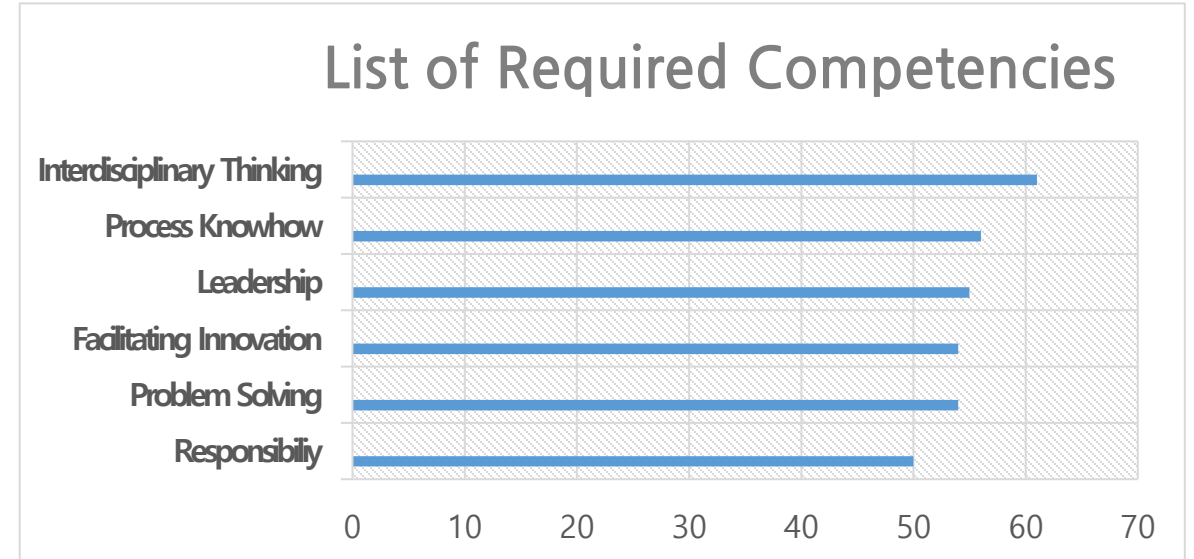
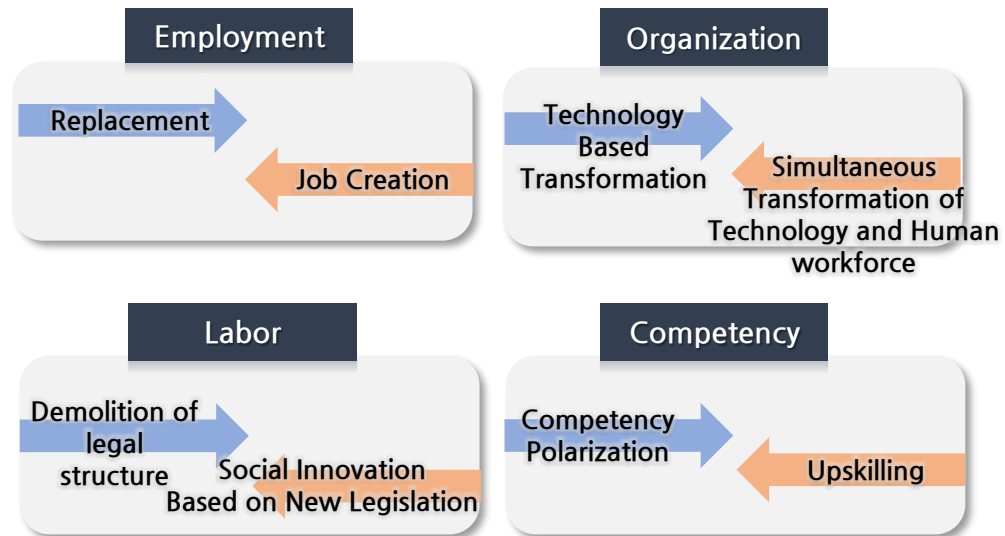
Source: Frey, C. B., & Osborne, M. A. (2017). The future of employment: how susceptible are jobs to computerisation?. *Technological forecasting and social change*, 114, 254-280.



# I . Digital transformation at work

## Do AI really Replace Human Workforce? (2/2)

“Industry 4.0.. Is it an Utopia or Distopia? ... Yet To Be Determined”

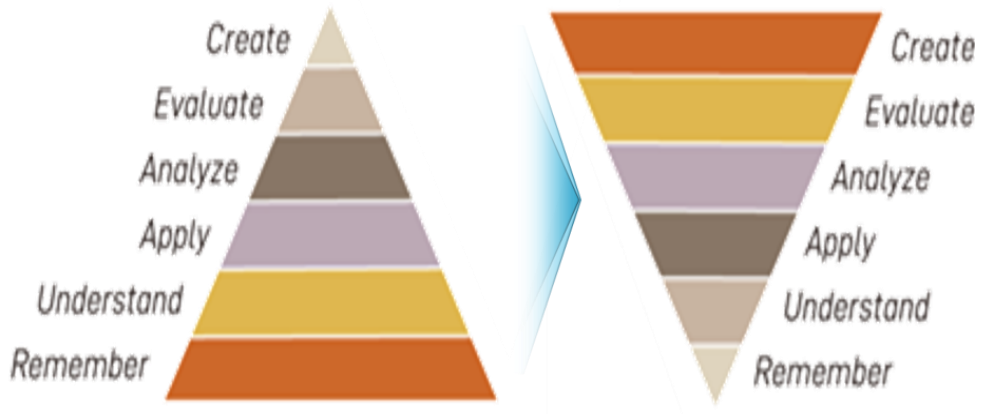


The transformation induced by job automation would **propose different pictures based on the social strategies**

# I . Digital transformation at work

## Changed Role of HR

### The Transformed Role of HR in the era of Digital Transformation



“In the digital transformation era,  
HR needs to propose more **transformed value**”

#### 01 Ensuring Meaning and Engagement

Creating the shared vision of the organization and federating people around the company culture

#### 02 Customizing HR Value Proposition

Customizing the HR Value for Individual workers based on the understanding of what motivates diverse generations of employees

#### 03 Facilitating Personal Development

Suggesting new career paths for individual employees and foster their employability corresponding to the individualized career plan

#### 04 Reinforcing the Agility of Org.

Establishing more flexible organization and defining the flexible work environment for upcoming changes

#### 05 Developing the leadership model

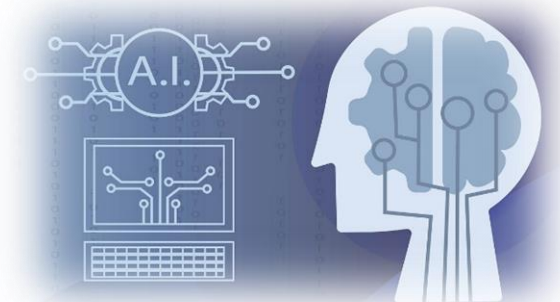
Providing the overall direction in line with managerial initiatives

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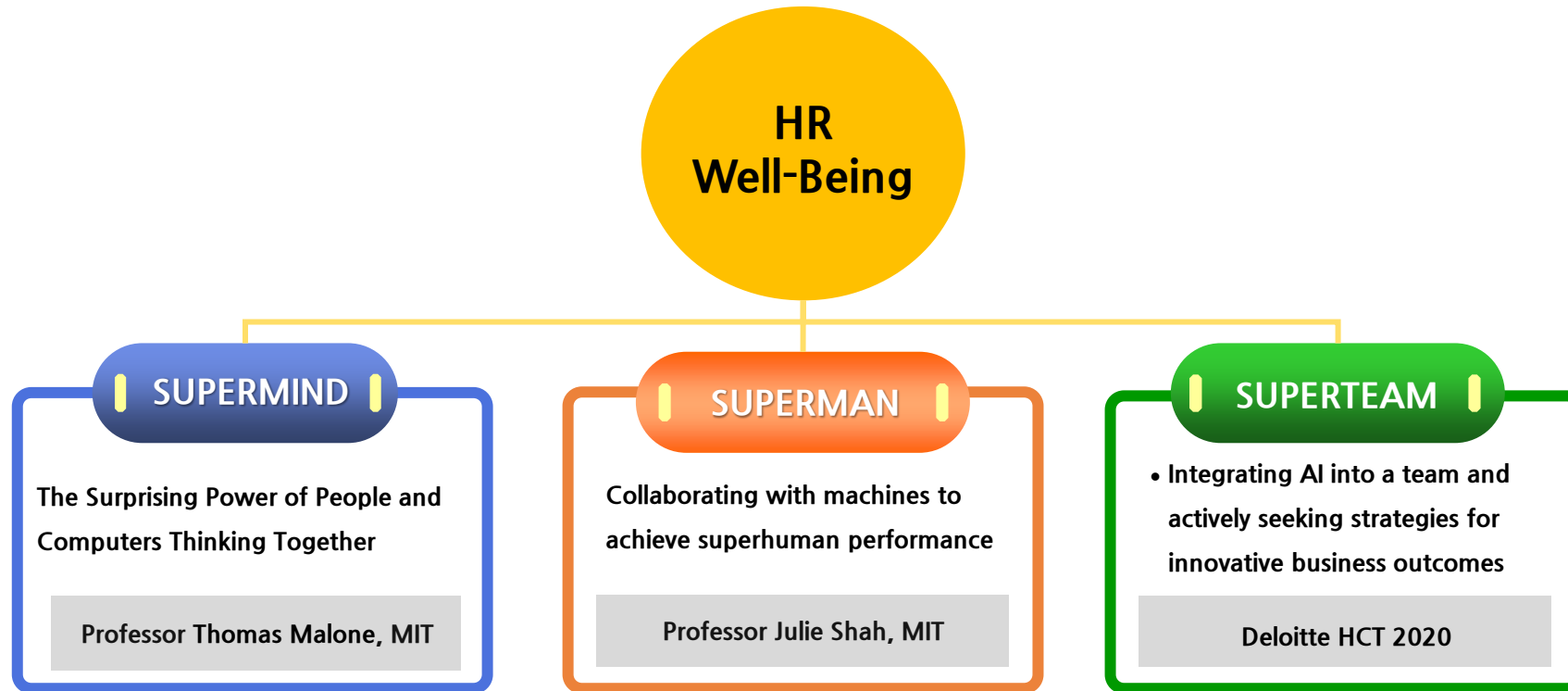


## II . HR well-being with AI

■ The need for HR well-being strategy emerges

**New HR Well-being Strategy = Coexistence through collaboration with artificial intelligence**

*Chan Lee (2020). HR Well-being and WLB(Work & Learning Balance). KHRD Vol361. p.23*



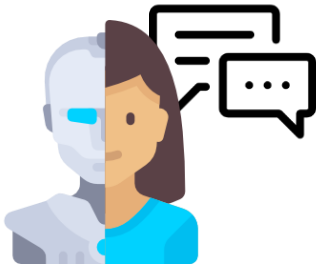
- HR Well-being : in order to create new value, defining unique tasks that only humans can do, reinforcing core competencies, and letting AI perform tasks that humans do not have to do.

Source : Chan Lee (2020). HR Well-being and WLB(Work & Learning Balance). KHRD Vol361. p.23



## II . HR well-being with AI

### Change of Value Proposition : Best Practice of Group J (1/4)



#### Automating Consulting Service

Juvis has embarked “AI Consultant” which is able to suggest an individualized diet plan for customers based on their personal history



Providing Grounds for  
**AI & HR Collaboration**  
based on Job Analysis

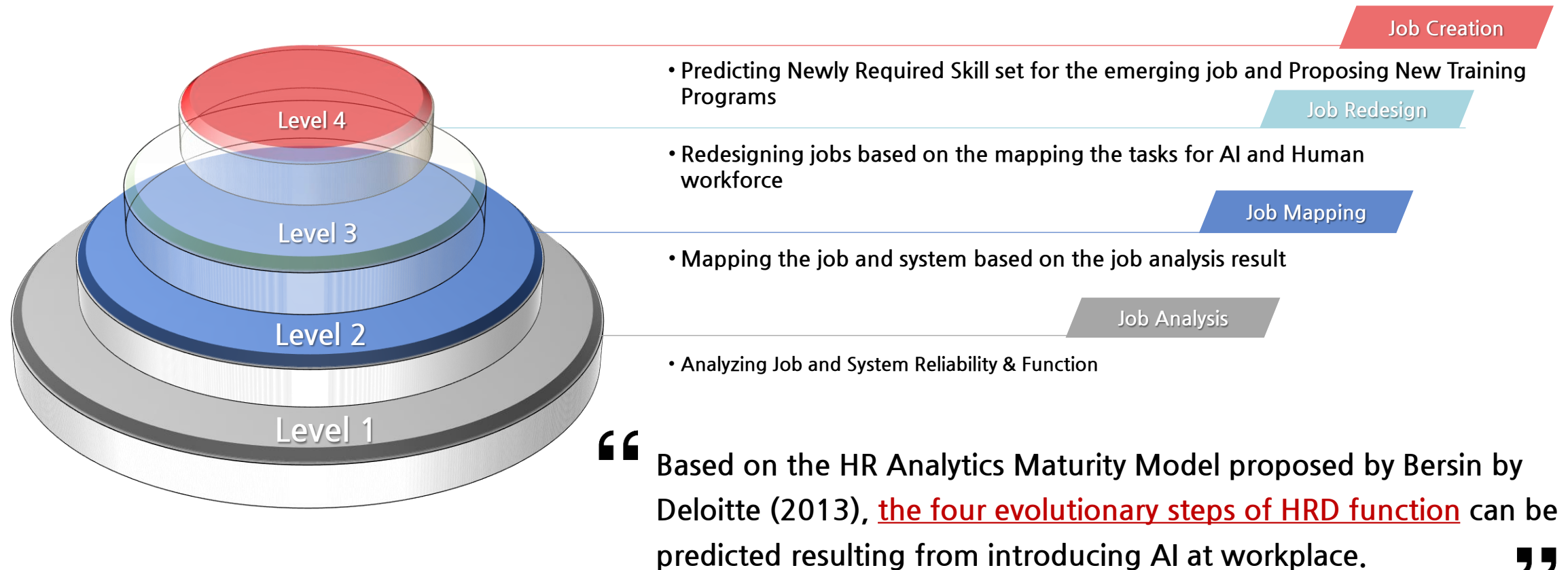


#### Job Redesign via Job Analysis

While Introducing AI at workplace, JUVIS cooperated with HR specialist to newly design job based on job analysis

## II . HR well-being with AI

### Change of Value Proposition : Best Practice of Group J (2/4)



## II . HR well-being with AI

### Change of Value Proposition : Best Practice of Group J (3/4)

#### Job Analysis

- Defining the core competencies for JUVIS employees

##### JUVIS Core Competencies

- Writing Documents
- Social Intelligence
- Planning and Organizing
- Analyzing Data
- Managing Resources and Time

##### Finances (Job Competencies)

- Managing Funds
- Managing Assets
- Analyzing Financial States, etc.

##### Marketing / PR

- Proposing New Plans for AD
- Planning New Offline AD
- Proposing New Marketing Plans for franchises

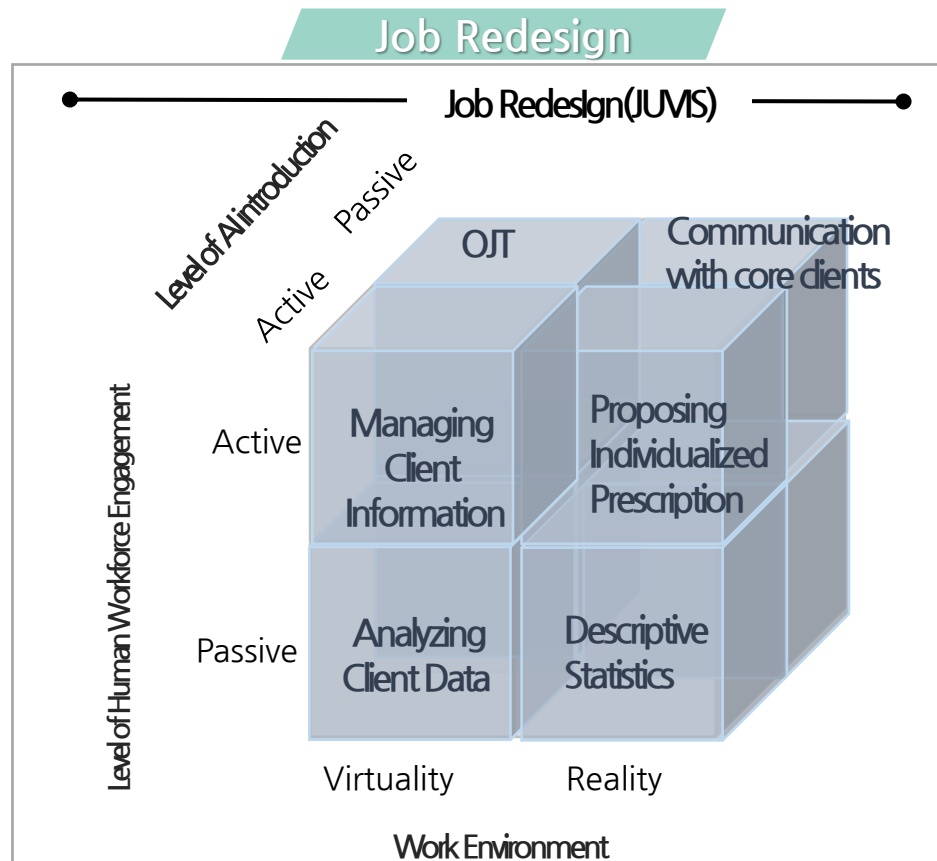
#### Job Mapping

- Research on the possible division of labor between AI and Human workforce



# II . HR well-being with AI

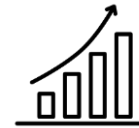
## Change of Value Proposition : Best Practice of Group J (4/4)



## Job Creation

### Creating New Business Area

Proposing new areas of business based on the thorough research on interaction between AI and human workforce



### Predicting Required Competencies

Predicting transformed skill set necessary for performing newly divided or designed tasks



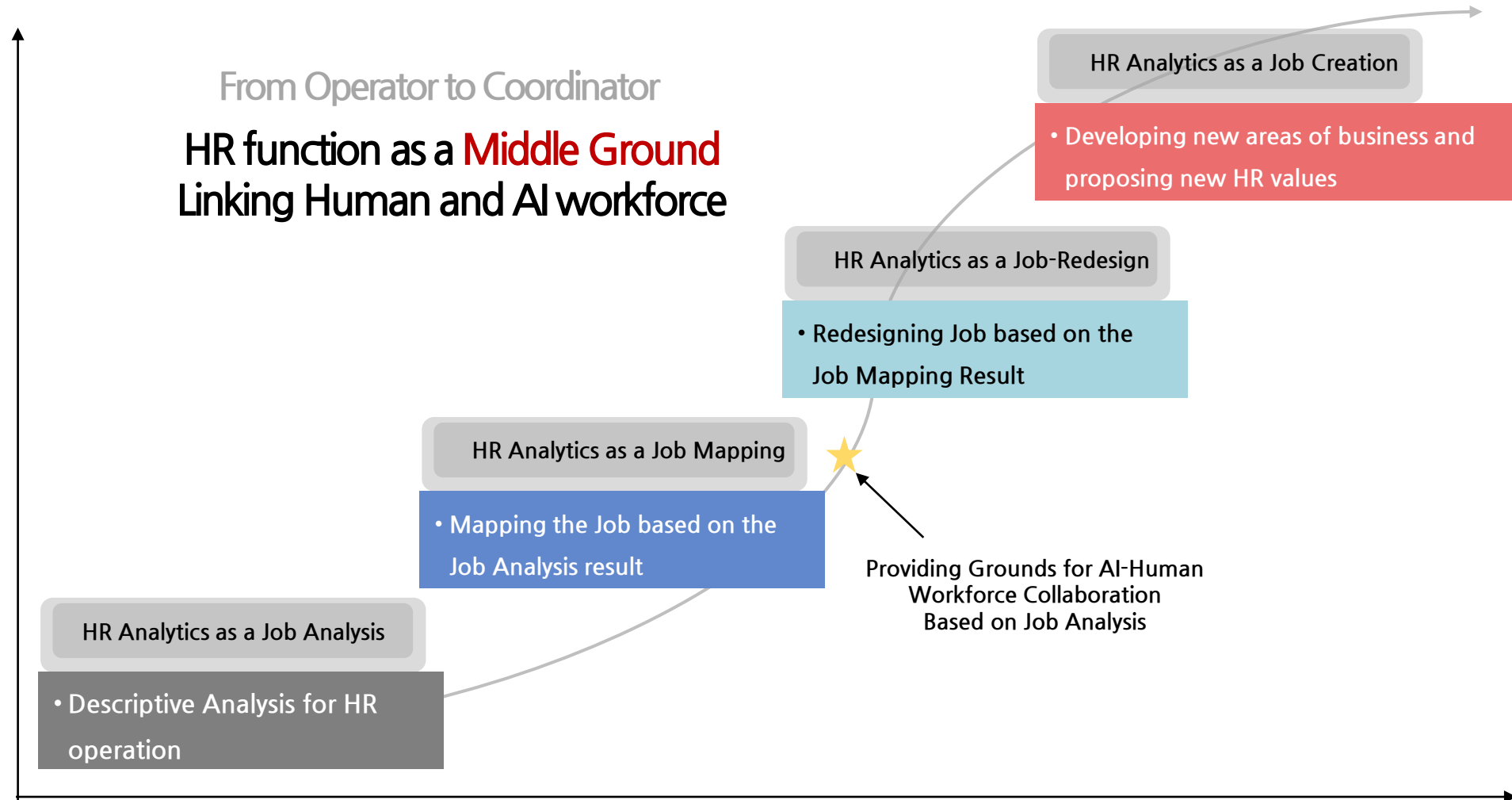
Suggesting more flexible yet innovative L&D strategy for fostering the newly proposed core competencies





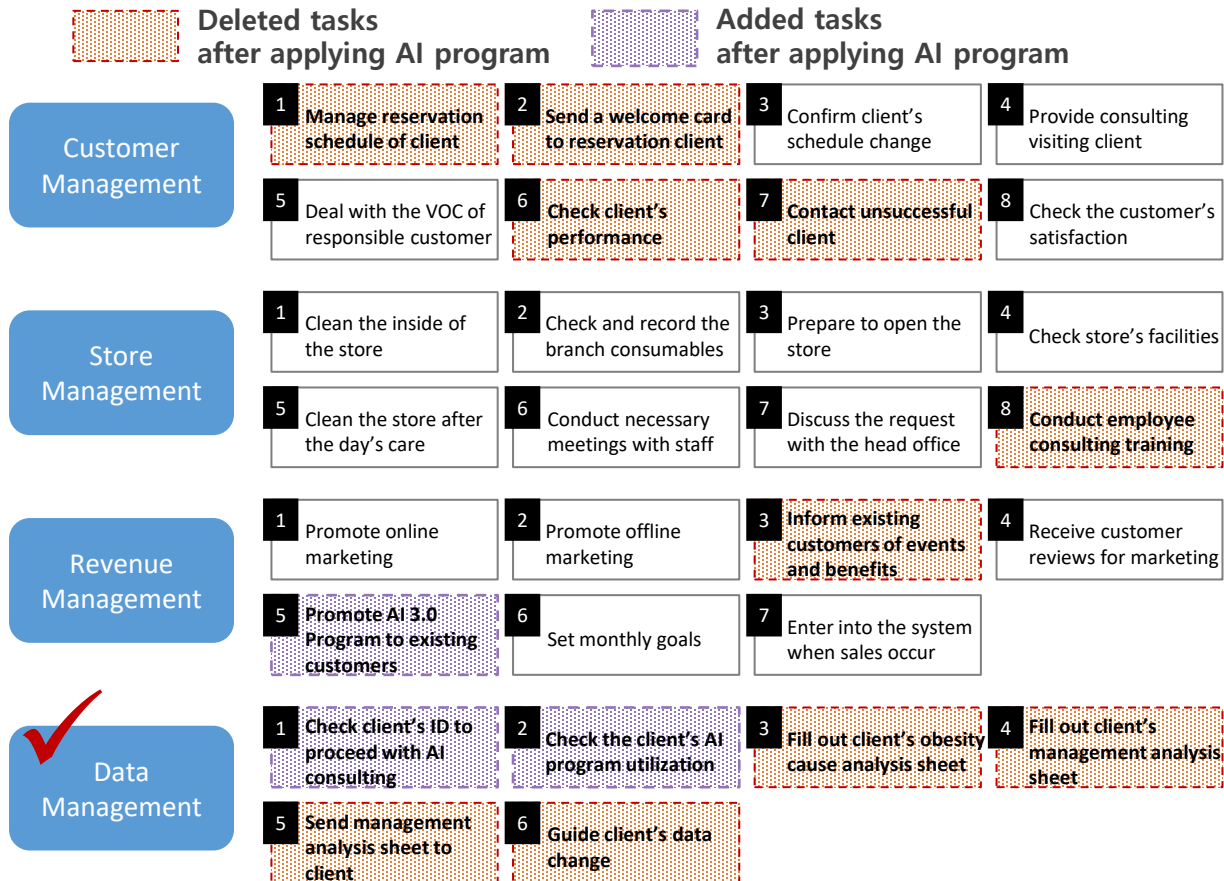
# II . HR well-being with AI

## Job Redesign Based on Job Analysis

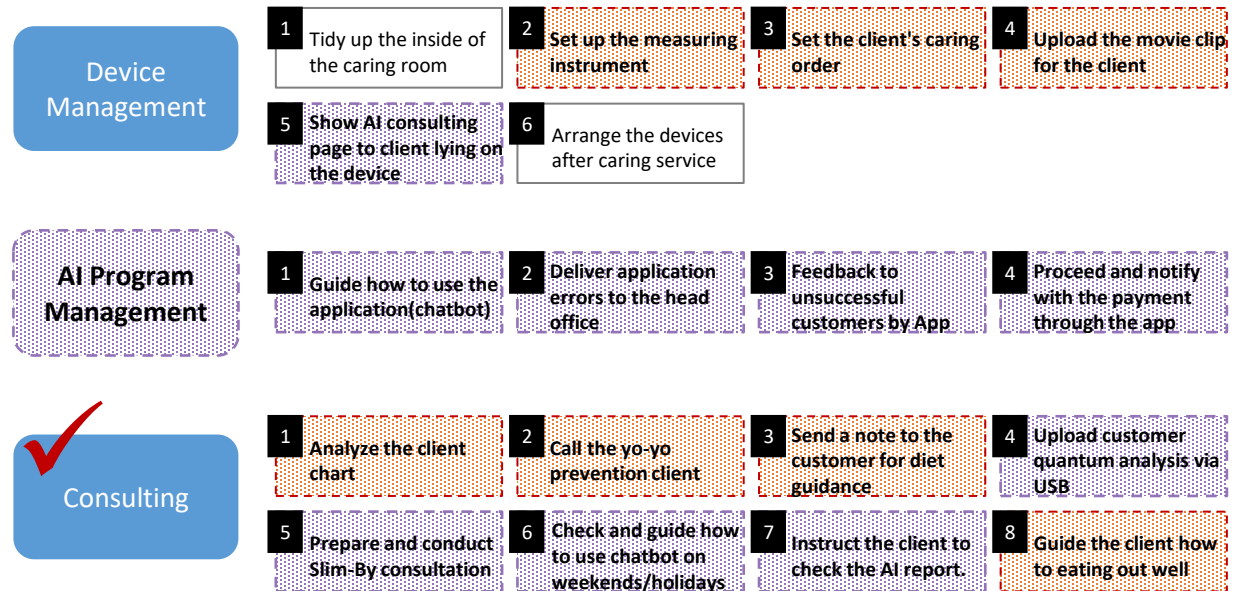


# II . HR well-being with AI

## Group J Job Redesign Results (1/2)



Since the introduction of the AI program, significant changes have been observed in the customer **DATA MANAGEMENT** and **CONSULTING** duties, which are considered core tasks.



\* results from the job analysis workshop with 66 employees who have job experience with before and after applying AI Program

# II. HR well-being with AI

## Group J Job Redesign Results (2/2)

### Before Applying AI

Customer Management	1 Manage reservation schedule of client	2 Send a welcome card to reservation client	3 Confirm client's schedule change	4 Provide consulting visiting client
	5 Deal with the VOC of responsible customer	6 Check client's performance	7 Contact unsuccessful client	8 Check the customer's satisfaction
Store Management	1 Clean the inside of the store	2 Check and record the branch consumables	3 Prepare to open the store	4 Check store's facilities
	5 Clean the store after the day's care	6 Conduct necessary meetings with staff	7 Discuss the request with the head office	8 Conduct employee consulting training
Revenue Management	1 Promote online marketing	2 Promote offline marketing	3 Inform existing customers of events and benefits	4 Receive customer reviews for marketing
	5 Set monthly goals	6 Enter into the system when sales occur	7 Enter into the system when sales occur	
Data Management	1 Fill out client's obesity cause analysis sheet	2 Fill out client's management analysis sheet	3 Send management analysis sheet to client	4 Guide client's data change
Device Management	1 Tidy up the inside of the caring room	2 Set up the measuring instrument	3 Set the client's caring order	4 Upload the movie clip for the client
	5 Arrange the devices after caring service			
Consulting	1 Analyze the client chart	2 Call the yo-yo prevention client	3 Send a note to the customer for diet guidance	4 Guide the client how to eating out well

### After Applying AI

Customer Management	1 Manage reservation schedule of client with AI Program	2 Confirm client's schedule change	3 Provide consulting visiting client	4 Deal with the VOC of responsible customer
	5 Check the customer's satisfaction			
Store Management	1 Clean the inside of the store	2 Check and record the branch consumables	3 Prepare to open the store	4 Check store's facilities
	5 Clean the store after the day's care	6 Conduct necessary meetings with staff	7 Discuss the request with the head office	8 Use AI programs for employee training
Revenue Management	1 Promote online marketing	2 Promote offline marketing	3 Reinforce existing customers of events and benefits	4 Receive customer reviews for marketing
	5 Promote AI 3.0 Program to existing customers	6 Set monthly goals	7 Enter into the system when sales occur	8 Enter into the system when sales occur
Device Management	1 Tidy up the inside of the caring room	2 Show AI consulting page to client lying on the device	3 Arrange the devices after caring service	
AI Program and Data Management	1 Guide how to use the application(chatbot)	2 Deliver application errors to the head office	3 Feedback to unsuccessful customers by App	4 Proceed and notify with the payment through the app
	5 Check client's ID to proceed with AI consulting	6 Check the client's AI program utilization		
Consulting With AI Program	1 Upload customer quantum analysis via USB	2 Prepare and conduct Slim-By consultation	3 Check and guide how to use chatbot on weekends/holidays	4 Instruct the client to check the AI report.

Increased effectiveness of existing work

Co-work with the AI

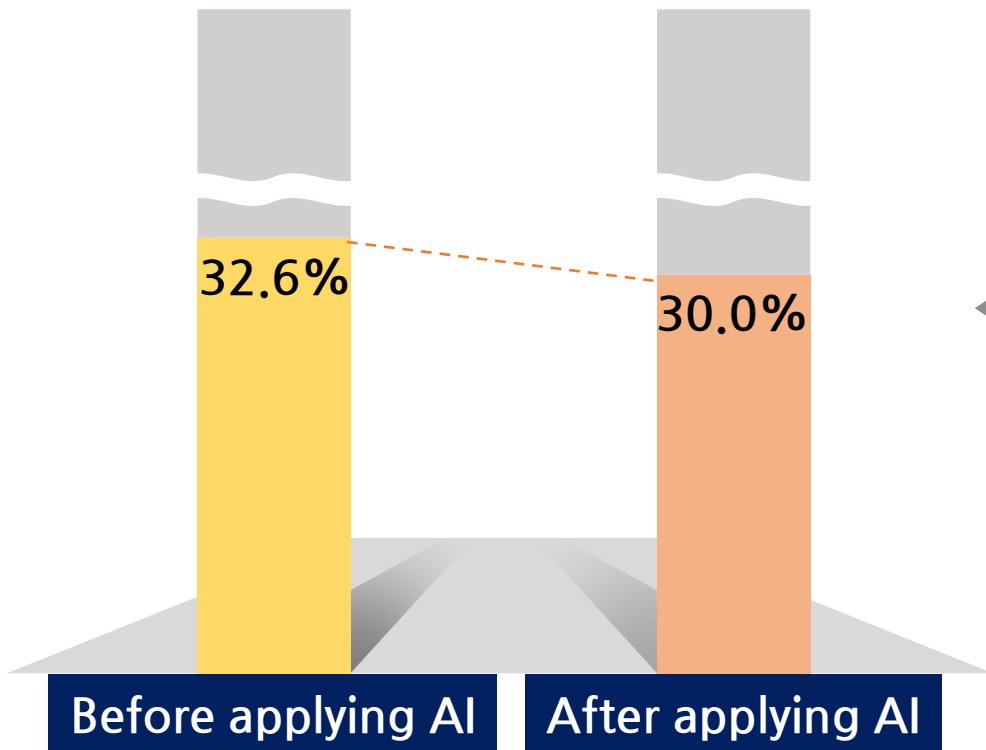
\* results from the job analysis workshop with 66 employees who have job experience with before and after applying AI Program



## II . HR well-being with AI

### Evidences of Benefits by Applying AI Program (1/6)

The proportion of cost of labor to revenue

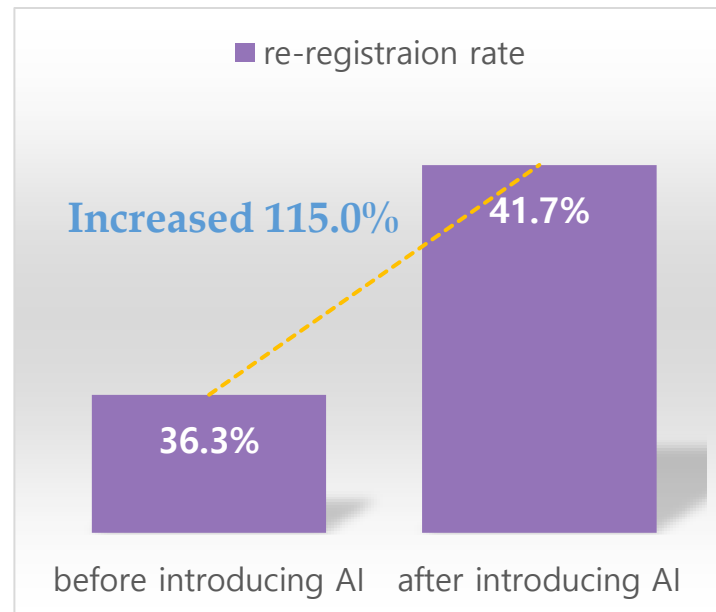
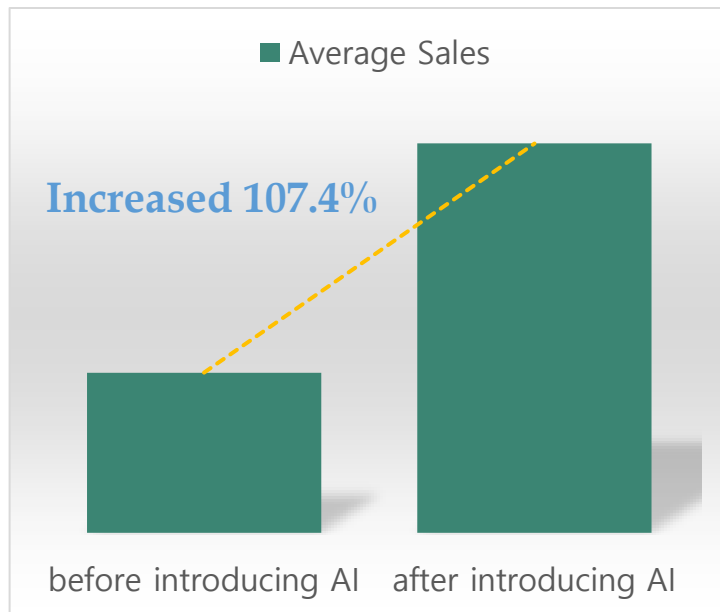


- The proportion of cost of labor to revenue has decreased by 2.6%, demonstrating the increase in productivity after introducing AI consultant.

## II . HR well-being with AI

### Evidences of Benefits by Applying AI Program (2/6)

#### The Increase of average revenue and registration

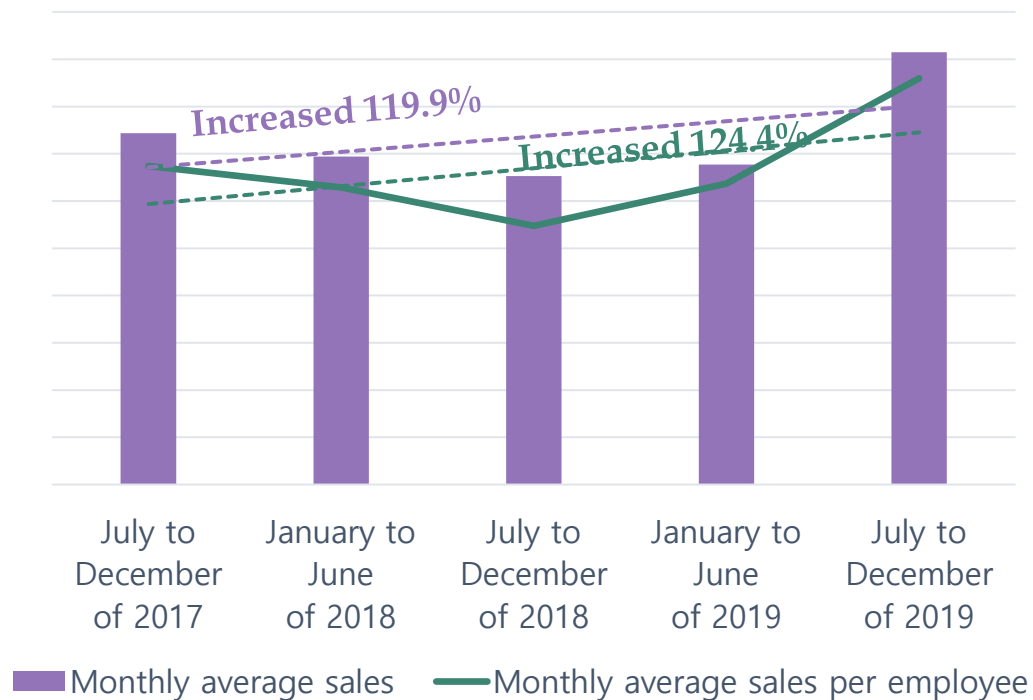


- Sales increased by 107.4% as a result of comparing average sales before and after introducing the AI Program
- The re-registration rate among registered customers, which is one of the key indicators of business success, improved by 115%.

## II . HR well-being with AI

### Evidences of Benefits by Applying AI Program (3/6)

The Increase of individual productivity

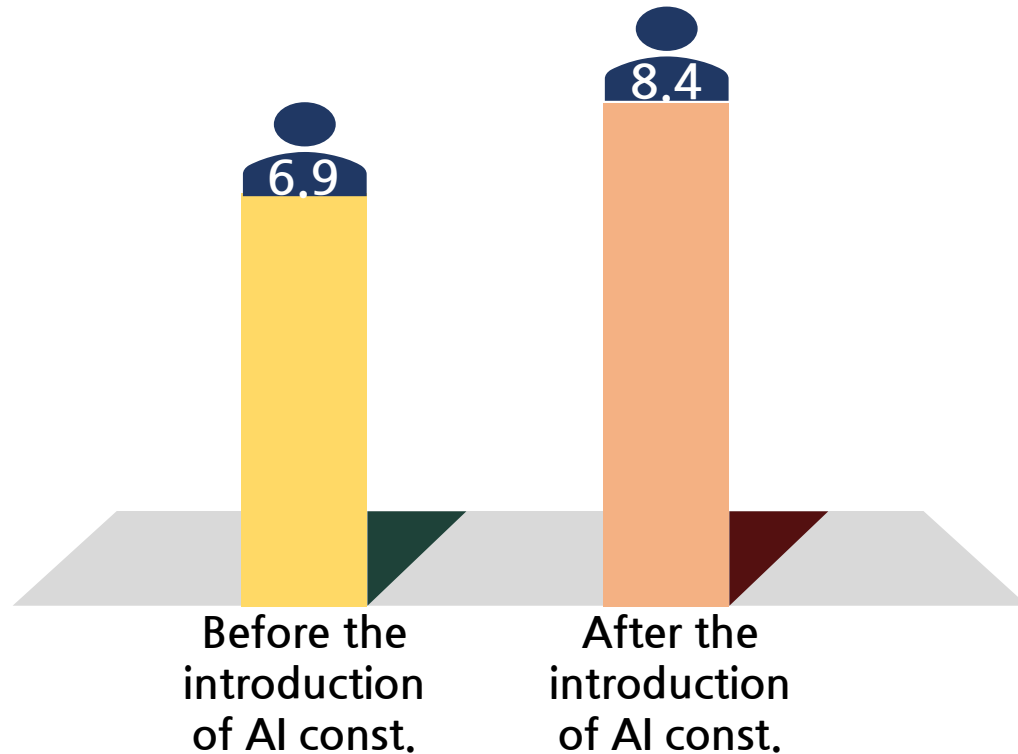


- After reviewing the average monthly sales growth rate at six-month intervals, sales and individual productivity decreased slightly during the period immediately following the introduction of the AI program(June to December 2018)
- A year later, it rebounded, and in the second half of 2019, sales increased 119.9% and individual productivity increased 124.4% compared to the second half of 2017

## II . HR well-being with AI

### Evidences of Benefits by Applying AI Program (4/6)

The average number of clients per one consultant

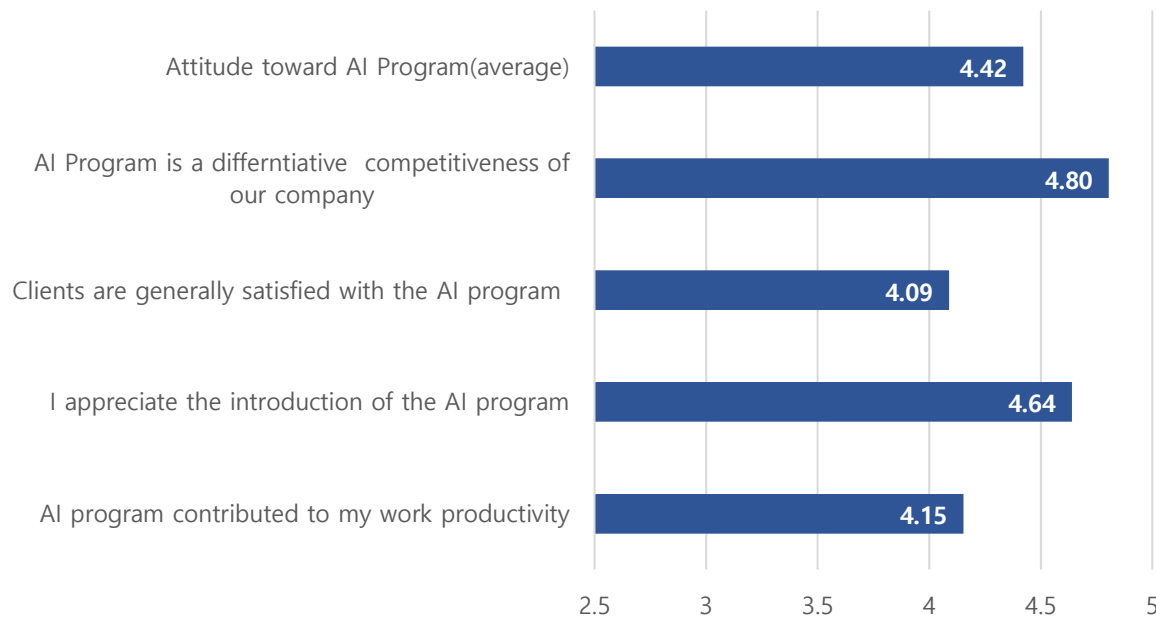


- The average number of clients per one consultant has been increased to 8.4 people, demonstrating the increase in efficiency after the introduction of AI consultant.

## II . HR well-being with AI

### Evidences of Benefits by Applying AI Program (5/6)

#### Employee's Attitude toward the AI Program



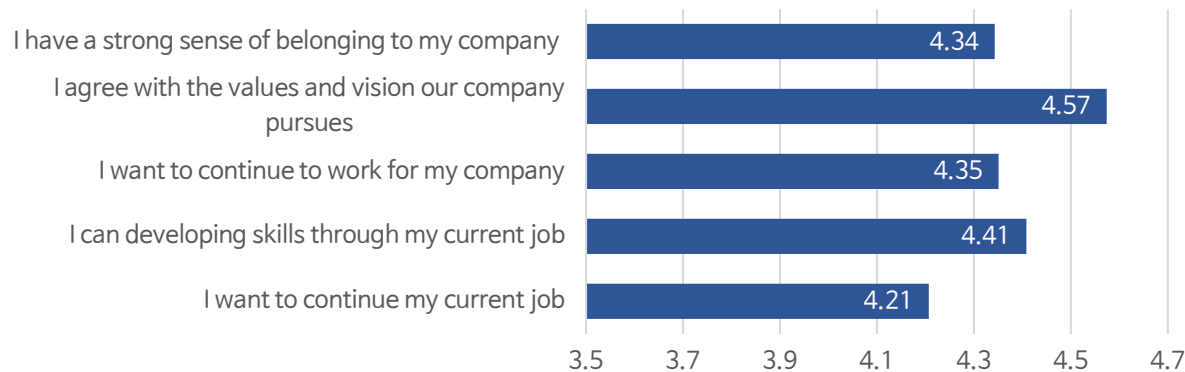
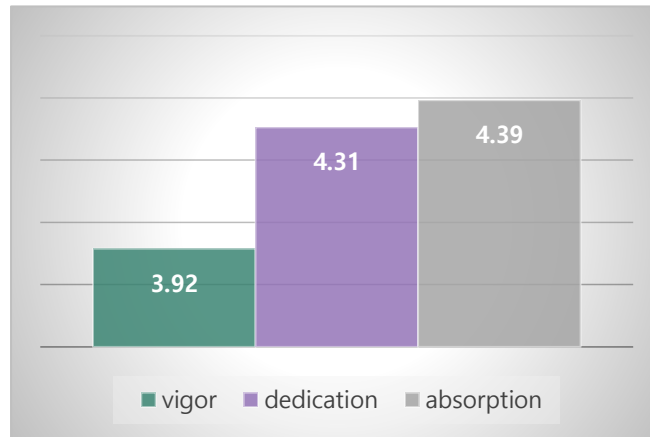
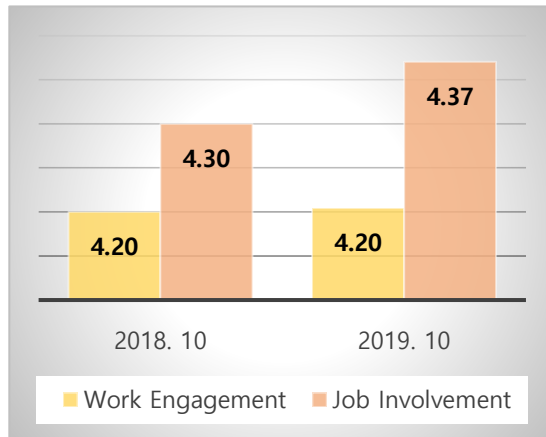
- Overall, employees showed a positive attitude toward the AI Program (average of 4.42)
- In particular, the response to the question that the AI program is the company's differentiator was high(average of 4.80).  
(85.2% of the 169 respondents say 'strongly agree')
- Recognized that AI programs contributed to individual productivity (average of 4.15)



## II . HR well-being with AI

### Evidences of Benefits by Applying AI Program (6/6)

#### Employee's Attitude Toward their Work



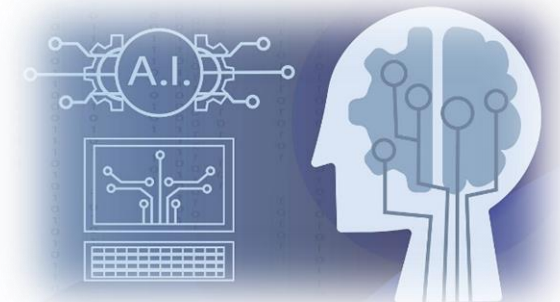
- Employee positive attitudes toward work have improved slightly over the past year
- Absorption was the highest among work engagement dimensions (average of 4.39)
- Among the job involvements, the highest score for the item was 'I agree with the vision and values pursued by the company'(average of 4.57)

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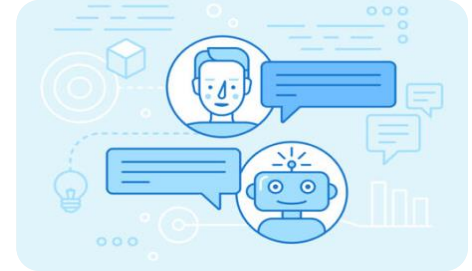
II . HR well-being with AI

**III . Implications**



# III. Implications

- 1 **4steps (1. job analysis - 2. job mapping - 3. job redesign - 4. job creation) of talent transformation for digital transformation**
- 2 **3rd step, job redesign and reskilling**
- 3 **4th step, job creation and upskilling**





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