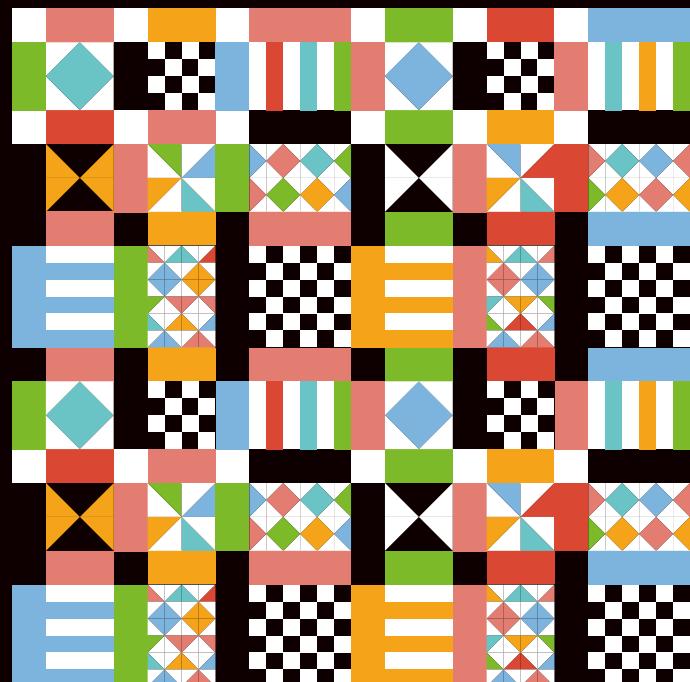


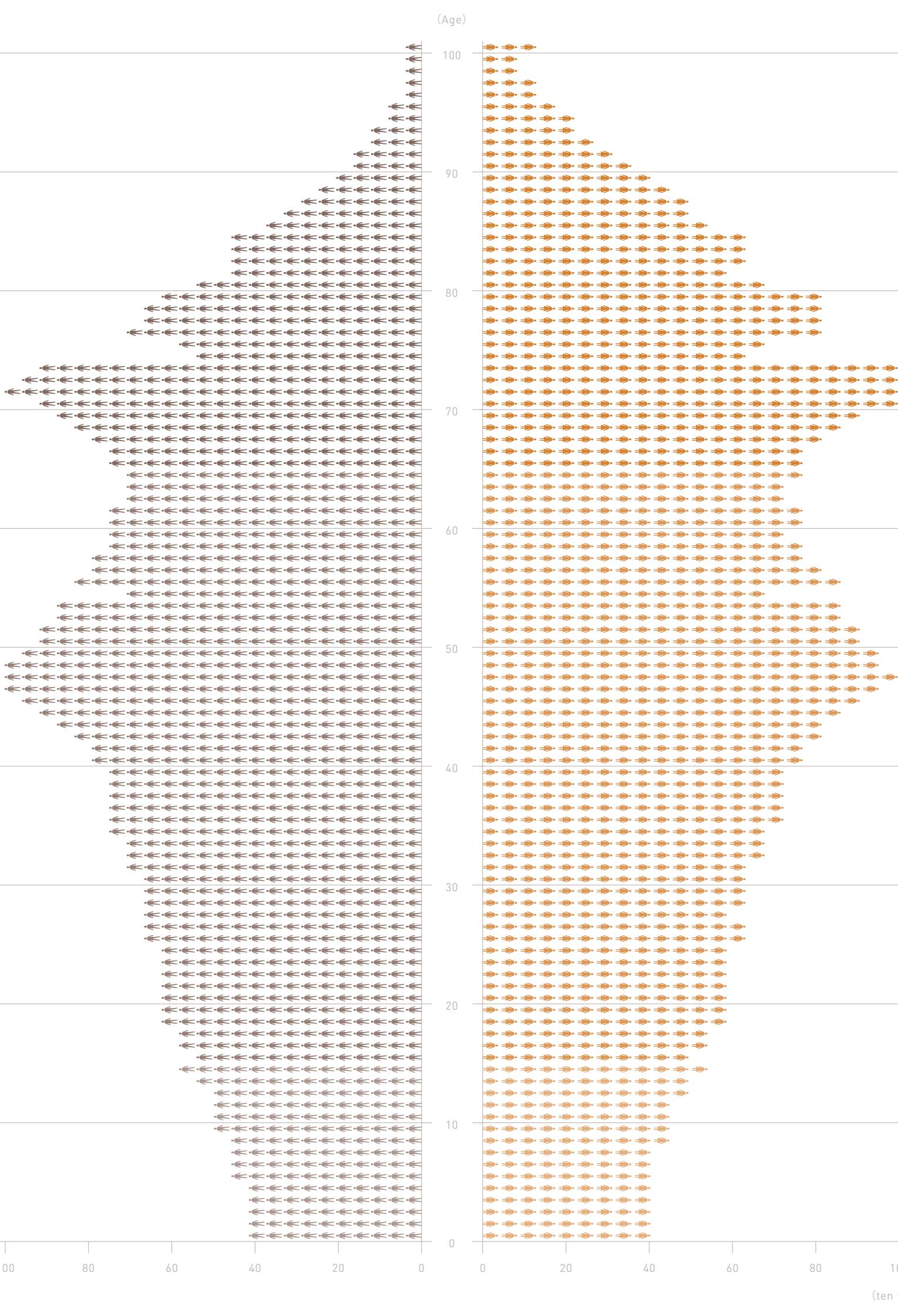
# Works Report

2015



# 2025

Time to Reinvent  
our workstyle



# **Depopulation and the super-aged society**

## **Spurring changes to the work approach**

### **The time to reinvent work approach is coming**

Japan are now facing depopulation and the super-aged society and the current concern is the speed of depopulation would be increasing.

Depopulation will trigger a decline in human resources.

Depopulation will result in lost job opportunities.

In actual fact, however, these events will be simultaneous. Unemployment will affect certain jobs, companies and occupations and similarly, a shortage of human resources will follow in the same. Certain people will be exposed to the risk of unemployment and others will find themselves caught up in a struggle for human resources. These opposing phenomena will both unfold as this vision of 2025 becomes a reality. Depopulation has also prompted concern over the erosion of the domestic economy.

Toward 2025, amid overwhelming depopulation, super-aging and economic stagnation, companies will face intensifying competition and various social systems such as employment safety nets are likely to malfunction. In 2025, can we overcome such concerns to welcome a lively society? The employment paradigm formed during a growth period will no longer apply in future amid the high risk of decline. Super-aging will also highlight the shortcomings of the previous career development system centered on young people.

What kind of future lies ahead? Using simulation data, let's examine the 2025 work approach. Whatever happens, 2025 will see the work approach you used to know reinvented.



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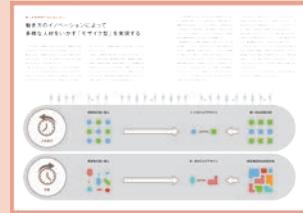
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### Micro-simulator

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Using a micro-simulator provides a certain scope to forecast personal income trends. We introduce representative examples.

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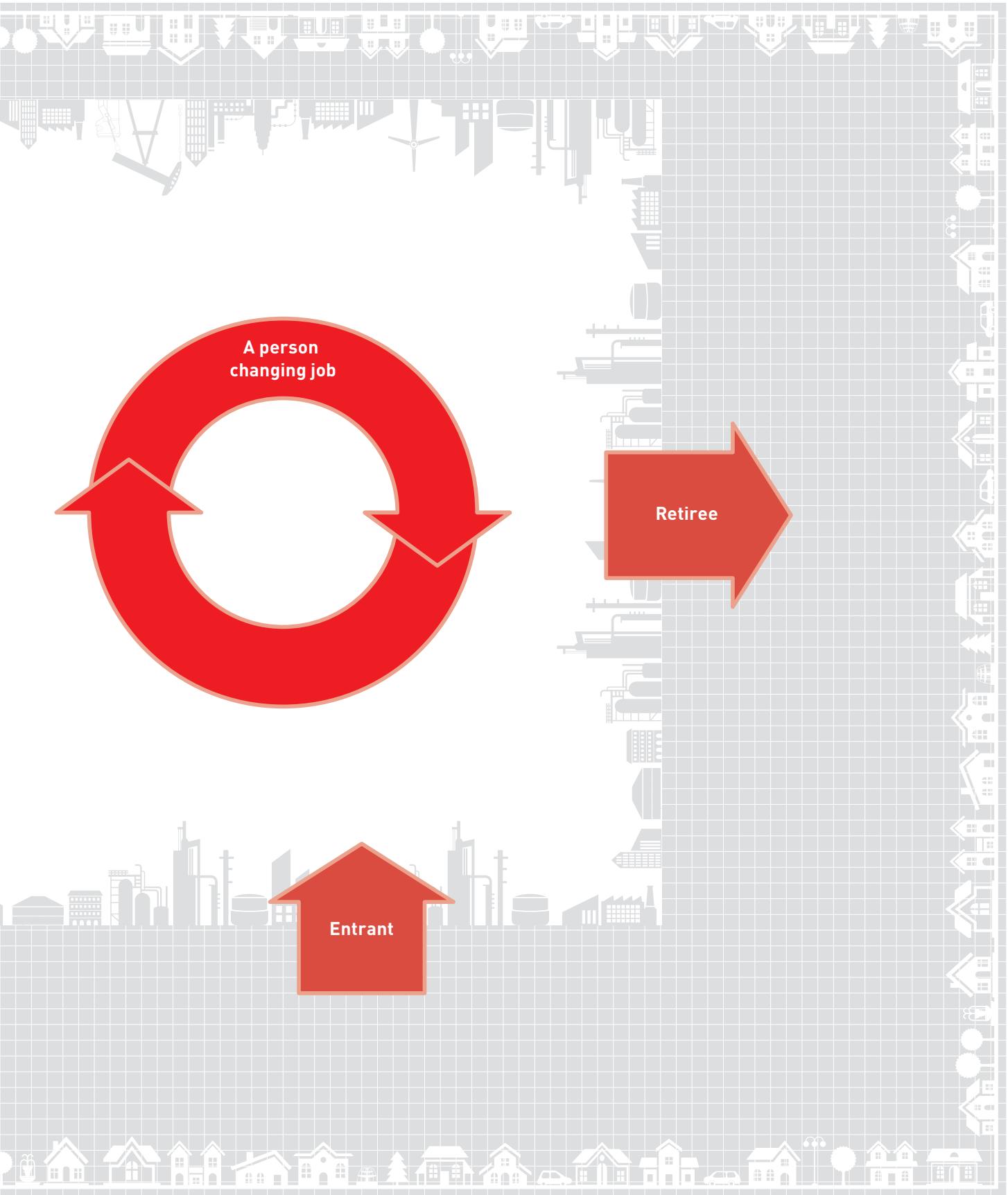
## DATA

### 1995 → 2025

Data collection overlooking 30 years of the labor market. Excel data is also available and usable for research, etc. Also the data is available from the website.



**We show the structure to make sure the problems.**



We focused on the actions of individuals “entering”, “exiting” and “moving within” the labor market.

Structuralizing alone helped spotlight problems. Someone who graduates from school and starts work may subsequently leave the labor market for various reasons. An environment to facilitate their return to work is prepared and they also retire at

the mandatory age,

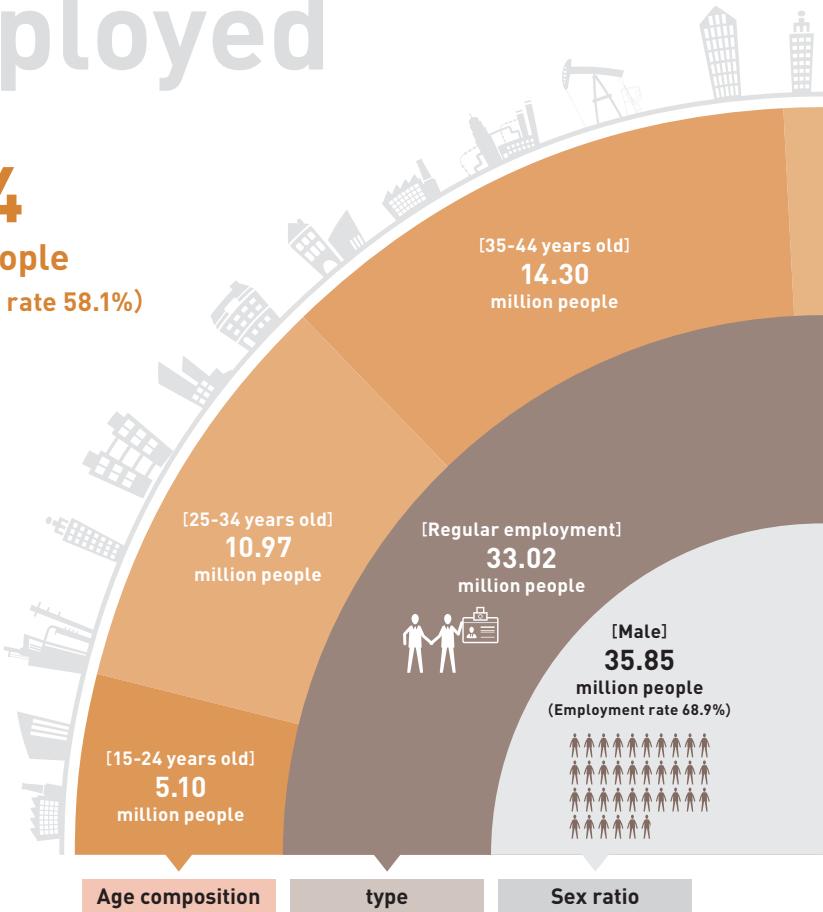
etc. Focusing on the actions of individuals entering and exiting the market and/or not leaving the same, i.e. job-change actions, helps reveal what 2025 has in store and how to respond.

## Employed

**Total  
62.74  
million people  
(Employment rate 58.1%)**



Newly employed persons  
**1.09**  
million people



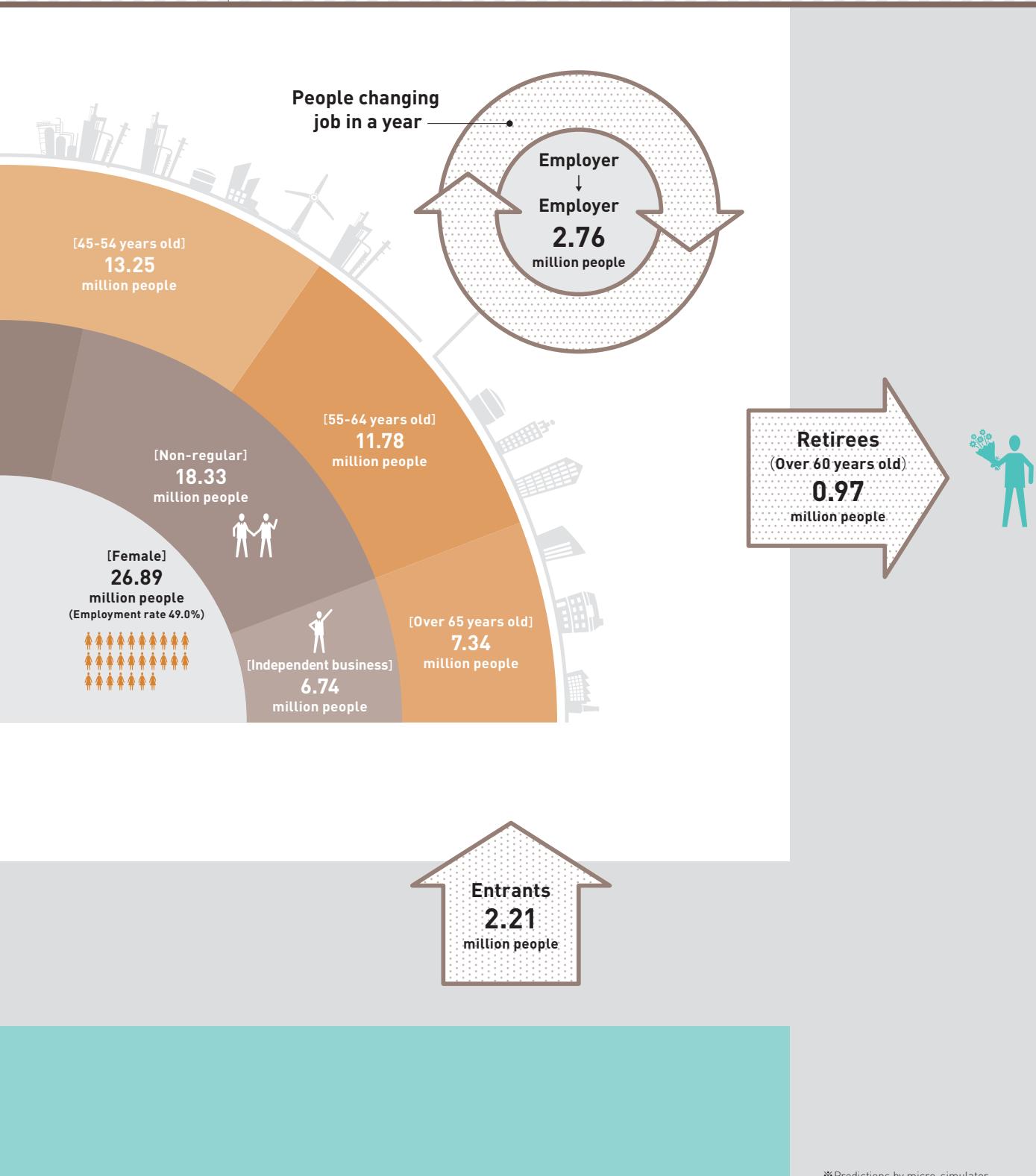
## Unemployed

**Total  
45.25  
million people  
(Jobless rate 41.9%)**



**In 2015,  
current labor market  
situation**

Before looking into 2025, we would like to review the present state of 2015, with 62.74M employed people and an employment rate of 58.1%. This includes 35.85M males (Employment rate of 68.9%) and 26.89M females (Employment rate of 49.0%). Examined by age, the 35-44 year-old bracket, including children of baby-boomers, represents the largest total at 14.3M.



Also, when viewed by type of employment, the number of regular employees is 33.2M. With diversification of employment continuing to progress, the current classification of regular and non-regular may no longer apply, but is included for reference.

Conversely, among 45.25M unemployed people, the number of those jobless and engaged in job-seeking was 2.45M, while

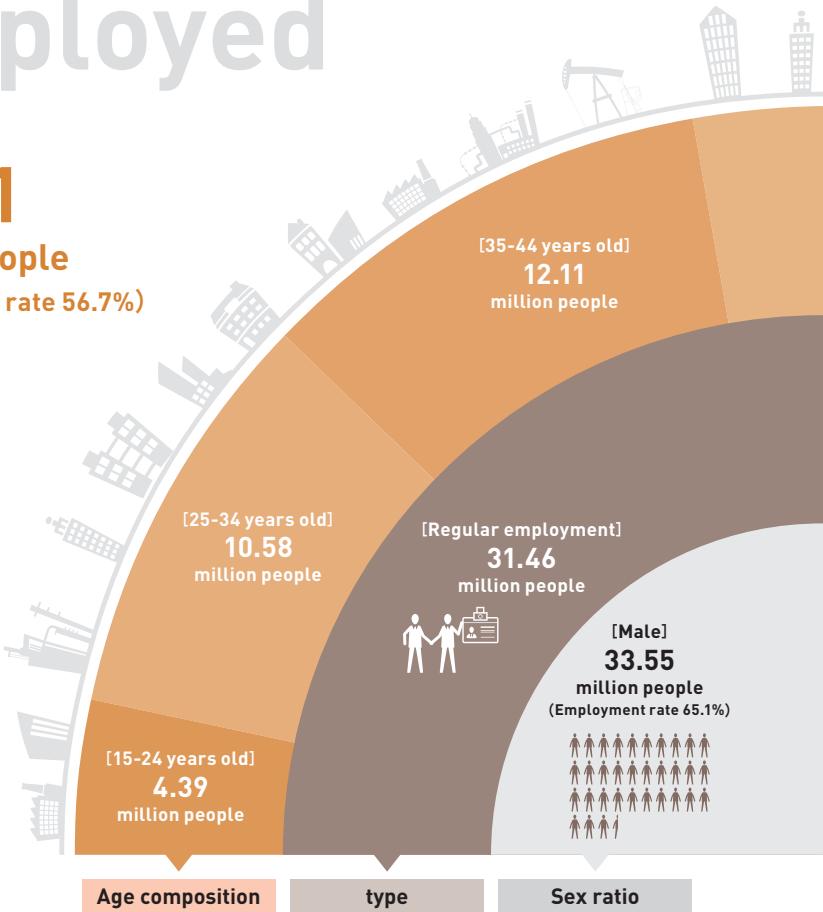
the number of those jobless, keen to work but not actively job-seeking was 3.97M. This equates to potential manpower of 6.42M people, comprising jobless and deemed jobless.

## Employed



Newly employed persons  
0.88 million people

Total  
**60.91**  
million people  
(Employment rate 56.7%)



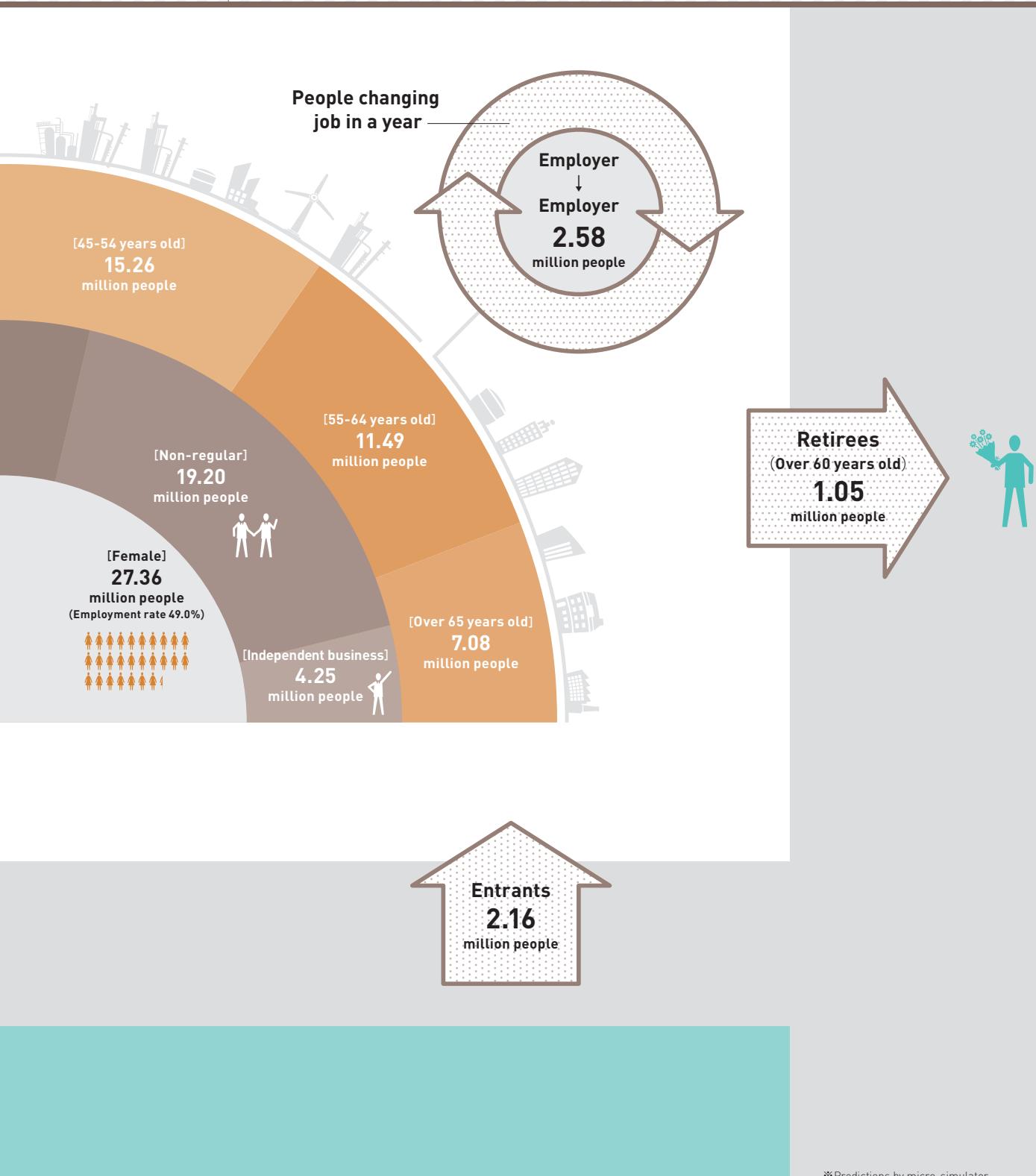
## Unemployed

Total  
**46,51**  
million people  
(Jobless rate 43.3%)



**Japan in 2025  
will be like this!**

Let us introduce you the result of our 2025 forecast using micro-simulation. In 2025, the number of employed will be 60.91M, a drop of 1.83M from 2015. In particular, while the number of the male employed will be 33.55M, namely 2.3M fewer than 2015, the number of female employed will be 27.36M, exceeding 2015 by 470K and efforts to utilize the



female workforce will be promoted.

One visible characteristic is that ten years change vary depending on sex. If we look at age, the number of those employed aged 45-54 years, children of the baby boomers, is 15.26M, which exceeds the other age groups. Conversely, the number of unemployed is 46.5M, an increase of 1.26M from

2015 and the retirement of the baby-boomer generation is a key factor. The number of jobless and deemed jobless are 2.34M and 3.6M respectively, meaning the total deemed jobless decreased from 2015 by 370K. The total number of people changing their job each year is also 2.58M.

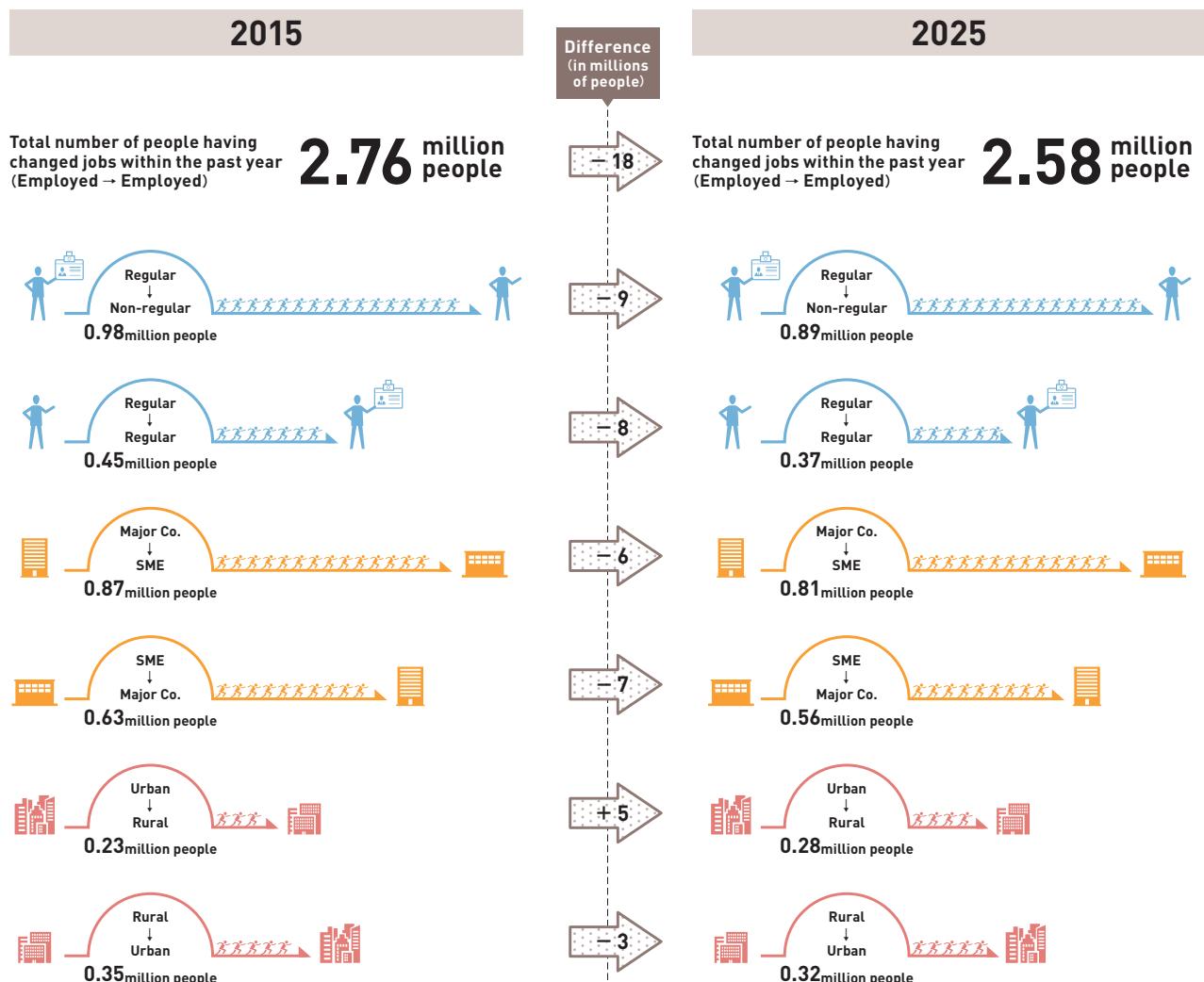


# Job changes and the number of workers by industry/occupation in 2025

## People who have changed their jobs within the past year

Let's review the trend of people having changed their jobs (from one employer to another) within the past year. Although this total for 2015 was 2.76M, it will decline by 180K to 2.58M in 2025. A closer look at the breakdown shows how while 980K individuals changed their status from regular to non-regular employee in 2015, this total declined by 90K to 890K in 2025. Conversely, while 450K individuals changed their status from non-regular to regular employee in 2015, this total declined by 80K to 370K in 2025. If we examine the movement between employment types due to job changes, many former regular employees are still becoming non-regular employees, reflecting the ongoing difficulty for individuals to go from non-regular to regular employees. In terms of company size, the number of those having changed their jobs from large

companies to small- and medium-sized companies declined by 60K from 870K in 2015 to 810K in 2025, while those going in the opposite direction, from small- and medium-sized companies to larger companies declined by 70K from 630K in 2015 to 560K in 2025. Also, if we review the movement between fields, the number of those who switched jobs from urban to rural companies increased by 50K from 230K in 2015 to 280K in 2025. A trend showing senior citizens moving back to the countryside when changing jobs has emerged and boosted the increase. Conversely, the number of individuals switching jobs from rural to urban companies has remained almost unchanged, from 350K in 2015 to 320K in 2025.



\* Major Co. is defined as one with more than 1,000 employees, an SME is one with 1,000 or fewer employees. Greater Tokyo Metropolis (Tokyo, Kanagawa, Chiba, Saitama prefectures), countryside = rural, non-urban areas.

## Number of workers by industry/occupation

Here, we would like to review changes in the number of workers by industry/occupation up to 2025.

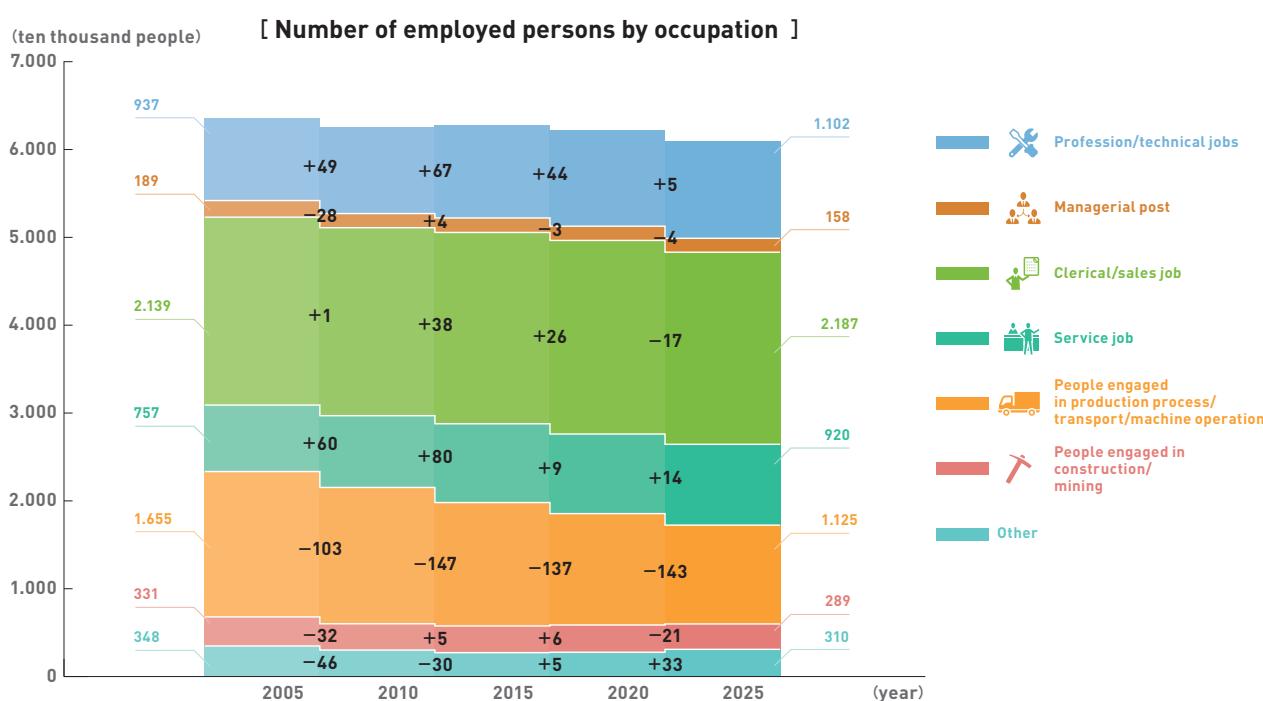
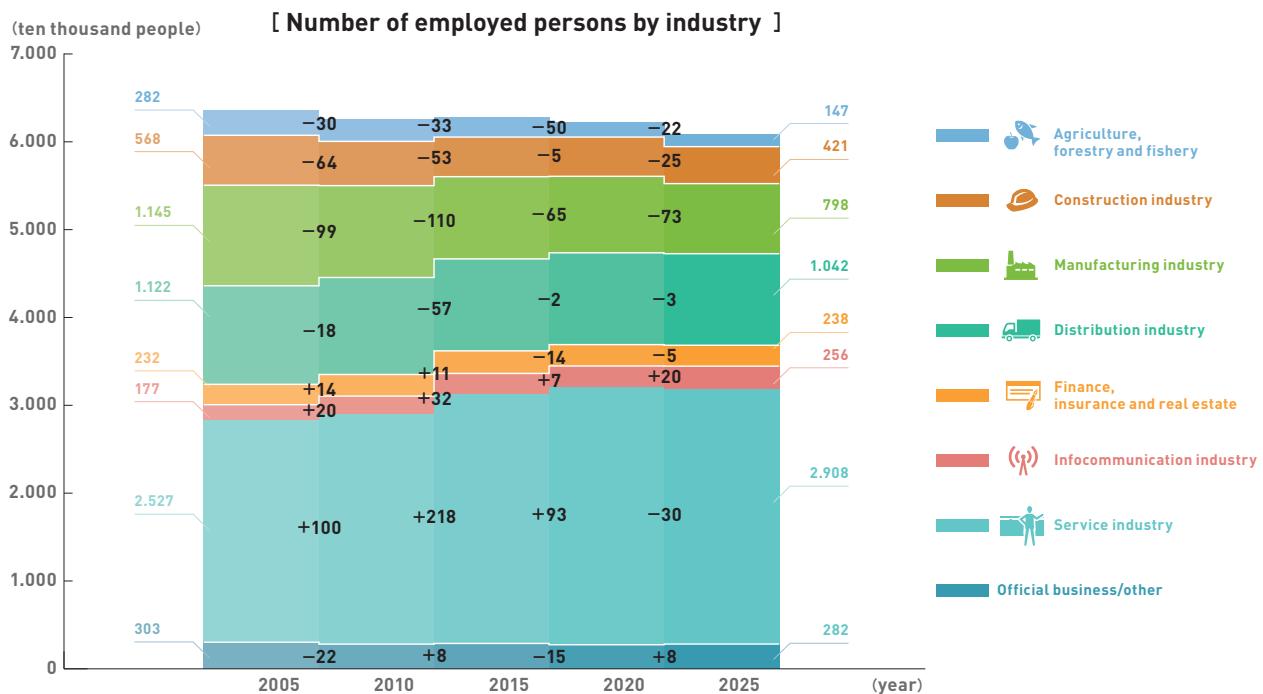
Viewed by industry, trends of an expanding service industry and shrinking manufacturing industry will continue in future.

The service industry will expand from 28.45M in 2015 to 29.38M in 2020 (share of 47.2%) , but will decline slightly between 2020 and 2025 to 29.08M. However, the service industry share will increase slightly from 2020 to 47.7% in 2025. Conversely, the manufacturing industry total will decline from 9.36M in 2015 to 8.71M in 2020 and to 7.98M in 2025, a

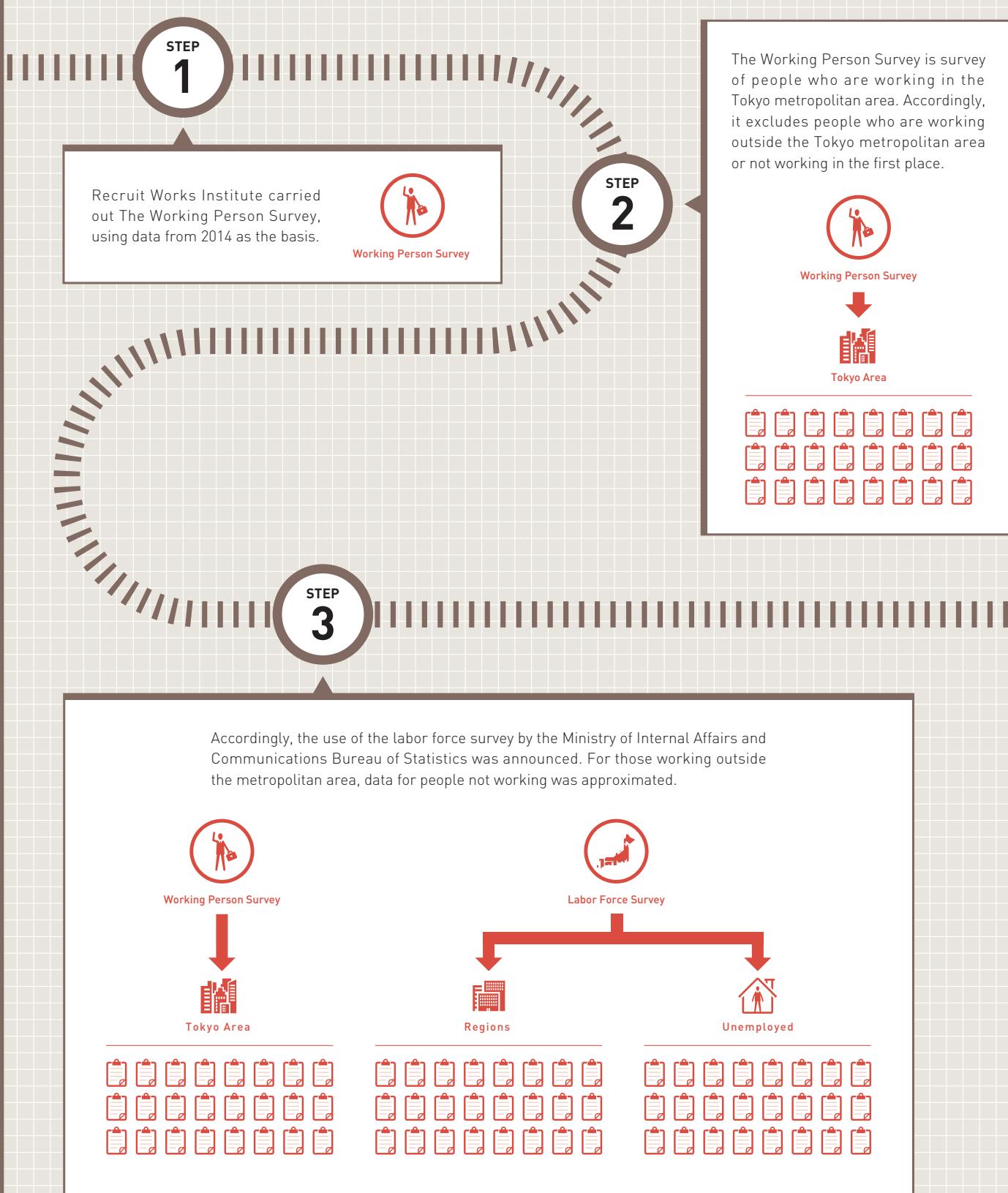
total decline of 1.38M over a decade.

While the progress of the service economy will increase employment needs in the service industry, the manufacturing industry is expected to increase productivity more and employment is expected to decrease.

Viewed by occupation, while profession/technical, clerical/sales and service jobs will gradually increase from 2015 into 2025, people engaged in production process/transport/machine operation will decrease. It is shown that according to the industrial structure, the occupational structure will also change.

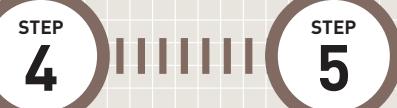
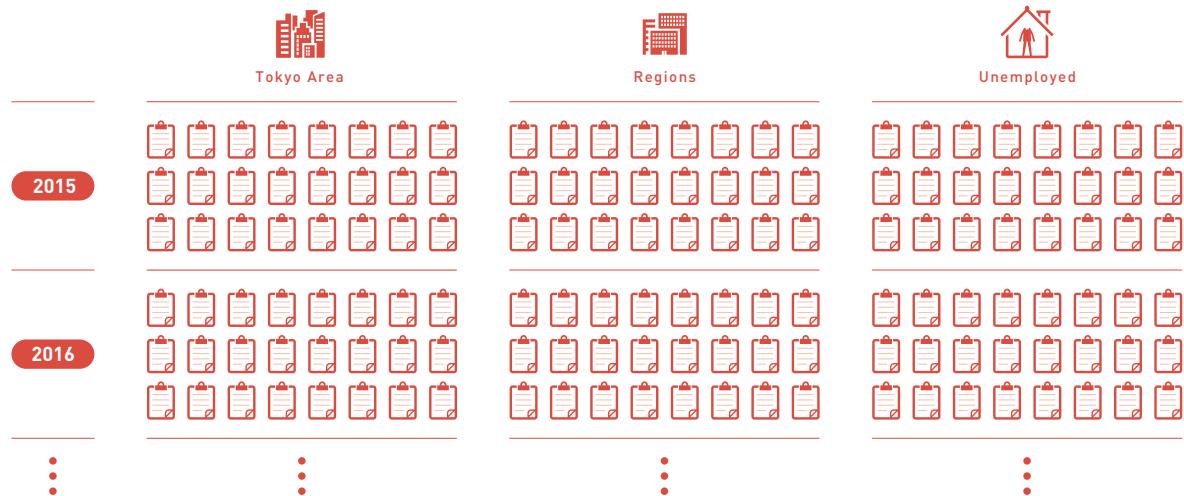


# Data for the 2025 labor market, using the following methods and stimulation.



The micro-simulation method is used to make predictions for 2025. Micro-data is created through steps 1 to 5 below, whereupon the model image is used to predict what will happen in 2025. Please see page 43 for the model assumptions and simulation method used.

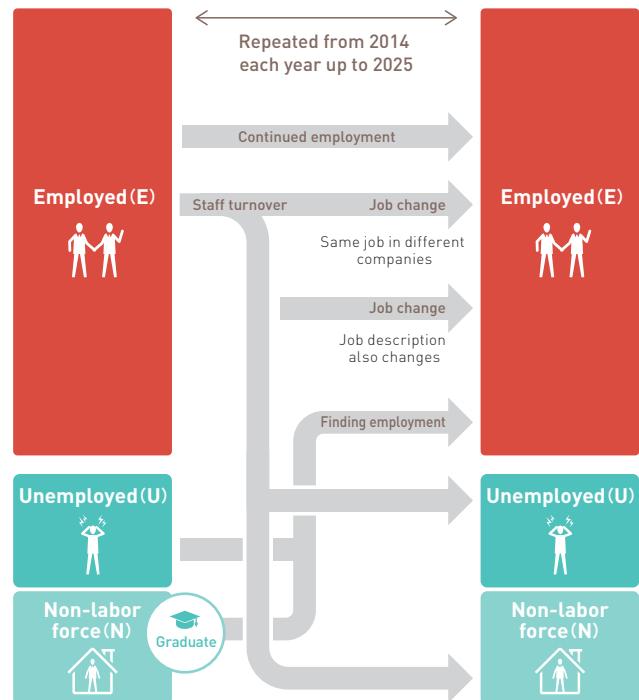
A pseudo-survey is created using micro-data of around 60,000 people. To create future micro-data, the probability of transition is calculated while taking 2014 as the starting point and annual micro-data is created.  
(⇒ See page 43 for the following model image)



By doing so, this allows the individual transition for data for around 60,000 people from 2014 to 2025 to be seen using micro-simulation.



### MODEL IMAGE



# Try re-examining 2025 from a pessimistic perspective

Pessimistic scenario 1 **Individuals who can't/won't work**

Pessimistic scenario 2 **Companies stop employing**

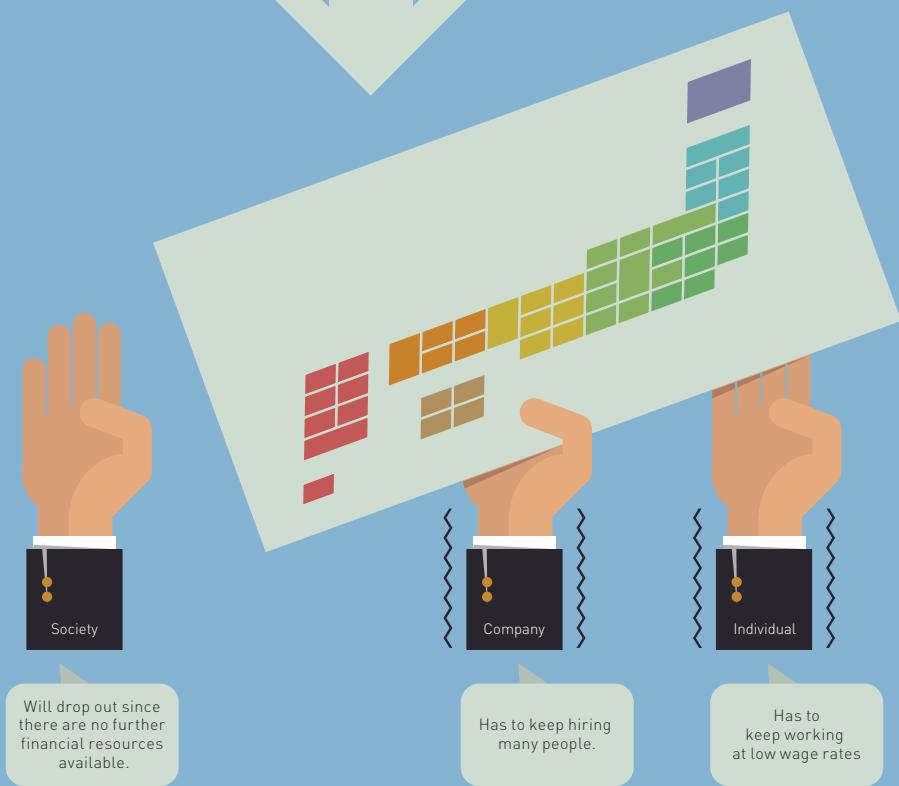
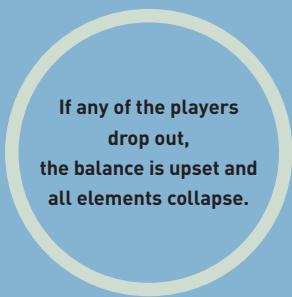
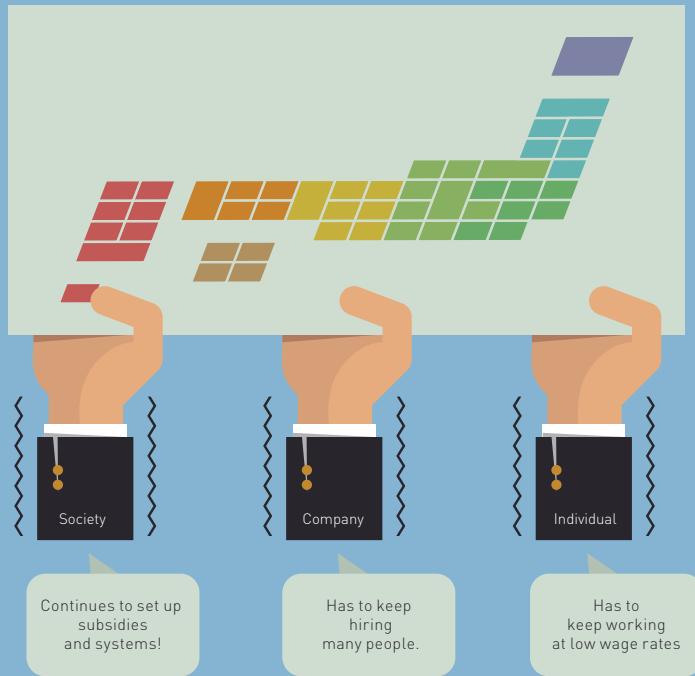
Pessimistic scenario 3 **A dysfunctional career development system**

A look ahead to the labor market of 2025 using the micro-simulator showed figures which are considered less critical and if we forecast an extrapolation of the present, Japan may face a more manageable challenge – or so the figures seem to suggest. However, the reality is quite different. In actual fact, we are ‘tolerating’ the current situation and ‘managing’ to maintain figures and it is too early to write off all concerns by the time 2025 comes.

For example, if we view the “Monthly Labor Statistics Survey” by the Ministry of Health, Labour and Welfare, in which surveys are conducted and data announced, circumstances merely tolerated by working individuals become quite clear. The real wage index has been calculated on an ongoing basis, taking the year 2010 as 100, but the latest data for 2015 shows that wages are continuing to decline. Those questioning such circumstances may interpret the situation as “workers keep putting up with cheap wages.” If things continue unchanged, of course, companies will keep securing cheap labor without any major issues. However, the situation is unsustainable. From the second half of 2014, wages started increasing, albeit slightly. The number of workers protesting the inability to tolerate such a small salary and work under such conditions may increase.

The same applies to companies too, with concerns clearly reflected in the data of the “Labour Force Survey” announced by the Statistics Bureau of the Ministry of Internal Affairs and Communications. A look at the preliminary figures announced on March 27, 2015 shows a total of 63.22M employed, which has increased by 390K year-on-year; moreover for the third month running. The number of employers is 55.95M, which has increased by 510K year-on-year. The number of regular staff/employees is 32.77M, with an increase of 580K year-on-year, while the number of non-regular staff/employees is 19.74M, a drop of 150K year-on-year. More employers naturally means more people working and similarly, companies posting job offers may well suffer from a shortage of staff. Data showing a decline in the number of non-regular staff/employees and more and more regular staff/employees shows how it has become less feasible to employ people with a cheap and easily adjustable work style. Companies are also desperate to retain employees to maintain and refine their businesses to survive amid competition. The prospects of business slumping mean pessimism is inevitable.

The same applies to the society-wide system in terms of administration and in Japan, social security provision for the unemployed is considered relatively meager, although that doesn’t mean there is no support. Provided financial resources are secured, the situation is sustainable but there is a risk of many employment subsidy initiatives being cut due to pressure from other social security costs. With this in mind, the current data presented, which is likely to be finely balanced and reflects a forecast extrapolation of the present, fails to withstand scrutiny. Instead, the figures fall like a pack of cards, leaving behind a shambles and an imbalance prevails. Accordingly, we tried to re-examine 2025 from a pessimistic perspective. As a given, what will become of the labor market under such circumstances? Following simulations collectively performed, please be ready to take a look.



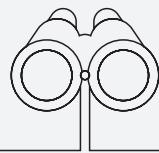


## If super-aging accelerates, it will be so far from working

On November 11, 2014, the Meiji Yasuda institute of Life and Wellness, Inc. and The Dia Foundation for Research on Aging Societies announced their survey results entitled "Balancing work and family care and separation due to family care." The shocking finding was that of those with experience in caring for their parents, over 50% of those opting to switch jobs or focus on family given the need to care for their parents had left their jobs within a year. Furthermore, the data showed that among those having switched their jobs, one in three males and one in five females worked as a regular employee. Although the survey shows accelerating super-aging and a corresponding rise in the number of those requiring care, it is equally clear that those choosing to care for someone personally may well end up unable to keep working. There is no doubt – as things stand in 2015 – working while caring for someone in Japan is a real challenge.

On this occasion, we tackled the same issue in our project;

creating a micro-simulator and visualizing how the type of employment and annual income, etc. of a fictional individual would change from 2015 into 2025. We scrutinized the data to uncover certain cases where even former regular employees suddenly lost their jobs, gave up working for a while and then engaged repeatedly in sporadic non-regular work on reemployment. Similarly, data estimates also showed that when faced with the need to care for parents, the relevant persons are highly prone to losing their jobs under the current system developed by a company. Furthermore, simulations show all too clearly that even for those wishing to return to the world of work, the blanks in their career hamper efforts to return to the same workplace and obtain employment like before. It is also safe to say that the company side suffers considerably from the loss of valuable human resources.

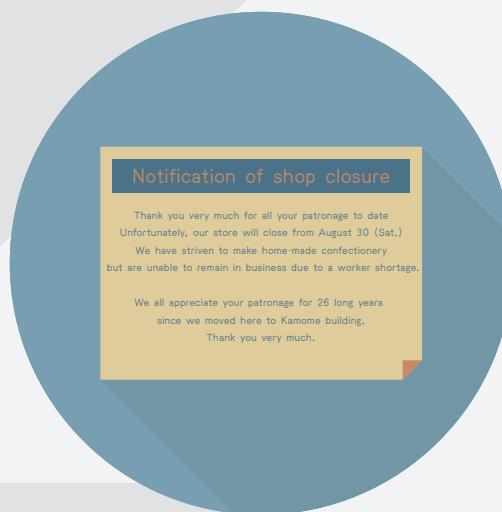


### Looking ahead from 2015 to 2025



## People stop working despite clear and acute staff shortages

Circumstances forcing hitherto established businesses to close down due to a worker shortage are also becoming increasingly common. Since 2014 or so, notices like that shown have become increasingly apparent all over town: "We have continued this business for many years but must now close the shop due to a worker shortage", "few applicants even when advertising the position, so we will shorten operation hours", etc. It is becoming more and more difficult to remain in business due to a lack of human resources. Likewise, major restaurant franchises are reviewing the previous system of remaining open for business 24 hours a day and increasingly tending to close restaurants in the middle of the night. People no longer have mentality of being grateful for any workplace when seeking a job and jobs which cannot provide good conditions, a positive environment and the ability to appeal to candidates tend to be ignored. This reflects the fact that people look for more than work alone.



# Individuals who can't/won't work

The type of future emerging in 2025 will depend on how the decade ahead unfolds. If the various customs and systems supporting the current work approach collapse, this will herald a very distressing future and vice versa.

## A future where even would-be workers cannot work

One of the most pessimistic scenarios which may become a reality toward 2025 is the advent of a future where "even individuals keen to work cannot get jobs."

In fact, this trend has already emerged in 2015, due to the impact of technology and globalization. Likewise, in the above-mentioned simulation, the number of those engaged in production/transport/machine operation, which was 16.55M in 2005 has declined to 14.05M in 2015 and will fall further to 11.25M in 2025. By occupation, employment loss is clear for those engaged in the production process, transport and machine operation. A closer look, however, reveals that employment is lost in jobs where technology can take over and in business where company profitability recovers via overseas transfer. Individuals who were engaged in such work are not only at high risk of losing their jobs, perversely, they are also rendered less employable because the jobs in which they could exploit their previous experience are vanishing from the labor market.

More worrying still, toward 2025, companies are demanding an increasingly high level of human resources. Under present circumstances, the key personnel issue for companies centers on securing "talents", including developing next-generation leaders and global human resources (Recruit Works Institute "Human Resources Management Survey.") Moreover, 79.9% of companies believe that in around 2025, "securing excellent human resources will become more difficult than at present" (Recruit Management Solutions "Human Resources Management Actual Conditions Survey 2013.")

Despite concern among companies over the shortfall in human resources, the personnel requirements they specify do not match the skills and experience of individuals displaced from their jobs. This mismatch between the demand for labor and labor supply will become increasingly evident toward 2025.

## A future where people will not work, despite available jobs

What we anticipate toward 2025 on a personal level is

the emergence of individuals who "do not work despite available jobs."

According to a "Survey on the effects and handling of a worker shortage" conducted by the Recruit Works Institute in 2014, in 15.9% of companies affected by labor shortages, the turnover rate of full-time employees is 14.6% and the turnover rate of part-time and contract workers is increasing.

This is a clear trend in the restaurant service industry, where in 23.7% of companies, the turnover rate of full-time employees is 31.6% and an increase in the turnover rate of part-time workers (including contract employees) is clear. The turnover rate is also rising considerably in the medical/welfare and retailing industries. In a service industry with an ongoing increase in demand for labor with the shift toward a service economy, the problem of available jobs with no workers to fill them is intensifying.

This problem is deep-rooted because while employment of women and the elderly is expected in future due to depopulation and increasing aging, more and more service industry employees are becoming non-fulltime, including in restaurants and retail domains, etc. Although it is generally considered easier for non-fulltime employees to achieve a work/life balance compared to their full-time peers, work contents, treatment and working conditions appealing enough to retain individuals in work are lacking.

Toward 2025, companies will face an increasingly severe competitive environment, which is likely to see them impose strict human resources management with greater efficiency and profitability in mind. However, the future will bring more individuals and old people needing nursing care as well as housework and childcare, making a more flexible work approach for individuals even more crucial. This conflict over the work approach needed by companies and individuals will also intensify toward 2025. In the run-up to 2025, more and more companies will find themselves confronting a deficit in the quality and quantity of human resources. Individuals will not join companies who cannot offer an appealing work approach, whereupon such companies will be overwhelmed. This unhappy future could very well come to pass.

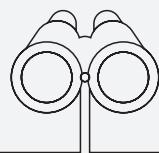


## Machines taking over will mean companies no longer need to employ people

Finally, artificial intelligence has "informally obtained a job" in a bank. The Nikkei Sangyo Shimbun dated March 20, 2015 reported that "Watson", a cognitive computer of IBM America, will start call center work in a bank. Although conventional computers could only utilize knowledge obtained through being taught and memorized by people in many cases, Watson analyzes/judges and utilizes compiled data. The bank seems to have expectations of this computer, which continues to grow and enhance its work accuracy by entering and learning huge volumes of data, considering it "a veteran knowing everything about the company." Although the final judgement remains, of course, with humans, it reaches veteran status far faster than a normal human would, so artificial intelligence is likely to become increasingly relevant to promptly meet the abilities companies seek.

Similarly, Netorabo dated April 15, 2015 reported on how a communication robot featuring "humanity" as a selling point and

developed by Toshiba, "Aiko Chihira", would become a receptionist at an old department store. It's a project in linkage with an event to experience the future, but this trial should be noteworthy and even raises the potential for human work, which is difficult to quantify numerically, for example the warmth felt when people come in contact with each other, to be replaced by machine. Machines have even started broaching areas where it was previously thought that "humans are irreplaceable". It is easy to imagine their hassle-free emergence and rapid evolution (from the present) will have transformed the labor market by 2025.



**Looking ahead from 2015 to 2025**



## Without national subsidies, companies will stop employing people

The website of the Ministry of Health, Labour and Welfare includes a corner called "employment subsidies for employers", the categories of which are summarized in the list on the right. They include an "employment adjustment subsidy" to keep employees in work after closures, provisions for education, training and loans if management declines and a further 48 subsidies available in subdivided areas of the above-mentioned categories. The system also encompasses a "local employment development subsidy," when a business operator in an area where jobs are scarce sets up or develops an office and employs local job seekers, etc. From the other perspective, meanwhile, there are quite a few cases where employment is maintained thanks to these systems. It is easy to imagine that withdrawing such provisions from companies who already implement tight management would see the number of displaced workers soar.



### Employment subsidies for employers

1. Subsidy aiming to keep employees in work
2. Subsidy to facilitate smooth labor transfer for displaced workers
3. Subsidy for newly recruited employees
4. Subsidy targeting enhanced treatment and environment for employees
5. Subsidy to support continued employment of people with disabilities
6. Subsidy to promote work/family balance
7. Subsidy to promote improved vocational ability of employees, etc.
8. Subsidy related to working hours/wages/ ensuring of health/workers' welfare

From the Ministry of Health, Labour and Welfare website ([http://www.mhlw.go.jp/stf/seisakunitsuite/bunya/koyou\\_roudou/koyou/kyufukin/](http://www.mhlw.go.jp/stf/seisakunitsuite/bunya/koyou_roudou/koyou/kyufukin/))

# Companies stop employing

The tragic future which companies may consider in the run-up to 2025 is a scenario which sees them increasingly less able to maintain employment.

## The future of companies supporting the lion's share of work opportunities

Nationally, among 63.11M workers, 52.1M are employed by companies and the ratio of employees to workers is 82.6% (Ministry of Internal Affairs and Communications "Labor Force Survey" 2013.) Most work opportunities are linked to company employment and if viewed from a work focus, this is a society where companies are strongly expected to fulfil their roles as "public entities of society."

Conversely, corporate management environments are becoming increasingly severe, amid progressive globalization and a shrinking domestic market. One reason why the percentage of non-regular employees, which was 20.9% in 1995 has continued rising to 37.4% in 2014 (Ministry of Internal Affairs and Communications "Labor Force Survey") is companies' quest for profits. On the basis of seniority-based wages, continued employment of all interested parties up to the age of 65 was required by legal reform, etc. and adjusting overall labor costs remains a major business challenge.

A survey concerning personnel issues of 2025 was distributed among companies. According to the "Human resource management factual survey" performed by Recruit Management Solutions on continuing employment, 30.6% had a policy of the "mandatory retirement age being extended from 65 years old" and for 40.3% "An early retirement incentive plan, etc., was used to further promote early retirement more positively than now". In terms of salary, although 35.5% envisaged a "salary level higher than now", 72.5% forecast a "higher salary disparity than at present". Toward 2025, the salary disparity will widen and instead of further employment promotion among old people, early retirement of existing employees is more likely to be facilitated.

## Potential excess personnel in a company

It is difficult to accurately determine the number of excess personnel within a company. Accordingly, on this occasion, we simulated the number of retained employees. Retained employees means human resources not utilized in business activities and the number to denote the difference between the estimated number of workers commensurate with the scale of the

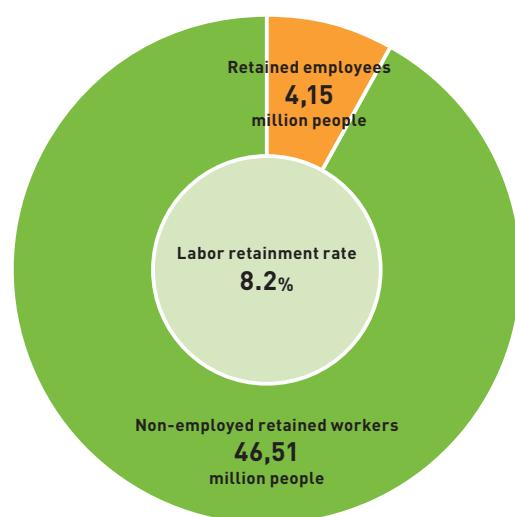
company's business activity as opposed to the actual number of workers.

Although strictly speaking, companies do not consider this category as 'excess personnel', there is some scope for a tacit assumption of the same. In the absence of significant economic fluctuation, toward 2025, the ratio of retained employees will remain high at around 8% and in 2025, the 50.66M employed persons will give rise to 4.15M retained employees.

These retained employees can be considered both rare human resources, which companies can tap into and potentially jobless persons, whose employment is protected by employment regulations. If in future, an intensifying management environment means companies promote retirement of human resources and employment regulations are eased, the risk of unemployment will soar.

In Japan, which is considered an employment society and rooted in the concept of lifetime employment, companies fill crucial roles in terms of the work approach. Conversely, protecting employment also depends on management making a healthy profit. As the competitive environment companies face intensifies toward 2025, there is undeniably scope to lose the precarious balance established with the current company management and employment opportunities. The issue of whether employment opportunities increase companies' productivity marks a major watershed for companies and individuals alike.

## [Retained employees to employed persons in 2025]



\* Prediction values by simulation



## An environment where you can work as before now inconceivable

The release of a paper entitled "Toward the realization of smooth labor mobility without unemployment from a mature industry to a growing industry" was announced by the employment/human resources working group of the Industrial Competitiveness Council on March 18, 2014; mainly specifying national guidelines. From an individual perspective, this paper can be interpreted as "please switch from the job in which you have been engaged to one which will grow in future." Of course, this presumes the use of your previous work experience and the abilities you have honed and confirms in writing that support systems will be prepared. However, what lies ahead is a future where it will be difficult to ask a company to maintain employment as before, leaving individuals with no choice but to switch to a new job. The time might come when the people's wish to work with reassurance as previously cannot be met.

**Trajectory of labor market reform**  
**"Toward the realization of smooth labor mobility without unemployment from a mature industry to a growing industry"**

- Hello-Work reform. Boosting quality and opening up more to the private sector
- Improved evaluation/function of private HR business efforts
- Enhanced matching function
- Development of a career consulting system
- Reform of a re-education/re-training system, targeting further quality improvement



## Looking ahead from 2015 to 2025

### Spending on labor market policies as a percentage of GDP

Unit : %

	total	Proactive measures					Income / Other support for unemployed / jobless	Establishment of Incentives	Direct Job Creation	Early Retirement	
		Public Employment	Job Training	Work-share Work-reassignments / Incentive	Employment support and Training Incentive	Establishment of Incentives					
Japan	0.62	0.27	0.05	0.03	0.00	0.09	0.00	0.09	0.00	0.35	0.35
USA	0.71	0.14	0.04	0.04	0.00	0.01	0.03	0.01	0.00	0.57	0.57
Canada	0.91	0.26	0.11	0.10	0.00	0.00	0.01	0.01	0.01	0.65	0.65
UK	—	—	0.05	—	0.00	—	—	—	0.00	0.30	0.30
Germany	1.82	0.79	0.34	0.26	0.00	0.06	0.03	0.03	0.07	1.03	0.98
France	2.34	0.93	0.25	0.36	0.00	0.06	0.07	0.14	0.05	1.40	1.40
Italy	1.78	0.41	0.11	0.14	0.00	0.15	0.00	0.01	0.01	1.36	1.28
Holland	2.74	1.11	0.41	0.13	0.00	0.01	0.44	0.11	0.00	1.63	1.63

Source: The Japan Institute for Labour Policy and Training "Databook International Labor Comparison 2014"

Expenditure on active labor market policies as a proportion of the GDP of each country is summarized in the chart at the left, clearly showing that Japan spends relatively little on relief measures for the unemployed, both before and after people lose their jobs, compared to other countries. Also according to the "Global Career Survey" conducted by Recruit Works Institute, when comparing how salary varies when changing job in each country, it is clear that incentives in Japan remain modest at best, despite changing job. In other words, as far as possible, it is best not to lose your job, maintain the actual status and remain with the current organization as long as possible. However, in reality, a current organization, namely, a company, may potentially no longer be able to retain staff. In this case, mobility of human resources is unavoidable but no such system yet exists to support that.

# A dysfunctional career development system

Toward 2025, companies will seek more highly profitable human resources whereas individuals, amid the aging population, will seek an approach that achieves a work/life balance. Here, the needs of companies and individuals will differ, steadily worsening the mismatch between job offers and job seekers.

## This mismatch is not solved solely by easing the asymmetry of information

In Japan, with low fluidity of the labor market, job searching via the human network is not as effective as overseas, so enhancing Hello-Work public agency and private human resources services helps facilitate labor mobility. These "formal paths to joining companies" are what pave the way to employment in terms of introducing job information that individuals cannot otherwise obtain and finding job seekers companies would otherwise miss out on.

However, in future, the divergence between companies' needs in terms of human resources and individuals' needs of employment will prevent them from linking up with each other simply by resolving the maldistribution of information on job offers and seekers. Companies are not providing the work approach individuals want while individuals lack the skills companies require. This dual-mismatch in personnel requirements and work style cannot be rectified by superficial matching alone.

## Limits of the current employment support system

Toward 2025, the employment of individuals facing certain "constraints" compared to the previous norm, which saw regular male employees at the center of the employment paradigm, such as women and old people subject to limited working hours and places, foreigners with different languages and backgrounds, etc., will be expected. Their ability to work is contingent on finding a work approach consistent with the applicable constraints.

However, the current employment support approach revolves around individuals, such as providing job information, counseling and training, etc. for job seekers. Molding the work approach and opportunities desired by individuals by approaching companies is rare. An employment support system which aligns companies' HR needs with employment opportunities that balance individuals' constraints has to be developed to prevent a miserable future, where employment will remain

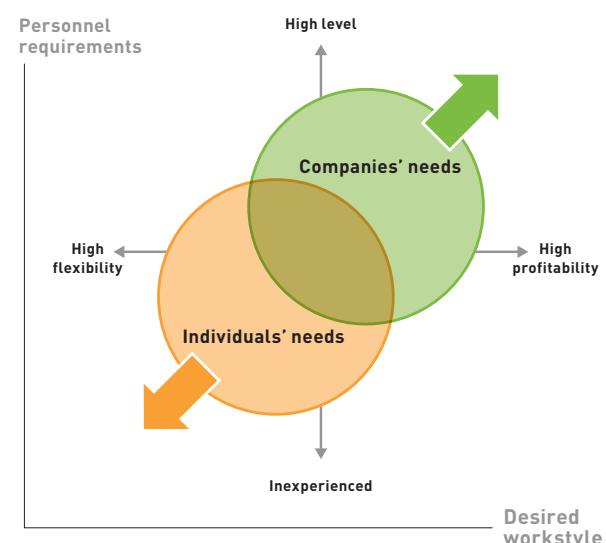
impossible, despite both job seekers and job offers available.

## Limit of the current capacity development system

Although improved employability and career autonomy have long been required, they have yet to be achieved. The reality even extends to a paradoxical situation, whereby individuals, who find themselves in a weak position in the labor market, despite deserving a protective safety net, are called upon to take personal responsibility. We should be aware of the limit to giving individuals all responsibilities to acquire ability.

To date, companies have been the main players tasked with developing vocational ability. In our country, an employment society, although companies will remain key to this task, the intensifying competitive environment makes it less realistic to expect individual companies to do everything. The quality of the ability development system that transcends the frameworks of individual companies, such as implementing training sessions collectively via several companies or the industry group, educational reform, etc. that have recently emerged, will impact on future of ability development.

## [Diverging needs of companies and individuals]



# In 2025, the number of employed will decline by 5.57M

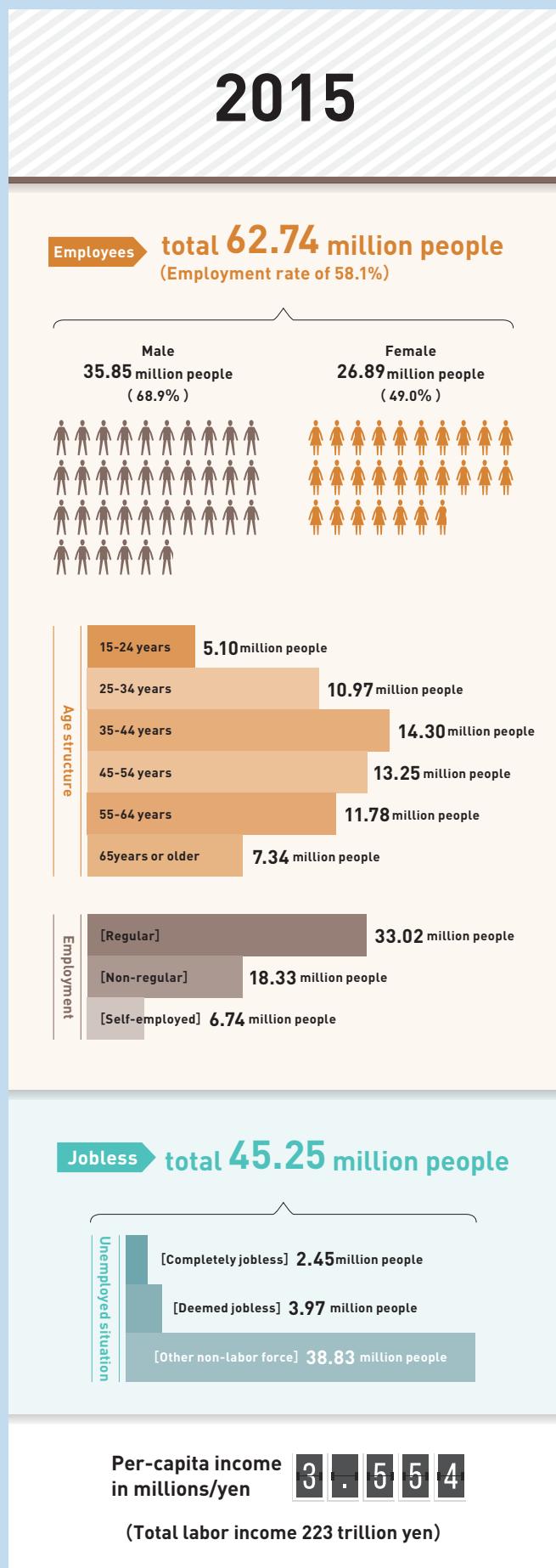
The current employment structure depends on a risky balance among companies, individuals and social systems. If this balance is lost, how will 2025 turn out? Here, check out these simulation results showing transitions toward 2025, the potential for housewives, etc. as new recruits making up half those entering the labor market and the turnover rate (those being displaced and retiring) doubling.

The total number of employed will be 57.17M, a decline of 5.57M from 2015. Broken down, while the number of males will decline by 4.36M to 31.49M, the female total will stay at 25.68M, declining by just 121K, which underlines the severe impact on male employment. Similarly by age structure, although the number of employed in the group aged 45-54 in 2025, classed as junior baby-boomers, is 14.3M, representing an increase of over 1M from the 2015 figure of 13.25M, the total of those older than this group, professionals aged over 55, is expected to decline.

## As well as displaced workers, the number of those no longer willing to work will also increase

Conversely, since the total number of unemployed will be 50.25M, an increase of 5M from 2015, it is clear that without an adjustment function, many people will lose their jobs. Broken down, the number of unemployed will be 3.51M, an increase of 1.06M from 2015 and the so-called 'deemed unemployed', willing to work but not actively seeking work, will total 4.2M, an increase of 230K from 2015. Meanwhile, the number constituting the remainder of the non-labor force will be 42.54M, an increase of 3.71M from 2015. This shows that after losing the adjustment function, many people will not only lose their jobs but also their desire to work. At the same time, the number of retained employees will also increase by 960K over a decade, from 4.01M in 2015 to 4.97M. Companies will also face the challenge of how to deploy personnel.

Consequently, the annual per-capita income will be 2.991M yen, under three million and a decrease of 563K yen from the 2015 total of 3.554M yen. Among the number of employed in 2015, about 70% are expected to experience a decline in income. Clearly, unless companies, individuals and social systems can adjust, the Japanese economy would be severely affected.



# BAD

## 2025 Pessimistic scenario

A case showing a transition where the probability of entry is halved and the turnover rate doubled by 2025

Employees

**total 57.17 million people**  
(Employment rate of 53.2%)

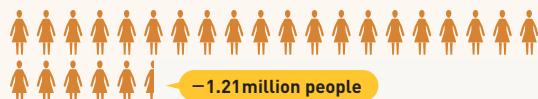
-5.57 million people  
(-4.9%)

**Male 31.49 million people**  
(Employment rate 61.1%)



-4.36 million people

**Female 25.68 million people**  
(Employment rate 46.0%)



-1.21 million people

Age structure

15-24 years	4.37 million people
25-34 years	10.14 million people
35-44 years	11.37 million people
45-54 years	14.30 million people
55-64 years	10.36 million people
65 years or older	6.63 million people

Employment

[Regular]	29.51 million people
[Non-regular]	18.94 million people
[Self-employed]	3.63 million people

= Difference from 2015

Jobless

**total 50.25 million people**

+5.00 million people

Unemployed situation

[Completely jobless] 3.51 million people +1.06 million people

[Deemed jobless] 4.20 million people +0.23 million people

[Other non-labor force] 42.54 million people +3.71 million people

Per-capita income  
in millions/yen

2 . 9 9 1

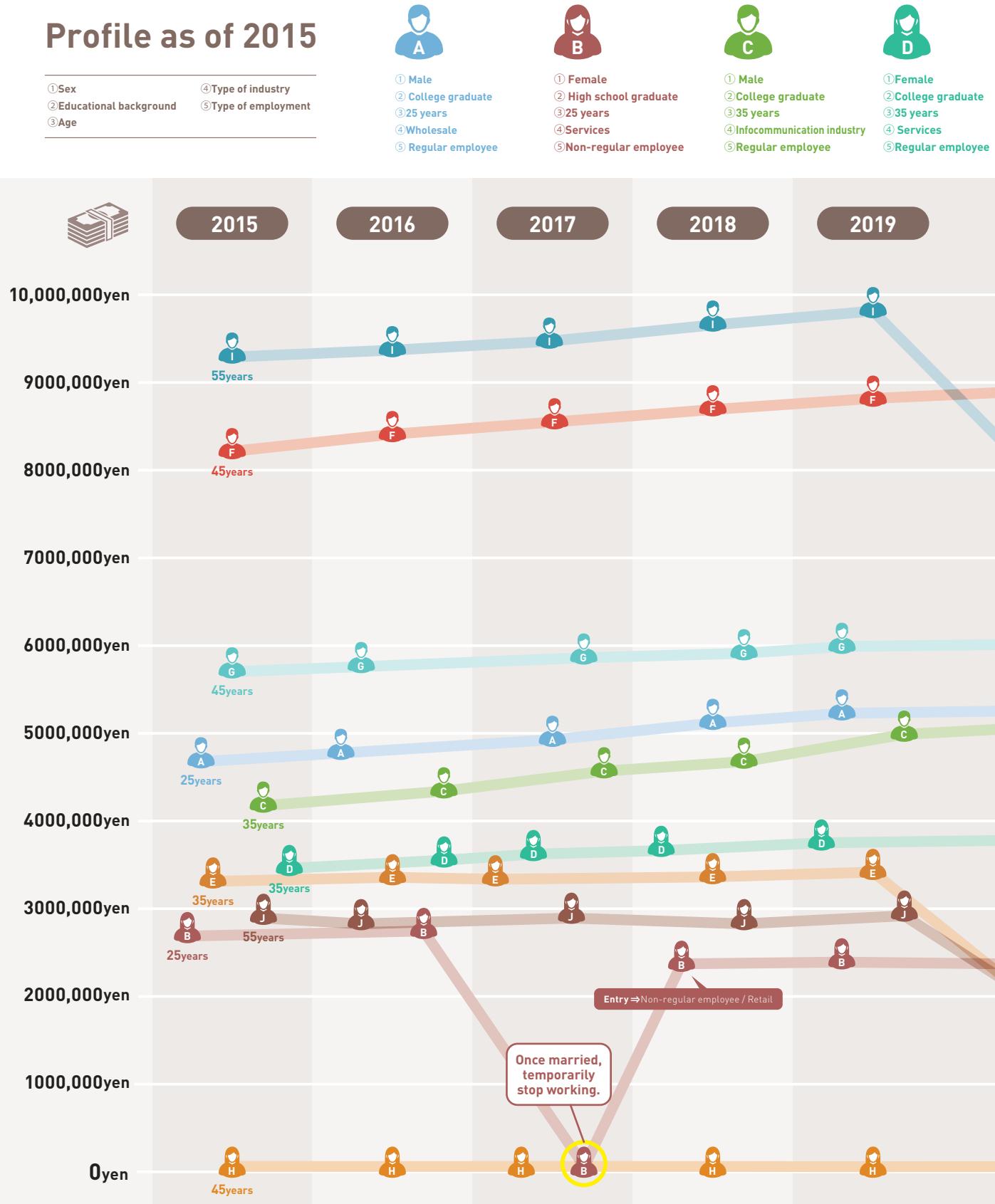
(Total labor income 171 trillion yen)

-563,000 yen

# Income transitions by 2025

Here, among the individuals pictured by the micro-simulator, we focus on certain individuals and compare the transitions in their annual incomes over the decade from 2015. While some individuals, such as A, C and F, see their incomes increase smoothly as they remain in employment with the same companies, others like I experience a decline

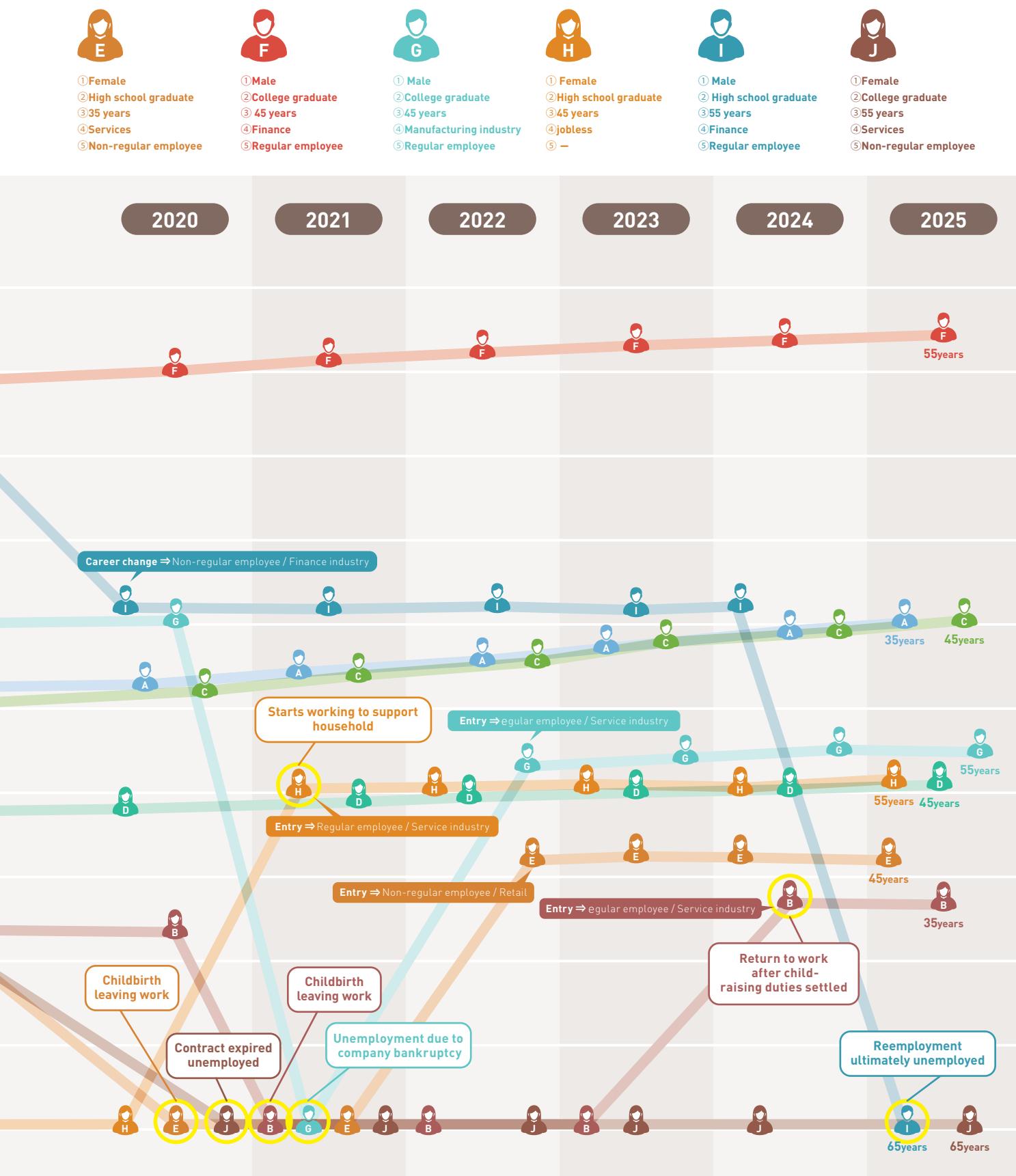
## Profile as of 2015



in their annual incomes after changing their jobs.

Some people like G lose their jobs due to bankruptcy and are forced into reemployment. Moreover, some of the females quit their companies after giving birth, like B and E and others start working after childcare has been settled for the time being, like H.

The micro-simulator creates such individuals and forecasts the future employment structure by aggregating. Predicting the future of individuals and aggregating reveals transitions of the work approach and income of each individual, with the advantage of showing dispersion as well as average.



# 3 courses we should take toward 2025

**Course 1**

**Toward a society where you can “continue working” long-term**

**Course 2**

**Toward a society where you can work “despite constraints”**

**Course 3**

**Toward a society where you can “get the next job”; even after resigning**

As we have already seen, toward 2025, there will be a simultaneous shortage and excess of human resources. Depopulation will trigger a structural shortage of human resources but at the same time, technological evolution, etc. will also result in an excess of human resources in the field of labor-intensive jobs. “Short-staffed despite people at hand.” “Inability to get a job despite work being available.” Toward 2025, such phenomena will proliferate and be more difficult to solve on a local level than before. Our target toward 2025 in the event of such serious mismatch is to improve the working environment by leveraging three principles, namely ensuring every single individual can work “despite constraints”, “continue working” long-term and “get the next job”, despite losing the current job.

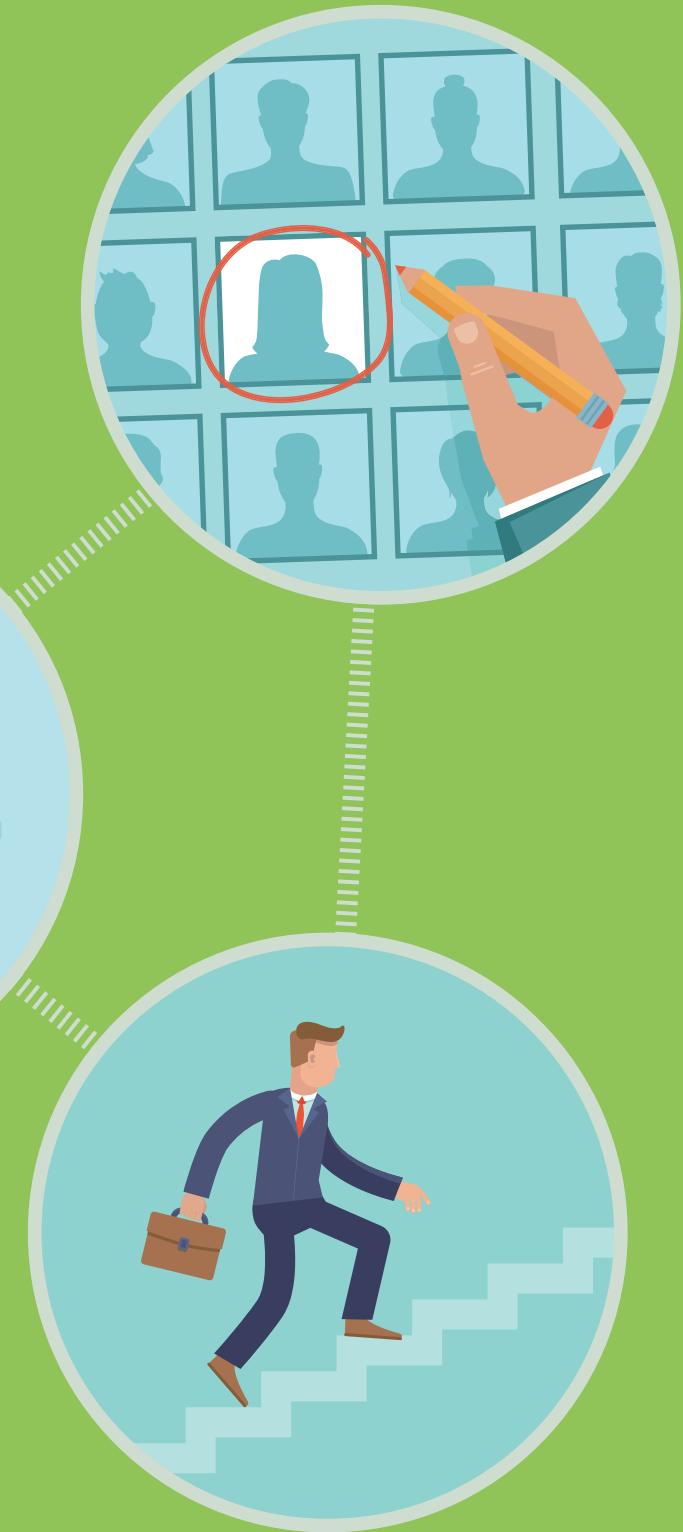
Firstly, in response to the shortage of human resources, it is important to secure the right quality and quantity of candidates. The largest resolution method is to enable “continued employment” in a configuration aligned to the lifestyles of those having left the labor market due to aging and reaching new life stages, which may help limit the decline in employed persons.

In addition, by allowing work “despite constraints”, potential workers with childcare and nursing can participate in the labor market. Those ‘deemed jobless’ and keen to work, but for whom present circumstances mean they cannot find attractive jobs which match their target time and place and are not actively job-seeking, can still be key human resources for companies if only they have access to employment opportunities matching their individual needs.

To help human resources excel, supporting individuals in forming their careers and enhancing employment support so that they “can get the next job.” Enhance employability and suppress the risk of unemployment. In addition, helping people who lose their jobs find the next one. This is the kind of support that is strongly expected.

Circumstances where every single person can work “despite constraints”, “can continue working” long-term and “can get the next job” even after losing the current job reflect universal labor market themes. However, toward 2025, we revert to these principles because amid the super-aging society, resolving the serious and wide-ranging mismatch, namely the concurrent shortage of human resources and excess of human resources which will ensue in the labor market, promoting the basic principles mentioned on a new and stronger level is crucial.

Toward 2025, to what extent should we promote these three principles? We would like to consider with embryonic cases.



# Toward a society where you can “continue working”

What the super-aged society urgently needs is the creation of an environment where we “can continue working long-term.” From an individual perspective, it will be possible to maintain a livelihood, even when aging and to get opportunities for public participation, viewed from the company perspective, secure human resources while from a national perspective, it will boost the sustainability of social security systems for example, with the increase in dependent individuals. There are three leverage points behind the creation of such environment “to continue working long-term.” The first is to achieve the continued employment of old people, the second is to limit their withdrawal from the labor market as represented by the M-shaped curve of women and the third is to achieve sustainable career development.

## You can keep working, even when aging

It goes without saying that employing elderly people within the super-aged society is important. However, with the employment paradigm created during the growth period, centering on male regular employees, it is difficult to create a venue where old people can work. Although the revised Law for the Stabilization of Employment of the Aged came into force in 2013, stating that all employees over 60 year but keen to continue working must be allowed to do so up to the age of 65, with 2025 in mind, we have to pave the way for elderly people who are willing and able to work even beyond 70 to do so.

Creating a workplace for elderly people, while balancing the working hours and their physical constraints and utilizing their abilities/experience, it is also important to develop an “unemployed” work approach, e.g. via sole proprietors and those starting a business, etc. as well as creating a place to work within a company.

## Continued work is possible, even when the family status changes

Currently in Japan, many people drop out of employment due to changes in their family status such as birth, nursing care, etc.. The low employment rate of women during the birth/childcare period in Japan is known as the “M-shaped curve.” Under the circumstances, given the difficulty not only of returning to work after the birth but actually even conceiving this step, many women leave employment before birth. Another recent phenomenon has been couple retirement, namely a wife quitting her job following the retirement of her male spouse. It is a big loss for society

to see able women quit their jobs like this, due to mismatch between long-established family values and the current work approach.

Toward 2025, the number of individuals with family members needing nursing care will proliferate, regardless of sex. Unlike childcare, the nursing care period is indefinite. Moreover, in 2025, the two major portions of the population will be baby-boomers aged over 75 and junior baby-boomers over 50 and the latter group will be tasked with providing nursing care to the former. The impact on the labor market will be considerable and creating a work approach that can be balanced alongside nursing care will be imperative. It is crucial to establish an environment where people can continue working without quitting their jobs, despite changes in their family status.

## Japan is expected to solve the problems of depopulation

Under present circumstances, the employment environment of Japan is barely sustainable from individuals, companies and social systems and at its limits, which imposes an excessive burden on individuals, even triggering suicides at times. Conversely, with the competitive environment for companies intensifying, there is a need to consider how to achieve employment that balances corporate profitability and individuals' QOL (Quality of Life); a structurally difficult challenge.

There have already been cases of excessive corporate pressure on employees, which spoil the corporate image and also have an adverse effect on talent acquisition. As the Internet penetrates, this trend will continue accelerating in future, whereupon companies will have to pursue sustainability in terms of both profits and employee lifestyles. There is a need to enhance productivity and optimize working hours and areas of responsibility by exploiting technology, reviewing work flow and so on.

Also important is enlightening employees with basic knowledge of labor law and how best to request support in the clutch (contact with workers' support group), etc. so that each working person can protect him/herself.

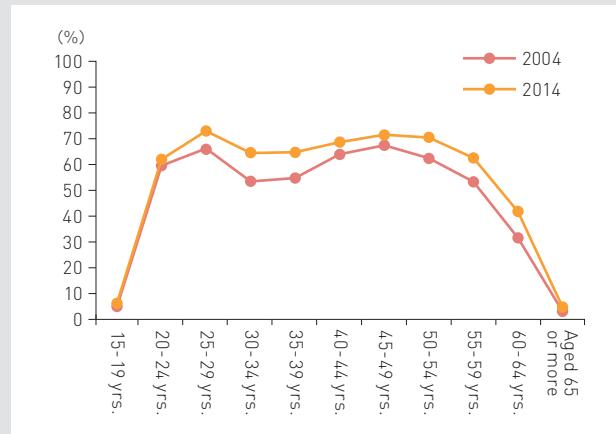
In Japan, the first country worldwide to reach the super-aged society, we have to create an environment where individuals “can continue working long-term” as long as they wish. No other country has yet solved this problem. Japan, which is most affected by the declining birth rate and aging population, is globally expected to solve this issue.



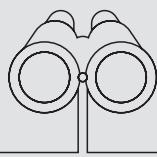
## The term M-shaped curve might vanish

Nikkei Newspaper dated November 28, 2014 reported that the dissolution was approaching. Likewise, in the White Paper on Gender Equality, 2015 edition, announced by the Cabinet Office, it explains how the M-shaped curve is shallower than before and the age class on which it is based is also rising. Moreover, compared to before, there is more scope for women to consider an alternative to simply leaving the labor market. This increased potential may pave the way for those who, despite being motivated, found themselves compelled to stop working because of misaligned working approach and conditions to re-enter employment. The White Paper on Gender Equality also reveals that among the female non-labor force population in 2014, totaling 29,310,000 people, 3,150,000 wish to be employed. If we can establish a world in which such wishes are met, the M-curved curve will become redundant.

**Female employment rate**



Source: Ministry of Internal Affairs and Communications "Labor Force Survey"



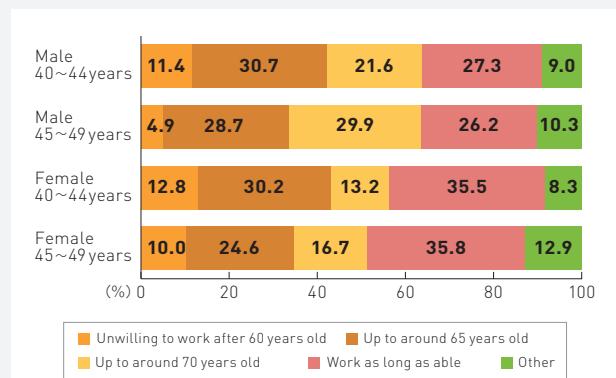
## Looking ahead from 2015 to 2025



## No more ruling out work due to old age

Job-change support sites have seen a gradual increase in enquiries such as "I am over the date of birth specified on the pull-down menu but how should I apply?" Currently, many job-change support sites presume the personnel registered will be born up to 1954, namely, individuals aged up to 60. However, those outside these criteria are still newly registering and seeking work. Some work for a living but beyond that, more and more people are keen to "work while their own master". Although many seek work using abilities acquired over their career or related skills, there was a very recent case on a certain engineer staffing site of someone who acquired a new language and started working at a company as an engineer. Yes, the time is coming where even old people can start from scratch.

**Intention to engaged in salaried employment after 60 years old and desired employment age**



Source: Cabinet Office, "Survey on attitude toward 'preparation' toward elderly generation" 2013

# Toward a society where you can work “despite constraints”

Toward 2025 and amid concern over the shortage of human resources, reemployment of those having once left the labor market, such as housewives and the elderly, etc. is expected. Moreover, in future, more and more people will have family members needing nursing care, regardless of sex. Under present circumstances, it is difficult for those facing such “constraints” to work.

## Why housewives and the elderly cannot work

Quite a few housewives and elderly people who are currently not working would like to do so, given satisfactory conditions. As the pessimistic scenarios showed, companies acutely aware of the shortage of human resources have emerged and in theory, the utilization of such human resources should be promoted. However, this is not yet the case in 2015.

There are three hindrances to housewives and the elderly returning to work. Firstly, companies don't cave the “constraints” housewives have. For example, conditions in terms of working hours and workplace with reference to housework, childcare and health, etc., are restraints for companies and bottlenecks such as these are what affect corporate appeal. Secondly, the enforced after quitting their jobs sees their skills become obsolete and the longer this gap, the more difficult returning to work becomes. However, multiple children could see this stage taking several years. Thirdly, because they can make a living without working, they tend to have higher expectations in terms of working conditions. If supported by the income and assets of their spouses and not compelled to work, their employment is limited to appealing jobs which they still want.

Accordingly and under current circumstances, given the severe lack of employment opportunities commensurate with restrictions, offering appeal and allowing them to utilize current skills or hone new ones, despite inexperience, employment of housewives and the elderly is hardly promoted.

## From attribute-type diversity to creating an inclusive workstyle

Over the past 20 years, a “diversified workstyle” has penetrated with non-regular types of employment expanding. However, industries utilizing non-regular labor will suffer a shortage of human resources due to unappealing conditions and work contents. Conversely, regular employees have to work unhindered and regardless of all criteria, including working hours, workplace and work contents. This bipolarization

impedes the employment of diversified human resources who seek intermediate positions.

To promote the employment of diversified human resources toward 2025, it is essential to develop attractive jobs and a work approach commensurate to their restraints. Moreover, toward 2025, even male regular employees will increasingly face the restraint of having to provide nursing care. Companies have to ensure inclusion at a workplace level, rather than pigeon-holing human resources with restraints under a separate system of non-regular labor as previously.

## Overcoming restraints with “mosaic adjustment” of roles

Human resource management must be reconstructed for companies to utilize not only homogeneous human resources without restraints, namely regular Japanese male employees, but also individuals with high heterogeneity in terms of experience, background, value system and restraints such as time and place, etc.

- From the mass management of human resources to individual human resource management, taking restraints/intentions of individuals into consideration.
- From a work design focusing on efficiency to a mutually complementary work design, exploiting member characteristics
- To management leading to a goal/strategy, rather than a task.

Manage by focusing on individuality according to the diversity of members, mutually combine members' strengths, weaknesses and restraints like a “mosaic” and lead the organization forward to win results. Compared to homogeneous human resources, utilizing diversified human resources is costlier from a management perspective, which is the main reason why employment of diversified human resources is hardly promoted. However, in future, amid a declining labor force, companies which fail to promote diversity and retain solely homogeneous human resource management will eventually lose their competitiveness. Embrace the diversity of human resources and enhance competitive power. Toward 2025, management innovation will be vital.

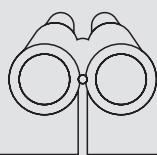


## The workstyle of limited regular employees will transform work approaches

From early 2015, articles with lines like "Companies start increasing regular employees" appeared in various news media, reflecting a trend of trying to secure employment via a system of "limited regular employee" in areas which had tended to be filled by part-time and temp staff, etc. Manufacturers are trying to keep pace with the trend, as are industries where companies are fighting over job seekers in the first place, e.g. retail and service industries. Despite another perspective advocating measures to ease rules of worker protection systems, many people welcome a system which is more stable than previous non-regular employment and enables more flexible choices for personal lifestyle and career intentions to some extent. Companies also see it as "a selling point" to attract more people by providing conditions which are "regular rather than non-regular employment", although to a limited scope.

At the same time, in the part-time field, the "mosaic adjustment" initiative is advancing in leaps and bounds. Reports in the Nikkei

Newspaper dated March 8, 2015 entitled "Securing human resources by shortening working hours" showed how companies had started advocating a new work approach such as a two-hour day, twenty-hour week, etc., far shorter and more flexible than was previously the case. These trends also reflect moves to try and utilize people who were previously considered unable to work despite wishing to do so, due to the inability to secure significant time, under circumstances like childcare and nursing care. A time when expertise fine-tuned by higher education and social experience goes to waste due to timing and geographical restraints imposed by working conditions and people finding it impossible to work and utilize their potential is almost at an end.



Looking ahead from 2015 to 2025



## People increasingly support the taking of paternal leave.

2015 marked five years since the 'Ikumen' campaign first came to the awareness of society. The "Ikumen Project", conducted by the Equal Employment, Children and Families' Bureau of the Ministry of Health, Labour and Welfare saw the name become a trendy term, but general acceptance and rooting of the same in corporate practice has yet to be achieved. Conversely however, as social networks have developed, the concept of men participating in parenting and childcare, etc. has sparked positive discussion. A company listed on the first section of the Tokyo Stock Exchange making a TV commercial which dramatized support for working mothers and what fathers could do also sparked major discussion. Similarly, in NHK Closeup Gendai,

broadcast on June 16, 2014, a keyword called "Ikuboss" newly emerged as the figure of a boss in the age featuring a diversity of human resources. Acceptance of men taking childcare leave will soon take root.



# Toward a society where you can “get the next job” even after resigning

Toward 2025, alongside a shortage of human resources, the risk of individuals losing their jobs due to the impact of technology and globalization is also a concern. This kind of structural mismatch is difficult to resolve and in our country, where long-term employment is the norm, efforts to maintain the environment to facilitate labor mobility remain insufficient.

There is a need to strongly promote a system allowing you to get the next job, even after losing your own and reinforce career development to support the system.

## Future employment support

The current employment support system centers on one-time employment support, aiming to connect sporadically distributed job offers and job seekers like a placement service. In future however, when such mismatch intensifies, there will be a need to enhance employment support from the following four perspectives.

① Coordination support to bring companies' human resource needs and individuals' employment needs closer together.

Toward 2025, companies are more than likely to need advanced personnel requirements and the gap between the work conditions individuals target and their own abilities will get wider. There will be a need for supportive coordination to help both companies and individuals respectively adjust to conditions which are realistic and which leave both parties satisfied. The approach to companies is particularly crucial when creating a new work style.

② Support for discontinuous career change

The changeover in the industrial structure and jobs being replaced by technology results in employment opportunities being lost within the overall labor market. Accordingly, as well as changes in the type of industry and occupation, enhanced support for dynamic career change such as re-education and movement among regions is expected.

③ Soft-landing-type employment support

Temporary support alone when changing job makes it difficult to adapt and succeed. Expanding the measures provided in the form of soft-landing-type employment support such as internships, trial employment, loans to non-group companies while remaining in-house etc., facilitating job changes after both the individual and organization ensure compatibility and competence, is expected.

④ Integrated support for life and employment

The relative poverty rate has continued to climb since the 1980s (Ministry of Health, Labour and Welfare, "2010 Comprehensive Survey of Living Conditions") and the increased number of poor people suffering financial difficulties will remain a future concern. Employment support for individuals in poverty is required alongside life support. In future, safety nets such as Acts for sustenance of needy people, etc. should not be reduced due to budget limitations.

## Future career development support

Career autonomy and enhanced employability are key when aiming to continue employment under an uncertain environment. However as mentioned above, taking individual responsibility to achieve such career autonomy and enhanced employability remains a challenge. In the run-up to 2025, there is scope to improve the environment surrounding individuals, including companies and social systems.

The ability to get a new job, even when losing one, the capacity to adapt to environmental changes and a human network are all important, as are the portable skills represented by expertise. For companies, which are the key players developing capacity, it will be important to present career paths to employees over five- and ten-year periods; focusing on intensive expertise in special areas and experience of adapting to environmental changes. It is also effective to recommend learning outside the company and allowing side jobs. Through such experience, considering career plans and their own positions in the labor market will encourage career autonomy.

Support for such medium- to long-term career development of employees has yet to be explored. During the period of economic growth, positions increased, allowing companies to develop the careers of their employees in the long term alongside such increase. In recent years, given the management need for short-term profits, investment in career development has been limited to a layer of talent such as next-generation leaders, etc. and it is getting difficult to invest in other layers.

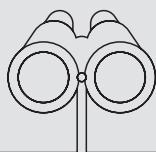
In the run-up to 2025, the competitive environment of companies will intensify. Companies will have to devise measures to balance the management need for short-term profits and medium- to long-term career development of employees on their own accord.



## Understand individuals' work approach better and everyone can enjoy

The Wall Street Journal dated March 8, 2013 included a report entitled "More and more American companies are tracking the actions of their employees with sensors", as part of an experiment to determine whether productivity would improve by measuring the extent to which employees communicate with sensors. This technology helps provide an insight into what kind of human relations or team-building is important and the type of communications to be targeted for improved productivity. As of 2015, this methodology has progressed rapidly. Despite the fear of personal information leaking and concerns over information management, there is also a sense of real potential based on the concept that using such material effectively could benefit both organizations and working people alike. For example, workplace stress may be illustrated by data, but presenting such data is likely to highlight the stress factors of working in an organization. Furthermore, it is believed that isolating the cause

of stress makes it easier to eliminate. There is a feeling that "standards" shown in data rather than something more analog and subjective, such as equivocal peer evaluations and feelings, would dramatically improve measures implemented to deal with problems and help ease the risk of losing a job or resigning due to "inability to adapt to the work site, unfamiliarity with the job or inability to perform at the required level". If an era where what was previously unseen can be visualized, this may allow us to continue working energetically and indefinitely.



### Looking ahead from 2015 to 2025



## Concrete moves to utilize the mid-layer and their skills and experience

The Ministry of Economy, Trade and Industry, championing a support service initiative for the "creation/promotion of diversified "human resources utilization", has started setting about work to promote the mobility of mid-layer human resources and their various skills and experiences in earnest. Previously, those changing jobs tended to be up to 35 years and with potential valued more highly than their experiences and skills. Turning things around, I think moves to advocate a theory of job-change limitation are common knowledge, with 35 years old considered the borderline. The Ministry of Economy, Trade and Industry also honestly admits the rarity of human resources with various skills and experiences thriving when moving to different companies on its web site introducing the project. Moreover, in the first place, since companies themselves are not really aware of their own needs, they are working on companies to create new businesses and taking in a wide scope of private-

sector knowledge.

Similarly, feedback from within the human resource industry "from cities to regions" is being heard. There are numerous small- and medium-sized enterprises growing in the regions and seeking human resources with experience of managerial posts in large companies and skills cultivated by such experience. However, their name values, conditions and regional location above all impede efforts to secure human resources. Even so, the middle layer, which "decided to change work after understanding they were the required human resources" have started moving to the regions. In future, when railways, etc. have been re-developed and cities and regions become even closer, this trend is likely to have become the norm.

Reference site: <http://www.meti.go.jp/policy/economy/jinzai/jinkatsu/>

# Employability will double and exceed the 2015 level for the first time

If we go beyond just maintaining the adjusting function of companies, individuals and social systems to consider what we should do in the run-up to 2025, what will this include? We would like to introduce a prediction result that shows the transition in terms of the probability of entry into the labor market based on the number of housewives doubling and the probability of turnover based on the number of elderly halving up to 2025.

The number of those employed is 63.89M, an increase of 1.15M compared to the 2015 figure of 63.74M and this shows that despite the decline in population, the overall number of employed will increase. If we break down the total, despite a decline in the number of males of 900K from 2015 to 34.95M, the total of females increases by 2.05M to 28.94M and it is clear that employment of women will rise. Similarly, when viewed by age group, although the total of those aged under 44 decreases compared to 2015, the total of those over 45 years increases, reflecting the fact that the elderly remain in continuous employment, without retiring.

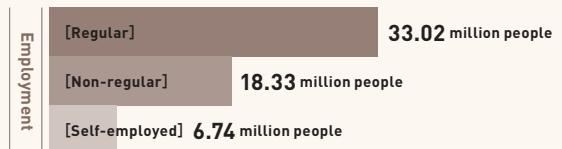
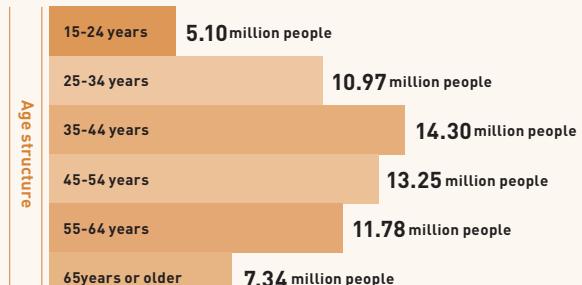
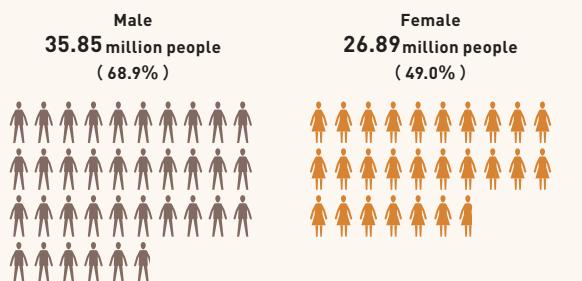
## From 2015, the level of unemployed will decline considerably and average income will slightly increase

Conversely, the number of unemployed declines significantly from 2015 by 1.72M to a total of 43.53M. Broken down, the jobless decreases by 500K from 2.45M in 2015 to 1.95M. The number of those deemed jobless, namely keen to find work although not job-seeking, is 2.5M, which is 1.47M less than the 2015 figure of 3.97M. The total for other non-labor force, meanwhile, is 39.08M, an increase of 250K over the 2015 total of 38.83M. At the same time, the number of retained employees also declines slightly to 3.93M from the 2015 figure of 4.01M. (Data on pages 44 and 45.)

The resulting per-capita income is 3.616M yen, which exceeds the 2015 figure of 3.554M yen, albeit fractionally. By encouraging more unemployed capable of working to do so as well as those who can work remaining in employment, income will be maintained. Utilizing the human resources in Japan is thought to have potential to boost both the economy and average income levels.

# 2015

**Employees** → **total 62.74 million people**  
(Employment rate of 58.1%)



**Jobless** → **total 45.25 million people**



Per-capita income  
in millions/yen  
3 . 5 5 4

(Total labor income 223 trillion yen)



## 2025 Optimistic scenarios

Transitions which see the probability of entry doubling and the probability of turnover halving by 2025

**Employees**

**total 63.89 million people  
(Employment rate of 59.5%)**

+1.15 million people  
(+1.4%)

**Male 34.95 million people  
(Employment rate 67.8%)**



-0.90 million people

**Female 28.94 million people  
(Employment rate 51.8%)**



+2.05 million people

**Age structure**

15-24 years	4.90 million people
25-34 years	10.78 million people
35-44 years	12.34 million people
45-54 years	15.34 million people
55-64 years	12.24 million people
65 years or older	8.29 million people

**Employment**

[Regular]	32.52 million people
[Non-regular]	19.94 million people
[Self-employed]	5.43 million people

= Difference from 2015

**Jobless**

**total 43.53 million people**

-1.72 million people

**Unemployed situation**

[Completely jobless] 1.95 million people -0.50 million people

[Deemed jobless] 2.50 million people -1.47 million people

[Other non-labor force] 39.08 million people +0.25 million people

**Per-capita income  
in millions/yen**

3 . 6 1 6

(Total labor income 231 trillion yen)

+62,000 yen

## Reinventing the work approach ①

# The work approach for 2025 remains to be determined. How you spend the coming decade may transform your future

"I don't know what will happen by 2025." This was the kind of comment heard this time from experts in various fields. Although predicting the future precisely is almost impossible, with remarks such as these from leading figures, there is evidence of a reverse in economic trends and the population structure.

Although there are signs of emerging from the long

economic stagnation, there is no guarantee that it will last beyond 2020. We have not yet experienced a phenomenon where the population stops climbing and declines. Moreover, Japan is super-aging at the same time.

With all that in mind, we cannot simply extrapolate the past when determining what will happen in 2025.



<b>Employees</b>	62.74 million people	57.17 million people (-5.57million people)
<b>Employment rate</b>	58.1 %	53.2%
<b>Female employee</b>	26.89 million people	25.68 million people (-1.21million people)
<b>Employees 55 years or older</b>	19.12 million people	16.99 million people (-2.13million people)
<b>Employees 34 years or younger</b>	16.07 million people	14.51 million people (-1.56million people)
<b>Completely jobless</b>	2.45 million people	3.51 million people (+ 1.06million people)
<b>Deemed jobless</b>	3.97 million people	4.20 million people (+ 0.23million people)
<b>retained employee</b>	4.01 million people	4.97 million people (+ 0.96million people)
<b>Average income</b>	3,550,000 yen	2,990,000 yen (-560,000 yen)
<b>Gross labor incom</b>	2.23trillion yen	171trillion yen (-52trillion yen)

One of the key factors dictating the future prospects of work approach is the fact that employment centers on the derived demand of the economy and population of working-age is regarded as the portion aged from 15 to 64 years, regardless of changes in the economy and population structure. Various 2025 scenarios emerge, depending on the kind of premise you establish, whom you imagine as individuals and the kind of companies you imagine.

Conversely, a different premise will see a different 2025 emerge. The work approach in 2025 could be bright or dark, depending on how we spend the coming decade.

Accordingly, in this report, we simulated the

employment structure toward 2025 based on three scenarios. If we assume that a desirable situation is as many people as possible working at high wages, a society exceeding the level of 2015 would only emerge given an optimistic scenario of the turnover rate from the labor market becoming 1/2 and the entry probability into the labor market doubling is realized. Conversely, under pessimistic circumstances, where employment of the elderly, etc. is not promoted and those separating from employment increase, the average income of employed persons would decline from 2015 and society would lose its dynamism in 2025.



## 2025 Base scenario

Extrapolating past trends

## 2025 Optimistic scenario

[Staff turnover] halved [Entry] doubled

60.91 million people (-1.83 million people)

56.7%

27.36 million people (+ 0.47 million people)

18.57 million people (-0.55 million people)

14.97 million people (-1.10 million people)

2.34 million people (-0.11 million people)

3.60 million people (-0.37 million people)

4.15 million people (+ 0.14 million people)

3,420,000 yen (-130,000 yen)

208 trillion yen (-15 trillion yen)

63.89 million people (+ 1.15 million people)

59.5 %

28.94 million people (+ 2.05 million people)

20.53 million people (+ 1.41 million people)

15.68 million people (-0.39 million people)

1.95 million people (-0.50 million people)

2.50 million people (-1.47 million people)

3.93 million people (-0.08 million people)

3,620,000 yen (+ 70,000 yen)

231 trillion yen (+ 8 trillion yen)

( ) Difference from 2015

## Reinventing the work approach ②

# Realize “mosaic type” to utilize various human resources by innovating the work style

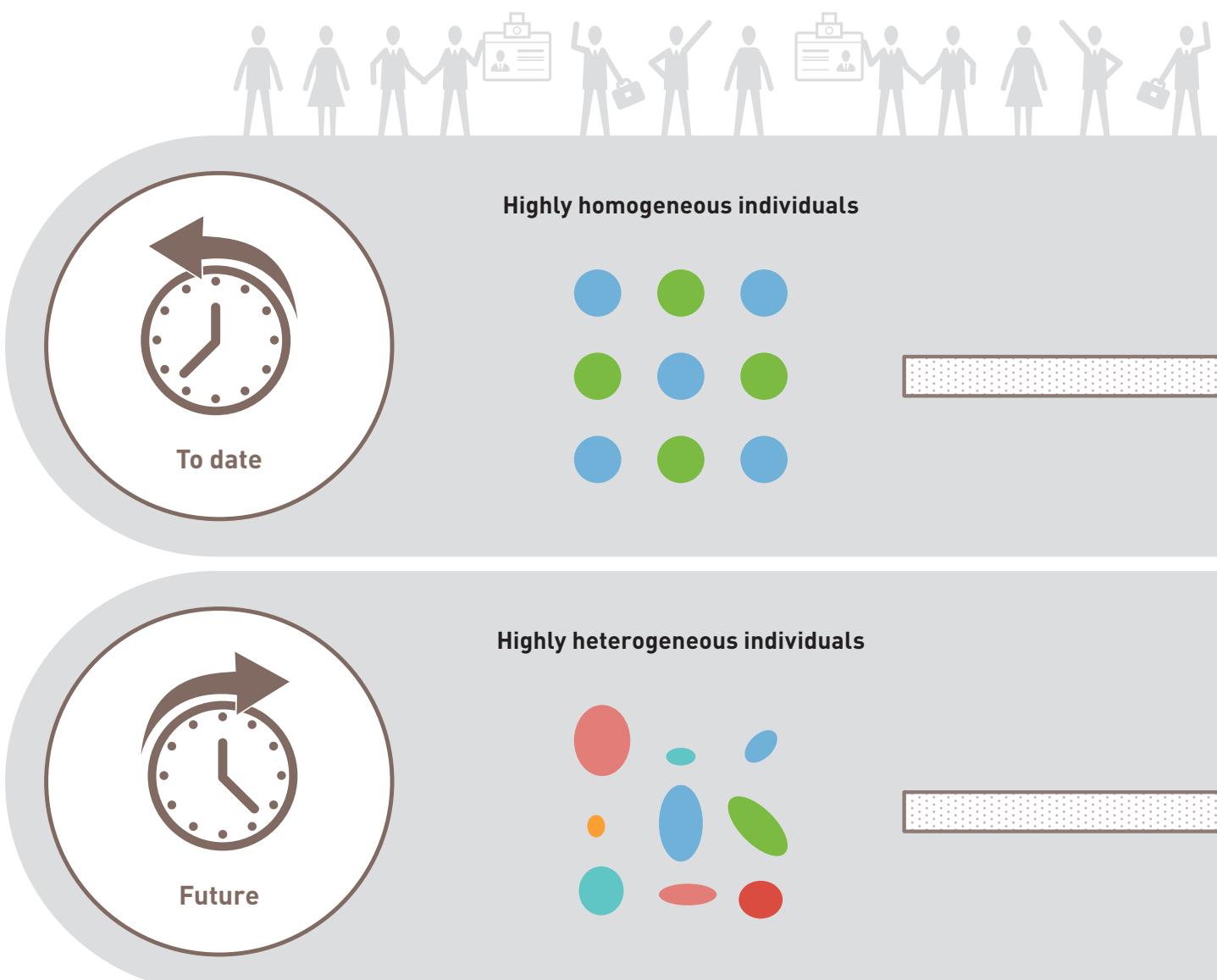
Whether 2025 will bring a pessimistic or optimistic future depends on the coming decade, but the balance is not fifty-fifty. To maintain society with dynamism equal to or exceeding the level of 2015, significant effort is required.

As we have already seen, if the future in the base scenario, which merely extrapolates past trends, is to come, society in 2025 will decline compared to 2015. The total employed will decrease by 1.83M to 60.91M, per-capita income will decrease by 130K to 3.42M yen and total labor income will decrease by 15 trillion yen to 208 trillion yen.

In reality, if the dynamism of society decreases due to

a decrease in the total employed, etc., this triggers a vicious circle of economic stagnation → loss of employment opportunities → increase in the number of persons separating from employment → increased number of unemployed/jobless → economic stagnation. The base scenario future is at risk of becoming a pessimistic scenario. In 2025, under a pessimistic scenario, both the number of employed and total labor income will decline significantly compared to 2015, leaving society as a mere shadow of its former self.

Halting this downward trend and maintaining a vigorous society means increasing the number of employed persons. Halving the previous level of

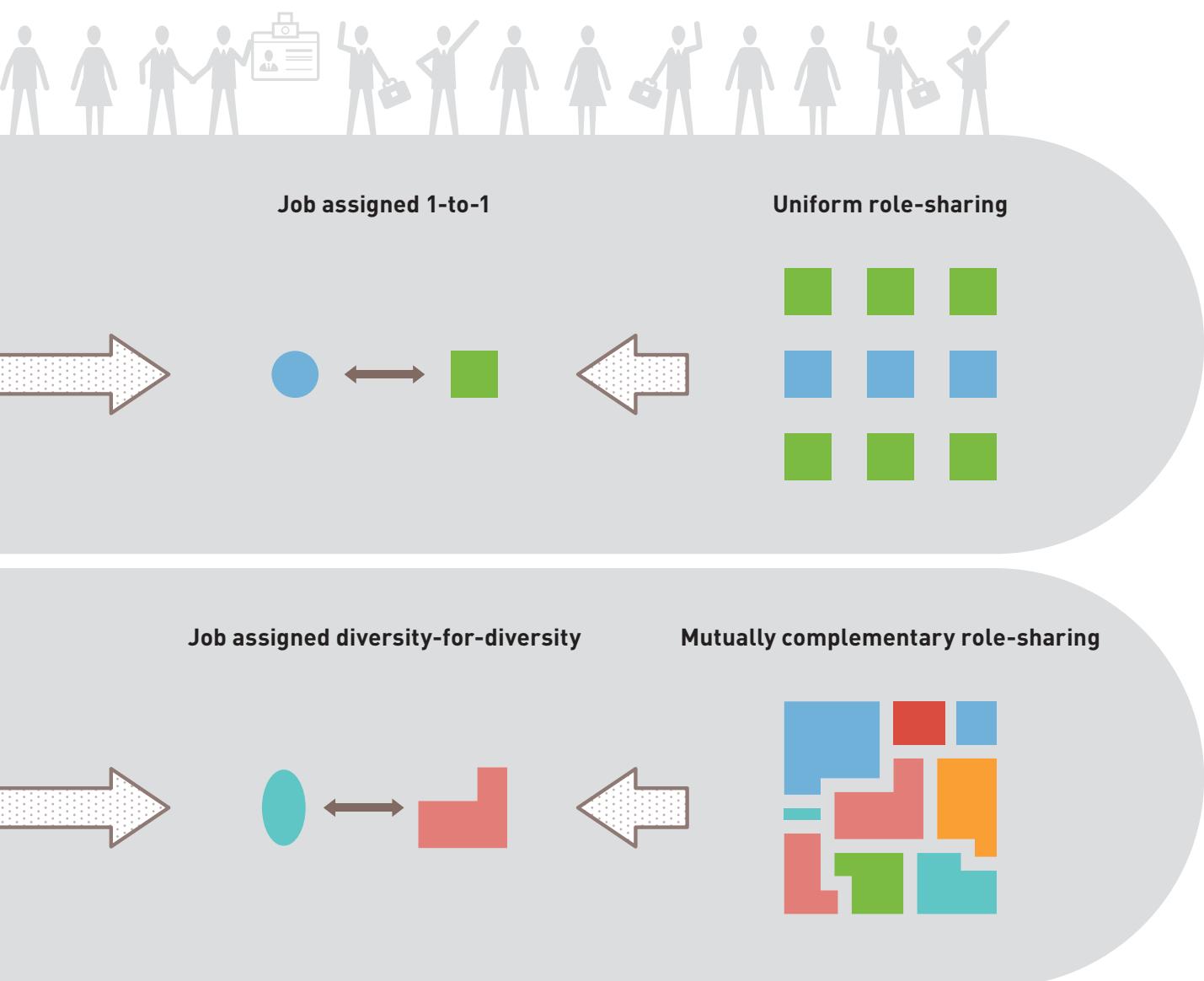


separation and retirement from the labor market and doubling the potential for jobless and deemed jobless to enter the labor market. If these objectives could be realized, the scale achieved in 2025 could even exceed that of 2015 in terms of the number of employed persons and gross labor income.

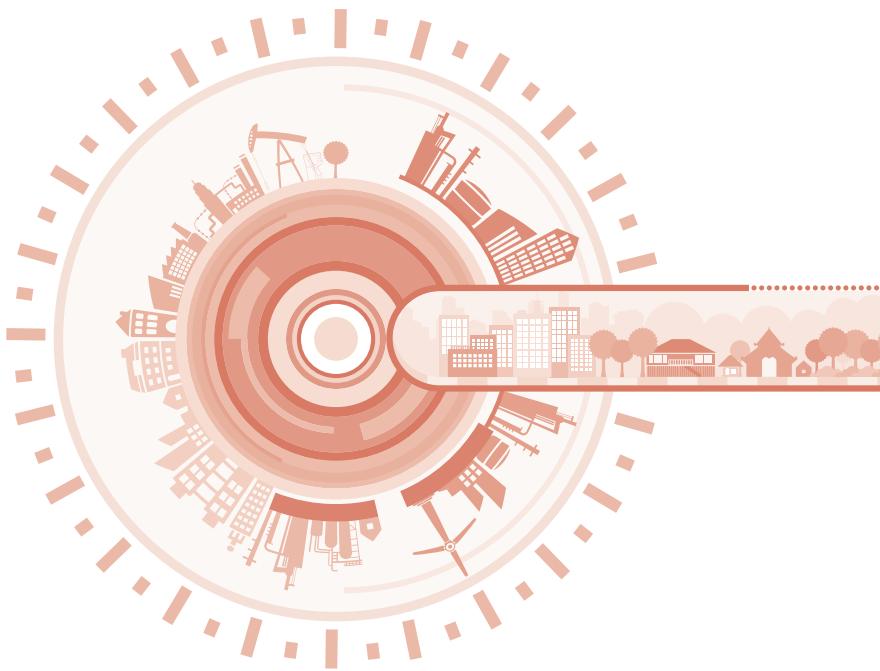
However, doubling the potential to work as above is extremely difficult amid a general downward trend. Moreover, the group for which considerable expectations of employment apply in the run-up to 2025 are the elderly, etc., whom, seen from company perspectives, are individuals with "restraints" which differ from before. Because utilizing various human resources increases management costs, the previous diversity of human resources was achieved by applying different systems to the same, such as distinguishing the type of employment, etc. However, in the run-up to 2025, there must be inclusion of diversified human resources at the workplace level and the question of whether or not this hurdle can be overcome forms a

watershed to welcome in vigorous 2025.

Here, innovating the work approach will be crucial. Business design and management exploiting the special qualities of various human resources, changing roles into mosaics and achieving an outcome is required, otherwise a future allowing various human resources to capitalize on their potential will remain unrealized. Companies must overcome management costs that will temporarily worsen or otherwise end up losing their competitiveness. Moreover, if companies lose their competitiveness, employment opportunities will be also lost and the dynamism of society will decline. Toward 2025, the key to achieving "a society where each individual can work to their potential" is to devise a work approach not extrapolated from the past. The road ahead is daunting, but there is no other way. We must create a new work approach toward 2025 by ourselves and doing so will result in a 2025 work approach with far more appeal than now.



## **Toward 2025 where we can work to potential**



"In 2025, it will be time to reinvent our work approach" – the third book on future prediction organized by the Works Institute.

When we published "2015 prediction - What will become of the human resource market? This will happen." in 2005, we said that in 2015, an employment paradigm based on "new graduate/male/regular employees" would mark the end. In "Paradigm shift in the maturity period – reviewing the "Work approach" of 2020" published in 2011, we predicted transitions toward 2020, from an employment paradigm based on "long-term male employees" into one where "everyone plays a leading role, regardless of sex, employment type, workplace and age."

Now, finally, 2015 has come. As of 2015, the key issue in employment will be the ability of diversified human resources to exploit their ability and we are advancing to the next stage, from superficial diversity to deeper inclusion. The run-up to 2025 will be an age where a work approach and workplace exploiting the characteristics of each individual is created by companies/individuals/social systems in a unified fashion. The future employment paradigm will center on "Reinventing the work style" by companies/individuals/social systems.

The future of Japan, which leads the way globally as a developed country with first-world problems, may be very dark one. Conversely however, no other difficult issues can be as challenging. If we can devise an answer by ourselves and achieve a society in which individuals can work to their potential, we have a bright future. The creativity of companies/individuals/social systems will be respectively key.

So, what kind of work approach will you invent for 2025?

## Assumptions of a micro-simulation model

### 1. Prediction method up to 2025

Based on individual data from a pseudo survey of approximately 60,000 people as of 2014, create an individual situation one year later via the following procedures, establish the situation for the following year in order and continue the same process up to 2025.

Setting the following transition probability centers on the base prediction.

#### (1) Employed persons as of the year of t (persons who have occupations)

( $t = 2014, 2015, \dots, 2025$ )

- ① In the year  $t+1$ , judge whether to be employed or become unemployed separating from employment. Calculate the probability of continuing employment based on the data of the Labor Force Survey 2000 – 2013 by sex, age and class and assess any change in probability. The following process applies to the case of being employed.

(A) Likewise, in the year of  $t+1$ , for an individual who is employed, assess whether or not to continue (continue the job currently performed by an individual without changing work) the employment conditions (type of employment, industry, occupation, number of employees, area) as of the year of  $t$ . Concerning whether to continue under the same employment conditions, calculate the probability of continuing employment by sex, age group, years of service and type of employment based on the Working Person Surveys in 2010, 2012 and 2014 and assess any change in probability. When continuing under the same employment conditions, the same value is assigned for employment conditions as of the year of  $t+1$  and for years of service, a value of one year added to the years of service as of the year of  $t$  is assigned.

(B) Likewise, in the year of  $t+1$ , when employment conditions differ from those as of the year of  $t$  (when changing job), assess whether the type of employment, industry, occupation, number of employees and area, which express employment conditions remain the same or differ. Concerning whether or not to continue under the same employment conditions, given the lack of sufficient information in the Labor Force Survey, calculate the transition probability of each employment condition by sex, age group, years of service and type of employment based on the Working Person Surveys in 2010, 2012 and 2014 and assess any change in probability. When continuing under the same employment conditions, the same value is assigned for employment conditions as of the year of  $t+1$  and when differing, the set as described below. Concerning years of service, because the individual concerned has changed their job, a value added by 0 year is assigned.

(C) Likewise, in the year of  $t+1$ , when employment conditions differ from those as of the year of  $t$ , calculate the probability of continuing employment based on the Working Person Surveys in 2010, 2012 and 2014 by sex, age group, years of service and employment conditions of the previous job changing in accordance with probability.

- ② In ①, if an individual becomes jobless in the year of  $t+1$ , assess whether the individual is categorized as completely jobless, deemed jobless (a person not actively job-seeking but keen to work) or other non-labor force. Based on the data in the Labor Force Survey 2000 – 2013, calculate the transition probability by sex and age group and assess any change in probability.

#### (2) Persons unemployed as of the year of t (the completely jobless, the deemed jobless, other non-labor force)

- ① At the year of  $t+1$ , assess whether or not to continue the conditions of the year of  $t$  or change to other conditions. Based on the data of the Labor Force Surveys 2000 – 2013, calculate the probability of continuing the current

conditions by sex and age group and assess any change in probability. However, concerning the deemed jobless, because we could only obtain aggregate data, the probability is guessed from the incremental increase in deemed jobless in each year.

When continuing the current conditions, assume the conditions of the year of  $t$  will continue in the year of  $t+1$  as well.

(A) Calculate the probability of continuing employment based on the data of the Labor Force Survey 2000 – 2013 by sex, age and class and assess any change in probability. However for the deemed jobless, since the details of any change are not publicized and grasped, the probability is guessed from the incremental increase in deemed jobless each year.

(B) Concerning individuals who are employed as of the year of  $t+1$ , determine type of employment, industry, occupation, number of employees and area, which express employment conditions. Since there isn't sufficient information in the Labor Force Survey, based on the Working Person Surveys in 2010, 2012 and 2014, calculate the ratio of each employment conditions of those with less than 1 year of service by sex and age group and assess any change in probability.

#### (3) Estimation of income

Using the data of the Working Person Surveys in 2010, 2012 and 2014, regress the income (including tax) obtained by working with regard to sex, years of service, industry, occupation, company size, type of employment and using this regression formula, estimate the post-2015 income. For self-employed business, estimate using a regression formula regressed with regard to income (average of the lower and upper limits of class value), age and industry based on the data available in the "Employment status survey" by the Statistics Bureau of the Ministry of Internal Affairs and Communications. However, in terms of the predictive value, the rate of increase in price is assumed to be zero.

The total labor income is a value equating to the total collective income of the respective individuals predicted (whole employed persons) and encompasses a different concept from remuneration of employees in national economic accounting terms. Per-capita income is obtained by dividing total labor income by the number of employed persons.

### 2. Assumptions of the model

In this report, we conducted our prediction around three patterns, including base, pessimistic and optimistic scenarios, but the assumptions of the respective patterns are as follows:

• Base scenario transitions, remaining at the probability described above

• Pessimistic scenario

Configured so that the probability of turnover of employed persons of the above ① doubles the average of 2000 – 2013 linearly from 2015 into 2025 (in all age groups)

Configured so that the probability of unemployed persons of the above ② becoming employed becomes half of the average of 2000 – 2013 linearly from 2015 into 2025 (in all age groups)

• Optimistic scenario

Configured so that the probability of turnover of employed persons of the above ① becomes half the average of 2000 – 2013 linearly from 2015 into 2025 (in all age group)

## Concerning estimation of retained employees

Estimate in accordance with annotations 1 – 3 of the Cabinet Office "Japanese Economy 2011 – 2012". To estimate the number of retained employees, ① Measure the labor productivity function, explanatory variables of which include the operation rate and time trend. Subsequently, ② using the potential operation rate, determine the extent of any excess of employment. The potential operation rate was assumed to be the operation rate for the second quarter of 2005 when judging employment conditions DI in the Bank of Japan's Tankan survey to be zero. Also, the result of assigning them is deemed to constitute appropriate labor productivity.

### ① Estimation of the labor productivity function (quotation of the Cabinet Office result)

$$10000 \times Y / (L \times H) = 34.96 + 0.21 \rho + 0.42 t$$

Measurement period = First quarter of 1980 – Final quarter of 2010

Y: Real gross domestic product (average for 2005 = 100), prediction period assumed to grow by 1% each time

L: Regular employment index. Prediction period is assumed to undergo transition according to the growth rate in the number of regular employees

H: The index of total actual working hours, for the prediction period, the past average value is used.

$\rho$ : Operation rate index, the past average value is used for the prediction period

### ② Calculation of the labor retainment rate

Determine the labor retainment rate in the following equation using the average labor hours for the appropriate labor productivity as found above

$$E = \{ L - 10000 \times Y / (P^* \times H^*) \} / L$$

E: Labor retainment rate

P\*: Appropriate labor productivity

$H^*$ : Average labor hours (calculate, estimating  $H = \text{constant term} + \text{trend term}$ )

The prediction data created in the micro-simulation, which is published in this report, is shown in the form of an Excel file on this page.  
<http://www.works-i.com/research/2014/2025yosoku/>

## Prediction data

		1995	2000	2005	2010	2015	
<b>Employees</b>	Total	6,457	6,446	6,356	6,298	6,274	
	Male	3,966	4,014	3,901	3,850	3,585	
	Female	2,491	2,432	2,455	2,448	2,689	
<b>Employment rate</b>	Total	61.4%	59.5%	57.7%	56.6%	58.1%	
	Male	75.2%	72.7%	69.9%	67.7%	68.9%	
	Female	48.4%	47.1%	46.3%	46.3%	49.0%	
<b>Employees (By age group)</b>	15 – 24 years	832	692	580	492	510	
	25 – 34 years	1,278	1,423	1,419	1,247	1,097	
	35 – 44 years	1,347	1,253	1,324	1,471	1,430	
	45 – 54 years	1,585	1,564	1,350	1,291	1,325	
	55 – 64 years	977	1,031	1,189	1,227	1,178	
	65 years or older	438	483	496	570	734	
<b>Employment type</b>	Regular employees	3,779	3,630	3,375	3,374	3,302	
	Non-regular employees	1,001	1,273	1,634	1,763	1,833	
	Self-employed/Family employees	1,181	1,071	932	772	674	
	Other (executives, side workers etc.)	496	472	415	389	465	
<b>Staff retention</b>	Retained employees	186	201	105	426	401	
<b>Jobless</b>	Jobless total	4,046	4,377	4,640	4,807	4,525	
	Completely jobless	210	320	294	334	245	
	Male unemployed	123	196	178	207	158	
	Female unemployed	87	124	116	127	87	
	Overall unemployment rate	3.1%	4.7%	4.4%	5.0%	3.8%	
	Male/Overall unemployment rate	3.0%	4.7%	4.4%	5.1%	4.2%	
	Female/Overall unemployment rate	3.4%	4.9%	4.5%	4.9%	3.1%	
	Deemed jobless	345	372	363	354	397	
	Other non-labor force	3,491	3,685	3,983	4,119	3,883	
<b>Career change in the past year (Employer → Employer)</b>	Total	—	224	247	262	276	
	Regular → Non-regular	—	89	92	96	98	
	Non-regular → Regular	—	34	41	40	45	
	Major Co. → SME	—	84	86	84	87	
	SME → Major Co.	—	63	65	60	63	
	Urban → Rural	—	20	22	20	23	
	Rural → Urban	—	33	36	36	35	
<b>Movement in and out of work</b>	Newly recruited employees	—	96	94	94	109	
	Retirees (60 years or older)	—	42	53	78	97	
	Job losers (Less than 60 years)	—	167	187	195	203	
	Newcomers	—	189	211	214	221	
	Housewives	—	84	91	87	102	
<b>Income</b>	Gross labor income (trillion yen)	—	242	235	228	223	
	Per-capita income (yen)	—	375.4	369.7	362.0	355.4	

Note: Values up to 2010 are actual values, figures from 2015 are predicted values using the micro-simulator

Units: million

	Pessimistic		Base		Optimistic		Comparing 2015 and 2025			Difference in 2025	
	2020	2025	2020	2025	2020	2025	Pessimistic	Base	Optimistic	Base — Pessimistic	Optimistic — Pessimistic
	6,035	5,717	6,223	6,091	6,337	6,389	-557	-183	115	374	672
	3,389	3,149	3,493	3,355	3,536	3,495	-436	-230	-90	206	346
	2,646	2,568	2,730	2,736	2,801	2,894	-121	47	205	168	326
	55.1%	53.2%	56.8%	56.7%	57.9%	59.5%	-4.9%	-1.4%	1.4%	3.5%	6.3%
	64.3%	61.1%	66.3%	65.1%	67.1%	67.8%	-7.8%	-3.8%	-1.1%	4.0%	6.7%
	46.5%	46.0%	48.0%	49.0%	49.3%	51.8%	-3.0%	0.0%	2.8%	3.0%	5.8%
	480	437	483	439	479	490	-73	-71	-20	2	53
	1,062	1,014	1,080	1,058	1,067	1,078	-83	-39	-19	44	64
	1,292	1,137	1,329	1,211	1,317	1,234	-293	-219	-196	74	97
	1,399	1,430	1,457	1,526	1,472	1,534	105	201	209	96	104
	1,112	1,036	1,161	1,149	1,203	1,224	-142	-29	46	113	188
	690	663	713	708	799	829	-71	-26	95	45	166
	3,192	2,951	3,245	3,146	3,282	3,252	-351	-156	-50	195	301
	1,846	1,894	1,877	1,920	1,915	1,994	61	87	161	26	100
	522	363	553	425	602	543	-311	-249	-131	62	180
	475	509	548	600	538	600	44	135	135	91	91
	465	497	408	415	395	393	96	14	-8	-82	-104
	4,918	5,025	4,730	4,651	4,616	4,353	500	126	-172	-374	-672
	300	351	231	234	215	195	106	-11	-50	-117	-156
	180	204	139	136	129	113	46	-22	-45	-68	-91
	120	147	92	98	86	82	60	11	-5	-49	-65
	4.7%	5.8%	3.6%	3.7%	3.3%	3.0%	2.0%	-0.1%	-0.8%	-2.1%	-2.8%
	5.0%	6.1%	3.8%	3.9%	3.5%	3.1%	1.9%	-0.3%	-1.1%	-2.2%	-3.0%
	4.3%	5.4%	3.3%	3.5%	3.0%	2.8%	2.3%	0.4%	-0.3%	-1.9%	-2.6%
	406	420	381	360	316	250	23	-37	-147	-60	-170
	4,212	4,254	4,118	4,057	4,085	3,908	371	174	25	-197	-346
	307	335	269	258	297	314	59	-18	38	-77	-21
	80	61	94	89	100	102	-37	-9	4	28	41
	50	55	41	37	47	49	10	-8	4	-18	-6
	69	50	85	81	88	89	-37	-6	2	31	39
	65	67	60	56	62	62	4	-7	-1	-11	-5
	26	29	26	28	29	33	6	5	10	-1	4
	33	30	34	32	43	49	-5	-3	14	2	19
	99	88	99	88	99	88	-21	-21	-21	0	0
	98	97	102	105	74	55	0	8	-42	8	-42
	229	253	199	193	198	193	50	-10	-10	-60	-60
	190	156	220	216	273	316	-65	-5	95	60	160
	109	115	107	110	161	210	13	8	108	-5	95
	198	171	215	208	223	231	-52	-15	8	37	60
	328.1	299.1	345.5	341.5	351.9	361.6	-56.3	-13.9	6.1	42.4	62.5

## DATA

The prediction data created in the micro-simulation, which is published in this report, is shown in the form of an Excel file on this page.  
<http://www.works-i.com/research/2014/2025yosoku/>

### Number of employed persons by industry

Units: million

	1995	2000	2005	2010	2015	Pessimistic		Base		Optimistic	
						2020	2025	2020	2025	2020	2025
<b>Total</b>	6,457	6,446	6,356	6,257	6,274	6,035	5,717	6,223	6,091	6,337	6,389
<b>Agriculture, forestry and fishery</b>	367	326	282	252	219	164	129	169	147	172	144
<b>Construction industry</b>	663	653	568	504	451	374	336	446	421	467	464
<b>Manufacturing industry</b>	1,462	1,326	1,145	1,046	936	797	697	871	798	824	864
<b>Distribution industry</b>	1,300	1,181	1,122	1,104	1,047	998	948	1,045	1,042	1,048	1,049
<b>Finance/ Insurance/ Real estate</b>	177	248	232	246	257	235	201	243	238	247	234
<b>Infocommunication industry</b>	130	152	177	197	229	229	227	236	256	241	264
<b>Service industry</b>	2,170	2,308	2,527	2,627	2,845	2,972	2,933	2,938	2,908	3,059	3,095
<b>Official business/ other</b>	188	252	303	281	290	266	246	273	282	279	275

### Number of employed persons by occupation

Units: million

	1995	2000	2005	2010	2015	Pessimistic		Base		Optimistic	
						2020	2025	2020	2025	2020	2025
<b>Professional/ Engineering</b>	790	856	937	986	1,053	1,064	1,034	1,097	1,102	1,117	1,156
<b>Managerial post</b>	236	205	189	161	165	153	138	162	158	165	166
<b>Administrative/ Sales</b>	2,197	2,196	2,139	2,140	2,178	2,147	2,083	2,204	2,187	2,255	2,294
<b>Service industry</b>	610	677	757	817	897	878	863	906	920	922	965
<b>Real estate/ Transport/ Machine operators</b>	1,842	1,781	1,655	1,552	1,405	1,249	1,056	1,268	1,125	1,311	1,220
<b>Construction/ Mining workers</b>	395	370	331	299	304	272	259	310	289	314	299
<b>Other</b>	387	361	348	302	272	272	284	276	310	253	289

# 2025

## Time to Reinvent our workstyle

Recruit Works Institute "2025 work" Prediction Project

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We would like to sincerely thank leading experts in a range of fields for a range of valuable proposals and inspiration to advance the "2025 Work" Prediction Project.

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# Works Report 2015

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