

## **To Solve the Labor Shortage Problem (Vol. 3)**

**The Actual State and Issues of Non-Desk Workers Who Support the Operation of Office Buildings**

March 29, 2024

### **1. Introduction—Breaking Down the Labor Shortage Problem**

Based on concerns about the labor shortage problem, Xymax Real Estate Institute (“Xymax REI”) has been releasing a series of reports entitled “To Solve the Labor Shortage Problem” since May 2023. In Volume 1, the 1st report, we categorized occupations into desk work and non-desk work and showed that non-desk work was at the core of the labor shortage problem. In Volume 2, we estimated the future labor supply-demand gap using long-term time series data and found that there will be a shortage of 8.19 million non-desk workers (in a total of 41 occupations) by 2040.

Labor shortages are expected not only in certain occupations, such as construction, distribution, and health care, where issues such as the “2024 problem” are much discussed. It is almost certain that there will be a shortage of non-desk workers in all the professions that support society, and it will be impossible to maintain our current safe and comfortable lives unless something is done.

In this 3rd report, we focused on non-desk workers who support the operation of office buildings, where desk workers spend the longest time after their homes and the main subject of Xymax REI’s research, in order to delve into specific occupations to gain deeper insight into the shortage of non-desk workers. By examining the people who work in office buildings, their jobs, and the structural factors that lead to labor shortages, we hope to provide an opportunity to promote understanding and interest not only among office users but also among office building owners and investors that this problem poses a serious threat to business continuity.

### **2. Non-Desk Workers Who Support the Operation of Office Buildings**

For many companies, the office is a place of intellectual production and value creation; a comfortable and safe office is a prerequisite for desk workers to focus and perform. Carpets without a speck of dust when workers come to work in the morning, clean restrooms, elevators and air conditioners that are always in perfect working order, and security areas where there is no danger of intruders entering—these work environments that many desk workers take for granted are supported by non-desk workers in a variety of occupations. However, not many desk workers are usually aware of this.



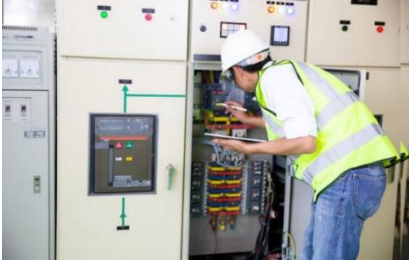
There are four main types of non-desk jobs that support the operation of office buildings: cleaning, security, facility management, and construction work.\*<sup>1</sup> In fact, these four occupations also face labor shortages, as in the case of other non-desk workers. According to the aforementioned estimate, there will be a shortage of 95,000 people in cleaning, 325,000 in security, 130,000 in facility management, and 26,000 in construction work by 2040.\*<sup>2</sup> Older people are already the main workforce in these occupations, and it is likely that there will be competition for older workers in a wide range of occupations in Japan, where the young population is expected to continue declining, further intensifying competition for human resources.

\*1 Another job related to office building construction work is construction management, but this was excluded from the analysis since it has the characteristics of both desk and non-desk work.

\*2 Estimations were made for each occupation based on the Japan Standard Occupational Classification (Ministry of Internal Affairs and Communications). The figure for cleaning is that for "cleaning workers," for security "security workers," for facility management "residential facilities, office buildings and other management personnel," and for construction work "electric construction workers."

Different jobs will mean that the types of workers and the situation and issues of labor shortages are different, as are the actions to be taken and the goals to be pursued. To explore the direction of the solutions to the labor shortage problem in the operation of office buildings, we outline the characteristics of these four occupations and workers. As a premise, the job details of each occupation are as described in **Figure 1**, and public data indicating employment status, etc., are as shown in **Figure 2**. These indicate that while all jobs support the operation of office buildings, each job has significantly different aspects.

**Figure 1: Job Details of Office Building Occupations**

<p>Cleaning</p>	<ul style="list-style-type: none"> <li>• Cleaning the building and collecting trash.</li> <li>• In office buildings, the work is divided into cleaning the tenants' exclusive areas and cleaning the common areas (toilets, elevator halls, etc.).</li> <li>• The work is often required to be completed before the start of the tenant's business hours (in the morning).</li> </ul>	
<p>Security</p>	<ul style="list-style-type: none"> <li>• Standing guard near the entrance of the building to prevent, quickly detect, and respond to break-ins, accidents, fires, and other events.</li> <li>• There are two types: Being stationed in one large building full-time and patrolling several smaller buildings.</li> <li>• Auxiliary tasks may be required, such as registering visitors entering and exiting the building and responding to inquiries.</li> </ul>	
<p>Facility management</p>	<ul style="list-style-type: none"> <li>• Operating, adjusting, and managing electric power facilities, air conditioning facilities, water supply and drainage facilities, etc.</li> <li>• There are two types: Being stationed in one large building full-time and patrolling several smaller buildings.</li> <li>• Some jobs require interpersonal communication, such as responding to tenants and supervising work at the sites.</li> </ul>	

<p>Construction work</p>	<ul style="list-style-type: none"> <li>• Finishing the interior of a building, such as floors, ceilings, and walls. In office buildings, the work often involves restoration work when tenants move in or out (interior worker).</li> <li>• Wiring electric cables and installing equipment to use electricity (electrician).</li> <li>• Fitting water supply pipes, drainage pipes, gas pipes, air conditioning and ventilation equipment, fire extinguishing equipment, wastewater treatment facilities, and air purification equipment (plumber).</li> </ul>	
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**Figure 2: Public Data of the Occupations**

Occupational characteristics		No. of workers (persons)	Working hours/month (hours)	Annual income (million yen)	Age (year)	Percentage of women	Jobs-to-applicants ratio
Occupations in office buildings	Cleaning	910,680	162	2.795	54.7	68%	1.28
	Security	374,690	170	3.343	51.1	5%	3.00
	Facility management	157,500	167	4.329	46.6	2%	0.98
	Construction work	647,530	180	4.607	42.6	2%	3.71
Other occupations (For reference and comparison)	Home-visit care worker	275,770	165	3.532	49.1	88%	14.19
	Truck driver	1,445,820	175	4.774	50.2	4%	2.26
	General administration	2,639,330	162	4.9	43.6	77%	0.33

Source: Taken from the Ministry of Health, Labour and Welfare's job tag (Japanese O-NET). According to the source, the number of workers is based on the 2020 Census, and the other figures are based on the data of the 2022 Basic Survey on Wage Structure.

Looking at the jobs-to-applicants ratio on the right side of **Figure 2**, it is difficult to sense a shortage of non-desk workers in office buildings since, although the ratio for security and construction work is higher than the average for all occupations (1.28), the ratio for cleaning and facility management is not particularly high. However, an interview survey of companies and associations conducted by Xymax REI between November 2023 and February 2024 found that all four occupations are experiencing chronic labor shortages.

### 3. State of Labor Shortage Based on Voices from Work Sites

From here, we summarize the characteristics of the workers and the state, background, and factors for the labor shortage of each of the four occupations and consider the possible directions for resolving the labor shortage based on the current situation. Furthermore, as a reference material that captures the objective characteristics of jobs, we add a radar chart of the "nature of the job" score\*<sup>3</sup> independently calculated based on data from job tag (Japanese O-NET), an occupational information website of the Ministry of Health, Labour and Welfare.

\*<sup>3</sup> The deviation scores of all 494 occupations, including desk jobs, with a figure higher than 50 indicating that the characteristic is more prominent compared to the average of all occupations. See the end of the report for the sources and calculation methods of the figures.

### 3.1. Cleaning

<b>Current main workforce</b>	<ul style="list-style-type: none"> <li>• Women (housewives) in their 60s and 70s                     <ul style="list-style-type: none"> <li>※Population change between 2020 and 2040: -2.6% (-430,000)</li> </ul> </li> <li>• Foreigners</li> </ul>
<b>Required expertise</b>	Low (Qualification as a building cleaning technician is an advantage, but not required.)

**State of labor shortage** [Now: Very severe ⇒ Future: Very severe]

Of the four occupations, this has the tightest labor supply. Retention rates are low, as the majority of the workforce is non-regular workers, and the work does not require advanced skills, making it easy for the workers to change companies and jobs, while it also makes it easy for them to take up the occupation. Especially since the end of the COVID pandemic, older women, who make up the bulk of the workforce, are moving to retail and restaurant jobs in the suburbs, where the commute is easier, hampered by the office cleaning conditions of “downtown, early morning, short hours.”

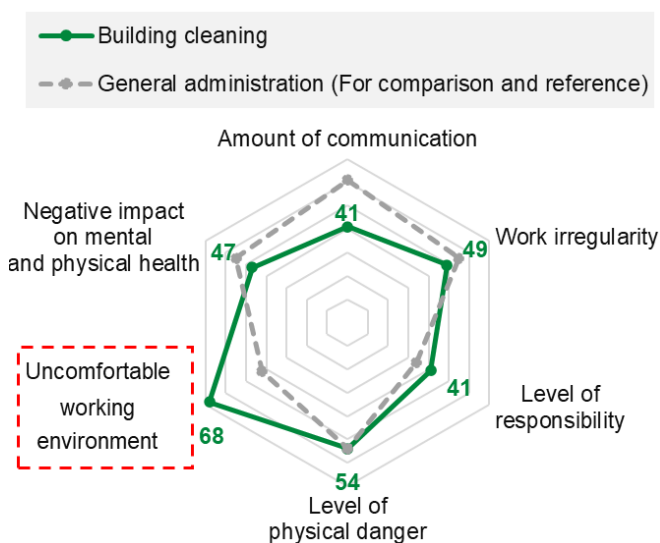
#### Background and factors

Specification order × mainly microenterprises × multiple subcontracting: Inherently, high employment liquidity should be a favorable factor that leads to better pay; however, the cleaning industry is prone to price competition from microenterprises that win orders at low prices and low quality, since it is difficult to differentiate services since orders are basically specification orders from property owners, and there is no system for evaluating suppliers. Another factor in intensified price competition is that multiple subcontracting has become the norm. Due to this structure, cleaning has become not only a low-wage job but also a job that is the same no matter who does it, i.e., a job with low psychological rewards.

Mainly non-regular employment: While the occupation, with its short hours, meets the needs of housewives, the main workforce, it is not very appealing to people looking for full-time, stable employment. As the majority of the workers are in non-regular employment, the retention rate is low, resulting in higher recruitment, training, and labor management costs. In particular, foreigners (the second main category of workers after housewives) have a network of information within the community of their compatriots and are more likely to move to operators who pay more, even if only a little, per hour.

Decline in population of main workforce: Due to the increase in dual income households, the number of dependent housewives, the current main workforce, is decreasing, and it is also difficult to hire existing housewives as they avoid working long hours or being hired as regular employees due to the annual income limit for tax benefits.

Greater disparity between buildings: There has been an increase in disparity between buildings, with large or high-spec buildings with waiting rooms for cleaning staff able to secure labor, while small/medium or multi-tenant buildings with unfavorable labor environments have greater



difficulty in staffing. The job also involves working in places without air conditioning, such as outdoors, resulting in a particularly high score of 68 for “uncomfortable working environment” in terms of the nature of the job, which is likely to be a key factor for people avoiding building cleaning jobs.

**Directions for resolving labor shortages**

Given that the number of workers who meet the office cleaning conditions of “downtown, early morning, short hours” will continue to decrease, it would be necessary to reconsider these conditions. Attempts are already being made to carry out cleaning during the late night hours when workers who can work in the early morning cannot be found. Now that telework and flex time programs have spread due to the pandemic, does it really meet the tenant’s needs to place specification orders based on the assumption that all of the tenant’s employees will come to the office at the same time? As times change at a greater pace, this may be an opportunity to increase tenant satisfaction by reconsidering the assumption that cleaning must be completed before the early morning start of business and meeting the real needs of tenants.

As for short-time work, while continuing to provide such work for dependent housewives who prefer this condition, it may be effective to provide a form of employment that offers, for example, regular employment by creating eight hours of work a day for them, as well as a pathway to pay increases and promotions based on years of service, to people who are seeking stable jobs that will support their livelihoods, such as men who are providing for their wives and are seeking long-term jobs after retirement, or people of the generation when finding employment was extremely difficult who have had unstable jobs.

**3.2. Security**

<b>Current main workforce</b>	<ul style="list-style-type: none"> <li>Men from the age of 55 up to their 70s (Switching from other industries)</li> <li>※Population change between 2020 and 2040: -0.1% (-20,000)</li> </ul>
<b>Required expertise</b>	Low (Certification of security guard tests, etc. is an advantage, but not required.)

**State of labor shortage [Now: Somewhat severe ⇒ Future: Severe]**

With low barriers to employment, many older men around retirement age have taken up the occupation, but the labor supply has become tighter in recent years due to the competition for older workers. Recruitment has become particularly difficult since the end of the COVID pandemic, as other industries, such as retail and restaurants, have become more active in hiring.

There are also structural issues, such as susceptibility to price competition due to the inability to differentiate because of the predominance of specification orders, and difficulty in raising prices due to the large number of microenterprises resulting from low barriers to entry. In preparation for the population decline, large security companies have been mechanizing their services (introducing/developing security robots and drones) and are likely to reduce the number of personnel required in the future.

**Background and factors**

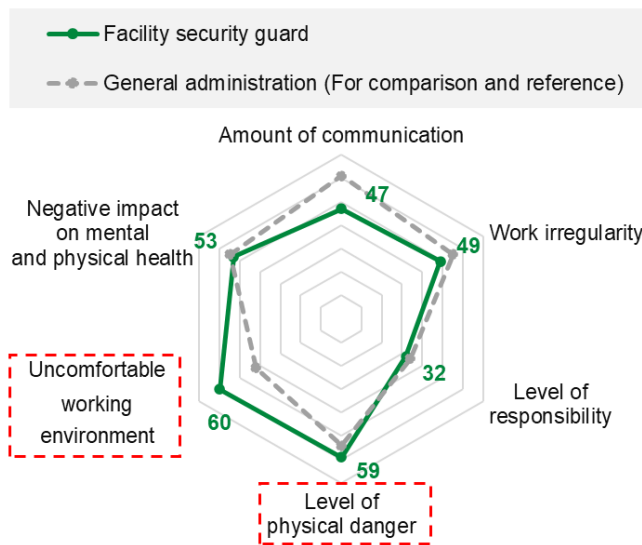
Mainly non-regular employment: Since there is often no path to career development or pay increases, the occupation is not usually chosen as a lifelong career. In particular, it has not appealed to the younger generation under 50s.



Intensified competition for older men: Competition from other occupations for older men around retirement age, the main workforce for the job, has intensified due to their scarcity owing to the extension of the retirement age, etc.

Physical burden and risk of danger: While there is a certain number of people who prefer facility security jobs, which offer regularity of place and time and do not require interpersonal communication skills, it is likely that the heavy physical demands of standing for long periods of time and the need to perform auxiliary tasks, such as responding to visitors, for free, depending on the employer company, have led workers to avoid the occupation. Because the job also involves unpredictable risks, such as responding to intruders, people have a perception that the risks are disproportionate to the pay. In terms of the nature of the job, the “level of physical danger” score is particularly high at 59.

Low level of comfort in work environment: The “uncomfortable working environment” score is especially high at 60, since even when working in an office building, workers standing guard near the entrance or outside are exposed to severe summer heat and winter cold. Another issue is that, due to the conservative culture of the industry, many service providers have a low awareness of caring for their workers and pay little attention to the comfort of waiting rooms and nap rooms used for 24-hour shifts.



### Directions for resolving labor shortages

Facility security jobs, which offer regularity of place and time and the ability to work for long hours, are accepted by older men who want to use their free time after retirement to earn a good income. Highlighting these characteristics would be effective in continuing to attract older men. Meanwhile, it is necessary to broaden the human resource base to prepare for future population decline, and the security industry is currently seeking to hire women. Women make up only 6.8%\*4 of the security workforce. There is room to attract women to facility security by improving the comfort of the work environment, such as waiting rooms and restrooms and reviewing the employment style based on long working hours.

Furthermore, the introduction of security robots and remote security with surveillance cameras will enable the security industry to improve productivity while reducing the physical strain on security guards and the risk of exposure to danger. Remote security, the evidence of results of which is easy to prove, will also lead to a departure from specification orders. If the industry can create a virtuous cycle that makes the occupation a safe, comfortable and well-paying one, it may be able to appeal to the younger generation.

\*4 Source: 2022 Security Industry Overview, National Police Agency

### 3.3. Facility management

<b>Current main workforce</b>	<ul style="list-style-type: none"> <li>Men in their 50s and 60s (Switching from other industries)</li> <li>※Population change between 2020 and 2040: -2.6% (-410,000)</li> </ul>
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<b>Required expertise</b>	Medium to high (There are many related qualifications, such as licensed electrical engineers, building environment and sanitation management technicians, and building facility management technicians. Qualifications are desirable.)
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**State of labor shortage** [Now: Not that severe ⇒ Future: Severe]

The barriers to employment are relatively high, as the occupation requires expertise in facilities, as well as the ability to communicate with related parties (property owners and tenants, specialist vendors, etc.), and administrative skills. Facility management jobs have historically been a source of employment for older men retiring from desk jobs, but hiring personnel is gradually becoming difficult as the working population shrinks and the retirement age increases.

Partly because of the time it takes to train workers, younger people are needed to sustain the industry (especially for candidates for management positions such as field managers). However, even large building maintenance companies are struggling to hire people in their 30s or younger. Although some operations have been mechanized, it is difficult to make tasks such as troubleshooting completely unmanned, which raises concerns about future labor shortages.

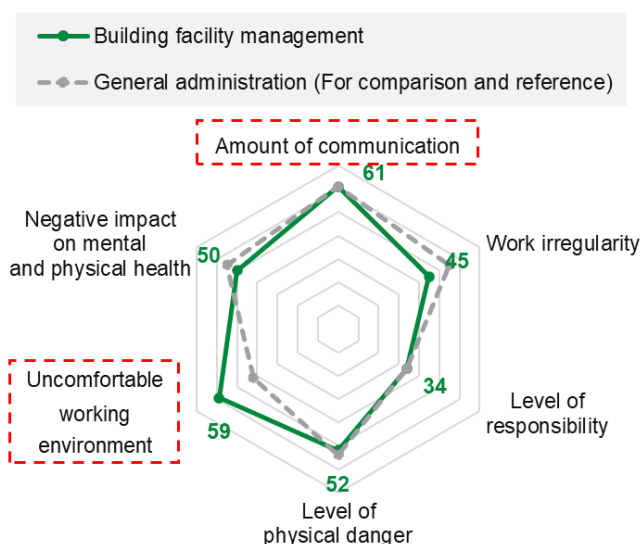
**Background and factors**

Low recognition: High income and career progression to management positions, etc. can be expected with a national qualification. However, there is a possibility that the occupation may not be considered an option due to the low recognition of the occupation itself. Compared to cleaning and security jobs, it is difficult for people to imagine the specific work of the occupation as a career change destination after retirement.

Appeal power compared to rival occupations: The occupation is likely to be affected by competition from a more attractive occupation in terms of impression and pay, such as development jobs in manufacturing, which seek the same technical talent.

Low level of comfort in working environment: Although the work is basically done indoors, the environmental stress is great since some of the work involves working in cramped positions in places without air conditioning, such as inside ceilings and underground equipment rooms. Furthermore, although daily inspection jobs have regular hours, construction or unexpected work, such as responding to breakdowns, can be stressful.

Requires interpersonal skills: As evidenced by the "amount of communication" score of 61 in the nature of the job, the occupation requires communication and negotiation skills in calling out, communicating, and reporting to ensure safety and prevent trouble, as well as coordinating with relevant parties. Depending on the work site, it will be necessary to build relationships with security guards and cleaning staff dispatched from other companies, which could be a barrier to employment for some people.



### Directions for resolving labor shortages

The low recognition of the occupation and the difficulty of imagining the specific work must be a source of concern not only for young people fresh out of school but also for the main workforce, i.e., those who have changed careers from different industries. Therefore, it will be necessary to work on increasing the recognition and attractiveness of the occupation. The first step to solving the labor shortage would be to publicize the advantage of facility management jobs, which is that people can work for a lifetime while growing their expertise and developing their careers.

At the same time, the high level of skills required has limited employment opportunities in some ways; therefore, it may be effective to divide the work into tasks that require qualifications and those that do not and hire people separately. Along with mechanization, the efficient appointing of human resources by segmenting and grouping tasks that can only be performed by humans according to their level of difficulty and the establishment of training systems that enable workers in menial jobs to acquire skills over the long term will also enable the industry to prepare for the future.

### 3.4. Construction work

<b>Current main workforce</b>	<ul style="list-style-type: none"> <li>• Men in their 50s to 70s (Mainly those with experience from the construction industry, etc.)</li> <li>✂Population change between 2020 and 2040: -4.5% (-1.05 million)</li> <li>• Foreigners</li> </ul>
<b>Required expertise</b>	High (Qualification as a paper-hanging technician, etc. is an advantage, but not required.)

#### State of labor shortage **[Now: Very severe ⇒ Future: Very severe]**

Workers are hard to find in some work sites since the work is mostly contracted out by sole proprietors (individual contractors), and it is a seller’s market. The labor situation is expected to worsen in the future due to the aging of the workforce. The industry is already unable to exist without foreigners (technical interns), but there are also jobs that can only be done by experienced Japanese craftsmen. Aside from that, depending on the future of the Japanese economy and the relative wage differences between Japan and abroad, it is uncertain whether Japan can continue to be an attractive country for foreigners to work in.

#### Background and factors

Income instability: Since sole proprietors work on a piecework system and their pay varies from contract to contract, their income is unstable and, on average, may be low relative to the workload. Although not to the extent of outdoor construction work (civil engineering, building, etc.), which is affected by the weather, interior workers are also subject to workload gaps as work is generated by tenant relocation. This has led to instability in employment and income. In addition, the custom of contract workers providing their own supplies for the work (nails, putty, etc.) is still prevalent in some areas, adding to the burden on their livelihoods.

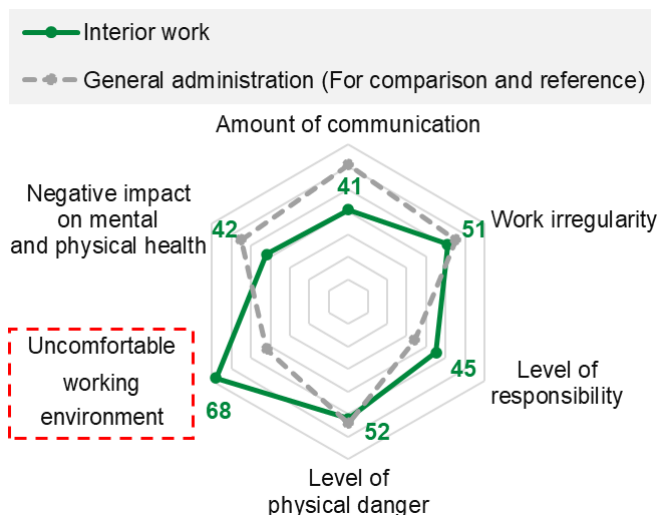
Lack of training systems and dependency on individuals: The industry lacks a culture of training inexperienced people due to the lack of organized training systems owing to the remaining old-fashioned craftsmanship and the large number of sole proprietors. Even when workers belong to an organization, work is concentrated on people with skills, and such people are prone to overwork as they have difficulty



taking time off.

Low level of comfort in working environment:

Since construction work in office buildings is carried out on weekends or before the building is completed, air conditioning is not in operation, and the severity of working in extreme heat has increased in recent years. Although the level of physical hazard is lower than in outdoor construction, there are still risks of injury and health hazards from working in dusty conditions in indoor construction. The age-old perception that construction work in general is “hard, dirty, and dangerous” persists.



**Directions for resolving labor shortages**

To ensure the sustainability of the industry, it is necessary to move away from the current dependency on older, experienced workers, to attract the younger generation, and to develop a system of training them over the long term. The younger generation in the seller’s market will inevitably avoid jobs that are physically demanding; therefore, it will be critical to start by improving the work environment to eliminate the negative perception of the job. Compared to other types of construction work, such as civil engineering and building construction, work in office buildings is more advantageous in terms of stability and safety. Of course, some aspects are difficult to improve, such as the inability to work under air conditioning, but the industry must work to offer wages that compensate for such disadvantages or career plans that allow workers to be promoted if they work long enough and foster values that take care of workers.

In addition, since the large number of individual contractors has led to unstable incomes, overwork, and lack of training systems, it would also be effective to employ workers and create company organizations. Organizing efforts are already spreading and are being embraced by the younger generation, who value stability and work-life balance. Organizing companies will also enable a teamwork system, as in facility management, where tasks are segmented, and a worker only performs tasks he/she is good at. This could be an immediately effective measure against labor shortage. The segmentation of tasks will not be suitable for manual work, but it could be the trump card to encourage people who have not been targeted to enter the industry, such as women who are good at delicate work.

## 4. Summary

If the labor shortage problem in office buildings remains unaddressed and worsens, building owners and investors will face various business difficulties. Not only will they experience an increase in costs, including management costs and repair costs, but they will also face delays in construction work when tenants move in or out or be forced to reduce the quality of services or simplify them, all of which will be directly detrimental to tenants. Going forward, the competitiveness gap between buildings that address labor shortages and those that do not is likely to widen, making the winners and losers even more pronounced than they are now.

Important measures will be to create attractive jobs and workplaces that are in line with the values and lifestyles of the workers, thereby 1) increasing the satisfaction of those currently working in order to reduce turnover and 2) encouraging the entry of those not previously targeted (labor transition). Since the workforce in the four occupations is already aging, the success of 2) will be key.

To encourage new types of workers to enter the industry, it will be necessary to change the nature of the work and the style of employment so that it suits and is accepted by a wider range of people than is currently the case. Since occupations and attributes used to be fixed (e.g., "cleaning lady," "security man"), jobs and employment were defined by assuming a fixed persona. However, the issues of each occupation examined in Chapter 2 have shown that diversification of employment patterns and segmentation of tasks are likely to be the key points in general. If diverse employment options such as "high-level work vs. menial work," "full-time vs. part-time," and "career-oriented vs. personal life-oriented" can be provided to meet workers' individuality and diverse needs, the source of human resources may be expanded, and the jobs may become an option for people who have chosen other occupations in the past.

Of course, improving wages and the work environment in line with the socio-economic situation is a prerequisite for encouraging current workers to work longer and attracting new people. To achieve this, all parties involved in the office property business must understand the current critical situation and recognize that the wisdom of the past is becoming obsolete. Precisely because it is an old industry, the first step in solving the labor shortage problem will be to break away from convention and think from the perspective of the worker.

## Overview of Chapter 2 “Nature of the Job (Radar Chart)”

Source: Prepared by Xymax REI by processing the “Occupational Information Database, Simplified Numerical Download Data ver. 1.8” by The Japan Institute for Labour Policy and Training (JILPT) downloaded on March 31, 2023, from occupational information site job tag (Japanese O-NET) (<https://shigoto.mhlw.go.jp/User/download>). The original data include the scores for the 39 items that describe the “nature of the job” for all 494 occupations based on the online worker survey (60 workers from each occupation; approx. 26,000 valid answers) conducted by JILPT in 2018 and 2019.

Score calculation method: Calculated by the following procedures incorporating the calculation methods of JILPT (2012) and Acemoglu and Autor (2011). [Procedure 1] Using the k-means method, the 39 items of “05 Nature of the job” of the numerical profile area data of Japanese O-NET were clustered and categorized into the following six categories: (1) Work irregularity (e.g., No routine work, cancellation due to weather, seasonality); (2) negative impact on mental and physical health (cramped, risk of disease); (3) level of physical danger (burns, cuts, violence); (4) amount of communication (face-to-face, telephone, team); (5) uncomfortable working environment (outdoor, standing, running); and (6) level of responsibility (mistakes, strict, consequences, decision-making). [Procedure 2] Performed a simple sum of the numerical data for each of the 494 occupation types and six categories. [Procedure 3] The sums were scaled to have a mean of 50 and a standard deviation of 10, and the deviation of the occupation was used as the score.

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