



Build Beyond As One®

WHITE PAPER

“Sustainable IT Operations and Maintenance”

The Key to Business Stability and Growth



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Introduction

The social environment is changing rapidly. Politics, economics, and society are changing with the spread of COVID-19, inflation and the fall of the yen, global fragmentation, rising tensions, and a declining population due to falling birth rates and an aging society. The role of corporate IT departments are also changing. IT departments have long been required to provide improvements to their businesses and value. While being called on to catch up to businesses that are growing in diversity and speed, as symbolized by DX efforts, IT departments also must maintain increasingly complex and advanced systems.

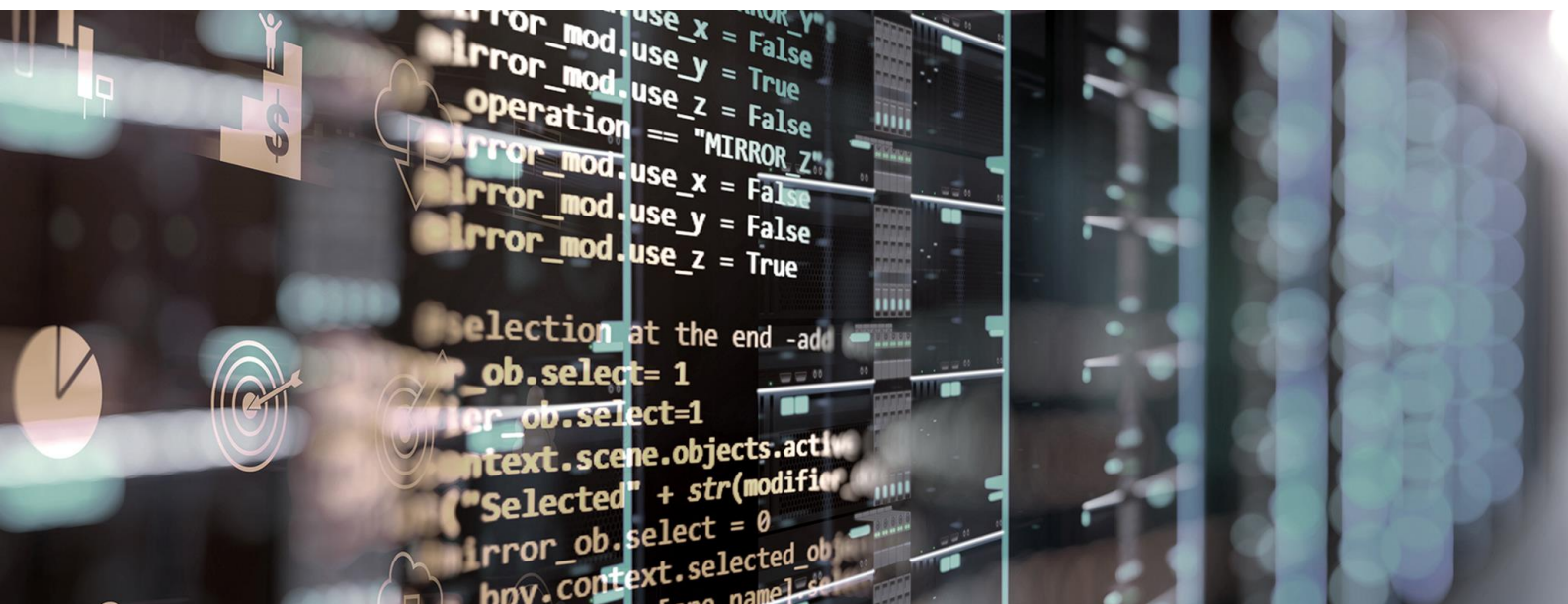
In response to these conditions, IT departments across companies are undertaking various initiatives while striking a balance between making business contributions and providing stable services. While there are cases where these efforts feel genuinely impactful, there are also plenty of cases where such efforts have not progressed as imagined, or have not even gotten to the execution stage because of various limitations.

In this project, we conducted questionnaires and interviews targeting IT department officers (at the executive responsible and department head level) across 15 companies, focusing on IT operations and maintenance, to which IT departments dedicate significant resources (in terms of people, things and money), thus surveying the initiatives, impacts, and challenges arising from such efforts. This white paper covers what we believe companies should aspire to in terms of their IT operations and maintenance, and the key points they should be aware of in getting to that point, based on the results of this investigation.

We would be delighted if this paper proves in any way useful to readers interested in the organizational and personnel challenges facing IT departments.

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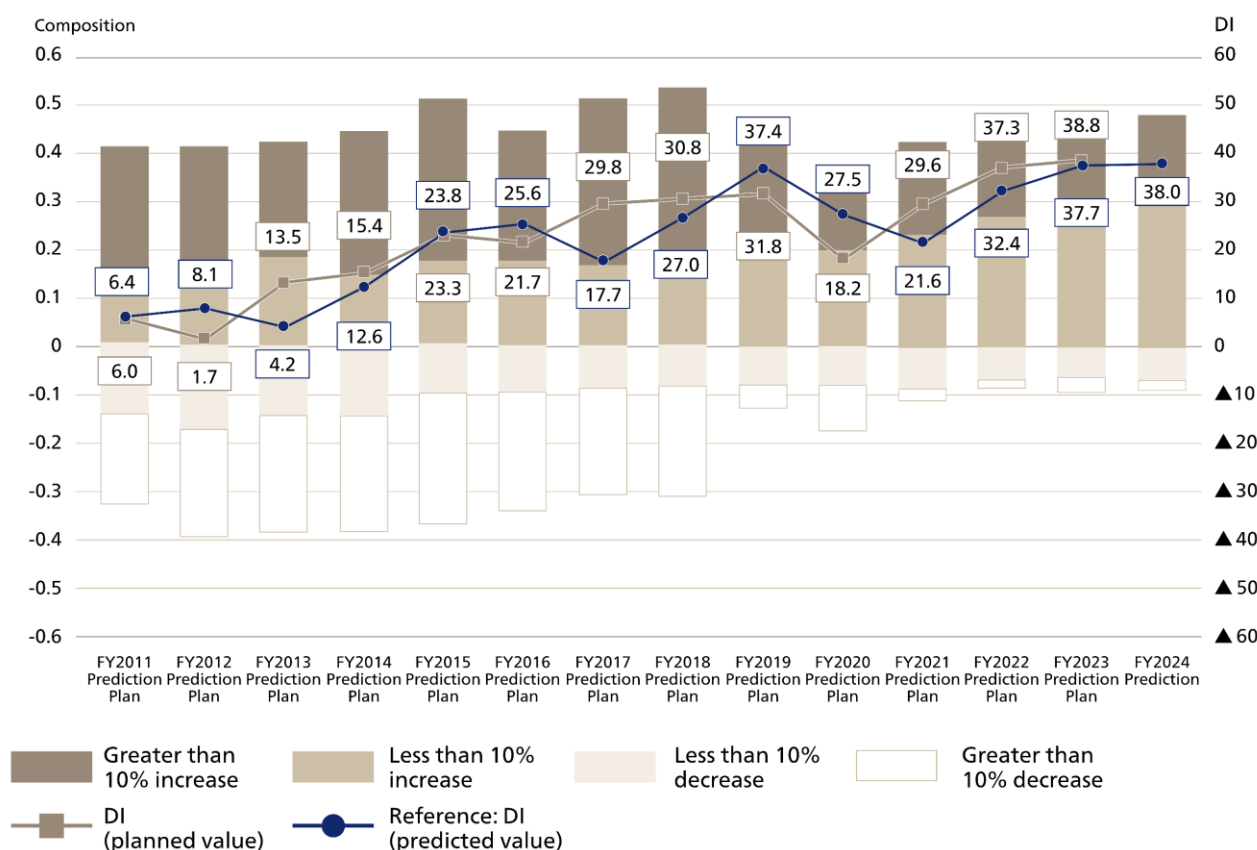
How Has the Role of the IT Department Changed?



IT departments have traditionally been expected to provide value to companies while supporting the business. While this role has not significantly changed, the scope of what IT departments address has expanded due to demands from the business side in terms of greater variety and speed in business, and due to the emergence of new technologies such as cloud computing and AI. IT departments are now expected to provide greater value to businesses with these new technologies. Amidst this backdrop, we believe the work of IT departments has expanded.

According to the “Survey of IT Trends at Corporations Report, 2024: Latest Trends in IT Investment and Use Among User Companies,” published by the Japan Users Association of Information Systems (JUAS), since 2011, the diffusion index (DI) of IT budgets has been positive and trending upwards. As of FY2023, both the planned and predicted DI values have reached their highest levels. Inflation in cloud computing and licensing costs and addressing the digitalization of business have been suggested as the background for this trend. From this, we can also conclude that the work of IT departments is expanding.

Figure 1 Trends in IT budgets and diffusion indices (DI)

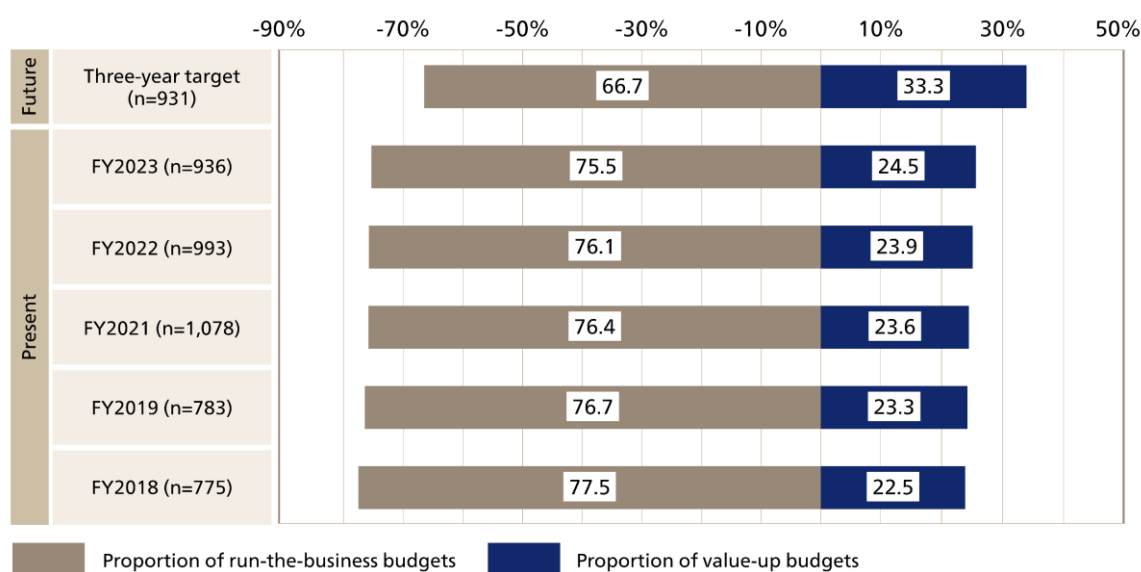


Source: “Survey of IT Trends at Corporations Report, 2024: Latest Trends in IT Investment and Use Among User Companies” (JUAS)

Drafted by ABeam Consulting based on “Figure 2-1-2: Trends in IT budget DI values” (page 27)

Next, let's look at a breakdown of IT budgets. According to the JUAS study, if we separate IT budgets out into "developing new business measures (i.e., value up)" and "operations and maintenance of existing business (i.e., 'run-the-business')" categories, since FY2018, run-the-business budgets have continued to be some 3x the value-up budgets. The study also showed that companies were aiming to revise the ratio between value-up and run-the-business costs to approximately 2x as part of their three-year target.

Figure 2 Distribution of IT budgets by fiscal year



Source: "Survey of IT Trends at Corporations Report, 2024: Latest Trends in IT Investment and Use Among User Companies" (JUAS)

Drafted by ABeam Consulting based on "Figure 2-1-16: Distribution of IT budgets by fiscal year (average proportions)" (page 38)

What can we conclude from the overall IT budgets and their breakdowns (between value-up and run-the-business spending) described above? IT department budgets overall are trending upward, and the digitalization of business is advancing. However, run-the-business costs are significantly outpacing value-up costs (this includes countermeasures for dealing with inflation in cloud computing and licensing costs). We can read into the research that companies are aspiring to have their IT departments provide more value to the business by revising the ratio between value-up and run-the-business spending.

While the roles played by IT departments have not changed dramatically, demands from the business side and the emergence of new technologies are forcing them to emphasize providing greater value to business. But departments are struggling to de-emphasize supporting business stability. This white paper focuses on the run-the-business side of the equation, rather than the value-up side. Focusing on IT operations and maintenance, which we believe occupies the largest part of this, and considering where IT departments should be attempting to take this work is the key to allowing IT departments to make greater contributions to the business.



1-1. Themes in IT Operations and Maintenance

What are the current themes in operations and maintenance that corporate IT departments are confronting? Based on our consulting insights, we organized IT department challenges in “2024 Japan CIO Survey: Usage of IT Services and Outsourcing” and the themes that corporate IT departments should address in operations and maintenance.

To begin with, the challenges in the IDC Japan survey address the question, “What challenges does your IT department currently face?” This is not necessarily limited to operations and maintenance. We excluded DX and system development issues and selected just the challenges related to operations and maintenance (as highlighted in blue in the table below).

Table 1 Challenges faced by IT departments

(%)

	FY2024 survey				Change (from FY2023 survey to FY2024 survey)			
	Overall (n = 1,500)	Over 1,000 people (n = 781)	100-999 people (n = 380)	2-99 people (n = 339)	Overall	Over 1,000 people	100-999 people	2-99 people
Improving security/ risk management	31.5	41.3	36.8	24.6	-1.5	-1.5	0.0	-1.4
Addressing personnel shortages	30.2	36.0	36.1	24.8	0.6	-2.4	-0.5	3.3
Upgrading the skills of/ reskilling company personnel	25.6	32.2	27.9	21.6	-0.8	0.1	-1.2	-0.6
Renewing outdated systems	23.9	30.7	30.0	18.1	1.4	-0.8	4.4	1.5
Reducing IT costs	22.8	32.4	28.4	15.9	0.7	2.1	-0.4	1.4
Promptly addressing business changes	22.6	32.7	25.0	17.0	1.4	-0.4	1.9	2.7
Centralized management/ effective use of internal data	21.1	31.6	24.7	14.7	0.9	5.0	-0.6	0.4
Addressing new technologies/ technological transformation	19.9	25.1	26.8	14.3	-2.0	-6.7	5.0	-2.8
Visualizing IT ROI	19.0	36.3	25.0	8.6	-0.9	5.3	-0.6	-2.9
Contributing to strategic IT projects	18.5	35.1	25.8	7.7	-0.8	-0.3	3.2	-1.9
Securing the right IT budget	17.7	27.7	22.1	11.1	0.6	3.7	0.1	0.2
Improving coordination with business /operations departments	14.7	23.6	17.6	9.5	-0.9	-1.8	-3.7	1.6
Improving external vendor management	12.4	26.3	15.3	5.0	0.7	4.4	0.2	0.0
Other	1.1	1.5	0.5	1.3	-0.5	-0.5	-1.0	-0.2
No particular issues	14.0	3.2	4.2	23.4	0.4	-0.1	-0.3	-0.1

Notes : ■ Multiple responses permitted

■ Displayed in order of highest "overall" value. Top five responses excluding "no particular issue" highlighted in red

Source : IDC's Japan CIO Survey, April 2024(n = 1,500)

Source: IDC Japan, June 2024, "2024nen kokunai CIO chousa: IT saabisu/autossooshingu riyou jittai"

("2024 Japan CIO Survey: Usage of IT Services and Outsourcing") (JPJ50710524)

Next, we categorized the required resources for operations and maintenance based on our insights into people, things, and money, and set desired directions and themes for achieving each. Checking how these tie in with the challenges in the IDC Japan survey has confirmed the reliability of these themes.

Table 2 Desired directions and themes for achieving each by required resources for operations and maintenance

			Links to challenges according to the IDC Japan survey							
What companies should aspire to in their operations and maintenance		Themes for achievement	Improving security/risk management	Addressing personnel shortages	Upgrading the skills of/reskilling company personnel	Reducing IT costs	Centralized management /effective use of internal data	Visualizing IT ROI	Securing the right IT budget	Improving external vendor management
People	Optimally deploying and improving the skills of IT operations and maintenance personnel	Optimizing personnel deployment		✓	✓	✓				✓
		Fostering skills among personnel		✓	✓					
Things	Standardizing IT operations, maintenance processes, and visualizing systems	Applying processes/tools for managing services					✓			
		Risk management/evaluation	✓							
Money	Optimizing IT operations and maintenance costs	Improving productivity		✓		✓				
		Optimizing investments and costs in IT operations and maintenance				✓		✓	✓	

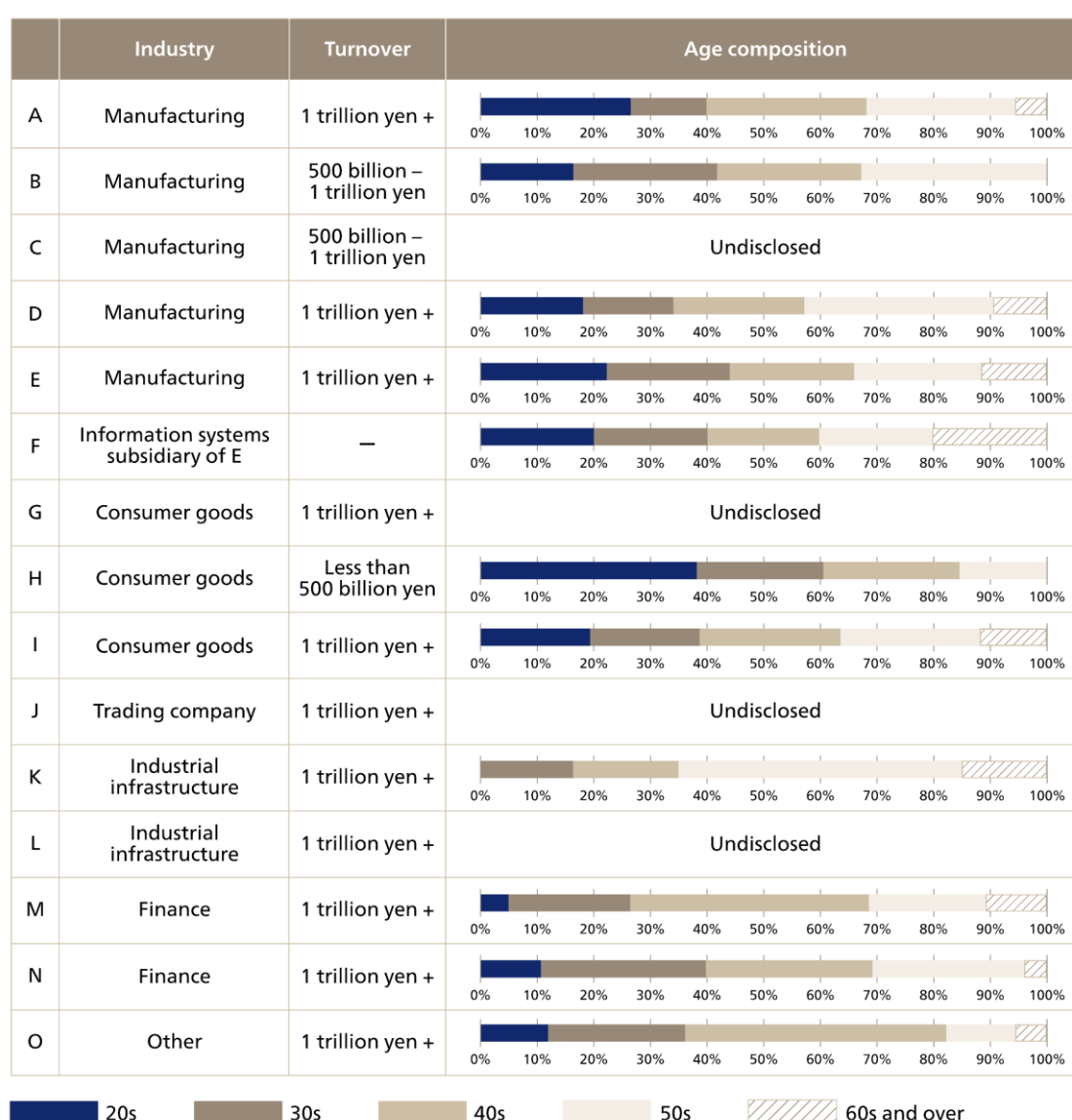
Following the steps outlined above, we have defined our IT operations and maintenance themes: 1) optimizing personnel deployment, 2) fostering skills among personnel, 3) application of processes /tools for managing services, 4) risk management/evaluation, improving productivity, and 5) optimizing IT operations and maintenance investment/costs. From the following chapter, we will take a deep dive into these six themes. From there we will make proposals on how to get to our ideal IT operations and maintenance, based on the status of corporate initiatives, specific measures and their impacts and challenges, as derived from our investigation.

1-2. Survey Overview

We focus IT operations and maintenance in this white paper, to which we believe IT departments dedicate significant resources, and surveyed the status of efforts related to six themes that we believe corporate IT departments should seek to address. To get a better picture of operations and maintenance at IT departments across companies, we picked out 15 companies from among global firms with over 100 billion yen in turnover across industries, and conducted questionnaires and interviews with CIOs and department head-level officers from these companies' IT departments.

While the age make-up varied across companies, team members were overall in or above their 40s, and were engaged in IT department work in operations and maintenance, development, strategy formulation and planning.

Table 3 Age composition of IT departments



Survey Overview

- Period: October 1 - December 31, 2024
- Survey methodology: Questionnaires and interview surveys
- Target: IT department officers (CIO and department head level) from 15 global firms with over 100 billion yen in turnover
- Question themes:
 1. Optimal Personnel Deployment
 2. Fostering Skills Among Personnel
 3. Operation of Processes/Tools for Managing Services
 4. Risk Management
 5. Improving Productivity
 6. Optimizing IT Operations and Maintenance Investment/Costs
- Main questions
 - IT operations and maintenance measures conducted at each company and their outcomes
 - Challenges in implementing these measures

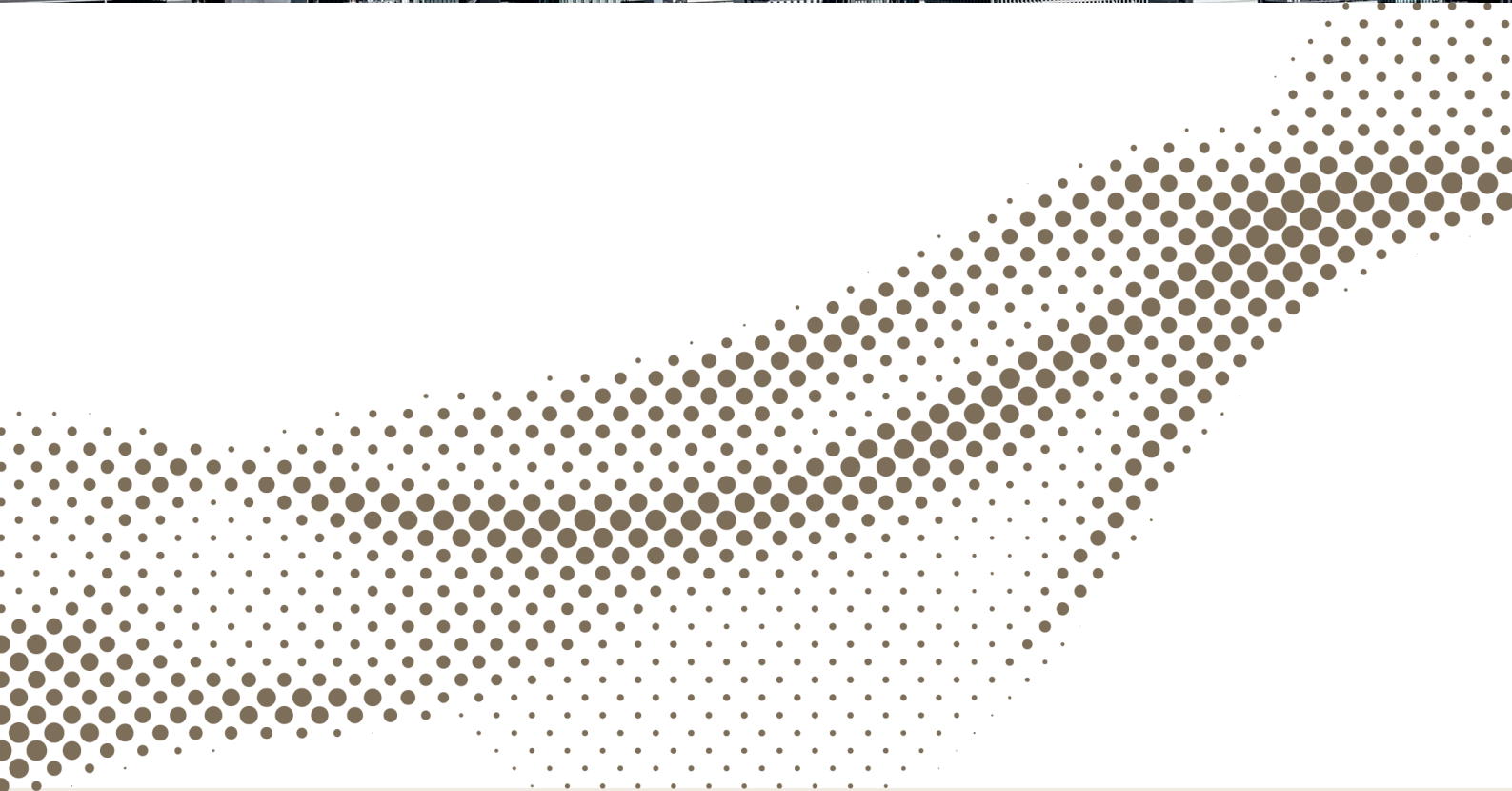
■ Survey summary

Our results showed that the challenges at IT departments were: high workload, individualization of work, personnel mismatches, inadequate addressing of seniority, barriers to standardization/streamlining, and limits to cost reductions.

To address these issues, we propose: redefining insourcing/outsourcing in IT operations and maintenance, deepening partnerships with outside parties, comprehensive automation with technology, making IT operations and maintenance a site for developing and engaging personnel.

2

Status of Efforts Across Themes



2-1. Optimal Personnel Deployment

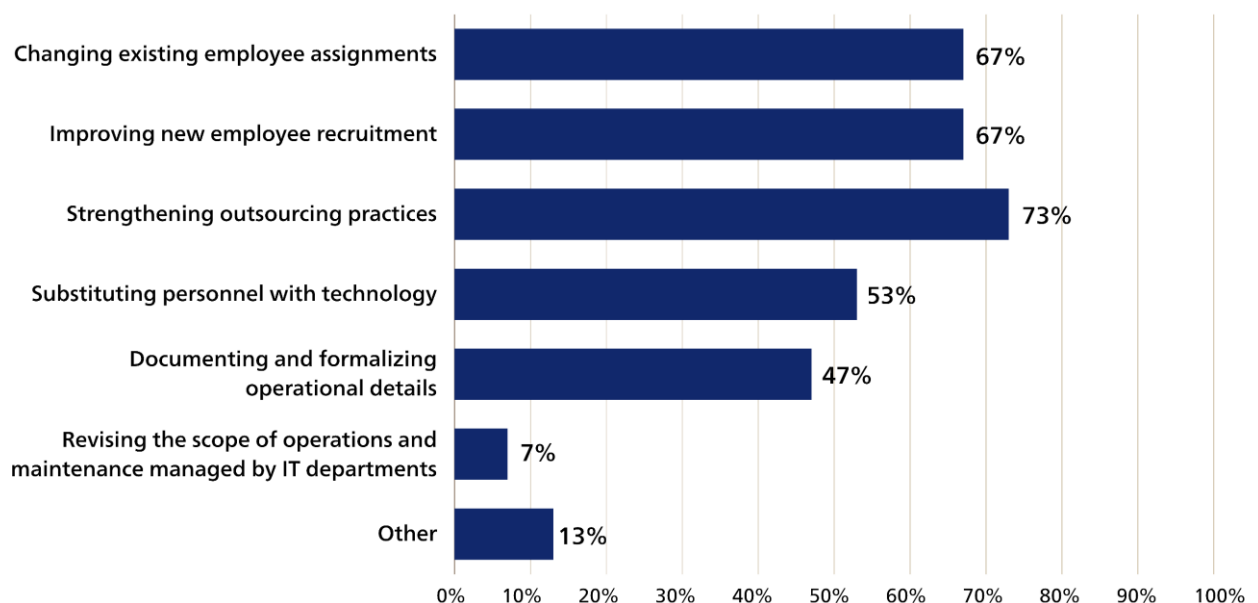
■ Background

Companies hope to improve their operational processes or transform their products, services and business models using digital technology. But IT systems and operations and maintenance work is growing more complicated. The load on employees who manage this is also increasing. It is increasingly necessary to shift employee labor hours spent on operations and maintenance work to value-up work such as DX. Companies must also improve recruiting, streamline operations by taking advantage of external resources or systems that do not require manual intervention, and devote personnel to the domains to which they had originally hoped to work.

■ Company measures

We interviewed IT department officers about their company's measures in optimizing personnel deployment. We found that some 70% of companies were strengthening their outsourcing practices, and that over 60% of companies were improving their recruiting or changing how they deployed existing employees. We saw a trend of management work and core domains that required operational insight being insourced to employees, and the outsourcing of domains with high volumes of rote work or operations and maintenance of low-importance systems. Companies were also using technology to reduce the amount of work that requires manual intervention, and to document and formalize knowledge of operations and maintenance work that tends to become individualized. However, revising the scope of operations and maintenance takes time, money, and operational knowledge. Compared to other measures, the number of companies undertaking such efforts was exceptionally low, with only one company among those surveyed doing so.

Figure 3 Measures to optimize personnel deployment (Respondents: 15 companies, multiple answers permitted)



■ Impact of measures

Thanks to the insourcing of core operations, advances in building up knowledge, formalizing operational knowledge, and greater use of outsourcing, companies have made progress in reducing costs and shifting employees from operations and maintenance to other work.

Industrial Infrastructure Company L

We expect to reduce operations and maintenance-related employee costs by 60% thanks to outsourcing. By hiring mid-career personnel with high-level skills in domains such as DX and security, we have also managed to accomplish difficult work using only our employees.

There were also companies seeking to optimally deploy personnel via personnel development plans, including the acquisition of internal qualifications for younger employees. Additionally, some companies that created environments to optimize personnel deployment through measures to reduce mismatches between personnel and companies or departments, even before those employees were hired.

Manufacturer A

We conduct an IT department-led internship program for college students. This has helped uncover potential candidates for the IT department and has reduced mismatches between the aspirations of new hires and where they are deployed after they join the company.

■ Issues in carrying out measures

Development and knowledge improvement efforts have stalled due to the individualization of work, and optimizing personnel deployment to core domains has failed to progress.

Some companies are continuing to fail to secure employee time and efforts to shift personnel due to the high existing workload and the individualization of work caused by a failure to create documentation and other resources to facilitate personnel shifts.

Manufacturer C

Minimizing employee labor hours has individualized work and has forced companies to become dependent on tacit knowledge, a major factor preventing effective work succession.

While personnel shifts require new skills, many companies feel that this becomes more difficult the more veteran employees they have. These companies are concerned that even if they make use of external resources and manage to create the capacity to apply their employees to upstream work, they will end up with employees who are unable to adapt.

Industrial Infrastructure Company K

Outsourcing operations and maintenance overseas resulted in there being less work for veteran employees (workers). We planned to apply employees to upstream and higher-level work to the degree that work was outsourced, but older employees failed to make progress in re-skilling, increasing the proportion of indirect employees.

Consumer Goods Company H

We have not conducted reskilling because of difficulties in making progress with it. Inadequate training structures and a lack of training personnel on our part as a company has caused us to fail to efficiently conduct personnel development, and thus we have not made progress in optimizing employee deployment.

Manufacturer E

We are improving our internal personnel, but we suffer from an overwhelming lack of mid-level personnel to act as training officers, so the development of personnel is not going well. This is hindering efforts to optimize personnel deployment.

They have put in place the operational environment and systems required, but not all personnel want to take on upstream work or new challenges, and some wish to continue on with their present work.

■ Summary

Many companies divide operations into core and non-core, and work towards redeploying resources to insource the former and outsource the latter. However, companies continue to face challenges in pursuing such redeployment by failing to find time for succession planning, seeing work be individualized, struggling to train people in the necessary skills, and failing to motivate people to pursue the project. In carrying out redeployments, companies must make temporary use of external partners to lessen the load placed on regular operations and undertake efforts suited to the age profiles and characteristics of their employees.

2-2. Fostering Skills Among Personnel

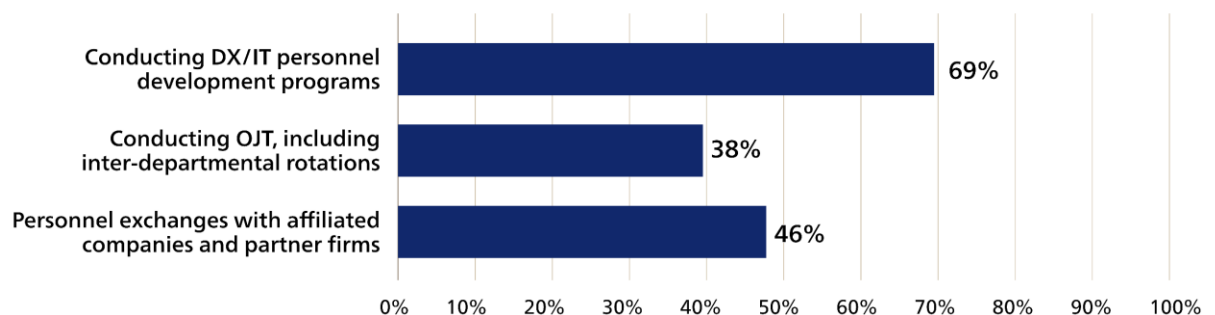
■ Background

Companies engage in many activities to improve their competitiveness, such as DX. To adapt to advancing IT technology, companies must increase headcount, improve their technology and operations, and enhance the skills of their employees.

■ Company measures

We interviewed IT department officers about their company's measures towards fostering skills among their personnel. We found that 70% were using DX/IT personnel development programs. However, fewer than 40% of companies were conducting OJT, including exchanges of personnel beyond the bounds of companies and inter-departmental rotations.

Figure 4 Measures to foster personnel skills (Respondents: 13 companies, multiple answers permitted)



■ Impact of measures

Many companies gather information, develop skills, and connect with new initiatives by participating in external seminars or particular communities. They also upgrade employee skills by establishing internal systems such as open application and FA systems, and personnel development funds.

Manufacturer B

We are conducting internal DX training and developing data scientists.

Manufacturer E

We have established a university internally, and graduates are deployed possessing certain IT skills in data science.

Skills required for the development, operations, and maintenance of IT systems are cultivated after assignment.

Industrial Infrastructure Company K

It has been over two years since we established open application and FA systems. These efforts generate competition among departments to make themselves more attractive.

It is difficult to improve employee skills while they are under high workloads. Some companies are moving current operations externally and use the spare capacity to improve the skills of their employees.

Industrial Infrastructure Company K

We have outsourced our current operations overseas, increasing the number of mid-level employees who have improved their skills with the spare capacity.

Business and technical skills can be improved through seminars and self-study. However, some companies foster employees with experience across multiple operational domains through rotations with other departments, such as operations departments, to improve operational knowledge and experience.

■ Issues in carrying out measures

Companies fail to consolidate skills because they are unable to generate the time or OJT opportunities for employees to master IT skills.

We often receive feedback to the effect that it is difficult to make time and maintain motivation to master skills due to usual high workloads.

Manufacturer B

Requiring individuals to master new skills in addition to their regular tasks increases the burden on them.

Manufacturer A

It is difficult to secure time and maintain motivation to develop and improve skills.

Financial Firm M

We must create systems to allow each manager to proactively attempt to master new skills. Proactively seeking to improve skills is something that is limited to certain team members.

Industrial Infrastructure Company K

Many employees are being left behind in the transformation, particularly veterans.

Consumer Goods Company I

It is difficult to retain team members who have obtained new skills.



The lack of mid-level employees with internal operations and service experience able to take charge of training younger employees is also an issue. Many companies state that some degree of experience is needed to improve operational knowledge.

Many also state that it is difficult to carry out effective inter-departmental rotation to improve operational skills due to factors related to both operational themes.

■ Summary

Many companies have identified skills for employees to master and are promoting activities aimed at helping them master those skills. However, there are issues with finding time for study, maintaining motivation, finding opportunities for employees to gain practical OJT experience, and securing trainers. Companies must conduct well-planned courses of study and rotations suited to the age profiles and characteristics of their employees, and provide opportunities such as OJT involving external partners.

2-3. Application of Processes / Tools for Managing Services

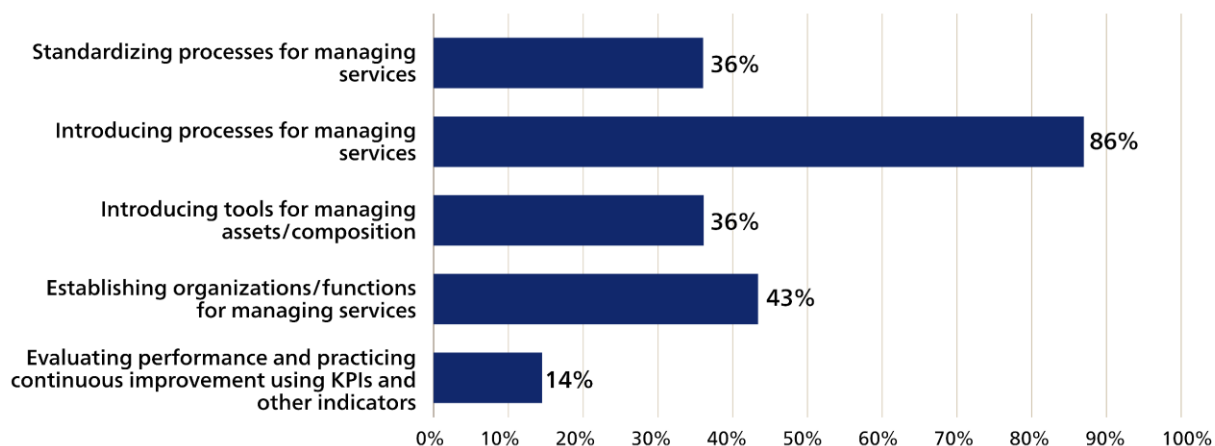
■ Background

So far we have examined optimizing personnel deployment and fostering skills among personnel. However, we have encountered the issue of companies struggling to make progress due to succession and individualization problems. Visualizing day-to-day operations helps address individualization, but there are also cases where early response to incidents has been accelerated by creating stores of past case studies. Operations have been streamlined and the workload both for IT departments and users has been lessened by creating FAQs of common inquiries. These efforts can contribute to leadership and business growth. When developing global businesses, managing services using the same frameworks, rules, and processes is useful for communication, progress management, and quality management.

■ Company measures

We interviewed IT department officers about their company's application of processes /tools for managing services. We found that over half of companies have implemented service management tools. However, fewer than 40% of companies have established service management organizations or functions, or standardized service management processes, while the proportion of companies going as far as performance evaluation and improvement activities was no more than 10%. We learned that many companies have implemented tools ahead of standardizing processes or planning evaluation indicators.

Figure 5 Measures to apply processes/tools for managing services
(Respondents: 13 companies, multiple answers permitted)



■ Impact of measures

Implementing an IT service management (ITSM) helps improve quality, speeds up work, and mitigates the individualization of operations.

Manufacturer D

We are deploying a single integrated ITSM. This ITSM forms a core platform connecting everything, including allowing employees to check results using the dashboard and monitoring in combination with cloud services. This allows us to see things that were previously invisible and take action.

There were also companies where standardizing operational processes reduced inquiries.

Consumer Goods Company H

Standardizing processes allows anyone to do things, and gathering knowledge (for IT and for users) has reduced inquiries.

■ Issues in carrying out measures

High workload volumes have prevented companies from planning ongoing improvements or lateral deployments after solution implementation. Tool implementation is being done ahead of such concerns.

Workload expansion reduces time allotted for thinking things through and has become a factor impeding themes.

Financial Firm N

Resources are taken up by other priority projects and regular operations, so these efforts fall down the pecking order.

It is difficult to get user departments (i.e., operational departments) to understand management through ITSM and the application of standardized processes.

This is hindering efforts to implement these measures.

Manufacturer E

Previously, there was a constant stream of telephone inquiries and individual contacts made to team members That people personally knew. The idea that IT services cost money and cannot respond to issues immediately had not permeated.

Manufacturer D

We contacted the systems managers of each department and held seminars, but it was difficult to get them to understand.

Many companies first limited ITSM tools to the systems or departments they would implement these for and performed advance deployments, before applying the tools to other departments or systems. Even from a global perspective, they began with their domestic locations, leaving deployment to global locations as a problem for later.

Manufacturer B

It remains unclear if we will be able to deploy the technology globally. Cloud services that are available for use are limited in certain countries and regions.

Because of the high license costs of ITSM tools, some believe that getting ROI will be difficult.

Manufacturer B

ROI is difficult due to high license costs. It will be a challenge to effectively use these tools.



■ Summary

Many companies are making progress in applying service management processes/tools to their operations and deploying these solutions to all systems and to global operations. Specific verification of their impacts remains a task for the future. They also struggle to find time to apply processes/tools, receiving pushback in response to the application of unified rules, and face issues in obtaining outcomes commensurate with the costs of the tools. In investigation/deployment projects that are part of the application of processes/tools, companies must use tools that will help them use external partners to visualize and improve operations post-application, and for end-to-end automation of operations.

2-4. Risk Management

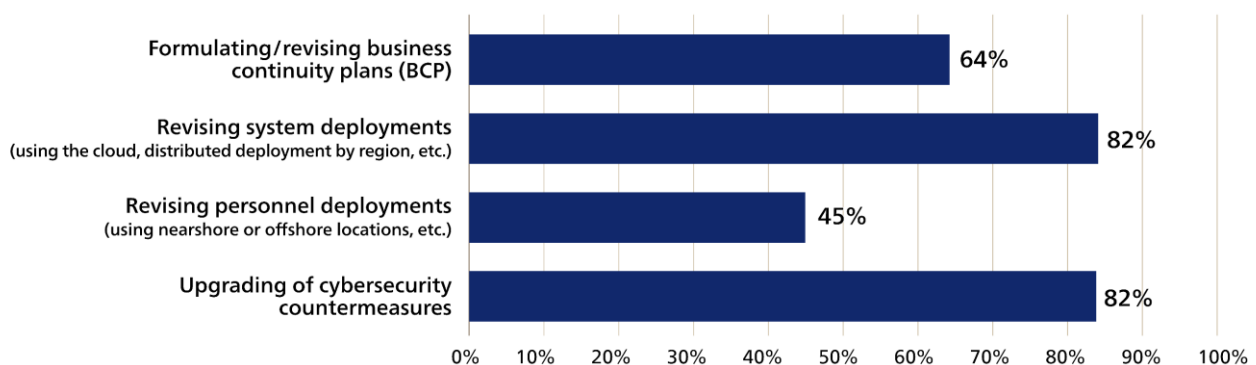
■ Background

In addition to traditional data leaks due to human error and cyberattacks, there are increasing risks to stable provision of IT services such as political, economic, and social risks and natural disasters. Many companies understand these rising risks and consider risk management important for business continuity and securing investor and customer trust.

■ Company measures

We interviewed IT department officers about their company's risk management. We found that over 80% of companies, irrespective of size or industry, were revising cybersecurity countermeasures and system deployments, including the cloud, in response to increased information security risks, cloud service usage, and earthquakes and other natural disaster risks. On the other hand, fewer than 50% of companies were revising their personnel deployments, and zero companies were engaged in near-shoring or off-shoring efforts to reduce risk. Some companies responded that they were engaged in near-shoring and off-shoring for investment and cost optimization in IT operations and maintenance, so we believe that such practices are done mainly with cost reductions in mind.

Figure 6 Risk management measures (Respondents: 11 companies, multiple answers permitted)



■ Impact of measures

Some respondents said that they had improved business continuity through security improvements.

Manufacturer E

Security is a part of our core operations, so we are improving it through insourcing. However, security monitoring (SOC) has been outsourced as operational work.

Manufacturer A

We are constantly implementing cybersecurity countermeasures using the scores of the evaluation system for the open environments to the public as KPIs. We ensure group-wide security by assessing the impact of these measures.

Manufacturer D

We conduct internal checks and countermeasures against cyberattacks. We visualize the operational status of our IT systems as a whole, including our networks, and make it so the BCP countermeasures headquarters can make decisions with that information. We also evaluate and take measures against various risks by conducting internal systems audits.

We also saw many companies that were improving operational continuity through system deployment schemes, such as building in system redundancy.

Financial Firm N

Building in redundancy through backup centers puts in place an operational IT continuity system in case the Tokyo Metropolitan region experiences a disaster.

Company F, an Information Technology Subsidiary of E

We maintain a stable, high-quality system cloud technology environment under a cloud-first policy.

There were also companies that also sought to improve business continuity by preparing countermeasure manuals and conducting regular training drills to respond promptly and accurately to disasters.

Manufacturer E

We prepared a manual in anticipation of a potential Nankai Trough Earthquake. When an earthquake occurred in Hyuganada, Miyazaki, we quickly gathered our team members and held a countermeasures meeting.

There are also companies that are improving their business continuity by making effective use of geographic conditions such as offshoring.



Manufacturer D

We have internal guidelines that avoid using certain offshoring regions due to geopolitical risks and have made individual decisions that account for information control.

■ Issues in carrying out measures

Significant time is assigned to keeping up with evolving risks to decide how far we should go in implementing security measures.

Because risks become localized and evolve over time, they cannot be addressed by implementing one-off measures. This necessitates ongoing measures and becomes a burden on the company. It is difficult to continue to secure personnel who are skilled in security-related matters.

Companies also do not see the expected outcomes when incidents actually occur, even after putting counter-measures in place.

Manufacturer E

We have implemented security measures, but it is difficult to deploy them to every part of the company including global locations.

Recently, our systems composition has changed with the use of cloud services. This has also made risk management more difficult and has complicated our operations.

■ Summary

All companies address risks to continuously provide IT services. Companies are improving their security systems in response to the the diversification and increase of security risks. However, they face challenges in costs and in securing personnel. In response, companies must divide their operations into core and non-core functions and improve their resource distribution by means such as insourcing zero-trust initiatives and outsourcing SOC at global locations.

2-5. Improving Productivity

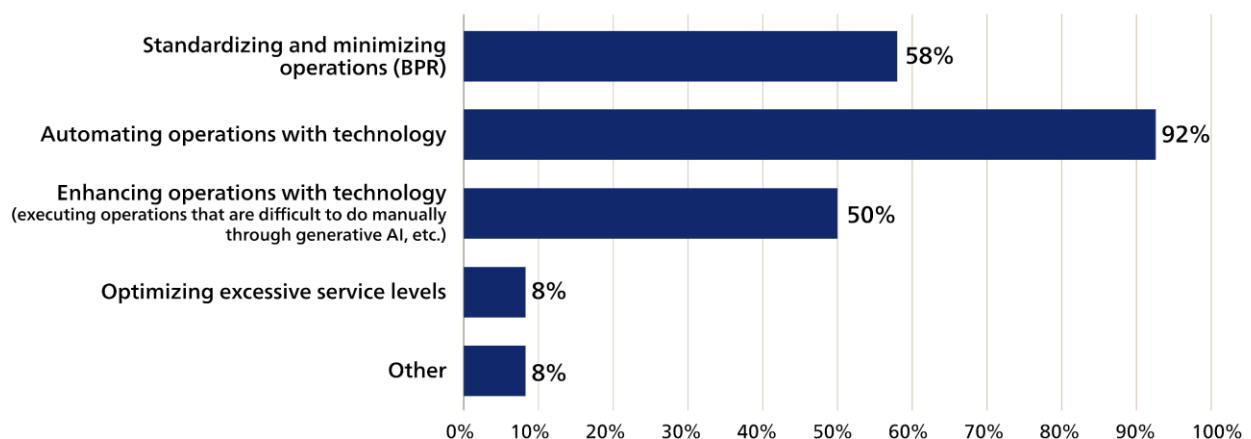
■ Background

Japan is facing the issue of a declining working population due to declining birthrates, an aging population and the retirement of the veteran worker generation. Amidst this context, companies are being pressed to make the most of limited internal and external resources. Customer expectations have also shifted, making it so that companies must provide services at higher quality and speed. To meet these expectations, companies must evolve their operations and services by efficiently incorporating new technologies and generate extra capacity in time and labor by improving productivity.

■ Company measures

We interviewed participants about their company's measures for improving productivity. We found that over 90% of companies were optimizing operations, and that automation was advancing in IT departments and user department operations. Half of these companies were standardizing operations and reorganizing unneeded work. Over 50% of companies were also enhancing operations through technologies such as AI, which will be an important measure in the future. One company was optimizing excessive service levels by revising its Service Level Agreements (SLAs). These efforts require the understanding and cooperation of entire organizations. Few companies presently implementing these efforts due to their long-term nature.

Figure 7 Measures to improve productivity (Respondents: 12 companies, multiple answers permitted)



■ Impact of measures

Many companies were able to obtain visible outcomes in reducing workload (headcount) through automation via RPA and other tools. Rote work and paperwork have been automated. Some companies minimized workload by not customizing systems during implementation.

Industrial Infrastructure Company K

We have cut work hours by over 30% by introducing RPA to accounting processing.

Manufacturer D

Operations have been streamlined with RPA. We are attempting to get results at the push of a button by performing ITSM tool and IT infrastructure composition management and connecting tools for automation.

We have also implemented automation to respond to incident notifications. The system determines the number of people required to respond to incidents, allowing us to reduce a five-team operating structure by one team.

We have also implemented an AI-enabled help desk, more than doubling operational productivity.

■ Issues in carrying out measures

While progress has been made in automation, a lack of knowledge related to new technologies such as generative AI provides room for improvement in thoroughly streamlining IT operations.

Companies are finding it difficult to gain the understanding of user departments and are struggling to implement solutions, even though they would like to change processes and services to improve productivity.

Financial Firm M

We believe that we should start automating and streamlining operations by standardizing and simplifying the current processes.

However, it is difficult to get the cooperation of user departments. They do not like changes to or impacts on present operations.

While automation of operations using automation tools has had tangible impacts at many companies, relatively few companies have attempted to streamline IT operations using AI.

Trading Company J

We have completed our RPA efforts, but the use of generative AI remains limited to a few departments.

Manufacturer E

We lack internal knowledge of how to automate operations with generative AI.



Updates to automation tools come out as required, so needing to fix automation scenarios (i.e., scripts and workflows) becomes a burden.

■ Summary

All companies surveyed were constantly working to improve productivity and making progress utilizing RPA. However, many companies are still considering the use of AI for further productivity improvements, and they did have issues in using AI to improve productivity due to a lack of employees with the knowledge of how to automate operations with generative AI. When using AI, companies must proceed by dividing up work to involve external partners in work that primarily requires technical understanding, and have employees handle work that requires operational understanding.

2-6. Optimizing IT Operations and Maintenance Investment/Costs

■ Background

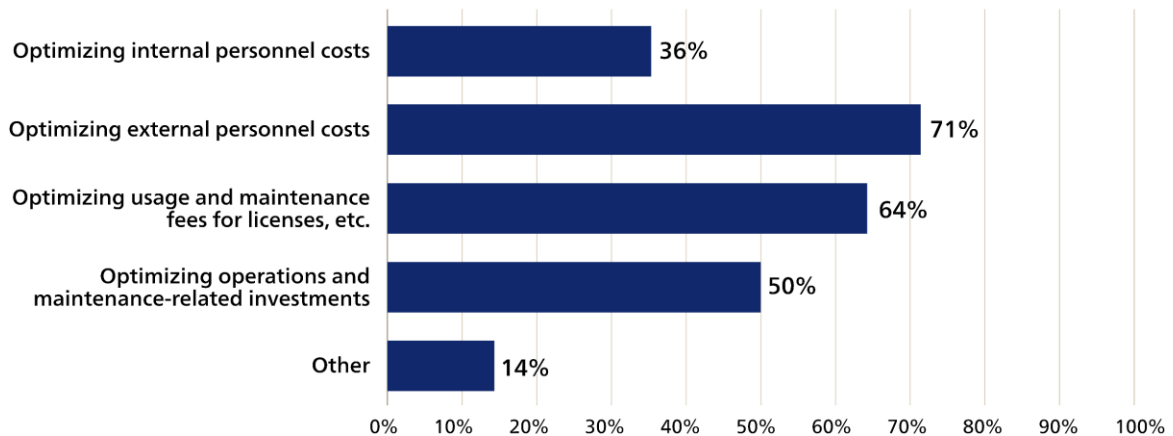
IT systems are increasing in scale and complexity, and IT departments are seeing a high proportion of their budgets dedicated to run-the-business costs, such as dealing with new technologies and increased security risks. Companies are reducing operational costs through IT investment as medium to long-term management goals.

Investments in IT operations and maintenance are made to reduce work and optimize running costs through automation and similar solutions. Companies intend to use these investments to contribute to sustainable growth through improved service quality or competitiveness by assigning a budget to measures and technologies that improve operations.

■ Measures by companies

We interviewed participants about their company's investments and cost optimizations in IT operations and maintenance. Over 60% of companies are optimizing their investments with overseas locations or local vendors, and are optimizing their external personnel costs, licensing costs, and maintenance fees. However, internal personnel cost optimization requires organization-wide understanding and cooperation. This is liable to generate resistance among employees, so only 30% of companies have embarked on these efforts.

Figure 8 Measures to optimize investments and costs in IT operations and maintenance
(Respondents: 14 companies, multiple answers permitted)



■ Impact of measures

We are formulating a roadmap to redeploy headcount resources and reduce costs.

Manufacturer C

We have made progress in our roadmap on insourcing core operations and outsourcing non-core operations to reduce costs.

Companies have enjoyed cost reductions by utilizing internal (overseas) resources.

Manufacturer B

Reducing our dependence on external parties has allowed us to make use of group resources such as overseas locations, insourcing some operations and development work.

There are also companies that achieved cost reductions through the use of external (overseas) resources.

Financial Firm M

We are increasing the use of external vendors.

Licensing and other costs are trending upwards. We are making adjustments such as regularly taking stock of the number of units we use and cutting unneeded items.

Manufacturer B

We kept costs down in an overseas deployment rollout project by incorporating systems centered on local vendors.

Manufacturer E

We have enjoyed economies of scale through centralized license purchases, including for the global business.

Many companies have reduced costs by substituting dispatch personnel in place of employee work, achieving a shift to core operations.

■ Issues in carrying out measures

External factors such as rising personnel costs make it difficult to determine the appropriateness of investment costs.

Roadmaps seeking to optimize investments fail to progress.

Companies are attempting to optimize investments and costs, but their efforts are limited by external factors such as the fall of the yen, inflation, and rising personnel costs.

Costs also do not need to be reduced as much as possible. It needs to be done while not impeding operations or services. It is challenging to verify the validity of these measures.

Financial Firm M

Verifying the appropriateness of increases in vendor and licensing/service costs is difficult.

Manufacturer B

We have concerns over quality related to systems centered on local vendors.

Trading Company J

Streamlining user operations has become the highest priority, so the burden of addressing that has increased.

While we are reducing costs towards our target values, there is also the risk of cutting things that were originally not allowed to be cut.

■ Summary

Companies are constantly working to optimize investments and costs, but face challenges from external factors such as rising personnel costs and the fall of the yen. This makes it difficult to determine what financial levels are appropriate. We believe that it is necessary for companies to formulate roadmaps for optimizing investments and costs from a long-term perspective and to measure the impacts of such activities.

3

Proposals for Better IT Operations and Maintenance



Our study revealed the status of efforts across each theme in operations and maintenance and the challenges involved.

The first of these are personnel challenges. The number of employees is not growing, but systems and the number of vendors to manage is, increasing the burden of run-the-business operations. Companies are struggling to prioritize, making human resource shortages more acute. Operational manuals do not get drafted. Progress is not made on training the next generation due to individualization of work or issues in training and succession. Business continuity problems arise. We also see employees who do not desire change. Difficulties in reskilling turn into compound problems.

Next, we turn to standardizing and streamlining operations. Rather than being one-offs, these require a constant PDCA cycle of improvement. But maintaining these structures proves challenging as human resources shortages accumulate. Methods for applying cutting-edge technologies such AI also fail to advance.

Finally, all companies have reduced operations and maintenance costs, but are encountering limitations to what they can do on their own due to rising personnel and license costs.

Based on this analysis, we have four proposals we would like to put forward: redefine the roles of insourcing and outsourcing in IT operations and maintenance, deepen partnerships with external parties, advance comprehensive automation with technology, and leverage IT operations and maintenance as a site for developing and engaging personnel.

Figure 9 Proposals for addressing issues surrounding IT departments

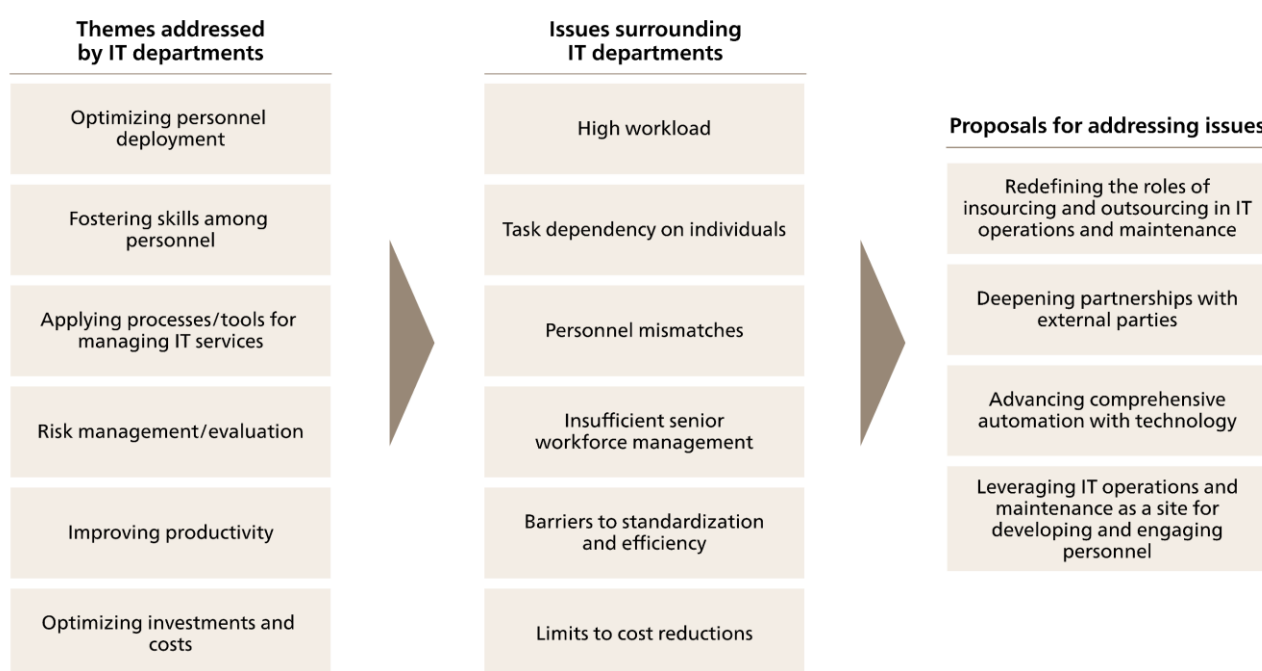


Table 4 Details of and background to issues surrounding IT departments

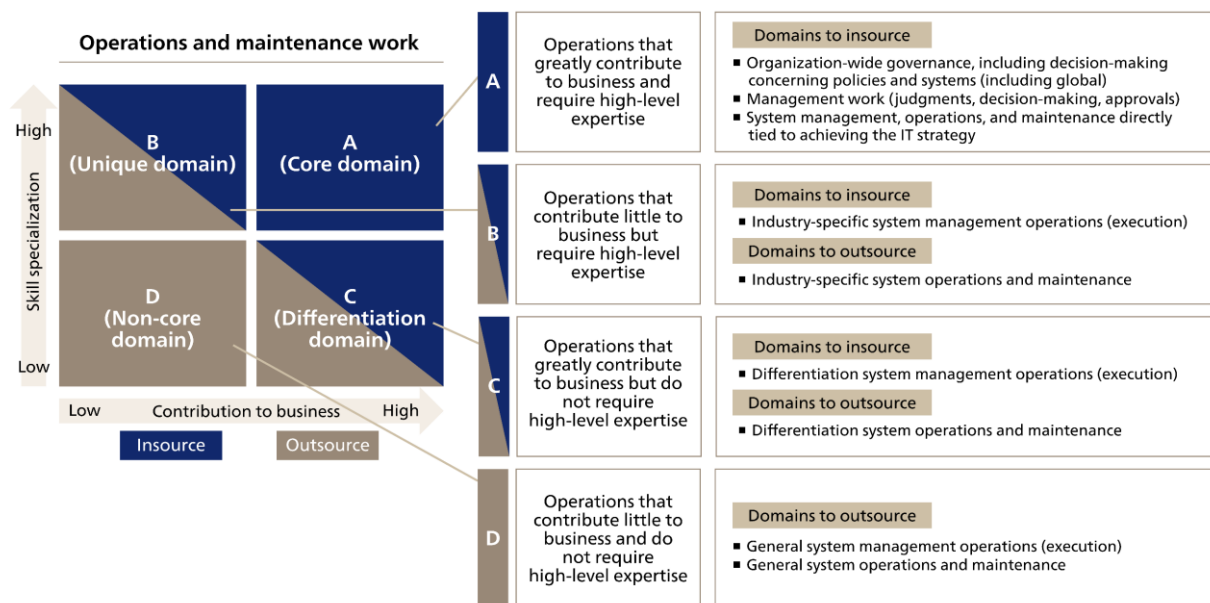
Issues surrounding IT departments	Details and background
High workload	Because workloads are high, it is difficult to address new projects or add headcount, so things departments want to do get delayed.
Task dependency on individuals	Labor saving efforts prevent documentation in operating manuals, and individualization of work advances due to single employees being in charge of work, rendering improvement and succession of operations impractical.
Personnel mismatches	It is difficult to shift people from IT operations and maintenance to high value-added work. Employees do not want to take on new work, making the barriers to reskilling high (particularly among veteran employees).
Inadequate addressing of seniority	Skills disappear as veteran employees retire, increasing the burden on mid-level personnel and making it difficult to pass on skills.
Insufficient senior workforce management	There are few people who understand technology such as AI. It is difficult to maintain systems that standardize or streamline operations, or those that evaluate and improve performance.
Barriers to standardization and efficiency	It is difficult to reduce costs due to rising personnel and licensing costs. Companies must fundamentally revise their cost structures to reduce costs in order to facilitate investment in digital technology and other solutions.

3-1. Redefining the Roles of Insourcing and Outsourcing in IT Operations and Maintenance

The recent shortages and increased mobility of personnel requires companies to account for business continuity. It is important for companies to redefine the roles of insourcing and outsourcing in operations and maintenance in IT departments so that they can concentrate employees into work that generates value and make effective use of external parties for all other work.

Operations and maintenance work can be divided into core, unique, differentiation, and non-core domains. Companies usually insource their core domains and parts of their unique and differentiation domains and have employees manage these areas.

Figure 10 Dividing up core and non-core operations and maintenance work



While many companies organize their operations in this manner, the degree of insourcing they perform depends on the priority with which resources are assigned to IT. In terms of insourcing core domains, companies must find a policy-based balance on how far they want to go in directly controlling such areas and the limitations on the extent they can secure personnel. For example, will companies insource operations and maintenance work that is prized in the labor market, such as work that requires deep knowledge of the company's operations that can fall under the differentiation domain (e.g., consulting work in upgrading systems)? Or work that requires high-level engineering skill that can fall under the differentiation domain (e.g., application of zero-trust security)? Some of this study's participants stated that they viewed operations and maintenance as important work that sustains the business, and would insource domains that are prized in the labor market.

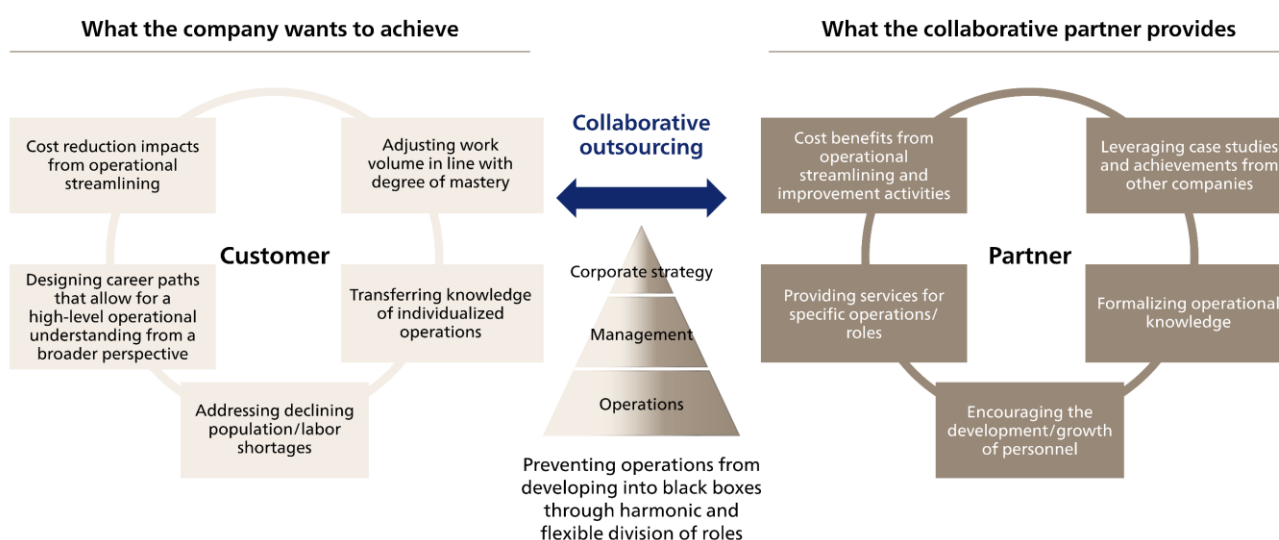
Even if companies define the operations they wish to insource and outsource, they may still encounter difficulties in doing so. Employees are already busy with their regular duties, so taking over operations with a view to some desired division of labor may be beyond their capacities. While companies have no choice but to proceed systematically, speeding up the process using external parties is an option. An effective approach for companies is to make progress towards where they want to be while assigning to external parties temporary substitution work to facilitate the creation of succession plans, succession progress management, documentation of operational details, and generation of extra employee capacity.

3-2. Deepening Partnerships With External Parties

Once companies have managed to redefine the roles of insourcing and outsourcing in the IT operations and maintenance, they must select partners that will meet their expectations and build relationships with them. External partners can be positioned across a variety of different types, considering their importance to the business and the importance of the relationship. In operations and maintenance, the right type of partner is one that can collaboratively outsource, which involves mastering a particular problem and turning it into a strength.

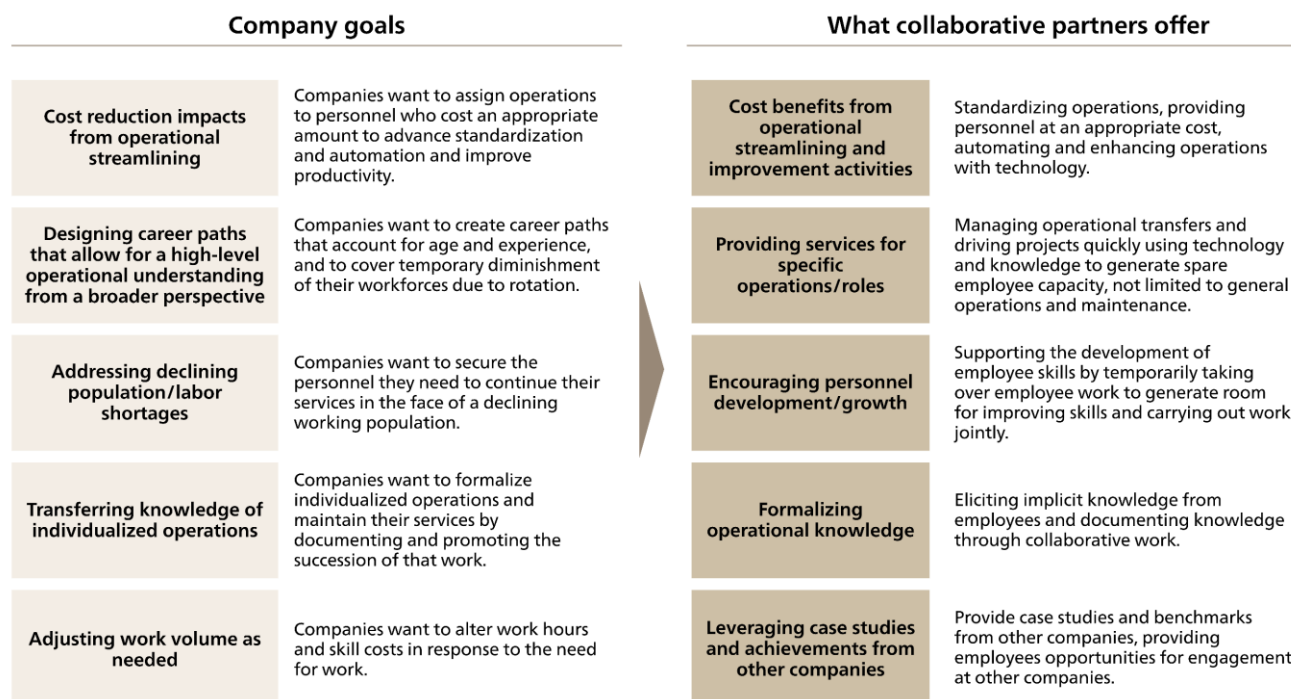
Collaborative partners differ from general outsourcers in that they do not just do what exactly as they are told. They must think for themselves about a company's challenges, ways to address them, and execute flexible responses. The company side must adopt an attitude of thinking through their challenges with and conveying their requirements to their partners, rather than attempting to control everything on their own.

Figure 11 Approach to collaborative outsourcing



Collaborative partners can offer, specifically, streamlined operations, the cost benefits that come from such streamlining, services for specific operations and roles not limited to general operations and maintenance (e.g., employee work support, operational succession support), employee development and growth, formalization of operational knowledge, and leverage of studies and achievements from other companies.

Figure 12 Company goals and services provided by partners in operations and maintenance

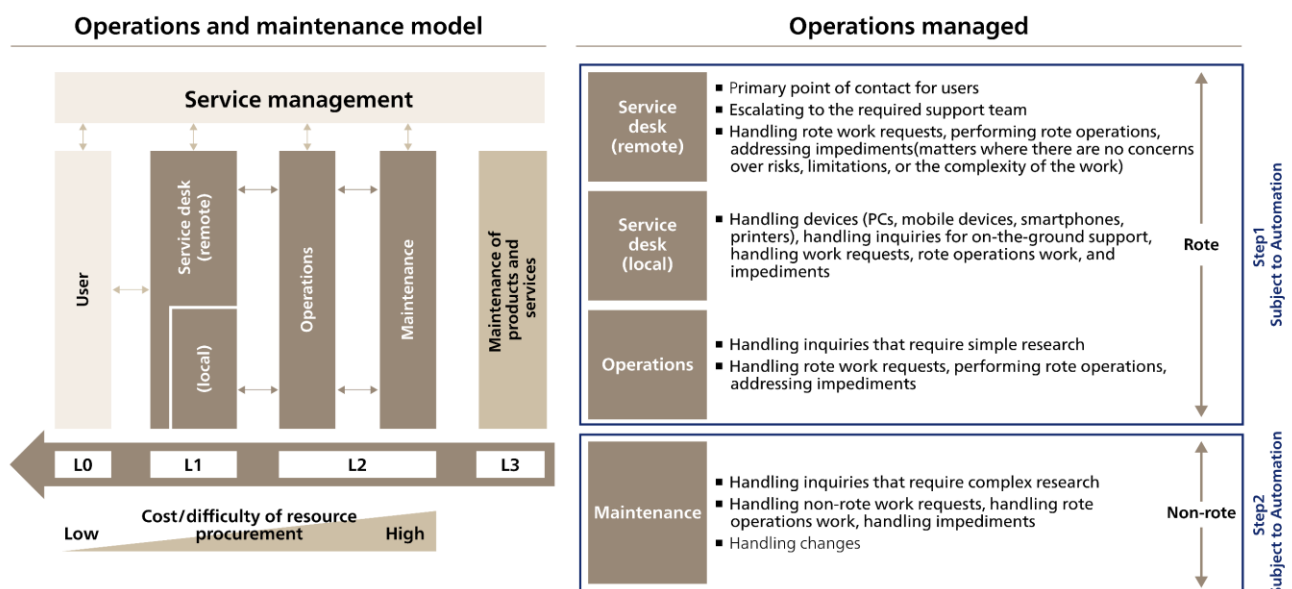


3-3. Advancing Comprehensive Automation With Technology

Once a company has managed to define how it will insource and outsource IT operations and maintenance and the expectations it has of its external partners, the next step will be to automate operations based on the evolution and spread of recent technologies such as AI (this includes the standardization and aggregation of operations in advance). In addition to labor-dependent shift-left practices (shifting work to lower cost personnel), the idea is to also automate operations with AI and other automation tools.

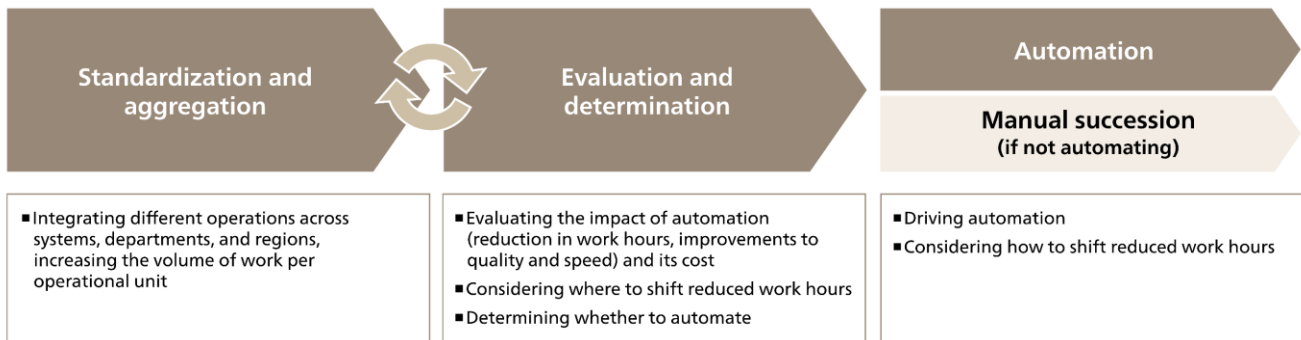
“Shift-left” refers to standardizing and aggregating operations and having them performed by lower-cost personnel (or personnel for whom resource procurement is easier) who are on the left of the operations and maintenance model. In this step, we will also further automate operations where possible after performing the shift-left. Realistic automation targets include traditional rote work (Step 1) and non-rote work, which was previously resistant to automation (before AI agents), thanks to recent advances in AI technology. To achieve further enhancements, as Step 2, companies must implement platforms to automate non-rote work.

Figure 13 Automation targets in the operations and maintenance model



Companies must create conditions that make it easy to enjoy the impact of automation (reduction in work hours, improved quality, speed) by standardizing and aggregating operations. Companies will also need to invest in automation tools their implementations. They must consider ROI, determine whether to make these investments, and prioritize them. Companies also must consider how they will use the work hours freed up through automation.

Figure 14 Steps in automation with technology



When standardizing, aggregating, and automating operations, it can be effective to establish an Intelligent Center (IC)*¹ made up of an overall project manager who coordinates personnel and drives transformation, an operational analysis manager who analyzes current operations and plans standardization and aggregation, and a technology manager who implements automation. It is best to use veteran employees familiar with the company's organizations and operations as the overall project managers and operational analysis managers, and automation experts from within or outside the company as technology managers. Incorporating operational knowledge into AI and automation tools is expected to help companies benefit from increased business continuity by avoiding individualization of work. Upon establishing such a structure, it is important to sustain a cycle of implementing, monitoring, evaluating, extracting new challenges from automation, and improving automation methods, starting with the standardization and aggregation of operations and evaluating and introducing cutting-edge technology.

¹An organization equipped with platforms, personnel, systems, and functions for driving fundamental operational transformation, in parallel with aggregated work

Figure 15 Visualization of an Intelligent Center (IC)

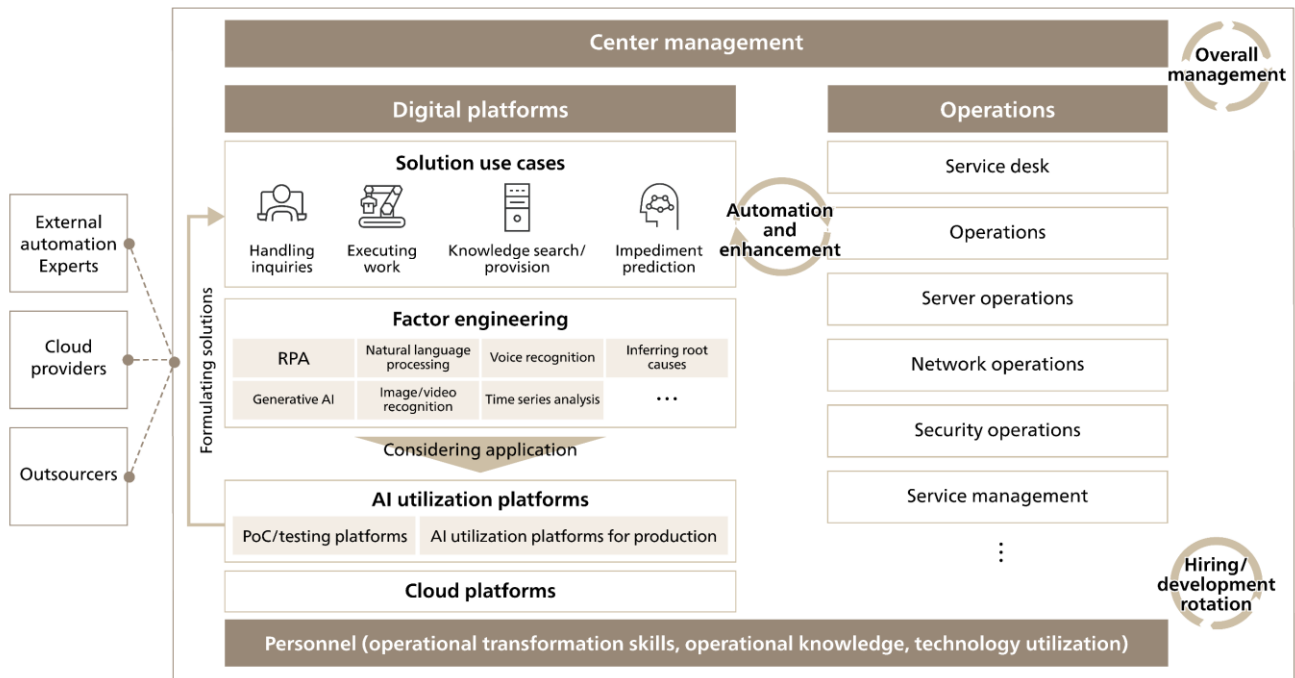
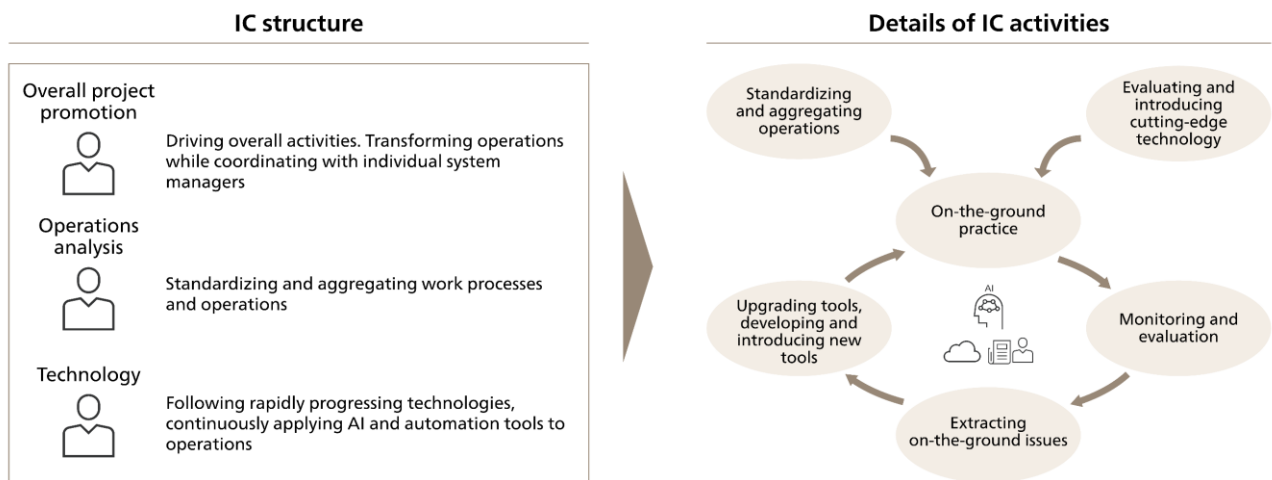
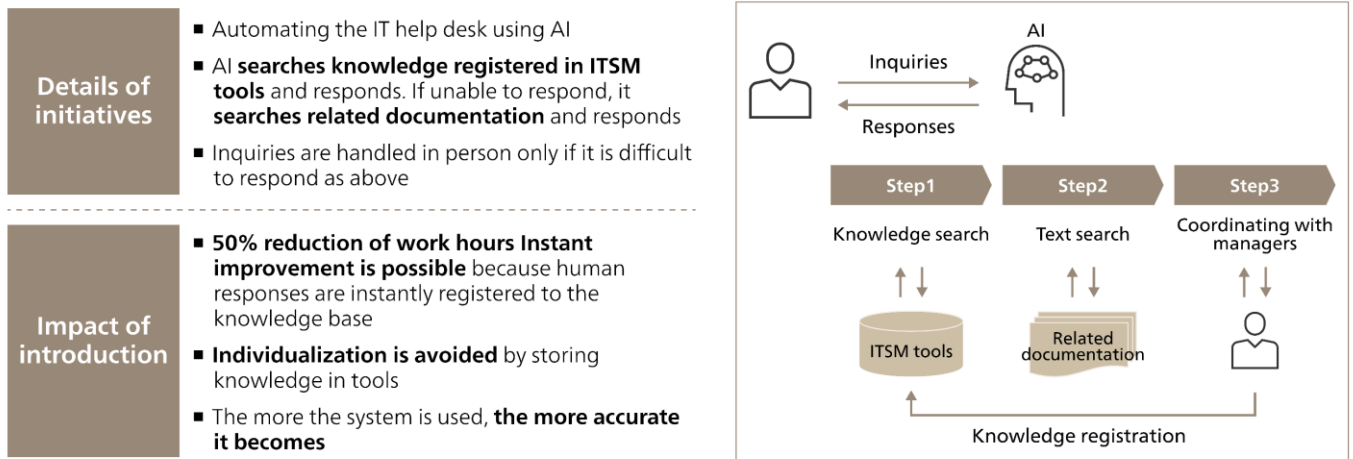


Figure 16 IC and details of their activities



Rather than being a one-off system processing, this allows for overall end-to-end automation of IT operations and maintenance. The entire outlook changes from one based on manual operations and maintenance to one based on automated operations and maintenance driven by technology. A significant amount of work in IT operations and maintenance can be automated, providing significant productivity gains. We have seen a case where AI-enabled automation of the IT help desk led to a 50% reduction in work hours.

Figure 17 Case study - AI-enabled automation of the IT help desk



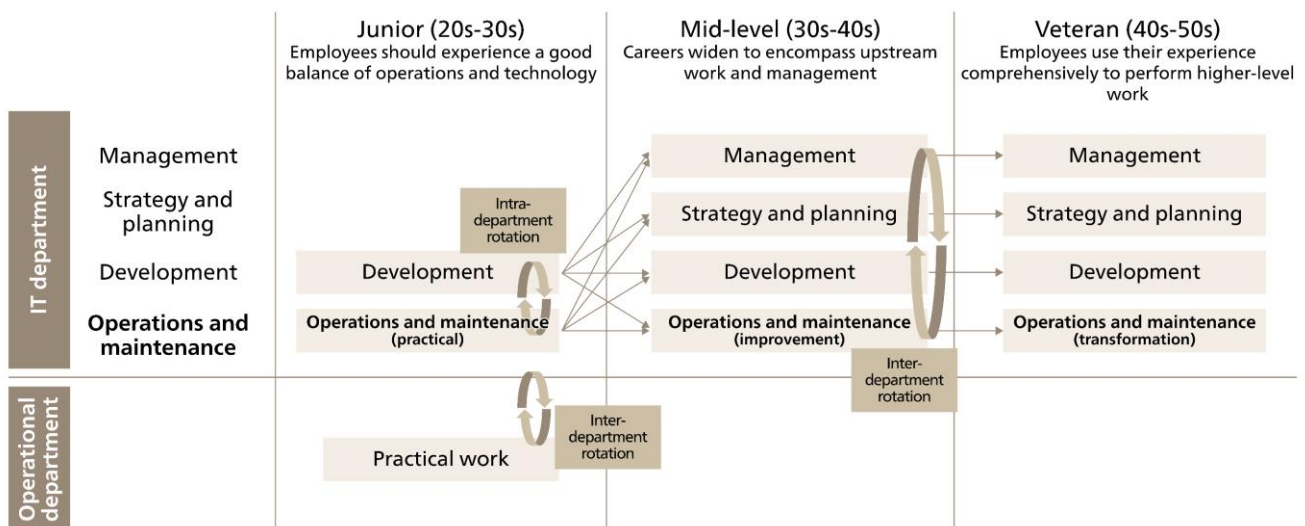
3-4. Leveraging IT Operations and Maintenance as a Site for Developing and Engaging Personnel

Finally, we will touch on the use of IT operations and maintenance for developing personnel. IT department work can be broadly divided into management of the overall organization, strategy and planning, development and operations, and maintenance. It is common for employees, based on their age, to have a career path that goes from development or operations and maintenance work while a junior, shifting to strategy, planning and management as a mid-level employee, before moving on to higher-level work.

Operations and maintenance has the distinguishing feature that it encompasses the entirety of the business and its systems, and sustains and supports the business directly. Juniors get experience from operations and maintenance work, develop a sense of the business and its systems overall, and are then prepared to move on to the next step. Mid-level and veteran employees should ideally have a mission to improve and reform systems and drive automation of operations and maintenance work to contribute to next-generation business continuity.

Companies should turn IT operations and maintenance into something sustainable.

Figure 18 IT department career paths



4 Making Effective Use of External Partners





While there are things companies can do to achieve the desired IT operations and maintenance stated in Chapter 3, in this chapter, we will go over key points for making use of external partners to produce results more quickly and efficiently.

4-1. Leveraging External Partners as Collaborators in Change

This study raised the challenges of not knowing how to start in advancing measures and not being able to take decisive action due to internal resistance in transformations arising from change to existing operations and services.

An effective means of responding to such challenges can be to leverage an external partner to work with the company, from planning to executing on transformation. Such partners possess many frameworks, knowledge, and case studies that companies may not have, and can make useful proposals using their own methodologies. It will ultimately be down to the company to decide what sort of strategy to formulate and what to execute. External partners can help generate and organize ideas, thereby facilitating and speeding up the process. When attempting to carry out transformation using only team members from within a company, there can be anxieties over whether doing so will harm relationships with related departments, leading to a focus on easily accomplished changes. However, an external partner who is unbound by such relationships can drive transformation towards where the company wants to go without getting caught up in existing company practices or deferring to other related parties.

However, it is difficult to drive an effective plan and carry it out. Companies must carefully select external partners to support and work with.



4-2. Leveraging External Parties to Execute Operations

Across the responses to this study, common to almost every theme was the issue of personnel and skill shortages.

External partners can address this issue. There may be company policies that state that operations and maintenance should be done internally as much as possible. However, operations that do not require specific specialized knowledge, such as system monitoring, should be done by external partners. If companies attempt to cover all domains internally, they will not be able to make effective use of their human resources and will be unable to shift them to tasks they originally wanted to accomplish (such as DX). Companies should ideally concentrate their resources on operations that should be done internally, while executing other operations with the resources and skills of external partners. Assigning work to external partners allows them to drive improvement activities such as streamlining domains, efficiently maintaining optimal operations and maintenance.

That said, companies must beware of the potential for outsourcing to external partners to turn their operations into black boxes, and of the increases in costs that can accompany this. Visualizing outsourced operations requires handling governance by employees with experience in those operations, and understanding the state of those operations by the junior employees put in charge of them (which doubles as training).

4-3. Leveraging External Parties as Information Providers

In this study, the lack of information for considering different measures was an issue. This could include not knowing how much to outsource to external partners when optimizing personnel deployment, how much costs will change with outsourcing, and what optimal values are when seeking to optimize investments and costs. Determining the right values from the experience of managers is exceptionally difficult.

External partners can be a reliable means of efficiently gathering information that is not dependent on industry or scale, even for such issues. As they are regularly involved in projects across multiple industries, these external partners will possess many case studies and will have insights into trending technologies such as DX and AI. These parties are also constantly refining their information. It is more effective in time and quality to rely on an external partner to share information, accounting for a company's specific concerns (for example, methodologies that can serve as references for solving a company's problems, or successful case studies from other companies), rather than attempting to figure out a solution from a search engine.

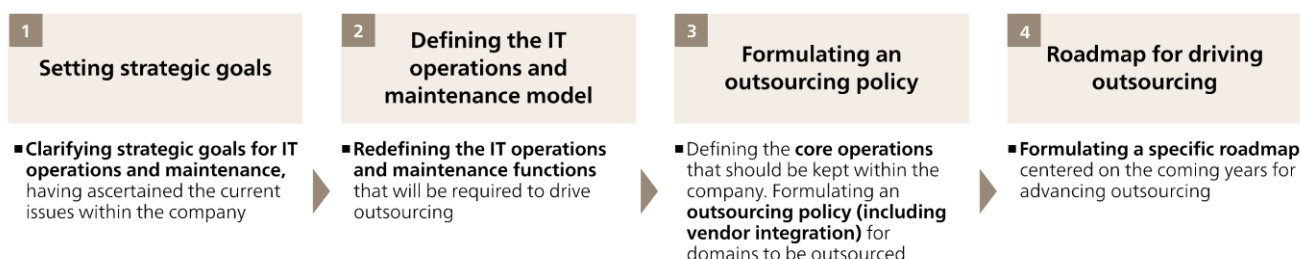
4-4. The Support ABeam Consulting Offers

On the other hand, some thought is required to gather information, so preparations to facilitate this can take considerable time. For example, companies must organize their operations and maintenance work into lists that other parties can understand, so that they can check the scope of what they are outsourcing. This will take some time, but doing so will allow external parties to provide companies with effective information.

Thus far we have covered how companies can use external partners to quickly and effectively execute IT operations and maintenance. ABeam Consulting offers side-by-side support services, including sourcing strategies and Service Management Office (SMO)^{*2} services to help companies achieve their visions for their IT departments.

As part of formulating sourcing strategies, we support companies in everything from organizing their operations to identify the scope of what to outsource, figuring out what they can outsource to external partners, how costs will change with outsourcing, how operational costs will evolve after outsourcing, and supporting the formulation of roadmaps based on cost-reduction measures.

Figure 19 Formulating a strategy for operations and maintenance sourcing

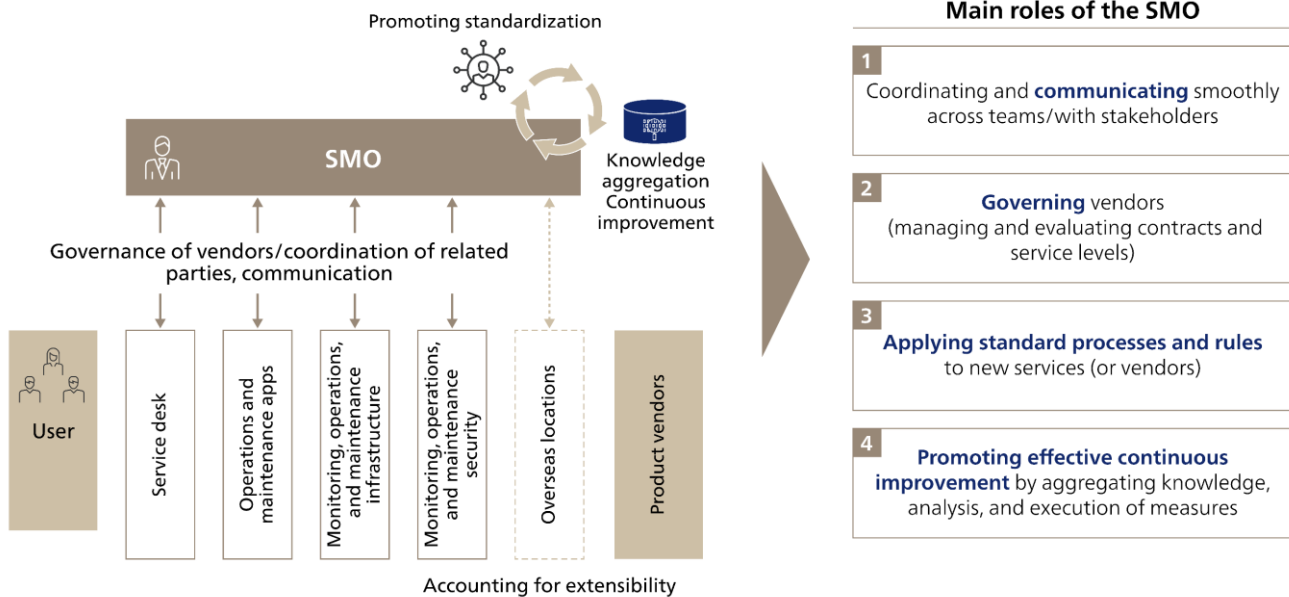


Many companies use a Project Management Office (PMO) to support project managers during projects, but we feel that there are still a few companies that define and operate a PMO-like organization for after projects launch. It is important to deploy and operate an SMO in the same manner as a PMO to maintain and optimize stable post-launch operations and maintenance.

ABeam Consulting's side-by-side SMO service uncovers issues in IT operations, maintenance and systems. We help companies plan and execute the transformation of their IT departments, and by extension the companies themselves. Our services offer continuous improvement by repeating this cycle. We encourage you to take advantage of it at your company.

²Service Management Office (SMO): An organization that manages IT services across organizational boundaries to improve quality, impact, and efficiency

Figure 20 SMO (Service Management Office) Overview



Conclusion

This study investigated IT operations and maintenance at companies and the associated challenges. We have covered the key points companies should be aspiring to achieve with their IT operations and maintenance. The role of IT departments has always been to generate business value using IT and to provide stable services. We hope that the proposals covered in this report to create the foundations for carrying out this role prove useful to your company's IT operations and maintenance. These include redefining the roles of insourcing and outsourcing in IT operations and maintenance, deepening partnerships with external parties, advancing comprehensive automation with technology, and leveraging IT operations and maintenance as a site for developing and engaging personnel.



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