A Case Study on Strategic Shift from Smart-Work to Work-Smart of Company K

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Abstract

Early smart-work of company K was a technology-led way of applying ICT such as smart phones and mobile devices to business. After company K perceived the limitations of ICT-driven smart work, it propelled the work-smart, doing a work smart toward the way that human beings become central and a creative organizational culture is engendered. Company K propelled work-smart strategy in eight categories: simplification of data requirements, establishment efficient meeting culture, streamlining reporting and approval process, simplified document creation, overtime decrease, spreading flexible work system, settlement of healing leave, creating work-smart place. Company K set up an organizational culture secretariat dedicated to work-smart promotion and selected task priorities in consideration of urgency and effectiveness. Owing to such efforts, the company K's work-smart index rose sharply to 72 points this year from 56 points in the previous year. At the organizational culture survey, employees responded that organizational culture improved in all area. For a better future, company K analyzed its work-smart outcomes and planned progressively to improve its work-smart efforts based on employees opinions. This case study will serve as a guideline, for companies to make efforts to going forward to today work-smart beyond yesterday smart-work.

Keywords : Smart Work, Work Smart, Organizational Culture, Work and Life Balance

1. Introduction

To improve management performance and to balance work and life, companies have been trying smart-work. Smart-work can be defined as a flexible working method that can work on online network with anyone regardless of time and place using information and communication technology (ICT) away from physical office [National Information Society Agency, 2010]. Company K had pushed smart-work as the technology-led way applying ICT such as smart phones and mobile devices to business.

Company K had provided virtual desktop infrastructure (VDI) environments for IT department and business departments that have many business trips, night shifts, and lot of task force team (TFT) activities. Thus almost all employees could access their computers regardless of time and space and perform their work continuously even during business trips or telecommuting. Tablet PCs had been provided as VDI tools and used for paperless meetings. Microsoft's Lync 2013 was used as a communication tool for Unified Communication (UC) messenger. Video conferencing and work report could be done at any time by using the built-in camera and microphone of the tablet PC. And through the mobile office, the company could quickly share company news and do personalized tasks such as liaison with colleagues, scheduling, task management, attendance and salary. The smart-work center was built using major cities and overseas offices nationwide so that telecommuters, business travelers, and smart-work center workers could use them.

However, company K perceived the limitations of ICT-driven smart-work in terms of work-family compatibility and a fundamental change of the way of working [Samsung Economic Research Institute, 2011]. Company K tried to various ways to overcome limitations of smart-work. As a result, company K devised a work-smart strategy. Work-smart, as a extended concept of the existing narrow smart-work, literally means doing a work smart, toward the way that human beings become central and a creative organizational culture is engendered. Company K's work-smart definition is similar to the smart-work concept that Korea Information Society Agency [2010] define as a flexible way that is not limited to place and time and as a people-centered culture using ICT.

Company K's challenge provides managerial implications as the strategical shift from technology-based smart-work into more advanced human and culture-centered work-smart.

2. Literature Review

In previous studies, smart-work mainly were defined by smart-work center, mobile-device based work, and telecommuting [Ministry of Public Administration and Security, 2010]. Lee et al. [2012] studied measuring the success of smart-work center. Han et al. [2011] did the research of analysis on core technologies and solutions for the smart-work.

As a smart-work infrastructure has been established, the related researches have been conducted on change in perceptions of smart-work and its impact on work performance. Park et al.

[2014] studied job satisfaction of smart-work worker and continued smart-work usage. Kang et al. [2016] did a research of the influencing factors of smart-work performance.

Jung [2016] researched the effect of smart-work on the organizational environment and the reaction of members in order to observe the effects of smart-work in depth. As a result, it was confirmed that the communication between employees and departments was greatly increased compared to the previous one. The employee recognized that smart-work increased opportunities to communication and mutual contact. Serendipity communication has increased due to overcoming the existing spatial limitations of communication only within the team. This leaded to the increase of communication level and information-sharing among senior, subordinate, and other departments, thereby improving organizational culture and assisting in business performance.

Oh [2015] conducted a case study about a framework for three organizations successfully utilizing smart-work environment. Among them, company B was suggested as a good example of adopting smart-work environment. This company confirmed that it has achieved the organizational culture improvements such as reduction of overtime, autonomy, and flexibility at the organizational level through smart-work.

In recent years, research was being conducted on ways to innovate organizational culture through smart-work. Oh et al. [2017] empirically studied the users' resistance against smart-work, based on the organization's innovative characteristics and user characteristics. Chung [2016] did re-search about organization innovation through smart-work.

Traditional ICT based smart-work research has recently been expanding its scope into work performance, organizational innovation, and personal influence factors.

3. Research Method

3.1 Reason for Company K Selection

This research was conducted in accordance with the case study procedures of Yin [1994] and Henderson and Lentz [1995]. And this case study was conducted according to an analytical approach [Yin, 1994] from the point of view of recognition. In this study, we selected company K in accordance with the theoretical sampling method, which we believe was appropriate for the purpose of work-smart case. Company K was judged to be appropriate for the purpose of research, because it was suitable for academic analysis and could provide practical meaning for reference to organizations that pursue it for organizational innovation and new organizational culture.

Companies that want to change and innovate through work-smart may be curious about how work-smart can be done in people-centered system and cultural aspect. Therefore, this case analysis is expected to provide meaningful implications.

For this study, we collected and analyzed work-smart diagnosis report, internal documents, and related external data that company K had performed. In addition, we analyzed the related data such as the satisfaction survey and the system utilization survey.

3.2 Company K's Work-Smart Diagnosis

Company K wanted to create the balance between work and family while enjoying leisure time, self-developing, and developing ideas for future growth. In response to these requests, company K first diagnosed the corporate-wide work-smart level in order to lay the foundation for becoming a world class company by establishing a dynamic human-centered organizational culture.

First, key issues of work-smart were identified and the goal of changing the way of working and building a people-centered organizational culture were set. A work-smart model was set up suitable for company K, based on the issues of drawing out innovation strategy, strengthening organizational productivity, and creating an in-

novation culture. In order to accomplish this goal, the company K had identified the strategies for work-smart practice and prepared measurement plans. Work-smart diagnosis of Company K was carried out in three stages of define-analysis-design. In the define stage, the strategy system was reviewed and the needs of employees were analyzed. The changes of internal and external conditions and the domestic and oversea cases were analyzed in order to draw out the critical success factors. In the analysis stage, the innovation system and the level of innovation culture were diagnosed. In the design stage, the work-smart level was divided into four categories such as "work style", "smart ICT", "smart place" and "smart people." A capability diagnosis of work-smart was carried out by areas, elements,

〈Table 1〉 Company K's Work-Smart Diagnosis

Category	Types of Tasks				Flexible work	Smart informatization	Smart space-innovation	Smart human resources
	Meeting	Report, Approval, Communication	Cooperation	Time management				
Result	Fair	Good	Fair	Fair	Fair	Good	Fair	Good
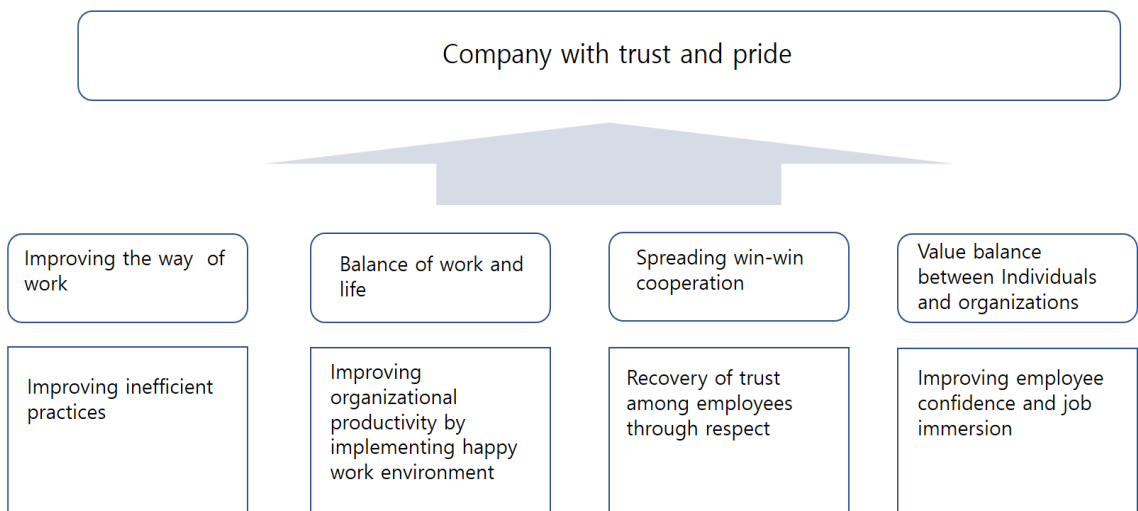
〈Figure 1〉 Work-Smart Strategy for Company K

and measurement items. The measurement was based on the quantified scores in two ways: questionnaire measurement and qualitative real-time measurement. From a qualitative perspective, interviews and surveys were conducted by expert group.

The results of the diagnosis of work-smart level of company K showed that they had more than usual capabilities, however there was a level difference between diagnosis areas. Among the individual measurement items, 'reporting, payment and communication of work', 'smart informatization' and 'smart human capability' are relatively high, whereas 'time management' and 'flexibility of work method' were low. Work-smart level of informationization capacity was relatively high compared to other competence level. This was because the company K expanded its scope after implementing ICT based smart-work. Based on the results of these assessments, company K divided into four areas, 'improvement of working method', 'balance of work and life', and 'proliferation of win-win cooperation culture' and selected tasks for organizational culture change based on work-smart.

4. Company K's Work-Smart Strategy

4.1 Simplification of Data Requirements

Data collecting in company K took a lot of work. Lots of data requirements by memos and e-mails led to work pressure and work dissatisfaction. Self-analysis showed that this phenomenon was due to work practices, convenienceism, and low level of IT system usage.

In order to simplify the requested data, company K improved the efficiency of data production and utilization through improvement of information system. The performance of simplification of data requirements was monitored and the sanction for non-participated departments was imposed.

Company K improved 53 intranet systems to the user friendly systems and integrated the data searching functions. Online data sharing room was opened to share periodic and repeated data. Data submission system was newly established to formulate data requests through existing mail and memos.

As results of simplification of data requirements, the number of data submissions drastically decreased 41%, from 200 last year to 118 this year. Overtime hours decreased drastically from 9% to 1.5%. Recognition of organizational culture improvement improved to 50% from the previous year.

4.2 Establishment of Efficient Meeting Culture

The results of the meeting survey showed that the satisfaction level was less than 10%, reflecting the ineffectiveness of the company K's meeting. It was urgent to establish diffusion of 'meeting diet' culture, setting up meeting guidelines, and settlement of meeting-supporting system.

Therefore, company K started 'Effective Meeting Leadership Program' to enhance the meeting performance and reduce the number of unnecessary meetings. The meeting was attended only by the people who desperately needs it, and

⟨Table 2⟩ Three meeting principles

Division	Contents
Agenda review and Conclusion drawing	Agenda appropriateness must be reviewed, conclusions must be derived, reciting simple materials at meetings must not be allowed.
One Hour Rule	Meetings must be completed within one hour
One Page Rule	Meeting materials and meeting log must be written in one sheet.

meeting data were pre-shared, and meetings were efficiently held. Paperless meeting, prohibition of writing PPT for internal materials, and three meeting principles were implemented.

Company K introduced a meeting monitoring system, efficiency evaluation, and feedback. It also conducted a cartoons campaign for a desirable meeting culture and developed an intranet systems for a meeting management. However, despite the improvement effort of meeting culture, the improvement performance did not appear within a short time period. It was gradually improving through monthly monitoring and analysis.

4.3 Streamlining Report and Approval Process

According to a report and approval survey, the average time required for approval was 12.84 hours. This led to too much paperwork and waiting time, because of especially excessive approval steps that led to delayed decision making and task engagement. Therefore the goal of approval time was set within 6 hours, within three steps, regardless of location and time. The approval time was monitored and new culture of report and approval spread widely.

At the beginning of the year, the average approval time increased to 13.2 hours due to lack of awareness and concentration. Accordingly, the target approval time was set for each document type and the achievement of the target approval time was included as a bonus point of department evaluation.

As a result, the approval time decreased by 74.7% to 9.6 hours. To create the reporting culture of diverse types, company K encouraged intranet systems, SNS, and unified communication (UC) report as well as face-to-face report and introduced a reporting reservation system. Company K also promoted the authority delegation in order to simplify the approval process.

4.4 Simplified Document Creation

Documents were simplified to reduce time waste due to excessive document volume and decoration time. Standard report forms were set by topic and guidelines for document standards were prepared. In addition, simplification of documents was carried out by presenting quantitative criteria considering meeting scale and meeting time. Strict document guidelines were developed to prevent excessive competition for better documentation among departments. Also the unnecessary document decoration were prohibited by typing a text directly into the online system. In addition, the presentations using a MS-PowerPoint in inter-departmental meetings were prohibited. To ease the burden of document creation, MS-PowerPoint template usage was recommended by PPT Sharing system.

<Table 3> Company K's Work-Smart Strategy

Work-smart categories	Existing business processes	Problem	Problem solving	Achievements
1. Simplification of data requirements	• Lots of data requirements by memos and e-mails • Poor IT system utilization	• High work pressure and dissatisfaction	• Simplification of data requirements • Monthly monitoring • Sanctions for non-executed departments • Improvement of IT system	• The number of data submissions decreased 41%
2. Establishment efficient meeting culture	• Unnecessary meetings • Time waste for making unnecessary meeting materials • Participation in meetings of irrelevant people	• Inefficient meetings • Negative perception of the meeting itself	• Campaign for a desirable meeting culture • Effective Meeting Leadership program • Reducing the number of unnecessary meetings • Three principles of meeting • Meeting monitoring • Meeting management system	• Weak short-term performance, but gradually improving
3. Streamlining reporting and approval process	• Lack of awareness of the importance of fast approval • Prefer face-to-face approval	• Delay in decision making • Too much paperwork and waiting time	• Approval within 6 hours, within three steps • Approval time monitoring • Departmental evaluation about approval time.	• The approval time for most departments (70%) decreased • The average approval time decreased by 74.4%
4. Simplified document creation	• Excessive document volume and decoration time	• Too much time to write a document	• Standard forms and guidelines for document creation • Presentations without PowerPoint	• Ease the burden of document creation for employees
5. Overtime decrease	• Habitually overworking • Unnecessary diner party	• Increasing employees' complaints • Lead to staff dinner	• Lunch party instead of time consuming dinner party • Monitoring shut down system • PC-Off after shut-down hours. • Reporting monthly overtime work status	• Overtime work decreased by 60 percent.
6. Spreading flexible work system	• Narrow-range limited flexible working system	• Demand increase for Diversified flexible working system	• Alternative work schedule • Flex-time work • Compressed work • Smart-work center work • Telecommuting system	• Increased usage of flexible work system
7. Settlement of healing leave	• More than 50% not using long-term vacation.	• Overworking during the holiday period • Unwilling to leave considering their boss and peers.	• Department head's vacation guarantee • Department grade down, when not using vacation • Planned vacation usage • From leave approval to reporting	• Annual leave rate increased by 41.7% • Long-term leave rate of over 5 days increased by 20.6%.
8. Creating work-smart place	• Traditional office space • Uniformed space	• Decrease work concentration • Lack of space for work-smart	• Separation of working space • Reflect departmental characteristics	• Increased work concentration • Increase office space efficiency

4.5 Overtime Decrease

Shut down was introduced to balance work and family, through concentration at working hours and prohibition of habitually overworking. However, due to not complying shut down rule and holding an unnecessary diner party, employee complaints increased. So, 119 Dining Culture and lunch party were encouraged, instead of time consuming diner party.

Shut down rule was implemented through cooperation between labor and management and monitoring was performed. As result, unnecessary overtime work decreased by 60 percent. To settle the rule, PC-Off rule was introduced. According this rule, PC had to be turned off after shut-down hours. Only those who needed overtime should request the approval of the department manager. In addition, the monthly overtime work was compared to the former month of this year and the same month of last year and was shared on company bulletin board, which led each department to voluntarily lessen overtime work.

4.6 Spreading Flexible Work System

To work autonomously and creatively, company K, without work gap, implemented a flexible work system, balancing individual needs and organizational work, as shown <Table 4>. The flexible working system that had been implemented in the early days of smart-work was being expanded and diversified. In order to take advantage of the flexible working system, employees should set the type and the period of flexible work, enter them into the systems before three work days, and get approval from the department head and the head of personnel department.

In alternative work schedule, the annual leave with pay were calculated relative to the working hours. In flex-time work, all employees had to work from 10 to 12 and from 14 to 16. In Compressed work such as individual and independent tasks, specialized tasks, tasks intensively processing on specific time period, and overseas business tasks, employees were required to work at least four hours between 7 and 24, up to 12 hours, working freely within 3.5 working days per week or 4.5 working days per week. Telecommuting system was a principle of working at a smart work center, but employees in case of restriction on commuting such as pregnancy, child care, and family support could work at home.

As a result of continuously spreading organizational culture of smart work, the use of flexible work was increasing by the year, as shown <Table 5>.

<Table 4> Types of Flexible Work System

Type	Contents
Alternative work schedule	Work at least 3 hours a day, 15 to 30 hours a week, shorter than the usual 40-hour a week
Flex-time work	Maintain an eight-hour workday, but, start working at different times of the week
Compressed work	Work more than 8 hours a day, work less than 5 days a week
Smart-work center work	Work in separate offices such as smart-work center near residential areas
Telecommuting system	Work from home

〈Table 5〉 The Frequency of Use of Flexible Work System

Types	'13	'14	'15	'16
Alternative work schedule	2	40	40	42
Flex-time work	662	858	978	1,828
Compressed work	3	3	5	14
Smart-work center work	–	–	–	6
Telecommuting system	–	–	9	–

4.7 Settlement of Healing Leave

Company K employees were encouraged to go on long-term leave by adding frequency of long-term leave to an evaluation index. As a result of survey about long-term leave, more than 50% of the respondents did not go on long-term leave. The reason was because of overworking during the holiday period and considering their boss and peers. Therefore, company K introduced leave guarantee system of department head to create organizational culture willing to take a leave. A department grade was marked down, when not using leave such as a vacationer's working in office were found. Employees were required to register their leave plans in advance, so that they could use planned leave. When applying for a leave, company K changed from "approval" to "reporting" to create a leave culture recognizing that annual leave is the employee's right. Company K encouraged the smoothing use of annual leave by reporting usage rate of quarterly leave. As a result, the usage rate of annual leave increased by 41.7% in 2016 year and the usage rate of long-term leave of over 5 days increased by 20.6%.

4.8 Creating work-smart place

In order to realize work-smart, the model for office space innovation was set up toward work-smart place. First, the office space was divided into a work space, a meeting space, a tea making space, an office automation (OA) space, and a rest space, and each department had a special space suitable for various job characteristics of each department.

The auditing department had a face-to-face space, the management innovation department had a creative innovation space, the contract department had a space for bidders, and the HRM department separated the civil affairs consultation space from its office space. Company K also remodeled a multi-functional complex space. The utility such as a beam projector and a monitor for the individual business and conference was installed and used, in addition to a rest function in the coffee shop. At the employee survey after modifying work-smart place, respondents showed 11.8% increase of work concentration, 49% of office furniture placement efficiency, and 45% of office space efficiency.

5. Conclusion

5.1 Summary

In order to speed up management innovation and maintain a balance between work and life, excellent companies have been propelling ICT-based smart-work. Company K also have been

interested in smart-work and pushed it. Early smart-work of company K was a technology-led way of applying ICT such as smart phones and mobile devices to business. However, company K perceived the limitations of ICT-driven smart work and tried to various ways to overcome them. As a result, company K promoted work- smart. From the point of view of company K, work-smart literally means doing a work smart, toward the way that human beings become central and a creative organizational culture is engendered.

Company K performed an organizational diagnosis for work-smart and identified core issues to establish work-smart strategy, which was focused on working method improvement and creation of a human-centered dynamic organizational culture. Company K propelled work-smart strategy in eight categories: simplification of data requirements, establishment efficient meeting culture, streamlining reporting and approval process, simplified document creation, overtime decrease, spreading flexible work system, settlement of healing leave, creating work-smart place.

Company K set up an organizational culture secretariat dedicated to work-smart promotion and selected task priorities in consideration of urgency and effectiveness. Owing to such efforts, the company K's work-smart index rose sharply to 72 points this year from 56 points in the previous year. At the organizational culture survey, employees responded that organizational culture improved in all area. For a better future, company K analyzed its work-smart outcomes and planned progressively to improve its work-smart efforts based on employees opinions.

5.2 Contributions

Today many companies are interested in applying ICT-led smart-work as innovative tools for enterprise management. But company K had tried work-smart strategy. Company K's case provides managerial implications as the strategical shift from technology-based smart-work into more advanced human and culture-centered work-smart.

For successful pursuit of work-smart strategy, leader's will and efforts are absolutely necessary and a dedicated organization should be established. Company K pursued eight work-smart strategies, three of which were implemented with ICT (category 1, 2, and 5 of <Table 3>), five of which were implemented, without ICT, towards reducing workloads, improving work processes, and shifting people's perceptions and attitudes (category 3, 4, 6, 7, and 8 of <Table 3>). In light of company K's work-smart experience, it is necessary to harmonize the conversion of recognition, improvement of institution and culture, and utilization of ICT as a support tool. Only when such an atmosphere is created, creative organizational culture innovation and work-family balance goals will be achieved. We hope this case study will serve as a guideline, for companies to make efforts to going forward to today work-smart beyond yesterday smart-work.

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