



KONICA MINOLTA

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IT Performance Report 2019

IT organization

IT strategy

IT security

IT infrastructure

IT investment

Giving Shape to Ideas

Message from Senior Executive Officer and Global CIO



Alongside the rise in geopolitical risk around the world and shifts in the environment surrounding IT procurement, actions taken towards cyber-security that also covers IoT devices and towards the protection of personal information have become increasingly important. At the same time, changes in business structure and social environment through new business models based on progress in IT technology and the national government-led Digital Transformation (DX) have also been gaining speed in all kinds of industries.

As part of Konica Minolta's "SHINKA 2019" Medium-term Plan, the Konica Minolta Group is aiming to become a company that leads change as "a digital company with insight into implicit challenges" that anticipates social issues and latent issues faced by its customers around the world, brings forth solutions to those issues alongside those customers and society, and supports the evolution of business society and human society. Fiscal 2019 will cap off that Medium-Term Plan.

The IT Planning Division at Konica Minolta has aggressively pushed forward with the development and reinforcement of internal IT infrastructure largely through improving productivity and creativity with the use of IT technology and Robotic Process Automation (RPA) that facilitates data management and work-style innovation and through enhancing the level of security. In addition, the department has also contributed to the promotion of DX under Konica Minolta businesses by addressing the development and operation of IoT business platforms and the development of talent. In our aim to realize an IT department that continues to perpetually evolve and contributes to the business of the Company, for the purpose of taking advantage of IT to promote DX together with numerous customers and partner companies and grow with them going forward, we hereby take the liberty of disclosing information on Konica Minolta's IT Medium-Term Plan and the degree of progress of that plan.

My hope is that you find this report to be of some use, and that it positively serves efforts to evolve upon business society around the world as we continue forward.

Ikuo Nakagawa

Senior Executive Officer
Konica Minolta Inc.

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1 IT Medium-Term Plan

Guided by the Medium-Term IT Plan linked with the Medium-Term Business Plan, Konica Minolta is strengthening its internal IT platform while at the same time developing and managing an IoT business platform.

“SHINKA 2019:” Konica Minolta’s Medium-Term Business Plan

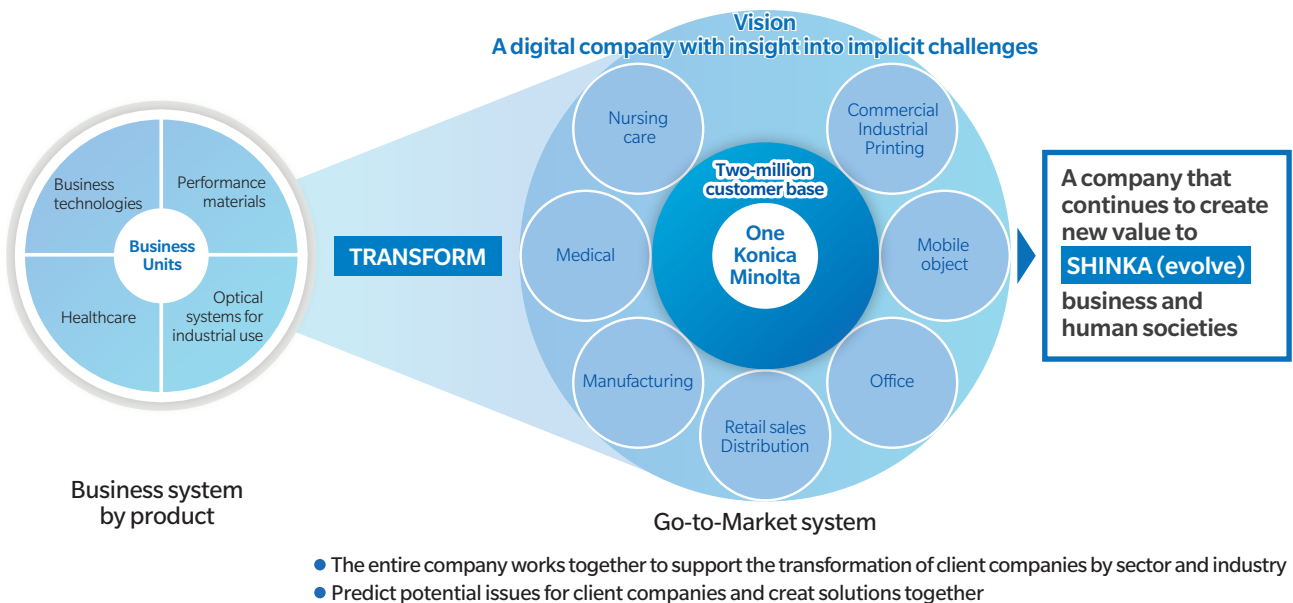
Under “SHINKA 2019,” its three-year Medium-Term Business Plan that commenced in fiscal 2017, Konica Minolta adopted “a digital company with insight into implicit challenges” as the form that it would aim to achieve. We will aim to become an enterprise that keeps on creating new value for the sake of the evolution of business society and human society by continuing our efforts to work together across the entire company to support the transformation of client companies by sector and industry, predict potential issues for those companies, and create solutions together with them.



IT Planning Division Medium-Term Plan (Fiscal 2017-2019)

The IT Planning Division at Konica Minolta’s Head Office has devoted efforts to establishing an internal IT platform as a global company—efforts outlined in our global IT strategies since fiscal 2011 and in the Fiscal 2014-2016 Medium-Term IT Plan. The IT Planning Division Medium-Term Plan for fiscal 2017-2019 establishes six themes and calls for the Company to pursue them. These include establishing an IT platform to support business transformation aimed at expanding our IoT business, security measures, and building a data utilization support system and IT platform for ascertaining, analyzing, and gaining insights into business performance indicators in a timely fashion.

Form that we seek to achieve under “SHINKA 2019,” our Medium-Term Business Plan



IT Planning Division's Vision and Themes under Its Medium-Term Plan for Fiscal 2017-2019

Vision

- IT departments that constantly achieve ambitious goals with boldness, speed, and persistence
- IT departments trusted as essential organizations by business divisions globally
- IT departments that lead the industry through active efforts to develop and manage IT for our business while deploying state-of-the-art technologies and conducting internal IT management

Medium-Term Plan Themes

1. IT infrastructure upgrade to support business transformation
2. Enhance IT tools and services for work-style reforms
3. Data-analytics system development for management decision in a timely manner
4. Stable and secure IT infrastructure deployment to ensure business continuity
5. Company-wide IT cost control
6. Strengthen IT talent and define global IT structure

2 IT Organization Structure

We have established a governance structure consisting of five global regions with IT Planning Division serving as the supervisory organization to facilitate speedier information-sharing.

Global IT Department Structure

The Konica Minolta Group, which is engaged in the development of various businesses, is made up of approximately 160 companies that include companies for R&D, manufacturing, equipment and service sales and after-sales service as well as companies that handle shared service functions for internal purposes. In order to thoroughly spread the policies, etc. on IT formulated by the head office of Konica Minolta Inc. around the globe, IT departments are present in five regional bases located in the US, Europe, China, Singapore and Japan. The IT department in each region exerts controls over its respective region.

The development, maintenance and operation of many of the information systems in the Japanese, Chinese and Asian regions are handled by Konica Minolta Information Systems Co., Ltd., an information systems subsidiary of Konica Minolta.

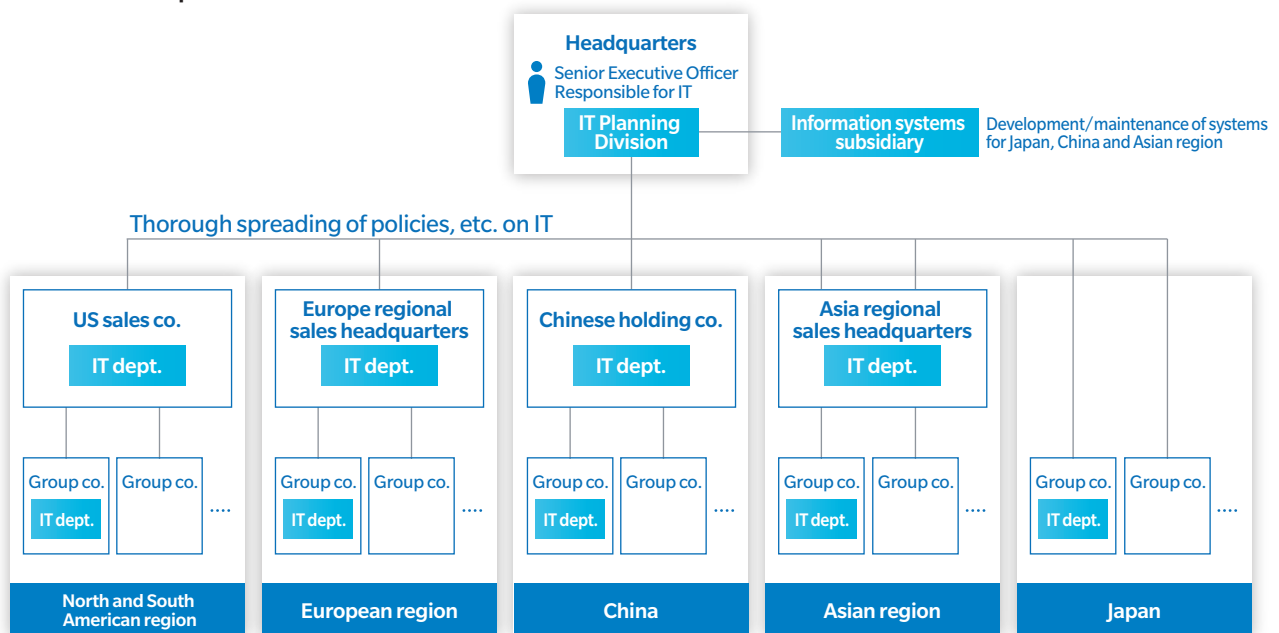
The IT departments in the Konica Minolta Group collectively make up a structure of approximately 800 members worldwide, including approximately 300 members in Japan.

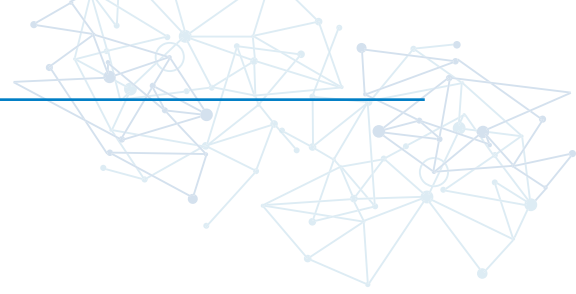
Global IT Initiatives

At Konica Minolta, the IT Planning Division is the entity responsible for developing policies on initiatives for data management, integrated infrastructure, integrated Enterprise Resource Planning (ERP), communications platforms, security measures and the centralized purchasing of the likes of software licenses and PCs, and thoroughly spreads those policies globally while cooperating with the departments supervising IT in each region.

Based on those policies, each Group company forms a plan for the IT initiatives that it requires in the expansion of its business, the improvement of its productivity, and other areas. Every year, the IT Planning Division verifies the annual IT plans of the Group companies representing Konica Minolta's main businesses, evaluates elements such as whether any discrepancies are present between the head office's IT policies and the IT initiatives of each Group company and whether there are any issues with the order of priorities, and provides feedback to each Group company. In doing so, the department endeavors to optimize the planning and implementation of those initiatives on a global basis.

Structure of IT department





Global IT Operation

Since fiscal 2013, Global IT Meetings at which supervisors from the head office's IT Planning Division and regional IT departments gather together to disseminate global policies and initiatives on IT and share examples of practices in each region have been held. In fiscal 2018, a total of two IT Meetings, one in Europe and one in Singapore, were held. In addition to sharing information on IT initiatives and examples of practices that contribute to the elevation of customer value in each region and on the status of security and protection of personal information in each country, the Meetings play key roles in global IT operation that include determining policies for the next wave of ERP at each Group company through discussion with regional IT supervisors.

Reinforcement of IT Human Capital

Konica Minolta is tackling the reinforcement of IT talent with the aim of securing talent to undertake strategy/planning for IT and IT projects. We have established eight skill map patterns and evaluation systems based on the Users' Information Systems Skill Standards (UISS) by the Information-Technology Promotion Agency (IPA), and are administering training programs in line with those patterns and systems. We facilitate the ongoing improvement of skills by administering a skill diagnostic once a year to IT Planning Division in Japan. In the future, Konica Minolta intends on enhancing its training programs aimed at IoT business.

The reinforcement of IT talent is essential for realizing enhanced corporate value by all employees, not just those in IT departments. Based on that perception, Konica Minolta is also working on dissemination, enlightenment and employee development efforts through workshops and other means so that each individual employee can personally consider how to utilize IT and make active contributions.

Selected as "2019 Competitive IT Strategy Company Stock and 2019 Noteworthy IT Strategy Company"

With the contribution of its IT utilization efforts in enhancing corporate value having been highly recognized, Konica Minolta was selected as a "Noteworthy IT Strategy Company" for 2019. We were also recognized as a "2019 Competitive IT Strategy Company Stock," which is jointly selected and announced by Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange as a company that is strategically addressing the utilization of IT.

Konica Minolta is aiming to shift its business operations to those reflecting "a digital company with insight into implicit challenges," and is positioning IT as both protective investment and aggressive investment to facilitate the growth of its businesses.

In addition to introducing mechanisms that make use of IT, such as the "Workplace Hub" platform for providing batches of optimum services for individual customers to enhance customer productivity and creativity and care support solutions that considerably mitigate the burden of nursing care on a working level, we will continue providing our customers with value-added service solutions that take advantage of data.



攻めのIT経営銘柄
Competitive IT Strategy Company

External evaluations of IT management

FY	Description of evaluation
2016	Competitive IT Strategy Company Stock
2017	Noteworthy IT Strategy Company
2019	Noteworthy IT Strategy Company

3

Establishment of IT Governance

In addition to administrating guidelines shared across the Group on a global level, we are implementing various IT initiatives for risk countermeasures as well as those for smoothly facilitating the expansion of our business.

Konica Minolta's Global IT Governance Guidelines

In fiscal 2016, IT departments in the Konica Minolta Group commenced the establishment of Konica Minolta's Global IT Governance Guidelines, which include the Company's IT Management Policy. Starting in FY2017, we conducted the test implementation of those Guidelines and moved forward with adopting them as internal provisions, and commenced their full-fledged administration in fiscal 2018. These Guidelines comprehensively set forth required items in IT-based contributions to our business and response to risk. By sharing them with the IT department in each region and administering IT management rules that are shared around the world, we will proceed to enhance our IT governance and support our global business.

Additionally, as an operating model for boosting the effectiveness of those Guidelines, our IT departments will also establish an IT operation model for Konica Minolta, and will promote IT governance based on the dual axes of that model and IT management rules.

IT governance/management process



Source: Prepared based on "COBIT®5"

Linkage with Existing Endeavors

Konica Minolta has conducted the below initiatives up to this point. We will continue to conduct these endeavors through linkage with IT governance/management.

1. Evaluation and improvement of IT-related items at Group companies

IT departments perform regular evaluations of IT-related items at each Group company (IT controls based on J-SOX, IT expenses, application usage status, infrastructure environment and IT security), and issue requests to them to take necessary measures in accordance with the results of those evaluations.

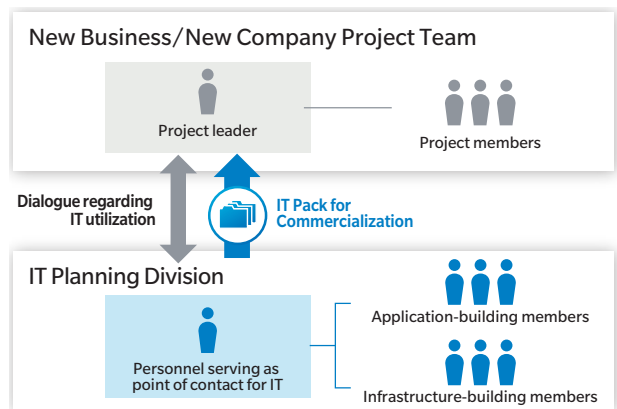
In fiscal 2018, evaluations of ITCLC (companywide IT controls) based on J-SOX were conducted for 143 companies.

2. Assistance with speedy expansion of new businesses

For the purpose of facilitating the speedy launch of new businesses or companies, the IT Planning Division prepares the necessary IT equipment and packages it under the name "IT Pack for Commercialization." This pack consists of guidelines, a basic IT program, policies on Group standards, and various processes and templates. Moreover, upon the application of that pack, the IT Planning Division assists with the smooth expansion of businesses by assigning personnel to serve as the point of contact for IT.

In fiscal 2018, this pack was utilized for projects in our precision medicine business.

Diagram of projects utilizing "IT Pack for Commercialization"



Composition of "IT Pack for Commercialization"

- Guidelines
- IT program (Finance/accounting analysis, hardware, software and network ware)
- Policies on Group standards and various processes and templates

4 IT Security

We have established a management structure and system around the world to enable us to guarantee IT security even when an unforeseen situation occurs.

IT Security Management System

The establishment of an IT security management system for the entire Group is one way in which Konica Minolta is continually working to improve IT security at Group companies. As part of a Group-wide security management system, all Group companies in Japan have continuously acquired ISO/IEC 27001 certification, an international standard, since 2009. Overseas Group companies have also built their own management systems internally, with 16 companies having acquired the abovementioned certification as of the end of fiscal 2018.

In January 2016, we launched the Konica Minolta Computer Security Incident Response Team (KM-CSIRT*) as part of a system to enable a quick response in the event of a serious IT security incident.

In fiscal 2018, we commenced endeavors for the purpose of expanding the applicable scope of our CSIRT to include product security in addition to internal IT.

*CSIRT is the general term given to organizations that handle incidents related to computer security. The Nippon CSIRT Association is a community that coordinates the sharing of information and collaboration among CSIRTs in Japan and that supports efforts to create CSIRT within organizations. Konica Minolta became a member of the Association in April 2016.

Measure to Prevent Information Leaks

As initiatives for preventing leakages of information, Konica Minolta introduced next-generation firewalls in fiscal 2016, and took measures to prevent its networks from various

threats. Through protecting ourselves from existing threats in real time, detecting unknown threats with the use of sandbox technology, visualizing applications used inside our networks and the users of those applications, conducting monitoring and exerting control in line with our security policy, we have established a safe and reliable environment for Internet use, and are also continuously taking measures with respect to the monitoring of suspicious behavior within endpoints.

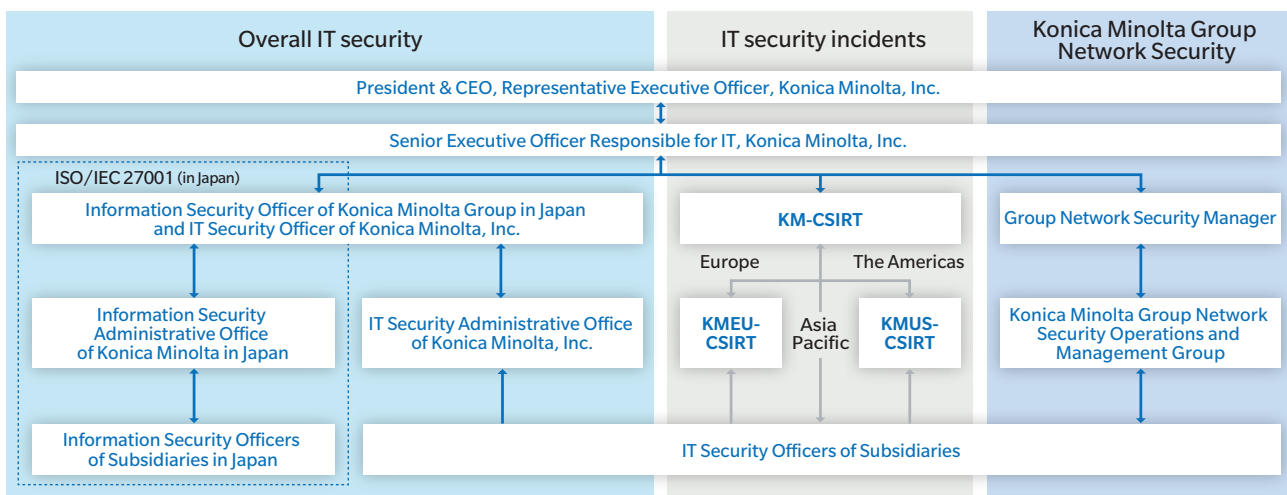
In the event that information does leak, alongside promptly notifying customers and the competent authorities, Konica Minolta endeavors to investigate the pertinent causes, minimize the damage, and take measures to prevent leaks from reoccurring.

IT- Business Continuity Plan (BCP)

Konica Minolta aims to refrain from cutting off the supply of its products or services even if a disaster or failure should occur and restore that supply at an early stage in the event that it should be cut off. Under our BCP, for the purpose of preserving systems and data, the basic actions called for are to first install a server at a formidable data center, then determine what systems to recover in accordance with their properties and how many days later to recover them, and put a backup environment in place at a remote location.

We have deployed IT-BCP Guidelines across our entire organization since fiscal 2018, and continue to improve the level of associated countermeasures.

Governance on IT security



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Optimization of IT Investment

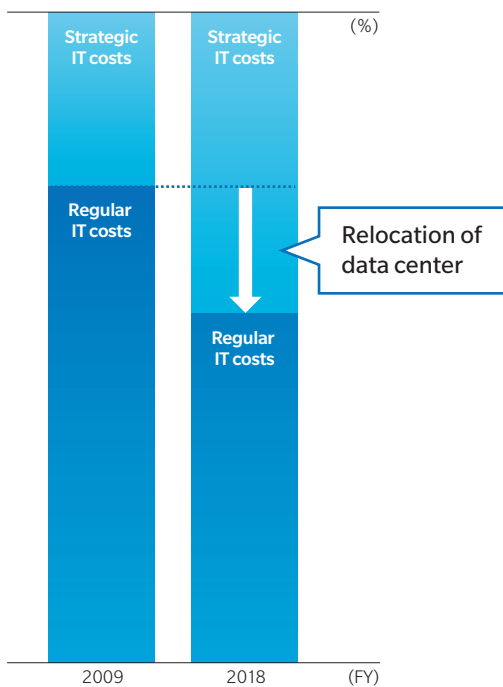
As we expand our business operations, alongside curbing regular IT costs, we appropriately manage investments necessitated by our businesses.

Reduction of Regular IT Costs

Since fiscal 2009, Konica Minolta has expanded the size of the Group largely through aggressive M&As. In line with that, IT costs incurred by the Group as a whole have been trending upwards. In order to curb total IT costs while simultaneously realizing the promotion of business reinforcement in the Group through IT, we are continuing our endeavors to reduce those costs.

To give several examples of our proactive efforts in this regard, in the area of applications, we have been integrating core systems at sales companies in the Asian region. In infrastructure, the Company has been promoting the virtualization and integration of servers. In the area of IT procurement, we have been procuring software licenses and PCs through a global contract. In 2018, the Company reduced regular IT costs through relocating its data center.

Effects of reductions of regular IT costs as a percentage of total IT costs



IT Investment Management

The business divisions, IT Planning Division and management at Konica Minolta's Head Office are working in unison to implement IT investment management necessary for the Company's businesses.

Every year, upon compiling our budget for the next fiscal year, we consolidate information on the main IT projects that will be subject to management based on the amount of investment, and organize them into a portfolio. Management then makes a judgment on that investment. After an IT project has commenced, it is monitored for the purpose of achieving Quality, Cost and Delivery (QCD) targets. Once it enters operation, an evaluation of whether or not the envisioned effects have been achieved is conducted to maximize the return on IT (ROIT).

Number of projects subject to IT investment management

38 (Fiscal 2018)

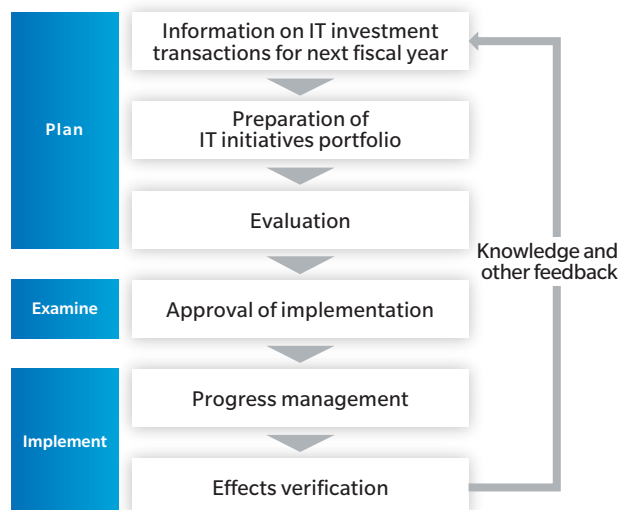
Number of investment completion evaluations

7 (Fiscal 2018)

Number of effects verifications (ROIT evaluations)

14 (Fiscal 2018)

Flow of IT investment management



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Establishment of IT Infrastructure

By utilizing IT in various aspects of our business activities, we have yielded numerous positive outcomes that include improved security and work efficiency and the promotion of work-life balance.

Consolidation of Server Equipment and Utilization of Public Clouds

For the purpose of consolidating its server equipment, Konica Minolta carries out initiatives tailored to internal and external circumstances, such as integrating its data centers, building on-premises virtualization environments, utilizing public clouds and formulating hybrid cloud guidelines.

In fiscal 2018, we successfully consolidated the public cloud accounts that we use in Japan into our IT department in order to eliminate the use of IT not authorized by the Company and to reduce costs, thereby realizing an integrated management structure.

Number of systems in operation in Japan

On-premises virtual environments (private clouds)

480
systems
(As of March 31, 2019)

Public cloud environments

165
systems
(As of March 31, 2019)

Establishment of Remote Work Infrastructure and Virtual Desktop

To provide a means of remote access for using internal systems at employee homes, sites of business travel and other locations, Konica Minolta provides Virtual Private Network (VPN) services with quarantine functions and has established an environment with consideration accorded to security and the improvement of employee convenience. In addition, we have established a virtual desktop environment so that applicable persons under the work-from-home system for childcare or nursing care can perform company duties on their PC at home as well. Because the desktop and data all exist at data centers and no data is left on the hard disk of PCs at employees' homes, the virtual desktop can be used safely and securely.

In fiscal 2018, by revamping our VPN service to prepare for greater growth in use following the promotion of cloud utilization for work systems, we increased the number of possible simultaneous connections as well as reinforced security.

Remote work environment users in Japan

5,800 users/mth
(As of March 31, 2019)

Status of server operation in Japan

Jan/May 2005 Integrated data centers

In addition to consolidating the large data centers that we operated at two sites in Japan, we integrated primary systems and other elements and centralized the operation and management of approximately 220 servers.

Sep 2007 Commenced use of external data centers

As a measure to prepare for disasters and increase the number of servers, we commenced use of formidable external data centers that are compliant with Information Security Management Systems (ISMS) and IT Service Management Systems (ITSMS).

Apr 2011 Started providing on-premises virtual environment

We began building an on-premises virtual environment to provide servers to operations departments and further consolidated our server equipment, thereby realizing effects such as cost reductions, enhanced server operation efficiency, and the reinforcement of our BCP.

Jan 2013 Commenced use of IaaS at Singapore data center

We selected the Infrastructure as a Service (IaaS) at our external data center in Singapore to host the building of

our ERP system for Asia sales companies as well as the relocation of our safety verification system, and commenced the use of public clouds in earnest.

Jan 2016 Started providing services through public clouds

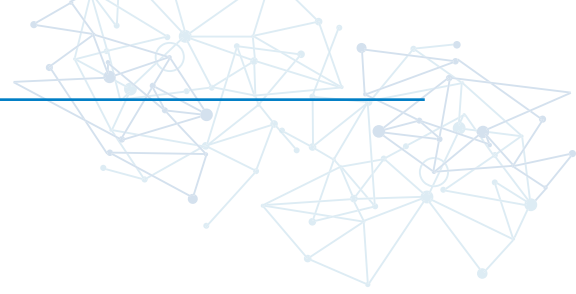
We adopted IaaS for public clouds as our hybrid cloud architecture, selected multiple cloud service providers, and commenced shared operation and the provision of services to coincide with our on-premises virtual environment.

May 2018 Made transition to new environment for external data center

We made the transition to a next-generation data center with the latest virtualization technology incorporated into it following the closing of the old data center due to the end of the useful life of its building.

Feb 2019 Made transition to new environment for Singapore data center

We realized improved functions and performance, the stabilization of quality, stronger security, cost reductions and other effects by making the transition to a new public cloud environment that makes the supply of new technology and services and the speedy and satisfactory provision of resources possible.



Automation of operations through Robotic Process Automation (RPA)

We are presently pushing forward with the introduction of RPA as part of our work process reforms and work efficiency enhancement initiatives. We have begun deploying RPA in Japan and in the Asian region, and our associated endeavors are expanding globally. The global deployment of RPA facilitates the progress in the lateral standardization and consolidation of shared operations across multiple sites. Moreover, it also enables us to utilize other regional assets. For those reasons, we have formed a global team to efficiently push forward with the deployment of RPA. Promoting automation has also yielded effects other than increased efficiency in the form of improved operations quality. Not only do our RPA endeavors serve to improve the productivity of our operations, the process involved also serves to develop human capital to prop up the “digital company with insight into implicit challenges” that we are seeking to realize under “SHINKA 2019.” We are also in the process of examining the expansion of business commodities with the use of RPA in collaboration with our business divisions.

Cases of automation of operations through RPA

166 operations
(As of March 31, 2019)

Introduction of Expense Settlement System

We carried out the introduction of a cloud-based expense settlement system and completed its deployment by fiscal 2017.

Through this system, we are realizing the visualization of expenses, improved productivity, a transformation in work-styles, the standardization of operations, stronger governance, and IT optimization.

Number of expense settlement system users

13,300 users
(17 target Group companies as of May 31, 2019)

Formation of Software Asset Management and Monitoring Structure

In order to circumvent license compliance risk and security risk that impacts its business, Konica Minolta formed a software asset management structure. More specifically, the Company established a structure that, by visualizing all aspects of the PCs and software used by Group employees in the performance of operations, is capable of objectively monitoring who is using what kind of software assets, where they are using them and for what purpose, and what kind of management state those assets are in. The scope of management under that structure is as follows.

Number of employees managed*

24,000 employees
(As of March 31, 2019)

*Includes employees at Japanese affiliates

Number of PCs managed

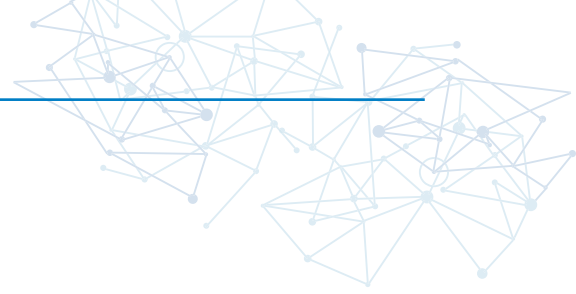
28,000 units
(As of March 31, 2019)

Units of software managed

1.75 million units
(As of March 31, 2019)

Through the introduction of this system, IT asset managers in our organization have become able to monitor and manage software assets over an arbitrary range. Moreover, it is now easy for individual employees to self-manage the PCs and software that they personally use. Furthermore, managers can now swiftly detect slight signs of risk and circumvent it before it develops into a full-blown problem. In addition, by lending visual form to software assets, the system is also contributing to the shortening of verification times for the implementation status of IT initiatives and the curbing of the procurement and purchase of superfluous software assets.

Going forward, in addition to endeavoring to further expand the scope of management for software assets, we will examine and propose the more effective utilization of those assets in our business.



Secure Use of Smart Devices

At Konica Minolta, Japanese Group companies alone account for the use of approximately 7,900 smartphone and tablet devices. The Company has put an environment in place that makes it possible to access internal email, a portal site, an expense settlement system, a maintenance support system and other Web-based applications to facilitate the performance of operations at any time from a variety of locations, including sites of business travel and employee homes. Because of the high risk involved in smart device use, including the risk of loss or theft, we have prepared a system to manage mobile devices that users are obliged to install on their devices. In doing so, we are working towards preventing information leaks and other security accidents.

Number of smart devices used in Japan

7,900 units (As of April 1, 2019)
(includes roughly 350 BYOD*)

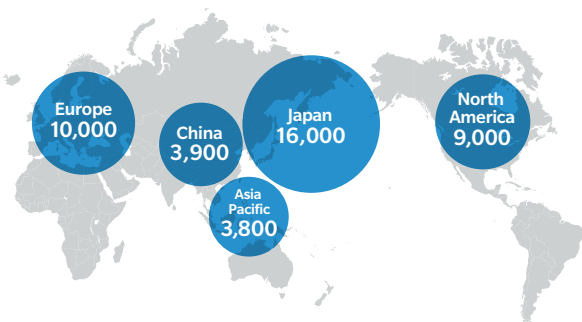
*BYOD: Bring Your Own Device

Utilization of Global Email

Konica Minolta operates internal email systems in the three regions of the Asia Pacific, North America and Europe. While endeavoring to reduce costs through consolidation in each region, we provide our Group companies with a secure email environment armed with an advanced level of operation and multiple security measures. Furthermore, we will proceed to elevate the quality of collaboration that this environment offers by bolstering the linkage between the email system and our information-sharing platforms.

Number of global email users

42,700 users
(As of May 31, 2019)



Promotion of Real-Time Communication

Employees at Konica Minolta have the ability to choose the means of communication that suit their present location and situation. We encourage communication in real time that removes the need for concern about the physical distance between both parties.

The Company has established an environment around the world that allows communication to be initiated securely and without delay both internally and externally. Such means of communication include that conducted over chat rooms through linkage with cloud platforms in addition to Web meetings and Instant Messenger (IM). For teleconferences, we have readied a Virtual Meeting Room (VMR) service that can be securely and mutually connected to from PCs and smart devices in locations where no teleconferencing system is present, be they inside or outside the Company. Through these means of communication, we are realizing the active sharing of information, swift decision-making, and enhanced efficiency for meetings.

Number of Web meetings held in Japan

20,000 meetings (Fiscal 2018)

Number of teleconference devices installed in Japan

500 units (As of May 31, 2019)

Number of meetings held using VMR in Japan

1,500 meetings/mth (Fiscal 2018)

Number of IM messages

1.87 million messages/mth (As of May 31, 2019)

Number of chat users

8,000 users (Fiscal 2018)

Promotion of Collaboration

We have put an environment in place on our websites that enables speedy information-sharing and seamless collaboration through joint work among internal organizations or with external parties in organization- or project-based units. We use these websites as companywide portal sites to transmit and share messages from top management and internal information.

Number of registered sites

2,327 sites (As of May 31, 2019)



KONICA MINOLTA

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