05 Information

01 Information environment
01 Leadership
01 Leadership
01 Has the management promoted the information system in the enterprise eagerly?

Y What kind of effect does the management expect in the enterprise operation most by making use of the information system?

N Advanced information technology is diversifying business. The establishment of necessarily information system in the enterprise may be delayed, if the management doesn't show their direction of the information system to the employee.

02 Has the management recognized the importance of information system, and discussed with the employees to get their understanding for developing and using information system?

Y The management's daily communication makes to increase the employee's consciousness about information system. The result of regular communication should be written in a document for future reference.

N The management should make the employees understand his willingness, by talking actively to them what he thinks about information system.

03 Does the manager take a leadership to utilize information system?

Y The manager should give feedback to the person in charge a result of actually using information system, so that he would become more active with positive mind.

N When the manager uses information system positively, the employees become more active to utilize the system. It also inform the convenience that information system can be appreciated with advantage convenience by using it deeper and wider.

02 Purpose and policy
01 Purpose and policy
01 Does the management clearly announce the purpose and policy to use information system?

Y The purpose and policy to use information system should be in a document, and review it every year.

N If an employee develops an information system independently, it would be difficult to unify the system as a whole in future. The purpose and policy to use information system should be established through communication with the person in charge.

02 Is there any long-term or middle-term plan, to develop information system? Do you check if it meets with the management strategy of the enterprise?

Y Review the system plan regularly with the people concerned and the experts, based on the investigated conditions of rival companies, because a change on information technology is drastic.

N Developing information system can't be attained in a short time. Make a goal, and develop it into a long or middle term plan, and try to achieve it step by step.

03 Do you give priority to an applicable business area in introduction of an information system?

Y Review regularly if the criteria to give priority are appropriate.

N It is important to what you should give priority in order to utilize management resources effectively, and the priority should be examined together with the criteria.

04 Do you define the characteristics of an information system to introduce which is good for current business conditions?

Y Review the definition to optimize the results again, considering the company scale and the management resources available.

N The choices increase due to the progress of the information system technology. Consider them and select the best for the company's future.

03 Information cost
01 Information cost
01 Do you promote introduction of information system, making its budget?

Y Does the budget of information system meet with your middle term business plan?

N Making the budget of information system leads reviewing the necessary management

resources to develop the system.

02 Is the scale and order introducing the information system fully examined from the cost vs. effect aspect?

Y Be aware of the cost including necessary expense for operation. Review the effect including the indirect effect which is sometimes overlooked.

N It seems difficult to grasp the indirect effect especially, but trying to do it continuously with ideas makes the result more precise.

03 Do you consider outsourcing (make or buy) on the development and operation of the information systems?

Y Be careful especially of the maintenance cost of information system in the case of outsourcing.

N Try to estimate the in-house development cost first. Using outside resource for the information system has become easier not only on the development of a system but also on recently.

04 Have the development policy and operation policy of the information system been defined?

Y The development policy should be made in to the company standard and utilized and referred to it at the review of design development.

N The difference by person in the development phase, and the difference of specification between the inside work and outside work will push up cost.

05 Is the budget for introduction of the information system surely followed up?

Y Do you confirm not only the use of the budget, but also the effects in your follow-up?

N Be sure to follow up the budget for introduction and the result expected. If they are not satisfactory, make clear the reason and establish a countermeasure so as to apply in the next introduction.

04 Organization

01 Organization

01 Are the responsible section and a person in charge of information system defined in the organization?

Y Innovation of information technology is changing dramatically, so pay attention to refresh in-house technology.

N Today it does not allow us to promote information system independently by ourselves. Make clear the person in charge to master necessary technological development.

02 Are the duty, authority and responsibility of the information system department defined?

Y The information department can't develop and operate the system independently. Review the organization whether the cooperation of other sections can be gotten easily.

N Nowadays the work and the business change drastically. It should be considered carefully to promote the system not only by relying on an individual skill but also on the organization.

03 Does the information system department grasp user's needs fully?

Y Train user departments to feedback their needs positively to the information department.

N The information department should carefully consider user needs, and especially review and pick up them at budget period.

04 Is the organization to review and discuss the priority of development and/or introduction of the information system clear?

Y A view point of the whole enterprise such as the consistency and the like with the middle-term plan is important.

N The concept and priority of developing the system should meet with all the company policies, so that any system should not be developed only by react to the user's request

05 Are the ability and number of staff composing the information system department appropriate?

Y Review the consistency with the business plan and the company policy.

N It is very difficult to attain the reinforcement of the information system department

in a short time. Proceed with the increase in personnel intentionally.

06 Are the talented people who have high information processing ability intentionally posted in the user departments as well?

Y The balance of information technique capability between the user department and information department should be considered.

N It is difficult to rely on the information department for all information technique capability with quick response. Study strengthening of the user section.

05 Fostering capable staff

01 Training of information literacy

01 Are the engineers trained intentionally to catch up with the technological progress in the information system?

Y Recommend studying from the outside of the office, for example to review information system of other company or to attend outside seminars, so as not to be in self-satisfaction.

N Today the technological progress is drastic, and new techniques and new applications are developed successively in the information field. Give a theme to the person in charge, and request a report on the result of technological study.

02 Have you established a curriculum of information literacy (information ability) training program, covering all the company staff and executing it with the schedule?

Y Recommend establishing the curriculum including legal request for packaging software and in-house standard for information development, as well as the general training such as Word and Excel.

N The company's re-engineering becomes possible after making permeate the information literacy through all the company. Make a plan to let all the staff have a minimum requirement of information technique.

03 Is the department to take charge of information training defined, and do they know user's information technological capability?

Y Recommend reviewing whether the investigation method and frequency of user's information technological capability are appropriate.

N Decide a department in charge, and make a plan to investigate the capability and refresh it periodically, because a difference of information literacy by individual is big.

04 Is there any user training in order to follow the expansion and advancement of the information system?

Y Recommend to review the function of the organization making use of the most of the advanced information expert and the like in each department, whether the information technique permeates in the company.

N It is difficult for only the information system department to promote the expansion and advancement of the information system technology. A training plan of acquiring skill in each department is necessary.

05 Is the information processing technological skill reflected on the personnel appraisal?

Y Review the management structure if the employee's effort to challenge to get required technology and to utilize it, is reflected in his daily job.

N An organizational support is important to reflect on the personnel appraisal both the employee's effort to master information skill and to use it to the daily practice, and link it to the assessment of the person's salary.

02 Utilizing information

01 Relationship with the management strategy

01 Relationship with the management strategy

01 Do you know whether your present information system meets with today's business condition of your company? And are you satisfied with the present system conditions?

Y Have you reviewed if the present system conditions meet with the future business requirement? And do you have a plan to review the system periodically for future enhancement?

N Today an information system would not be developed only for your own sake, but should

be met with partner's business requirements and industry movements.

02 Does the information system share the responsibility in the management strategy?

Y Is the responsibility of the information system defined and discussed in the long-term business plan?

N It is the time that a good Information system could lead the business to success.

03 What kind of information system does the top management use?

Y If you use business report monthly, it should be changed to weekly, and if it is weekly try to get them daily. So you might make business decision earlier with timely manner.

N : If the top management requests a report only on paper, intra-office management could be led to be inefficient.

04 Do you utilize your information system to get CS (customer satisfaction)?

Y Can you mutually communicate with the customers to exchange business information?

N There are many cases in which you might get better customer satisfaction by well utilizing the information system.

05 Have you developed or are you developing any important information system for CS?

Y What is your predominance when it is compared with your competitor's system?

N Is there any reason why you don't develop an important information system for CS? (no necessity, short money, lack of talented people, doesn't know a method)

06 How do you promote the electronic commerce in future?

Y The information system might be varying according to the business aspect. (new customer development, new vender development, enhancement of business condition, etc)

N What is the reason why you don't consider starting an electronic commerce? (no necessity, short money, lack of talented people, doesn't know a method)

02 Business process and its information system

01 Organization and the business process

01 Does each department have its clear duty, and is the business process standardized?

Y An information system becomes complex and requires more development cost when the business process isn't integrated and standardized, even if the duty and authority of each department are clearly defined.

N Making department duty and authority clear and promoting standardization lead up to making each department establish a medium-to-long-term plan, executing their business process steadily and promoting the process improvement.

02 Is the mutual delivery of the information among the departments rational, and aren't there any duplication of data entry and document control?

Y To get better understanding of business among the related departments, the job rotation may be considered.

N It is rare that a business process just closes only in a single department, and the business improvement should be promoted across the departments. The improvement as a whole should be promoted not only for the office process but also for the business purpose.

03 Does each department regularly review the business process, develop an improvement plan, and request an information system development or improvement to the information department?

Y A business process has a tendency of becoming more complex as time passes, so it is important to review them on a regular base.

N Any daily office process has a tendency to be accepted as a matter of course. It is important that the regular office process should be reviewed together with the linkage of the accounting process, and established an improved plan through unification and standardization under the information system.

04 Which department takes an initiative in improvement of the business process across the departments?

Y When a new business is proposed, the top management might be involved actively making clear a department in charge, when necessary.

N If the responsibility of every department is defined, generally the department in charge of new business becomes clear. If it isn't defined, people mostly expect that

the information system department could be in charge of the new business without reason.

02 EUC (End User Computing)

01 Do you consider separately major information system and EUC system?

Y It is important that whole information system is reviewed periodically to cope with progress of the technology and improvement of the skill, including whether EUC is evaluated with excessive expectation or too small.

N When the expected business process to be covered by EUC is unclear, all business process improvement concerned with information might be requested to the information system department. Then information system department might not be able to process a big project for improvement.

02 Is the necessary database for EUC prepared and is the information for the common use stored?

Y Separate databases for limited access from those for open, and expand the database for common use.

N It is important to prepare an environment to promote EUC. It will become possible for all employees to process data by common use of the information.

03 Is the main information system organized to support EUC?

Y The information system should be developed considering the user skill, for example as the users in the accounting department might be familiar with PC, or those in the production site unfamiliar with PC.

N Device means such as developing a data base with RDB, making a system development adding an auxiliary function easy to retrieve data needed from the data base, and the like.

04 How much do you utilize EUC and do you have any further schedule to expand EUC?

Y Do you receive the necessary information easier because of EUC, and is your decision making on business improved much faster?

N What is the reason why the EUC has not been promoted? Is it the user problem(no PC to use, too busy to study, lack of PC skill), or is there no environment (no data base to utilize, no leadership in the information system department)?

03 Gathering information and communication

01 Utilization of network

01 Is the personal computer in house connected to LAN?

Y How much is the utilization level of PC to LAN?

N What is the reason why you have not introduced a LAN yet? (not enough PC, no technological knowledge, and lack of money)

02 Have you introduced an E-mail system?

Y Do you have any countermeasures for wrong use of e-Mail? (guideline for use of e-Mail, monitoring system in e-Mail system)

N What is the reason for not introducing e-Mail? (paper is more reliable, too complex to use it, no technological knowledge, and lack of money)?

03 Do you utilize the internet on business?

Y How do you expand the internet technology on business? Is it just for retrieving the information, broadcasting information in public or for limited use giving information in common in house? How are you going to expand the use of the internet in future?

N What is the reason why you do not utilize the internet on business? (no business area, no knowledge and skill to use, lack of money)?

02 Gathering information

01 Is there any information collected regularly or irregularly besides the daily business operation?

Y What kind of information do you gather now? Do you have any plan to expand it?

N Are you satisfied with the volume of the present business information? What kind of information do you want for business?

02 What kind of information do you gather, who does select the information, how is it captured, to whom is it reported?

Y Do you review the collected information, if it has achieved the expected effect vs.

cost, and should be continued?

N Do you have clear criteria about the information gathering in the business process?

03 Is the top management satisfied with the present business report?

Y Do you receive all necessary information including bad news, and is your information system maintained well to keep advantage on the competitor's system?

N Does the top management direct clearly what kind of information is requested for business?

03 Information system
01 System composition
01 System composition
01 Do you have a managing system to overview the whole company information system?

Y When each department advances EUC activities, the information system department could not monitor every department because their system is apt to be changed without reporting to the information system department. It is important to encourage cooperation among the related departments.

N Higher performance of network system could be achieved by organizing all the company system effectively. It is important to make clear the assignment of the information system department and to make it known to the related departments thoroughly.

02 When has the main information system been introduced, and are the capability and the distribution of machines on system appropriate?

Y Do you review the capability and the distribution of the system and reconsider the need of replacement of the system, or rearrangement of the distribution, at the time making budget?

N Do you have the system layout of each machine and do you know the persons who use the system and machine?

03 Is the hardware composition appropriate considering the user needs?

Y How do you judge the balance between the capability of the machine and the actual use of the system?

N The usage of the machine should be reviewed regularly.

04 Is the capacity of the device strengthened in accordance with expansion of the use?

Y Do you know the maintenance time of the machines, and the turnaround time of an access to the machine?

N You should know the usage of the information machines, and make effort to use it effectively.

05 Do you have a renewal plan of the hardware and the software of the information system?

Y Does the renewal plan consist of a part of the company's business plan and the investment plan for plant and equipment?

N There is an expiring period on the vender and manufacturer support schedule, and then any system has its lifetime. It is important to make a renewal plan for the information system and the machines.

06 Do you consider the user's convenience in arrangement of the capability of terminal machines and input/output machines?

Y Is the cost performance of the systems considered?

N Have you surveyed the complaints of the users?

02 Software
01 Software
01 Is the concept of the software development clear? Do you consider to utilize an off shelf package program?

Y Do you have a guideline for development of the software? Do you have a concept of the software development? Have you studied which way, make or buy, to take for the software in the development? Have you surveyed an off shelf package software? Are you sharing the subroutine with your colleague?

N If you leave software development to one individual, you can't maintain it in future because there are various choices to develop software. You would better to prepare

a guideline for the process of the development consisting of standardized database and middleware, setting up timing for design review in the process.

02 Do you make clear the software specifications before developing it? Do you review the software specifications effectively before and during the development process?

Y Do you set up design reviews during the planning process of system development, in order to avoid any change of the basic specification after you have started the development process?

N It becomes difficult that you promise a development period and a development cost, if the system specifications aren't cleared. It is necessary to describe the system specifications especially when ordering outside, even though some inner office users do not want to make detail specification at first.

03 Do you consider operation and maintenance of the system, when you describe the specification and the manual? Are they updated to the latest one?

Y The document and manuals necessary for system development must be made to meet with the department standard, and applied to every system development. The above document and manuals must be maintained in case of any specifications change, so you can utilize it for future maintenance.

N In general, a host information system has well-organized document such as system specifications and program specifications and so on, but a client-server system does not. It is important to prepare similar document and manuals for the client-server system as well, because a different maintenance person from the developer may be assigned in future.

04 Are there clear procedures and effective application for development, change, or expansion of the program?

Y Who and how is making decision for the development priority, the development period, necessary cost? Is the procedure and result open in public?

N In case of receiving an order of system development or change, request to the user to prepare a form standardized by the information department which includes necessity of the information, development priority, budget cost and expected completion period. And you should be able to make response information on whether the development has been accepted, together with expected cost and period.

05 Do you handle the program change or the system expansion in house or outside of office?

Y How do you manage when you order it outside? Do you have a method to review the document to order outside? Do you have a system or organization to review the document from outside, to manage the outside progress, to evaluate the cost, to keep good communication and the like?

N Why do you limit system development only in house? And how do you manage the backlog of system development?

06 Is the effect of the completed system followed up?

Y If a system doesn't show up the expected effect, there are many items to feedback to future system development, such as a wrong measure for development, miscalculation of the expected effect, and the like.

N There are many indirect effects in developing a system, and it is sometime difficult to measure them precisely. But, as far as you need to confirm effects of developing system, please try and make effort to measure indirect effects.

07 Do you have any control system of preventing the illegal use of the marketed package software?

Y It is possible to control when the information system department knows all soft wares in the company. The more personal computers in the company, the more soft wares such as free software, shareware, and so on which are installed by each personnel. It is important that you make a standard to control and audit marketed package software in the company and audit them once a year to check the situation and to protect illegal use.

N Illegal use of the marketed package software is a crime. Sometime the use in house is complicated, and it is difficult to judge the illegality in some cases. Even if it is illegally used as a result of mistake, it is a crime. You have to make a clear

guideline to protect it.

03 Network

01 LAN (Local Area Network)

01 Is it clear which department develops and maintains the LAN?

Y Is it clear which department manages each LAN and reinforces the LAN monitoring the number of users and traffic?

N It is better that one particular department controls LAN collectively, because there are several problems such as improper connection with the outside of the company and lowering the network efficiency due to heavy traffic, and the like.

02 Is it clear which department controls the access to the system?

Y Does the department which controls the access to the contents, have a form to control the access and clear criteria for judgment?

N Generally a department to control the access to the system (LAN) is different from a department to control the access to the contents, because they have different responsibilities. The information system department is responsible to system set up, while a department to control the access to the contents is responsible to security of the contents.

03 Do you have a clear standard to control the access to WAN and internet?

Y It is better to introduce a control system to monitor the access to outside in order to use the system effectively.

N The more users and access, the more cost for control of the network is needed. It is important that the access permission to the outside network should be approved based on the need of business.

04 Do you promote expanding the network use (to handy communication machines, SOHO, and so on)?

Y Do you review the standard for expanding network considering the cost versus effect, and meet with the management policy, before use?

N It is one of the means to improve business efficiency that you check your e-mail by mobile and the like from the place on business trip or at home.

02 Network security

01 Is the person in charge clear, who is responsible to the network security?

Y You have to consider various cases for security, such as the system destruction or the data destruction due to the natural calamity and man-made disaster, the data leakage in house, illegal penetration to the system from the outside, and the like. You have to make a consensus how far you have to make necessary action in house for the security.

N If you don't make action for security, you might be getting the system destructed or valuable data stolen due to the penetration of illegal access and of virus from outside. You should assign a person in charge of security control and make him manage it fully.

02 Have you established a virus control rule, and operated it properly?

Y The information system department should not only report to the office on the virus found, but also let a user pay attention to the new virus with the notice information.

N There are many cases that a virus prevails over countries. You must establish a system to prepare countermeasures for an unknown virus penetration. If you find out a virus penetration you must report it to Information-technology Promotion Agency office so as to prevent the virus from penetrating other companies.

04 Database

01 Database

01 Do you standardize the database to use data in common?

Y You must be careful to make the database version control match with a system to be developed in future, because the life of the business system is so long.

N When different databases are introduced in two or more systems related, the users may be confused and it needs extra data processing to communicate each other.

02 Do you accumulate in a database plenty of information from the business process, and utilize it to the various purposes for business?

Y It must be considered that data in the database should be reorganized and maintained so easy to use for the user who has low skill in information technology, so that the database is used more frequently.

N The data accumulated in a database should be utilized effectively in the various aspects of business, so it is important to disclose the data accumulated in a database actively.

03 Do you standardize the user technique of database, and instruct it to the users?

Y When building a database, a system developer should standardize the technique easy to use a database, and teach the technique each other for users' convenience.

N It activates utilization of information to instruct a familiar way of use to the user, such as use of database information dropping to EXCEL format which the user has already mastered and the like.

05 Others
01 Others
01 Have you introduced CAD, and do you utilize it effectively?

Y Can you use CAD information for your work the same as a drawing, and do you utilize CAD information for CAM CAT directly?

N Don't you need to introduce CAD? (no designing work, no design information with the CAD from upper stream, no work to utilize the CAD information)

02 Have you introduced CAM CAT to automate a production line?

Y Do you create a machining program directly from the CAD information? And do you utilize it for the production control information as well?

N Don't you have a plan to utilize CAM CAT? (no NC machine, no information about CAM CAT, no technological knowledge about CAM CAT)

03 Do you have a total production automation plan utilizing FA, CIM, and the like?

Y Is the whole production control in the factory computerized, not being limited of CAM and CAT in the island of the automation? Especially, does the control cope with changes of production promptly?

N Don't you have any necessity of FA and CIM? (few automation machines, no computerized production management, no necessity of real time information for production control)

04 Operation
01 Operation organization
01 Organization of operation system
01 Have you defined a manager and persons in charge of operating the information system?

Y Have you defined the range of responsible work for the manager of operating the information system?

N It is important to make clear the responsible personnel for quick response in case of the unusual conditions of the system and the like.

02 Have you made clear direction to set up operation schedule for daily, weekly, monthly, and yearly?

Y Do you review the operation schedule to improve operator's work and user's work?

N Make clear the operation schedule and get cooperation with the related departments on date of the data delivery, closing time of the operation, delivery time of the report, and the like.

03 Is the system operation made properly, following the operation manual and operation standard?

Y Do you review the operation manual and operation standard to improve operator's work and user's work?

N It is important to maintain an organization to operate the system properly based of operation manual and operation standard.

04 Is it clear how to report to the operation manager and the users in case of unusual conditions of the system?

Y It is important to review and improve the action program whenever you have unusual conditions of the system.

N You should make an action program in advance to minimize influence to the work of the related departments in case of unusual conditions of the system. (delay of the data delivery, unmatched data, computer malfunction, power interruption, and the like)

05 Do you have a clear control standard for storing the software?

Y It is better to control the software by generation, and then you can maintain the system to return to the original conditions in case of software malfunction.

N You should prepare a backup of software in use, so that you can maintain the system reparable in case of unusual conditions of the system.

06 Do you prepare a necessary budget, and manage it properly?

Y Compare the actual cost with the budget and analyze the difference in order to reflect on the next budget plan.

N To let the information system department's activity meet the business plan, it is important to make a budget plan and promote activities including a new system development plan and an operation improvement plan following the schedule.

02 Management of data handling

01 Do you have a clear standard to handle data and reports in order to prevent information leakage?

Y In handling data, a satisfactory system should be established by combination of various elements, such as to limit place, personnel, time and the like.

N There is some secret information in an enterprise such as personnel information, new products information and the like. You should establish a control system to secure the information from unknown access.

02 Do you have a clear rule to control document such as taking out a file from the storage and the like?

Y It is important to check that the purpose of taking out the file should be only for business use.

N There are many files, which you should not lose, such as a system file, package file off shelf, and the like. You have to care especially taking the file out of office.

03 Do you have a clear procedure to control system access, and is it managed appropriately?

Y Review access application conditions regularly, for example use of an access licensees who access rare, users who should utilize a system have not request an application yet, and take appropriate action to correct them.

N You should control same quality on appropriate procedure and on controlling the number of access, even if the person in charge may change.

04 Do you make a backup of the data processed every day based on a standard?

Y Review the backup conditions such as a generation control, a place control, and the like, regularly.

N It is important to establish a backup system, preparing for unusual conditions of the system.

05 Do you have a clear procedure for the data repair process in case of unusual conditions of the system?

Y Introducing a new system daily to keep the procedure update.

N Set up a clear procedure for a data repair process to repair data as soon as possible in case of unusual conditions of the system.