ISO/IEC 20000

- IT Service Management -

Benefits and Requirements for
Service Providers and Customers

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Table of Contents

Introduction

The ITIL® best practices are designed as guidelines for the management of IT service processes. IT organizations can use these best practices to optimally configure their enterprise-specific IT service management processes. ITIL® is not a standard; therefore, it is not possible to ITIL® certify an IT organization.

Because of its conceptual approach, ITIL® pushed against its limits in terms of providing obligatory parameters for minimum requirements.

- Which minimum requirements must be met in the respective processes?
- Which processes must be implemented?
- What requirements must the process management fulfill?
- How can it be ensured and verified that the IT provider, especially in the area of outsourcing, is using internationally recognized procedures?

Internationally recognized minimum requirements for IT service management were defined in the ISO/IEC 20000 standard "IT Service Management".

The specifications of ISO/IEC 20000 can be consulted as an internationally recognized and independent reference. The comparison between enterprise specific IT service management processes and ISO/IEC 20000 shows their degree of coverage and ultimately represents a neutral evaluation benchmark.

IT organizations that want to show their customers this benchmark or are required to show it as part of outsourcing, can be certified by an independent organization in the fulfillment of the ISO/IEC 20000 minimum requirements.

ISO/IEC 20000 should not be perceived as competing with the ITIL® Best Practices, but as complementing them.

Benefits of ISO/IEC 20000 for IT Providers

Business processes are increasingly dependent on IT services. As a result, the quality requirements for IT have increased. At the same time, companies and IT are under growing pressure to lower costs. Considering this dilemma, IT organizations - internal as well as external service providers - have to show proof of delivered IT services and effective processes.

Legal requirements such as the Sarbanes-Oxley-Act or Basel II play a role, as well as auditors, insurance companies and customer requirements. Customers prefer a guarantee that an IT organization will deliver the requested quality of service while complying with external regulations.

Features of ISO/IEC 20000:

- International standard that stipulates the minimum requirements for IT
- Requires an integrated process approach for the effective provision of IT services
- Requires proof of continuous improvement
- Includes the relationship with customers and suppliers as part of its evaluation
- Based on ITIL®, but does not require the implementation of ITIL®
- Describes a management system which is not described as such in ITIL®

Benefits of a certification:

- Continuous improvement of service quality, including stability and cooperation, resulting in more customer confidence in the service provider and IT
- Focused services through alignment with the enterprise strategy
- Insight into IT performance that is confirmed by an independent source and may serve as a basis for marketing and selling services
- Improved understanding by all process participants for defining objectives, responsibilities and roles

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It is important for the IT organization to:

- ensure the required quality.
- establish effective and efficient processes.
- react quickly and with flexibility when conditions change.
- cover compliance requirements and show proof of adherence.

Similar to other management systems, ISO/IEC 20000 includes the requirements for a verifiable, ongoing improvement path that applies to single processes as well as the entire IT service management system. The defined requirements stipulate clear objectives for the implementation of the processes. Thus, the room for "philosophical discussions" is reduced, since a standard poses more limitations than the ITIL® best practices.

This advantage is clearly stated by Michael Zaddach, manager of Munich Airport's service area IT department during its successful ISO/IEC 20000 certification process.

> "Delivering high service quality at the lowest possible cost is the objective of the service area's IT department. Defining the certification as the first objective focused the attention of management and employees, and at the same time limited the depth of the processes. Keeping a pragmatic 'flight altitude' was very helpful and provided all participating employees with clear objectives."

Which companies would benefit from an ISO/IEC 20000 certification?

To provide proof of a successful IT service management, an ISO/IEC 20000 certification will soon be a matter of course for IT organizations. Just like the ISO/IEC 9001 has become a matter of course for most service providers.

Many U.S. government authorities require evidence of a complete and successfully working IT service management system from a service provider when handing in a proposal. With an ISO/IEC 20000 certification the supplier could objectively prove the fulfillment of these requirements – officially confirmed by an external certification organization.

The ISO/IEC 20000 certification represents a unique feature and competitive advantage for the service provider. Instead of relying on trust and promises, the customers can rely on an externally monitored IT Service Management solution when dealing with an ISO/IEC 20000 certified service provider.

A certification against ISO/IEC 20000 is a strategic market potential for service providers. Customers don´t have to trust the commitments and statements of a service provider but can trust an externally verified, reliable IT service management system.

For the internal service provider and IT subsidiaries, an ISO/IEC 20000 certification offers the advantage of better positioning themselves against the competition with outsourcers. Usually large IT organizations have to address these topics. Additionally, the tendency to structure IT according to ITIL® best practices will further increase due to ISO/IEC 20000 .

> **Reasons for a certification against ISO/IEC 20000**
> - proof that IT services are delivered on the basis of an internationally recognized standard
> - assurance, that customer requirements are fully met
> - risk management with risks that are understood and under control
> - constant surveillance and optimization of service quality

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The introduction of IT service management processes leads to changes in existing work habits and often to organizational changes. These measures, which need to be addressed in addition to daily tasks, initially increase the work load for employees and can cause resistance. On the other hand, certification can be used to motivate staff by acknowledging work performance through a neutral certification organization.

Content and configuration of ISO/IEC 20000 "IT Service Management"

Here is a short summary of the requirements of ISO/IEC 20000.

Configuration and new version of ISO/IEC 20000

ISO/IEC 20000 consists of two parts, ISO/IEC 20000-1 and ISO/IEC 20000-2. The first part of the standard (ISO/IEC 20000-1) includes the "must criteria". It is a list of requirements that an organization must adhere to, complete and verify in order to receive certification. In the second part, ISO/IEC 20000-2, the requirements of part I are enhanced by the explanations of the best practices. The ISO/IEC 20000-2 offers guidelines and recommendations for IT service management processes within the formal standard of ISO/IEC 20000. The scope of the ISO/IEC 20000-2 (best practice) cannot be compared with the best practices from ITIL®. The ITIL® best practices deliver supplementary, practical help to meet the requirements and recommendations of ISO/IEC 20000 in enterprise specific processes.

The first version of ISO/IEC 20000 has been released in 2005 already, converted as a so called "fast track" from the British Standard BS 15000. To be able to release the standard fast, it was accepted that ISO/IEC 20000 does not follow other management standards in terms of structure and definition. Therefore a revision of ISO/IEC 20000 was already planned and necessary from the beginning. This revision has come true with ISO/IEC 20000-1:2011. The new title of the revised version ISO/IEC 20000-1:2011 "Service management system requirements" emphasizes the aspect of governance as fundamental goal.

Main goals of the revision were:

- closer alignment of ISO/IEC 20000-1 to the related standards ISO 9001 (quality management) and ISO/IEC 27001 (management of information security)
- improved and consistent terminology, aligned to the related standards/guidelines and code of practice
- introduction of the term "Service management system" (SMS) and aligning the standard with the concept of a service management system (SMS)
- introduction of new and revision of existing requests (e.g. clearly expressed and more detailed description of requirements)
- consideration of experiences made

ISO/IEC 20000-2 has also been revised and released on 15.02.2012 as ISO/IEC 20000-2:2012. With this revision the standard got the title "Guidance on the application of service management systems". This shall make clear, that part II is a guideline on how to use part I and not in competition to the ITIL® best practices.

In addition to the two core books ISO/IEC 20000-1 and ISO/IEC 20000-2 supplementing technical reports are provided. These treat special aspects of an implementation, e.g. how to define the scope of a certification (ISO/IEC TR 20000-3).

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Complementary documentation of the ISO/IEC 20000 series includes the following reports:

- ISO/IEC 20000-1:2011;
  Service management system requirements
- ISO/IEC 20000-2:2012;
  Guidance on the application of service management systems
- ISO/IEC TR 20000-3:2009;
  Guidance on scope definition and applicability
- ISO/IEC TR 20000-4:2010;
  Process reference model
- ISO/IEC TR 20000-5:2010;
  Exemplar implementation plan

Certification of an organization against ISO/IEC 20000

During a certification, the management system as well as implemented IT service management processes are checked against the requirements of ISO 20000-1. All requirements of ISO 20000-1 have to be fulfilled and proved.
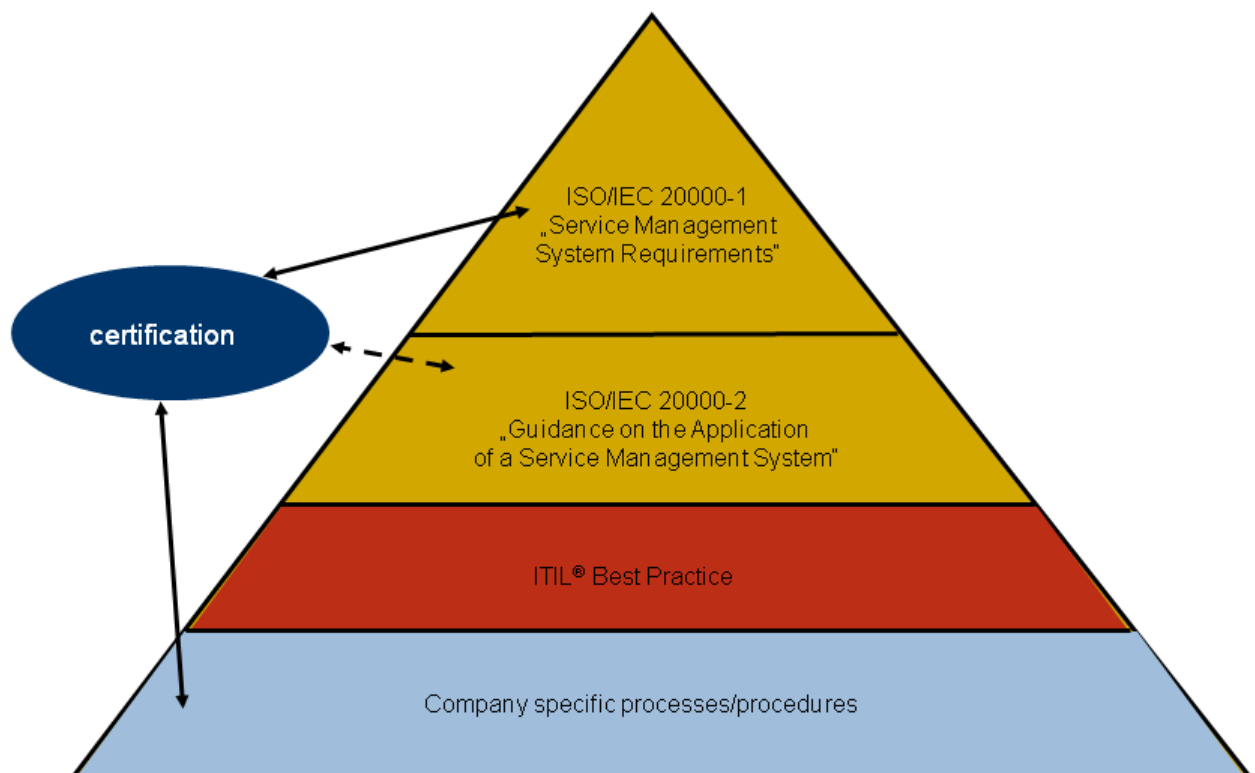
Structure of ISO/IEC 20000 (source: KESS DV-Beratung)

Contents of ISO/IEC 20000

ISO/IEC 20000 -1:2011 and the future ISO/IEC 20000 -2:2012 will be identically structured. The structure consists of the following:

- 1   Scope
- 2   Normative references
- 3   Terms and definitions
- 4   Service management system – general requirements
- 5   Design and transition new or changed services
- 6   Service delivery processes
- 6.1 Service level management
- 6.2 Service reporting
- 6.3 Service continuity and availability management
- 6.4 Budgeting and accounting for services
- 6.5 Capacity management
- 6.6 Information security management
- 7   Relationship processes
- 7.1 Business relationship management
- 7.2 Supplier management
- 8   Resolution processes
- 8.1 Incident and service request management
- 8.2 Problem management
- 9   Control processes
- 9.1 Configuration management
- 9.2 Change management
- 9.3 Release and deployment management
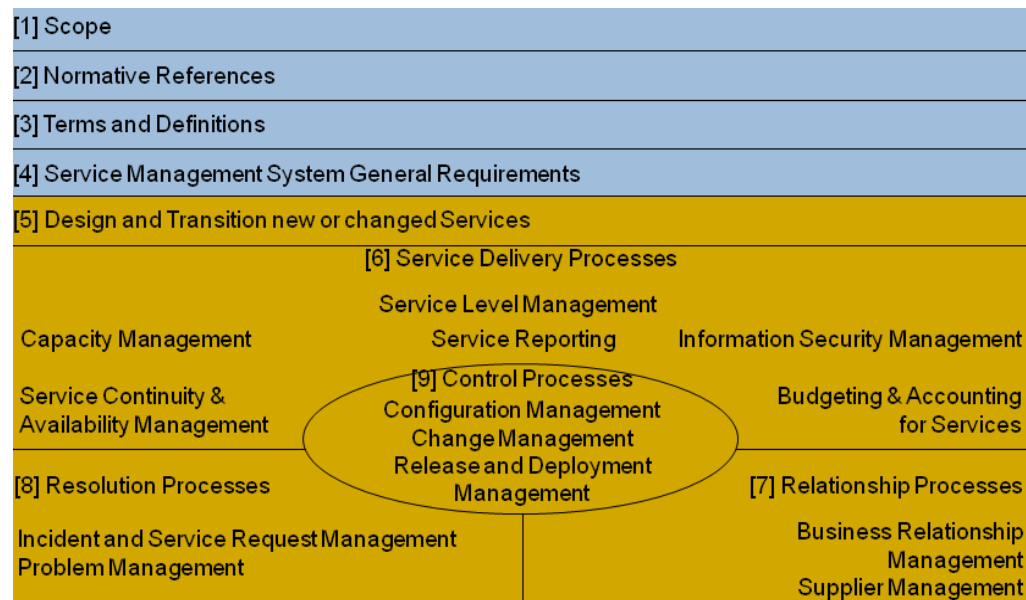
Outline of ISO/IEC 20000 (source: KESS DV-Beratung)

The standard has enhanced requests for governance compared to the ITIL® best practices. These enhancements are described briefly in the following section. Most important are the superior management processes.

Service management system (SMS) general requirements

The chapter "Service management system general requirements" describes the superior management processes and activities which are as such not to be found in the ITIL® best practices. These requirements for a service management system are comparable with the requirements that are specified in other quality management systems, e.g. ISO 9001.

Special attention is payed to management responsibilities, resource planning and control and to the requirements for a continual improvement process. Resources of course include human resource planning and control.

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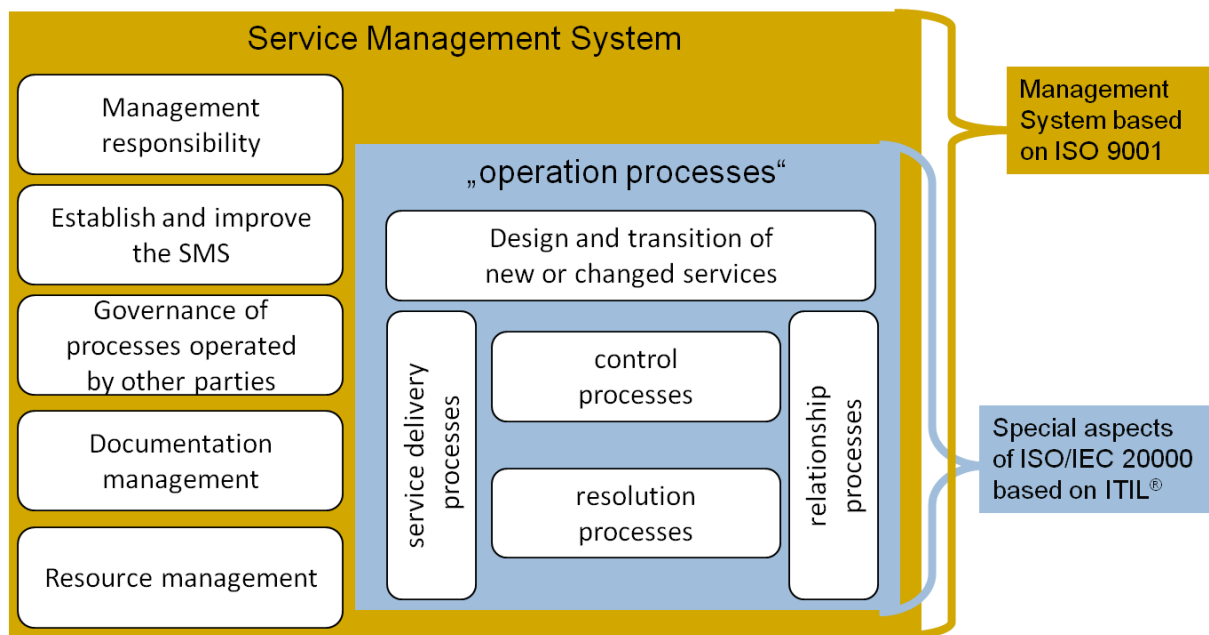
Structure of ISO/IEC 20000 (source: KESS DV-Beratung)

Design and transition of new or changed services

This process describes the requirements for changes of existing services and for the implementation of new services. These requirements are primarily meant for changes with potentially high impact on services and/or customers. Accordingly the norm requires for the process "Change management" itself that changes with potentially high impact are to be controlled by the process "Design and transition of new or changed services".

The process "Design and transition of new or changed services" has documented requirements to the strongly connected "Control processes" (see below).

Delivery processes

ISO/IEC 20000 is not as comprehensive and detailed as the ITIL® best practices and does not include its five life-cycles. Nevertheless, fundamental elements are to be found in both norms.

The delivery processes of ISO/IEC 20000 contain most of the processes of ITIL® edition 2011 life-cycle service design but are not completely congruent. The delivery processes of ISO/IEC 20000 include budgeting and accounting for services (accounting for services is not a required element) as well as service reporting. In ITIL® edition 2011 budgeting and accounting are included in financial management within the life-cycle strategy, reporting is part of the life-cycle continual service improvement. Service level management of ISO/IEC 20000 includes design and maintenance of the service catalogue (in ITIL® edition 2011 = service catalogue management). Vice versa supplier management of ITIL® edition 2011 is part of the relationship processes in ISO/IEC 20000 and the process design coordination (ITIL® edition 2011) is not at all described in ISO/IEC 20000.

Relationship processes

The purpose of both relationship processes "Business relationship management" and "Supplier management is to establish and maintain the relationships between service provider, customer and supplier. In ITIL® edition 2011 business relationship management is part of service strategy and supplier management of service design.

Resolution processes

Incident and service request management and problem management are called resolution processes. ISO/IEC 20000 describes the requirements for dealing with incidents and service requests in one common process whereas ITIL® edition 2011 describes the handling of services requests in a separate process called request fulfillment.

Control processes

ISO/IEC 20000 considers Change Management, Configuration Management and Release and Deployment Management as so called „Control Processes" which are in the center. These processes control the service components and ensure the availability of accurate information for the configuration. This equals the lifecycle service transition of ITIL® edition 2011.

Internal audits required

Within the service management system (SMS) the ISO/IEC 20000 demands the planning and execution of internal audits. Even if an organization is not aiming for a certification, regular audits are recommendable:

- A first-time audit after ISO/IEC 20000-1 shows the maturity level of an IT-organization regarding international minimum requirements for IT service management.
- The execution of an audit after implementing improvements gives feed-back about their success.
- Regular audits help to identify potential improvements and avoid to go back to "old habits".

KESS DV-Beratung has adapted their ISO/IEC 20000 assessment tool to reflect the requirements of ISO/IEC 20000-1:2011 and offers audits/assessments based on the new demands.

ISO/IEC 20000 assessment tool of KESS DV-Beratung

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Content and execution of the certification

The certification always requires verification of the entire ISO/IEC 20000 IT service management processes. However, organizational limitations are possible. For instance, the certification can be limited to:

- Parts of the organization
- One particular location or
- Specific services

Individual processes cannot be excluded! A certification requires the implementation of all processes, i.e. all requirements of ISO/IEC 20000-1.

The certification is conducted by a certification body (CB). It is valid for three years, after which a repeat audit has to be performed. Additionally, yearly monitoring audits are performed. A CB is always an independent organization that cannot perform consulting, coaching or training in the context of an audit.

The certification test verifies the adherence to the requirements specified in ISO/IEC 20000-1. This happens on the basis of the existing documentation ("system analysis"), as well as checking the implemented processes on site ("audit"). For instance, a random sampling of request for change is performed and analyzed whether all requirements for the rating of changes have been demonstrably undertaken. Or the physical IT infrastructure is compared to the contents of the CMDB (Configuration Management Database), i.e. it is checked whether configuration items are really managed and continually maintained.

The continuous improvement process and the process management are very important. In this area the service provider needs to provide a proof of conformity via documented descriptions and key indicators. For each ISO/IEC 20000 process the following is reviewed:

- Knowledge and control of the input
- Knowledge, usage and interpretation of the output
- Definition and evaluation of benchmarks
- Objective proof of the process functionality in accordance with ISO/IEC 20000
- Definition, measurements and evaluation of the process (service improvement plan)

Recommended procedures

In preparation for certification, the first step consists of gathering and reviewing the necessary information. An ideal scenario is the exchange of experiences with companies that have already received ISO/IEC 20000 certification or with consulting firms that have expertise in supporting an organization during the ISO/IEC 20000 certification process.

Identifying the necessary steps requires knowledge of the current status of IT service management versus the requirements of ISO/IEC 20000. Companies should perform an assessment that reviews the current degree of fulfillment of ISO/IEC 20000 requirements (see chapter "Internal Audits").

Based on the assessment results, a project plan is developed and the required internal and external resources are specified.

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Based on previous experiences, the following critical factors for success need to be considered during the implementation of the project:

- A clear commitment from top management regarding the significance of the project
- Planning towards a realistic timeframe
- Careful selection of parties responsible for project and process
- Daily workload of the responsible staff should be appropriately reduced
- Early integration of the certification organization (CB)
- Appropriate documentation (no "paper overkill")
- Availability of effective tools at the right time (according to process specification)
- Continuous process improvement is driven by the responsible employees even after the project end

Necessary tool support

In ISO/IEC 20000, different requirements exist for plans and support systems. Therefore, it is necessary to conduct an analysis of the existing tool landscape in the context of the project. This analysis includes tools for measuring and reporting key indicators as well as business and supplier relationship management. iET Solutions covers the following areas with the IT service management suite iET ITSM:

- Incident management
- Problem management
- Change management
- Release & deployment management
- Service asset & configuration management
- Knowledge management
- Service portfolio management
- Service catalogue management
- Service level management
- Request fulfillment
- Relationship management
- Event management
- Availability management

With regards to ISO/IEC 20000, however, the complementary solutions, as well as any individual solution components, are especially important. Yet a majority of the ITSM solutions on the market do not offer them. In particular, the solution **Account Management** is highly useful for managing the customer relationships (business relationship management) and the supplier relationships (supplier management).

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Support of ISO/IEC 20000 requirements for business relationship and supplier management by iET ITSM account management

Business relationship management with iET ITSM

iET ITSM's comprehensive account management functions allow internal as well as external service providers to manage the business relationships with their customers, and immediately adjust their service design and service operation processes in case of changes in their customer's business environment.

The business relation management of a service provider is one of the core functionalities of iET ITSM and is linked system-wide with all other areas of iET ITSM.

All employees who contribute to the provision of IT services and business relation management have access to the account management data based on their roles and privileges. In other words, the account management data is not just available to the sales representative, but also to all other IT service management process roles, especially incident management and service level management. Independently, a sales representative ("contact partner") can be assigned to each customer.

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Business Relationship Management - all service contracts of a customer

Business Relationship Management: all incidents, problems, changes of a customer

Comprehensive, flexible display of the customer's organization

The flexibility of iET ITSM's account management helps maintain various organizational structures or assumes those of leading systems. Data regarding locations, cost centers and contact addresses is stored. By setting up hierarchies, departments can be managed as individual customers, and structures of company holdings can be adequately displayed.

This flexibility is necessary to review, for instance, the service level management at various departments and organizations in a differentiated way and to display the individually agreed service levels.

Changes in organizations, company acquisitions and divestitures

In the case of changes in the customer's organization, for instance if departments are spun off or a new company is acquired, new locations opened or others merged; iET ITSM account management allows for immediate, easy displays of these business events. Thus, a fast and transparent service delivery for the new organization and structure is secured.

Integrated mail function and contact history

With the "mail management" functionality in iET ITSM, it's possible to electronically correspond with the customer directly from iET ITSM.

Important account information, such as email addresses or salutations, are available for mailing per "drag & drop". Sent mail is managed in the mail history for each customer and thus offers maximum visibility into the entire communication with the customer – across department lines. All employees of the service provider are constantly up-to-date and informed.

Extensive reporting for sales representatives

Through the reporting function of iET ITSM the sales representative receives valuable information about the entire relevant customer data. This includes all IT service management processes such as "Is the incident still open?", "Is the customer scheduled for a change?", "Did the customer inquire about new services?", "Is the customer interested in an extension of response time?", etc.

This data is important for long term customer retention and to guarantee customer satisfaction.

Data for sales controlling – customer status and categorization

The iET ITSM account management functionality allows users to manage a multitude of customers. Additional features such as customer status and categorization are also available.

iET ITSM account management generates important data for the sales force. In particular, it provides an overview of the sales representatives and their customers, a classification along various categories (e.g. industries) as well as a status of customer relationships (e.g. customer, prospect, per sales phase, former customer).

With iET ITSM the service provider has a tool for displaying the business growth with regards to new customers, cancellations, etc.

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Transfer of personnel master data and department changes

The personnel master data of a customer's employees are customarily transferred from leading systems, for example directory services such as Microsoft Active Directory Services, and standard applications, like SAP HR or identity management systems. This transfer eliminates manually maintaining the end-user data. In case of a department change, any new information is seamlessly transferred from the leading system to iET ITSM, and the service agreements in the service level management of iET ITSM are automatically updated.

The end user is managed through a variety of attributes in iET ITSM. Generally, this information also comes from the leading systems. In addition, other information can be directly maintained in iET ITSM, such as a categorization of the end-user, quickly showing the service desk agent the caller's role (VIP, executive management, etc.).

Supplier management with iET ITSM

iET ITSM's supplier management offers the service provider extensive data about the service quality, which allows control of external suppliers.

In addition to administrating and maintaining supplier information (contact data, contract information, etc.), qualitative data from IT service management is retrieved in order to evaluate the delivered products and services.

Service support cost in internal supplier benchmarking

If the service provider decides to use two manufacturers for standard components, such as desktop computers, laptops, monitors and printers, the supplier management solution, using extensive data from iET ITSM, is able to generate reports and analyses which compare the service support costs of these suppliers.

For instance, the service provider could analyze how many hardware incidents were reported for the laptops of supplier A versus supplier B, the average costs for the service provider, and the total accumulated costs per supplier.

With the help of this data, it's possible to monitor the product quality and level of service from the supplier. These results can provide the basis for decisions regarding future supplier contracts. iET ITSM delivers the relevant information from the CMDB via the configuration items, as well as from account management and the linked processes such as incident and change management. With the data from iET ITSM Availability Management, this benchmarking information can be further enhanced.

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Contractual data of a supplier in supplier management

Supplier relationship and service level management

External service providers are often necessary for the delivery of services. This is true for the provision of product-specific services, such as hardware support, as well as the delivery of external services, such as network connections with remote locations. All of these services are contracted via service contracts with suppliers (underpinning contracts) which are managed in iET ITSM.

During the planning phase of a service level agreement, the service provider needs to check to what degree these underpinning contracts will affect his ability to offer an appropriate service level to his customer.

For instance, if the supplier offers the repair of a critical hardware component within 24 hours, then the IT service provider cannot easily guarantee a restart of the services within 12 hours. The service level management of iET ITSM will report this discrepancy.

By graphically displaying these relationships, iET ITSM shows which supplier has what kind of importance for the provision of services, and what significance the supplier has for the service provider.

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