Continuous Improvement and Innovation with a Customer Center of Expertise
Prepare Your IT Organization for the Future
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MANAGE COMPLEX SOLUTIONS AND REALIZE BUSINESS REQUIREMENTS

Introduction

Over the last 15 years, IT operations have become more complex. More specialized application products are in customers’ shopping carts and the system landscapes are becoming heterogeneous by moving to the Cloud. The complexity and individuality of business applications increase, IT operations are outsourced and decentralized, and the business requires more stringent service-level agreements and agility. Conversely, the combination of exacting innovation needs and limited resources available for projects requires a well-orchestrated organization to deliver maximum business value.

THE CIO’s CHALLENGES

Outpacing your competition requires you to be ready and able to adopt different, better, and faster ways of running and improving your business. IT innovations, such as enterprise mobility, in-memory database technology, digital transformation, and Cloud-based solutions, progressively increasing, can provide your business with a competitive edge. Your business asks for speed and agility, continuity and zero disruption when adopting innovations, which can challenge even the most efficient and experienced IT organizations and keep the savviest CIOs awake at night. Mastering these challenges requires efficient IT solution management capabilities that include excellent, high-quality, end-to-end solution orchestration, and of course business and IT alignment.

Today’s key priorities of a CIO are:
- Ensuring business continuity where 24x7 - “always on” is a mandate and where solution availability, stability and good performance as well as data integrity, consistency and overall security are paramount
- Reducing total cost of ownership and total cost of operations
- Speeding up solution improvement, protecting investment, and maximizing the use of what you have
- Accelerating innovation without disruption to the next best business practices and technologies supporting never-ending business transformation

Ensure Business Continuity

When asked about the most important challenge that he faces, the CIO of a large enterprise might answer briefly: “Business continuity: if it’s not guaranteed, we don’t even have to talk about the rest”.

The number of users per system has increased tremendously, especially in large enterprises. In addition, to support their daily core business operations, many companies run complex business processes that span heterogeneous platforms and multiple integrated business applications. These business applications may include software from SAP as well as from SAP partners or other software vendors and often running in the Cloud, along with functionalities and solutions developed by the company itself. From this perspective, it is obvious that the end-to-end operation of such landscapes is far different from the operation of simpler solutions, which was the norm in the past. End-to-end solution support encompasses all the methods, tools, IT processes and standards that must be deployed by your

Management of complex solutions and fast realization of business requirements require a flexible well-orchestrated organization aligned with the business, such as a Customer Center of Expertise.
IT operations department to ensure business continuity of your software landscape.

**Reduce Total Cost of Ownership and Total Cost of Operations**

Unexpected downtime with business interruption is typically expensive. However, low performance; inefficient system management, data volume management, and job scheduling; and ineffective incident management are all important cost drivers. Adding to the cost of daily operations, maintenance and innovation projects stress the budget even more. The solution? In short, you need the right experts, methods and tools to reduce the costs and the risks of your projects. In addition to that, reducing total cost of operations can free up money and resources for innovation.

**Speed Up Solution Landscape Improvement**

Accelerated improvement of your solution landscape helps reduce costs and ensure business continuity. Improvements have to take place especially with regard to business process automation and operations in technical areas. For that reason, SAP provides services, tools, standards, and methodologies that help stabilize and improve solutions, with the goal of increasing their value. Typical technical areas of improvement supported by SAP are system landscape and administration, performance, application integration, data volume and consistency, and testing.

The most important improvements can be achieved by optimizing the operation and automation of both business and IT processes. SAP provides tools and methodologies to diagnose and improve user productivity, raise the level of business and IT process automation, improve handling of business process exceptions, and improve business process monitoring. The key objective is to provide 100% transparency of business process execution and 100% management of business process exceptions.

**Accelerate Innovation Without Disruption**

Many companies see IT as the driving force for process innovation, which can result in a crucial differentiation from the competition as well as greater flexibility. However, you must be able to adapt systems readily to allow business models to be aligned with shifts in market conditions. Therefore, IT has to provide fast proof of value via a prototype for sound business decisions as well as a fast and disturbance-free value-realization project after the business agrees to the new prototype.

Value prototyping and fast value-realization are gaining more importance with increasing demand of the business to real real-time reporting and more flexibility for users. This demand is driving IT to new, possibly unfamiliar, technologies such as in-memory databases, mobile solutions and Cloud.

Partners must be fully integrated into the IT processes, tools, and roles of a Customer Center of Expertise. This is essential for unified operations, successful projects, continuous improvement and innovation adoption.
EXCELLENT END-TO-END SOLUTION ORCHESTRATION

IT systems continue to be highly heterogeneous landscapes, combining On Premise and Cloud solutions, connected through networks with multiple technical components, distributed over many software components, data persistence layers, and, most likely, many enterprises. These systems have to serve the needs of a high-tech and high-speed generation. However, the solution also has to serve mission-critical business needs – availability on a 24x7 schedule in a global world – and meet performance, scalability, and data security goals.

To support solutions in this highly networked world, excellent end-to-end solution orchestration is essential. But what does this solution orchestration look like?

Because most of our customers have made a large investment in SAP-centric solutions, they rely on SAP to provide answers as to how their solutions can be optimally supported and enhanced – today as well as 10 years from now, even as complexity and heterogeneity are increasing.

A general solution approach for optimized IT orchestration has:

* Standardized, end-to-end operations processes that are scalable yet flexible enough to react quickly to business requirements and IT changes. Restructuring business units (for example, department reorganizations and mergers and acquisitions) is “business as usual.” Fast restructuring projects create demand for a “change factory” approach.
* IT that is as much as possible automated and proactive rather than manual and reactive. This keeps costs as low as possible while reducing overall effort and incidents.
* Quality-oriented IT operations. Only continuous improvement can ensure state-of-the-art IT that is ready for new challenges.
* Close connection to experts. This is essential, as innovation normally requires a pool of internally and externally sourced skills.

This last topic leads to a more sophisticated collaboration model. Implementation and improvement projects require an embedded link between SAP and the customer.

How can this solution approach become real within a customer’s organization? First, it requires a specialized organization with dedicated stakeholders for different objectives and highly qualified experts with appropriate skills. Next, you need to establish control centers to guide operations, projects, and the integration of the new solutions into later operations.

Quality management leads to continuous improvement and fast resolution of business-critical situations. For this purpose, dedicated quality manager roles are defined within the customer and partner organization to ensure efficient collaboration between stakeholders in business units and in IT. It is essential to have a central commonly accessible up-to-date documentation and reporting platform, where status and continuous improvement can be tracked with key performance indicators (KPIs) to provide a Single Source of Truth. By setting up control centers, the single Source of Truth and quality management roles, and by including stakeholders and partners, you can move your Customer Center of Expertise (Customer COE) organization to the next higher level: certification by SAP as a center with advanced capabilities.

THE ORGANIZATIONAL MODEL

The first step toward efficient, end-to-end solution operations is specialization. Dedicated stakeholders – such as organizational units of a company, service providers, or SAP consultants – are responsible for different objectives. Using a simplified organizational model, you can assign these stakeholders to different roles, classically grouped into two categories – business and IT – as shown in Figure 1. Although the names of the organizations may differ from one company to another, their function is roughly the same. They all run their activities in accordance with corporate strategy, corporate policies (such as corporate governance, compliance and security) and organizational goals.

Figure 1: Simplified Organizational Model for Solution Operations in Organizations

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Your Future-Proofed Organization

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Continuous Improvement and Innovation with a Customer Center of Expertise
On the business side, most stakeholders are either end users who rely on the implemented functionalities to run their daily business or key users providing first level support or knowledge transfer for their colleagues. Another essential role is served by business process owners, who take the lead within the business units.

On the technical side, the customer’s IT organization has to ensure that services required for the solution are available for the business units. The program management office (PMO) or applications team is in direct contact with the business units. This team is responsible for implementing the business requirements. The development group is in charge of providing the right development practices or selecting the appropriate development platform, while the operations group is responsible for keeping solutions running 24x7. Providing the underlying IT infrastructure, such as the network and databases, is the responsibility of the infrastructure organization.

Figure 2 depicts the core responsibilities of the different organizational units. Line-of-business (LoB) owners drive investment decisions for new technologies and products and have a strong interest in fast value realization and value identification – through DevOps and Agile Methodologies.

While business requirements regarding proactive operations are driven by the LoBs, the business has to provide input to evaluate monitoring results and drive continuous improvement of the proactive activities.

The operations team is responsible for running SAP® solutions with minimum headcounts and maximum efficiency. This is made possible by defining an operations control center that is responsible for proactive monitoring, incident diagnostics and automation of IT processes.

The PMO and applications team take care of all projects and maintenance topics. This covers requirements management as well as testing, documentation, and change and release management. Another important aspect is integration validation of projects to mitigate project risks and help ensure an efficient and smooth handover into production.

A large part of the investment within projects is related to development. The development team is responsible for the quality and maintainability of custom code and provides customer-internal development standards as well as the most suitable development platform.

**Figure 2: Core Responsibilities Within the Organization**

* MCC: Mission Control Center
The continuous monitoring, maintenance and, if necessary, retirement of customer-owned code is also the responsibility of the development team. Whenever new technologies are introduced, they must be integrated with the existing infrastructure and assessed in terms of high availability and disaster recovery, for example. The infrastructure department is responsible for these kinds of IT planning activities.

**THE CONTROL CENTER APPROACH**

What does it take to provide excellent end-to-end solution orchestration? As starting point, an organization establishes different control centers, depending on the organization’s current situation. A mission control center (MCC) focuses on day-to-day operations and provides a project-control approach that monitors the progress and quality metrics of multiple critical projects and helps ensure a smooth transition of the new solution from the project to the operations phase.

This control center concept works, in principle, similarly to a U.S. National Aeronautics and Space Administration (NASA) control room. Every mission-critical application and technology component, as well as every implementation and operations services provider, is represented within this control center. In addition, the control center is staffed with representatives from all stakeholder groups. Staff in the control center can also include the development support units of all the application and technology components.

Appropriate owners with access to all functional units, as well as implementation and operations stakeholders, are assigned to control centers. They have access to key users and development support units and use clearly defined escalation paths that help speed up issue resolution. Within the control center, a one-team approach is enforced, with one or two co-owners assigned to review and sign off on issue resolution. The control centers use KPIs, an essential part of the single source of truth, to track, control and improve their processes.

The control centers can be efficiently implemented and constantly improved only when the customer’s IT team works in close cooperation with SAP and partners (see Figure 3). Since control centers deal not only with current operations challenges, but...
also with future innovation topics, the customer’s control centers need to establish and control flexible, automated, proactive and quality-oriented IT operations processes to ensure business continuity and minimize time to value.

QUALITY MANAGEMENT AND THE CUSTOMER COE

Establishing control centers (CCs) in an increasingly complex, intricately networked world is not enough. There is a growing need to adjust and optimize your CCs constantly to provide holistic efficient governance and take your CCs to a new level of performance. To do this, consider enhancing the CC concept with dedicated quality management staff to build a highly mature and professional Customer COE, which serves as a single source of truth and as a central point for functional collaboration among the business, IT, SAP and partners. This structure helps increase the transparency of business processes, reduce the downtime to boost system availability, and lower the total cost of operations.

Because multiple organizations are involved in end-to-end operations processes, collaboration must be optimized among all parties involved. This becomes even more important when the involved parties belong to organizational areas that have different focuses. For example, let’s assume that your incident management team is working with very challenging KPIs in service-level agreements and is getting more challenging every month, solving more and more incidents within a shorter time. At this point, the incident management process is working according to the definition.

Nevertheless, a cross-organization quality management structure is required to connect all lines of business with CCs, other IT teams and even partners to identify root causes for the increasing number of incidents and define a KPI-driven action plan to reduce the number of incidents. This continuous improvement approach helps ensure that your end-to-end IT processes are flexible and adaptable to future requirements.

Achieving optimal collaboration requires both a common collaboration platform and a clear definition of the end-to-end IT processes. The definition ensures that stakeholders know their tasks, the service level they must provide and what information they need to share with others. As the trend of out-tasking and outsourcing IT services continues to grow, the ability to share reliable and up-to-date information becomes increasingly important for all the parties involved.

A Customer COE provides appropriate knowledge about end-to-end business processes that are implemented currently or will be implemented. It is responsible for various quality management tasks, such as validating the successful integration of solutions into complex heterogeneous software landscapes during the integration testing phase of an IT project.

OUT-TASKING AND OUTSOURCING

Efficient, end-to-end solution operations can no longer be accomplished with in-house resources alone. When implementing SAP applications, customers are increasingly seeking outside resources to augment their in-house

Setting up control centers, a Single Source of Truth, and quality management roles and including stakeholders and partners moves your Customer Center of Expertise to the next level, higher maturity level, which can be certified by SAP.
personnel. Partners offering standard application packages can make it easier to out-task or outsource process components to manage/reduce costs, increase speed and access skilled resources. In out-tasking, a service is given away to a third-party service provider, but still owned and monitored by the Customer COE through appropriate service-level agreements.

In outsourcing, the complete ownership of implementation and operation is relinquished. Out-tasking is the collaboration model used for SAP and SAP partner application and technology product units.

To maximize the potential of out-tasking and outsourcing, your organization must carefully weigh which activities you can out-task and which process components you can outsource. This requires a detailed risk analysis. Recommendations to keep in mind during this process are included in the SAP standards for solution operations. The work to be out-tasked or outsourced and the process interfaces between customer and service provider should be defined clearly in a service-level agreement. The SAP standards for solution operations provide a template for this. In addition, these standards provide KPIs to evaluate how well the agreements were fulfilled.

Another challenge presented by out-tasking and outsourcing is that the IT service provider often uses different tools than the customer, such as a different online help desk using a different ITSM tool. That’s why technical integration of the different tools is required to support efficient collaboration. SAP delivers integration packages that are ready for outsourcing. For example, service desk functionality in the SAP Solution Manager application management solution provides an open, bidirectional interface to the help desks of third-party providers.

It is of highest importance to ensure that outsourcing and out-tasking partners are fully integrated with all end-to-end IT processes. This requirement covers not only tool integration, as described above, but also includes the defined roles, skills, and responsibilities that must be integrated with the company’s processes as well as quality management and the concept of an advanced center of expertise. As an additional requirement, partners must define quality management roles as well so that continuous improvement does not stop at the boundary between the partner and the customer.

**CUSTOMER COE WITH ADVANCED CERTIFICATION**

Setting up control centers, the single source of truth, and quality management roles and including stakeholders and partners can enhance your Customer COE maturity and overall efficiency to the next level, where it can receive an advanced certification from SAP.

A customer COE organization that successfully passes the audit for the advanced certification demonstrates that:

- Can react quickly to any business requirements and IT changes
- Operates with lowest possible cost and effort while delivering a maximum level of stability and business continuity
- Has a state-of-the-art IT organization that is ready for new challenges
- Integrates with SAP and partners in critical situations and projects

The integration of new technologies into existing IT processes and organizations within highly networked solutions, progressively in the Cloud, will be one of the most critical challenges for the next 5-10 years.
Establish **Quality Management** for Your Customer Center of Expertise

The “journey” of a Customer COE to a higher level of maturity starts with setting up tools and procedures so as to ensure, on one hand side, internal collaboration and business and IT alignment, and, on the other side, to enable collaboration with SAP and partners. The ability to “support solutions” in critical situations requires a certain level of solution documentation and the capability to analyze root causes and exchange information.

With increasing maturity of your Customer COE, the “survive” phase (becoming productive and staying productive) is replaced by the “save” phase, where the focus of the Customer COE is on proactivity, automation and continuous improvement by quality management. So, your organization reaches the level of professionalism where innovation can be adopted without disturbing existing processes and value realization is most efficient.

**CUSTOMER COE CHARTER**

Customer’s control centers are challenged constantly with new business and IT requirements, leading to continuous adjustment of the CCs’ focus topics. This adjustment and the quality assurance and continuous improvement of the CCs’ operations processes are the core tasks of a Customer COE with advanced certification and of its quality managers.

The key success factors, driven by the quality management methodology, for meeting these challenges include:

- Transparent and complete up-to-date documentation of solutions, projects, operations, procedures and engagements within a single source of truth
- Fully integrated partner tools and roles, which are also part of the single source of truth, as are the KPIs of the control centers
- Continuous improvement of IT operations and projects driven by balanced scorecards and using a KPI framework for definition and improvement of documentation, and adjustment of control center structures, if needed
- Clear centralized ownership, resolution and reporting of top issues, with quality managers acting as de-escalation architects to coordinate the required expertise from all involved parties
- Centralized activity planning for tasks, services, issues, and so on related to each KPI (also to optimize collaboration with the embedded SAP support team)
- Business and IT alignment (Business and IT are and acts as one team)
- Customer COE not only as service provider but also as business innovation enabler

**QUALITY MANAGEMENT METHODOLOGY**

SAP recommends a quality management methodology that includes a single source of truth, continuous improvement driven by KPIs, centralized issue resolution and de-escalation, cross process and cross organizational optimization, business transformation and business innovation driver. The methodology can result in quality-oriented IT operations, standardized end-to-end operations processes, close connections with experts and IT operations that are automated and proactive rather than manual and reactive.

**Single Source of Truth**

Setting up standardized / optimized end-to-end IT processes and a single source of truth is supported by SAP with a set of best-practice documents – the SAP standards for solution operations. These standards describe how best to use available tools and services and how the different roles work together to optimize end-to-end processes for solution operations. This standard framework allows customers to benefit from SAP’s over 45 years of experience delivering best-in-class support.

Second, the optimization strategy is rooted in SAP Solution Manager as a collaboration platform, providing full visibility of the customer’s solution and process status while making required information available to all stakeholders. This helps reduce cost for information gathering and keeps participants working with current information.

The adjustment of the control centers’ focus topics due to new business and IT requirements and the **quality assurance and continuous improvement** of the control centers’ operations processes are the core tasks of a Customer COE with advanced capabilities and certification.
Additionally, SAP provides a methodology for the implementation of end-to-end solution operations, called the SAP Activate methodology. It supports best practices and provides content, services, training and tools to perform solution operations efficiently. SAP standards for solution operations define core, end-to-end operations tasks. Supporting the SAP Activate methodology, engineering service road maps accelerate the implementation of solution operation standards.

A training program for quality manager roles and subject-matter experts completes our support offering to keep IT skills up-to-date.

**KPIs-Driven Continuous Improvement**

Each quality manager is responsible for one or more focus areas. These focus areas can be related to end-to-end solution operation standards; integration topics for platforms, technologies, and devices; and strategic business areas such as financials. Each focus area of a balanced scorecard is covered by one or more KPIs to document the current situation and drive continuous improvement. In keeping with a single source of truth, KPIs are documented in the KPIs framework of SAP Solution Manager.

If control center structures or composition have to be changed to fulfill KPI targets, quality managers drive this transformation.

**Central Top-Issue Resolution and De-escalation**

A top issue is an incident or a problem that has severe impact on at least one of your core business processes. It reveals a critical challenge – a showstopper or a mission-critical situation that requires the attention of top management at your site and sometimes at SAP side as well.

If left unresolved, a top issue could result in serious business loss. It can be either a major critical issue or a bundle of single technical issues of the same type or belonging to the same area.

The Customer COE team owns top issues and is responsible for issue transparency and resolution. By coordinating all involved parties within the control centers – including outsourced resources, implementation partners, hardware partners, customer departments, SAP experts, and third-party vendors – the quality management team drives the resolution of the top issues. In business-critical cases, the quality managers act as de-escalation architects to coordinate the required expertise from all involved parties using a “situation room” approach. This approach requires the engagement and collaboration of all the parties until the issue is resolved.

**Central Planning and Collaboration**

In the control centers, a multitude of activities and resources are required to mitigate identified risks, solve the top issues, and support the continuous improvement of defined KPIs. Central resource and service planning is required to coordinate these activities efficiently and provide the most suitable solution.

This can imply the identification of the most appropriate SAP and partner services, the leveraging of the skills and capacity of the IT teams, or the identification and integration of internal and external resources to bring about efficient collaboration “at eye level” with the experts of SAP.

**QUALITY MANAGEMENT ROLES**

To maintain a stable link between the mission control center (MCC) and SAP, you should establish dedicated quality manager roles in your Customer COE with advanced capabilities.

Quality managers make sure that IT processes are “state of the art” and are improved continuously. To this end, quality managers are responsible for the key success factors listed in the “Customer COE Charter” section.

The customer and engaged partners must participate actively in quality management for continuous improvement. Therefore, a Customer COE is staffed with individually certified quality managers from all involved parties – customer and engaged partners.
Quality managers deescalate incidents with critical business impact by driving the technical analysis of all relevant software components as well as by analyzing the business process supported by these software components. The goal is to bring the business process “up and running” again in the shortest possible time, with either a “workaround” or a technical fix.

Due to the typical complexity of business processes, multiple SAP and non-SAP software components are often used. Therefore, a team of experts must be formed quickly in the operations control center for the analysis of each incident. Quality managers act as de-escalation architects and lead this team until the issue is resolved. In addition, these managers initiate and drive communication to management and business and align communication with SAP and partners.

Mandatory quality manager roles must cover all topics regarding business continuity, integration validation, application lifecycle management (including the program management office), and business innovation and enablement. The head of a Customer COE with advanced certification manages the team, oversees process compliance and takes responsibility for the team’s work. It is important to mention that, in addition to the customer’s four quality manager roles, all involved partners (SAP, outsourcing, and out-tasking partners) must provide a quality manager for the areas in which they are active or responsible.

In summary, we recommend the following roles for a Customer COE.

Customer (mandatory):
- Head of the Customer COE with advanced certification
- Quality manager for business continuity
- Quality manager for protection of investment
- Quality manager for integration validation
- Quality manager for business innovation and enablement

SAP (in addition, if applicable):
- Technical quality manager(s) for all relevant areas

Partners (in addition, if applicable):
- Quality manager for business continuity – application operation (technical outsourcing)
- Quality manager for business continuity – business process operation (application outsourcing)

Each quality manager role is responsible for different focus topics collected in a balanced scorecard (see Figure 4). The successful implementation and continuous improvement of operations processes and innovations are measured with KPIs.

The personnel structure and the size of your company determine how many employees are needed to serve these quality manager roles. In small businesses, one employee may take over all roles (a substitute is required as well), whereas in large enterprises, two employees could be required for one quality manager role. To understand why these roles should be established, it makes sense to look at where they are positioned in the organization, which IT processes they should define and drive, and the business units with which they collaborate.

**Figure 4: activity Focus of quality Manager Roles**
Quality Manager for Business Continuity
The main goals of the quality manager for business continuity are to maintain the availability of IT service and to support the business at a justifiable cost. Therefore, this manager drives the implementation and continuous improvement of an operations control center for business process operations and application operations. This manager is also responsible for establishing and optimizing end-to-end operation standards for both areas.

The key focus areas of business process operations are the proactive prevention of poor business process performance, the continuous improvement of the business processes, automation and control, and performance and capacity management. The standardized end-to-end processes cover business process monitoring, business process analytics and improvement, data consistency management, job management, and exception handling.

In application operations, the focus is the efficient technical operation of complex landscapes. This includes proactive monitoring, alerting and reporting of user response times, data volume control, system monitoring, and early detection of bottlenecks and performance incidents. Technical optimization is targeted, often with the use of platform-specific tools such as the SAP NetWeaver® Process Integration (SAP NetWeaver PI) offering. The involved end-to-end standard processes cover system, user experience, and SAP NetWeaver PI monitoring; root cause analysis with exception handling and technical optimization; data volume management; technical system administration; IT reporting; and security.

The quality manager for business continuity is involved in the efficient provision and use of the infrastructure and drives IT infrastructure planning and integration of new infrastructure topics. Taking into account the future challenges of IT, this can cover key focus areas like the migration of databases, such as the SAP HANA® database and SAP Sybase® Adaptive Server® Enterprise; the integration of mobile platforms, such as SAP NetWeaver Gateway technology and Sybase Unwired Platform; the management of new devices, such as the SAP Afaria® mobile device management solution; and the distribution of data and application over clouds. An important task of the quality manager for business continuity is to integrate these topics into the existing end-to-end operations processes.

Based on these focus topics, the organizational contacts for the quality manager for business continuity are mainly in the operations and infrastructure team. Due to the analytics and continuous improvement aspects of business process monitoring, this quality manager works closely with the lines of business.

Quality Manager for Protection of Investment
The main goal of the quality manager for protection of investment is to ensure that IT is drawing the maximum value out of investments in products, hardware and tools. This can be achieved through application lifecycle management, either by maintaining existing solutions or by managing business requirements as major changes within a new project up to the deployment into the solution. The quality manager should pay special attention to decisions about creating custom code versus using existing standard code. This requires not only a sound evaluation of the risks and business requirements, but also standards for custom development that cover development practice, naming conventions, code verification, and testing procedures as well as other important development aspects.

To help increase the maturity of your Customer COE, SAP offers a bundle of services, typically starting with an operations planning workshop, a holistic initial assessment, to identify the optimization potential of your IT capabilities and define an initial high-level road map.
Significant business changes, like mergers and acquisitions or business restructuring, are a special challenge for IT, as these transformations must be performed with minimal downtime and without disrupting existing business and IT processes.

Security requires special attention, with increased complexity of landscapes and with more data either being kept decentralized or – with mobility solutions – being loaded on less secure, handheld devices outside a well-protected centralized landscape. Protecting data while keeping it available for users is a constant challenge to a customer’s security concepts.

The quality manager for protection of investment works in close collaboration with the application lifecycle management team, the PMO team and the development organization, which could be outsourced. This manager ensures that the corresponding end-to-end IT processes are established and improved continuously.

The quality manager’s focus topics within the application lifecycle management and PMO areas are all aspects of sound project management as well as master release planning, and business requirements clarification. This manager needs to avoid significant test efforts and changes that lead to errors as well as missing development guidance and documentation. These aspects lead to problems in the IT operations team if not considered and resolved during the project phase. The end-to-end, standard processes cover project and quality-gate management; vendor-neutral solution documentation of project and business processes; incident, problem, and request management; and a clear change and release management that also covers retrofits. Other important topics are template management, test management and test automation, security, custom code management, and the preparation of appropriate development platforms. Master release planning and upgrade management are important, as are landscape transformation methodologies in case of significant organizational changes.

**Quality Manager for Integration Validation**

Integration of solutions can be complex and challenging when implementing and running solution landscapes that drive mission-critical business processes. The implementation work is distributed across many teams and, in most cases, many stakeholders, as well as custom-built and third-party software. SAP provides a proven, integration-validation methodology to mitigate the technical risks of an implementation or upgrade project, to introduce solutions into the production environment smoothly and to set up ongoing operations efficiently. The quality manager uses the methodology for integration validation in collaboration with the application lifecycle management team, the PMO and the operations team.

In addition to technical risk assessment and mitigation, the quality manager for integration validation makes sure that SAP-defined solution, product and operation standards are implemented and enforced. This means that data consistency requirements have been met in the project and the business requirements regarding performance and scalability are fulfilled. The quality manager supports the deployment of new solutions by making sure that all required experts of the project and the operations team are available in the control centers during this phase. The quality manager reviews, validates, and optimizes the end-to-end process standards for integration validation, which cover solution documentation, testing, data integrity and data consistency, performance and scalability management and the integration validation methodology.

The focus of a periodical recertification of an advanced Customer COE with advanced is the review of the Customer COE balanced scorecard and of the quality management KPIs.
Quality Manager for Business Innovation & Enablement

A working, controlled interface between the different lines of business and the IT organization units is vital for maintaining user and business owner satisfaction as well as for understanding and resolving any issues that impede business processes. Moreover, business requirements need to be collected and addressed efficiently for IT to realize the value of innovations quickly. The goal of the quality manager for business process improvement is close collaboration with business units to improve existing business processes and drive accelerated solution identification through a methodology delivered with the SAP Solution Management Assessment service. The assessment starts with a walkthrough of the corresponding core business processes and application and technology landscapes to identifying top issues, areas of functional improvement, or lack of user satisfaction. The outcome of SAP Solution Management Assessment is documentation of all top issues, requirements and challenges. Based on the results of this assessment, continuous improvement projects are implemented. The improvements are measured periodically and compared with those stipulated in the initial assessment.

On a continuous basis, critical issues and requirements are identified through a methodology delivered with the SAP Solution Management Assessment service. The assessment starts with a walkthrough of the corresponding core business processes and application and technology landscapes to identifying top issues, areas of functional improvement, or lack of user satisfaction. The outcome of SAP Solution Management Assessment is documentation of all top issues, requirements and challenges. Based on the results of this assessment, continuous improvement projects are implemented. The improvements are measured periodically and compared with those stipulated in the initial assessment.

The quality manager for business innovation and enablement drives projects for fast value realization of business requirements by using the DevOps and Agile Methodologies. This means that new business process scenarios are prototyped in the customer’s environment using real master data and real process integration. With accelerated prototyping, the business is able to make fact-based decisions, with IT and SAP providing a proof of concept with state-of-the-art technical infrastructure. Typical examples for this methodology are new technologies, like in-memory computing (SAP HANA), when, for example, performance requirements cannot be met, the data architecture is complex or redundant, and real-time reporting and decisions are needed. Another topic for DevOps and Agile Methodologies is the area of mobile infrastructure, where business-user requirements show high demand for flexibility and simplicity.

Another challenge for the business is the increasing globalization of companies, often resulting in the implementation of a standard, global template for SAP software. The globally run SAP solution needs to take into account local operation practices such as local legal, tax and compliance requirements. The quality manager for business innovation and enablement should leverage best practices and provide guided procedures to the business for localizing the template to fulfill these local requirements.

Quality Management and Partners

While the setup of a Customer COE is the responsibility of the customer and the customer’s IT organizations, it is understood that partners have to be integrated fully. This means that partner expert roles are also part of the end-to-end IT processes and the control centers. The partner tools have to be integrated fully into the documentation and reporting concept of a single source of truth.

This, however, is not enough to ensure a seamless operation and implementation, as subject-matter experts are focused on their tasks and responsibilities. In the Customer COE with advanced certification, the integrative roles are taken by the quality managers, and the same has to apply to partners as well. SAP supports control centers and Customer COEs with one or more technical quality managers, depending on SAP’s role and the customer’s situation.

The same support with an integrative function is required by other core partners, especially the outsourcing and implementation partners. Depending on the tasks of the partner, quality manager roles are either protection of investment (for implementation and upgrade projects) or for business continuity. In the operation area, there are often two types of outsourcing: technical outsourcing and application management outsourcing, which can be transferred to the partner’s two quality manager roles for business continuity – application operation and business process operations.
Certification of a Customer COE

Customer COE Program provides functional certifications to underscore a customer’s commitment to continual improvement and innovation of its business solutions supported by SAP products and services.

CERTIFICATION OVERVIEW

The Customer Center of Expertise program entails two maturity levels: Primary and Advanced. The primary certification validates that an organization fulfills the minimum requirements needed to provide a solid foundational infrastructure for interaction with SAP. In detail, it checks that the minimum features are established to guarantee basic supportability to the organization in case of critical situations and that the minimum requirements are in place to work effectively and collaboratively with SAP. Additionally, information management, contract and license management, influence SAP development and innovation management are verified.

Advanced certification is an extension of the supportability criteria of the primary certification and covers the full spectrum of required Customer COE functions and capabilities to ensure the successful implementation or transformation towards SAP’s Best Practices.

It provides the certified Customer COE with the confidence to drive challenges by business and market requirements as well as new technologies.

Both levels of certification require that the center complies with the SAP standards for solution operations.

PRIMARY CERTIFICATION

The certification of a Primary Customer COE organization indicates that it possesses the basic service and support infrastructure necessary for interaction with SAP. Such an infrastructure enables the Customer COE team to collaborate internally – within its own company – as well as externally with SAP.

Having this fundamental infrastructure is essential. For that reason, primary certification applies to all SAP customers and is described in the support contract provided by SAP.

Primary certification focuses on establishing a single source of truth and a central point for functional collaboration between your business and IT units on one side and between your company and SAP on the other side.

However, certain basic functions of the service and support infrastructure are a key prerequisite for the efficient collaboration. Primary certification requires that a Customer COE team demonstrate proficiency in four core areas:

- Information Management
- Contract and License Management
- Innovation/Influence SAP Development
- Support Operations

To receive this certification, a remote audit is performed based on globally standardized certification criteria. In preparation for the audit, the head of the Customer COE organization will be required to fill in an online questionnaire and return it to SAP. Please refer to the SAP Support Portal [http://support.sap.com/ccoe](http://support.sap.com/ccoe).

Once a Customer COE has been certified for the first time, a re-certification must take place every two (2) years at the latest. The re-certification will follow the same process as the first certification. In order to do this, it is necessary that the Customer COE starts again with the online Questionnaire on the SAP Support Portal. The re-certification process is also included in your support contract fees.
ADVANCED CERTIFICATION

Advanced certification of a Customer COE covers the full spectrum of required Customer COE functions and capabilities to ensure the successful implementation or transformation towards SAP’s Best Practices.

This certification validates that the team has mastered the use of key functions, roles, IT processes, skills and tools based on SAP standards for solution operations and SAP best practices. The Customer COE that has received the advanced certification confirms an excellent integrated end-to-end solution orchestration and a KPIs driven continuous improvement process through an effective Quality Management System which brings transparency to challenges and issues faced by the organization as a whole. This is paramount for mission-critical operations. Visibility, business and IT alignment and a common understanding of the top issues facing an organization are achieved through the Customer COE’s ability to maintain a single source of truth – a central repository where everything is tracked and from which all information is disseminated.

Advanced certification for a center of expertise is comprehensive in scope and includes an assessment of the skills the team possesses for executing integrated quality management and continuous improvement of SAP solution operations. Advanced certification verifies that Customer COE has adopted and complies with SAP standards for solution operations, driven by an operation control center and an innovation control center, including underlying service management processes.

Advanced certification requires that a center shows expertise in the following areas:

- Transparent and complete documentation of solutions, projects, operations handbooks and engagements within a single source of truth
- Integration of partner tools and roles with the end-to-end operations processes
- Continuous improvement of IT operations and projects driven by scorecards and using the KPI framework for definition and improvement documentation
- Central, top-issue resolution and reporting
- Central activity planning regarding tasks, services, issues, KPIs, and risks
- Establishment of all quality management roles by customer and partners, with skill levels of quality managers proven through individual certification
- Successful setup and operation of an operation control center and an innovation control center

To receive this certification an Advanced audit (remote and onsite) is performed based on globally standardized Advanced certification criteria. To prepare the audit, which should be done well in advance, two useful documents are available: the Advanced Certification checklist and the Advanced Certification guidelines. Please refer to the SAP Support Portal [http://support.sap.com/ccoe](http://support.sap.com/ccoe).

The initial advanced certification is valid for 1 (one) year. Within 1 (one) year from the initial advanced certification the Customer COE must apply for the first advanced re-certification.
ADVANTAGES OF CUSTOMER COE CERTIFICATION

Depending on the focus areas you select, you can see benefits such as lower failure rate, higher availability, faster implementation or adoption of innovation, increased efficiency hence lower total cost of operations and ownership. Enhancing the continuous improvement process over time can show positive impact in these areas.

In addition to these primary benefits, some additional benefits are available only after SAP has successfully audited your organization. These benefits include:

• Leveraging the service delivery engine from SAP for your own purposes
• Being part of a network with other Customer COE organizations that have advanced certification and are at a very mature IT level
• Early information and knowledge transfer

Leverage the Service Delivery Engine for your Own Purposes
Customer COE organizations with advanced certification discover or know ways to replicate the way that SAP runs “industrialized” services onsite as well as remotely. SAP provides the infrastructure of the SAP Solution Manager application management solution to enrich these kinds of services so that a Customer COE with advanced certification can deliver customer-specific content, such as highly optimized projects or business reviews. This approach helps build the framework and tools for a customer’s own services, which should be supplemented by specific expert services from SAP.

Customer COE certifications underscore a customer’s commitment to continual improvement and innovation of its business solutions supported by SAP products and services.

Be part of a Network with Other Companies at a Mature IT Level
Mature IT processes and organizations do not have to be developed individually and in a vacuum; they can be adopted as best practices from other mature customers. SAP provides a platform where Customer COE organizations with advanced certification can establish a network for rapid adoptions.
The Benefit: Reach a New Level of Collaboration Within Your Business

When your company establishes a center of expertise, the result is an IT organization that is prepared for future challenges of products, technologies and innovation in general, and can react quickly and flexibly to new business requirements. The introduction of the centralized, single source of truth for documentation and reporting helps you to increase the transparency of business processes, reduce the downtime to boost system and business process availability, and lower the total cost of operations and ownership. Collaboration between the lines of business and IT has reached a level where requirements can be identified and tested quickly with a prototype, and value realization for the business is done in an optimum way. On the other hand, the value of IT to the business is demonstrated clearly.

These benefits are the result of the introduction of the following:
- Flexible, end-to-end operations processes that are scalable and can adjust quickly to any business and IT changes
- Cost and effort that is as low as possible while making sure there is a maximum level of stability by acting proactively and using automated functions
- Quality-oriented IT operations and KPIs driven continuous improvement to help ensure that a state-of-the-art IT organization is ready for new challenges
- Availability of expert skills from partners and SAP if required

FIND OUT MORE

For more information about establishing a Customer COE organization at your company, visit the SAP Support Portal at http://support.sap.com/ccoe.
Certification for Advanced Customer COE: Services and Support Offerings

Customer COE Program provides, to support the journey from the primary to the advanced certification and define a tailored road map, a bundle of services (onsite and remote) delivered by SAP experts (see picture below).

The Core Customer COE services are part of the of the SAP Enablement for Customer COE Portfolio (CRM # 9504713), which is part of the New MaxAttention Portfolio – End-to-end Hybrid Operations.

THE ADVANCED IT OPERATIONS SELF-ASSESSMENT

As a kind of “bridge” between the Primary and the Advanced certifications the Advanced IT Operation Self-Assessment service identifies areas of improvement for Primary Customer COE(s) that want to:
• plan the optimization of the Customer COE, including efficient E2E solution operation processes
• start the journey towards Advanced maturity and certification

After completion, SAP will provide a rough estimation of the maturity of your IT processes including maturity indicators and recommendations in each area together with Benchmark information to give additional guidance in evaluating your results.

The value of this Advanced IT Operations Self-Assessment will be further enhanced by the Operations Planning Workshop (OPW), where SAP will interact directly with your experts, on site for several days, and will come up with a more sophisticated and precise evaluation, including action plans for moving ahead.

The Advanced IT Operation Self-Assessment service is remote and free of charge: it can be accessed directly in the Customer COE Area of the SAP Support Portal → Roadmap and Certifications → Advanced IT Operation Self-Assessment

Figure 5: Customer Center of Expertise Road Map
THE OPERATIONS PLANNING WORKSHOP

The Operations Planning Workshop (OPW), which can be considered the initial step in the improvement journey and towards a possible advanced certification, delivers a maturity assessment of the IT capabilities such as Customer COE strategy, governance and organization, IT operations processes, tools, roles and skills. The OPW, which is applicable also for Hybrid environments (where On Premise and Cloud solutions are combined), provides a fit-gap analysis of your IT operations against SAP’s Best Practices / SAP’s Standard for Solution Operations. The workshop is an interactive and collaborative discussion between the SAP delivery team and your key IT and Business stakeholders.

During the onsite part of this service the SAP delivery team will check strategy, roles and responsibility, processes, tools, documentation, and KPIs based continuous improvement.

The service generates a common understanding of optimization areas and plans for moving ahead and provides maturity level ratings for each topic area of the IT operations evaluated based on the SAP Advanced COE customers’ experiences.

As result of the Operation Planning Workshop the customer can:
• decide how to move forward, reviewing and prioritizing the actions identified and the recommendations provided,
• derive a detailed improved roadmap based on the prioritizations above
• decide where and how support from SAP is required (Engineering Projects / SAP Services, Advanced Customer COE Coaching, etc.)

SAP can support in these activities.

The Operation Planning Workshop is part of the SAP Enablement for Customer COE Portfolio (CRM # 9504713), which is part of the New MaxAttention Portfolio – End-to-end Hybrid Operations. (CRM Service Number: 9501141)

Customer COE Program provides a bundle of services delivered by Customer COE experts to define and support the journey to the advanced certification.
ENGINEERING PROJECTS / SAP SERVICES

Implementing the recommendations provided, hence enhancing comprehensive IT processes according to the SAP Best Practices / SAP Support Standard for Operations, takes time, but a great innovation step in moving towards a mature and advanced SAP operational state. It will require strong management commitment, allocated resources, time and the motivation to change or adjust, and of course improve the existing IT processes.

This is the reason why the roadmap towards the advanced certification is referred as a “journey” and the related approach requires to be seen and considered as a project, a engineered project for Customer COE implementation or optimization.

Engineered project which can include all the required Services and/or Support and/or even Consulting from SAP to implement the recommendations, and also Training to build or enforce the skill in those areas to be improved.

THE ADVANCED COACHING FOR CUSTOMER COE

The Advanced Coaching for Customer COE Service supports the Advanced Customer COE journey / project towards the certification focusing on concrete deliverables, targeting the Audit criteria, and ensuring additional but regular support by an SAP Advanced Customer COE expert to sustain, smooth or even expedite this journey.

The Advanced Coaching for Customer COE is designed to provide expert remote support in a period and appropriate interval to be determined individually for the duration of the journey (e.g. during the milestones review and regular status meeting).

The Advanced Coaching for Customer COE is part of the of the SAP Enablement for Customer COE Portfolio (CRM # 9504713), which is part of the New MaxAttention Portfolio – End-to-end Hybrid Operations. (CRM Service Number: 9504914)

THE QUALITY MANAGEMENT WORKSHOP (AND QUALITY MANAGERS CERTIFICATION)

As mentioned in the “Establish Quality Management for Your Customer Center of Expertise” section, SAP recommends a quality management methodology and approach that includes a single source of truth, continuous improvement driven by KPIs, centralized issue resolution and de-escalation, cross process and cross organizational optimization, business transformation and business innovation driver.

Quality managers make sure that IT processes are state of the art and are improved continuously Mandatory quality manager roles must cover all topics regarding business continuity, integration validation, application lifecycle management (including the program management office), and business innovation and enablement.

The Quality Management Workshop enables Quality Managers to work efficiently in the context of a Customer COE with Advanced Capabilities (which includes enabling and then leveraging a strong collaboration and proactive dialogue between IT and LoB, supporting innovation adoption and continuous improvement). The goal of this service is to provide an understanding of the Quality Managers roles, tasks, objectives and benefits.

Furthermore, the QM Workshop provides guidance to setup Quality Management in your Customer COE and to identify adequate KPIs.

At the end of the QM Workshop, a certificate will be provided to all Quality Manager who successfully passed the final written exam (which is part of the Workshop). The individual Quality Managers certification is a prerequisite for the Advanced Customer COE Audit.

The Quality Management Workshop is part of the of the SAP Enablement for Customer COE Portfolio (CRM # 9504713), which is part of the New MaxAttention Portfolio – End-to-end Hybrid Operations. (CRM Service Number: 9504846)
THE ADVANCED RECERTIFICATION FOR CUSTOMER COEs

The initial advanced certification is valid for 1 (one) year. Within 1 (one) year from the initial advanced certification the Customer COE must apply for the first advanced re-certification. If this re-certification does not show any major negative findings, it can be performed on a bi-yearly basis if the Advanced Customer COE does not face any major technical or organizational changes in the meantime.

The Advanced Recertification for Customer COE is part of the SAP Enablement for Customer COE Portfolio (CRM # 9504713), which is part of the New MaxAttention Portfolio – End-to-end Hybrid Operations (CRM Service Number: 9504850).