

Optimizing Organizations and Processes for Service Providers with CMMI for Services

Hand in Hand

About 70% of the value created in the Federal Republic of Germany is based on services. Requirements concerning assured quality, costs and on-time delivery, which the manufacturing industry had to respond to long ago have since also become a decisive competitive factor in the services sector. Providers of IT services in particular can no longer afford to be said to have suboptimal processes in »immature« organizations. Since end of February 2009 the Capability Maturity Model Integration for Services (CMMI-SVC) of the Software Engineering Institute (SEI) is now offering methods for processes, organizations, continuous improvement as well as for internal and external benchmarking.

CMMI (Capability Maturity Model Integration) has long become established as a de-facto industry standard. It consists of a compilation of best practices, which allow for an assessment of one's situation and support process improvements. In particular CMMI for Development (CMMI-DEV), which is being applied to all areas of development, has proved itself in practice so well – considering objective maturity/capability evaluations and continuous process improvement - that it could only be a matter of time when this experience was going to be used and transferred to adjacent areas. CMMI for Acquisition (CMMI-ACQ) already focuses on acquisition processes while the new CMMI-SVC reference model can be used by organizations in the services sector or by individual departments which provide services internally or externally.

CMMI-SVC, CMMI-ACQ and CMMI-DEV all have the same structure and share some process areas of the CMMI core which is common to them all. These CMMI models consist of objectives for the individual processes, the process areas, an improvement guideline and the associated infrastructure, training materials, as well as standardized methods for appraisals. Lead appraisers and trainers have undergone strict training through the SEI.

An ideal IT service provider develops and maintains his/her products and service processes with CMMI-DEV, operates in accordance with CMMI-SVC principles, and controls his/her acquisition processes and suppliers in accordance with CMMI objectives for supplier agreement management. This not only covers all phases of the service lifecycle – it also ensures fast and smooth reaction to new requirements or disturbances that may come up and need to be dealt with during operation.

Another important point for IT organizations is to ensure compliance. Companies are subject to constantly changing legal requirements and standards. Applying CMMI supports the IT management in the fast and correct implementation of these requirements using flexible, structured processes, standards and organizational structures. It has been proven, for instance, that the application of CMMI facilitates audits for IT revisors and auditors, shortens the time needed for the audits, and increases the probability that the audits will be passed successfully.

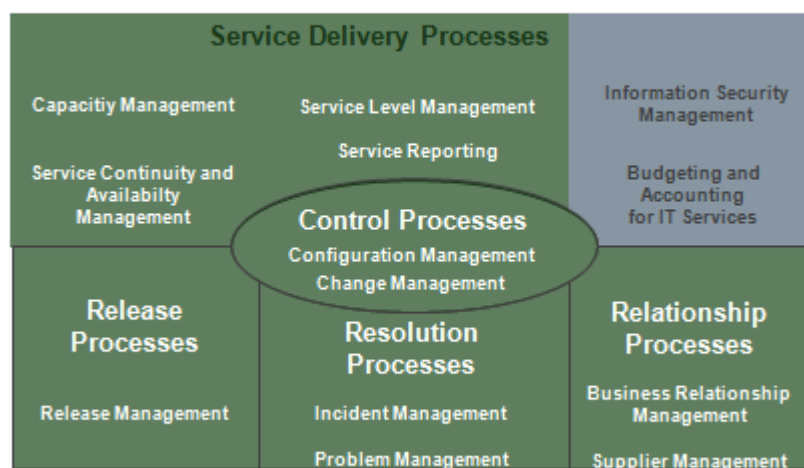
Who for and why?

CMMI-SVC as the newest model was also designed for training providers, logistic services, consulting firms, health care institutions, finance companies, as well as for IT services. In particular service providers responsible for IT support and operation are able to profit, as the development view of operations can be included much more in the other processes – thus also increasing the influence of the operational perspective on development. This frees synergies, which show in particular in reduced costs and improved quality. Using a consistent methodology in development and operation for the description, implementation, monitoring and control of services also tends to reduce (staff?) resistance in IT projects overall. [?]

Substitute or supplement for ITIL?

Figure 1 shows which ITIL processes are addressed by CMMI-SVC process areas - though the actual advantage of CMMI-SVC does not show in this diagram. This lies in the much deeper institutionalization of the processes in the organization, the assurance, sustainability and continuous improvement of processes as well as the staged maturity assessment of a service organization and the improvement potentials derived from there for the improvement program required by CMMI.

Abbildung 1: Abdeckung der ITIL-Prozesse (ISO 20.000 Spezifikation) durch CMM-SVC Prozessgebiete



Adressiert durch CMMI-SVC

nur durch ITIL adressiert

But ITIL also has advantages. It has already proven its worth as a reference model in IT service organizations; it offers very detailed advice on implementation regarding some of its processes, and the tools support this standard.

It is now a matter of skillfully integrating the advantages of both. If an ITIL-oriented organization combines its methodology with CMMI-SVC, it secures in particular its service strategy and its service improvement. For this organization applying CMMI-SVC does not mean introducing a new model, but assuring the sustainability of its already established processes. ITIL-oriented organizations usually only apply parts of the service delivery, service resolution and service control books. The CMMI-SVC process range and its objectives for a professional process map usually remind an organization that some processes are still missing, which ITIL V2 and V3 require as well (i.e. all processes including those of service design, the service strategy, the continuous service improvement – cf. also Tab. 1 which contains an overview of all CMMI-SVC process areas).

Tabelle 1: Die CMMI-SVC Prozessgebiete nach Kategorien

Kategorie	Prozessgebiet
Process Management	<i>Organizational Innovation and Deployment</i>
	<i>Organizational Process Definition</i>
	<i>Organizational Process Focus</i>
	<i>Organisational Process Performance</i>
	<i>Organisational Training</i>
Project Management	<i>Capacity and Availability Management</i>
	<i>Integrated Project Management</i>
	<i>Project Monitoring and Control</i>
	<i>Project Planning</i>
	<i>Quantitative Project Management</i>
	<i>Requirements Management</i>
	<i>Risk Management</i>
	<i>Supplier Agreement Management</i>
	<i>Service Continuity</i>
	<i>Service Transition</i>
Support	<i>Casual Analysis and Resolution</i>
	<i>Configuration Management</i>
	<i>Decision Analysis and Resolution</i>
	<i>Measurement and Analysis</i>
	<i>Process and Product Quality Assurance</i>
Service Establishment and Delivery	<i>Incident Resolution and Prevention</i>
	<i>Service Delivery</i>
	<i>Service System Development</i>
	<i>Service System Transition</i>
	<i>Strategic Service Management</i>

CMMI-SVC offers IT a meaningful addition to and assurance of its ITIL approach, strong support in moving towards a »mature« organization and thus also in preparing for an accepted assessment of its maturity level. The established SCAMPI method (Standard CMMI Appraisal Method for Process Improvement) now also allows for an objective benchmarking of ITIL processes. For the approaches existing so far - like the ISO 20.000 certification - are currently widely-used by ITIL users, but only deliver a met/not met maturity assessment of an organization. ISO 20.000 is not so much focused on identifying improvement opportunities, which constitute the main task of internal and external CMMI assessments. The IT Service Management Forum (itsMF) seal of approval on the other hand confirms maturity in terms of maturity levels, but is not yet as widely-used as SCAMPI or ISO 20.000. Combining the advantages of the distribution and acceptance of ITIL in Europe with the requirements of CMMI assures not only a well-functioning process organization with greater efficiency, effectiveness and flexibility, it also offers the possibility of a common language and a harmonization of both areas – thus helping to overcome barriers and minimize internal friction losses.

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About KUGLER MAAG CIE:
KUGLER MAAG CIE is an international consulting company supporting its customer in particular in improving development and acquisition processes for software and systems. Its clients come from the automotive, telecommunications, finance, IT industries and the health care sector. Based on accepted maturity models, standards and methods like CMMI®, SPICE (ISO 15504), Automotive SPICE™, Safety (IEC 61508, ISO WD 26262), COBIT, ITIL and Lean SixSigma the company - together with its customers - develops improvements of systems, software and IT performances in the tension-filled context of costs, quality and deadlines. Its consultants are experts with many years of practical experience in designing and implementing improvement programs.

Source: CMMI for Services Technical Report CMU/SEI-2009-TR-001 ESC-TR-2009-001, Carnegie Mellon University 2009