IT ADVISORY

Enhancing process maturity in services industry

A new excellence framework

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During the industrial growth, businesses concentrated on producing goods that were either a need or a want. Efforts were put into making the product world class, fully loaded and retaining the capacity of satisfying both its fitness for purpose and its fitness for use. While industries still continue to cater to customer needs through tangible products, the recent past has seen a change to this. The customers are now looking at the new intangible word called ‘The Experience’. Though it is intangible, this particular need of the customer has grown in leaps and bounds. ‘The Experience’ is what the customer wants and is willing to pay for. This segment of the industry catering to the ‘soft’ aspects is commonly known as ‘The Tertiary Sector’ of the economy or ‘The Service Industry’.

Industries are concentrating their resources and energies to understand the softer customer needs through the services that they offer. The services offered create an experience for the customer. Today’s services not only provide an experience but also help to manage the customer and his/her needed work in a much better way. The ‘Service Industry’ as an umbrella covers a huge gamut of offerings under it, a few being listed below

<table>
<thead>
<tr>
<th>Healthcare</th>
<th>IT / ITES</th>
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</thead>
<tbody>
<tr>
<td>Hospitals</td>
<td>Hotels / Hospitality</td>
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<tr>
<td>Banking</td>
<td>Insurance</td>
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<td>Financial Services</td>
<td>Retail</td>
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<td>Consulting</td>
<td>Tourism</td>
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<tr>
<td>Franchising</td>
<td>Legal Services</td>
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<tr>
<td>Education</td>
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**Growth and future of the service industry**

The Services sector has grown steadily and today constitutes almost 80 percent of the world economy. The sector saw an accelerated growth in the eighties and nineties, especially in the nineties. While the share of services in India’s GDP increased by 21 percent points in the 50 years between 1950 and 2000, nearly 40 percent of that increase was concentrated in the nineties. As illustrated in Fig 1a, the services sector contributed to almost 65 percent of India’s GDP growth in 2009-10.

The outlook of the services market is strong and seems to be growing along with the Indian economy. The Indian economy is expected to grow at 8.9 percent in 2010-11 and 9.3 percent in 2011-12. The services sector will be one of the major contributing factor estimated to grow at 8.9 percent in the fiscal year. The expansion in the services sector is expected to approach 9 percent in 2010-11 and inch up to 9.3 percent in 2011-12. While the service sector continues to grow, one of the major contributing factor to this growth has been the IT and ITES services.

The Information Technology and Business Process Outsourcing would touch USD 60-62 billion in 2010 – 11, as published by NASSCOM, as part of its “Strategic Review 2009” titled “The IT-BPO Sector in India.”

While almost all service sectors participated in this boom, growth was fastest in communications, banking, community services, trade and business services (Illustrated in Fig 1b). One of the reasons for the sudden growth in the services sector in India in the nineties was the liberalization in the regulatory framework that gave rise to innovation and higher exports from the services sector.

**Fig. 1a**

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>16.4</td>
<td>15.7</td>
<td>14.6</td>
</tr>
<tr>
<td>Industry</td>
<td>20.7</td>
<td>20.5</td>
<td>20.7</td>
</tr>
<tr>
<td>Services</td>
<td>62.9</td>
<td>64.4</td>
<td>64.9</td>
</tr>
</tbody>
</table>

*Source: RBI Report, RBI Quarterly Bulletin, 2010*

**Fig. 2b**

![Graph showing contribution to GDP by percentage](image)

**Source: RBI Report, RBI Quarterly Bulletin, 2010**

The Indian IT and ITES market is estimated to grow at the rate of over 16 percent to become a USD 132 billion industry. Simultaneously, the IT and ITES exports are estimated to more than double to USD 78.62 billion by 2012. ITES now offers services such as Knowledge Process Outsourcing (KPO), Legal Process Outsourcing (LPO), Games Process Outsourcing (GPO), etc. More and more sophisticated products are being developed in India. The domestic BPO segment is growing annually at a rate of nearly 35-40 percent. The revenues generated by the BPO’s are almost USD 1.18 million and the domestic market is expected to reach USD 10 billion by the end of the financial year 2008.

With service industries being one of the fastest growing sectors, it is expected to grow double fold in the coming years and therefore these statistics clearly indicate the business that can be expected.

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1 RBI Report, RBI Quarterly Bulletin, 2010
2 India Law Offices – Higher standards making a difference for you
Typical challenges in the service industry

As an industry grows, so does its complexity. Especially, in the service sector where we are dealing with the ‘experiences’ of the customer, it becomes even more vital to have robust systems in place.

‘Service’ is an intangible offering that we provide to our customers through our interactions. It is therefore, extremely important to ensure that each time a customer engages with the service industry, he/she has a hassle free experience through the entire process.

In today’s competitive market, the battle is not about the service being offered, but it’s about the ‘manner’ in which the service is offered. With very few services having a monopoly in the market, for most of the others it’s ‘competition’. Some commonly observed challenges in the service sector are:

• **Direct interaction with the customer** – The service industry is one such area where the interaction is direct with the customer with very few interfaces. The quality of the service delivery hence takes more priority to ensure continued relationship.

Customer service executives of a service provider need to ensure the most cordial relations with the customer. Any dissatisfaction experienced by the customer can have a direct impact on the continuation of the service with the service provider.

• **High level of people involvement** – Service delivery mostly involves very high levels of people involvement making service delivery ‘people dependant’.

The real estate business is highly dominant with real estate agencies involving agents. As a customer interested in buying a property, we decide on buying the property based on the property itself and also based on the selling ability of the agent.

• **Services delivered over several platforms** – A service can be rendered to a customer in more than one ways. Today as a customer wanting to do a financial transaction, there are more than one ways in which he/she can do it:
  - Visit the bank – personally visit the bank and make the needed transaction across the counter
  - Net banking – provide the needed details and perform transactions over the internet
  - Tele-banking – make a call to an assigned number and execute your transactions or even request for a cheque to be picked up at your door step.

Here, though the platforms through which the service is delivered are different, what remains common is the level of satisfaction that the customer expects.

• **Measures could be intangible** – Service being an intangible offering, measuring all aspects of the service delivery to assess performance can be challenging. Lack of specific measurements that can be analyzed and provide process improvements could result in poor efficiency.

• **Fast and dynamic service delivery** – As compared to other industries, the service industry has a shorter time span for service delivery and hence it is of outmost importance to make sure the needed resources are available through capacity and availability management.

• An organization providing cab services needs to ensure the cab is available at the requested time to receive the customer. They also need to ensure that there are sufficient cabs available across the region to cater to customer requests round the clock.

• **Poor management** – may arise due to inadequate strategic planning and decision making.

• **Low productivity** – idle time due to insufficient resources.

• **Lack of processes and methodologies** - typically in a service industry the activities performed could be adhoc in nature based on the type of request received. The activities performed need to be bifurcated based on type and accordingly need to have processes and methodologies in place to address the same. Introducing processes and methodologies for the services would help generate process improvements as well whilst making the process more stable and capable.
What can help?

Service organizations need to invest their time and money in building a robust framework that ensures their smooth and continual functioning, and also giving them the needed competitive edge. A model/framework will enable Organizations to identify the key ingredients needed in executing their business in the most effective and optimal manner.

In today’s world, everything that we do or receive to a large extent could be termed as a Service. In such a scenario where the Service Industry is seen as the backbone of any country’s Economic and Social development, it almost becomes imperative to have a model in place that can assess the Organization’s maturity in delivering a given service.

- A capability maturity model can help develop people, processes and technology resulting in improved efficiency in an Organization.
- A capability model focuses on the vital elements that are required in a process to make it effective and thereby gives a sense of direction to the Organization including the areas of improvement.
- The capability model helps identify essential processes that would enable the achievement of business objectives and also business excellence.
- The capability model increases visibility into the organization’s activities ensuring the product or service meets the customer’s expectations.

Although, ISO was traditionally accepted globally as a benchmarking standard for quality, it did not cover the entire gamut of the industry. With the growth in the different sectors of the economy ISO was being viewed as suited best for the manufacturing sector and therefore new models and frameworks such CMMI gained popularity due to their ability to cater to specific needs for a larger and varied group of industries including services.
CMMI and CMMI SVC as a model

CMMI is a process improvement model that effectively uses processes in a structured manner to achieve business and process excellence. It is a capability maturity model that moves from level 1 to level 5 based on the maturity attained by the Organization at each level. A capability maturity model has two representations to it: a) Continuous representation and b) Staged representation. A continuous representation has capability levels from 0 – 5 that look into the organization's process improvements in individual process areas. A staged representation has maturity levels from 1 – 5 that look into the organization's process improvement at each maturity level. A maturity level is attained when the goals at the given level are achieved by the organization.

This model is developed by SEI and released in February 2009. As per the SEI published appraisal results, a total of 24 Organizations have been assessed for CMMI SVC globally out of which 20 of them have been assessed in the year 2010, clearly indicating the increasing trend for future assessments.

Some of the initial benefits observed across infrastructure management, support projects and BPO are:
- Noticed improvement in existing processes
- Improved service management
- Strengthening of planning and execution activities
- Improved issue management
- SLA improvement
- Better capacity planning
- Enhanced service capability.

CMMI SVC is a part of the CMMI constellation serving specifically to the services sector with respect to service establishment, service management and service delivery. The model comprises of 5 levels starting from level 1 and reaching highest maturity at level 5, as other models of CMMI (Illustrated in Fig 2a)

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3 KPMG’s analysis based on information from SEI (Software Engineering Institute. www.sei.cmu.edu)

**Fig 2a**

<table>
<thead>
<tr>
<th>Level</th>
<th>Focus</th>
<th>Process Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Optimizing</td>
<td>Continuous xProcess Improvement</td>
<td>Organizational Innovation and Deployment (OID)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Causal Analysis and Resolution (CAR)</td>
</tr>
<tr>
<td>4 Quantitatively Managed</td>
<td>Quantitative Management</td>
<td>Organizational Process Performance (OPP)</td>
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<tr>
<td></td>
<td></td>
<td>Quantitative Project Management (QPM)</td>
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<tr>
<td>3 Defined</td>
<td>Process Standardization</td>
<td>Capacity and Availability Management (CAM)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Incident Resolution and Prevention (IRP)</td>
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<td></td>
<td></td>
<td>Service System Transition (SST)</td>
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<tr>
<td></td>
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<td>Service Continuity (SCON)</td>
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<tr>
<td></td>
<td></td>
<td>Service System Development (SSD)</td>
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<td></td>
<td></td>
<td>Strategic Service Management (STSM)</td>
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<tr>
<td></td>
<td></td>
<td>Organizational Process Focus (OPF)</td>
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<tr>
<td></td>
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<td>Organizational Process Definition (OPD)</td>
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<td></td>
<td></td>
<td>Organizational Training (OT)</td>
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<td></td>
<td></td>
<td>Integrated Project Management (IPM)</td>
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<tr>
<td>2 Managed</td>
<td>Basic Project Management</td>
<td>Service Delivery (SD)</td>
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<tr>
<td></td>
<td></td>
<td>Requirements Management (REQM)</td>
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<td></td>
<td></td>
<td>Project Planning (PP)</td>
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<tr>
<td></td>
<td></td>
<td>Project Monitoring and Control (PMC)</td>
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<tr>
<td>1 Initial</td>
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<td>Supplier Agreement Management (SAM)</td>
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<tr>
<td></td>
<td></td>
<td>Measurement and Analysis (MA)</td>
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<tr>
<td></td>
<td></td>
<td>Process and Product Quality Assurance (PPQA)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Configuration Management (CM)</td>
</tr>
</tbody>
</table>

Source: SEI (Software Engineering Institute. www.sei.cmu.edu)

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Salient features of CMMI SVC

CMMI-SVC has features that can enable service organizations to be scalable with the growing demands in the service sector.

Simply put, CMMI SVC could enable the following:

- Organizations will be well-equipped with resources to undertake the new requirements. Through Capacity and Availability Management, Organizations can check the existing strength of resources to meet the forecasted demand. They can also verify the availability of these resources to perform the needed tasks. Capacity and Availability Management will enable more realistic planning and management of needed resources.

- On delivery of services, several issues might crop up due to varied reasons that would need to be addressed within the agreed time frame to ensure customer satisfaction. A prompt response to an issue or incident and its quick resolution has more chances of retaining a satisfied customer. Incident and Request Management ensures the timely resolution of requests for service and incidents that occur during delivery.

- Catering to specific customer service requests and classifying the services based on customer, type, etc. will establish standard services that can be offered to the customer. Any input received on the delivery of these services in the form of feedback, etc. can be analyzed and accordingly actioned upon. This activity is done through Organizational Service Management.

- A mature Organization practices re-use and captures key learnings to ensure re-work effort is minimal due to similar issues re-occuring. In a Service Industry where repetitive issues/problems could cost you your customer, Problem Management prevents incidents from recurring by identifying and addressing underlying causes.

- Business hours have changed to 24/7 to cater to the growing service needs and therefore it is critical to ensure the systems are up and running in the shortest time span possible, in case of any disruption. Service Continuity establishes and maintains continuity plans for continuity of services.

- Minimum time for service delivery has become the key aspect of many Service Organizations. Efforts are put to ensure the timelines agreed upon are met and any issues causing the delay are addressed accordingly. Service Delivery encompasses activities to deliver services in accordance with service agreements.

- Service System Development has as its purpose to analyze, design, develop, integrate, and test service systems to satisfy existing or anticipated service agreements. A service system is an integrated and interdependent combination of components, consumables, and people that satisfies service requirements.

- While Organizations delivering service continue their routine, the growth in the Service Sector triggers these Organizations to prepare themselves for any changes that might be needed in their existing systems. This change needs to be managed systematically ensuring that it has the least effect on already existing services. Service Transition handles this activity in an Organization.

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4 KPMG’s Enhancing process maturity in service industry, 2010
CMMI-SVC does not contain…

Like any other model or framework, CMMI-SVC model also has certain aspects which have not been addressed explicitly in the model.

- **Environmental Management** – as addressed in ISO14000. A lot of organizations today are laying importance on the need of ensuring their businesses are operating in an environment-friendly manner and ensuring environment safety. The CMMI SVC model does not look into aspects or processes that could facilitate the same.

- **Information Security Management** – as addressed in ISO27000. As part of CMMI SVC there is no explicit mention of methods and procedures for information security management which is an important aspect of any IT business.

- **Financial Management aspect is not in scope** – The CMMI SVC model similar to other CMMI models does not specify practices for financial management.

Practical challenges of implementing CMMI SVC

- Understanding the new process areas introduced in CMMI SVC such as Service Delivery, Service System Continuity etc. An organization that has adopted CMMI DEV would also need hand holding to be able to rightly interpret the process areas in CMMI SVC and their requirements. An eg, the interpretation of the word ‘project’ is different in CMMI DEV and in CMMI SVC, hence the right interpretation can be crucial for the successful implementation. Organizations seek advisory or consulting support to address the same.

- Need for strong management commitment. The CMMI SVC implementation should be treated as an improvement initiative and management should be committed towards this initiative by supporting all the needed requirements. This management commitment in most organizations is seen as a challenge and can act as a roadblock in the successful implementation. The steering commitment for this initiative should be able to present a strong business case for the initiative clearly highlighting the value added and ROI from this initiative.

- Creation of a process measurement framework. Identification of the relevant set of measures that are feasible to collect and will help measure the process performance and improvements. The measures need to be linked to the business goals to ensure all improvements using measures help directly or indirectly in achieving the business goals. In a service industry some of the measures could be qualitative in nature and these would need to be used in the most appropriate manner.

Services include a wide range of offerings such as IT application support, healthcare, hospitality, ITES services, banking, insurance etc. The model applicability needs to be understood in the light of each of the specific service area. Mapping of the process area requirements to the identified and specific service segment can be crucial.

### CMMI in comparison with ISO

<table>
<thead>
<tr>
<th>Factors</th>
<th>ISO</th>
<th>CMMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>A set of standards defined as per the model requirement</td>
<td>A collection of best practices from across the Industries</td>
</tr>
<tr>
<td>Focus</td>
<td>ISO is less exhaustive in nature.</td>
<td>CMMI is an exhaustive process improvement model with 22 process areas and ensuring adherence to all GPs</td>
</tr>
<tr>
<td>Approach</td>
<td>ISO being a standard, there is no concept of progressing from one level to another</td>
<td>The CMMI model allows the organization to move level by level from 1-5 depending on the maturity attained. There are two approaches staged and continuous.</td>
</tr>
<tr>
<td>Appraisal method</td>
<td>ISO assessments last for 3 days for the entire organization</td>
<td>CMMI has a rigorous appraisal method spanning over 2 weeks.</td>
</tr>
<tr>
<td>Assessment Team Members</td>
<td>ISO does not involve the organization to participate as assessors</td>
<td>The ATMs in a CMMI appraisal are identified from within the organization. This allows better understanding of the areas of improvement</td>
</tr>
</tbody>
</table>

Source: KPMG’s Enhancing process maturity in service industry, 2010

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5 KPMG’s Enhancing process maturity in service industry, 2010
Summary

With the expected growth in the service industry in the coming years, it's important to give to the customers a 'benchmark' which is specific to their industry and catering to their specific needs. As a result of this understanding, organizations are looking forward and showing a deep interest in the adoption of the model. The increase in the number of organizations that have been assessed in 2010 (20 organizations) as compared to 2009 (four organizations) for CMMI SVC stands testimony to the same. Organizations that have adopted the model have not only found it more applicable to their businesses but have also seen:

- Improved quality of services through better managed processes
- Strengthened project management activities within services
- SLA improvements through measured baselines
- Improved readiness with respect to availability and capacity to meet changing customer demands.

Author/Reviewer Profile

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He handles Strategic Advisory Services encompassing Model based, Six Sigma and Sourcing Process Improvement Advisory Services. An MBA from IIM(B), Raman has directed over 200 advisory engagements and served on the review panels and pilot initiatives for new models and frameworks from the SEI. He is also an executive member of SPIN BLR chapter, member of European SEPG review panels, member of Institute of Public Auditors and is active on NASSCOM, CII panels and conferences in the field. KK serves as a IT Industry Champion for KPMG in India as an Advisory Partner.

Prasanth Shanthakumaran
Associate Director IT Advisory (SPI) KPMG in India

Prasanth has rich experience of more than 18 years in process advisory and quality assurance. Consulted clients in achieving business objectives through improved processes by facilitating implementation of industry proven best practices and process improvement models/reference frame works (CMMI®, TMM and ISO 9000) to bring lasting value to organizations.

Thirtha Uthappa
Assistant Manager IT Advisory (SPI) KPMG in India

Eight years of overall experience which includes process and quality assurance, CMMI high maturity practices delivery, CMMI L3 and L5 implementation, Six Sigma and transition handling. Has worked with leading organizations in process improvement initiatives and their vision enablement teams.