Executive Summary

The Knowledge Management (KM) program at Global Application Management (GAA) is one good example of how a large organization should go about building capability in the area.

KM was initiated in a project form at smaller scale to pilot out the feasibility and suitability for the Application management business. Later, it was mapped to meet out strategic business objectives without losing sight of the actual knowledge needs of the workforce. The development and roll-out was well planned in phases to ensure scheme goes the ‘first time right’. The results of first project in GPC India were used to demonstrate the value of KM to other organizational entities and countries.

KM Services offered are combination of pull (self-service) and push services (facilitated transfer) specially designed to meet the needs of consultants. There is a robust measurement system around KM process to ensure all participation and non-adherence gets reported.

While the initiative is barely one and half year old in GAA, the early signs of success indicate that change management strategy and plan are on the right track and other process and systemic challenges are addressed appropriately.
Disclaimer

The views expressed in the paper can be attributed to Global Application Management as a whole. The paper is based on the current practices and they are subject to change due to policy of the organization. The business scope of the current Knowledge Management deployment is for Global Application Management only. The process indicators are chosen randomly as samples to demonstrate the case in point.

Acknowledgements

First of all, we would like to acknowledge the efforts of all consultants of Global Application Management who participated in all kind of Knowledge Management (KM) processes. It is their contribution which is being discussed and detailed out in the paper and the whole text is reflecting the point of view of Global Application Management. The thought leadership provided by Mr. Andreas Degenhardt, Head of Siemens IT Solutions and Services – Global Application Management, Mr. Sanjay Vispute, and Mr. Manish Saxena, main author of this text, is one of the defining factors for the KM program. The KM technical team and support team based out of India also deserve huge credit for converting a vision into a real working system.
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Introduction

Siemens IT Solutions and Services is an internationally leading provider of information technology solutions and services, offering one-stop shopping for the complete IT service chain – from consulting to systems integration and IT infrastructure management right through to industry-specific IT solutions.

As a cross-sector business Siemens IT Solutions and Services supports the Siemens Industry, Energy and Healthcare Sectors that possess IT. Special focus will also be on fully integrated, industry-specific IT solutions developed together with the Siemens Sectors.

What makes Siemens IT Solutions and Services unique?

Industry DNA – as the only IT partner embedded within a global integrated technology company, with a 160 year history of continuous industry leadership, Siemens IT Solutions and Services has an unrivalled knowledge of all the industries and sectors that it addresses.

Practical innovation: Siemens IT Solutions and Services with its technical expertise, backed by a strong engineering culture, provides innovation that delivers measurable value to the clients, both in the public and private space.

Quality & Commitment – as a service company, with customer satisfaction and contract renewal rates among the very best in the global industry, Siemens IT Solutions and Services has the proven ability to guide the successful transformation of it’s customers’ business processes and operations. Siemens IT Solutions and Services is known for always staying engaged, never walking away from difficulties and delivering on its promises.

Global Application Management business

Global Operations (GO) is the outsourcing business division of Siemens IT Solutions and Services. GO is further divided into two parts; Infrastructure Services and Global Application Management (GAA) business.
This paper is based on the experiential learning out of the KM program in GAA business globally which operates into Application Management Services (AMS) space. GAA has five main priorities:

- Quality in everything we do
- Win new customers
- Better collaboration
- Foster Standardization and Industrialization
- Promote the AMS topic towards the market, internally and to our people

**Context of setting up a Knowledge Management team**

“The need for setting up a KM team and systems was felt by top management for multiple business reasons” explains Manish Saxena when coming to speak about how this project came into life. These reasons attributed for having a robust KM system could be distinctly classified in two categories; direct business reasons and the classical problems addressed by knowledge management. The direct business reasons were i.e. growth strategy in market place, improving operational efficiency, driving consistent look and feel within all constituents of the organization and integrate and create one global organization. The other set of classical reasons for setting up KM were to reduce information search time for employees, improve learning curves of new joiners, limit the knowledge drain with outgoing employees, avoid reinvention of the wheel across multiple geographies, improve collaboration among global workforce and last but not least, foster a culture of knowledge centricity and creativity.

In AMS business, the global competition is getting fiercer and players are now increasingly emphasizing more on building and sustaining competitive advantages. And, given the nature of the business, source of competitive advantage in long run will be the workforce and their competence as a whole. Andreas Degenhardt points out that luckily GAA was quick to realize the fact and started focusing on systems and processes that help consultants in keeping their knowledge abreast and thereby, become more productive and effective for their customers. The key priorities for AMS business were to generate all round growth from existing customers and by acquiring
new customers. “KM has been chosen as one of the several strategic tools to enable growth by sharing best practices of customer acquisition and servicing teams of different countries”, says Andreas Degenhardt. Furthermore KM aims to have one common database of knowledge assets (i.e. enhancements) to promote upselling and cross-selling across verticals and geographies.

Another salient feature of GAA strategy was to create a sustainable competitive advantage by having low cost structure. It was proposed to achieve this by having an integrated model of delivery across five production centers to optimize capacity utilization. The cost of operations varied in a broad-band across these global production centers along with the competencies of consultants resolving incidents and realizing enhancements on customer IT systems. Was there any challenge to be faced? “Yes, answers Manish Saxena, the major challenge in implementing an integrated delivery model was the absence of common systems i.e. ticketing tools, diverging processes, documentation practices and exposure to consultants. The consultants were used to work in closed teams interacting within themselves and catering to one client. The proposed model needed to have one consultant working across several projects to facilitate higher capacity utilization.”

According to Saxena, the next big challenge faced was to contain the burgeoning cost of operations. Due to the push in last several years for starting new initiative at country level and driving country or region specific approach have led to accumulation of fragmented costs. In addition, outsourcing could not be pushed very strongly due to region specific growth model. The management felt the need to consolidate all such initiatives and attempt to synergize. For a long-term competitiveness, it was necessary to contain the operational cost and promote outsourcing in big way. While it started around five years back but real thrust came when the Integrated Common Delivery System was pushed by a central team from HQ. KM was seen as a big enabler for unified delivery model and also a tool to improve productivity of line staff.

For the variety of reasons explained in above paragraphs, process standardization took a back seat. This ideally should have been the key differentiator when you eye big conglomerates or global organizations. These players demand common standards of services and processes from all production centers. Hence, KM was thought to be
serving as a common platform to integrate all knowledge pertaining to processes, people, services and tools. After restructuring, GAA strived to become a well-oiled and synchronized organization in short span of time. Again, the challenge was on connecting minds of people belonging to diverse demographies. The feeling of one GAA irrespective of the country specific incorporation was needed and it was agreed to achieve the same by rolling out common global processes, platform and tools. The organizational culture was the key factor in driving this aspiration. Again, KM was identified as key initiative to help achieve these objectives.

The second set of reasons that led to setting up a KM team at corporate level was to address the classical problems identified by KM in any organization. One major challenge in large organization like Siemens IT Solutions and Services GAA was to connect knowledge islands. The challenge was not the unavailability of knowledge but the access to the right knowledge at the time when people need it. Another missing link was the contextual understanding of the knowledge. It all results into huge information search time which otherwise could have been utilized for more productive business purposes. As per the estimates provided by a leading consulting firm, about 92% of the knowledge and information is often found unstructured and resultant information search time for employees could be as high as 35%.

One of the focus areas of KM deployment has been to reuse knowledge to the possible extent. In large organizations, reinvention is commonly seen as a source of additional cost which could have been very well avoided just by being well informed. For example; a lead practice i.e. a comprehensive design of the Management Information System for a country could be easily replicated in other countries without investing any time and efforts by other countries. As per a study done by KM practicing organization in India, reuses can save cost up to 70% using a good KM system which shared and disseminate information efficiently. According to Andreas Degenhardt, Siemens IT Solutions and Services GAA is no exception to this thumb rule because of the size and scale. So there lied an opportunity to control the cost by driving reuse of all types of knowledge i.e. transactional knowledge and tacit knowledge.
In current scenario, when ample opportunities are available to employees particularly in emerging markets like India, Brazil, Argentina and Russia, the attrition rate was touching all time high. At one point in time (2008), for GAA India annual attrition rate went up to as high as 18%. Of course, later during the subsequent recessionary years, it came below significantly but business volumes too dipped strongly. In such dynamic scenario, it is always beneficial to have steeper learning curves for new joiners so that they could become productive sooner than usual average. This has direct bearing on organizational bottom lines. In this context, KM system plays a vital role.

KM systems offer for any new joiners to pick-up learning in selected areas at one’s pace and convenience. More importantly, the dependency on seniors in the system for providing learning to a new joiner is reduced.

Another incidental benefit of KM is to make knowledge transfer independent (of course to a limited extent as KM system can never be a replacement of a human mind which captures enormous knowledge) of people who participate in business processes. This is equally true in a scenario when an experienced resource moves out from the current role.

In recent times, when workforce is spread in wider geographies, it is all the more necessary to have stronger focus on people to people collaboration. It has been a well established fact that a team which connects at individual level shares more and learns faster from each other than a team which does not have personal connections. This has been the underlying philosophy of social collaboration or also called as social computing. This latest aspect of KM has been a focus of current KM model of GAA.

One of the major intended benefits of the KM intervention is to drive a culture of knowledge sharing and reuse. “When knowledge is made available to employees, it also triggers into many improvement ideas”, outlines Saxena. An organization if actively tracks and drives the reuse and further incremental knowledge over the base knowledge, it generally leads to many major or minor improvements. It has been empirically proven that KM programs usually leads into increased tendencies among employees to come up innovative solutions of day-to-day problems.
**KM value proposition in Global Application Management**

KM systems aim to ensure consistent, efficient, effective and smart services to end-customers by enabling smart work-ways within GAA delivery units. The following table explains the opportunities (potential benefits) available to KM for GAA on the four quadrants of the balance scorecard.

| Process                  | Smarter & efficient processes: Adapting best practices. Drive reusage of knowledge  
|                         | Standardize processes for greater consistency and flexibility  
|                         | Enable CDP model by offering common source of knowledge and documentation which results into higher flexibility  
|                         | Avoid reinvention. Quick replication across Global Production Centers (GPCs)  

| Customer                | Improve contextual grasp of customer knowledge  
|                         | Move up from customer satisfaction to customer delight  
|                         | Improved SLAs and response time. Futuristic solutions  
|                         | Ensures new joiners adapts faster and thereby reduces impact on delivery to customer  

| People                  | Learn right things with right speed and ensure financial benefits (P2P learning)  
|                         | Higher collaboration among teams  
|                         | High levels of employee engagements  
|                         | Help get access to Global Subject Matter Experts across GAA  

| Finance                 | Need to improve operational efficiency (productivity, response time, optimize utilization of resources)  
|                         | Smart work ways to ensure market growth from existing customers  
|                         | Enhance chances for cross-selling and up-selling of enhancements  

Evolving KM strategy for the organization

The genesis of KM thought process of GAA lies in urgent business needs as discussed in the previous chapter. KM was first identified as one of the core project under the program “GAA for 2014” initiative in 2008. It started on a small note in global production center in India. The initial focus had been to capture incidents and their resolution in a database for driving reuse of the same. The intended benefit was to improve productivity of consultants. After around two quarters, the need was felt to have a broader view of knowledge management. It was also planned that a line function will be instituted which will carry forward the work of the project team and enlarge the scope of KM. Subsequently, Global Knowledge Officer (GKO) was appointed.

With the advent of the line function, GKO worked out a comprehensive KM roadmap for GAA through a wide-level consultation with GAA leadership and country teams. The document also took the strategic business objectives of GAA (as explained under the value proposition of KM for GAA and its customers) into consideration, the vision of program GAA for 2014 and the knowledge needs of the workforce.

The following knowledge needs of GAA employees have been identified to begin the further design of the KMS:

- Capture past resolutions, smart retrieval, stop re-invention
- Structured document based collaboration. Prescribed & standard
- Top level Process knowledge, operating instructions, Audit, Continuous Improvements
- Encourage People to people connection. Drive sharing & reuse.
- Measure progress, trends. Stay focused. Centralized & Transparent approach
- Help employee get more knowledge; corporate, specialized, interests, customer
- Ensure learn right things, faster and translate into business benefits.

After analyzing all of the three defining factors of KM strategy, the conceptual model was finalized which laid the foundation of basic tenets of KM. The first and foremost,
A vision for KM has been carved out from the overall vision of GAA:

**Figure 2**

Proposed KM vision

- **Harness GAAs corporate brain for achieving GAA for 2014**
- **Improve Collaboration. Empower employees with peer’s knowledge**
- **Avoid Reinvention. Quickly Replicate Best Practices**
- **Enable business growth by more resilient employees**
- **Foster a culture of creativity & openness**

**Strategic Business Objectives**

- Profitability
- Employee engagement
- Customer intimacy
- Innovation

**Broad contours of KMS strategy and design**

GAA identifies KM as one of the four core processes in Application Management framework. The below principles explain the broad contours of the design of the KM program for GAA:

- Strongly linked to the GAA’s overall business objectives
- Focus on driving culture of sharing and re-use of knowledge
- Build GAA’s organizational body of knowledge for long-term advantage
- Designed to cater knowledge needs of the work-force
- Capture transactional knowledge. Experiential knowledge (tacit and explicit) and external knowledge to meet all-rounds needs of the consultants
- Ensures knowledge is provided at the point of need
- Offers a combination of pull (self-service) and push (facilitated transfer) services to consultants
- Leverage power of communities in ensuring knowledge sharing
- Helps to bring several organizational entities closer by providing opportunities of social collaboration and standardized documentation structure
- Measure business and financial impact of the reuse
Conceptual model and approach to achieve GAA’s KM vision

GAA’s definition of Knowledge Management

KM is pertaining to a set of activities that ensure knowledge created in all business interactions (i.e. transactions, projects, initiatives, programs and customer interactions) are captured, categorized and stored in GAA’s organizational body of knowledge for future purposes i.e. organizational learning and reusage. KM program will enable people to people learning at individual and organizational level by bringing a cultural change and technology enablement of the knowledge processes about.

The aim of KM program will be to harness individual and collective brilliance (knowledge) of workforce and transform the same into GAA’s competitiveness in market place in generating sustainable competitive advantage. There are two conceptual models that outline guiding principles for designing of KM in GAA.
In today’s time, effectiveness of knowledge worker’s is crucial for organizational success. Hence, businesses must enable people to make decisions quickly, effectively and with minimum oversight.

Businesses depend on their people for several thing:

• to seek relevant information;
• to understand loads of information based on situations and surroundings;
• to analyze and make sense of information; and
• to share and disseminate information so that people know and understand situations, actions, implications and next steps.

Therefore, a good KM program should focus on harnessing the tacit knowledge of employees who have best situational awareness. It has been proven by several studies that a well designed and executed KM program would result into enhanced business resilience of employees which is their ability to make right decisions at the respective moments of truth.

From the individual employee perspective, six major behavioral characteristics of individuals get impacted due KM to some extent. This is put together defined as business resilience:

1. Pragmatism in overall approach,
2. Resourcefulness,
3. Risk taking ability/ new initiative,
4. Handle business ambiguity smartly,
5. Clarity of purpose,
6. Collaborate.
From the methodology and tool perspective, the below KM framework helps in determining the right mix of methodologies to influence people’s sharing and reusage tendencies in the organizational set-up.

This above knowledge transformation framework forms basis for identifying various methodologies that are explained in subsequent chapters.
GAA’s KM Model

The KM program offers three services. First, pull services (self-service) – contribute & retrieve knowledge as and when one’s need it. Second, push services (facilitated transfer of knowledge) driven by the need of the organization. And, third, community exchange where peers and experts join hands to discuss and share knowledge.
Portfolio of KM tools and functionalities at GAA

Siemens being a large conglomerate, a well integrated organization which cut across multiple sectors and geographies, and also being a pioneer in technologies and research and development has a huge legacy of management information systems. Some of them are really world-class and classify as knowledge management systems. Therefore, it was decided to harness existing tools and functionalities which are relevant for AMS business and integrate GAA specific tools with legacy systems in order to maximize returns on investments and avoid duplications. The current portfolio of general and GAA specific tools appears as below:

These tools are being rolled out to global production centers; Customer service organization and hybrid model (Delivery Competency Centers).
Glimpse of the Live KM Systems

**GAA Portal**
- **Purpose:** Information Dissemination
- **Technology:** SharePoint, DotNet

**Global Production Portal**
- **Purpose:** Transactional Knowledge for reuse
- **Technology:** SharePoint, DotNet

**Social Collaboration**
- **Purpose:** collaboration
- **Technology:** SharePoint (MySite)

**SlidePool**
- **Purpose:** Share & review presentation
- **Technology:** SharePoint, DotNet

**Wiki**
- **Purpose:** Document Collaboration
- **Technology:** SharePoint, DotNet

**Customer Project & Unit Collab. base**
- **Purpose:** knowledge about customer & units
- **Technology:** SharePoint, DotNet

**Highlights of KM deployment in GAA**

- KM strategy, plan, process design, training and support are provided by GAA’s Global KM team which operates out of India.
- KM is part of a line organization: Process Improvement Management and Production unit (PIM PSU) which drives standardization across GAA
- Each regional unit or Global Production Centers has a KM coordinator responsible for driving KM performance in the unit
- Every Global Production Center has a demand manager for ensuring change and enhancement
- Infrastructure is maintained in India by a technical team which has a strong functional and technical skills
- Communication is managed through the Internal Communication Team based out of Munich
- Weekly reporting on KM engagements feeds into all offices of units heads and GAA Head
• There are KM specific roles that are set-up i.e. Subject Matter Experts for each unit and global service areas. These roles are pillars for ensuring quality of knowledge assets in KMS.

• There is a point based system which is interlinked with every knowledge contribution and reuse. So every knowledge transaction gets recognized by offerings points to an individual. GAA has some plans to link these points with a new reward scheme. Policy clearance for the same is being sought.

**KM measurement systems**

KM promotes a transparent and robust set of metrics around followings:

<table>
<thead>
<tr>
<th>KPI Type</th>
<th>Level of measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Individual</td>
</tr>
<tr>
<td>People Engagement (KM-PE)</td>
<td>✓</td>
</tr>
<tr>
<td>KM Process (KM-PR)</td>
<td>✓</td>
</tr>
<tr>
<td>Process Improvement (PI)</td>
<td>❌</td>
</tr>
<tr>
<td>Financial (Fin)</td>
<td>✓</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>❌</td>
</tr>
</tbody>
</table>
Challenges of KM deployment at organization level

KM has some classical challenges which are often faced irrespective of industry or organization. In addition, there are some organization specific challenges. Also, most of the challenges associated with KM could be characterized as change management barriers which are commonly evident in most change situations in an organization.

In GAA’s KM journey which is about one and half year old, there have been many challenges. Some of them have been overcome and some are still being addressed.

Generating buy-in at middle management

While the top team at the Head Quarter was really bought into the idea of KM, hence the sponsorship came without much selling. The same was the case with country leaderships which were quite open to the new initiative based on the experience and initial success achieved in GPC India.

The challenging part was the mid-level teams which are usually very busy with too many operational issues. The effect of top level buy-in did not directly percolated down as expected. Hence intensive dialog started on regular basis. Things began to change when KM team could find few promoters and advocates in each country who lead as the key change agents. Also, a new role of country KM coordinator (which was instituted bit late) was instrumental in driving the change. Still in some pockets, KM performance dashboards are not being paid enough attention. But, it is probably too early to expect quick turnarounds in the remaining groups of people who are usual late changers. For sure, the value of many of KM tools and functionalities are slowly established at organizational level.

The progress so far could largely be attributed to the high visibility provided by the GAA Head and perseverance shown by local and global KM team.

Driving knowledge process compliance at consultant level

One of the most crucial factors was to involve real knowledge creators of the organization. The commitment of the top team did not influence the behaviors of consultants as much as originally thought. This was true in initial phase but later things improved with collective efforts of local and global KM team. Country KM SPOC
came into picture a bit late but became effective soon. The point emphasized was that having local owner of the KM deliverables always pays off.

Robust measurement system

In initial phase, measurement was difficult due to unavailability of data from various ticketing tool in different projects. Later when more data was made available, things started showing positive trends.

Quality consciousness

At second level, the issue of having good quality knowledge assets in KMS proved vital to long-term credibility. While, right from beginning there were sufficient measures to control quality of solutions (knowledge), maturity of validation process takes some time. The Engineers needed some time to become expert and consistent in approving knowledge assets. There were trainings and re-trainings for them which started showing results. Another factor which worked in favor was effective communication. There were few system related changes i.e. recording each rejection for each Engineer proved helpful. In next stage, system will enable two-way communication and traceability of feedbacks provided to consultants.

Effective communication and training

Communication through multiple channels i.e. Intranet, Quick News and feedback sessions proved effective. Initial trainings on tools were very helpful.

Changing perception of KM being a cost center

One of the soft challenges was to change perception that KM is an all-time cost center and hard benefits of KM i.e. productivity gains and savings will be a far reality. There can not be better advocate than the real benefits which are validated and published by commercial teams in each unit. In later stage, above 2000 cases of reuse were reported and they are under validation by KM team before submitting to commercial teams. Once done, this will lend good credibility to the KM program.
Success so far

So far the success of KM program could be inferred from the statistics below:

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator of Success</th>
<th>Actual Performance</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Employees participating in KM program</td>
<td>Equivalent to about 35% of total workforce in a given month</td>
<td>251 per week</td>
</tr>
<tr>
<td>2.</td>
<td>Creation of knowledge assets</td>
<td>About 500 in a month</td>
<td>Average of 100 approved K assets in a week</td>
</tr>
<tr>
<td>3.</td>
<td>Reuse trends of knowledge assets</td>
<td>About 200 in a month</td>
<td>Average of 36 in a week</td>
</tr>
<tr>
<td>4.</td>
<td>Total knowledge assets in KMS</td>
<td>8500</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Knowledge sharing session i.e. webinars</td>
<td>One in a month on average with 6% of workforce participating</td>
<td></td>
</tr>
</tbody>
</table>

* sample data as per the last week of March 2010

Lately, KM is being showcased to many customers at proposal stage or later. So far, almost all customers have shown keen interest and expressed willingness to harness KM for their own service accounts. Recently a global pulp and paper industry player appointed a knowledge manager for their account which will work within KM framework of GAA and help customer in managing knowledge in the AMS engagement. This is a real sign of success when a customer demands for dedicated KM roles. Now, the endeavor would be to take this beginning to a bigger scale.
Key Success Factors for KM in Global Application Management

Key success factors for KM in GAA have been:

- Strong commitment and trust by the Head of GAA, Commercial Head of GAA and Head Process Standardization
- Of late, good support coming in from country heads
- Parent organization, Global Operations – too promote KM initiative
- Strong linkage of KM with business objective which helps in generating buy-in from users
- Consultative approach in arriving at key features of design
- The role of local (country level) KM responsible is boon
- Formal set-up of regular and consistent dialogue between global KM team and local country team
- Initially, top-down communication. Later, effective and all around communication from multiple channels
- A comprehensive and user-friendly KMS which keeps on getting enhanced regularly. The evolution of the system is an on-going feature. In KM roadmap, there are four defined phases for functional and technological improvements and upgrades
- KM measurements have been proving very handy in driving engagement
Abbreviations

AMS: Application Management Services

CDP: Common delivery pool; interchangeably used as Integrated Delivery Model

GAA: Business division of Siemens IT Solutions and Services which operates into AMS

GO: Global Operations, business division of Siemens IT Solutions and Services. GAA is part of GO

GKO: Global Knowledge Officer (used for GAA)

GPC: Global Production Centers (back-end entity which produces services)

HQ: Head Quarter

KM: Knowledge Management

KMS: Knowledge Management System

P2P: People to People learning

PIM PSU: Process Improvement Management and Production Support Unit of GAA

TAT: Total turnaround time
**The Author**

**Manish Saxena**, Global Knowledge Officer, spearheads the Knowledge Management (KM) program for Global Application Management (GAA) organization. Manish brings with him a rich experience of over 12 years from service industries like Telecom and Banking where he was heading a KM program for over seven years. Manish actively participates in various KM community groups and well connected with the international KM practicing fraternity. Scholastically, Manish graduated as Chemical Engineer, Masters in Business Management, a Chartered Financial Analyst and a certified Black Belt in Six Sigma Methodologies.