Executive Summary

In a progressively knowledge-dependent economy, businesses need to pay greater attention to harnessing the knowledge that resides in their organizations. However, despite increasing investment in knowledge management (KM) tools, organizations often experience frustration in developing a knowledge sharing culture. This article describes how HP’s Decision Support and Analytics Services (referred to as HP Analytics) unit in India promoted initiatives aimed at changing the behavior of employees and successfully fostered a knowledge sharing culture as it implemented a cost-effective KM platform using web-based collaborative technologies. Its experiences in branding the KM program, establishing interest groups, using opinion leaders as KM ambassadors, and encouraging blogging over a multi-year period provide important lessons for CIOs and other organizational leaders who seek to build a knowledge sharing culture.

THE CHALLENGE OF BUILDING A KNOWLEDGE SHARING CULTURE

Knowledge management (KM) has been a business leadership focus since the early 1990s. Initially, the focus was on how to create a knowledge repository by documenting knowledge inside the organization using various technologies such as performance support systems and groupware. However, organizations found they also needed processes to facilitate knowledge sharing if they were to gain benefits from these technologies. The importance of knowledge sharing is evident from the recent emphasis on business analytics, where harnessing existing knowledge is crucial for obtaining insights to enhance organizational competitiveness.

With the emergence of web-based collaborative technologies in the 2000s, KM became more interactive and participatory. Web 2.0 collaborative technologies, though, have the same drawbacks as many other technology-based knowledge sharing initiatives that require a high degree of individual participation to be effective: knowledge contribution is often dominated by a few employees, thus making any knowledge sharing initiative based on such platforms ineffective.

The key to harnessing knowledge is to develop a knowledge sharing culture inside the organization. Various case studies have shown that a knowledge sharing culture is crucial to the success of a KM program. But developing such a culture is easier

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2 The authors wish to thank Prithvijit Roy (Director, HP Analytics), Debleena Majumdar, Prashanth Sarpamale, Debasish Das, Arumugam Pitchai, and the entire KM Team at HP Analytics for their cooperation and support.
3 For an article that explores KM in organizations, see Nonaka, I. “The knowledge creating company,” Harvard Business Review (69), November-December 1991, pp. 96-104.
5 For examples on ways to effectively use Web 2.0 tools in organizations, see the four articles published in the December 2010 special issue of MIS Quarterly Executive; and Chui, M., Miller, A. and Roberts, R. “Six ways to make Web 2.0 work,” McKinsey on Business Technology, 16, Summer 2009, pp. 1-9.
said than done, as employees are often reluctant to share their knowledge. Employees often consider their personal knowledge as their key competitive asset and may be reluctant to share it because they fear losing their competitive edge.\(^7\) Moreover, no matter how much technology fosters collaboration and interactivity, it cannot by itself create a knowledge sharing culture. Instead, deliberate and planned initiatives are required to change employees’ behavior and promote knowledge sharing.

There are two predominant approaches to changing organizational culture.\(^8\) One emphasizes top-down efforts aimed at changing employees’ behavior. The other recognizes that culture cannot be changed easily and emphasizes initiatives aimed at changing the behavior of employees over a period of time. HP Analytics took the second approach: it understood that changing organizational culture is not an easy task and focused on changing employees’ behavior with the long-term goal of changing the organizational culture.

Existing case studies that document the KM initiatives of organizations\(^9\) tend to focus on initiatives like building communities of practice in the context of a KM program based on the traditional approach of building a knowledge repository. Other studies tend to focus on the influence of culture on KM,\(^10\) KM strategies,\(^11\) and KM challenges.\(^12\) This article provides a different perspective by describing the multi-year journey of HP Analytics in India, during which a technology platform of web-based collaborative technologies was supplemented with various participation initiatives designed to change employees’ behavior to facilitate knowledge sharing.

### HP ANALYTICS

HP’s Decision Support and Analytics Services (DSAS) unit is a part of Hewlett Packard (HP) Global Business Services, an internal function that provides shared services and process expertise to other HP business units. Popularly known as HP Analytics, the unit provides knowledge process outsourcing (KPO) services in the form of analytics and research support for internal HP clients. Unlike BPO, which provides transaction-based services (such as call center operation) and hence is more rule-based, KPO is based on business knowledge expertise and typically involves the application of domain knowledge for research and development, data analysis, and interpretation inside an organization. HP Analytics draws heavily on advanced statistical and econometric knowledge and strategy development to provide value-added knowledge-based services for its primary internal clients in HP’s technology consulting, printing, and personal computing units.\(^13\)

Based in the cities of Bangalore and Chennai, HP Analytics started in 2005 as a support team working for the HP Risk Management Office in collaboration with HP Labs, building models to solve problems related to business optimization, planning, and supply chain. By 2010, HP Analytics had grown to about 900 employees—mainly Ph.D.s, M.B.A.s, chartered accountants, and statisticians from premier educational institutions in India and overseas. They work in teams that provide support to the various HP business units, spanning functions such as business intelligence optimization, supply chain planning, web analytics, online repository of HP internal documents, and marketing strategy support. HP Analytics obtained ISO 9001 certification in 2009.

When HP Analytics was initially established, its leader stated that the objective “is not about labor arbitrage but about truly making an impact on our internal customers’ top and bottom lines.” To achieve this objective, a technology and business domain-based service that derives insights from information was established. The insights increase decision-making flexibility as well as help management in making decisions based on data, rather than rules-of-thumb. Better technology allows more data to be stored than ever before, but organizations that will be competitive

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13. Internal clients include Personal Systems Group (PSG), Imaging and Printing Group (IPG), Corporate Marketing, and HP Enterprise Business.
in the future are those that can extract insights from the data.\textsuperscript{14}

**FIRST STEPS IN BUILDING A KNOWLEDGE SHARING CULTURE AT HP ANALYTICS**

**Realizing the Need for a KM Program**

HP Analytics started its KM initiatives in 2007. As a KPO provider, HP Analytics’ top leadership understood that its employees and their knowledge are the unit’s assets. The leadership also realized that there was no effective mechanism for individuals to share their knowledge across teams. The successful completion of an analytics project requires a blend of both statistical knowledge and an understanding of specific technology and business units. HP Analytics employs both statistics and business specialists, but there were instances when the two types of specialists were members of different teams. Since there was no mechanism in place to share knowledge, employees faced difficulties in figuring out which teams or individuals could help them.

HP Analytics also had many processes that used data to provide insights into markets, products, and business operations. Employees working in these processes not only gained strong domain knowledge but also developed heuristics to reduce turnaround time and improve productivity. These heuristics resided in the minds of employees, and when they moved to new roles, their knowledge might be lost. In addition, this knowledge might help employees who worked in other teams. The need for a mechanism that would enable employees to share their knowledge was evident in HP Analytics’ day-to-day operations.

HP Analytics’ employees also use statistical tools such as Excel and SAS Business Analytics software extensively. However, the analysis of data using these tools required comprehensive knowledge of the software; most graduate recruits who joined HP Analytics often lacked such knowledge. Although there were a few power users in each team, there was no platform where queries relating to these packages, which were central to daily operations, could be posted. Hence HP Analytics’ top management recognized the need for a KM program.

In May 2007, Sameer Agarwal, a specialist with prior experience in managing a KM program in an analytics organization, was brought into the organization as the KM Leader with the mandate to launch a KM program. Top management championed the initiative by establishing the vision for KM and by providing support to the KM Leader. He noted:

> "What existed before I joined was a thought process for knowledge management. One definition of analytics is creating insights out of data, which really is a process of developing knowledge. Our whole business is about developing knowledge, and if we do not manage our knowledge well, we end up re-inventing the wheel; we end up not doing the task efficiently. It’s very critical to have a knowledge sharing culture within an analytics organization, and the HP Analytics Leader recognizes that."

From the outset, the focus of the KM initiative was not on creating a knowledge repository but on encouraging people to share knowledge. The journey began with the formation of a team dedicated to the KM program in HP Analytics. This team comprised the KM Leader and a KM Technical Lead with prior experience in Microsoft SharePoint, wiki and blog implementation, and content management. The KM team was supported by HP Analytics’ internal communication team in its campaigns to promote and encourage knowledge sharing.

**Selecting Web-Based Collaborative Technologies for KM**

After forming the KM team, the next step was to select appropriate technologies for the KM program. Technology selection is an important decision because IT is an enabler for building a knowledge sharing culture. There are various technologies on the market that can help organizations to build a knowledge repository, but they are expensive, and their focus is on creating a repository rather than promoting interaction. HP Analytics’ KM team thus faced the challenge of selecting technologies that would also facilitate cost-effective interactions among employees. The team used existing technologies for the KM program and was given permission to hire additional employees to assist in building the technical infrastructure required for KM. The challenges faced by the KM team are evident in the words of the KM Leader:

> "If you specifically talk about the HP Analytics perspective, we do not have budget or approval..."
to invest in sophisticated KM software or document management systems. What we had in terms of technology was SharePoint, internal messaging, internal blogs (which was a good thing really), and internal discussion forums (a set of collaborative technologies), but there was no integrated system together. If one looks at the market today, in terms of what is available for KM or for social media systems, you have things like Drupal and Joomla, which give you an integrated KM experience. So creating an integrated portal using easily and freely accessible collaborative technologies was a challenge.”

The various collaborative technologies already existing in HP Analytics included Microsoft SharePoint, internal discussion forums, and internal blogs (see Figure 1). These tools are now made available through an HP Analytics portal. How these collaborative technologies helped in building a knowledge sharing culture is evident in the following quote by an HP Analytics’ staff member:

“There is no doubt that collaborative technologies help information flow freely so that people can get their information from various sources, all across the world, at the touch of a button. Moreover, information is not restricted to a restricted few but available to the population at large.”

GETTING MULTI-LEVEL BUY-IN TO THE KM PROGRAM

As KM is an important initiative that has significant impacts on an organization’s knowledge base, it is important to secure buy-in for the KM program at all levels. HP Analytics’ KM team focused on starting small, involving middle managers and branding the KM program.

Starting Small

The KM team realized that an initial success is crucial for the success of the overall program. An initial success will ensure that any skepticism about KM is addressed and will also motivate the team to take future steps more confidently. So the team created a multi-generation plan, divided into phases, to first pick off the “low-hanging fruit.” Further, knowledge sharing behavior was promoted initially among just a few teams before spreading throughout HP Analytics.
Involving Middle Managers

In addition to the support of top management, there needs to be support from middle managers, as they will be responsible for the effective implementation of the KM initiatives. The KM team realized that it is important to know the KM expectations of middle managers and to discover the extent of any existing team-level knowledge sharing that could be exploited for the HP Analytics-wide KM program. To achieve this objective, the KM Leader interviewed middle managers. This collaborative approach to developing the KM program helped ensure participation at every level.

“The design of the KM program evolved in a collaborative way. The first thing we did was to interview middle managers. The objective was to understand their vision for the program and what we are already doing. We created an inventory of the expectations of these people. Based on that, we created a very basic structure for the program.” (KM Leader)

Branding the KM Program

The KM team realized that employees are often skeptical of terms like “knowledge management” and simply asking employees to participate in knowledge sharing activities will usually result in them perceiving KM as additional work and in a lack of enthusiasm for sharing knowledge. HP Analytics addressed any potential skepticism by branding the KM program as “IKnow,” with the caption “I Collaborate, Therefore I Know” (see Figure 2).

This branding served two purposes: (1) the term “IKnow” conveys the impression to employees that the program is aimed at improving their knowledge; (2) implicit in the caption is the notion that improving employees’ knowledge will help them to improve their performance. Hence this approach not only addresses initial skepticism but also conveys the essence of KM to employees.

“We selected collaborative technologies and created a brand around it. We have a logo for the KM program. The thought process behind this logo is that if we call it Knowledge Management, then it may not work as efficiently because people may get intimidated by the whole term.” (KM Leader)

The KM team articulated its KM concept as the “EAT” framework—explore, ask, and tell. This framework conveyed the objectives of the program as:

- Explore what the organization collectively knows.
- Ask questions that can help employees do their jobs better or live their lives better!
- Tell what they know.

The overall objective was to build a collective memory and knowledge base for HP Analytics.

INITIATIVES TO PROMOTE KNOWLEDGE SHARING

“Technology is only one aspect; the key aspect is building the knowledge sharing culture.”

The various initiatives aimed at promoting knowledge sharing in HP Analytics are illustrated in Figure 3 and discussed below.

Appointing KM Ambassadors

To encourage greater participation in the IKnow program, the KM team appointed a KM ambassador

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from each team within HP Analytics to act as a Single Point of Contact (SPOC) with the KM team. Interactions between the SPOCs are facilitated through All Hands Meet (AHM), while interactions between SPOCs and employees were facilitated through a KM Help-Desk Day.

Single Point of Contact. To create a group of individuals who are passionate about sharing knowledge, the KM team asked the leader of each team within HP Analytics for the name of an individual deemed appropriate as a SPOC. Each team leader asked for a nomination from his or her team, and the nominated employee was appointed as the SPOC for the team. If there was no nomination, the team leader selected an employee considered appropriate for the SPOC role. The KM team does not require SPOCs to have any specific technical skills. Even if SPOCs lack knowledge about blogs, SharePoint, and other collaborative tools, this is not considered as a critical drawback because they are provided with the required technical support to develop their knowledge of collaborative tools and skills for using them. The key requirement is that SPOCs show enthusiasm for the various KM initiatives and have a keen desire to promote them in their teams by actively publicizing them. The KM leader requires each SPOC to devote 10% of his or her office work hours for KM activities.

The SPOCs act as ambassadors of the IKnow program as they interact with their team colleagues and explain the importance of knowledge sharing. They also keep their teams up to date with the various KM initiatives. The SPOCs other responsibilities include moderating online forums and blogs, helping their team members register on forums and blogs, and guiding them on how to post articles and queries, and on how to create personal profiles on HP Analytic’s portal. The SPOCs are also responsible for building and maintaining repositories of their teams’ skills, which are collated to create an HP Analytics skills repository.

In addition, the SPOCs provide input for a monthly newsletter published by the KM team, which highlights, for example, successful completion of a project or a process improvement initiative. This newsletter is sent to HP Analytics’ internal clients to showcase its capabilities.

The creation of the SPOC framework helped the KM team to reach out to every team, without having
to talk with each team individually about the IKnow program. The effectiveness of the SPOC framework is highlighted in these words from the KM Leader:

“The reason we asked for SPOCs from each team is you cannot get buy-in if you are sitting in one of the silos, going to teams, and trying to preach the merits of KM without understanding the nuances of knowledge present in the teams.”

Currently, there are about 40 SPOCs in HP Analytics, and the SPOC to employee ratio is about 1:25. As the organization expands and new teams are created, more SPOCs will be appointed to maintain this ratio to ensure the effectiveness of the SPOC initiative.

All Hands Meet. The SPOCs need to interact and share their knowledge with each other. Ideas aimed at improving the IKnow program originate from such interactions. The KM team schedules a monthly one-hour meeting for all SPOCs to gather and discuss the progress of the IKnow program. Employees who are not physically present can join the meeting through conference calls and the HP virtual rooms. This meeting is called the “All Hands Meet” (AHM) to emphasize the collaborative aspect of the meeting. The SPOCs say that the AHM is instrumental in spreading awareness about the IKnow program:

“In AHM, we meet the other SPOCs. We get to know each other and discuss various initiatives. AHM serves many objectives. First, it promotes interaction amongst the SPOCs. Second, it allows the SPOCs to discuss and address skepticism about KM initiatives. Third, it allows SPOCs to discuss the responses from their teams, which are used to launch new initiatives or make changes in existing initiatives, thus acting as a feedback mechanism for the IKnow program.”

However, it is not always possible for SPOCs to leave their daily work to attend every AHM. To address this issue, the KM team and SPOCs have fortnightly conversations using online tools such as Jabber or Microsoft Communicator.

KM Help-Desk Day. HP Analytics organizes occasional events to create a buzz around the IKnow program. One such event was the KM Help-Desk Day in April 2008 (a few months after the IKnow program was launched). This event was publicized within HP Analytics, and SPOCs were available during office hours to address any query from HP Analytics’ teams about the IKnow program. During the day, SPOCs were given a fact list so that they were prepared to resolve any issue and could gauge the awareness of the IKnow program. The KM Help-Desk Day was promoted as a platform to provide an opportunity for employees to ask about the IKnow program, make suggestions, and address any KM challenges they faced. One of the SPOCs described this event as follows:

“This event, in a sense, marked the arrival of the IKnow program. Before this, the SPOCs talked to their respective teams. In this event, there was a help desk inside a conference room, with many SPOCs sitting together and addressing queries. The SPOCs were easily identified through their unique T-shirt with the IKnow program logo and caption. This resulted in much visibility and gave employees an idea of the scale of the IKnow program.”

Encouraging Blogging

The KM team created an HP Analytics blog called “DSAS Talks,” where employees can post their views on any topic of interest. Work-related blogs are posted under the category Brains@work, while non-work related blogs are posted under various categories such as “any thoughts” and “IKnow opinion.” The challenge behind any corporate blogging initiative is to motivate employees to post their knowledge on blogs and to read other employees’ blogs. The two key initiatives taken by the KM team to encourage blogging were “Blogging Idol” and “Digital Eyes.”

Blogging Idol. In early 2009, the KM team organized a “Blogging Idol” contest, modeled on the popular TV program “Indian Idol” (in turn based on “American Idol”), where viewers vote for their favorite singer and the one who receives the most votes is crowned as the “Indian Idol.” In Blogging Idol, employees voted for their favorite blogs submitted by their colleagues.

Employees were asked to submit blogs on selected topics, and over 100 entries were received. Since the idea was to motivate employees to start blogging, topics were general, such as “What do I expect from the IKnow program?” The selection of topics was crucial to the success of this event. They had to be interesting to employees as well as connected to HP in some way. For example, at the time of the Blogging Idol event, the KM team was interested in gauging employees’ expectations of the IKnow program. The blog entries submitted on this topic reflected the
views of employees on the various knowledge sharing initiatives as well as their ideas for improving the effectiveness of the initiatives.

Having read the Blogging Idol entries, employees voted for their top three. The three bloggers who received the most votes were given rewards and congratulated during a ceremony. Those employees who voted for the winning entries were eligible for a lucky-draw of gift vouchers.

In addition to creating a buzz around blogging and providing a platform for many new bloggers to showcase their blogs, this event also provided several other benefits. For example, bloggers who were interested in submitting their entries had to post their blogs on DSAS Talks. Doing this caused them to browse the various sections of the official blog and explore entries relevant to their interests or domains. They thus discovered relevant sections on the official blog to which they could contribute in the future. They also discovered the wealth of knowledge available in blogs.

**Digital Eyes.** In the fourth quarter of 2009, the KM team launched the “Digital Eyes” initiative, which invited HP Analytics’ employees to submit blogs giving ideas for developing the unit’s social media strategy and digital marketing (see Figure 4). The top 15 entries were then given a platform to sell their ideas. Five of these were selected, and their originators were asked to present their ideas before a panel of distinguished experts in the fields of social media and digital marketing. The top three were given prizes, and the HP digital marketing team is now implementing the entry that won the first prize. The award-winning entry proposed an analytics framework for social media measurement. The Digital Eyes initiative shows that blogs can be effective in fostering knowledge sharing that can result in innovative ideas for the organization.

**Establishing Interest Groups/Forums**

As well as promoting blogging as a medium for sharing knowledge, HP Analytics established focused interest groups/forums—known as Domain Excellence Platforms (DEPs)—on specific domain areas. Sharing of knowledge on more general areas is achieved through Unconferences.\(^\text{17}\)

\(^{17}\) An Unconference is a facilitated, participant-driven conference centered around a theme or purpose; see [http://en.wikipedia.org/wiki/Unconference](http://en.wikipedia.org/wiki/Unconference).
**Domain Excellence Platforms.** DEPs are interactive forums for employees with interest in a particular domain or business area to come together, brainstorm ideas, evolve frameworks, and share knowledge about that particular domain with the global HP community. The mechanism of DEPs is shown in Table 1.

The KM team initiated DEPs to provide an opportunity for employees who share a common interest related to the business to come together to form a team—e.g., the team interested in advanced modeling techniques is called the “Advanced Modeling DEP.” Each DEP is assigned a page on DSAS Talks and is responsible for “focused blogging” (i.e., blogs relevant to the interest area), webinars, and knowledge sharing sessions. DEPs can also send newsletters containing the latest news from their field as well as their own articles on the domain to employees. The first newsletter is sent to all employees. From the second edition onwards, it is sent only to those who subscribe to it.

The idea behind DEPs is to create interest groups relevant to business areas in HP. To facilitate this, the KM team has established guidelines for creating DEPs. Anyone can start a DEP, but the area has to be relevant to HP’s business. There needs to be at least five employees who share the same interest and are interested in starting a DEP. This rule ensures that a DEP is sustainable, as one person cannot handle the various activities of a DEP. Those wishing to set up a new DEP must also get the approval of their team leaders.

DEPs have been established in areas such as advanced modeling, cloud computing, and web analytics, and have facilitated discussion and sharing of knowledge on these topics as well as documented knowledge in the form of podcasts, webcasts, and blog entries. DEP members also conduct various training programs to share the latest knowledge about a specific area. DEPs also incubate projects and facilitate new ideas and innovation. The significance of DEPs in the IKnow program is evident in the following quote by the KM Leader:

> “The establishment of DEPs is really a unique initiative in the sense that it is based on decentralized KM. When an organization is trying to implement a program like IKnow, it can either try to make everything central or can decentralize ownership of KM. DEPs allow for decentralized KM.”

**Unconferences.** While DEPs focus on business areas and topics, Unconferences focus on any area ranging from cricket to meetings. The objective of Unconferences is to bring people from different teams together to discuss any interesting topic, so that they get to know each other well and start thinking beyond their team silos. Each Unconference has a facilitator to ensure that everyone participates in sharing knowledge. This helps in building a knowledge sharing culture. The KM team suggests a few topics and also asks employees for suggestions, but the theme for an Unconference is democratically selected. The KM team also asks for volunteers to be the lead speaker. The SPOCs also obtain suggestions on interesting topics from their business teams and recruit volunteers to attend an Unconference. Employees meet in a conference room to discuss the chosen topic; those based at different offices can participate through conference calls.

Unlike training sessions organized by the DEPs, which are focused on enhancing domain knowledge or the statistical skill-sets of employees, Unconferences are aimed at improving employees’ soft skills. All HP employees have to undergo various training in soft skills such as cross-cultural issues, and meeting and teleconferencing etiquettes. However, the formal training sessions in these areas are run every quarter and are open to employees from all divisions on a first come-first served basis. Hence many employees who are interested in attending such sessions may find the date of the next one is not convenient or that

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**Table 1: Domain Excellence Platforms (DEPs)**

- Core team of at least five volunteers formed, all experts in a functional domain or HP business area
- Charter of the DEP articulated
- Initial user base for knowledge dissemination solicited
- Activities include focused blogging, newsletter, knowledge sharing sessions, webinars, etc.
- Minimum time/work commitment defined at the time of DEP set-up
- Tracking mechanism for performance against goals
- Non-functional DEPs retired—six DEPs have been retired to date
it is already fully booked. Unconferences provide an alternative way of obtaining these soft skills. They include discussions on topics such as “How to conduct meetings” or “Cross-cultural issues in a meeting.”

The KM Technical Lead commented:

“The intent behind Unconferencing is to get people together to talk to each other, break the silos of their teams. Unconference topics range from HP quarterly results to things like how to make meetings more effective. The discussion in an Unconference allows people to get to know each other, and they can leverage this in future projects. There is one Unconference organized every month.”

MONITORING THE KM PROGRAM

The KM team understands that the success of the IKnow program depends to a large extent on SPOCs and hence there is a need to effectively monitor the SPOCs’ performance. For example, the KM Leader has a one-to-one monthly meeting with every SPOC to discuss issues that they may be facing and their progress in spreading the message about the importance of KM.

In addition, various dashboards are used to monitor the KM program (see Figure 5).

The dashboard for SPOCs shows the level of participation of SPOCs in the various initiatives. This dashboard is made available on a monthly basis to the KM team, SPOCs, and team leaders. If the dashboard shows a SPOC is red in one category, it implies that the SPOC’s engagement in that category is not satisfactory.

Team leaders are provided with statistics on the number of blog posts and query posts from their team members, which indicates the level of engagement for their teams. The rationale behind this is that if a team is not participating actively in the IKnow program, then its leader can take steps to motivate team members to participate.

There is also a dashboard for DEPs, which highlights activities such as publication of newsletters and knowledge sharing sessions. If a DEP is red for three consecutive months, then it is retired. The idea is to build a certain level of credibility for DEPs. This dashboard ensures a minimum level of commitment among the DEP members.

Another dashboard, made available to middle managers, displays summary data from the SPOC and team dashboards showing the engagement level for their teams (also shown in Figure 5). A team that is not actively participating is highlighted and the corresponding middle manager is required to take corrective actions to ensure active participation in the future.

HP Analytics has found that the level of monitoring required decreases over time as knowledge
sharing behavior becomes increasingly part of the organizational culture. To start with, SPOCs’ performances were tied to their annual goal sheet, and their involvement in knowledge sharing activities was a component of their annual performance appraisal. This practice has now been discontinued as the level of engagement by SPOCs and other HP Analytics’ employees has remained at a high level.

**ACHIEVEMENTS AND BENEFITS OF KNOWLEDGE SHARING INITIATIVES**

HP Analytics has achieved much progress since it launched the IKnow program. The key objective was to promote knowledge sharing behaviors that, over time, would become part of the organizational culture. Another objective was to eliminate silos inside the organization so that employees from different teams interact freely with each other. The increased interaction among employees was aimed at building a knowledge sharing culture at HP Analytics. The various milestones of the HP Analytics’ KM journey are summarized in Table 2.

Making knowledge sharing an integral part of HP Analytics’ culture required considerable changes in employees’ behaviors and working style. The culture change journey was fraught with risks and uncertainties. The organization’s leadership team strenuously communicated the need for knowledge sharing, developed knowledge sharing initiatives, and established metrics to gauge success. Behaviors such as sharing knowledge through blogs, discussion forums, and other media have now become a part of the organizational culture. This is evident from the fact that the number of employees who are engaged in these initiatives is constantly increasing, without the need to promote the initiatives. Employees are now self-motivated to share their knowledge and to come up with innovative ideas to help the organization.

An example is the chain stock-out tool, which identifies the root causes of stock-outs (when a manufacturer is out of stock) and has a predictive modeling function for reducing future stock-outs. This tool was developed by three employees from different teams in HP Analytics and won first prize at the Wharton Innovation Tournament 2010. In addition to this highly successful example of knowledge sharing, there are now many on-going projects in HP Analytics, driven by employees’ desire to share knowledge to help the organization. Every day, a significant number of domain-specific queries and technical queries are resolved through blogs and discussion forums. The willingness of employees to drive such initiatives shows that knowledge sharing has now become a part of HP Analytics’ culture.

However, the leadership team at HP Analytics believes that “although the success of the IKnow program can be felt; it cannot be measured in hard dollar terms.” Instead there are non-financial and other indicators of the success of the program.

**Successful Integration of Collaborative Technologies**

One key benefit of the IKnow program comes from the successful integration of collaborative technologies into the way HP Analytics operates. Employees are now aware of what is happening not only in their own team but in others as well. When they are faced with any issue, they can actively seek help through the discussion forums.

**Benefits from DEPs**

DEPs have facilitated discussion and sharing of knowledge on business-relevant topics and have documented knowledge in the form of podcasts, webcasts, and blog entries. DEPs have also promoted the incubation of projects and facilitated new ideas and innovation. Further, DEP members have conducted various training programs to share the latest knowledge about a specific area. This has helped people to learn new skills—e.g., staff from the research team attended the sessions of the Advanced Modeling DEP, thus learning new skills. Similarly, employees from the modeling team attended the Web Analytics DEP’s sessions. The benefits of DEPs are summarized in Table 3.

**Metrics Indicating Success**

Other indicators of the success of the IKnow program are objective metrics such as the percentage of employees engaged in knowledge sharing behaviors and increases in the numbers of discussion threads, blog posts, blog hits, and DEP subscribers. All these metrics show that employees are using the DEPs and that there is a higher level of interaction than there was before the IKnow program was launched.

For example, on average, about 100 of HP Analytics’ 900 employees subscribe to each newsletter. The popularity of various initiatives like the forums and blogs is reflected in over four-fold and two-fold increases in the number of discussion threads and blog posts, respectively, and indicates the extent to which
Table 2: KM Journey at HP Analytics

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<tr>
<th>Year</th>
<th>Milestones</th>
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<tbody>
<tr>
<td>2007</td>
<td><strong>KM Project Execution</strong>&lt;br&gt;• Launch of the IKnow KM program&lt;br&gt;• Meeting with HP Analytics’ second-line managers&lt;br&gt;• Work on collaborative tools such as blogs, discussion forums&lt;br&gt;<strong>KM Ambassadors</strong>&lt;br&gt;• Initiation of the SPOC structure</td>
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<td>2008</td>
<td><strong>KM Ambassadors</strong>&lt;br&gt;• IKnow Help-Desk Day organized&lt;br&gt;• Launch of fortnightly communicator chat&lt;br&gt;• Launch of All Hands Meet (AHM)&lt;br&gt;• Monthly one-on-one with SPOCs begins&lt;br&gt;<strong>Interest Groups/Forums</strong>&lt;br&gt;• Launch of Domain Excellence Platforms (DEPs)&lt;br&gt;• Launch of Unconferences</td>
</tr>
<tr>
<td>2009</td>
<td><strong>Encouraging Blogging</strong>&lt;br&gt;• Organize events like “Blogging Idol” and “Digital Eyes” to promote knowledge sharing behaviors&lt;br&gt;<strong>Interest Groups/Forums</strong>&lt;br&gt;• Training sessions and Unconferences organized by KM team and DEPs respectively&lt;br&gt;<strong>KM Program Replication</strong>&lt;br&gt;• Replication of the IKnow program at HP India (ConnectIN)</td>
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<tr>
<td>2010</td>
<td><strong>Encouraging Blogging</strong>&lt;br&gt;• Organize Blogging Idol 2 (Part of ConnectIN)&lt;br&gt;<strong>Interest Groups/Forums</strong>&lt;br&gt;• Training sessions and Unconferences organized by KM team and DEPs, respectively&lt;br&gt;<strong>KM Program Replication</strong>&lt;br&gt;• Replication of the IKnow program at HP worldwide level (MarketVision Lounge)</td>
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Table 3: Benefits of DEPs

- Improved understanding of business and/or domain
- Increased knowledge sharing within teams
- Identification of subject matter experts
- Knowledge retained when someone leaves the organization
- New hires become productive earlier due to easily accessible pool of information on business or domain
- Improved visibility of HP Analytics to its internal clients
- Promotion of project incubation
HP Analytics’ employees have embraced KM. The average number of blog posts per month is around 200. On average, the number of hits across various blogs is about 10,000.

The success of DSAS Talks is also reflected in the following words by the HP Analytics’ Leader:

“It is very interesting to note that the HP Analytics’ blog has consistently been featured as an HP “Hot Blog” ever since its launch! Personally, I’ve been actively using the blog, and I see a wealth of knowledge being shared on the forum. This is a healthy trend.”

Objective measures such as the average number of subscribers for each DEP reflect the success of the DEP program. The number and popularity of training sessions organized by DEPs and the number of Unconferences organized during the last year shows that these initiatives are achieving their objectives. For example, various DEPs organize monthly sessions on their interest areas, and these sessions improve the awareness and understanding of employees. An illustration is monthly sessions on statistical topics organized by the Advanced Modeling DEP, which have contributed to improving the statistics knowledge of employees.

In addition to objective measures, perceptual measures also indicate that the IKnow program has succeeded in achieving its objective. A survey conducted in 2009 showed that overall satisfaction with the IKnow program is 91%. These objective and perceptual measures, which are summarized in Table 4, provide empirical evidence of the success of the IKnow program and the various initiatives for fostering knowledge sharing.

### IKnow Program Rolled Out Elsewhere in HP

Another indicator of the success of creating a knowledge sharing culture at HP Analytics is that various components of the IKnow program have been implemented both at HP India and in HP worldwide. The HP Analytics’ KM team was involved in building an employee engagement program using the IKnow collaborative technologies (blogs, online forums) for HP India. This program, called ConnectIN, was launched in June 2009.

As a part of ConnectIN, a second Blogging Idol contest was held in March 2010. While the first contest included a wide range of topics, Blogging Idol 2 was focused on environmental issues (e.g., green IT, best practices on sustainability), and all employees in HP India (rather than HP Analytics alone) could enter. There were submissions from over 75 HP Analytics’ employees and over 2,000 employees from HP India. Employees also began to make greater use of social networking sites such as Facebook to promote their blogs. The increased number of entries compared to the first Blogging Idol contest is evidence that this type of KM initiative is successful in creating awareness and motivating employees to post blogs.

In a similar vein, HP Analytics also launched a program named “MarketVision Lounge.” This program is an HP-wide market research and industry intelligence portal that syndicates research from over 1,200 firms, including IDC, TBRi, Lyra, and the Corporate Executive Board, and is maintained by HP Analytics. MarketVision Lounge is an interactive social media platform for HP employees. It makes it easier for HP employees to track the latest news, read interesting perspectives on hot topics by experts across the company, and engage in a dialog with their

### Table 4: Impact of Initiatives for Fostering Knowledge Sharing

- Over 60% of employees engaged in knowledge sharing activities
- 400% increase over three years in number of discussion threads
- 285% increase over three years in number of blog posts
- 300% increase over three years in number of hits for blogs
- Average number of subscriptions for each DEP = 120
- Current number of DEPs = 10
- Number of training sessions organized by DEPs in last year = 30
- Number of Unconferences organized in last year = 15
- Number of innovative ideas incubated in DEPs = 10
- Satisfaction level with the various knowledge sharing initiatives (2009 survey) = 91%
peers. This platform also incorporates the various IKnow collaborative technologies and demonstrates that knowledge sharing through collaborative technologies is scalable. While the IKnow program is targeted at HP Analytics’ 900 employees, ConnectIN and MarketVision Lounge are targeted, respectively, at 20,000 and over 100,000 HP employees.

REMAINING CHALLENGES

HP Analytics still faces two main challenges. The first is that, although interaction among employees has improved, the penetration of KM is not uniform across the various teams. Some teams have more active and enthusiastic employees than others. This can also be attributed to the SPOCs of these teams. SPOCs who are very active spread the message of the IKnow program very effectively in their teams, and hence the participation of these teams is high. As one of HP Analytics’ senior leaders noted:

“The success of the IKnow program, to a large extent, depends on how we can enroll our fellow team members to embrace this collaborative platform.”

The second challenge is the different rate of adoption of collaborative technologies by employees. Although collaborative technologies are easy to use, more technology-savvy employees adopt the technologies at a faster rate than those who are less technology-savvy. SPOCs are therefore asked to focus on less technology-savvy employees in their teams and guide them on ways to gain maximum benefits from using collaborative technologies.

LESSONS LEARNED

The lessons learned from HP Analytics’ journey in fostering a knowledge sharing culture can be divided into three categories—platform, people, and process. Figure 6 indicates that these three categories of lessons can be thought of as interlocking cog-wheels, suggesting that platform, people, and process are interrelated and that changes in any one of them affect the other two. We believe these lessons and the framework implied by Figure 6 provide insights for CIOs and other organizational leaders who are interested in fostering knowledge sharing in their organizations.

KM Technology Platform

Lesson 1: Use Easily Available and Scalable Web-Based Collaborative Technologies. Collaborative technologies such as internal messaging, online forums, blogs, and SharePoint are usually available in organizations, and they are scalable without incurring much additional expenditure. One of HP Analytics senior leaders noted:

“The success of the IKnow program is a significant milestone for HP Analytics. This effort demonstrates that with a vision and teamwork, we can execute any initiative using collaborative technologies with limited budget, which will serve as a differentiator for HP Analytics across the knowledge services marketplace.”

HP Analytics’ experience shows that sophisticated technologies may not be necessary for creating a knowledge sharing culture. What is important is to choose collaborative tools that are easily available, scalable, and do not require much training so that employees can readily use them. HP Analytics’ experience shows that such technologies are more effective than traditional knowledge gathering and sharing media. As noted by one of the unit’s senior leaders:

“The IKnow program is quite an addictive platform. The more you use it, the more you get glued to the virtual community of HP Analytics. I found that initially, I was not naturally inclined to the IKnow program as I was used to the earlier media for knowledge gathering and sharing.”

Lesson 2: Support the Online Platform with Offline Initiatives. The online collaborative platform should be supplemented with offline initiatives to ensure success in promoting knowledge sharing behavior. HP Analytics has a wide portfolio of easily available collaborative tools such as blogs and online forums, but it simultaneously also introduced initiatives such as SPOCs and Unconferences. The idea behind simultaneous execution of both online and offline initiatives is that acceptance of collaborative technologies varies with employees’ characteristics such as age and educational qualifications. Hence the simultaneous execution of offline initiatives (such as face-to-face interactions for knowledge sharing) ensures that later technology adopters are not left behind. This is important: HP Analytics realized that employees may be more willing to share knowledge if there are closer interactions among teams.
Lesson 3: Communicate the Objectives of Knowledge Sharing. When the IKnow program commenced in 2007, there was concern that activities like blogging were counter-productive because employees would waste time on blogging rather than focusing on their work. HP Analytics addressed this issue through effective communication of the objectives of the IKnow program. For example, in various communications, top management emphasized that KM initiatives were aimed at fostering knowledge sharing to assist employees in learning from each other’s and applying them to their daily work. This approach, coupled with effective monitoring of employees’ participation, helped to ensure that the IKnow program is used to serve its objective of fostering a knowledge sharing culture rather than promoting “cyber-loafing.”

Lesson 4. Make Knowledge Sharing Fun. Knowledge sharing within an organization needs to be sustainable. This occurs only when employees are genuinely interested in sharing knowledge and when knowledge sharing is part of the organizational culture. In many KM programs, there is active participation initially but participation decreases significantly over time. One reason is that knowledge sharing is often perceived as an “add on” to regular work, so many employees lose interest in it as they are busy with other work activities. HP Analytics addressed these issues by positioning knowledge sharing behavior as fun-filled activities through contests such as Blogging Idol and Digital Eyes. The KM Technical Lead commented:

“We created buzz around the KM activities, portrayed various KM initiatives as fun activities, which employees must participate in.”

Unconferences provide another opportunity for employees to share their thoughts in a fun-filled environment. In addition, the HP Analytics’ KM team organizes fun quizzes and various such events periodically. These events create an impression in the minds of people that knowledge sharing is not an additional task but a fun-filled activity that expands knowledge and thus makes blogs and other KM initiatives popular.

Lesson 5: Appoint Appropriate KM Ambassadors. Many organizations often leave the responsibility for KM initiatives to the KM team. However, KM initiatives involve multiple stakeholders, and the KM
Another available to engage in a new process or project. Bandwidth in HP Analytics refers to an individual’s free time from middle managers and line managers is crucial to their views on various KM initiatives. The buy-in from middle managers and line managers ensures that the program is executed according to the top leadership’s vision and is aligned with the organization’s goals. The championing and support of various KM initiatives by the top and middle management is reflected in the following words of one of HP Analytics’ senior leaders:

“I’m an active user of the IKnow collaborative platform and an avid follower of the DSAS blog. Besides, I believe that the IKnow collaborative platform gives us a great opportunity to effectively connect with the broader DSAS organization.”

Process

Lesson 7: Start Small. Initial success in a knowledge management program boosts the morale of the KM team and also helps it to obtain further support from the organization. Hence a small initiative at the beginning of the program lays the foundation for the success of the entire program. HP Analytics adopted this approach in the initial stage of its KM program by focusing on promoting knowledge sharing behavior among just a few teams.

Lesson 8: Brand and Market the KM Program. An important lesson from the HP Analytics case is the need to brand the KM program. When organizations use the term “knowledge management,” employees may “switch off” because they consider it as additional work with little benefit to them. Employees will ask “What’s in it for me?” HP Analytics addressed this issue by branding its KM program in a way that gave a message about the power of KM without using the term “knowledge management.” Such branding will help to mitigate any employee skepticism about KM as well as make KM initiatives less intimidating. In HP Analytics, the KM program was called “IKnow” with the caption “I Collaborate, therefore I Know.” The caption conveys an implicit message to employees on the power of the program—namely, if employees start sharing knowledge, they will know more things and hence will be able to perform their work more effectively.

Lesson 9: Adopt Multi-level Metrics with Alignment of Goals for Different Levels. Another important lesson is that there is a need to effectively monitor the KM program. HP Analytics realized it is difficult to measure the success of the IKnow team alone cannot ensure their success. HP Analytics widened the responsibility for ensuring the success of KM initiatives to SPOCs, DEP owners, and line managers. It also empowered employees at different levels and made them direct stakeholders of the various KM initiatives. These initiatives also involved decentralization of power and thus reached every level of the organization.

HP Analytics’ experience emphasizes the importance of KM ambassadors (known as SPOCs at HP Analytics) in making the KM program successful. In the initial phase, SPOCs helped to ensure that various collaborative tools were used effectively, thereby creating a critical mass to facilitate rapid adoption. SPOCs also disseminated messages about the IKnow program to their teams, addressed any queries from their team members, and provided the KM team with feedback from their teams. This group of enthusiastic employees established the foundation for fostering a knowledge sharing culture within HP Analytics. SPOCs voluntarily took time off from their daily schedule to engage in various activities such as acting as moderators for blogs, forums, etc. Issues regarding their “bandwidth”18 were addressed by appointing multiple SPOCs for a team. This ensured that there was no undue pressure on an individual SPOC.

In the later phase, the KM team expanded the role of SPOCs by creating a “portfolio” framework. Different SPOCs were responsible for promoting different tools—e.g., some were responsible for blogs, while others were responsible for internal discussion forums. HP Analytics recognizes that selection of appropriate KM ambassadors was one of the key factors for the success of the IKnow program. This sentiment is reflected in words of the KM Leader:

“Creating a community of KM ambassadors is a critical element in any successful KM program.”

Lesson 6: Focus on Middle Managers to Secure Buy-in. Knowledge sharing initiatives usually focus on the role of top management, which acts as KM champion and is considered crucial to the success of any KM program. However, the KM initiatives at HP Analytics demonstrate the importance of middle managers in the success of knowledge sharing. The KM team made efforts to obtain the support and manage expectations of middle managers by seeking their views on various KM initiatives. The buy-in from middle managers and line managers is crucial in facilitating shared responsibility for the success of knowledge sharing initiatives. While championing of KM by top management ensures that the employees take KM initiatives seriously, support from middle managers and line managers ensures that the program is executed according to the top leadership’s vision and is aligned with the organization’s goals.

Lesson 5: Engage Middle Managers to Ensure Alignment of Goals for Different Levels. It is important to engage middle managers and line managers in facilitating shared responsibility for the success of knowledge sharing initiatives. While championing of KM by top management ensures that the employees take KM initiatives seriously, support from middle managers and line managers ensures that the program is executed according to the top leadership’s vision and is aligned with the organization’s goals. The championing and support of various KM initiatives by the top and middle management is reflected in the following words of one of HP Analytics’ senior leaders:

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Lesson 9: Adopt Multi-level Metrics with Alignment of Goals for Different Levels. Another important lesson is that there is a need to effectively monitor the KM program. HP Analytics realized it is difficult to measure the success of the IKnow
program in dollar terms. As a consequence, the unit’s top management decided on non-financial metrics that show the participation in KM by the various teams. Hence there are two primary dashboards: one for SPOCs and another for individual teams. The dashboard for SPOCs shows the participation level for a specific SPOC, whereas the team dashboard shows the participation level for a team. Wherever there is insufficient participation, corrective action will be taken by the leadership of that team.

The implementation of multi-level metrics that target the various levels of management, together with objectives at different levels aligned to each other, ensures that there is a consistent and homogeneous focus on promoting knowledge sharing behaviors across the organization.

The multi-level metrics also ensure that each initiative receives equal focus and that there is appropriate accountability if an initiative should fail.

**Lesson 10: Publicize Knowledge Sharing Behaviors.** Publicizing activities that employees engage in often results in improvements in employees’ morale and motivates them to continue in engaging in such activities. Knowledge sharing is often perceived as a voluntary activity. However, highlighting knowledge sharing behaviors through various media motivates employees to continue to share knowledge. HP Analytics highlights the most active SPOCs in its monthly newsletter. This serves two purposes. First, it motivates active SPOCs to continue their efforts in encouraging knowledge sharing. Second, the visibility gained by active SPOCs motivates other SPOCs to put greater efforts into knowledge sharing activities. Similarly, rewarding employees who actively participate in contests like Blogging Idol motivates other employees to actively engage in such activities and also conveys a message about the importance of KM initiatives.

**Lesson 11: Reinvent the KM Program.** Another important lesson is the need to continuously reinvent the KM program. The rationale for continuous reinvention is that, over time, many changes start to become part of the organizational culture and hence need to be reflected in the program. The IKnow program has undergone many changes since its inception in 2007. In the initial phase, there was strong emphasis on monitoring by tying SPOCs’ performance with their annual goal sheets. This monitoring has now been stopped. Similarly, in the initial phase, the KM team monitored blogs and forums. Now, many of these activities are handled by the SPOCs. This implies that knowledge sharing is now increasingly embedded in the organizational culture, and the program is reinventing itself by becoming more and more voluntary and decentralized.

**Lesson 12: Replicate the KM Program in Other Units.** Organizations should try to replicate the KM program successfully launched in one unit in various other units of the organization. This will enable the organization to reap further benefits from KM. In HP, the IKnow program has been replicated at the India level in the form of ConnectIN, and some of the IKnow components have been replicated at the HP worldwide level in the form of MarketVision Lounge. The KM team at HP Analytics is providing support to these programs, and it is using its prior experience accumulated during the IKnow program to ensure success of these initiatives.

**CONCLUDING COMMENTS**

Although there is some empirical evidence suggesting that organizations are using various participatory frameworks for knowledge sharing, there is a dearth of case studies on the initiatives that organizations promote to develop a knowledge sharing culture. The case study in this article describes the journey of the KM program in HP Analytics. It highlights how HP Analytics did not just use web-based collaborative technologies as a platform for knowledge sharing but also supported the technologies with various initiatives to promote knowledge sharing behavior, all without incurring significant expenditures. Over time, these behaviors have become ingrained in the organizational culture. Although all HP Analytics employees are knowledge workers, the case offers important lessons for CIOs and other leaders in a variety of organizations who are interested in building a knowledge sharing culture using easily available and scalable collaborative tools, and with limited KM budgets.

In addition to the lessons learned that we have shared from HP Analytics’ various initiatives for fostering knowledge sharing, the leaders involved in the IKnow program emphasize an important overall message for organizations implementing KM: treat KM as a process—a journey—not a one-time project. HP Analytics’ KM Leader likened KM to other enterprise support functions:

> “Knowledge management is not a project. It is a function similar to HR. You cannot say that you have deployed KM, and the work is done. You need to continuously improve it, be
creative in its positioning, and you need to reinvent it perhaps every year.”

If organizations reduce their KM efforts, then the momentum will be lost, and what they have achieved may be undone.

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