Honda

Organizational and managerial systems for learning

Honda Motor Company is often referred to as one of the best managed companies in the world. It has achieved this status by employing an innovative organizational system. In this case study, we highlight some key aspects of Honda’s system of learning.

Importance of questions and openness

Embodied in Honda’s operating principles are the goals ‘learn, think, analyse, evaluate and improve’ and ‘listen, ask and speak up’. This leads to constant questioning of ideas, decisions and management, which is encouraged and even demanded of each employee. It is referred to as ‘constructive contention’. According to Honda’s co-founder:

> there are discordant sounds within a company. As a president, you must orchestrate the discordant sounds into a kind of harmony. But you never want too much harmony. One must cultivate a taste for finding harmony with discord, or you will drift away from the forces that keep the company alive.

It is not just management who hears the noise. The innovative enshrining of discord is systemic at Honda. Different perspectives among Honda’s various functional departments are encouraged, with a view that intellectual competition sharpens and improves the end product. Design and development teams are deliberately staffed with engineers from peripheral disciplines who are unfamiliar with the core technology under development. This is designed to ensure that problems will be approached from different and innovative perspectives, and that conventional wisdom will be challenged and tested.

Importance of a culture of ‘equals’ and cross-functional skills appreciation

Honda has built a dynamic technical culture on the idea that the company needs many technologists with deep technical expertise in a given area and who must also have direct knowledge of the fundamentals of Honda as a whole. Honda’s goal is to create a ‘T-shaped engineer’, where the vertical bar of the T represents an individuals depth, and the horizontal bar represents his or her cross-functional as well as market-based knowledge. To gain necessary depth, Honda has established an ‘expert system’ (conceptualized in the 1950s). The expert system is in fact a special career track for experts who can advance through four different levels with proportional increases in salary. It parallels the regular managerial track, but with one significant difference: experts can rise to very high levels within the organization without having supervisory responsibility over others. An expert can become, for example, a director of a company solely on the strength of his or her expertise. The expert system ensures that the best and brightest in the engineering ranks find lucrative rewards in advancing their expertise in technical disciplines. But to prevent them losing touch with the real world, Honda also places a premium on rotational job training (the crossing of the T, so to speak).
Importance of interaction and a value of experience

One of Honda’s key beliefs is that a person cannot comprehend fully a situation by relying on second reports, but must experience the situation personally. From this come three corporate principles: genba, genbutsu and genjitsu (real place, real thing and real activity).

1. Genba demands the person ‘to be on the scene’ or at the place where events are actually happening.
2. Genbutsu means that in order to understand a product or a piece of hardware the person must be actively involved with the thing itself.
3. Genjitsu means that the person must seek all the facts surrounding a situation in order to make educated and well-informed decisions.

Together, these three principles – be on the scene, be actively involved with the subject and be sure to get all the facts – constantly focus efforts on creating the products that customers really want.

The principles are not mere slogans, but are continuously applied at all levels within Honda, and new recruits are rapidly socialized into them.

Importance of structures and rewards in shaping culture

In Honda’s attempts to tap deep into individual expertise, the critical goal is to ensure that design memory is not lost.

Structurally, Honda’s R&D is organized as a ‘paperweight organization’ (named after the typical Japanese paperweight which is broad and flat with a handle at the top). In other words it has little room for hierarchy. Honda rigidly follows its R&D philosophy, which is best expressed by the slogan ‘All engineers are equal in the presence of technology’. There is no place for seniority or rank. Ability is all that matters, and ability can be recognized and rewarded. With the paperweight organizational structure there is room for an almost unlimited number of high-level engineers. However, managerial positions are strictly limited according to need.

Importance of effective processing of ideas

The lack of hierarchy allows all ideas – not just ‘official ideas’ – to be judged side by side on their own merits. There are few ‘official ideas’ within Honda because such ideas tend to be the result of conventional wisdom, which itself is an offshoot of top-down hierarchical organizations. Ideas come from every corner. As ideas run throughout the company, they help prevent creative inertia at the individual level. People remember by sharing what they know.

Honda also has an early reality test for these ideas. Ideas undergo a possibility test very soon after they are registered. The evaluation is conducted by a group of senior managers whose role is to:
• identify innovative refinements to existing ideas
• ascertain new ideas do not repeat past mistakes.

Both of these criteria serve to ensure that knowledge and learning is not lost. Also, given that the norm of the culture is that conventional wisdom is actively frowned upon, the risk of these senior people rejecting an idea simply because it was too innovative is considerably reduced.

**Importance of keeping and building knowledge**

The expert system institutes very early on a practice which encourages all employees to keep diaries in which to record their work in progress and creative ideas.

**Importance of accepting failure**

Honda estimates that up to 99 per cent of its projects end in failure. However, these failures are not simply discarded. Instead, they are pooled for possible adoption at a later time when they provide answers to a future product. The purpose is to institutionalize an effective method for maintaining design memory.

**Importance of rewarding failure and success**

Honda has an explicit policy of recognizing effort, even when it is not successful. It states this as ‘encouragement of challenge, which never discredits failure, but only credits success’. Allowing engineers the freedom to fail removes the stigma, and promotes innovation and learning over convention and stagnation.

**Importance of design and work layout**

Honda has a tradition of creating wall-less work environments. Even the executive suite is basically one large room where all senior managers work.
**Singapore Airlines**

While world airlines have faced many difficulties, Singapore Airlines (SIA) has weathered the storms better than others. Many airlines, since 1990 have suffered extensive losses. American airlines have lost about US$6.5 billion. Pan Am folded and several carriers filed for bankruptcy protection. While Asian airlines have been more successful (i.e. Cathay Pacific and China Airlines), SIA had been the more successful than the competition in many cases. While Cathay Pacific and China Airlines earned US$813 million in 1991 with seventy-three planes, Singapore Airlines earned US$912.8 million with fifty planes.

**Reasons for Singapore Airlines’ success**

Certainly part of the SIA success story might be attributed to the government’s seed money, policies which encouraged growth and the development of Changi Airport (one of the world’s best). However, the government is not involved in the airline’s policy making and has made it clear that SIA has been set up to provide services and economic benefits, not for national prestige. It was not to expect government subsidies. So what makes SIA so successful? One of the strongest features of SIA’s success is that its fleet of aircraft is very new, with an average aircraft age of five years. But aside from prudent fixed asset investments, its overall investment strategy in technology to manage the demand and supply for airline seats surpasses that of its competition.

**Managing booking information**

This web of managing customers’ demand for seats is helped along by technology such as the PROS Revenue Management system which in 2000 supplied SIA with a SD$20 million advanced systems capable of forecasting and optimizing the allocation of airline seats more effectively. Dubbed Krismax II, the technology was developed to cater to SIA’s specific sales and marketing needs.

Eng Huang Cheng, SIA’s Senior Vice President of Marketing Planning, in a recent interview commented that:

> Seats on any given flight can be sold in many different markets. The idea of investing in state-of-the-art technology is to better match supply with demand and ensure that each market is allocated an appropriate number of seats, especially when traffic mix and seasonal travel have to be factored in. Ultimately, we want to minimize seat wastage.

Krismax II helps overcome the complexities of matching seat capacity with customer demand. By using PROS dynamic modelling and operations research techniques, a forecast demand based on historical travel patterns and current booking trends can be developed.
Engaging in e-business – flying high on customer information

Singapore Airlines has also long been known for their excellent levels of customer service, served through the legendary ‘SIA Girl’. However, the ‘SIA Girl’ too requires help when it comes to gaining and maintaining a competitive advantage, maintaining and reinforcing service leadership, and providing significant benefits such as fostering stronger ties and reaching out to its customers and business partners. In the last quarter of 2000, SIA and IBM’s Business Innovation Services announced that they had developed an e-commerce strategy to provide more service options for their customers, while maintaining service quality. The task force had over a period of four months conducted extensive research with customers, business partners, employees and management of SIA, focusing on areas as diverse as the mobile internet and customer service. The e-commerce strategy also looks at the collection of customer information to be analysed such as industry dynamics, customer preferences which would ultimately determine what business strategy the ‘SIA Girl’ should observe in order to maintain being a global travel leader.

Managing information flow internally

Moving from the technological-aided gathering and transferring of information, SIA communicates information to its staff through more traditional means. With an organization comprising more than 28,000 staff located in cities and subsidiaries throughout the world, linking the people from different cultures and making them work together to produce a seamless and positive customer experience is indeed a challenge that SIA handles well. Internal communication and dissemination of information is done through a variety of regular department newsletters and a monthly company-wide magazine. Regular dialogue sessions are also held between the management and staff to help keep the information flowing. A ‘Staff Ideas Action’ scheme helps ensure that the feedback from their frontline workers are constantly put forward for improvement of service and products delivered.

Listening to ‘knowledgeable’ customers

Singapore Airlines’ managers know the best sources for improving their competitiveness is to maintain a constant feedback from customers. This open line of communication with their customers, listening to customers wants and needs is a priceless culture not easily replicated. Singapore Airlines makes a concerted effort to stay in touch with customers through in-flight surveys, customer focus groups and rapidly replying to every complaint or compliment they receive. Consolidating these inputs with other key figures, a quarterly ‘Service Performance Index’ is developed and closely watched throughout the airline.

External gathering of information is also done, based on an environmental scan to keep track of its competitor’s progress. In the true spirit of benchmarking, SIA even monitors outside the airline industry, keeping a close eye on the new services offered by banks, hotels, retail outlets and other service industries, always looking to improve its amenities and comfort of air travel either through modifications or through product or service innovation.
From its early days, SIA has built a reputation for taking the lead and doing things differently, e.g. serving free drinks on flights and providing free headsets. Airlines now have made it the norm for long-haul flights to provide these two services at no extra charge. Singapore Airlines’ upgraded economy class has even added a personal telephone, adjustable ‘ears’ in the headrests (to provide neck support), footrests, plus a choice of meals including local and ethnic dishes. The leading edge gaming and in-flight entertainment system has yet to be adopted as an industry norm, and certainly its free flow of Charles Heidsieck champagne service in coach class is unprecedented. Meals come at the customer’s request and at their pace, as in a premium restaurant, with dishes straight from the aircraft galley rather than from a trolley, complemented by a wine list that won first-place honours from Decanter Magazine in 1999. Passengers arriving in Singapore can even book at the time of reservation for the complimentary use of a cellular phone which can be collected at the arrival hall at Changi Airport. Plans for the near future include the introduction of a cyber-cabin which, in line with the knowledge economy, will allow passengers to keep in touch with their ground contacts through e-mails as well as to surf the web and engage in e-shopping.

These innovative services have been a result of translating customer knowledge into services now often expected right from when a passenger purchases a ticket to when he or she arrives at the destination (and currently schemes cater to beyond arrival).

**Culture of continuous improvement**

This commitment to continuous improvement is coupled with a cultural determination to try it out, make it work and see it through. Not every innovation succeeds, and some are eventually removed from service (the fax machines are long gone), but SIA makes every possible effort to find the key to success, or to create it.
**Swedish National Crime Intelligence**

Much has been made of the criminal possibilities of the Internet. There are constant reports on computer hackers, financial fraudsters in the media and so on. The repercussions of the growth of the Internet on serious crime, like child pornography, are horrific to contemplate. This chapter highlights how European police forces’ child protection units are working together and using technology, in the form of knowledge retrieval software, to their own advantage.

Pornography is not an issue that most people feel comfortable with, in spite of the recent Hollywood penchant for films glamorizing certain aspects of the industry. Nevertheless, pornography has been around for many years. It is a massive global industry, the size of which cannot be estimated, but it is safe to say it is a market increasing in size and accessibility, aided significantly by the sudden rise in the use of the Internet for dissemination of material. Pornography magnates no longer need to rely on hard copies changing hands, running the risks associated with customs controls and storing vast quantities of film and photographic images, but have embraced technology, using the electronic superhighway both to peddle and access their wares.

**A problem spawned by new technologies**

Nowadays, it is a simple process to surf the World Wide Web and find untold quantities of pornographic material using apparently innocent keywords, and then to download stills or video clips on to a computer’s hard disk or removable storage system, like a CD or a DVD. Up until now, Internet-friendly pornographers, either suppliers or receivers of child pornography, have had relatively easy lives: Internet jurisdiction has not been entirely resolved across borders, and usage is facilitated by the ease of setting up and accessing web sites from anywhere in the world. However, things have taken an entirely different turn, with a new panEuropean project led by the Swedish National Crime Intelligence Unit Child Protection Division, set up using funds from the European Union (EU) ‘STOP’ programme (an EU project with the aim of economically supporting the fight against child abuse) and utilizing technology, this time, to the authorities’ advantage.

It was first recognized that identifying perpetrators and victims from pornographic films and photographs can be difficult and time-consuming following a major seizure of video film in Sweden. The task was exacerbated given the poor quality of the film seized and lack of background information available to the local officers. The Swedish investigating officer met with German police and discovered that the German officers were already aware of most of the material that had been seized in Sweden. This case highlighted the need for an international approach to child pornography, based on a central repository of images.

**Swedish National Crime Intelligence Unit – combating crime through management knowledge**

In November 1997, the Swedish National Crime Intelligence Division was given the job of establishing and maintaining a central image bank of known child pornography pictures, captured at raids, downloaded from the Internet or otherwise. The objective of the project was to
learn more about the origin and distribution of pornographic material, to eventually be able to clamp down on the producers of the images and to stop the abuse of children in this context.

Detective Inspector Anders Persson joined the Swedish child protection unit at the start of the project with the job of supervising the operational value and technical development of an image library and mapping the distribution of the material. The library is able to handle both photographs and video film, which are translated into digitized images for ease of storage and search. Initially, the image bank contained 5600 pictures, all from Sweden.

**The knowledge problem**

Persson found that the biggest problem once the library was set up was that he still could not compare images found with those found by other forces. There was no search facility for the different images and therefore there was still a requirement for police officers who knew from experience where the different images were stored and all the background information surrounding each picture. The problems were compounded when new officers joined the team, as it was impossible for them to find images matching seized videos or stills.

*I tried looking at various search solutions, such as text searching of the images. Text searching is a very good way of finding the right pictures, but the problem is that you must keep a large number of staff just describing the different images. Bear in mind that one CD Rom can contain up to 12 000 images and in most cases we are handling hard disks with the capacity of up to 10 Gb and sometimes more. If we had to describe each picture in detail before they were operationally available for searching, it would take far too much time and opportunities would be lost. I decided that the future of a search tool for images could not be based upon any textual pre-work of the images.*

**The technological solution**

During his search for the ideal tool for the recognition of images, Persson came across Excalibur Technologies’ Visual RetrievalWare®. RetrievalWare® is a software developer’s kit for the creation of powerful image-content matching applications for digital libraries, document imaging, positive identification and so on. Visual RetrievalWare can be employed in a variety of applications with repositories of visual data including corporate, online and government information systems.

Following a demonstration of the software, Persson applied for funding from the EU STOP project and was granted financial support to set up the project. Police forces from Germany, the UK, The Netherlands and Belgium, together with representatives from Europol and Interpol, were invited to a meeting at Europol headquarters in The Hague to discuss the best way to proceed. In May 1998, an invitation was sent out to all EU countries, the Baltic states, Switzerland, Sri Lanka, Thailand and the Philippines to join the project, with the USA, Canada, Australia and New Zealand as observers. Positive answers were received from twelve countries and the project started in June 1998.
‘The first step was to collect seized material from the participating countries, mainly to see if there were any differences in the material between countries, but also to see what Excalibur software could handle.’ Running on a basic Pentium PC, Visual RetrievalWare is able to scan in pictures from CD-ROM, then search its entire database. The software is able to recognize the degree of similarity between a searched and a programmed variable with different degrees of information, based on their colour, shape and texture, and allows users to ask simple questions such as, ‘Have you seen anything that resembles this?’ and ‘Where did it originate?’

Visual RetrievalWare employs Excalibur’s adaptive pattern recognition processing technology (APRP) which allows the rapid automatic indexing of digital data from a variety of sources, including paper, electronic and sound, and which is based on the conversion of information to binary patterns. In retrieval, the software searches for an underlying pattern from the digital data, not for specific words or images, which allows for typing errors and enables searching on poor quality images.

Once a search is performed, the images found are ranked and shown in order of similarity compared to existing images using a percentage scale, with 100 per cent showing an exact copy. The terms of reference for searching do not include the identification of the victims involved, but focus on the background information available, e.g. similar colours and textures of walls, carpets and bedding, style, colour and shape of bedstead, shape and number of windows, similar level of lighting, etc.

Police forces taking part in the project can, when they come into possession of new image material, have this compared to already known material stored in the central image bank. This search can give clues as to whether the new images are part of a known series, together with data regarding the origin of the other images in the series etc.

Over the six-month period of the project the library has grown and now stores in excess of 100 000 images from England, Denmark, Finland, The Netherlands, Norway, Portugal, Switzerland and Germany. Results so far have been encouraging, with the unit recommending a single international database to be run by a central agency employing Visual RetrievalWare and proposing that all participating countries set up their own national databases with the same concept. The project has proved that an international reference library for child pornography will result in enormous gains in efficiency for the national and international police authorities. Persson commented that using such technology was really the only answer for the police force to be able to search its image bank and has been a major factor in helping them cope with all the enquiries they have received since the start of the project.

Outcomes

While the technology has not led to hard results in the form of arrests, it has contributed significantly to operations, including the recent Operation Cathedral, which culminated in eighty arrests being made simultaneously across sixteen countries. Persson concludes:
How many arrests or cases have been solved because of our database is very difficult to answer. The benefit is that we nowadays have a far better knowledge of all the child porn images that are available over the Internet. As well as positively identifying suspects from related stored images, we can check easily whether images are being produced by known perpetrators or not. We can very quickly answer a query if an image is old and known or a newly produced one, saving valuable time and manpower and resulting in much more efficient investigations and quicker arrests.

Future challenges

While an enormous step forward has been taken with this project, it is now vital that time and resources are invested by the authorities in keeping up to date, not only with the increasing volume of pornography being disseminated around the world, but also with the differing technologies that are being employed by pornographers. It is also increasingly important that political boundaries are lifted and legislation co-ordinated to best effect across international boundaries in the fight against an increasingly global pornography industry. It is only by working as an international team, as demonstrated in this project, that the police and other authorities can hope to crack down and limit the growth and appeal of pornography.
Hewlett-Packard

Getting knowledge management started

Hewlett-Packard (HP) began embracing rudimentary concepts of knowledge management around early to mid-1990s. The computer manufacturing giant, with over 100,000 employees and more than 400 locations around the world, started its knowledge management journey from a wellspring of informal interest among independent business units.

By mid-1995 senior staff noticed that several knowledge management initiatives were under way in various parts of the company. Some had been in place for several years; others were just beginning. Acting upon this phenomenon, the leaders of HP’s corporate information systems group decided to attempt to facilitate knowledge management practice by setting up a series of workshops. Their idea was to bring together a diverse group of people within the company who were already involved in knowledge management efforts or who were interested in getting started. The main aim of the workshops was to facilitate knowledge sharing through the systematic establishment of informal networks as well as the development of a common language and management frameworks for knowledge sharing.

Hewlett-Packard’s organization and culture act as both a facilitator and a barrier to knowledge sharing. The company has a relaxed, open culture that facilitates knowledge exchange. All employees, including the CEO, work in open cubicles. Many employees are technically-oriented engineers who enjoy learning and sharing their knowledge.

Hewlett-Packard is renowned, through the imprint of its founding fathers, for its benevolent attitude towards employees. This was abetted by a munificent environment and fast growth that allowed the company to avoid major layoffs. The nature of the organization employee relationship is such that all HP employees participate in a profit-sharing programme and it is common for employees to move from one business unit to another. Combined, these factors have helped to create a bond between employees and the organization, which, coupled with mobility, facilitates possibilities for informal knowledge transfer within the company.

Working against this, however, is the company’s highly decentralized organizational structure and mode of operations. The push to change this structural set-up has been resisted because many within HP firmly believe that the strong business-specific focus brought by decentralization is a key factor in the firm’s success. Business units that perform well enjoy a very high degree of autonomy. On the negative side, this has meant that there is little organized sharing of information, resources or employees across units. Thus, despite a cultural openness towards sharing, few business units were willing to invest time or money in efforts that do not have an obvious and immediate payback for them. Nevertheless, appreciation of the weaknesses of a highly decentralized structure heightened sensitivity towards knowledge management. Moreover, at the grass-roots level there has long been a desire among employees to ‘know what HP knows’.

The first workshop, held in October 1995, discovered that there were some twenty separate knowledge management programmes under way in various parts of the corporation. Knowledge
management programmes were being independently pursued within a diverse set of groups, that ranged from HP Corporate Education to HP Labs, from HP Product Processes Organization (responsible for the corporate mission of advancing product development and introduction) to

**HP Consulting: laying the paving for knowledge management**

HP Consulting is a 5000-strong global consulting organization. HP Consulting offers its clients a variety of services, including IT service management, enterprise desktop management, customer relationship management and enterprise resource planning services. HP Consulting’s business success is inextricably linked to its ability to provide high-quality business advice to clients and in this way deliver increased profits to HP’s bottom line. Its ability to share and leverage knowledge underpinned the unit’s business performance. Despite this, sharing of knowledge at HP Consulting remained informal and serendipitous, based on personal networks and chance meetings. HP Consulting began to recognize that its success was heavily dependent on the ability to manage and leverage organizational knowledge both efficiently and effectively. Lew Platt, Chairman, President and CEO of HP captured the case well in stating: ‘Successful companies of the twenty-first century will be those who do the best jobs of capturing, storing and leveraging what their employees know.’

Another motive for becoming a knowledge-based organization was the distributed nature of the global consulting teams and increasing client expectations that HP’s collective experience should be used to solve their technology problems. Moreover, many competitors were implementing knowledge management programmes with the same goals in mind.

HP Consulting had come to believe that sharing, leverage and reuse of knowledge had to become part of its culture. This, however, was not the first attempt at managing knowledge within the company. Previous attempts to share and leverage knowledge at HP Consulting had focused on groupware technology and information repositories. Unfortunately, these attempts failed. These failures were thought to have occurred as a consequence of neglecting the human side of knowledge management. In particular, the early initiatives had failed to recognize the importance of the roles played by leadership, processes and culture. Technology had been poorly integrated with work processes, and information stored within the databases had not been structured in a way that made it easy to access.

**The knowledge management initiative**

In 1996 a fresh knowledge management initiative was launched with three key objectives:

1. To deliver additional value to customers without increasing the hours worked.
2. To bring more intellectual capital to solutions.
3. To create an environment in which people were keen to share knowledge with others.

To achieve this aim the company knew that they had to have a clear intention and adopt a process approach. Additionally, the change effort would need a high level of senior management sponsorship and commitment.
In sum the task, in the words of HP Consulting’s General Manager, Jim Sherriff, was ‘to make the knowledge of the few the knowledge of the many’. The company needed to tap into the knowledge of the more experienced consultants. All consultants in the organization needed to feel and act as if they had the knowledge of the entire organization, at their fingertips, when consulting with customers.

Assessing organizational readiness

An assessment of the organization’s readiness for change was conducted through interviews with HP Consulting’s managers, consultants and clients. The assessment allowed the company to gauge the current level of knowledge sharing, leverage and reuse, and to discover inhibitors to these behaviours. This proved to be useful in uncovering the likely problems and challenges that lay ahead. From this assessment the following issues emerged:

1. Without visible leadership commitment the programme would most probably fail.
2. There was a lot of ‘reinventing of the wheel’. There were few examples of successful knowledge sharing or reuse. In HP’s words ‘we invent the wheel, not just daily, but hourly’.
3. There was a lack of practical processes and tools to share, leverage or even to find out who in the organization had the needed knowledge.
4. There was a perception that knowledge sharing would be further burden to an already full work schedule.

Following the organizational readiness assessment, an action plan was developed and mandated by the leadership.

The approach

Due to the earlier failures, HP Consulting launched the new knowledge management initiative using pilot programmes that focused on behavioural elements. The key features of this were to:

- Allow time to reflect and learn from successes and mistakes
- Develop an environment that encouraged sharing of knowledge and experiences
- Encourage the development and sharing of best practices, tools and solutions that could be leveraged by other consultants.

Two consulting practices located in North America were selected for participation in the pilot programme. The selection of the two practices was driven by the belief that these two were facing challenges which would benefit most through a sharing and leveraging of knowledge. Both practices were in the process of implementing new services, and had only a handful of consultants with previous experience of delivering such services. The challenge was to quickly ‘ramp up’ consultants around the world to effectively sell and deliver the new solutions.

The pilots were also an experiment to learn quickly what worked and what did not, and to make improvements for widespread knowledge management efforts.
Launching the knowledge management initiative

The approach used to launch the knowledge management initiative utilized a four-step change model: mobilization, vision, design and transition (Figure 13.1).

![Four steps to organization-wide knowledge management](image)

**Fig. 13.1 Four steps to organization-wide knowledge management**

**Step 1: mobilization**

The mobilization stage was considered an important precursor for enacting change. It was to familiarize the pilot teams with the business imperative and objectives for knowledge management.

**Step 2: vision**

Developing a vision statement served to energize the leadership, pilot teams and, eventually, the whole organization. The vision statement, which was formulated and continues to endure is:

*Our vision is that our consultants feel and act as if they have the entire organization at their fingertips when they consult with customers. They know exactly where to go to find information. They are eager to share knowledge as well as leverage other’s experience in order to deliver more value to customers. We will recognize those consultants that share and those that leverage others’ knowledge as the most valuable members of the consulting team. To achieve this, we need everyone to take personal responsibility for sharing knowledge and learning from each other.*

The vision statement became a guidepost for the knowledge management initiative and was the rallying cry for the pilot programme participants.

The leadership also identified and promulgated four values for sustaining the knowledge management effort. The values were:
1. Leveraging other people’s knowledge, experience and deliverables is a desired behaviour.
2. Innovation is highly valued when both successes and failures are shared.
3. Time spent increasing both one’s own and others’ knowledge and confidence is a highly valued activity.
4. Consultants who actively share their knowledge and draw on the knowledge of others will dramatically increase their worth.

Step 3: design

The purpose of this stage was to design processes for sharing experiences and surfacing knowledge for reuse.

The initial pilots focused on coming out with generic processes and mechanisms to enable knowledge management. These processes would need to provide for the connection and interaction among participants, i.e. they had to be designed so that they could tap the knowledge locked in people’s heads and capture the knowledge that needed to be leveraged from a few consultants to many consultants. Three basic formats were formulated, each with a slightly different purpose and positioning:

1. Learning communities. These would comprise informal groups of people. Membership would cross organizational boundaries. Members would come together to discuss best practices, issues or skills that the group wanted to learn about. They would be able meet face to face or through conference calls.
2. Project snapshots. These were to be sessions designed to collect lessons learned and compile collateral from a project team that potentially could be reused by a future project team.
3. Knowledge mapping. This would be a process which would help identify the knowledge, skills, collateral and tools needed to sell or deliver a solution. Consultants with experience would need to come together to build the map based on their experience and know-how. The map would be used as a guide to what knowledge is important and where it can be found. It is updated as experience in the organization grows.

Step 4: transition

In order to make sustained change in knowledge management, the design team needed a way of introducing the new knowledge processes, values and behaviours.

To define the best way to do this a two-day workshop was designed and tested with a subset of the pilot programme participants. This workshop allowed the design team to evaluate the results of their efforts and decide whether modifications to the design were needed.

This stage also provided ammunition to tout the successes of the pilot teams. This was useful to build confidence and help prepare the organization for the long journey to permanent change that lay ahead.
The workshop: a look into the experience

Two project teams were selected to participate in the first workshop. The workshop’s aim was to stimulate immediate behavioural change, so that the value of knowledge sharing and reuse became evident quickly. The workshops were also a way of providing a safe environment to practice the initial reflexes and behaviours necessary for knowledge sharing. The experience of the workshop is captured in the discussion that follows.

Initially, participants struggled with the relevance of knowledge management to their work. One of the leaders surmised, ‘The first day was a disaster. The group wanted nothing to do with the “fluffy stuff”. They wanted technical training’.

The breakthrough came when the facilitators stopped the presentation format. At this point the participants were arranged in circular seating and a dialogue was opened.

It soon became apparent that the major source of resistance stemmed from the consultants’ perception that they already had the values and behaviours that were being suggested, and therefore saw the whole workshop exercise as ‘a waste of time’. Eventually, the deadlock began to break after the senior practice leader interjected to make a clear cut case for why knowledge management was absolutely vital for the future of the business and the urgency of taking action:

While you may not believe knowledge sharing and reuse is important to the success of our business, our clients say different. The client feedback collected during the assessment phase reflects that our clients believe that the depth of our knowledge is dependent on the consultants assigned to their project. Our challenge is to be able to deliver these new services in a consistent, high-quality manner. To do this, we must rapidly leverage our experience so we can learn what works and what doesn’t, and grow our capability to deliver globally. We have a small window of opportunity and knowledge management is key to our success.

Thereafter, slowly but gradually, an understanding of the importance of knowledge sharing and leverage to them, to their clients and to the business began to permeate the group. This was reinforced when a consultant, who was well respected for his depth of technical capability, spoke out: ‘I’ve been working with the design team for several weeks. At the beginning, I was sceptical about the value of knowledge management too. However, I now see how important it is to our success.’

The combination of customer feedback, leadership support and the buy-in of a respected team member created the breakthrough that the workshop needed. After this point, workshop participants moved from resistance to what they wanted to get out of the workshop experience.

The pilot participants began to ask questions and surface old assumptions and models of practice. It was not long before the pilot participants arrived at the realization that knowledge is based on experience and exists in the minds of individuals. They also began to notice the different shades of knowledge and the different management challenges facing them. As one consultant commented: ‘Paying attention only to knowledge captured in a database is like a wine
connoisseur paying more attention to the bottle than to the wine. Paying attention only to the human capital would be like a wine maker not paying attention to bottling or distribution.’

The success of the workshop can be easily ascertained from the participants’ sentiments:

*The workshop had specific personal impact to me. It convinced me to work on changing my behaviour, and helped me to see the value of sharing knowledge and learning from others. It clearly demonstrated that technical ability alone is not sufficient for success.*

We’ll talk about the things we did wrong; we hope others will be just as honest with us. We’re going to learn a lot from each other.

Overall, the consultants agreed that the workshop encouraged them to rethink their relationships with each other and with customers.

**Launching Learning Communities**

Given they had already experienced frustration with past attempts at leveraging knowledge through repositories, the pilot teams chose to start by launching Learning Communities. The logic behind this was that Learning Communities would provide a process and environment for the consultants to connect with each other, learn from each other and experience the value of sharing and reuse. The plan was to incorporate over time the other knowledge processes, namely project snapshots and knowledge mapping.

After the workshop, the first group of participants began to form Learning Communities. Initially four Learning Communities were launched. The four quickly grew to seven. The Learning Communities were designed to ensure that their activities would create value by structuring discussion around key consulting issues, the development of core competencies or the sharing of best practices.

The Learning Communities also involved consultants who had not participated in the workshop, but were within the scope of the pilot. The design team established a process for capturing feedback from Learning Communities in the form of anecdotal stories. Stories played a major role in motivating and sustaining enthusiasm. The telling of stories helped to reinforce the value of establishing processes for sharing and leveraging knowledge.

Tangible and intangible benefits were soon being reported as a result of Learning Community sessions. Even early on in the process HP Consulting began to note gains such as:

- a reduction in delivery time while improving quality through leveraging best practices
- reusing and standardizing proposal and presentation materials resulting in increased productivity
- sharing a broad range of tacit knowledge resulting in improved know-how of the community members.
Enthusiasm for knowledge sharing and reuse grew with those participating in the pilot. One Learning Community participant provided the overall sentiment: ‘The Learning Community is creating a connectedness among us. We all feel we can go to each other for help. That’s a big benefit for people who spend a lot of time at customer sites.’

**Moving from pilot to company-wide initiative**

For HP Consulting, the pilots were the beginning of an organization-wide initiative to make the knowledge of the few the knowledge of the many. The design team rapidly moved from the pilot to implementing the knowledge processes routinely in the HP Consulting global organization. The key lessons arising from the experience were:

1. Leadership must provide a foundation for change through unequivocal support and motivation.
2. Sponsors must be both evangelists and role models.
3. Knowledge management is not a programme but a new way of working that needs to be embedded into the overall strategy and organization design.
4. Focus should be on the critical business knowledge; not all knowledge is equally valuable.
5. Knowledge management begins with processes to share and create knowledge and is sustained by a knowledge-friendly culture.
6. People are willing to share and reuse knowledge if they feel it is desirable and expected behaviour.
7. Technology is an enabler, not the driver.

**Challenges in the future**

By 1998, sharing knowledge and structuring intellectual capital for reuse had become part of HP Consulting’s strategy. One of two strategic objectives was for consultants in the organization to become knowledge masters. Knowledge management progressed from an initiative to becoming an intellectual capital work group whose purpose was to lead the transformation of HP Consulting to a knowledge-based business.

Hewlett-Packard made a concerted effort to knit the knowledge processes into the way work gets done. As the processes became embedded within everyday work, enabling technology was carefully added. As more and more technology has been added, new challenges such as content management and the structuring of the explicit intellectual capital have become priorities. The company also began to devise and implant performance metrics in consultants’ roles to further reinforce that knowledge sharing, leverage and reuse is part of everyone’s job.

Hewlett-Packard’s approach has been one of emphasizing awareness and through this developing of a common vocabulary and knowledge frameworks. The workshops approach has been a subtle one. This was deemed to be the most appropriate for HP’s culture at the time.