In this chapter from *Designing a Successful KM Strategy*, Stephanie Barnes and Nick Milton list ten key strategic principles for Knowledge Management (KM) and explain how each contributes to the success of a KM program.

The Ten Principles Behind Your KM Strategy

Stephanie Barnes and Nick Milton

Knowledge Management (KM) has been around nearly two decades now with as many failures as successes. What usually separates the successes from the failures are the principles behind each of the programs. KM programs based on sound principles succeed; those that are not fail. In this chapter we list 10 key strategic principles for KM, and then expand on each of them.

Your KM strategy should be based on these principles, so you'll want to discuss them with your steering team, gain consensus on basing your KM program on them, and document them in the strategy. The rest of your strategy depends on your adopting these principles.

This is a long chapter, reflecting its importance. Get the principles right and success will follow.

KM Strategic Principles

1. KM implementation needs to be organization-led; tied to organization strategy and to specific organization issues
2. KM needs to be delivered where the critical knowledge lies, and where the high value decisions are made
3. KM implementation needs to be treated as a behavior change program

4. The endgame will be to introduce a complete management framework for KM
5. This framework will need to be embedded into the organization structures
6. The framework will need to include governance if it is to be sustainable
7. The framework will be structured, rather than emergent
8. A KM implementation should be a staged process, with regular decision points
9. A KM implementation should contain a piloting stage
10. A KM implementation should be run by an implementation team, reporting to a cross-organizational steering group

Now let's look at these 10 principles one by one.

1. KM Implementation Needs to Be Organization-Led

Black & Decker used to say "Our customers don't want a power drill; they want holes in the wall."

Similarly in KM, the senior managers don't want "a KM system," they don't want "Enterprise 2.0," and they don't want "more knowledge sharing"—they want a Better Organization (better decisions, better practices, and fewer repeat mistakes). They want to make sure that decision-making staff at all levels in the organization have access to the knowledge they need to help them to make the best decisions and deliver the best results. It's up to you, the knowledge manager, to develop and implement the strategy that will make it happen.

Neither do organization staff "want KM"; what they want is an easier way to find the knowledge they need to solve their problems, and a wider stage on which to use their own knowledge. Again, it's up to you, the knowledge manager, to develop and implement the KM framework that will make it happen.

If we are going to do our jobs properly as knowledge managers, we need to start from organizational strategy, organizational needs, and organizational outcomes at all levels. It is vital that KM efforts are linked to organizational outcomes, because the outcomes are what are important. This principle has been recognized by many of the early writers in the knowledge management field, and there are plenty of stories to support this as being the only effective approach. Consider, for instance:

- This quote from an early '00s survey: "Most successful KM applications addressed a 'life or death' business situation. Successful cases answered two questions at the outset: What business objective am I trying to achieve? How can I apply existing knowledge?"[1]
- This quote attributed to Bechtel Corporation in the late '90s: "KM is not an end in itself. Companies do not exist for the purpose of propagating and advancing knowledge—they exist to sell products and services. But to the extent that competitive advantage relies on informed decision-making within the business, KM has a crucial role to play."
- Tom Davenport and co-authors, in the paper "Building Successful KM Projects"[2] conclude that "Link to economic performance or industry value" is the number one success factor for KM.
- The head of IT at BP recognized this when he said, "We have been looking at the key processes of the business, testing them for their knowledge intensity to see if we would create some significant new change in the performance of that particular process if we managed knowledge in a more profound way. This concept has not been difficult to sell to the top executive team."[3]

The story is told of how President John F. Kennedy, on a visit to NASA, encountered a janitor and asked him what his job was. The janitor replied, "To help to put a man on the moon." There is some discussion of whether or not the story is true, but what it illustrates is the janitor's complete alignment with the aims of NASA, and the collective mission and strategy of the organization.

What if it had been the KM lead at NASA whom Kennedy had spoken to? What sort of answer would he have received? Hopefully the KM program was also strategic, and also linked to the collective mission and strategy of the organization. However, a lot of KM professionals haven't made this link. If you ask them what they are doing, they'll say "We're rolling out SharePoint," or, "I am trialing MediaWiki." This would be the equivalent of the NASA janitor saying "I'm trying out a new mop head." The link from the organizational priorities to the KM effort has been lost.

2. KM Needs to Be Delivered Where the Critical Knowledge Lies, and Where the High Value Decisions Are Made

We suggest that one of the first questions the KM professional needs to ask management is "*What knowledge?*"

What knowledge is important? What knowledge needs to be managed? What knowledge should be the focus of your KM activity? You don't have to manage *all* of the knowledge; only in those areas which truly add business value; the "critical knowledge areas." This critical knowledge will be knowledge that is crucial to the strategy of the organization, and which therefore needs to drive your KM strategy. The senior managers of the organization will help you determine what these knowledge areas are, and the first bullet point list in Chapter 3 will give you guidance on where critical knowledge lies.

Often our default approach as knowledge managers is to think that this critical knowledge is technical knowledge held by people at lower levels in the organization; the "knowledge workers" such as the sales force, the plant operators or the project engineers. However, this viewpoint misses the significant value and opportunity of applying KM at a middle and senior management level. Middle managers and senior managers are knowledge workers too, and there is as much value from influencing the relatively rare but very high value decisions that project managers, divisional managers and senior managers make as there is in supporting the much more common but much lower value decisions of the front line staff.

One of the most valuable pieces of work done at BP, for example, was at senior management level, taking the knowledge and lessons from the Amoco merger and applying them to the Arco acquisition. There we were working with the CFO, the chief counsel, and one of the VPs; very senior level people whose knowledge and experience from the Amoco merger really accelerated the Arco process, and made for a much smoother transition to an integrated organization. Delivering a high-level KM pilot at a senior level has three benefits:

- It delivers significant value to the organization
- It engages senior managers in KM, and helps them understand the value KM can bring to the organization as a whole
- It gains senior managers' buy-in, by showing how KM can solve their most pressing problems

KM is something that is needed at all levels, and the sooner you involve the senior managers, the faster and smoother your implementation will become. So make sure your critical knowledge areas include the big topics such as mergers, acquisitions, divestments, integrations, new market entry, organization restructuring, and recession survival. Not only do you deliver huge value, you may well get instant buy-in from the very people you most need on your side.

3. KM Implementation Should Be Treated as a Behavior Change Management Exercise

KM is a program that implements and manages organizational change and should be treated as such. It is not about buying and rolling out technology, it is not about giving people new toys, and it is not about adding another task into the project framework—it is about changing the way people think. It is about changing personal and organizational priorities, and it is about changing the way people treat knowledge. It is a profound shift from the individual to the social collective, involving the following changes in emphasis:

- From "I know" to "We know"
- From "Knowledge is mine" to "Knowledge is ours"
- From "Knowledge is owned" to "Knowledge is shared"
- From "Knowledge is personal property" to "Knowledge is collective/community property"

- From "Knowledge is personal advantage" to "Knowledge is company advantage"
- From "Knowledge is personal" to "Knowledge is inter-personal"
- From "I defend what I know" to "I am open to better knowledge"
- From "Not invented here (i.e., by me)" to "Invented in my community"
- From "New knowledge competes with my personal knowledge" to "New knowledge improves my personal knowledge"
- From "Other people's knowledge is a threat to me" to "Our shared knowledge helps me"
- From "Admitting that I don't know is a weakness" to "Admitting that I don't know is the first step to learning"

KM should be introduced as an organizational change program, with high-level sponsorship, with a communication strategy, with a desired result, and with phased implementation rather than "everyone change at once." Change follows the S-curve, change has to reach a tipping point, and hearts and minds are changed one at a time. Organizational change is a well-established discipline, and KM needs to incorporate this discipline in its execution.

The change in emphasis and behavior we are talking about here is not a gradual change; it is a step-change. It is a remodeling of the organization; a makeover, and a new way of thinking. It needs to be treated as a change process and measured as a change process. Don't go into KM thinking that it is about a new IT tool, or trying out communities of practice —you won't get far if you don't start to address hearts and minds and behaviors. This means that KM implementation must be structured using change management principles, including a piloting component, and must have a strong team of change agents to implement the change.

4. The Endgame Will Be to Introduce a Complete Management Framework for KM

The ultimate goal of your Knowledge Management strategy will be to introduce a KM framework into the working processes of the organization.

Nancy Dixon has posted some very interesting ideas about the evolution of KM, and how it has evolved from Information and Content Management, to Networking and Experiential Knowledge, to Collective Organizational Knowledge[4]. Similarly we have seen an evolution in the understanding of just what is needed in terms of a complete management framework for KM. We can look at this evolution by briefly reviewing the KM history of one of the authors of *Designing a Successful KM Strategy*.

Evolutionary Stage 1—Focus on One or Two Tools

When author Nick Milton was working in Norway in the early to mid-'90s, his KM approach was very simple, focusing on one or two KM components: the retrospect, and a lessons database. In hindsight this was a naive and rudimentary approach, and the lessons built up in the database until it became too full and too daunting for people to use as reference. He was focusing on one or two tools, and missing large chunks of KM.

There are quite a few organizations still at this stage. They have bought an Enterprise Content Management system or a social networking platform, or are capturing lessons, and think that this alone will deliver KM. But no one tool alone will deliver KM.

Evolutionary Stage 2—Build a Toolbox

When Nick left Norway in 1997 and joined the BP KM team, the team had already realized they needed more than one KM tool. This is when Nick and colleagues developed the "learning before, during, and after" model, and started to put together a KM toolbox including "after-action reviews," "peer assist," and the concept of "knowledge assets." Certainly that gave a little more in the way of success, but the success was largely down to the intervention of the KM team, and when the KM team withdrew, knowledge-sharing died away. That's because a toolbox is not enough. The BP toolbox was not embedded into the work practices of the organization, the roles were not in place, and there was no governance. The attitude the KM team was taking was "Here are a bunch of tools—we invite you to use them to deliver value." And, largely, the organization declined the invitation.

There are many organizations at this stage. They have defined a KM toolbox—in some cases an extensive toolbox, and sometimes a very expensive one as well. But KM remains optional, and it remains separate from the everyday work process. A toolbox alone will not deliver sustainable KM.

Evolutionary Stage 3—Implement a Framework

When Nick left BP in 1999, KM was still at the toolbox stage. In 2004 Nick and his colleague Tom Young worked with BP again to do a major review of KM, and to look at where it was working, and what was missing. That's where the concept was born of a "KM framework"—a set of KM activities embedded into organization process, a number of roles embedded into the organizational structure, and a selection of supporting technologies, all under an umbrella of governance.[5] At last, KM was beginning to take on the aspects of other management systems, as a framework of roles, processes, technologies, and governance, which could be made part of the organization.

Where KM works well—in the military, for example—there is always such a framework in place. Any successful KM implementation needs to look beyond single tools or toolboxes, and aim to implement a management framework of processes, roles, technologies, and governance.

5. The Framework Must Be Embedded Into the Organization Structures

If your KM framework is not embedded into the existing organizational structures, you risk reverting to a pre-KM state later on. Many of the high-profile, late-stage failures of KM are due to a failure to embed.

Stephen Denning has published an interesting and thought-provoking post, entitled "Why Do Great KM Programs Fail?"[6] where he concludes that, "Even when an oasis of excellence and innovation is established within an organization being run on traditional management lines, the experience doesn't take root and replicate throughout the organization."

Late-stage failures such as those described by Denning often occur because KM has not been embedded in normal organizational activities.

These programs are often delivered by a strong team and a charismatic leader, but delivered as something separate, and not fully rooted in the work structure and management framework of the organization. For KM to succeed in the long term, the processes, roles, technology, and governance must be incorporated into day-to-day structures such as the project management system, the quality management system, and the sales process.

6. The Framework Will Need to Include Governance If It Is to Be Sustainable

Without governance, embedding a framework for KM in the operations of the organization will not result in lasting and sustained change to KM behaviors and culture. Governance in this case refers to the on-going organizational elements that must be in place to ensure that an asset—in this case knowledge—is managed properly and with rigor in a sustained way.

If you are a manager and you want to get something done in your organization, you need to set three things in place:

- First, you have to make it very clear what you want done
- Second, you have to give people the tools and the training to do it
- Third, you have to check that they've done what you asked them to

These three elements are important governance components in all areas of life. If you wanted to get your teenage son or daughter to mow the lawn, for example, you would first be very clear with them about what you expected them to do; next, you would show them where the lawnmower is and explain how to use it; and, finally, you would check that they had completed the work.

Without the clarity of expectation and explanation, your son or daughter would most likely claim that they weren't sure what to do, or else they would do only half the job, leaving the edges untrimmed and the grass clippings all over the lawn. If you didn't give them the lawnmower and show them how to use it, they wouldn't be able to get started. If you didn't check up on them, the likelihood is that they would be distracted by more urgent activities such as the PlayStation, Twitter, or Facebook. Those three elements—clarity of expectation, the tools to do the job, and monitoring—ensure the job gets done. It's a governance system for mowing the lawn!

Your strategy must ensure that a similar governance framework is applied to KM. Imagine if the staff in your organization knew that they had to do a knowledge budget (or other learning and planning activity) at the start of any significant piece of work. Imagine they knew that they would have to do knowledge tracking as the work continues, and balance the knowledge books by capturing their learning at the end of the job. Imagine that they had the tools to do these activities, and the training to use the tools, and also that management would be checking to see that they had done what they were supposed to do. Whether or not the individual employee believes KM is a good thing, such a governance system will ensure that it happens.

7. The Framework Will Be Structured, Rather Than Emergent

There is a major philosophical divide in KM circles between the Structured and the Emergent camps.

The Emergent people believe that if you provide people with the tools, then knowledge sharing will naturally emerge. They point to Wikipedia as a prime example of this—the wisdom of the crowds spontaneously emerging as documented knowledge. They point to Twitter, to LinkedIn, and to many other global social networking tools. They believe that knowledge is organic, and that too much management will kill it. This was the prevalent view a decade ago, particularly where communities of practice were concerned.

The Structured people believe that knowledge is an asset to an organization, and that assets cannot safely be left to manage themselves. They believe that if there is an area of knowledge which is important to the organization, then there should be a community of practice that looks after that knowledge. Rather than waiting for such a community of practice to spontaneously emerge, they encourage it.

ConocoPhillips is a prime example of the structured knowledge company: they divide their business into areas of competence, and for each area they ensure there is a community of practice and a network leader, who is also the editor of the relevant wiki page. The network leaders are given training, and the communities are nurtured through a growth process until they become highly effective knowledge-sharing mechanisms. Each network leader reports upward through functional excellence teams into the functional leadership of the organization.

The past 10 years has seen a shift, with the Structured view becoming dominant, at least for KM within organizations, and the Emergent view less dominant. This change has come through experience with working with knowledge sharing within organizations, and the need to adapt and structure the corporate intranet free-for-all, which was modeled on the internet, into a managed system with an architecture that allows staff to find and use the knowledge they need to get their jobs done efficiently and effectively.

Unstructured networking similar to that seen on the internet is not a useful model for knowledge sharing in organizations, for these reasons:

- The emergent discussion forums in LinkedIn very quickly fragment into multiple parallel conversations, which often deteriorate further into silos. That is a disaster in an organization where there needs to be one place to go to tap into a network, not 422 places.
- The 90:9:1 participation model of Wikipedia is fine if there is a massive pool of potential contributors, with redundancy in knowledge. Tapping into what is effectively 2 or 3 percent of the available knowledge is fine, if the available knowledge is global. In an organization, it just isn't enough.
- The diversity profile of Wikipedia is highly skewed. If your organization knowledge base was disproportionally populated by the knowledge of unmarried males under the age of 30, as Wikipedia is, you would think something was amiss.

The prevalent Emergent view of KM a decade ago derived from an assessment that knowledge is organic, and that it could be killed by too much control. However, structure does not necessarily require control, and structure can be applied to the management of organic things.

The classical structured organic enterprise is the garden—the flower garden, the vegetable garden, the market garden, the allotment. The vegetables grow organically, within a structure. And anyone with a garden will know that if you want to produce flowers or vegetables, then "organic" is hard work, and requires a lot of management. You don't just "let the garden emerge," because all you'll get is weeds. If you simply 'let a thousand flowers bloom" most of them will be dandelions; few if any will be tomato plants. Instead, you create the conditions, fertilize the soil, plant the seeds, remove the weeds, deter the pests, tend and water and fertilize, and eventually your flowers and vegetables will grow. If knowledge is organic, then KM is akin to gardening, with all the structure that this implies.

Your strategy should be a structured one, rather than an emergent one. Find out what knowledge is critical to the success of the organization, and put in place the framework and structure that ensures it will be managed.

8. A KM Implementation Should Be a Staged Process, With Regular Decision Points

Implementing KM into an organization will not happen accidentally. It happens by making a deliberate decision, or rather a series of decisions, each one followed by much hard work until the next review/decision point.

Very few company presidents or CEOs wake up one morning and "decide" to implement KM. Instead, like any other practice, implementation will follow a series of decisions, with each decision resting on a basis of necessary evidence.

The decision chain is shown in Figure 4.1 and in the five decisions that follow.

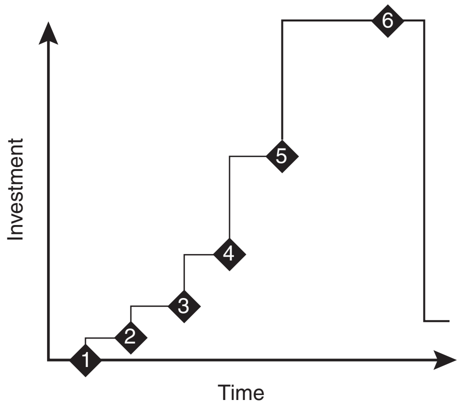

Figure 4.1 Stepwise investment in Knowledge Management implementation

Decision 1: To Investigate KM

Your first decision will be to set up a task force to determine whether or not KM makes operational sense for the organization. The task force will study the pros and cons and decide if it is worthwhile pursuing. Assuming an affirmative decision, the task force will then make the business case for investing in KM.

Decision 2: To Map Out What Needs to Be Done to Implement KM

If the task force has shown that KM makes good operational sense, then further work is needed to assess the current state, to define the KM strategy and implementation plan, and to estimate the time, budget, and resources required. We are assuming that this is the stage you have already reached; the stage at which you need *Designing a Successful KM Strategy*.

Decision 3: To Pilot KM in High-Profile Areas

If the strategy, plan and budget are approved, then KM needs to be piloted in selected business areas in order to road-test and refine the

KM framework prior to roll-out. By this time, KM is becoming quite high profile, and quite high cost.

Decision 4: To Roll Out KM as a Required Discipline to the Whole Organization

If the pilots were successful and the value of KM to the organization and to the employees was proven, the next decision—not to be taken lightly!—is to roll out a KM framework across the whole organization. This is the point of no return.

Decision 5: To Stand Down the Implementation Team

After the KM program has been rolled out across the organization, it's time to hand over KM to be managed as part of normal operational processes and disband the implementation team. The KM team must be sure that KM is fully embedded before making this decision.

Treating KM as a series of incremental decisions as just described has two main benefits. First, it is sensible, prudent decision-making. Figure 4.1 shows that the investment in each stage will be a little larger than the previous stage—a task force costs less than a team, which costs less than a series of pilots, which costs less than a roll-out campaign. Each incremental increase in cost is built on a decision, which depends on the results of the previous stage, and on how well KM has proven itself. And at any point up until Decision 4, the organization can change its mind, because it is not fully committed. Once Decision 4 is taken, the organization is committed to roll-out.

And that's the second advantage. If each decision is made by the right people, based on the right information and the right criteria, then you shouldn't have to revisit the decisions later. Each decision should be documented, and should stand on its own merits. You shouldn't have to keep re-justifying, and remaking decisions. Decision 5—the decision to roll out KM—needs to be made at the highest level. You need the support of the CEO to make an organization-wide change like this. But by the time it comes to Decision 4, a series of successful trials and pilots will have demonstrated that KM works in your organization, and delivers real value.

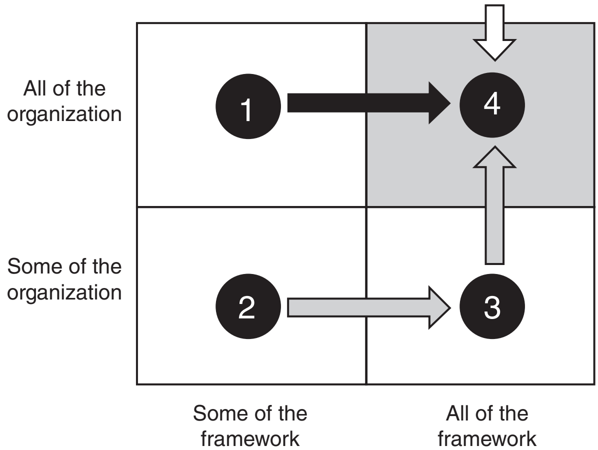

Figure 4.2 Three implementation strategies

9. A KM Implementation Should Contain a Piloting Stage

In generic terms, there are three main implementation strategies for KM, and only one of them is, in our experience, really reliable. These are shown symbolically in Figure 4.2.

You ultimately want all the elements of the KM framework deployed across all of the organization. You want to get to the grey square in the top right of Figure 4.2, marked with the number 4.

There are three ways to get there:

1. The white arrow represents getting there in one step—planning a framework, and then rolling it out across the whole organization. This is a high risk strategy. You only get one shot at the framework design, and if you get it wrong, it may be permanently wrong. Also you will be beginning the roll-out with no history of success within the organization, which makes change management difficult (as explained in Chapter 13).
2. The black arrow represents rolling out parts of the framework one by one across the whole organization (Circle 1) until the framework is complete. This is a common approach, and people often start by rolling out the technology element, and only later introducing the other elements of roles and accountabilities, processes

and governance. This also is a high risk strategy. Few framework elements add much value when working in isolation, and you may devalue the whole KM implementation if you introduce something that adds no value. Often people will roll out a technology such as Groupware, social media, or enterprise search, and find that knowledge sharing and reuse do not automatically follow. By which time, you may have devalued KM as a concept, and you may not get a second chance.

3. The grey arrow represents a piloted implementation. At Circle 2, you test elements of the framework one by one, locally in the organization, to make sure they work in the organization context, and to tailor them until they do. At Circle 3, you pilot the whole KM framework in one part of the organization, to make sure the complete framework adds value to the organization, and you tailor it until it does. Finally (Circle 4) you roll out this tried, tested, and piloted framework across the organization as a whole. The piloting strategy represented by the grey arrow takes longer, but it has a much higher chance of success.

In the third approach, the pilot is a crucial element, and is a test of Knowledge Management as a whole, rather than one or two KM tools in isolation. Piloting is, therefore, a large-scale test of KM and a prototype of the KM framework.

In the late 1990s we worked with Colonel Ed Guthrie of the U.S. Army, whose view of KM was similar to this model. His model was based on how you might get a brigade across a river. You start with firing a rope over the river, use the rope to pull across a pontoon bridge, and march the rest of the army over the bridge. In his model the far bank of the river is the changed KM behavior, with KM embedded and applied, and the early KM pilots are the rope.

The other advantage of piloting over an "everything at once" implementation is that it delivers some quick wins to management. When the CEO comes by and asks, "How are we progressing with KM?" it's great to be able to say "We've been working with X division and Y community and we've got some really good success stories to tell you." Additionally, you can use these pilot-based success stories as internal marketing material to help with the behavior change element of roll-out.

10. A KM Implementation Should Be Run as a Project

During the implementation stage, KM is a project, one that is set up to implement change in the organization, and to move the organization to a state where KM is embedded as part of the way the organization operates. As with any project, there are a number of roles and accountabilities associated with delivering the project objectives. These include:

- KM project leader or Chief Knowledge Officer
- KM implementation team
- KM project sponsor
- Management steering team

In addition to these roles, your KM implementation project will need a budget, an implementation plan, and a set of milestones and objectives. The end point of the project will be a fully implemented and embedded KM framework—in place, delivering value, with governance in place, and sustainable.

Example of Principles Within a KM Strategy

Given that the principles behind any strategy are important, and should be made explicit, it is surprising that relatively few published KM strategies make reference to principles. An exception is the KM strategy for the STAR (Strengthening Transparency and Responsiveness) program in Ghana,[7] a multi-donor-pooled funding mechanism (funded by DFID, DANIDA, EU, and USAID) to increase the influence of civil society and Parliament in the governance of public goods and service delivery, with the ultimate goal of improving the accountability and responsiveness of Ghana's government, traditional authorities, and the private sector.

The STAR-Ghana KM strategy outlines a set of nine principles, which follow. Some of these read more like vision statements than principles, per se (number 5, for instance), but others mirror the principles covered in this chapter. The first principle on the STAR-Ghana list matches our number one principle, which is the most important of all the KM principles we've discussed.

[STAR-Ghana's] core KM guiding principles are as follows:

- The KM strategy must be aligned to the shared vision and values of STAR-Ghana
- STAR-Ghana and grantees are 'learning organizations' and are encouraged to be innovative and try out new approaches and initiatives in KM
- Work processes and systems must be improved to include more collective, systematic and continuous learning and knowledge processes
- We need to allocate time and budget to KM
- Every time we do something repetitive we should strive to do it better than the last time
- Knowledge systems and tools developed encourage ownership of the institutional and intellectual memories of the organization. They should be to support knowledge asset driven strategies, processes, methods and techniques
- Grant Partners, stakeholders and the citizen need to have access to information generated about and from our work and has to be timely
- STAR-Ghana KM is concerned with creating, sharing and applying knowledge as a team, by working more effectively together as one. Communicate, learn and share knowledge
- Leverage knowledge for achieving organizational goals and serving citizens and noncitizens

Summary and Next Steps

An effective KM strategy will rest on proven principles. The ten principles described in this chapter are the foundation of your KM strategy and program. They have been identified out of the experience of the authors and are generally acknowledged as best practices across the field of KM, regardless of industry or sector. Once you are clear on the principles, it's time to move on to the next step: creating your strategy document.

Notes

1. Teltech survey, source now lost.
2. Thomas H. Davenport, David W. De Long, and Michael C. Beers, "Building Successful KM Projects," in *Managing the Knowledge of the Organization* (Ernst & Young LLP, 1997). http://www.providersedge.com/docs/km_articles/Building_Successful_KM_Projects.pdf
3. John Cross, BP CIO, interviewed in CIO Magazine, May 5, 1997, 120.
4. Nancy Dixon, "Where Knowledge Management Has Been and Where It Is Going-Part Three," July 30, 2009, accessed May 27, 2014, www.nancydixonblog.com/2009/07/where-knowledge-management-has-been-and-where-it-is-going-part-three.html.
5. P. J. Gibby, N. Milton, W. A. Palen, and S. E. Hensley, *Implementing a Framework for KM*. SPE-101315-PP: (Society of Petroleum Engineers, 2006).
6. Steve Denning, "Why Do Great KM Programs Fail?" *The Leader's Guide to Radical Management*, July 4, 2010, accessed Jan. 2014, stevedenning.typepad.com/steve_denning/2010/07/why-do-great-km-programs-fail.html.
7. STAR-Ghana, "KNOWLEDGE MANAGEMENT STRATEGY - May 2011," accessed May 27, 2014, http://www.starghana.org/userfiles/files/publications/KM%20STRATEGY.pdf.

About the Authors

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This chapter originally appeared in *Designing a Successful KM Strategy*, by Stephanie Barnes and Nick Milton. For more information visit http://books.infotoday.com