



KNOWLEDGE MANAGEMENT

Instructor Guide



West Virginia Department of Transportation
Division of Highways
Human Resources
Training & Development Section
FY 2015

Knowledge Management – Materials

- Participant Guides (#_____)
- Laptop and Power cord
- Speakers
- LCD Projector
- PPT - on Desktop - on USB Drive
- Pencils
- Instructor / Course Evaluations
- Sign-in Sheets & Certificates
- Index Cards
- Flip Chart
- Dry-erase marker(s)

For the Instructor:

This instructor's guide is designed to provide the workshop facilitator with very easy to use instructions. Herein, you will even find examples to use for most of the discussions should you need some. The slide numbers are at the top right of each new page along with the heading or title.

- Items in BLACK with no background color give general instructions and information for the instructor,

- **Items in RED, BOLD print with a pink background should be verbally said, asked, explained, or modeled by the instructor, and**

- **Items in RED with a gray background may be said or asked by the instructor if the participants are not participatory, if further discussion is warranted, or if time permits.**

KNOWLEDGE MANAGEMENT

- 1) Introduce and give a brief description of yourself and your background, i.e. where you have worked, where you live, how long with the DOH, etc.
- 2) Introduce the “Knowledge Management” workshop:

It has been reported that at least 30 percent of the state transportation agency workforce will change over the next three years. The knowledge lost will be severe. Although you cannot stop your workers from leaving or retiring, you can control how much of their skills and knowledge stays.

Every organization is in danger of losing employee knowledge. Knowledge management helps your organization obtain and transfer valuable information before it walks out the door. It is an ongoing process designed to dispense company information in a user-friendly way for both current and future employees. The goal of this process is to preserve knowledge assets, enabling your organization to work more effectively:

- **Minimize the risk and cost of lost knowledge**
- **Increase the speed by which individuals assuming new responsibilities become competent**
- **Create knowledge and skill repositories that support creative job and learning design**

- **Lower training costs through repurposing assets across various employee groups**

3) Review housekeeping rules, e.g. sign in sheet, breaks (timekeeper), lunch, cell phone policy, and the location of bathrooms and refreshments.

SLIDE 2 – If only it were that easy!

- 1) Display and read the short cartoon slowly allowing the participants enough time to listen to the words and process what is happening in the picture.
- 2) Ask the participants these simple questions:

- **When a veteran employee leaves your organization or team, do you hope to vacuum the many years of knowledge and experience from him or her?**
- **If not, then how do you plan to get the critical knowledge in his/her head?**

SLIDE 3 – Objectives

1) Review the objectives of the workshop on slide 3 and emphasize how capturing, organizing, and managing the critical knowledge is becoming increasingly important within the Division of Highways. As you review the objectives, it may be a good idea to give a quick one or two sentence explanation or example. Often times, these short, quick illustrations give the participants a preview of what to anticipate from the workshop:

This workshop is designed to help you as supervisors and leaders to capture the critical knowledge within your crew, team, office, or organization. We will...

- **Describe the difference between tacit and explicit knowledge**
- **Define knowledge management**
- **Explain the benefits of knowledge management**
- **Identify reasons why the culture of government may make knowledge management difficult**
- **Explain the process used to share critical agency knowledge**

2) It will be beneficial for you to describe the difference between a lecturer and facilitator, and to let the participants know that your role is to facilitate. Emphasize that you are there to assist them in learning from each other and from the exercises and concepts that will enhance their knowledge and expand their thinking ability.

SLIDE 4 – Questions for thought

- 1) Display slide 4.
- 2) Have the participants turn to page 4 of the Participant Guide.
- 3) As the background of the slide shows, these questions are not to be answered right now, but rather the participants are to think about them as you facilitate the training session:

- **Who are some of the “experts” on your team, in your organization, or in the agency?**
- **What knowledge does this agency need to provide to its employees?**
- **How might we manage this knowledge?**
- **What goals will the successful implementation of such a program accomplish?**

SLIDE 5 – Albert Einstein's Quote

1) Display and read the quote by Albert Einstein.

“Everything that can be counted does not necessarily count; everything that counts cannot necessarily be counted.”

2) Ask the following question.

- When Albert Einstein was referring to everything that counts cannot necessarily be counted, to what kind of knowledge was he referring, explicit or tacit knowledge?

SLIDE 6 – What is Knowledge Management?

1) Display and read the definition on slide 6.

Implementing ways to better utilize the expertise that we have— people and information— to improve ongoing processes and procedures and retain critical knowledge.

2) Emphasize that knowledge is a part of a process.

Knowledge is *part of a process* rather than an object

SLIDE 7 – Knowledge Management is...

1) Display and read the title “**Knowledge Management is...**”

2) Display and read each of the bullet points one at a time.

- **Getting the right knowledge to the right people at the right time**
- **Identifying capturing, organizing and disseminating critical institutional knowledge**
- **Sharing lessons learned and best practices to avoid re-inventing the wheel**
- **Knowing the *WHY* behind decisions and actions**

SLIDE 8 – Why do we learn about KM?

1) Display and ask the question.

Why do we learn about KM?

2) Allow the participants to give any answer(s) of which they can think.

3) Display the 'official' answer to the question given on the slide.

Knowledge Management supports the West Virginia Department of Transportation in its efforts to enhance the opportunity for people and communities to have economically sound development.

SLIDE 9 – Why Knowledge Management?

- 1) Display the title of slide 8.
- 2) Ask this question of the participants, and list their answers on a flip board or dry-erase board.

Why is Knowledge Management important?

Possible Answers:

- Retirements
- Changing positions frequently
- Save Time
- Save Money

- 3) Display the bullet points on the slide.

- **Looming retirements of ‘Baby Boomers’**
- **Mobile Workforce**
- **Knowledgeable workers**
- **Competitive Edge**
- **Changing Culture**
- **Avoid re-inventing the wheel**
- **Changing work environments**
- **Need to increase effectiveness and efficiency**

Born between 1946 and 1964, Baby Boomers are predominately in their 40s and 50s. They are well-established in their careers and often hold positions of power and authority.

The Benefits

With some 15 years of documented KM practice in all types of organizations, the benefits of a systematic approach to managing knowledge are clear. In an analysis of many cases, there is a hierarchy of benefits:

1) **Benefits from more efficient processing of information and knowledge, including:**

- faster retrieval of information
- minimizing duplication, e.g. "one version of the truth"
- saving or freeing up the time of busy professionals
- knowing who knows what and who is doing what
- improved quality of information
- access to latest thinking and most current knowledge

which in turn leads to:

2) **Internal organizational benefits, including efficiencies and effectiveness through:**

- sharing of good and best practices
- reduction of waste and re-work
- better management of risk
- retention of knowledge before experts leave or retire
- cost savings, both in people's time and processing of information

which in turn leads to:

3) **Benefits to the public and stakeholders, including:**

- improved customer service and satisfaction
- faster solving of problems
- greater consistency in servicing customers at different locations
- improved product and service quality, more closely aligned with needs
- better value for money
- enhanced reputation and image

SLIDE 10 – Knowledge and Tools

- 1) Play the short video clip. (1 minute, 42 seconds)
- 2) Allow for any comments.
- 3) Ask one of the first two questions, and ask the last question.

- Did the repairman have the right tools to get the job done efficiently?
- Do you think the owner of the car got her money's worth?
- **Do you sometimes feel like the repairman as an employee of the Division of Highways?**

SLIDE 11 – What is Knowledge?

- 1) Display the title “What is knowledge?” and the pyramid.
- 2) Have the participants turn to page 5 of the Participant Guide.
- 3) Begin by showing the bottom two rungs of the pyramid, data and information.

Data and Information are out there for anyone who looks it up. It has no specific context.

- 4) Display the description for “knowledge” along with the two arrows.

**Knowledge requires a context for the data and information.
Knowledge is it which we try to share within an agency or organization.**

- 5) Display the description for “intelligence”.

Intelligence and wisdom depend on the individual with whom you are sharing knowledge and require a skill set, experience, and time.

What is Knowledge?

Words like "data," "information," and "knowledge" are often used interchangeably. But there are some important differences:

Data is a specific fact or figure, without any context. For example, the number 1,000 is a piece of data, as is the name Tom Smith. Without anything else to define them, these two items of data are meaningless.

Information is data that's organized. So, pieces of information are "Tom Smith is a CEO" and "1,000 widgets." We have more details, so now the data makes more sense to us.

Knowledge, then, builds on the information to give us context. Knowledge is "Tom Smith is the CEO of our company's biggest competitor, and his company ships 1,000 widgets every hour."

The key difference between knowledge and information is that knowledge gives us the power to take action. We can **use** it.

SLIDE 12 – The Knowledge Iceberg

- Refer to the picture on page 6 of the Participant Guide.

The Iceberg is a very familiar model within Knowledge Management, seen in many presentations.

In this analogy, the conscious documented knowledge of an organization is like the visible portion of an iceberg, and the known undocumented knowledge is underwater, but close to the surface, in the daylight zone where it is visible, and easily accessed.

However, deeper down, out of sight, lies the vast mass of knowledge; the bulk of the iceberg. This knowledge is invisible, inaccessible, and easily overlooked. These are the things that you don't know that you don't know.

Before this underwater knowledge can be shared and applied, it first needs to be brought to the surface, i.e. made visible.

Source:

http://www.nickmilton.com/2012/08/the-knowledge-management-iceberg_29.html

SLIDE 13 – Explicit & Tacit Knowledge

- Display and explain the picture on slide 13.

Explicit Knowledge is articulated knowledge, expressed and recorded as words, numbers, codes, mathematical and scientific formulae, and musical notations. Explicit knowledge is easy to communicate, store, and distribute and is the knowledge found in books, on the web, and other visual and oral means.

Tacit Knowledge is unwritten, unspoken, and hidden vast storehouse of knowledge held by practically every normal human being, based on his or her emotions, experiences, insights, intuition, observations and internalized information. Tacit knowledge is integral to the entirety of a person's consciousness, is acquired largely through association with other people, and requires joint or shared activities to be imparted from one to another. Like the submerged part of an iceberg it constitutes the bulk of what one knows, and forms the underlying framework that makes explicit knowledge possible.

Source: <http://www.businessdictionary.com>

Chemist and Social Scientist Michael Polanyi expressed tacit knowledge as the state of knowing more than you are able to tell. He summarized his theories about tacit knowledge in his book, "The Tacit Dimension," which he based on the Terry Lectures he gave in 1962 at Yale. Polanyi is credited with defining tacit knowledge as being something other than explicit or expressly taught information.

Source: http://www.ehow.com/about_6497365_meaning-tacit-knowledge_.html

SLIDE 14 – Explicit or Tacit Knowledge?

- 1) Display slide 14.
- 2) Have the participants answer the two questions on the bottom of page 6 of the participant guide.
- 3) Have the participants turn to page 7.
- 4) Read the directions aloud or ask for a volunteer to read them aloud.
- 5) Have the participants complete the 15 blanks, as directed. You may:
 - a. Complete the activity as a large group
 - b. Have them complete the activity at tables
 - c. Have them complete the activity individually

SLIDE 15 – Government Culture

1) Display and read or explain each of the two bullets points on slide 15.

- **Culture is defined by the rules, actions, and behavior within an organization. It explains how employees relate to each other. It also explains the processes and procedures within an organization or agency.**
- **Our agency has an overall culture but may also have subcultures within different departments and areas.**

2) Ask the following questions two questions and allow for some lengthy discussion. Be prepared for some very negative comments.

- **What overall culture does the Division of Highways have?**
- **How would you describe the rules, actions, and behavior within your individual org, team, garage, etc.?**
- **How can this culture be changed, if needed?**

SLIDE 16 – Politics

1) Display and read the two bulleted points on slide 16.

- **Knowledge Management will not work without an understanding of an organization's cultures and subcultures.**
- **Build structure that withstands changing political positions.**

2) Make sure to mention that we may not truly be able to change the political system with its change of leadership.

3) Ask the participants if they feel that they have an understanding of this organization's culture and subcultures.

- **Do you understand how this agency or organization functions well or not well?**

SLIDE 17 – Obstacles to Knowledge Sharing in Government

1) Display and read or explain each of the obstacles.

- **Command and control cultures inhibit knowledge sharing**
- **Lack of awareness that held knowledge may be available and visible**
- **Short on time and other resources**
- **Size of the organization**
- **Knowledge is power—job security**

2) Ask the participants if they agree with this list and if they are willing share their knowledge.

Do you agree with this list of obstacles?

Are you willing to share the knowledge that you have with others?

3) Show the participants 2 examples of the SOPs that we have recently created in the Human Resources Division on pp. x-x of the participant guide.

SLIDES 18 & 19 – Cartoons

- Display and read the short cartoons slowly allowing the participants enough time to listen to the words and process what is happening in the picture.

SLIDE 20 – Knowledge is Power!

- 1) Play the short video clip. (3 minute, 12 seconds)
- 2) Allow for any comments.
- 3) Ask the participants the following question.

Do you feel like you have to jump through hoops because some in the organization have more knowledge or power than you feel that they should have?

SLIDE 21—Knowledge Management

- 1) Display the graphic on slide 21.
- 2) Ask someone in the audience if they would like to explain what this graphic represents.

Possible Answers:

- Using Technology to bridge the gap between People and Processes
- Knowledge Management held together by People, Processes, and Technology.
- One needs People, Processes, and Technology to have KM.

SLIDE 22 – People, Processes, and Technology

- If time permit, play the video clip on this slide.

SLIDE 23 – Implementing Knowledge Management

- 1) Display slide 23.
- 2) Explain how to implement knowledge management.

Implementing Knowledge Management

Knowledge management systems should try to implement a two-part approach: using a database or wiki to collect explicit knowledge, and connecting colleagues to one-another to share tacit knowledge.

1. **Technology-based systems** – These can include a collaborative wiki , where everyone can add and edit information. Or, it can include programs or databases on the company's intranet, with information organized so that everyone can access them.

Any technology-based system will have challenges. For instance, who will manage the project? Who will keep the information up to date? How will people access the information?

There's no "one size fits all" approach here. Every organization and culture is different.

2. **Softer systems** – These are things like specific actions or meetings that take place to share knowledge and help people connect with one another.

Consider the following methods as part of your soft knowledge management systems:

- Shadowing
- Mentoring .
- Instant messaging and intranet forums.
- Specific actions, like After Action Reviews after significant events, and Post-Implementation Reviews after a project has been completed.

- Voluntary groups, also called communities of practice, help team members doing the same thing in different areas to meet informally and share information.

Keep in mind that technology-based knowledge management systems are great at capturing explicit knowledge, but not so great at capturing tacit knowledge. Tacit knowledge is more often captured by softer systems, like the ones listed above.

This is why knowledge management approaches should try to use both approaches.

SLIDE 24 – Standard Operating Procedure (SOP)

SLIDE 25 – Tips for Implementing KM

- 1) Display slide 25.
- 2) Explain the bulleted tips for implementing knowledge management.

- **Identify tacit knowledge first** – Many organizations find that identifying their team's tacit knowledge is the biggest hurdle. If you implement a knowledge management system in your department or company, start with a brainstorming session with your team to get their ideas flowing on how to capture this.
- **Start with a small team** – It's very easy to get overwhelmed with the amount of knowledge that could be shared. Start with a small group, in one department, and grow from there. This will help you figure out what information you'd like to keep, and how you'd like to organize it.
- **Help staff feel comfortable about sharing knowledge** – It might be hard to "sell" knowledge management to your team. After all, you're asking them to share their hard-won knowledge and experience, the very things that make them valuable to the company. (This can be a powerful incentive for people not to share their knowledge!)

Make knowledge sharing part of the company culture, and something that *everyone* does. This will help make team members feel more comfortable about getting involved. And, consider bringing knowledge sharing into your formal approach to performance management, so that people are rewarded for sharing information freely.
- **Make it as easy as possible for your team to share information** – Everyone is busy. If being part of a knowledge management program is difficult or time-consuming, people may not want to be involved. The easier it is for people to participate, the more likely you are to succeed.

- **Plan for retiring team members** – Retirement is a major reason why so many organizations are trying to quickly implement knowledge management systems right now. If you're facing a baby-boomer generation that's about to walk out of the door, it makes sense to start collecting their experience first.

SLIDE 26 – What needs are there in your organization...?

1) Display slide 26 with the question.

What needs are there in your organization to share knowledge?

2) On page 8 of the Participant Guide, allow the participants to complete step 1 – Determine Needs by writing down two needs they see within their team, organization, garage, etc.

3) Alternatively, you may complete the activity as a brainstorming session as a large group by having the participants focus on Supervisory Skills or the DOH as a whole.

4) Go on to step two, and have the participants write down some name of people whom they know that have the knowledge required.

SLIDES 27-31 – Steps to Implement a KM System

- 1) Display slide 27 and refer the participants to page x of the Participant Guide.
- 2) Display slides 27-31 one at a time. Each slide put another arrow or step on the process.

- **Determine Needs**
- **Locate Information Sources**
- **Choose Information-gathering systems**
- **Compile, Confirm, and Circulate**
- **Maintain**

SLIDE 32 – Thank you for your participation!

- 1) Before ending this presentation, display slide 32.
- 2) Thank the participants for taking the time out of their busy schedules for coming.
- 3) Say that you enjoyed the opportunity to come and present the workshop, and that you hope they found it beneficial and will be able to apply what they learned.
- 4) Give them your contact information and invite them to call or email you if they have questions or can assist them in any way.
- 5) Ask the participants to fill out the Workshop-Presenter Survey. They can either leave the surveys on the table or put them in a pile on their way out.
- 6) Stand by the door from which it seems most people are exiting and shake hands and thank them again.

Sources

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