TABLE OF CONTENTS

Agenda: Day Two 50

Understanding Your Training Package

Your Velsoft training package contains the following items:
- **Instructor Guide:** Contains all textbook information plus this preface, icebreakers, activities, delivery tips, and more!
- **Student Manual:** Contains textbook information as well as areas to take notes. Each manual also includes an evaluation form, action plan, and recommended reading list.
- **Handouts:** Contains pre and post class answer keys as well as any additional information or activity resources.
- **Pre-Assignment:** Task for participants to complete before the workshop to get them thinking about the learning that will take place.
- **PowerPoint Slides:** PowerPoint presentation highlighting talking points in the course.
- **Quick Reference Guide:** Two page cheat sheet of tips and facts covered in the course.
- **Outline:** Word document that outlines the overview and objectives of the course and summarizes each session to be covered.
- **Advertorial:** Pre-made flyer that you can customize and distribute.

Preparing for Training

To begin, **read through this Instructor Guide**. This is intended to be a guide and not a bible! Be guided by your experience, the needs of the participants, and your own common sense, as well as the information in here. Most of the suggestions and all of the information have been developed through research and hands-on, classroom experience, but you will want to customize the material for your particular audience.

Practice writing on flip chart paper before the workshop. You may want to draw lines on the paper (lightly, in pencil) to help you. As well, many of the flip charts suggested in this course can be prepared ahead of time. The first page should be set up like this:
- Name of Workshop
- Facilitated by <Your Name>
- Your Organization's Name

For an extra touch, include sheets with the words Courtesy, Participation, and Confidentiality written on them and post them around the room. You might also want to add the words Exercises, Role Play, Learning, and Fun.

Have an **emergency kit** ready with the following items:
- Extra markers
- Tape and sticky putty
- Adhesive bandages
- An extension cord
- Safety pins
- Tissues
- A bottle of water
- A fuzzy toy (which can be used for many activities and to spice up any lecture)

Arrive at least one hour before the start of the session to ensure that:
- Signs are placed directing trainees to your room.
- The classroom is set up as desired.
- You know where washrooms, break facilities, smoking areas, and fire exits are located.
- You have all necessary resources for the day.
- Materials for the morning are laid out, particularly for the icebreaker.
- Pens, sticky notes, and scrap paper are placed at every table.
- If you are using a laptop, it should be connected to the projector and both items should be turned on.

Our Top 10 Training Tips

Although we will provide advice throughout the workshop, there are a few tips that we think every trainer should know.

1. I always **shake hands with each participant** and introduce myself as they come into the classroom. I find that it breaks the ice and sets the type of friendly atmosphere that is conducive to learning.
2. I always **practice** before the big day, even if I have delivered the course beforehand.
3. Bring **extra activities** with you. I have a list of children's games that I've adjusted for adults.
4. Always have a **backup plan**! For example, if you plan to use PowerPoint slides, make sure you have a copy of the Instructor Guide, which includes the information to be covered.
5. I like to **print my instructor guide and place it in a three-ring binder**. I put any customized information in here, plus during the workshop I make notes about what worked and what didn't. This will be a resource that you can build on in the future too!
6. **Things will go wrong** during your workshop. If you are well prepared and confident, you should be able to resolve most situations quickly and easily. Try not to let participants see you stressed!
7. **Involve participants** as much as you can. Have them help you set the agenda, guide activities (by passing out or collecting forms, for example), lead discussions, and improve the course. The more participants put into it, the more they will get out of it.
8. **Be ready to learn.** I have not yet taught a workshop where I didn't learn something. Challenge yourself!
9. Tie everything **back to the workplace**. It's no good knowing information unless participants know how to use it.
10. And finally… don't be afraid to **have fun**! I always bring a few fuzzy toys with me. I use them as a speaking hat during discussions – whoever is speaking has the toy. Plus, it sparks creativity and keeps participants interested.

Materials Required

- Flip chart paper
- Markers
- Soft ball or object
- Several rolls of toilet tissue *(Day One Icebreaker)*
- Jigsaw puzzles, divided into small sandwich bags *(Day One Energizer)*
- Timer and blank paper *(Session Seven)*
- Index cards, if desired *(Day Two Energizer)*

Problem Solving and Decision Making

Related Courses

- o Building Better Teams
- o Change Management: Change and How to Deal With It
- o Managing Difficult Conversations

Additional Resources

If you would like more information on training, Velsoft offers Train-the-Trainer courses at several different levels. We also like the following books:

- o *The Trainer's Tool Kit*, by Cy Charney and Kathy Conway
- o *Diversity Training,* by Cris Wildermuth
- o *Games that Teach*, by Steve Sugar
- o Sivasailam Thiagarajan's books on games and activities

If you have a favorite resource, please share it with us!

AGENDA: DAY ONE

8:30-8:45	Icebreaker: Toilet Paper Twister
8:45-9:00	Session One: Course Overview
9:00-10:30	Session Two: Definitions
10:30-10:45	Break
10:45-11:45	Session Three: Making Decisions
11:45-12:00	Morning Wrap-Up
12:00-1:00	Lunch
1:00-1:15	Energizer: Jigsaw
1:15-1:45	Session Four: Getting Real
1:45-3:45	Session Five: The Problem Solving Model
3:45-4:15	Session Six: Case Study
4:15-4:30	Day One Wrap-Up

Icebreaker: Toilet Paper Twister

(8:30-8:45)

Activity

Ask participants to sit in a circle. Once everyone is seated, pass around a roll of toilet paper and ask participants to each tear off how much they need. Don't provide any explanation beyond that. (You may want to have several rolls going around the group.)

Once everyone has some toilet paper, ask participants to count how many squares they have. Each person must state one fact about themselves for each square of toilet paper they have.

Variation

Instead of things about themselves, you could ask them about decisions they have already made today.

You may find that some participants are already familiar with this game, so they will only select one or two squares of toilet paper. If that happens, you can demonstrate your own problem solving approach by assigning a certain number of items to say for each square (i.e., one square = 3 statements; five squares = 1 statement).

Debrief

Now, bring the group back together and set up your transition to an interactive, compelling workshop.

Session One: Course Overview

(8:45-9:00)

Setting the Stage

Introductions
Introduce yourself. Establish credibility by giving examples of your training experience, and your own experiences with today's topic, including some war stories if you have them.

Give the participants a chance to introduce themselves to you. You will probably want to know their names, their departments, their position titles, and why they are interested in today's topic.

Ground Rules
Ask participants for some ground rules that should be followed during the course. Record ideas on flip chart paper. After the activity, create a final version and post them where everyone can see.

Some common ground rules include:
- What we say in this room will stay in this room.
- We can disagree with one another and provide feedback as long as we do so constructively and respectfully.
- We will all put on our listening hats when someone else is speaking.
- Everyone will participate to the extent that he or she feels comfortable. You get out of a workshop what you put into it.
- We agree that this is the place to make mistakes and to learn.
- We agree to each be responsible for our own behavior.

Housekeeping Items
Let participants know:
- When the workshop will end
- When breaks and lunch will be
- Where they can find break and restroom facilities
- Where fire exits are and what will happen if there is an emergency
- What the building's smoking policy is
- How you would like cell phones to be handled, although this should be agreed upon by all participants
- What the classroom food and drink policy is

Agenda Review

Present the agenda as a handout, PowerPoint slide, or on flip chart. Review the topics and the timeline.

Here is how our in-house trainer handles some common concerns.

This looks like a lot of information. Will we be able to cover it all?
Reassure participants that today's timeline is indeed feasible. If issues arise, promise that you will involve participants in solving the problem, rather than cutting out topics or breaks autocratically.

We'd rather spend more time on x rather than y. Is that possible?
If it is at all possible, accept suggestions like these. For example, you may be able to move an activity (particularly discussion activities) from one topic to another. Make a few minutes before the session to prepare.

I was expecting to discuss _____. Is it included in today's course?
If it is included, reassure participants and let them know when it will be covered. If it's not included, suggest resources or provide additional information. If you don't have the answers, promise participants that you will track the information down and get it to them as soon as possible. (Give a timeline if you can.)

I didn't realize that this course covered_____. Why is it included in today's course?
This can be a tough one! Usually, I briefly explain the connection and let participants know more information will be provided when the topic is covered.

Course Overview

Ask students to turn to Session One in their workbooks. Read the introduction below.

> ⊞ **Workbook Material**
>
> We make decisions and solve problems continually. We start making decisions before we even get out of bed (shall I get up now or not?). Sometimes, we will have made as many as 50 decisions by the time we leave for work. Despite all the natural decision making that goes on and the problem solving we do, some people are very uncomfortable with having to make decisions. You may know someone who has a hard time making decisions about what to eat, never mind the internal wrestling they go through in order to take on major decisions at work.
>
> Likewise, we've probably all looked at a solution to something and said, "I could have thought of that." The key to finding creative solutions is not just creativity, although that will certainly help. The answer rests in our ability to identify options, research them, and then put things together in a way that works. Having a process to work through can take the anxiety out of problem solving and make decisions easier. That's what this two-day workshop is all about.

Learning Objectives

At the end of this workshop, you will be able to:
- Apply problem solving steps and tools
- Analyze information to clearly describe problems
- Identify appropriate solutions
- Think creatively and be a contributing member of a problem solving team
- Select the best approach for making decisions
- Create a plan for implementing, evaluating, and following up on decisions
- Avoid common decision-making mistakes

Give participants a moment to write down their own learning objectives in their workbook.

Action Plans and Evaluations

Next, pass out evaluations and action plans. (Both of these items are in the Handouts folder and the Student Manual.) Ask participants to work on these throughout the day. They will also have a few minutes at the end of the workshop to finalize their ideas.

Session Two: Definitions

(9:00-10:30)

Defining Problem Solving and Decision Making

(15 minutes)

What, specifically, is a problem? A problem can be a mystery, a puzzle, an unsettled matter, a situation requiring a solution, or an issue involving uncertainty that needs to be dealt with. You are dealing with problems every day.

> ☑ **Discussion Points**
>
> A problem is a gap between ideal and actual conditions. A decision is a choice between alternative solutions to a problem.

While doing some research on problem solving, we found some interesting arguments. There are quotes attributed to different people that say very different things about problems.

Albert Einstein is quoted as saying that if he had an hour to save the world, he would spend fifty-five minutes defining the problem and only five minutes finding the solution. While people have argued with Einstein's numbers, the point is that a problem needs to be properly defined before you can come up with a solution that is worth implementing and deals with the problem adequately.

Problems can be classified in three ways:
- Problems that have already happened
- Problems that lie ahead
- Problems you want to prevent from happening

There are three ways to approach problems:
- You can stall or delay until a decision is no longer necessary, or until the problem has become even greater.
- You can make a snap decision, off the top of your head, with little to no thinking or logic.
- You can use a professional approach and solve problems based on sound decision-making practices.

ⓘ **Activity Ideas**
⊞ **Slide and Workbook Material**

Ask participants to complete this exercise.

Think of someone you know who is a great problem solver. Describe the traits, characteristics, and behaviors that make them a good problem solver.

☑ **Discussion Points**

Give participants a few moments to complete this exercise, and then brainstorm a list on the flip chart.

Problem Identification

(15 minutes)

The first and most important undertaking of your problem solving efforts needs to be defining the problem. You cannot work on something if you don't know what it is. You have to resist the tendency to start working on the problem as soon as you know one exists, and instead develop an understanding of whether we are addressing the problem or merely a symptom of it.

We should go after the problem rather than attack symptoms. This way, we can create higher quality solutions that in turn will eliminate or reduce the symptoms. As well, this will resolve the problem much more easily than when you attack the surface only. Most importantly, you'll also know that you are taking on a worthwhile problem.

ⓘ **Activity Ideas**

Ask participants if they have an example of when someone looked at the symptoms instead of the root of a problem. If they are having trouble, here is an example to get them started.

Case Study
Last week, Janet mentioned to her husband, Frank, that she thought she could hear mice scurrying in the wall in the kitchen. She had also seen what looked like droppings on the floor. Since she was pregnant, she did not want to get too close to mouse droppings and had simply swept them into the bin. Frank had not had time to look into the matter yet.

Last night, Frank was sitting in the living room when he saw a mouse scurry across the floor.
Frank went to the hardware store and purchased a spring trap. When he got home, he added some peanut butter to the trap, and placed it in a corner of the living room. When he got up in the morning, the trap remained untouched. His wife found mouse droppings on the kitchen counter, and soon afterward there was a mouse looking at her from across the room, which she trapped under a bucket. They found a second mouse found in the bathtub later that day, and it got away.

Debrief
Clearly the trap, suitable for catching one mouse, was not going to be enough for Frank and Janet, but we still do not know how big their problem is.

Frank was treating the symptoms of the problem by trying to catch the mouse he

Problem Solving and Decision Making

Eight Essentials to Defining a Problem

(30 minutes)

Although we make decisions all the time, some decisions come easier than others. The first step is to define the problem clearly. We have eight suggestions to help you do this as easily, efficiently, and effectively as possible.

> ☑ **Discussion Points**
>
> Discuss the following essential elements with the group. There is an exercise afterwards to reinforce the concepts.

Rephrase the Problem

Sometimes what we want to see is not what other people see. When the boss sees production drop and he tells his team to work harder, he's not likely to see much of a result. He's telling people what to do for his benefit, and that does very little to engage people. Instead, he could rephrase the problem and ask people what they feel connects them to their work. He can take an interest and ask what they can do to make their jobs easier or make work processes more efficient. In this way he engages people, finds out what could be dropping their production, and can come up with solutions instead of just telling people to be "more productive."

If you have a hard time with wordsmithing, grab a dictionary and thesaurus (or look at online versions) and play with your problem statement by changing it several times. Start with one word or short phrases. If you don't enjoy word games very much or feel yourself struggling, ask for help from a colleague or friend.

Here's an example. If the problem seems like "Our sales are decreasing," start replacing words to become clearer about what's going on:
- "Our market share is decreasing."
- "Our new sales are the same as last year."
- "Repeat sales have decreased 16% over last year."
- "Our outgoing sales call volume has increased 18%."
- "Our incoming complaint calls have increased 22%."

By doing this type of rewording, you can narrow things down and determine that the real problem isn't that your sales team is neglecting their work or needs more training. The problem appears to be that repeat sales are down and correlating with that is an increase in complaints. Finding out why will be your next step.

Expose and Challenge Assumptions

We assume a lot. It's human nature. Unfortunately, assumptions can really interfere with getting an accurate problem statement.

If you pull up to the gas pumps, you might assume that you can buy regular, mid-grade, or premium gas. And yet, when you pull up to a rural station and there is only one option (regular) for your car, which usually gets premium, you have to decide whether you have enough fuel left to make it to the next gas station.

When defining your problem, write a list and include as many assumptions you can think of, especially the obvious ones. This helps to clarify the problem. Then, test each assumption and find out if some of them are actually wrong, or if you imposed them on yourself.

One common assumption is to say, "We've never done it that way, so we won't be allowed to do it in the future."

> ☑ **Discussion Points**
>
> In our example with Janet and Frank's mouse situation, Frank might have assumed there was only one mouse and it happened to wander in the house only long enough to want to find a way out. Instead, he needs to challenge that assumption and consider that where there is one mouse there are usually many more.

Use Facts

Sometimes we see a problem and just want to jump in and fix it. However, we are also generally responsible for things like time and money, so it's important that we look at the details and determine what the problem really is. If a problem is too vague, it might not even be serious enough to warrant solving. Find the data you need to define the problem. If you can draw a picture or a graph, do so. Ask questions and gather information that honestly describes the problem so that you can get specific about it.

"You're always late" is a very vague statement of a problem. "You've been late three days in a row" is specific. With straightforward problems like this one, you will find that defining the problem and bringing it to the other person's attention will often resolve it. There are very few people who will continue to challenge the supervisor once they demonstrate an awareness of the late behavior being repeated.

Grow Your Thinking

Problems are often related to other problems. They can be a small element of a larger issue, so this element of problem definition includes considering the problem as part of something larger. To do this, you make the problem more general.

Ask questions such as
- "What's this connected to?"
- "What is this an example of?"
- "Where have we seen this before?"

Leveraging the word play we used earlier, replace specific words with more general ones. "Budget" becomes "finances," "office desk" becomes "furniture," "mouse" becomes "pest."

Shrink Your Environment Temporarily

Since each problem is likely made up of smaller problems, one way to figure out the issue is to split it into smaller pieces. This allows you to consider specific details. This will help you gain an understanding of the bigger problem, as well as the effect that the smaller problems have on one another.

Shrinking your environment is very effective when you have a problem that is overwhelming. It allows you to focus on something tangible. You can again use word play to great benefit here, using words that are more accurate in their definition. "Vehicle" becomes "taxi" or "car." "Budget" becomes "our department's budget" and then "our department's travel budget."

Practice Multiple Perspectives

Although the problem may be very clear from where you are looking right now, that may not be the case from everyone else's perspective. If our sales are decreasing, we may think it's because our sales team is not being effective, but maybe our competition has dropped their price and added a feature to their product that makes them more appealing than we are.

Rewrite the problem from several different perspectives. How does your customer look at this problem? What about your sales team? Your courier? Add perspectives for people in different roles. How would your spouse see this? A former teacher? A local business association? The people at the café down the street?

Turn it Upside Down

One powerful perspective is defining your problem is to look at it from the reverse direction. If you want more of something, figure out what you get less of as a result.

Investigate what happens to decrease sales, or to sell fewer products, or to lose more games. If you feel that sending an employee to a conference is too expensive, consider what happens when you do send them.

Change your perspective and consider things from angles you had not yet considered, and consider the consequences. What about setting up a bare bones product that does not have all the same elements as the fancy ones people are buying from your competition?

Frame the Problem Purposely and Positively

This is something we borrow from goal setting. Our brains will focus on things that are positive and exciting. Even more effective is to reframe what you think as the problem into a positive and engaging question, because our subconscious loves to ponder questions and will start working on them immediately, even if we don't think we're thinking about it. For example, instead of thinking, "We need our employees to quit smoking because smokers are driving up costs of our benefit plan," try, "How can we encourage our employees to live long healthy lives and live to be happy people?"

Summary

When you can describe the problem clearly, the solution often presents itself. However, failure to identify the problem properly can send you off fixing things that may not ever resolve the actual problem. Don't create a situation where you are looking at the same problem three months from now; use these eight essential elements in your favor.

Problem Solving in Action

(15 minutes)

ⓘ **Activity Ideas**
🖾 **Slide and Workbook Material**

Once you have reviewed the eight essential elements with the group, divide the group into teams of four to six participants. Assign some groups the first problem and some the second. You can also create some problems that are pertinent to the group from current news or events in their work environments.

Problem One: Your child's teacher calls to say that your teenager has been late arriving to school every day this week.
Assignment: Define the problem using the "Rephrase the Problem" and "Expose and Challenge Assumptions" elements.

Problem Two: Colleagues are leaving their dirty dishes in the kitchen at work.
Assignment: Define the problem using the "Grow Your Thinking" and "Practice Multiple Perspectives" elements.

Encourage groups to look back at the element descriptions as they consider their

Debrief

(15 minutes)

☑ **Discussion Points**

Review the group's solutions and discuss them. Answers are going to vary among groups and will depend on their experience with these actual problems. The point is to ensure they really dig in and look at things in depth. Reinforce the concept that the more carefully they review problems and can describe them, the more easily solution generation and decision making becomes.

Break

(10:30-10:45)

Session Three: Making Decisions

(10:45-11:45)

What it Means

(15 minutes)

Making the decision will lead us to action, and that's a good thing! There is not much benefit to defining a problem unless we do something about it. Luckily, there are plenty of tools to help you make the best decision in a particular situation.

Making Winning Decisions

Whether you are making a decision as an individual or as a group, some ground rules of the decision making process are:
- Encourage everyone to participate.
- Encourage new ideas without criticism, since new concepts come from outside our normal perception. Without considering new decisions, things remain the same.
- Build on each other's ideas.
- Whenever possible, use data to facilitate problem solving.
- Remember that solving problems and making decisions is a creative process. This means that new ideas and new understandings often result from the process.

In order to reach decisions, the group should agree to the following standards:
- Make decisions based on the best data available.
- Research and locate required information or data.
- Discuss criteria for making a decision (cost, time, impact, etc.) before choosing an option.
- Encourage and explore different interpretations of data.

Types of Decisions

(15 minutes)

Three Types of Decisions

We tend to make three kinds of decisions. The **autocratic decision** is one you make alone. You do not consult anyone, and you accept full responsibility for the consequences of your decision.

Your second choice is a **consultative decision**, when you talk over the problem with another person or persons, such as a more experienced superior or several of your colleagues or teammates. Two heads are frequently better than one when a serious decision must be made.

A third possibility is a **group decision**. When a problem involves the entire staff or a team, they should participate in the decision. Being involved also gives them some ownership, which will make them more committed and motivated to the decision and the results that come with it.

Advice from an Expert

Inevitably, we will make some decisions that are less than ideal, especially when we look back on something we've done in the past. This is why we have to commit to using the data that's available, rather than relying strictly on intuition or making a guess.

If you make a decision that haunts you, this advice from Claude George has been around since the 1970's and is still valid today:
- Don't ignore it or cover it up, because this won't go away.
- Accept that it is probably not the first or last poor decision you will make. The goal is for the large percentage of your decisions to be good ones. If so, then your overall average will be acceptable.
- Learn from your mistakes. Ask yourself where you went wrong. Get advice from those around you concerning what you should have considered that you didn't, what you should have done that you didn't, what errors of judgment you made, and so on.
- After this analysis, decide what you should do now; what action should you take? Then tell your boss about your new plan of action. Explain to him or her why you have moved from the old decision and why it is important for you to make the change. In talking with your boss, don't try to shift the blame.
- You are responsible for the decision and for the error. Prepare for and accept the consequences.

Problem Solving and Decision Making

Facts vs. Information

(15 minutes)

Decisions combine fact and theory. They are the choices we make in the light of how we interpret the events we observe. We can consider "facts" as basic ingredients and "information" as a supplement to the facts.

Basic Ingredients

- Facts
- Knowledge
- Experience
- Analysis
- Judgment

The Supplements

- Information
- Advice
- Experimentation
- Intuition

When we make decisions, we want facts that are indisputable, incontrovertible, and irrefutable. But facts can change. With progress, today's facts may be out of date tomorrow. (Some examples include the tallest buildings, largest cities, and the Guinness Book of World Records.) In the absence of facts we must fall back on available information, which will have to be filtered since it can also be well-laced with opinion.

Eight Ingredients for Good Decision Making

1. Focus on the most important things. Of all the things you are judging, one factor is the most important and must be given greater weight than anything else.

2. Don't decide until you are ready. Don't act on impulse or succumb to decision panic.

3. Look for the positive results that can come from this decision. Make your decision as if you were afraid of missing a wonderful opportunity.

4. Consider the negative outcomes. If things go wrong, as they sometimes will, what's the worst that can happen? How can you mitigate problems?

5. Look ahead. Try to see how your decision will play out over time.

6. Turn big decisions into a series of little decisions. When a big undertaking seems like it could be too much to tackle all at once, take small steps, get more information, reconsider, and then make the next decision.

7. Don't feel you are locked into only one or two alternatives. There are always more options if you look for them. Go look for them.

8. Get what you need to feel safe. For some people, that means knowing the worst that can happen. For others, it means knowing they can back out at the last minute. For still others, it means knowing that everyone they care about agrees with the decision, or fully understands the situation they are in. Identify your safety needs related to the decision at hand.

☑ **Discussion Points**

Ask participants if they have other suggestions to add to this list.

Decision-Making Traps

(15 minutes)

We just finished discussing what can substitute for cold, hard facts. In the absence of good data, the people making decisions must fall back on available information, and sometimes that kind of information is heavily influenced by opinion. This isn't necessarily a bad thing if the sources are informed opinions. However, as information is being gathered, we must be aware of decision-making traps and avoid as many as possible. Here are 10 traps that you may encounter.

Misdirection

When we go on fishing expeditions (trying to get information without revealing its purpose), we may very well get the right answer to the wrong question. If we ask the experts and they don't know, they may not admit it. Then we can become the victims of a snow job, or find that the blind are leading the blind.

Sampling

There is also danger of making a decision based on too small a sampling. You may ask three people about when they want the Christmas party and get every one of them to agree on the same date. But it would be dangerous to go ahead with that date based on such a small sampling if it is not adequate and representative. Perhaps that is also the night of the Kiwanis Christmas party, of which several employees are members, or perhaps it is a Tuesday and many of the employees go bowling that evening.

Bias

We are all guilty of some bias. Every moment we have lived and everything we have ever experienced has in some way contributed to our own biases. These biases will be reflected in our actions and our opinions. Usually it is enough to know that we each have biases and to adjust our thinking accordingly. However, remember that people with a clearly defined bias will be representative of others similarly inclined.

Averages

The ubiquitous "average" can be deceiving. The arithmetical average can be a long way from the figure in the middle, or the median. Averages can also bury extremes: a man can drown in a stream of water that averages two feet deep if he just happens to fall into the one spot in its entire length where it is 50 feet deep. The average time it takes my brother to drive from Boston to New York would be deceptive for the average driver, since my brother often drives at excessive speeds.

Selectivity

Selectivity is another danger signal. When we throw out unfavorable results and embrace unacceptable ones, the results are ambiguous to say the least. We have to demand **all** the facts, not just those that have been swept under the rug.

We mustn't correlate the frequent with the normal. If a particular study of the infant population indicates the average age at which a child sits up is six months and your child has a particularly round bottom and doesn't sit up until eight months, that doesn't necessarily make him slow.

Here's another example: we have been told that cannibalism is frequent among certain populations. However, whether it is "normal" is best left to the anthropologists, whether it is "right" can be left to the theologians, and whether it is "good" will probably depend on whether you are the eater or the eaten.

Interpretation

We should never forget that facts and information are always open to interpretation. Remember the old adage that figures lie and liars figure. We must be careful that someone isn't using facts to distort the truth rather than to enlighten. We also have to ensure that we aren't finding convenient statistics simply to support our own position. When a person has information, they are obliged to present it as clearly as possible so others will not misunderstand. However, we can never entirely eliminate the danger of misinterpretation.

Here's an example: A man was being interviewed for a management position, and as it came to an end he was asked what he felt made him stand out from other candidates. He responded that he was a "thoughtful" man. The selection committee thought he was referring to his gentlemanly behavior: opening doors for older people, remembering birthdays, and the like.

A few months later he met one of the people who sat on the interview panel and the disappointed candidate asked why he's been overlooked. The man told him that "thoughtful" had weighed heavily against him. The man then explained he'd meant he gave a great deal of thought to the decisions he was required to make. The misinterpretation cost him a job.

Jumping to Conclusions

This is a trap you set for yourself, and nobody has to spring it for you. Make sure that you are using the skills you have to consider things thoroughly instead of heading for an easy answer.

The Meaningless Difference

"Sell the sizzle, not the steak," says that when all things are equal (10 neighborhood restaurants sell a decent steak), then it's the atmosphere, the service, the side dishes, and all the extras that make us select one eating establishment over another. Make sure that when you need to make a decision about the steak, you are considering the steak itself and not the sizzle.

Connotation

It is natural to draw out all the meaning in a remark, but our emotional state may determine our connotation. Connotation, emotional content, or implications can all be added to an explicit literal meaning. When we are making good decisions, we need to base them on fact rather than our emotions about something, as difficult as that can be.

Status

Status can limit communication in ways we never intended. This is a barrier between supervisor and employee, committee member and chairperson, and so on. Status can interfere with communication in either direction, with fear of disapproval on one hand or loss of prestige (or job, or position) on the other.

> ☑ **Discussion Points**
>
> Share some stories with the group, or ask them for some stories from their own experience, where decisions have been tough to make, worked well (or didn't), and how they remedied the issues.
>
> Things are always easier when we look back on them, but would those decisions have been stronger, more sustainable, or simpler if the essentials of problem solving and decision making had been applied?

Morning Wrap-Up

(11:45-12:00)

> ☑ **Discussion Points**
>
> Use this time to answer any outstanding questions, and to see how the group is doing so far.
>
> We've covered lots of material this morning, so this is a good time to get some feedback and see how people are feeling. Ask them to rate how the pace has been this morning. (You can also evaluate another attribute, such as energy in the room or their interest level. However, avoid asking an overall "How are we doing?" question until they have some more material under their belts.)
>
> Have them write a number from 1-5 on the flip chart. You can use a system like this, or adapt the statements for your group:
> 1. Dead slow and I'm falling asleep
> 2. Slow but I'm playing with my cell phone so I am engaged
> 3. Perfect, just like Goldilocks likes it — not too slow and not too fast
> 4. A little fast, but I'm a quick learner

Lunch

(12:00-1:00)

Energizer: Jigsaw

(1:00-1:15)

Preparation

Beforehand, divide the pieces of a jigsaw puzzle up into small sandwich bags or envelopes.

Activity

As participants return from lunch, give every person a bag with puzzle pieces. The group must solve the puzzle together. (For larger groups, you may want to use two or three different puzzles.)

Rationale

This exercise gives teams a physical problem to work on. It demonstrates how teamwork and communication are essential to solving problems.

Session Four: Getting Real

(1:15-1:45)

Pre-Assignment Review

(15 minutes)

> ### ⓘ Activity Ideas
>
> In the pre-assignment, participants were asked to make a decision about a serious situation in the workplace. Ask them to bring out their pre-assignments. Arrange participants in groups of four to five so that they can share their solutions with one another. Allow them 15 minutes for this, since this is a serious example and may get people very engaged.

Pre-Assignment

Introduction
We make decisions and solve problems continuously. Some people love these types of tasks because they enjoy the challenge, being self-directed, and the feeling of satisfaction when they work through complex problems. Other people struggle with it frequently, although all of us struggle with it from time to time.

Do you decide what to wear when you get up in the morning, or do you organize it the night before? What's your morning routine like? Do you get up, eat, and then dress, or do you get dressed and then eat? Do you check your work e-mail first or your mail?

We have preferences for how we do things, and including making decisions and solving problems. As you start thinking about your own preferences, consider the following scenario.

Case Study
Your workplace has a casual Friday policy that doubles as a fundraiser for charity. Employees who want to take part have to put $2 in a donation jar each Friday if they wear casual clothing instead of their usual business dress. Some employees grumble about the policy: they'd like to wear jeans but don't want to pay $2. However, for the most part no one pays much attention to their grumbling. Each year, the employees vote on which charities they would like to support and the money raised is divided equally among the groups that are chosen.

One Friday, Elise, who normally looks after the jar, calls in sick. Colleagues are engaged in the plan and they drop their $2 into the jar throughout the day as usual. On Monday, Elise returns to work and notices right away that the jar is missing. She is very upset that she didn't think to ask someone to lock the jar away for her at the end of the day on Friday. Each week there is about $90 raised.

You start to investigate. Using surveillance footage that only records activity in the common areas of the building, you clearly see the thief leaving the office with the jar under her arm. Moments later she comes back into view without the jar. After a quick search, the security guard finds the empty jar hidden behind a door in the stairwell.

You know the thieving employee well. She has been complaining lately of financial problems. She has also been written up for performance issues twice in the previous year; once for not showing up for a shift and another time for being rude with her team leader.

As the manager, you must decide how to approach the problem(s) and what action(s) to take.

Questions
- Write out your decision. What did you do as a result of the theft?
- Write out the steps you took to reach your decision.

Debrief

(15 minutes)

☑ **Discussion Points**

Bring the groups back together and lead a discussion on what common actions were taken, and any that were unique.
- Was the thief fired? Why or why not?
- Was the thief reprimanded? Why or why not?
- Did any groups decide to create a policy to protect the donation jar in case Elise is absent in the future? Give them a prize if they did, since it means they looked past the obvious problem to find a secondary problem that also needs addressing.

Introduce the next section as a formal process that can be applied to guide their thinking during problem solving.

Session Five: The Problem Solving Model

(1:45-3:45)

Model Overview

(30 minutes)

Whenever you read a book on problem solving, this model, in some form or other, is sure to be there. It may have six steps rather than seven, or it may have five steps. However, the model doesn't really change...just the authors' ways of breaking it down.

As you work your way from problem to solution, you are actually shifting your focus.
- When you define a problem, you ask yourself: What is my problem?
- As you try to analyze the root causes you ask: Why is it a problem?
- When you are generating options, you ask yourself: What are some ways I can solve my problem?

The Problem Solving Model

Phase One: Problem Identification	Phase Two: Decision Making	Phase Three: Planning and Organizing
Identify apparent problem	Identify alternative solutions	Plan a course of action
Seek and analyze the causes		
Define the real problem	Choose the best solution	Implement
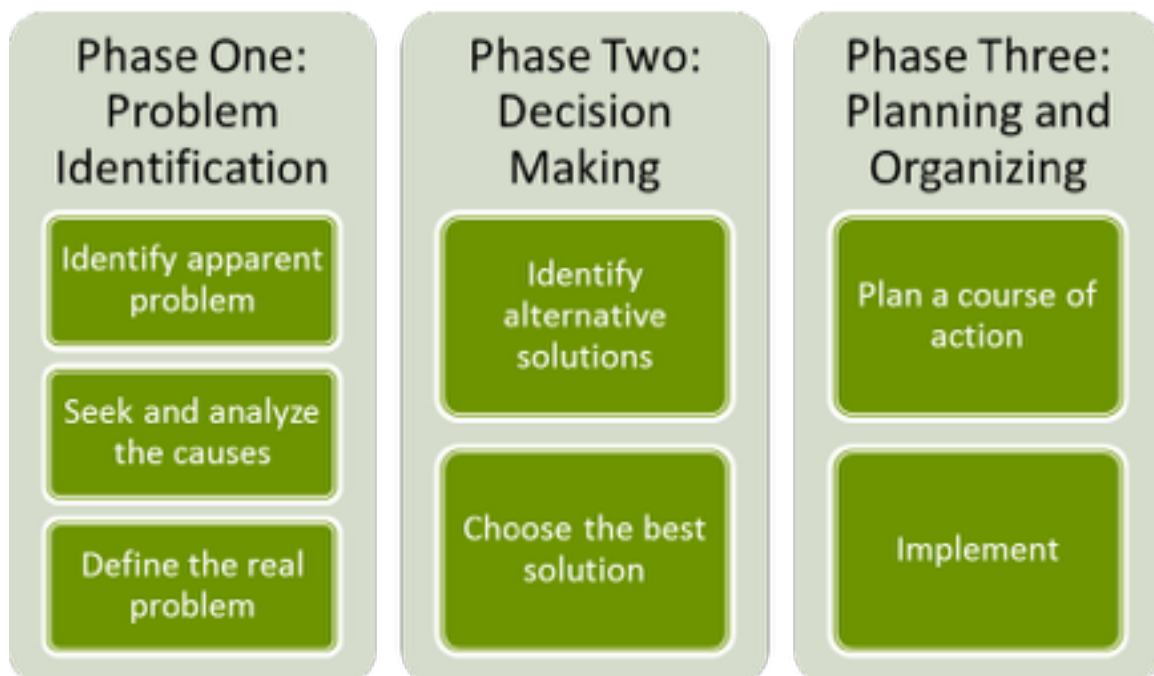
This model doesn't just work on paper: it applies across a range of problem solving activities. It is the very basis for informed and consistent problem-solving. If you are someone who loves tools, this is your basic tool.

We often don't spend enough time in defining a problem, and that in itself is a problem. Don't be in too big a rush to get the solution worked out: make sure you know what you need to know. Then, make a commitment to continually check back with the first stage to make sure the problem is the same.

Another Perspective

Here is another way of breaking down the three phases:
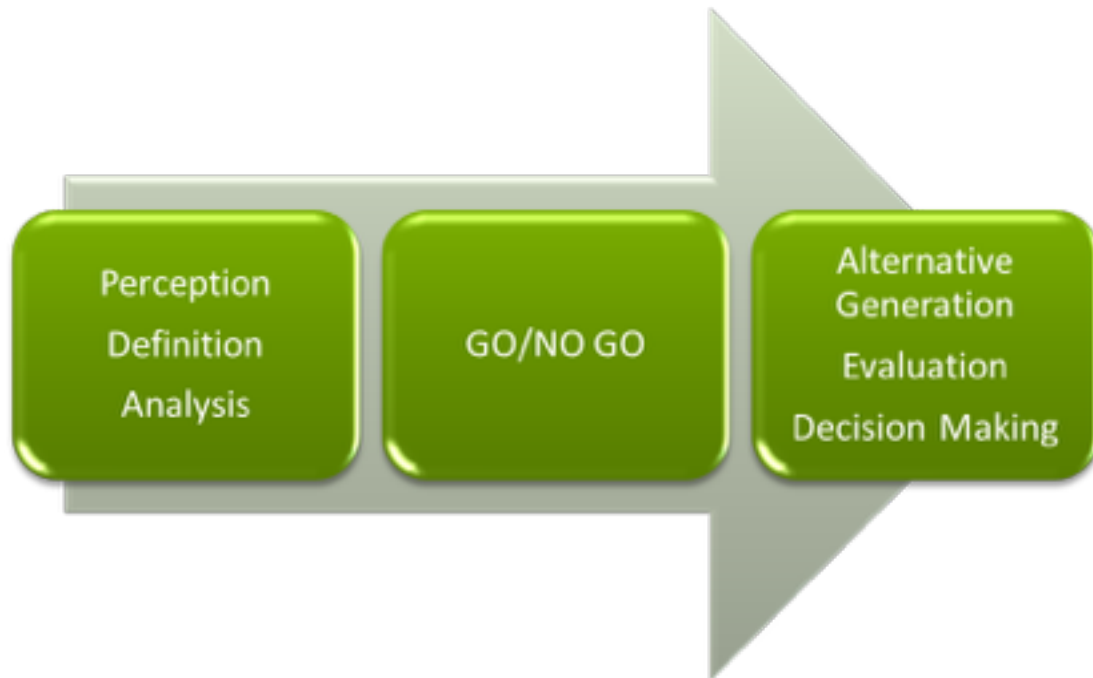
We recommend that you spend most of your time on the first block: perception, definition, and analysis. As we've mentioned already in this course, we often don't spend enough time in defining a problem, and that in itself is a problem. Don't be in too big a rush to get the solution worked out: make sure you know what you need to know first. Then, make a commitment to continually check back with the first stage to make sure the problem is the same.

Keeping an Open Mind

Part of the problem solving process is re-evaluating and evolving. This will ensure you reach the best solution possible. Consider how perception, definition, and analysis overlap:

Solving Problems the "Right" Way

Don't let people try to convince you there is one "right" or "best" way to solve problems, or to solve a particular problem. Problem-solving is all about applying educated trial and error. With so many different kinds of problems to deal with, there is no system that works in every situation. Many solutions are possible, and some are better than others.

Your skill as a problem-solver depends on your expertise with the tools and your knowledge of how to use them. You know you don't always solve problems step by step. Sometimes you have a solution before you know what problem it solves. For example, you decide to move your bed against another wall and you find out the next morning that the sun doesn't wake you up so early.

However, for many situations, having formal steps to follow can help you create flexible, workable solutions.

Break

(15 minutes)

Real Problems

(15 minutes)

> ⓘ **Activity Ideas**
> ⌗ **Slide and Workbook Material**
>
> Divide participants into groups of four. Ask participants to read the following case study and answer the questions. They should be prepared to discuss their answers with other members of the class.

Case Study

You work in a regional insurance company with 300 employees. As a mid-level manager, you deal with a range of problems on a regular basis. Your team makes claim adjustments and answers complaints and inquiries about personal claims. Your job includes handling escalated calls, making sure that your team of 40 people stays within budget, and making sure that customers are satisfied.

Two weeks ago, you finished off the last of the performance reviews for the team. Since the work the team does is detailed, there are many aspects that are measured, so it is pretty easy to measure people's work. Two years ago there was a lot of turnover on the team, but since you became manager, only two people have left and been replaced.

The performance reviews are one of the measures that are used when it comes to giving raises. You have your spreadsheets at the ready to decide who gets how much.

You have 30 staff who are meeting expectations to varying degrees, six staff who are exceeding expectations (two of them are at the top of their salary band), and two who are just barely meeting expectations. You also have two vacant positions which you are currently trying to fill.

Your director has provided you with the budget figures for raises this year. Everyone will get a 1% cost of living increase, and you have to share the rest of the money among the group. Their base salary is between $30,000 and $38,000 per year. You know that 1% does not go far: your own rent has gone up 0.5%, gas is up 15% over last year, utilities are up about 10%, and groceries are more expensive than ever. What will you do?

If you give everyone a 2% raise (including their 1% cost of living), you will meet your budget, but your top people will go unrewarded by any additional amount, despite getting better results than their colleagues. There is not enough money available to

give each person a 3% or 4% raise. You are not allowed to go over budget. Clearly, you have some math to do and decisions to make.

Discussion Questions

- ○ What is the problem (or problems)?
- ○ Is this your problem or someone else's?
- ○ Do you have all the information you need to make a decision?

🔊 Trainer's Tip

If the groups are having difficulty getting to an answer (e.g., they get stuck on the fact that they need additional money, or they think they need more information), you can ad lib the details, or let them do so.

Debrief

(15 minutes)

☑ **Discussion Points**

Bring the groups back together. Here are our suggested answers.
- o The problem is deciding how much of a raise to give everyone. Some managers will be comfortable offering everyone an equal amount regardless of their results, while others may want to reward staff based on their performance, even though the margins are very slim.
- o This is your (the manager's) problem since no one else can do it for you. As the manager, you are responsible for telling each person how much their raise is, and for explaining your decision.
- o You do not have the exact total money available for the raises. You will need that before you make the final determinations, but you know at this point you are working in tenths of a percentage point. This is going to make it difficult to create raises that reward people for excellent performance more than those who are working at lower levels.

As we have mentioned previously, human nature can be to stop trying to figure out the problem and head for solutions. This exercise allows for a thorough examination of what the problem is.

Ask participants how they feel about stopping to examine the problem. Although many of us want to decide on solutions (divide the money evenly, or evenly except for a small top up to people who perform at the top of the range and who are not already at the top of their salary band), as managers we also must consider the effect of our decision on others.

Ask them to consider these questions:
- o If you cannot give a raise to staff at the top of their salary band, how will you engage those employees on an ongoing basis? Are they self-motivated without the need for an increase? (Not likely.)
- o With that thought in mind, how do you identify and then deal with this part of the problem?

Introduce the next sections, which will outline three phases for problem solving to help us to answer these questions.

Phase One

(15 minutes)

Let's take a look at the first phase of the three-phase model: Problem Identification. Here is a breakdown of each step in the problem identification process. In all three steps, your focus is on the problem itself. Only afterward will you start thinking about solutions.

Perception

You ask yourself: Is there a problem? Where is the problem? Whose problem is it? This is the sniffing, groping, grasping stage. It includes whatever you do to get a handle on the problem.

What are the symptoms? Funny noises in the engine, an unhappy look on your employee's face, or a change in the productivity rate? You've got to find out what the problem is.

The purpose of this phase is:
- To surface an issue.
- To make it okay to discuss it (legitimize).
- To air different points of view.
- To avoid perception wars.
- To get group agreement to work on the problem.

Steps in this phase include:
- Legitimizing the problem; make it okay to discuss it.
- Asking, "How does the problem feel?" and, "What's the real problem?"
- Identifying the best, worst, and most probable situation.
- Identifying whose problem it is.

Definition

Here, we state the problem as a question. Our goal is to grasp the general idea of the problem and then draw the rope tighter to get a more specific idea of the problem.

Steps in this phase include identifying:
- What is the problem?
- What is not the problem?

Analysis

Now that we have a general idea of the problem, we will use analytical tools to define it even further. Steps in this phase can include the following.

Ask basic questions, such as who, what, where, when, why, and how.

Break it down into smaller pieces. For example, if we know that the problem is that revenue is down, we can break it down into possible areas of cause: manufacturing, shipping, or sales.

Use force field analysis. This is a structured method of looking at two opposing forces acting on a situation. Simply draw a line on a piece of paper. On one half of the line, list the forces that are working to solve the problem. On the other half, list the forces that are stopping you from solving the problem. Let's say that revenue is down this quarter. Our force field might look like this:

Resisting Forces:
Consumer purchases
down this quarter
Loss of Marketing VP

Assisting Forces:
New product
development team
Hired three new sales
people
Buyout of Acme Widgets

Move from **generalizations to specific examples** as a way of testing what the problem is or is not. For example, you could say, "Our company has really been doing poorly all year." We could further identify how the company has been doing poorly; let's say that the production department in particular has been less efficient, costing the company money. Then, we can look at what aspect in particular is doing poorly.

Ask the expert. Find a person who has dealt with this sort of issue before.

Phase Two

(15 minutes)

Until the three steps of problem identification have been covered, don't proceed to phase two (decision making). (If people don't agree on the problem, they will never agree on a solution!)

Creative Thinking Methods

Here are some tools you can use to come up with ideas.

Brainstorming
Draw a circle in the middle of a page and write down your problem. Then, draw lines from that circle and write down some solutions. Don't worry if they're wacky, impossible, or silly; this is a time for creative thinking, not critical thinking. Capturing the range of ideas is what is important here.

Checkerboard
This is a more organized form of brainstorming and can be particularly helpful for people who don't like how chaotic a brainstorming session can become. With this method, you organize your thoughts into a table. We still want creative thinking rather than critical thinking, but this method may help you develop ideas.

Here is an example of a checkerboard.

Main Solution	Possible Specific Solutions		
Create safe passage between building and parking/bus stop	Have security escort night staff to their cars or bus stop	Rearrange shifts so that people come and go during daylight hours	Set up a buddy system with employees
People missing work in snowstorm	Set up 50% of staff with ability to work from home during storms	Arrange for temporary shelters so that staff can stay overnight	Provide incentives for employees to put winter tires on their vehicles and learn safe winter driving
Threat of strike is rumored	Set up contract negotiations well before contract expires	Approach union and ask to speak with them	Set up contingency plan to ensure business continuity in the event of a strike

Next, cut up solutions and move them around, or use your computer. This can help you organize your ideas and generate even more solutions!

Research and Report
Look at what others have done. Do some research and prepare a report. What lessons can you learn from this information?

Evaluation

Now that we have some solutions in mind, it's time to evaluate the solutions to see which ones are feasible.
- Sort solutions by category. This can be similar to the checkerboard above, just with some critical thinking applied.
- Identify the advantages and disadvantages to each solution.
- Identify what you like about each idea and what you don't like.
- Number your ideas in order, from the one that seems the most feasible to the one that seems the least feasible. This is useful for small problems.

Decision Making

Once you have evaluated the options, it's time to make a decision. Here are some ways you can do it:

- Get a consensus from the group on the best solution.
- Don't limit yourself to one option; you may find that you can combine solutions for super success. (This is called the both/and method.)
- To make voting easier, you may want to eliminate the solutions that the group as a whole absolutely won't consider.
- Try to focus on agreements during all voting.
- Use straw voting: Take a quick, non-binding yes/no vote on the current solution as proposed.
- Try negative voting: Rather than asking who is for a solution, ask who is against the proposed solution.
- Back off! The group may need some time to evaluate the options before making a decision.

Phase Three

(15 minutes)

Our last phase should be planning how to implement the solution and performing the actual implementation.

Planning

For the planning portion, start by breaking the task down into smaller portions. Then, for each mini-task, plan the following information:
- What needs to be done?
- Who will do it?
- What resources will we need?
- How much time will it take? (Set a deadline!)

Once all the smaller tasks are planned out, you will have an idea of how long the main solution will take to implement. You may also want to make sure that the above questions are answered for the main task.

Implementation

Implementation is a cycle of three activities:
- Figuring out what you are going to do
- Doing it
- Reacting to what happened or getting feedback

Sooner or later, you have to try out your solution!

Solution Planning Worksheet

It can help to lay out what you are planning to do. Here is an example of a solution planning worksheet.

Problem: Revenue down 10%

Solution: Develop new product

Task 1	Engineering will design product.	
	What needs to be done?	Product needs to be designed.
	Who will do it?	Jim and Sue from Engineering.
	What resources will they need?	Unknown. They should have all resources in house; we will make sure they know we can assist in obtaining more resources if necessary.
	How much time will it take?	Targeted completion date: Dec. 31
Task 2	Prototype will be created.	
	What needs to be done?	Prototype needs to be developed.
	Who will do it?	Sam from Manufacturing, Jill from Engineering
	What resources will they need?	May need testing group; we will help provide this
	How much time will it take?	Targeted completion date: Feb. 28
Task 3	Product will be manufactured.	
	What needs to be done?	Product needs to be created.
	Who will do it?	Joe from Manufacturing
	What resources will they need?	All resources in-house
	How much time will it take?	Targeted completion date: Dec. 31

Session Six: Case Study

(3:45-4:15)

The Truck

(15 minutes)

> ⓘ **Activity Ideas**
> ▦ **Slide and Workbook Material**
>
> Divide the group into small teams of four to six. Ask them to read the case study and answer the questions. Emphasize that they aren't looking for solutions, but for

Case Study

When Mike took out the company truck last week, he thought he heard an unusual sound, but the radio was loud enough to drown it out, so he didn't think about it again. The next day Alan took the truck out, but the radio was really loud from the time he started the truck, so he didn't notice anything.

Yesterday, Dave signed out the truck. Dave doesn't like the radio station that was playing, so he turned it off. He could hear something rattling underneath the truck. When he finished his errands, he told the fleet supervisor, Bruce, that there was a sound coming from underneath the truck."

"What did it sound like?" Bruce asked.

"A rattling sound underneath somewhere," Dave said, gathering a double tray of hot coffees for his friends in the office.

"Can you tell me anything else about it?" Bruce probed. "Rattling in the center, rear end? Metal on metal kind of sounds, or transmission?"

"No idea," Dave replied. "I'm not really a truck guy, y'know? If you start it up and drive around the yard a little, I'm sure you'll hear it."

Dave took the coffee and left the room, thinking that if Bruce would just do his damn job and maintain the fleet, he'd know what kind of rattle it was already.

Bruce knelt down to look underneath the truck looking for loose parts, thinking to himself, "These guys in the office have no idea how hard I work at maintaining these

vehicles. They think it's a joke or something that they can hop into a truck and go get coffee without putting mileage on their own cars. They always come back with an armload of coffee, but they never offer to pick one up for me."

Bruce couldn't see anything hanging down below the truck, but he needed to finish putting the winter tires on the car that was already on the hoist. The truck would have to wait.

An hour later, Bruce came back to look at the truck but it was gone. He went into the office and asked around for who had taken the truck. No one knew, and so then he asked who wasn't at their cubicles. Dave and Nick were missing. Bruce stormed into the boss' office, mad.

"Jessie," he said. "I'm getting to the end of my rope. Dave knew there was a problem with the truck, and yet he is out in it right now. These guys have no respect for those vehicles."

"Sorry Bruce, I think he went to get lunch for the guys. They are putting in a lot of hours to get this project done."

"Jessie, they all bring their own cars to work. There was no need for them to take that truck, except that they like joy riding around in it. I've spent 14 hours on maintenance in the last quarter. Dave told me today that there was a noise that needed looking at, and then he took the truck anyway!"

Then the phone rang. Seeing that it was Dave's cell phone, Jessie put it on speakerphone. "Jessie, it...it's Dave. I don't know what to do and I don't have Bruce's number. Me and Nick are in the truck and we've b...been in an accident. Nick's hurt bad. What do I do?"

Jessie looked at Bruce. "Open the glove box," Bruce said tersely. "All the emergency numbers are listed right there. Call for police and ambulance, and then call me back so I know where to meet you."

Discussion Questions

- ○ What is the problem?
- ○ What is its root cause or the real problem?
- ○ What is the Problem As Given (PAG)?
- ○ What is the Problem As Understood (PAU)?
- ○ How does it feel to Dave? How does it feel to Bruce?
- ○ What are the best/worst/most probable consequences of solving/not solving the issue?

Debrief

(15 minutes)

> ☑ **Discussion Points**
>
> Bring the group back together. Have one person from each group present their findings and discuss conclusions. We have included some talking points below.

What is the problem?
The problem is that Nick is hurt and needs medical attention.

What is its root cause or the "real" problem?
There are several possible answers here. The initial problem is that something was broken on the truck and it led to an accident.

What is the Problem As Given (PAG)?
The problem as given is one incident: Nick is hurt in the company truck.

What is the Problem As Understood (PAU)?
After reading the case study, we understand that the problem is a string of issues that led to the truck breaking and causing an accident.

How does it feel to Dave?
Dave may feel like his poor judgment (taking the truck) has led to an accident where Nick has been injured.

How does it feel to Bruce?
Bruce feels concerned that someone has been injured while driving a vehicle he is supposed to maintain. He also feels angry that Dave took the truck when he knew there was a problem with it.

What are the best/worst/most probable consequences of solving/not solving the issue?

Outcome	Best Consequence	Worst Consequence	Most Probable
Solving the problem	Nick recovers and the truck is fixed or replaced.	Nick suffers permanent injury.	Nick recovers and the truck is repaired.
Not solving the problem	Dave and others learn to respect the sign out and notification of vehicle malfunction policies.	Nick suffers permanent injury. The company's reputation suffers.	Bruce will quit and go somewhere that his services and expertise are appreciated.

Day One Wrap-Up

(4:15-4:30)

Review any lingering questions, or anything in the Parking Lot, and introduce the agenda for tomorrow.

AGENDA: DAY TWO

8:30-8:45	Reconnect: Alphabetize It!
8:45-11:00	Session Seven: The Problem Solving Toolkit
11:00-12:00	Session Eight: Aspirinia
12:00-1:00	Lunch
1:00-1:15	Energizer: Getting into It
1:15-1:45	Session Nine: Swotting Up
1:45-2:30	Session Ten: Making Good Group Decisions
2:30-2:45	Break
2:45-3:15	Session Eleven: Analyzing and Selecting Solutions
3:15-4:15	Session Twelve: Planning and Organizing
4:15-4:30	Workshop Wrap-Up

Reconnect: Alphabetize It!

(8:30-8:45)

Activity

This energizer is a good way to get the group energized for the day. Ask participants to form groups of six to ten. Make sure that they have enough space to move around.

Explain that you are going to call out various letters of the alphabet. The group must move around to form that letter.

Keep this activity quick and light.

Variations

Assign each group a letter and then have them form words related to problem solving and decision making.

Session Seven: The Problem Solving Toolkit

(8:45-11:00)

The Basic Tools

(30 minutes)

There are some techniques we can use to help us at every stage of the problem solving process.

The Lasso

Can we tighten up our definition of the problem?
- "How can we improve communication in our group?" What do we mean by communication?
- "How can we get our work done more efficiently?" What do we mean by efficiently?

Is/Is Not

The Is/Is Not technique lets us eliminate assumptions and emphasize facts. For example, someone says, "The telephone system isn't working." You might ask them to list what isn't working and list what is working. Perhaps all functions are affected, or perhaps only incoming calls have been affected.

Graphics

A diagram allows us to see things visually. For example, think of personality types, which can be depicted visually as well as verbally. For some, a graph is more beneficial than a score or a label. For others, one type of categorizing is better than another type of categorizing.

Basic Questions

Who, what, where, when, why, how?

Criteria

In many situations it can be very helpful to have already determined what the criteria will be for your best solution. For example, let's say that you and your spouse are going out to celebrate your anniversary. Where are you going to go? Well, rather than

the old harangue about: "Where do you want to go?" and, "I don't care. It's up to you," how about developing criteria ahead of time?

Some examples:
- The place must have a liquor license, since you want a glass of wine with your meal.
- It shouldn't cost an arm and a leg, yet you don't want the fast food joint just down the road. A cost of $20 to $30 per person is another criterion.
- You want a place where you can have chicken and your spouse can have seafood.
- It shouldn't be more than 50 miles away, since you both have to work tomorrow.
- It should take reservations. You don't want to go to all that trouble and then find the place has no table for you.

Now you can brainstorm, but the brainstorming will be modified or restrained, since you've already identified the criteria that the restaurant must meet.

Force Field Analysis

Force field analysis examines restraining forces (forces that discourage the problem) vs. sustaining forces (forces that encourage a problem). Take an example like John arriving late for work.

What are the restraining forces?
- Boss is angry
- John is behind with his work
- Parking spots all gone

What are the sustaining forces?
- Gets to sleep an extra 15 minutes
- Takes the kids to the babysitter
- Misses traffic on way to work

Then the question becomes, how can we weaken the sustaining forces and strengthen or shore up some of the restraining forces?

Legitimizing Problems and Positions

Problems are okay. Everyone has problems. They are a fact of life. Human beings couldn't live without change in their environment, without stimulation, and problems provide that change and stimulation. So it's all right to have a problem as long as you are willing to do something about it.

In our society we often think that having a problem is like admitting failure. Some of us refuse to admit we have problems, or we ignore or hide them.
Everyone sees things differently, especially problems. Did you ever stop children from fighting and ask what the problem was? You would usually get a discordant chorus of responses as to why they were fighting, and each would see the fight from their own perspective. This expression of our personal view, no matter how discordant it may be, needs to be legitimized. To do this, we can use the communication funnel.

Encourage and criticize

Acknowledge feelings and ideas

Question and inform

Communication
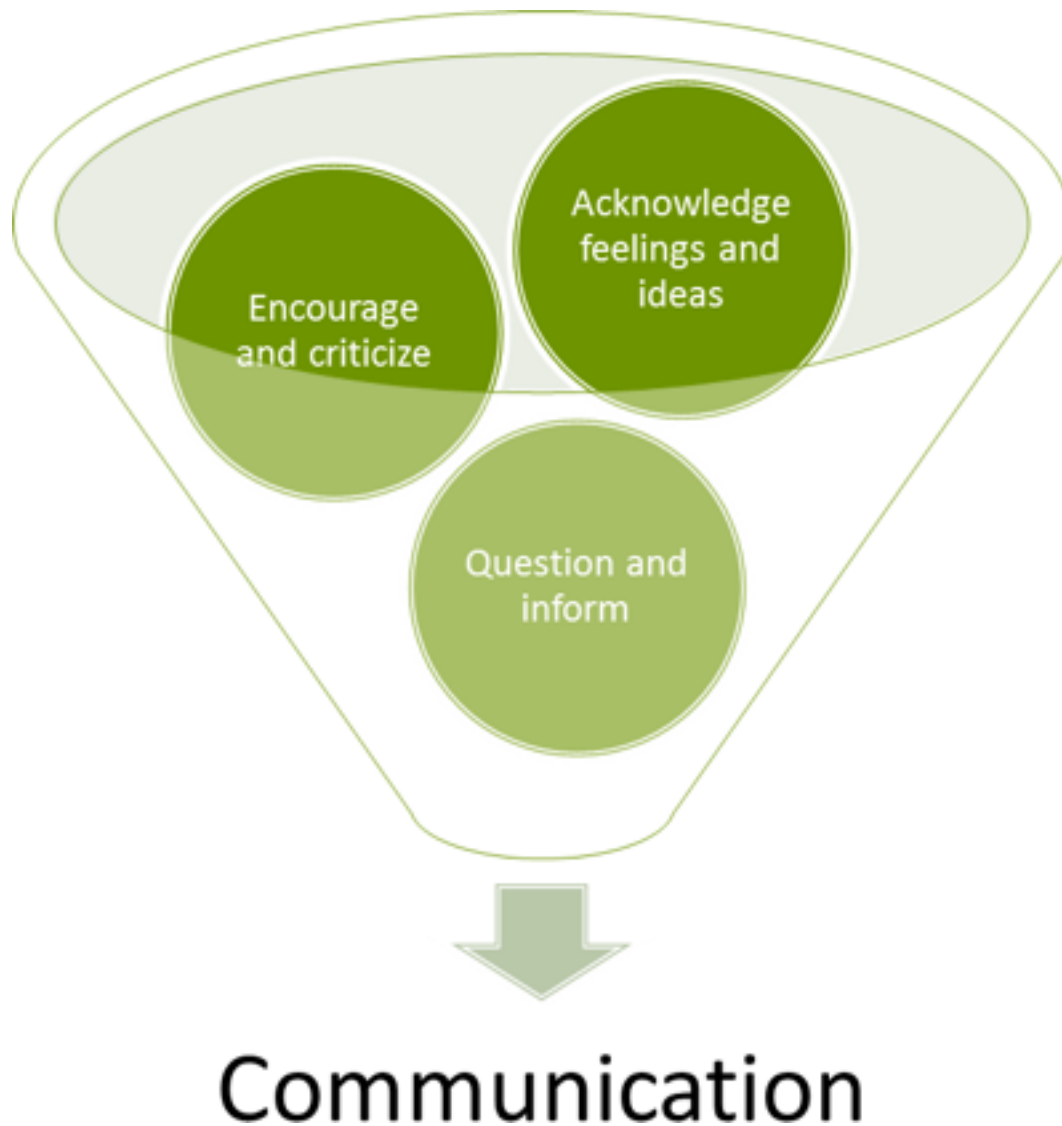
If you are working with two employees who are in conflict, for example, each one must have their perception of the problem legitimized. You aren't telling one they are right and the other they are wrong. Rather, you are demonstrating that you accept and support each view as legitimate, and will protect it from attack until it has been explored. Showing people that their view has been heard and accepted will reduce the tension and let them relax, at least a bit. Only then can you go on to find common

ground, identify what's at the root of the problem, make decisions on solutions, and move ahead.

The Fishbone

(15 minutes)

The fishbone problem solving tool visually organizes information:
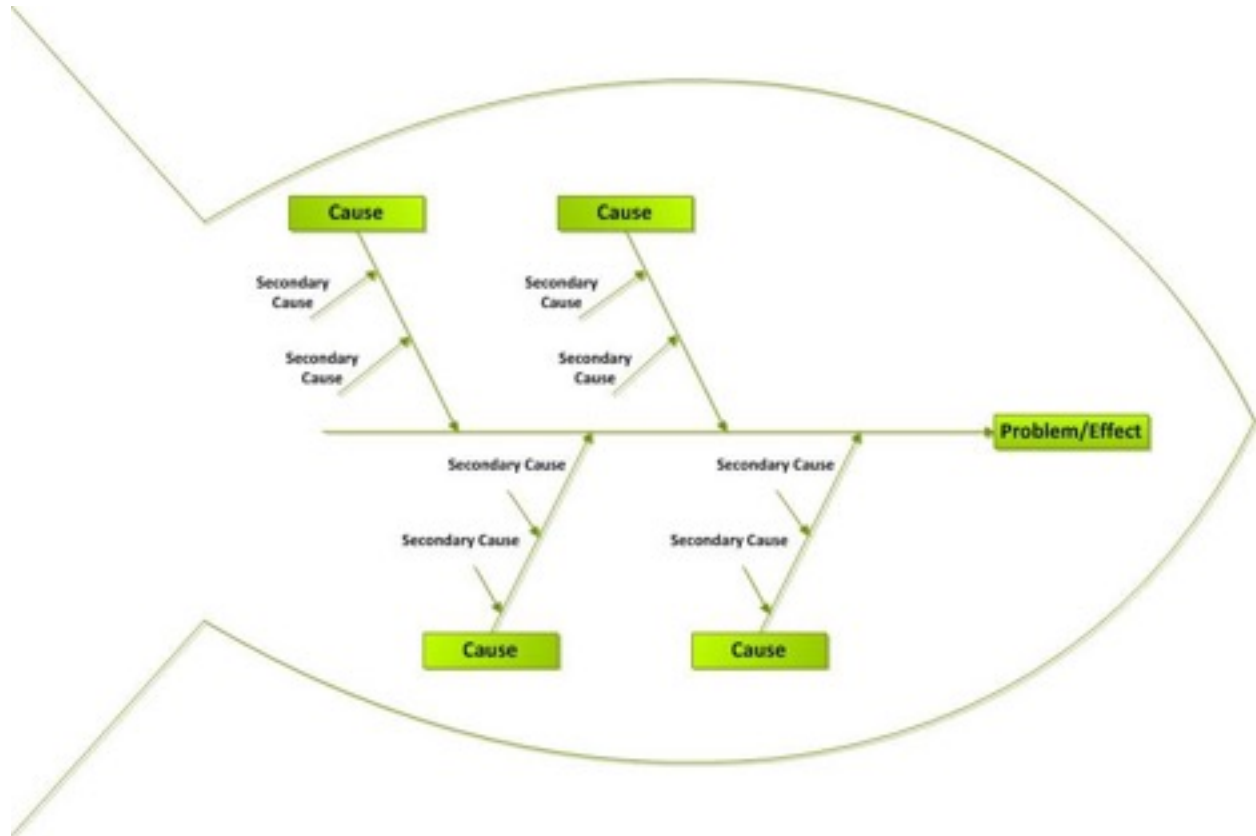
This tool is also called the **Ishikawa diagram**, after the Japanese quality management consultant who created it. It is an excellent method for solving complex problems, and for identifying the root cause(s) associated with it. It is most effective when used by a group. The facilitator starts the discussion by drawing the outline of the diagram, and then asks for assistance from the group to identify the main causes. Each cause is listed separately (one per fishbone). The team continues making suggestions to fill out the entire diagram. Once the problem is laid out in this visual way, the team can decide what the root causes of the problem are. The causes are highlighted, and then can be acted upon.

One advantage of the fishbone diagram is that we can clearly see the reasons that a situation or problem exists, because we list all the factors that influence it. It is also

possible to identify solutions that might help solve more than one problem, especially if you are applying it in a larger workplace where manufacturing, building, or other processes are taking place.

This diagram can be used as a one-time exercise, or it can become a working document that is updated as various solutions are tried or more information becomes available.

Degrees of Support

(15 minutes)

There are shades of grey everywhere in life, and decision making is no different. If participants can apply the degrees of support instead of having to select yes or no, they may feel some relief that they are not taking sides. The degrees of support may help them articulate exactly how they feel about a decision.

No Need for Black and White Thinking

◁)) **Trainer's Tip**
⊞ **Slide and Workbook Material**

Refer to the Degrees of Support diagram on the next page. This is a great tool to put on the flip chart, overhead, or just provide as a handout. It can help people decide where they stand on an issue.

To illustrate the point, you can ask participants to identify where they stand on a particular issue using the Degrees of Support, pictured below. This aspect of the workshop usually generates some conversation and feedback, particularly as people realize the options that come with agreeing on a particular topic.

Using Degrees of Support will help a group realize that consensus does not mean that everyone agrees to the same degree. The circular nature of the diagram (which reflects the symbol for degree, or °) demonstrates how we may increase or decrease the strength of our commitment to a decision in response to getting more information, considering a different perspective, and moving through the problem solving process.

Degrees of Support

Little in life is really so clear that it needs to be discussed in terms of an absolute yes or no. Like the diagram, we really consider things in terms of degrees, especially when moving through the problem solving process.

Creative Thinking Methods

(15 minutes)

Brainstorming

About Brainstorming
We talked very briefly about brainstorming earlier to get you started thinking about it. Brainstorming is the first thing that comes to most people's minds when we talk about creative thinking. In a brainstorming session, people are encouraged to say what comes to their mind, and all the ideas generated are recorded. People are encouraged to say whatever they are thinking, and are not to fear looking foolish since wild ideas are explicitly encouraged. There is no one right way to run a brainstorming session. Rather, you should tailor it to your needs and resources. In doing so, you may find it useful to consider the following guidelines.

Before Brainstorming
- Define your purpose. Think of what you would like to walk out of the meeting with.
- Choose the participants. The group should be large enough to provide a stimulating exchange, yet small enough to encourage both individual participation and invention. This usually means between five and eight people.
- Change the environment. Select a time and place that distinguishes the session as much as possible from regular discussions. The more different a brainstorming session seems from a normal meeting, the easier it is for participants to suspend judgment.
- Design an informal atmosphere. What does it take for you and others to relax? It may be talking over a drink, meeting at a vacation lodge, or simply taking off your tie and jacket during the meeting.
- Choose a facilitator. Someone at the meeting needs to facilitate to keep the meeting on track, make sure everyone gets a chance to speak, enforce any ground rules, and stimulate discussion by asking questions.

During Brainstorming
- Seat the participants facing the problem side-by-side. Physically sitting side-by-side can reinforce the mental attitude of tackling a common problem together. People sitting side-by-side in a semicircle of chairs facing a flip chart, for example, tend to respond to the problem depicted on the chart.
- If the participants do not all know each other, the meeting begins with introductions all around.
- Then, clarify the ground rules, including a no-criticism rule.
- Outlaw negative criticism of any kind.

○ Once the purpose of the meeting is clear, let your imaginations go. Try to come up with a long list of ideas, approaching the question from every conceivable angle.

○ Record the ideas in full view. Recording ideas on large sheets of paper gives the group a tangible sense of collective achievement, reinforces the no-criticism rule, reduces the tendency to repeat, and helps stimulate other ideas.

After Brainstorming

○ After brainstorming, relax the no-criticism rule in order to bring the most promising ideas to the surface. You are still not at the stage of deciding; you are merely nominating ideas worth developing further. Circle the ideas that members of the group think are best.

○ Take one promising idea and invent ways to make it better and more realistic, as well as ways to carry it out. The task at this stage is to make the idea as attractive as you can. Preface constructive criticism with: "What I like best about that idea is…" or, "Might it be better if…?"

○ Before you break up, draw up a selective and improved list of ideas from the session and set up a time for deciding which of these ideas to take further and how.

Limitations of Brainstorming

There are some noted challenges with brainstorming, although it remains a favorite method of creative idea generation. Despite a facilitator's best efforts to get everyone involved, there are always some people who limit or filter what they say in a brainstorming session, and the sessions can sometimes benefit from the extroverts more than the introverts. Verbal traffic jams, where we are waiting for our turn to share, lead to filtering our own ideas before stating them or even forgetting what we wanted to say.

Another limitation to brainstorming relates to its very social nature. If we are involved in a brainstorming session and it is set to take place off site, or involves a particular group of people, production can be lower than expected in a brainstorming session. Fortunately, there is a great tool to overcome these problems: brainwriting.

Brainwriting

Brainwriting takes all the best elements of brainstorming (plentiful ideas creatively generated) and makes them even more effective. Brainwriting was originally made popular in Germany during the 1970's, although it may have originated prior to that. Further developed by creativity expert Arthur B. VanGundy, Ph.D. (1946-2009), brainwriting uses individual work to creatively increase the number of ideas generated.

There are several methods to brainwriting. The **interactive method** has everyone gather around a table. Each will write down one idea on a piece of paper and then pass the paper to the person beside them. That person will read what is on the page and use the initial idea as stimulus for a new idea, modify or enhance the original idea, and then pass the page to the next person. You can set a limit of 15-20 minutes for the exercise, which will end when each person gets their original page back. There are plenty of variations you can apply to this exercise to encourage creative thinking. You could use differently colored paper or hang flip chart pages on the wall and have participants move around the room instead of passing paper around. You could also fold paper into paper airplanes, throw them to each other, and write all over the wings. Get as creative as you like! Another idea: have the writing surface somehow reflect the problem, the environment, or just get people moving.

In-depth research conducted by Dr. VanGundy demonstrated that brainwriting consistently produced more ideas than traditional brainstorming, given the same sized group and amount of time. He attributes the difference to "production blocking," where only one idea can be generated and written down at a time during brainstorming, as opposed to each member of the group writing simultaneously. (See Dr. VanGundy's books *Techniques of Structured Problem Solving* and *Managing Group Creativity.)*

Mind-Mapping

Once the ideas have been generated, mind-mapping can be used to organize them.

Step One: Create a List

Topic
- Adopting a puppy

Related Ideas
- Adoption = community oriented
- Require warranty for good health
- Must be neutered/spayed
- Can be male or female
- What breed?
- Family dog?
- What size?
- Dry food, canned, or raw?
- Company during lonely evenings
- Training required!
- Requires brushing regularly
- Will get me out walking every day
- Needs a sweater
- I need to learn to trim nails

- ○ Need a vet

Step Two: Create the Diagram
List each idea in its own box, with the main topic at the center.

Dry food, canned, or raw?

Adoption – community oriented

Require warranty for good health

Training required!

Company during lonely evenings

Requires brushing regularly

Family dog?

What breed?

Must be neutered/spayed

Will get me out walking every day

Needs a sweater

Need a vet

Adopting a Puppy

Can be male or female

What size?

I need to learn to trim nails

Step Three: Link and Categorize
Now, you can begin linking and categorizing the ideas:

Adopting a Puppy — **Advantages**
- Will get me out walking every day
- Company during lonely evenings

What size?

I need to learn to trim nails
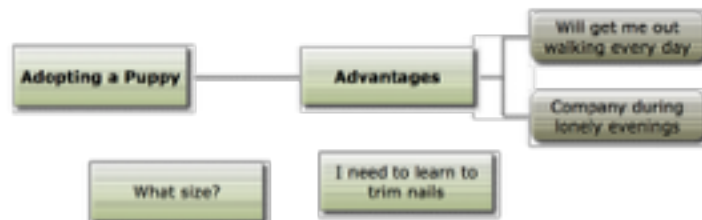
Step Four: Finalize and Review
Look at the final product. Evaluate and review as needed.

Brainstorming and Brainwriting

(15 minutes)

> ### ⓘ Activity Ideas
>
> In this session, we will conduct a brainstorming and then a brainwriting exercise.
>
> First, let participants know that you are going to brainstorm about a particular topic. Tell them you want them to get creative and think of as many ideas as possible about the topic. They are not allowed to criticize any of the ideas. Set the timer for 5 minutes and either give them a topic of your choice (something that is pertinent to the class), or select something like:
> - Methods to reach our customers
> - Potential blog (or press release or article topics) for work
> - How to save money (work or personal)
> - Weather phenomena
> - Things people like to talk about
>
> After the brainstorming session, pass a sheet of blank paper to each person. Tell them that this time they will be brainwriting. Again, encourage them to be creative and write down whatever they think of. Use the same topic as the brainstorming exercise. They are to write their idea at the top of their own sheet and then pass it to the person to their left. Everyone in the group adds a comment to the sheet; it might be a new idea about the topic or a modification on an idea written on the sheet somehow. Then they will pass it to their left. Remind them that there is a no-criticism rule, and that you are looking for lots of ideas so they should feel free to be creative.
>
> ### ⊞ Slide Material
>
> The sample list of topics is included in the PowerPoint slides.
>
> ### ⊞ Workbook Material
>
> There is a blank brainstorming diagram in the workbook.

Debrief

(15 minutes)

> **☑ Discussion Points**
>
> Ask participants about their experience with both methods (brainstorming and brainwriting). Which generated more ideas? Where was there more energy? What applications can they see for both methods?

Break

(15 minutes)

More Methods

(15 minutes)

Random Word Method

Another interesting technique is the random word method. First, open a dictionary. Then, close your eyes, choose a page, and point to a word. You must use the first word you choose. Then, write the word on a flip chart and try to figure out how that word applies to your problem. Perhaps you're working on a decline in sales and your word is "tiger." You could say that we need a tougher approach, or a brighter idea.

Don't Re-Invent the Wheel

When you've solved a problem successfully, or if you hear about a creative solution, write the solution down in a log. Then, when you're having trouble problem solving, refer back to the log to get your creative juices started. You may even be able to take certain elements of different solutions and bring them together to create a solution for your particular problem.

Do Something Different

Creativity takes work. Don't be surprised if sometimes you are supposed to be problem solving, and your ideas don't flow, so you do something different. Take a walk, bounce a basketball, browse a bookstore, or do something that is at a different pace, in a different place, or requires a different part of your brain. You will find yourself refreshed and recharged when you get back to the problem at hand.

Session Eight: Aspirinia

(11:00-12:00)

Decision Information

(15 minutes)

> ⓘ **Activity Ideas**
> ⊞ **Slide and Workbook Material**
>
> This exercise is designed for participants to take what they are learning and apply it in a simulation exercise. This exercise will ask participants to imagine they are in a situation and to fully invest in the exercise. Ask them to turn off their phones and distractions. The first 15 minutes are provided for them to read and absorb the

Introduction

You work for the Super Aeronautic Space Science Institute (SASSI for short). The group is international, but then, so is everything these days. The old concept of separate countries vying for their piece of Earth, wealth, and power has given way in the need for survival. You have been selected to be a part of a team of scientists and astronauts getting ready to leave Earth to explore Aspirinia, a moon that appears able to sustain life and currently orbits Earth with our original Moon.

Sounds like science fiction? Think again!

The year is 2111. A hundred years ago, there was a massive shift in space, and a catastrophic astronomical storm destroyed orbit patterns, sent moons and planets in unimaginable directions, and re-wrote the map of the universe. The storm pushed tens of thousands of pieces of rock and space junk into the asteroid belt. Many pieces burned through the outer edges of Earth's atmosphere and crashed into Earth itself. Millions of people were killed in the constant showers of rock and minerals, earthquakes, landslides, tsunamis, and severe weather. Despite celebrating the birth of the 7 billionth person in 2011, current census results indicate there are no more than 1 billion people left on the entire planet Earth.

In the destruction, many of Earth's great scientific minds were killed. Air travel, cellular technology, the Internet, and contact with other regions are all extremely limited, and very costly. Short wave radios are most commonly used and Morse code is once again the language of the airwaves. Dirty water is a constant threat. Food is scarce and rationed everywhere. There is high security around technical installations

and food and water treatment and preparation facilities. The greatest threat, however, is the cooling of the Earth's core. An ice age is imminent.

As well, the moon Aspirinia that was once orbiting around Jupiter now orbits Earth with Earth's original moon, having broken away from Jupiter's orbit. Earth's own axis shifted by nine degrees, and Earth's moon shifted so that 50% of what used to be known as its dark side now faces the planet below.

One hundred years after The Shift, Earth's fractured self is still adjusting to the changes. The ground is so unstable that earthquakes can no longer be told apart from aftershocks in several regions. Areas that were at around sea level before the shift are now underwater (perhaps permanently). Survivors have relocated themselves far inland, often living in family groups and tribes in small villages and learning to survive by practicing ancient techniques of water treatment, farming, and sustainability.

The surviving members of the science community were left with access to a multitude of information, and a possibly crazy idea. Aspirinia seemed to quickly stabilize when it took up position beside Earth's original Moon, and has remained there. The question is: can it sustain life?

Before The Shift, SASSI was involved in a terramanipulation experiment on Earth's Moon. The terramanipulation was an effort to make the moon livable for humans and animals. Scientists were able to manipulate and secure the moon's gravitational pull, create thousands of hectares of farmable land, and generate drinkable water. They were in the process of completing the final touches on the ecosystem, complete with insects, birds, and farm stock, when The Shift hit and the project was abruptly ended. By the time The Shift finished its active phase, the Moon showed significant damage, with enormous craters and at least three cracks the size of Earth's Grand Canyon. The scientists and settlers on the Moon all perished when the Moon's gravitational pull returned to its pre-terramanipulation state.

Aspirinia, however, appeared to be another matter. It was significant enough to be a planet in its own right, judging by its size and composition. Positioned as the next door neighbor to Earth's Moon, scientists are confident that Aspirinia could be the savior they are looking for. At about two-thirds the size of Earth, Aspirinia shows evidence of plant growth and water on the surface at some time, and its gravity and placement have been consistent over the past 90 years or so. Could terramanipulation, once a story in science fiction tales but partially proven on Earth's old Moon, be made to work? Could Aspirinia save humanity?

Individual Action Steps

(15 minutes)

> ⓘ **Activity Ideas**
> ⊞ **Slide and Workbook Material**
>
> Have participants individually rank the list below.

There are several things that your team will need to do before leaving for Aspirinia. Go through the list below individually and rank the tasks from 1 through 8, with 1 being the most important, and 8 the least. All tasks must be completed, and all must have a different ranking.

Individual Ranking	Task	Group Ranking
	Hire three security personnel to protect the SASSI center, including an airstrip.	
	Reassign resources (food, water, electricity, heating fuel, medical supplies, and water purification chemicals) from the local village to the space team.	
	Visit the neighboring village to solicit their support for the project.	
	Make repairs to the space suits, which are now 100 years old and must be made secure against leaking. You will not know enough about the atmosphere on Aspirinia until you get there.	
	Form a team to create ration packages to last at least six months. You will be dehydrating food that is harvested by the local villagers and rationed in the village.	
	Establish your realistic launch date.	
	Send ahead two unmanned shuttles with supplies.	
	Arrange for a launch party that includes the villagers.	

Group Planning

(15 minutes)

> ⓘ **Activity Ideas**
>
> Divide participants into groups of five in order to represent the size of the team that will travel to Aspirinia. If you have uneven numbers, create an additional team who must attempt to complete the project with fewer numbers.
>
> Ask each group to discuss their individual answers and re-rank their choices as a group. Everyone needs to participate in the ranking and be prepared to share their answers.
>
> **Curve Balls**
> After the group has discussed the rankings for a time, you can offer them a few curve balls. This reflects the nature of real projects, where new information becomes available, or things take place in the environment which causes us to alter our plans. You can offer the curve balls all at the same time or at intervals of two minutes, depending on the nature of your group.
> 1. As plans get underway to leave for the mission, there is an outbreak of a highly contagious virus in three nearby villages. The virus manifests as a bronchial infection that can lead to pneumonia and death. Treatment is a long course of antibiotics and steroids, which are difficult to get. The only doctor in the area is scheduled to go on your mission. Will you still take him? What if there is a massive fatality rate and people are no longer available to provide security and support to the mission?
> 2. While the villagers want somewhere safe to live and raise their children, they are angry that you are demanding so much food and water purification for your trip. There is a lot of talk about preventing you from leaving on your trip, and their points are all valid. In order to support your team, villagers will have to go without necessary supplies. What will you do?

Exercise Debrief

(15 minutes)

☑ **Discussion Points**

Bring the small teams together and discuss how they set up their rankings. You may get a wide range of answers. The rankings are based on the need to visit Aspirinia and to minimize the risks.

Recommended Ranking
1   Hire three security personnel to protect the SASSI center, including an airstrip.
3   Reassign resources (food, water, electricity, heating fuel, medical supplies, and water purification chemicals) from the local village to the space team.
2   Visit the neighboring village to solicit their support for the project.
5   Make repairs to the space suits, which are now 100 years old and must be made secure against leaking. You will not know enough about the atmosphere on Aspirinia until you get there.
4   Form a team to create ration packages to last at least six months. You will be dehydrating food that is harvested by the local villagers and rationed in the village.
8   Establish your realistic launch date.
7   Send ahead two unmanned shuttles with supplies.
6   Arrange for a launch party that includes the villagers.

There really are no right or wrong answers on this priority ranking, because the argument that each team presents will no doubt support their position. Our ranking is so that the team is able to securely protect the resources for the trip, and so that they can execute it as designed. However, there is more than one way to skin a cat!

Lunch

(12:00-1:00)

Energizer: Getting into It

(1:00-1:15)

Activity

Ask participants to describe their first or worst job where they were required to solve problems or make decisions regularly as part of their work (as opposed to the usual decisions we make throughout the day). If you are worried about keeping people on time, you could ask participants to write the information down on an index card as they arrive back from lunch, and then read the cards aloud and have participants guess who wrote the description.

The objective is simply to learn something new about the other participants and to start people thinking about the topic at hand before they settle back into work.

Debrief

The answer should be that in every job, every day, we are solving problems and we make loads of decisions. Some of them will be bigger (or smaller) than others, but those first times when it becomes part of what you get paid for can be quite memorable.

Session Nine: Swotting Up

(1:15-1:45)

SWOT Analysis

(15 minutes)

Solving business problems can be a bit different than everyday dilemmas. One suitable problem-solving method is to use the SWOT analysis, where the members of your team attempt to identify the assets and liabilities of the organization as they look to the future.

SWOT stands for the strengths, weaknesses, opportunities, and threats facing your company. The strengths and weaknesses are usually considered to be internal, while the opportunities and threats are generally external to the company. This analysis helps you ask yourself, "Where are you now?" This is really your situation analysis or inventory, and it gives you an opportunity to take stock of the overall situation right now before planning any future changes.

You can use this matrix to help you lay out your analysis:

	INTERNAL	EXTERNAL
P O S I T I V E	Strengths	Opportunities
N E G A T I V E	Weaknesses	Threats

Problem Solving and Decision Making

A SWOT analysis should consider:
- Your company and its strengths and its weaknesses
- Your products and/or services and their strengths and weaknesses
- The community and what is currently going on that may affect future planning
- Your primary and secondary target markets and what they want/need
- The competition and what they are doing
- The external forces that will affect your business
- Opportunities that are available to you and your company
- Environment and market factors that could threaten your business

Individual Analysis

(15 minutes)

ⓘ **Activity Ideas**
▦ **Slide and Workbook Material**

Ask everyone to complete a SWOT analysis of their own organization or team at work. If members of the same team or organization are at the workshop, they can work together to complete the analysis. After a few minutes, bring participants back together to discuss and debrief.

Session Ten: Making Good Group Decisions
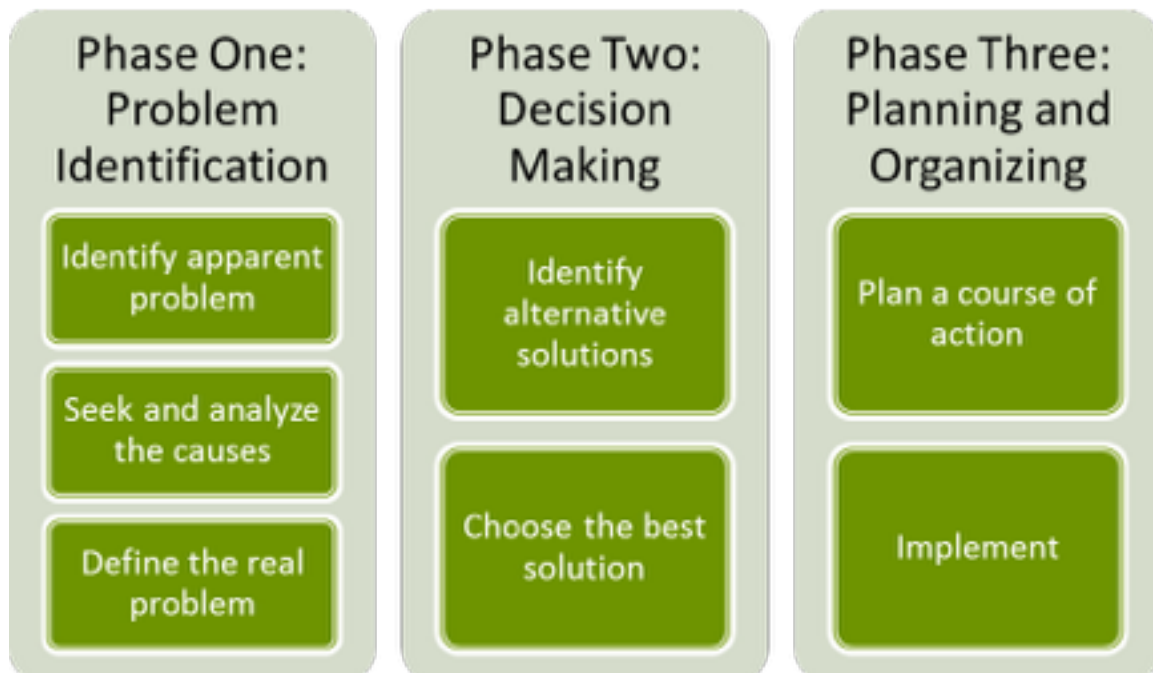
Working Toward the Decision

(30 minutes)

There are several tools that you can use that will help strengthen group decision making.
In your workday you deal with two kinds of decisions: the routine and the strategic. In a **routine decision**, the conditions of the situation which the solution has to satisfy are known, and the job is simply to choose between a few obvious alternatives. The routine decision is often governed by which alternative will accomplish the goal with the minimum effort and disturbance.

Not so for the strategic. **Strategic decisions** are more complex. They involve either finding out what the situation is or changing it. The ramifications of strategic decisions are broader; they can affect productivity, organization, capital expenditures, and so forth.

Remember the tools we have talked about so far, including the three-phase model we introduced in Session Five. These tools can be used for both types of decisions.

Phase One: Problem Identification	Phase Two: Decision Making	Phase Three: Planning and Organizing
Identify apparent problem	Identify alternative solutions	Plan a course of action
Seek and analyze the causes		
Define the real problem	Choose the best solution	Implement

Decision Frames

There are many formats for decision frames, and lots of names. Essentially, this is a graphic representation of the decisions that the group is making. It provides a format for thinking through the process and allows decision makers to consider the likelihood of each possibility. Sometimes these decisions make use of formal shapes involved in flowcharting, although for shorter decisions a series of drawings on a flip chart will suffice.

The decision tree below is one team's consideration about whether to purchase new smartphones or tablets for the production team at a particular workplace. The first dot raises the question "smartphone or tablet." Subsequent dots will highlight the decisions made through the process, weighing out factors like usability, cost, service charges, practicality, applicability to work, etc.

Stepladder Technique

This is a useful technique that encourages individual participation within a group. This technique encourages people to contribute on an individual level before they can be influenced by anyone else. This method will encourage a wide variety of ideas and stops anyone from withdrawing or hiding within a larger group. It also avoids having some personalities overpower others because, with this technique, all members of the group are equal. People will not want to engage in this method if one person has an agenda and pushes it on the others. This technique is very effective for smaller groups (four to seven members).

There are five steps to this technique.
1. Group members are presented with the problem and given time to think about it, do some research, and form their own opinions about what could be a reasonable solution.
2. Two members of the group are assigned to discuss the problem. They meet and discuss their ideas.
3. A third member is added to the group and presents their ideas before hearing the ideas that the first two have discussed. After all three have presented their ideas, they discuss the options together.
4. The process is repeated by adding one member to the group at a time. Remember to allow discussion time as each person joins the group. Be careful here, since the first members of the group may drift off. Keep the group small enough that everyone can remain engaged.
5. Once presentations and discussions are finished, the group makes their decision.

The Delphi Technique

This technique is very useful when you have people who are considered experts on a topic and when you are looking for information to help with forecasting or resource allocation. This technique works by using cycles of anonymous, individual written discussion and argument, and is coordinated by a facilitator.

Anonymity and remoteness of the process (which could also be managed using an online survey tool) helps to avoid personality issues and groupthink. It also gives people the opportunity to think things through on their own time, to consider other arguments adequately, to gather any background information that is required, and avoid the emotional energy that can be generated during an in-person debate.

The process requires an effective and strong facilitator. One of the weaknesses to the method is that participants are not always provided with adequate background information, and sometimes when the information is made available, the experts do not access it. The facilitator has to make sure that participants are engaged and that they do not put off responding.

Problem Solving and Decision Making

Nominal Group Technique

When a group meets, it can sometimes be difficult to get heard above the rallying of people who are loud or have more status in the organization. When it comes to gaining consensus on important decisions and priorities, the nominal group technique is a great help.

This is a face-to-face process often used in organizational planning where people with competing priorities need to come to agreement in order to assign resources and money.

The group must be provided with and discuss the issues before the evaluation takes place, with each group member having an equal voice. Each participant will nominate their priority issues and rank them on a scale.

As an example, the IT Development manager compiles a list of requests from different sections within the company. This includes things like updating software, creating custom programs, purchasing hardware, and fixing bugs in existing systems. Naturally, the manager has a budget that restricts the amount of work they can do each year, and dictates the resources that are available.

In order to work with her colleagues, the manager understands the value of having everyone with items on the list decide what the priorities are. She invites her colleagues to a meeting where they will discuss each item on the list, and then assign it a priority order for completion. An added benefit of these discussions is that the managers involved get a very thorough understanding of competing and complementary priorities throughout the organization.

Avoiding Fatal Mistakes

(15 minutes)

Groupthink

If you've ever been part of a group where people hesitate to speak up, or you led a team (or a meeting) where people wouldn't speak up, you may have been experiencing groupthink.

Groupthink occurs when the goal of consensus overrides people's responsibility to speak up. It can occur at the end of a workshop, where at 4:00 p.m. the trainer asks if there are any questions. Somebody may have a question, but they hesitate to ask because they know that other participants are keen to leave early that day. The question goes unasked, people leave early, and everyone but the person with the question is happy.

Fighting the Status Quo

Sometimes, despite all of our best problem solving and decision making, we run into a brick wall. Although we know change is good, inevitable, and that we have some terrific ideas that will solve our troubles and generate money, the familiar is easy. Maintaining the status quo is not going to require late night planning sessions, new processes, equipment, or money. The status quo might be ugly, but it's familiar. In a world where we are constantly required to work already, people and companies are happy to maintain the status quo. It's also not going to add work to our busy, overworked to-do lists.

If you are fighting the status quo in getting decisions implemented, you need to phrase your business case in a way that presents the benefits of the change to the people who must implement it, and you need their cooperation. Time is a precious commodity. It's often not that people fear change as much as they fear the commitment that comes with it.

Change must be worthwhile if people are going to come on board, so make it worth their while. Change should not be implemented just for the sake of changing; it must somehow have a positive effect.

> ⓘ **Activity Ideas**
>
> Ask for examples of groupthink and keeping the status quo. Be prepared, as there are often some good stories to share here. This is a good learning opportunity for people to think about how to engage others in the good work that is going on around

Break

(2:30-2:45)

Session Eleven: Analyzing and Selecting Solutions

(2:45-3:15)

Selecting Criteria

(10 minutes)

Once you've generated solutions, it's time to sort them out and make those decisions. As we mentioned way back at the beginning of the course, the decision we have to make is sometimes obvious through the problem definition and solution generation phases. Other times, we have to weigh out the solutions and decide what the best decision is for right now. Here are some additional considerations to think about as you select solutions.

Deciding on Wants/Needs

Despite the work we put into defining a problem, and the effort it will take to implement decisions, sometimes the final debate is pretty close when we weigh it all out.

Consider these scenarios:
- With all other things being equal (such as vacations, seniority, and responsibility level), would you decide to leave your job right now and take on a new one for a 5% increase in pay?
- Would you move to a new cubicle because there was 15% more sunlight?
- Would you use premium gasoline in the company vehicles if it cost 5% more in fuel, but saved 5% in maintenance costs?

Deciding what you **need** as opposed to what you **want** is an essential decision, especially if you are in a position to only get what you need.

The Cost-Benefit Analysis

This is something that can be a driving factor in your decision. If you are making a business decision, it can also be the grounds for creating a business case to implement your decision.

A cost-benefit analysis (CBA) simply weighs out the cost of your decision in a way that is clear and easy for a reader to understand. Your integrity can rest on the completeness of your CBA. People sometimes leave elements out of a CBA in order to create a more favorable impression and to bias a reader deliberately. Usually, when

readers find the missing pieces, the credibility of the CBA goes out the window – and so does your chance for change.

Creating a Cost-Benefit Analysis

(10 minutes)

> ⓘ **Activity Ideas**
>
> Have participants work through the case study listed below. Depending on the time available, you can have the group brainstorm and record the list on a flip chart, or have them work in small groups.

Case Study

Your two year old smartphone no longer holds a charge well and is not under warranty. You would really love a tablet, since the people working in sales now have them and they seem so handy. You don't really need a tablet to do your job, but you could probably make a half decent argument to get one.

Discussion Questions

- ○ Would you ask your boss for a new tablet to replace the phone ($700) or a smartphone ($350) like you had before?
- ○ Create a list of factors to justify the purchase of a new smartphone or tablet as mentioned above.
- ○ When the cost is added up, and then projected for a 12 month period, is it reasonable? Does it add to your work to have one item instead of the other?
- ○ What kind of business case are you most comfortable moving ahead with?
- ○ What are the benefits to the company?
- ○ How will you present your CBA to your manager as part of a request for consideration?

Debrief

(10 minutes)

> ☑ **Discussion Points**
>
> Bring participants back together and discuss. Here are the essentials that should be considered and on participants' lists:
> - Purchase or lease price
> - Monthly service package fee
> - Service activation fee
> - Warranty fee
> - Add-ons to service package fees, such as annual registration, app fees, and access fees
> - Carrying case
> - Charger
> - Insurance or replacement costs in case of loss, theft, or damage
> - Hands-free headset (if applicable)
> - Memory card(s)

Session Twelve: Planning and Organizing

(3:15-4:15)

Introduction

(15 minutes)

After the problem has been identified and a solution has been chosen, it's time to plan and organize your course of action and implement it. Depending on the size of the decision you've made, these tasks may take minutes, or they might require a full project team to make sure things are implemented effectively.

You've talked, planned, looked at all the options from every angle, and now it's time to put things to the test. Since you have spent the time needed to define the problem and make your decisions, this phase should be quite straightforward. Once you have developed your plan, assembled the people and supporting resources necessary, and get things started, it's all downhill! Of course, we're not quite finished yet.

> ☑ **Discussion Points**
>
> Ask participants what concerns they have about planning and organizing. Often they are concerned about failing or looking foolish in front of their peers. Discuss these issues and validate their feelings. When confidence is flagging, especially if they have experienced recent failure, they may need some confidence building and support from peers they have met through this course to help them out. Velsoft also offers courses in self-assertiveness, project management, stress management, and

Follow-Up Analysis

(15 minutes)

There is nothing like hindsight to let us know how well we have done. After your decisions are implemented, review the outcomes and determine your results.

ⓘ **Activity Ideas**
☑ **Discussion Points**
⊞ **Slide Material**

Ask participants what questions they would ask in a formal follow-up analysis to this process. Write their responses on flip chart and then discuss. Possible responses could include:

- Were there essential elements that I missed in the problem identification phase?
- Did I adequately define the real problem?
- Were there other decision making tools I could have used to generate more solutions, or encourage more creativity?
- Knowing what I now know, would I have made a different decision?
- What would I do differently next time?

⊞ **Workbook Material**

Evaluate

(15 minutes)

We might give little thought to small decisions that we make all the time as a routine part of our lives and work. For larger decisions, ask yourself what measureable impacts there are to the changes that were made. Gather those results and data first.

Then decide what questions you will ask and what format you will use to evaluate the effect of your decision and report on it. Do you require a simple summary of a few paragraphs, or does this decision need a full report?

> ⓘ **Activity Ideas**
>
> Ask participants for suggested questions they can ask to evaluate the decision. Encourage them to apply the essential elements of problem solving.
>
> For example, if this was a small change made at home, you might ask your spouse or children about it. At work, we generally look for a well-rounded evaluation that involves members of the team who helped make the decision, teams that were affected by the decision, your boss, and maybe their boss. Is there anything else to consider?
>
> ⊞ **Workbook Material**

Adapt, Close, and Celebrate

(15 minutes)

Part of the reason that we do such careful follow up is to check for the need to alter our course. Sometimes, we must adapt or evolve in some way to continue along the desired path. If, during your evaluation, you find things that need adapting, get back into the problem solving process and change what needs changing.

You might find the failure of a well-executed plan troubling, so remind yourself that you've now identified a new problem and are working things through. Then, re-implement and prepare for success.

Once the changes are finished and your evaluation is complete, make sure you close off this project with all the people involved and celebrate your success. Change may not be easy, and you may have had some struggles, but you are finished for now!

We like the way Jack Welch, former CEO of GE, describes change. In an interview with CNBC on September 7, 2007, he said: "Change is what excites people. You can't stay the same. If you're growing, you have to keep growing. If you're going down, you got [sic] to turn it around. If you're stagnant, you're dead. And so in the end, you've got to get people to embrace change and not be paralyzed by it."

Workshop Wrap-Up

(4:15-4:30)

Take the last fifteen minutes for a quick review and to answer any questions the class may have. In closing:
- ○ "We can't solve problems by using the same kind of thinking we used when creating them." (Albert Einstein)
- ○ "It is a mistake to think you can solve any major problems just with potatoes." (Douglas Adams)

This is also a good time to help participants wrap up their action plans, collect evaluations, and to pass out certificates.

> **◀꣠ Trainer's Tip**
>
> If you haven't provided students with the Student Manual, print out the Recommended Reading List and give it to participants as a bonus.