Successful Strategies for Teams

Team Member Handbook

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with
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Becoming skilled at doing more with others may be the single most important thing you can do to increase your value—regardless of your level of authority. Useem, Fortune 2006
Table of Contents

PART 1: Introduction .............................................................................. 4
   Why Should I Learn to Team?

PART 2: Teaming Basics ...................................................................... 10
   Stages of Development
   Team Players
   Teamwork Mental Models
   Teamwork Skills

PART 3: Organizational Tools .............................................................. 36

PART 4: Problem-Solving Framework ................................................. 53

PART 5: Analysis Tools ........................................................................ 58

PART 6: When Something Goes Wrong ............................................. 78

PART 7: References ............................................................................. 88

Whenever you see this box, you can find a template to help you with the tool!

Download this Excel template at: www.clemson.edu/OT EI/Resources
PART 1.
INTRODUCTION

The purpose of this handbook is to equip you with tools that can help your team work productively and successfully. These techniques will help your team organize information, organize and run effective meetings, and generate useful member contributions.

Objectives for You
After you read and start using this handbook in your team work, you will be able to:

- Recognize different team player styles and what each contributes to the team.
- Organize a new team with clear ground rules, roles, and responsibilities.
- Organize and run effective team meetings that stay on track.
- Practice project and time planning.
- Follow the Seven Steps of Problem-Solving.
- Apply more qualitative and quantitative analysis techniques solving problems.
- Know when and how to use the appropriate organizational and analysis tools.
WHY SHOULD I LEARN TO TEAM?

FACTS:

- 81% of Fortune 500 companies are building at least partially team-based organizations, and at least 77% use temporary project teams to perform core work. Lawler, Mohrman, & Benson, 2001.

- In 2006, Fortune Magazine devoted an entire issue to teams June 12, 2006.

It is clear from the media and research that a growing number of companies are organizing their work around teams.

But why?

And what does it mean to me?

An increasing number of companies are using business teams to respond quickly to changing conditions in an environment of intense global competition and increasing complexity. Changing an organization to compete in a highly volatile business environment usually requires multiple and continuous innovations. Achieving flexibility and innovations requires reorganizing into your work units to improve information flow, optimize synergies, and streamline work.
This is what traditional organizations have looked like –

In the traditionally organized organization, Cole has defined work responsibilities and receives his work instructions from his supervisor. He performs his work duties individually for the most part, and he alone is accountable for his work performance.

In the networked organization, Cole’s successful performance depends on his interactions with many of his coworkers. He is a member of a work team expected to achieve excellence by optimizing the value and use of all members’ diverse skills and experiences. Therefore, Cole is both individually and jointly accountable for the team’s work product.

Companies are actively recruiting graduates who can work in this type of collaborative environment – people who can work well with others, share responsibility, and get the job done efficiently!
How prepared are you?

Do you have the interpersonal skills to work productively on a team?

Have you mastered the organizational skills to keep the team on track?

Are you confident that you can manage a successful project?

Working in student teams gives you the opportunity to acquire and practice the collaborative skills that are essential to your future success.
“Teamwork is an individual skill.” AVERY 2001

Becoming skilled at doing more with others may be the single most important thing you can do to increase your value—regardless of your level of authority. Useem, 2006

Which of the following statements are true?

1. “Since teamwork is a group experience, individuals can’t be responsible for the quality of their team efforts.”

2. “Getting in a good team is mostly a matter of luck.”

3. “If you are in a poorly functioning team, and you are not in charge, there is little you can do but grin and bear it.”

If you answered “True” to any of these statements, then chances are that you have had unfavorable team experiences. Past experiences influence how people react when placed on a new team. You learn how to “act” and “interact” through past experiences. The “truth” is that these three statements above are all myths—myths that many people believe in because they confirm their own prior experiences with teams.
The reality is that positive team experiences come from:

1. Using your individual personal abilities to enhance the entire team’s effectiveness.

2. Knowing that being on a good team isn’t random. Rather, it is a function of one’s relationship behavior and what you and others do.

3. Taking personal responsibility for the quality of relationships and team outcomes.

This handbook on teamwork is specifically designed to help you learn to use teamwork tools that will give you the collaborative skills you will need to succeed in your career.

The methods and tools included in this book are those taught by corporate trainers and most commonly used across organizations.
PART 2.

TEAMING BASICS

Having a basic understanding of how teams work gives members a common way of thinking about teams. It also helps set shared performance expectations and promotes understanding and trust among team members.

This section examines four important characteristics of teams:

- Stages of Team Development
- Team Players
- Teamwork Mental Models
- Teamwork Skills
Almost as certain as the sun rises in the east and sets in the west, all teams go through stages as they develop. What does vary is how long each stage takes.

There are four stages of team development, and all teams lie somewhere along that continuum: Forming, Storming, Norming and Performing.

Some teams never progress past the second stage, while other teams zip right through to the final stage.

Key Points:
- Team members should talk about their current stage.
- All teams go through rough patches at first.
Stage 1: FORMING*

Characteristics

This stage is characterized by introductions and socializing activities. In some teams, members may be somewhat tentative and may not fully understand the purpose of the team. But in others, they may get right down to identifying what each member can contribute to meeting the objective and planning an agenda.

<table>
<thead>
<tr>
<th>COMMON FEELINGS</th>
<th>COMMON BEHAVIORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Excitement, anticipation, and optimism</td>
<td>▪ Attempts to define the mission and decide how it will be accomplished</td>
</tr>
<tr>
<td>▪ Pride in being chosen for the project</td>
<td>▪ Attempts to determine acceptable team behavior and how to resolve problems within the team</td>
</tr>
<tr>
<td>▪ Initial, tentative attachment to the team</td>
<td>▪ Discussion of symptoms or problems not relevant to the task; difficulty in identifying relevant problems</td>
</tr>
<tr>
<td>▪ Suspicion, fear, and anxiety about the job ahead</td>
<td>▪ Complaints about the organization and barriers to the task</td>
</tr>
</tbody>
</table>

**RECOMMENDATIONS:**

✓ Discuss team expectations.

✓ Useful Organizational Tools:
   Establish Ground Rules (pg 40)
   Define Team Roles and Responsibilities (pg 37)

* Stage descriptions are adapted from Working Together Reference Manual from Rubbermaid, Inc.
Stage 2: STORMING

Characteristics

This stage is characterized by individual assertiveness, hidden agendas, conflict, and discomfort. Significant role negotiation is the undercurrent. This stage provides a foundation for effective interaction in the next stages. Cliques may form, and a struggle for leadership may take place. Individual members may be dissatisfied with the team’s performance at this stage and may reflect that feeling with derogatory comments about the team.

<table>
<thead>
<tr>
<th>COMMON FEELINGS</th>
<th>COMMON BEHAVIORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Resistance to the mission and to approaches different from those used by each individual member.</td>
<td>▪ Arguing among members even when they agree on the real issue</td>
</tr>
<tr>
<td>▪ Sharp fluctuations in attitude about the team and the project’s chance of success.</td>
<td>▪ Defensiveness and competition; factions and “choosing sides”</td>
</tr>
<tr>
<td></td>
<td>▪ Establishing unrealistic goals</td>
</tr>
<tr>
<td></td>
<td>▪ Expressing concern about excessive work</td>
</tr>
</tbody>
</table>

RECOMMENDATION:

✓ Communicate! Make sure everyone stays in the loop.

✓ Useful Organizational Tools:
  Meeting Agendas and Summaries (pg 42 & 45)
  Project Planning Tools (pg 47)
Stage 3: NORMING

Characteristics

The team begins to refocus on their task or objective and to develop a team spirit. Leadership may be shared among group members. Problems are addressed as mutual rather than individual. Real progress toward the team's objective is made.

<table>
<thead>
<tr>
<th>COMMON FEELINGS</th>
<th>COMMON BEHAVIORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ A new ability to express criticism constructively</td>
<td>▪ Attempts to achieve harmony by avoiding conflict</td>
</tr>
<tr>
<td>▪ Acceptance of membership to the team</td>
<td>▪ More friendliness, confiding in each other, and sharing of personal problems; discussion of the team's dynamics</td>
</tr>
<tr>
<td>▪ Relief that it seems everything is going to work out.</td>
<td>▪ A sense of team cohesion, a common spirit and goals</td>
</tr>
<tr>
<td></td>
<td>▪ Establishing and maintain team methods and boundaries (ground rules).</td>
</tr>
</tbody>
</table>

RECOMMENDATION:

✓ Continue using Organizational Tools.

✓ Follow the Steps of Problem Solving (pg 53).

✓ Use Appropriate Analysis Tools.
Stage 4: PERFORMING

Characteristics

Members feel high morale within the team, loyalty to the team, and an identity that may be represented by a logo or name. Members may participate equally.

<table>
<thead>
<tr>
<th>COMMON FEELINGS</th>
<th>COMMON BEHAVIORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Insights into personal and group processes; better understanding of each other’s strengths and weaknesses</td>
<td></td>
</tr>
<tr>
<td>▪ Satisfaction at the team’s progress</td>
<td></td>
</tr>
<tr>
<td>▪ Ability to prevent or work through team problems</td>
<td></td>
</tr>
<tr>
<td>▪ Close attachment to the team</td>
<td></td>
</tr>
<tr>
<td>▪ Constructive disagreement used to resolve conflicting issues and ideas</td>
<td></td>
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</tbody>
</table>

RECOMMENDATION:

✓ Continue using Organizational Tools.
✓ Follow the Steps of Problem Solving (pg 53).
✓ Use Appropriate Analysis Tools.
TEAM PLAYERS

Every team member has a natural team-player style. All of these styles are important ingredients of successful teams.

**Contributor**
This member gets the team to focus on the immediate task.

**Collaborator**
This team player emphasizes the overall purpose of the team.

**Communicator**
This member encourages positive interpersonal relations and group processes.

**Challenger**
This style asks the tough questions and pushes the team to take reasonable risks.

It is important for a team to understand the team player styles of its members. This helps to highlight both strengths and weaknesses. And if a player style is missing, then the team can talk about how to fill this gap.

Which team player style are you?
Team Player Questionnaire

Purpose

Take the Team-Player Questionnaire so you can learn to identify your style and special strengths as a team member. The results will also help you figure out what you need to do to become a more effective team player. In addition, your team can use these results to assess its strengths as a group and to plan how to become more effective as a team.

To access this questionnaire and the directions for obtaining and interpreting the results, please go to this website and scroll down to 98. Resource C.


This questionnaire was developed by Glenn Parker and is also found in this book: Parker, G. M. 1996. Team Players and Teamwork. San Francisco: Jossey-Bass.
Are you a **Contributor**?

Enjoys providing good technical information and data.

Pushes for high performance standards.

Helps the team use its time and resources.

Freely shares all relevant information with the team.
Are you a Collaborator?

Helps the team establish goals and clarify tasks.

Sees the “Big Picture.”

Reminds the team to stay on track and focused on the target.

Pitches in to help out other team members when needed.

Flexible and open to new ideas.

Imaginative
Cooperative
Visionary
Accommodating
Confident
Flexible
Forward-looking
**Are you a Communicator?**

Emphasizes team process.

Believes in an interpersonal “glue”.

Listens well and periodically summarizes discussion.

Encourages everyone to participate.

Helps team members relax and have fun.

- Relaxed
- Encouraging
- Tactful
- Supportive
- Considerate
- Helpful
- Friendly
Are you a **Challenger**?

Questions goals and methods.

Willing to disagree with the leader.

Encourages the team to take well-conceived risks.

Honest about progress and problems.

Asks “why?” and ‘how?” and other relevant questions.

- Candid
- Brave
- Adventurous
- Questioning
- Principled
- Honest
- Outspoken
Styles Working Together

You probably discovered you have a *primary* and a *secondary* team player style. These are the styles you usually use when on a team.

You may have scored closely on more than one player style. You might have even scored closely on all four styles. That is okay! This just means that you are versatile and will tend to draw on the personality traits as needed.

The GOAL is to have a good mix of team player styles on the team.

All FOUR styles are needed to have a really great team.

EVERYONE has valuable skills to bring to the table!
Too much of a good thing . . .

Teams with members who have similar styles may sometimes have trouble reaching their goals.

If a team has only . . .

. . . contributors,

it may be data-bound, shortsighted, perfectionist, and may have trouble completing the whole task.

. . . collaborators,

it tends to become overcommitted, too global, and overly ambitious, and it does not know when to stop.

. . . communicators,

it focuses on the team processes and may set these as an end in itself, with the project goals taking second place.

. . . challengers,

it spends a great deal of time in non-constructive conflict, constantly questioning the goals and mission, and finds it difficult to complete the project tasks.
What if the team doesn’t have an even mix?

What if the team is missing a style?

HINT: TALK about the team’s strengths and limitations!

✓ What qualities and skills is the team missing?
✓ How can the team adjust?

Recognizing and talking about weaknesses can be your team’s BIGGEST strength!
A “teamwork mental model” is an individual member’s understanding about what is needed for a team to be successful. Each team member comes to a team with a pre-determined model (or picture) of how teams work that is influenced by prior experiences.

Team members come to the first team meeting with different mental models of team processes. When members have similar team-related knowledge of processes, then they are better able to coordinate their work and achieve higher performance. They can anticipate the actions and information needs of their teammates.

Your experiences with teams contribute to the teamwork mental model that you will take with you to your first job.

Positive experiences will generate a positive attitude and energy as you develop collaborations during your career.
TEAMWORK SKILLS

Experienced team members develop two distinct but related sets of skills:

Interpersonal Skills
Meeting Management Skills

Interpersonal skills involve the ability to interact in a positive and effective manner with other team members. Effective Communication and Collaborative Decision-Making are two important interpersonal skills. They enable a team member to communicate openly and supportively.

Four Guidelines for Effective Communication

1. **Focus on the behavior or problem, not on the person.** People become defensive when criticized personally. Keep the discussion focused on the task and the issues.

2. **Make sure what you say and what you do are the giving the same message.** In other words, keep your verbal and nonverbal language on the same page. This limits confusion.

3. **Validate others’ contributions.** Compliment team members on good ideas and suggestions. This makes them feel a part of the team and encourages future participation.

4. **Make sure everyone has a chance to speak.** Encourage team members to express opinions and share ideas. Don’t let specific team members dominate the conversation. Ideas are lost this way.
Collaborative Decision-Making

Why do companies use teams to solve problems?

Decisions made by multiple individuals who openly share data, opinions, and experiences are almost always better, more innovative, longer lasting decisions that those made my a single individual.

It's because of the diversity of experiences and opinions!
Sometimes the process is harder because people see things differently. But if everyone thought the same way, then the decision would not be very innovative at all!

Imagine what team members thought when someone said for the first time,

“Let’s give free flights to people who fly frequently.” (Maginn 1994)

Probably some people thought:

“No one will buy this!”
“We’ll lose money!”
“What a crazy idea!”
“We’ll get fired if we suggest this!”

But as the team members began to talk about it, they began to see new possibilities. Now it doesn’t seem like such a crazy idea after all, does it?
Once upon a time . . .

In his book, *Shadows of the Neanderthal*, David Hutchens tells the story of two cavemen who went outside the cave to see what the world was like. Each one went in a different direction, climbed a tall tower and looked out over the world he could see. Then each one came back to the cave to report what he had seen to the rest of the tribe.

Caveman #1 said, “We must build spears so we can hunt for our food if we are to survive.”

Caveman #2 screamed, “No! We must build tools so we can plant and grow our food. Only then can we survive.”

What did each one see from each of their towers?

This is what Caveman #1 saw:

But this is what Caveman #2 saw from his tower.

Who is right?

Should the tribe build spears or hoes?

The answer, of course, is that they are BOTH right! But they would have to listen to each other to understand why their viewpoints were different.
Compromise versus Consensus

What is a Compromise?

A *compromise* is one way of arriving at a decision that everyone involved can accept. The benefit to compromising is that it is expedient and allows the team to move on to the next task. In some situations, this is exactly what is needed.

The problem with compromising is that the outcome doesn’t meet anyone’s expectations. Still, some people are happier with it than are others. As a result, not everyone is 100% committed to the solution, so not everyone will work towards implementing the decision.

When decisions are determined by majority or authority, those who dissent lose their commitment.

Synonyms for compromise:
- Settlement
- Concession
- Arrangement

What is a Consensus?

In a *consensus*, the various points of view of each member of the team are considered, discussed, compared, and discussed again until everyone sees all “views from the tower.” They may not all agree, but it *is* important that their opinions are all heard.

In a *consensus*, the various points of view of each member of the team are considered, discussed, compared, and discussed again until everyone sees all “views from the tower.” They may not all agree, but it *is* important that their opinions are all heard.

Synonyms for consensus:
- Agreement
- Accord
- Harmony
- Union

Why is building consensus important?

The benefit to building consensus when making a decision is that *everyone* buys into the solution. This means that *all* team members will work towards making that solution work.
Sometimes people in the minority may not feel comfortable jumping in and expressing their own opinion. How do you get them to offer their ideas and reasons?

The key to consensus building is steering the discussion away from “right versus wrong” arguments.

Instead, seek different opinions and . . . listen!

“How can we change this proposal so it works for you?”

Avery, 2001

Nominal Decision Making (pg 63) is one way of sorting all everyone’s opinions. When it looks like most people agree with one plan of action, you can check for consensus by asking team members which of the statements on the continuum below is closest to what they think (Avery 2001).

Now, you can ask team members who don’t agree with one plan of action what their reservations are all about.

The point of this exercise is to include those who disagree. Inclusion gives dissenters a voice, which is always better than no voice at all!
Meeting Management Skills

Meeting Management skills are critical for a team to achieve its goals. The ability to plan and run a productive meeting is one that is learned through practice and by using appropriate management tools.

Mastering organizational and analysis tools will help your team to:

✓ Hold productive meetings that start and end on time.
✓ Come to meetings prepared with materials and information.
✓ Maintain good communication and records so everyone knows what the team is doing.
✓ Hold team members accountable for their assigned tasks.
✓ Share the workload evenly.
✓ Plan your project assignment.
✓ Organize information to make it useful.
✓ Gauge the team’s progress towards completing the assignment.

AND . . .

✓ Have a GREAT team experience!
PART 3.

ORGANIZATIONAL TOOLS

Effective team meetings are perhaps the single most important ingredient in team success. While individuals contribute much, their meeting together as a synergistic team produces even more. A well-run meeting not only accomplishes its task goal but motivates and excites team members. A meeting that is not productive due to poor planning or conflict has just the opposite effect on team members. They lose confidence in their ability to succeed, and many choose to participate only minimally.

In order for meetings to be productive, it is important to create and maintain a focus on both the team members and the task. Organizational tools help keep the team on task and elicit member participation.

Teams should use some tools when first organizing:
- Establishing Roles and Responsibilities
- Establishing Ground Rules.

Teams should use other tools at every meeting to maintain focus and effectiveness:
- Meeting Agenda
- Meeting Summary.

Teams should use still other tools as needed to keep projects on track:
- Project Plan
- Gap Analysis
- Milestone Chart.

The following sections explain these tools.
ESTABLISH ROLES

Discussing Roles and Responsibilities Establishes Common Expectations

It is important for every team member to actively participate in the teaming process. Only in this way can diverse skills and opinions contribute to the best outcome. At times, some team members come to meetings but don’t participate in discussions or volunteer for tasks. These are “passive” members who may want to contribute but need encouragement. Discussing team member roles in the first meeting helps to better define the manner in which all members can contribute and, therefore, become “active” members.

Teams should always determine three critical roles: facilitator (or leader), recorder, and participant.

*Facilitator:* This role’s responsibility is to help the team organize its efforts, stay task-focused, and hear out all member contributions. The facilitator should not be taking notes but should be free to focus on guiding the team through a productive discussion and task completion.

*Recorder:* The team recorder takes notes on the actions and decisions of the team, maintains the team’s permanent record, writes up and distributes the meeting summaries.
Discussing the Importance of the Participants' Role Reinforces Everyone's Responsibility

**Participant:** Often overlooked, the participant is the most critical role on the team. While the facilitator and recorder focus on running and documenting the meeting, it is the rest of the team that generates the ideas and solutions. Participants' responsibilities include regularly attending and actively participating in team meetings. They must accept responsibility and accountability for assigned tasks and complete those tasks in a timely fashion. They must also support the team in its decisions and constructively handle disagreements and conflicts.

**Permanent or Rotating Roles?** The team must decide whether the facilitator and/or recorder roles should be permanent or should rotate among members. Several considerations influence this decision. On the one hand, the skills of a team facilitator improve with practice, so permanent roles usually result in smoother and more efficient meetings. On the other hand, longer-lived teams may benefit from rotating roles in order to share the workload and to afford multiple members the opportunity to learn and practice these skills. So members should consider the life span of their team in deciding between permanent and rotating roles.
If rotating roles is the team’s preference, members should decide how frequently to change the role. For example, they may decide to rotate positions every three meetings. Scheduling the rotation ahead of time helps prevent confusion or hurt feelings later on.

**Key Points:**

- Document roles and responsibilities.
- Don’t assume that every team member has the same understanding.
ESTABLISH GROUND RULES

Establishing Agreement on Acceptable Behavior Reduces the Occurrence of “Non-Acceptable” Behavior

Establishing a set of ground rules, also referred to as “norms,” is the second step to be accomplished in the first team meeting. Norms constitute an agreement among members on the types of behavior that are acceptable and unacceptable.

Being Specific Eliminates Confusion

Ground rules should be as specific as possible, as diverse expectations can foster misunderstandings and disruptive conflicts. For example, prompt completion and delivery of the meeting summary may mean “the next day” to one team member and “within a week” to another. A third member may feel delivery is “timely” if provided before the next meeting. If, however, the team develops ground rules in its first meeting, members can all expect to receive the meeting summary within two days of the meeting. This way, potential conflicts are avoided.

HINT: Discuss the following questions in your first meeting.

#1. Think of the BEST team experience you have had:
   ▪ What made the team work?

#2. Now think of the WORST team experience you have had:
   ▪ What made it the worst?

#3. What can we do to make this team experience one of the BEST experiences for all of us?
EXAMPLE: GROUND RULES

**GROUND RULES**

1. Attend each team meeting. (Notify team facilitator in advance if unable to attend.)
2. Start and finish meetings on time.
3. Meetings will last no longer than one hour.
4. Listen to each other completely, without interrupting.
5. Actively participate in meetings.
6. Complete assigned tasks on time.
7. Ask for help with tasks as needed.
8. Raise potential problems at the meeting.
9. The recorder will distribute meeting summary within two days of the meeting.
10. At the end of each meeting, the team will set the date and agenda of the next meeting.

**Key Points:**

- Agree on ground rules at the first meeting.
- Be as specific as possible.
MEETING AGENDAS

An effective team meeting agenda distributed well in advance of the meeting is essential to ensure that members come prepared and motivated to the upcoming meeting. It also helps to keep the team on track as it tackles its assignment.

In addition, an effective agenda eliminates word-of-mouth misinformation and holds members accountable for their responsibilities. It also provides an anchor to which members can always return in order to keep the meeting on track.

An important and often overlooked agenda item is to decide on the agenda for the next meeting. This item is absolutely key because, when finishing one meeting, all members are focused on the project and aware of what was accomplished and what is left to do. Setting the agenda for the next meeting at the current meeting ensures continuity and a common understanding of team progress. If instead the facilitator or recorder makes up the agenda individually at some point after the meeting, he or she may forget and leave off important items on the new agenda.

A meeting is a process, and it can always be improved. Take a minute at the end of the meeting and review what happened. How could it have been improved? The purpose of reflecting on what went right and what went wrong is to make the next meeting even better.
The meeting agenda should contain six elements:

1. **Meeting Logistics** – Date, time, place, duration and main subject.

2. **Team Members Contact Information** – For easy reference and communication between meetings.

3. **Purpose** – Brief statement (1-2 sentences) of the goal of the meeting.

4. **Products** – List of what the team will accomplish during the meeting. Use outcome-oriented nouns, such as lists of options or causes, a decision, and/or an action plan.

5. **Preparation Required** – Tasks for which team members are responsible prior to the meeting, such as reading or data collection, and a list of what items to bring to the meeting.

6. **Process** – Steps the team will take during the meeting to reach their expected outcome (product) for that meeting. Begin these statements with verbs, such as “Brainstorm problem causes.” Each process step should also designate a team member responsible for that step and an estimated time allotment.
**MEETING INFORMATION**

<table>
<thead>
<tr>
<th>DATE</th>
<th>4/9/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIME</td>
<td>3:30</td>
</tr>
<tr>
<td>DURATION</td>
<td>Approx. 1'30&quot;</td>
</tr>
<tr>
<td>PLACE</td>
<td>Sirrine Conference</td>
</tr>
</tbody>
</table>

**CONTACT INFORMATION**

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karen</td>
<td><a href="mailto:karen@school.edu">karen@school.edu</a></td>
</tr>
<tr>
<td>Tom</td>
<td><a href="mailto:tom@school.edu">tom@school.edu</a></td>
</tr>
<tr>
<td>Helen</td>
<td><a href="mailto:helen@school.edu">helen@school.edu</a></td>
</tr>
<tr>
<td>Pat</td>
<td><a href="mailto:pat@school.edu">pat@school.edu</a></td>
</tr>
<tr>
<td>Bob</td>
<td><a href="mailto:bob@school.edu">bob@school.edu</a></td>
</tr>
</tbody>
</table>

**PURPOSE**

To synthesize our findings into our proposed executive summary and PowerPoint presentation

**PREP**

Finalize your area information and send any information to be included in presentation to Tom.

**BRING**

Your findings/proposals and any other information to be included in presentation or summary.

**AGENDA ITEMS**

<table>
<thead>
<tr>
<th>AGENDA ITEMS</th>
<th>PERSONS RESPONSIBLE</th>
<th>PROCESS</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Develop executive summary</td>
<td>All</td>
<td>Consensus</td>
<td>~ 30&quot;</td>
</tr>
<tr>
<td>2. Develop PowerPoint presentation</td>
<td>All</td>
<td>Consensus</td>
<td>~ 30&quot;</td>
</tr>
<tr>
<td>3. Determine next steps and milestone progress</td>
<td>All</td>
<td>Open Discussion</td>
<td>~ 10&quot;</td>
</tr>
<tr>
<td>4. Plan next meeting and write agenda</td>
<td>All</td>
<td>Consensus</td>
<td>~ 10&quot;</td>
</tr>
</tbody>
</table>

**KEY!**

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MEETING SUMMARY

Keep Everyone Informed by Summarizing the Meeting Promptly

Having the recorder promptly write and distribute a summary of a meeting is the best way to keep everyone on the same page with a common understanding of the team’s progress. While a meeting summary does not document all the discussion, it describes what was accomplished in the meeting. It also includes the decisions made, the action items agreed upon, and the team members accountable for their completion. Finally, the meeting summary gives the day, time, place, and agenda of the next meeting.

Summarizing Promptly Eliminates Confusion

A well-written, promptly distributed meeting summary increases the probability that team members will follow up on the action items and reduces the likelihood of word-of-mouth misinformation and confusion.

Remember that team reflection is a key component of learning.

Make your next meeting better by asking:

“What could we have done better at this meeting?”
MEETING SUMMARY

MEETING INFORMATION

DATE 4/2/2003

PREPARED Pat

FACILITATOR Jerry Barron

PLACE Sirrine Conference Room

TEAM MEMBERS ATTENDING

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Karen</td>
<td>x</td>
</tr>
<tr>
<td>Tom</td>
<td>x</td>
</tr>
<tr>
<td>Helen</td>
<td>x</td>
</tr>
<tr>
<td>Pat</td>
<td></td>
</tr>
<tr>
<td>Bob</td>
<td>x</td>
</tr>
</tbody>
</table>

SUMMARY

To present our findings and proposed future states to Dr. Scott and determine next steps for report and presentation.

DECISIONS and AGREEMENTS

After getting some feedback from Dr. Scott, the group has decided to base our future state on the design of the system using the budget forms that Helen presented. It will be further discussed and adjusted to meet the needs of the facility manager.

ACTIONS TO BE TAKEN

<table>
<thead>
<tr>
<th>ACTIONS TO BE TAKEN</th>
<th>BY WHOM?</th>
<th>WHEN?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Document meeting with area contacts and submit those to Helen</td>
<td>All</td>
<td>9-Apr</td>
</tr>
<tr>
<td>2. Area teams should be sure to meet before next meeting and establish risk considerations for executive summary.</td>
<td>Area team scribes</td>
<td>Continuo us</td>
</tr>
<tr>
<td>3. Submit any information that you would like included in the PowerPoint presentation to Tom before next meeting.</td>
<td>Area teams</td>
<td>9-Apr</td>
</tr>
<tr>
<td>4. The next meeting will be held in the library conference room 101 on April 9th.</td>
<td>Area teams</td>
<td>9-Apr</td>
</tr>
</tbody>
</table>

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PROJECT PLAN

Develop a Broad Overall Project Plan

Project planning is a very important process. It helps team members to systematically visualize the eventual outcome and to broadly outline how to reach it.

First, define the outcome or goal to ensure that all action steps make progress towards the same goal.

Second, list key action steps that it will take to achieve the goal.

Third, anticipate potential problems and when they may be encountered.

Fourth, discuss and record possible actions that can prevent or overcome potential problems.

An overall project plan is a way to gauge progress. The team should use this document periodically to assess where they are, to determine if they are still on plan, or to identify changes in plan due to new information.
# EXAMPLE: Project Plan

## PROJECT PLAN

### ASSIGNMENT GOAL:

*Develop presentation concerning the costs of poor quality for Pizza Pizzaz Company*

<table>
<thead>
<tr>
<th>Key Action Steps</th>
<th>Potential Problems</th>
<th>Preventive Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Juran's COPQ framework.</td>
<td>None anticipated</td>
<td>Team may have to interview a manager at a local pizza parlor.</td>
</tr>
<tr>
<td>Research how pizza is made.</td>
<td>We may not be able to find resources that provide enough detail to be useful.</td>
<td>Team will need to carefully outline the analysis tools necessary to determine the root cause of problems.</td>
</tr>
<tr>
<td>Make a list of potential quality problems.</td>
<td>We might not have a good handle on what quality means in the pizza business.</td>
<td></td>
</tr>
<tr>
<td>Develop a list of solutions.</td>
<td>We might jump to the obvious solutions and not determine the root cause of the problems.</td>
<td>We must closely monitor our progress and adjust the action plan to allow enough lead time for presentation development.</td>
</tr>
<tr>
<td>Develop a presentation.</td>
<td>We may not have enough time to develop; someone may be sick that day.</td>
<td>Team can assign a back-up presenter for each part of the presentation.</td>
</tr>
</tbody>
</table>

### Key Points:

- Develop a common vision of the final product.
- Anticipate potential problems AND preventive actions BEFORE problems can occur.

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GAP ANALYSIS

Visualize the Future State

Another useful way to plan how to accomplish a project is through *Gap Analysis*.

In Gap Analysis, the team identifies the current state of a project, visualizes its future state, and lays out the process for bridging the gap. This type of analysis ensures that team members have a common vision and plan of action for reaching the future state.

Quantifying the current and future states, when possible, makes it easier to set targets and measure progress toward the future state.

Setting dates by which team members will complete “necessary actions” establishes a timeline for completion.

Identify the Actions Necessary to Bridge the Gap
EXAMPLE: Gap Analysis

<table>
<thead>
<tr>
<th>GAP ANALYSIS</th>
<th>Cost of Produce Spoilage</th>
<th>Pizza Pizzaz</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURRENT STATE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 2008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6% of Purchases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FUTURE STATE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>November 2008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2% of Purchases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GAP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4% Reduction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NECESSARY ACTIONS</td>
<td></td>
<td>Team to analyze receiving and storage processes</td>
</tr>
<tr>
<td>Recommendation by</td>
<td></td>
<td>June 1, 2008</td>
</tr>
</tbody>
</table>

HINT:

*ALWAYS* begin by visualizing the final product!

- Ensures all team members have a common vision.
- Increases the probability of the team’s achieving its goal.

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MILESTONE CHART

Designating Responsibility Makes Individual Team Members Accountable

After the team has visualized the project outcome and has established the basic steps to achieve it through a Project Plan and/or Gap Analysis, it should fill in the detail with a Milestone Chart.

A Milestone Chart differs from the two prior planning tools in its level of detail. The action plan is broken down into “action steps.” Each step is a specific task with a team member designated as responsible and a target date for completion. Using the chart, the team can track its progress to the project outcome.

Key Points:

- Use the Milestone Chart to review progress at each meeting.
- Check to see if unexpected problems have occurred.
### MILESTONE CHART

**Team Name:** COPQ Team  
**Goal:** Develop presentation explaining the costs of poor quality for Pizza Pizzaz  
**Project Due Date:** 12/01/2008

<table>
<thead>
<tr>
<th>Key Action Steps</th>
<th>Who is Responsible?</th>
<th>Completion Date</th>
<th>Tracking Results (completed, problems, actions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Research pizza business.</td>
<td>Jaime &amp; John</td>
<td>10/15/2008</td>
<td>Completed search by 10/18/08 - not enough; scheduled visit to pizza parlor 10/22/08.</td>
</tr>
<tr>
<td>3. List potential quality problems.</td>
<td>Team</td>
<td>10/24/2008</td>
<td></td>
</tr>
<tr>
<td>4. Assign to cost categories.</td>
<td>Team</td>
<td>11/1/2008</td>
<td></td>
</tr>
</tbody>
</table>

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PART 4. PROBLEM-SOLVING FRAMEWORK

There are many reasons to form teams and many potential outcomes, but all the reasons boil down to one primary purpose: to solve a problem. Problems come in many forms. It could be a research question, such as “Why do people push elevator buttons when the light indicates they have already been pushed?” Or it could be a case study requiring a critical analysis of a problematic situation and recommendations for actions.

Regardless of the form of the problem, teams commonly do not know where to begin or how to proceed to solve it. Consequently, through trial and error—a little stumbling here and there—they may try different approaches until something works—or it doesn’t.

In organizations problem-solving is a daily activity, and teams are the most effective problem-solvers. A methodology that teams in companies frequently use is the Seven Steps of Problem Solving. This framework helps a team figure out not only where to start but also where to touch base whenever it encounters an obstacle.

The staircase on the next page illustrates the steps and lists the questions related to each step.
The Seven Steps of Problem-Solving *

These seven steps help keep your team focused on task.

STEP 1: Define the Problem
- What is the problem?
- What are the results expectations?
- Who is the supplier and customer of the process?
- Do we need more information?

STEP 2: Describe the Current Process
- How does the current process work?
- How should the process work?
- What is the performance gap?

STEP 3: Identify the root cause(s) of the problem
- What are the possible causes of the problem?
- What is the most likely cause? Why?

STEP 4: Develop a solution and action plan
- What are the possible solutions?
- What is the best solution(s) that meets expectations?
- What criteria should we use to select the best solution?

STEP 5: Implement the solution
- How will the best solution(s) be implemented?
- What actions and decisions are needed to implement the best solution(s)?
- What are the potential problems?
- What preventive steps can we take?

STEP 6: Review and evaluate
- What are the results of the change?
- Do we need to revise the plan?
- How do we measure the progress?

STEP 7: Reflect and act on learnings
- What have we learned from the problem-solving process?
- What could we have done differently?
- What have we learned that we can use elsewhere?

* Adapted from The Problem Solving Memory Jogger 2000 and Corporate Training Manuals.

If your team struggles to come up with a good solution in Step 4, go back to check whether the team did a thorough job of identifying the root cause in Step 3.
Refer to these seven steps to guide your team through a sound process in solving problems.

To progress through the steps, your team needs the help of some additional tools—specifically, tools for problem “analysis.” You may already be familiar with some of these tools, as they are useful in learning as well as problem solving. The rest of this teamwork handbook defines and illustrates the use of these helpful analysis tools.

These tools include:

- Brainstorming
- Affinity Diagram
- Nominal Group Technique
- Pareto Charts
- Flowcharting
- Interrelationship Digraph
- Cause-and-Effect Diagram
- Data Collection
This chart identifies the most appropriate tools for each step. Note that most of the tools help teams through multiple steps.

<table>
<thead>
<tr>
<th>Steps 6 and 7. Review, Evaluate, and Reflect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 5. Implement and Monitor the Solution</td>
</tr>
<tr>
<td>Step 4. Develop a Solution and Action Plan</td>
</tr>
<tr>
<td>Step 3. Identify the Root Cause(s) of the Problem</td>
</tr>
<tr>
<td>Step 2. Describe the Current Process</td>
</tr>
<tr>
<td>Step 1. Define the Problem</td>
</tr>
</tbody>
</table>

**Tools (purpose)**

- Brainstorming (generate lists of ideas)
  - ✓ ✓ ✓ ✓ ✓
- Affinity Diagram (organize into categories)
  - ✓ ✓
- Nominal Group Technique (prioritizes)
  - ✓ ✓ ✓
- Pareto Chart (organizes and presents)
  - ✓ ✓ ✓
- Flowchart (document process steps)
  - ✓ ✓ ✓
- Interrelationship Digraph (identify root causes)
  - ✓ ✓
- Cause-and-Effect Diagram (identify root causes)
  - ✓
- Data Collection (e.g., check sheets, run chart)
  - ✓ ✓ ✓ ✓
NEXT QUESTION:

*How do you use each tool?*

This is what the section of the handbook is all about.
PART 5. ANALYSIS TOOLS

The *Seven Steps of Problem Solving* maps out how your team should plan how to accomplish its tasks in a logical, efficient process. Below you can learn how each analysis tool can help your team proceed through the steps.

<table>
<thead>
<tr>
<th>Generate and Organize Ideas (steps 1 and 4)</th>
<th><em>Brainstorming</em> is used to generate as many ideas and solutions as possible. Once all ideas are on the table, <em>Affinity Diagramming</em> helps organize the ideas into meaningful categories.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prioritize and Select Ideas and Solutions (steps 1 and 4)</td>
<td>Deciding which idea or problem to work on among multiple options can sometimes be difficult in a team. The <em>Nominal Group Technique</em> can help, and results can be summarized in a <em>Pareto Chart</em>.</td>
</tr>
<tr>
<td>Understand the Current Process and Visualize the Future Process (steps 2 and 5)</td>
<td>Some projects require that team members thoroughly understanding how a process works. <em>Flowcharting</em> is a good way to document a process visually so everyone can understand.</td>
</tr>
<tr>
<td>Determine the Root Cause of Problems (step 3)</td>
<td><em>Interrelationship Digraphs</em> and <em>Cause-and-Effect Diagrams</em> are methodical techniques to help find the source of problems.</td>
</tr>
<tr>
<td>Monitor the Solution (steps 6 &amp; 7)</td>
<td>Once a team determines and implements a solution, it must “test it out” by monitoring the impact of the change. To do so requires collecting and examining quantitative data.</td>
</tr>
</tbody>
</table>
BRAINSTORMING

Criticizing or Sighing
Discourages Team Members
from Sharing Ideas—called
“Shell-Tapping”

Shell-Tapping Looses Ideas
Forever!!

Brainstorming is a method of idea generation
used in teams to “storm” a topic with brain
power, resulting in many new and different
ideas.

The term “brainstorming” is very common, and
we tend to use it correctly as a way to come up
with new ideas. However, it can generate even
more creative ideas if a team follows some
specific guidelines for making an especially
safe environment for people to contribute.

Guidelines for Effective Brainstorming

1. Clearly identify the topic to brainstorm.
2. Select a team member to record all ideas.
3. Set a time period to collect ideas (e.g., 3 minutes).
4. Establish ground rules:
   - All ideas are accepted.
   - No criticism, discussion, or evaluation allowed.
   - Everyone participates.
5. Begin generating ideas.
6. Record all ideas, even duplicates.
7. Brainstorm until the team exhausts all ideas or goes
   over the allotted time.
EXAMPLE: Brainstorming

TOPIC: Uses of a 10-gallon Storage Container

Example A: List by hand

To Store:
- Tools
- Potatoes
- Picnic supplies
- Fertilizer
- Pack for trip
- Painting supplies

Old clothes
Cleaning supplies
Fishing gear
Drinks
Baby clothes
Tools
Newspapers for recycling
Toys
Kindling wood
Things for car trunk
Shoes
Baby Supplies

Example B: Using Microsoft Visio

Dotted lines should link similar ideas.

Uses for 10-gallon storage container

Don’t be surprised if your list is over 30 items long!
Team Practice -- Brainstorming

Why do you think brainstorming, if performed correctly, is so successful when generating ideas?

Step 1
Each team member writes down as many uses of a marshmallow as possible in two minutes.

Step 2
Review the rules for good brainstorming.

Step 3
As a team, brainstorm the many uses of a marshmallow.

Step 4
COMPARE:
- How many uses did you come up with by yourself?
- How many uses did you brainstorm as a team?
AFFINITY DIAGRAM

*Affinity Diagramming* is a simple way of organizing the long, disorganized list of brainstormed ideas.

The team develops category names that describe most of the items and places each idea in the appropriate category.

During this process, the team also deletes duplicate ideas.

**EXAMPLE: Affinity Diagram**

This example uses the Organization Chart tool in Microsoft Visio. 
- - - - -
You can do the same thing on paper by hand.
- - - - -
You can download an Excel template at:  
[www.clemson.edu/OTEI/Resources](http://www.clemson.edu/OTEI/Resources)

Now, instead of 18 items, you have 4 meaningful categories. You have turned a disorganized list of ideas into a few “concepts.” It is easier to discuss and remember concepts than it is “items.”
NOMINAL GROUP TECHNIQUE

Often a team faces more than one problem. Not all problems are necessarily equal, and sometimes a team has data showing that one or two of the problems are more important or more urgent than the others. In this case, the team has to prioritize the most important or most urgent problems to tackle first.

The Nominal Group Technique can help a team prioritize problems.

In the following example, the team is prioritizing five problems with pizza quality.

Steps for Nominal Group Technique

✓ Select a team member to list the five problems.
✓ Each team member takes a moment to prioritize them on his or her own paper.
  • The member does this by ranking each item 1-5, with 5 being the most important.
✓ Each team member tells the recorder his or her ranking for each problem.
✓ The recorder adds the rankings across members.
✓ The highest score is the weighted opinion of the team.

This technique includes everyone’s opinion.
EXAMPLE: Nominal Group Technique

Problem with Pizza Quality

<table>
<thead>
<tr>
<th>Problem</th>
<th>Kara</th>
<th>Tom</th>
<th>Steve</th>
<th>Mark</th>
<th>Sally</th>
<th>Henry</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Enough Toppings</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>19</td>
</tr>
<tr>
<td>Overcooked</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>Not Cooked Long Enough</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>Wrong Toppings</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Too Much Cheese</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>9</td>
</tr>
</tbody>
</table>

It is very clear which pizza quality problem is most important to the team as a whole.

It is equally clear which problem is the *least* significant.

What about close scores?

Sometimes this technique ends in a tie or with two items too close to identify a clear priority. In this case, the team may try eliminating the items with the lowest scores and repeat the technique on the reduced number. This usually yields one high score.
A Pareto Chart is a bar graph that summarizes quantifiable information. It is used to compare quantities.

The Pareto Chart below visually displays the results of the Nominal Group Technique on problems with pizza quality.

**EXAMPLE:** Results from Nominal Group Technique

Pizza Quality Problems

- Not Cooked Long Enough: 25
- Wrong Toppings: 20
- Not Enough Toppings: 19
- Overcooked: 17
- Too much Cheese: 9

- Order bars from greatest to least.

- Use Pareto Charts to summarize actual data as well.
  - For example, a team could track the number of pizzas sent back to the kitchen due to different quality problems and summarize the results in a Pareto Chart.

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Flowcharts highlight redundancies, inefficiencies, or other needs for change.

A *Flowchart* is a pictorial representation of all the steps, activities, and tasks in a process.

Organizations often use flowcharts to find ways to improve or streamline a process by combining, reordering, or deleting steps.

It is easy to miss steps, so be careful to include *all* of them.

On the next pages are examples of a single-process flowchart and a cross-functional flowchart.

It is VERY important to identify and include ALL steps in the process.
EXAMPLE A: SINGLE-PROCESS FLOWCHART

PROCESS: Getting up and leaving for school

Start

- Turn off alarm

School Day?

- Yes: Go to bathroom; brush teeth
- No: Go back to sleep

Time to exercise?

- Yes: Put on exercise clothes
- No: End

Run? Aerobics? Bike?

- Yes: Run, Workout Tape, Exercycle
- No: End

Hungry?

- Yes: Prepare breakfast, Eat breakfast, Get dressed
- No: Collect school supplies

Have everything?

- Yes: Leave for school
- No: Hunt for missing items

End

Ovals show the start and end of the process.

Boxes show the steps.

Decision Point asks a question and has two answers: YES and NO.

Sub-processes charted on another page.

Detail is important!

If you leave out steps, you will not consider them in developing a new and better process.

You can draw a flowchart by hand, or you can create it on computer using any one of many programs including Word and Excel. This flowchart is drawn with Microsoft Visio.
EXAMPLE B: CROSS-FUNCTIONAL FLOWCHART

PROCESS: Developing a Business Plan

Business Plan Cross-Functional Flow-Chart

Executive Management

Top executives: Prepare strategic plan of lowest cost pizza in town for young people

Marketing

Marketing executives: Locate parlors near high school and college campuses

Sales

Sales staff: Hire college students from nearby universities

Students: Trained as customer-oriented servers

Servers: Perform quality order-taking

Servers: Deliver pizza to customers

Servers: Submit bill to customer

Production

General manager: Purchase raw materials for pizza production based on sales plan

Pizza production staff: Hire college students from nearby universities

Students: Trained as pizza preparation specialists

Specialists: Prepare pizza according to customer requirements

Specialists: Complete preparation and baking process

Students: Trained as customer-oriented servers

Accounting and Information Systems

Accounting staff: Hire college accounting majors as part-time accountants

Accounting majors: Trained in operating accounting system

Accountants: Record sales and cost of sales to prepare income statement

A cross-functional flowchart is a great tool to show how information travels back and forth across department lines.
INTERRELATIONSHIP DIGRAPH

Examines complex relationships

The Interrelationship Digraph explores the causal relationships among groups of ideas. This tool is useful when more than one cause exists for one or more outcomes—a common situation in the complex real world. Creating this graphic involves five steps.

EXAMPLE: INTERRELATIONSHIP DIGRAPH

TOPIC: What are the issues related to reducing litter?

- Lack of respect for others
- Unnecessary packaging
- Lack of awareness if impact
- Not enough recepticles
- Inadequate penalties

Step 1: List the ideas or concepts.

In this example, the team identifies five issues related to litter.

Download this Excel template at: www.clemson.edu/OT EI/Resources
Step 2: Relate each pair of ideas.

For every pair of ideas, ask “Is there a relationship?”

If the answer is yes, then ask, “Which comes first?”

Then draw an arrow showing the direction.

Step 3: Count the arrows.

For every idea, count how many arrows point to it and how many arrows come out from it.

Step 4: Label the results.

Use the table below to label the results.

<table>
<thead>
<tr>
<th>Driver</th>
<th>Largest number of outgoing arrows</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome</td>
<td>Largest number of incoming arrows</td>
</tr>
<tr>
<td>Bottleneck</td>
<td>More incoming than outgoing arrows</td>
</tr>
<tr>
<td>Catalyst</td>
<td>More outgoing than incoming arrows; or an equal number in and out</td>
</tr>
</tbody>
</table>

Driver

Largest number of outgoing arrows

Outcome

Largest number of incoming arrows

Bottleneck

More incoming than outgoing arrows

Catalyst

More outgoing than incoming arrows; or an equal number in and out
Step 5: Interpret the Results.

Question: What are the issues related to reducing litter?

In this example, “inadequate penalties” appears to be the main driver and has a causal effect on other factors, such as “lack of awareness of impact” and “not enough receptacles.” The driver is a good place to start in order to change the outcomes.

The final outcome of these factors is “not enough receptacles.” The incoming arrows indicate that reasons for not having enough receptacles include “unnecessary packaging,” “lack of respect of others,” “lack of awareness of impact,” and “inadequate penalties.”

“Lack of respect for others” and “unnecessary resources” are bottlenecks, meaning that these two factors will potentially require more resources and time to change.

The catalyst, “lack of awareness of impact,” is an important but manageable factor.

The Interrelationship Digraph is a very good tool for sorting out and examining complex ideas and relationships.
CAUSE-AND-EFFECT DIAGRAM

It Is Too Easy to “Settle” for an Easy Cause Too Soon

The Cause-and-Effect Diagram is a logical method for identifying the root causes of a problem.

The success of this method depends on your following two rules:
1) Be very specific in defining the problem. Being too broad will make it difficult to come up with causes.
2) Ask “Why?” at least five times.

Take Your Time to Find as Many Causes as Possible

Start your Cause-and-Effect Diagram by drawing a “fishbone,” as shown below. The head of the fish is the problem statement. Draw four main bones off the backbone. Label each with one of the “4 M’s.”

```
Problem Statement

Material

Method

Machine

Manpower
```

“4 M’s”
Most causes will fall within these four categories:
- Material
- Method
- Machine
- Manpower

In this example, your team operates a business that buys plain ball caps, stitches logos on them, and resells them at ball games. Recently, sales have dropped, and that is your problem.
First, put the problem statement at the head of your fishbone.

Next, use the “5 WHY” process. Here’s a “Material” example:

1. Why are sales dropping?
   - Because our logo design is unpopular.

2. Why is it an unpopular design?
   - Because we did inadequate market research.

3. Why did we do inadequate market research?
   - Because we didn’t know how to do it.

4. Why didn’t we know how to do the research?
   - Because we are new to the business.

5. Why are we new?
   - It’s our first job.
Continue asking “why” until your team adds as many bones to the fish as possible.

Then step back and look at your fishbone. Do any causes keep repeating? Is there a cluster with many more causes than others?

In this example, “stitching breaks” is both a material and a manpower problem. So it is a good place to start to working on the problem of sales dropping.
DATA COLLECTION

Collect Data for Solving Problems

Collect and analyze data whenever possible. The type of data and your collection method depend on the purpose of the analysis. Possible methods include interviews, observations, surveys, and databases.

Collect Data to Evaluate the Success of Your Change

When analyzing a process, you will want to collect data on the frequency of and the reasons for problems (like returned pizzas). If you intend to improve a process, you will want to collect these data (‘data’ is a Latin plural word) both before your team makes a change AND afterwards to see how well your change solves the problem.

Use Check Sheets to Count Occurrences

A simple way to collect data is with a Check Sheet, as illustrated below.

CHECK SHEET

Reasons for pizzas returned to kitchen in one week

<table>
<thead>
<tr>
<th>Categories</th>
<th>Frequency of Occurrence</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wrong order</td>
<td>★★★★ ★★★★</td>
<td>12</td>
</tr>
<tr>
<td>Burned</td>
<td>★★★★ ★★★★ ★★★★★★</td>
<td>14</td>
</tr>
<tr>
<td>Too late</td>
<td>★★★★★ ★★★★★★★★</td>
<td>7</td>
</tr>
<tr>
<td>Crust not cooked</td>
<td>★★★★★★★★★</td>
<td>4</td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
<td><strong>37</strong></td>
<td></td>
</tr>
</tbody>
</table>

Check Sheets help identify the problems to address first.
DATA COLLECTION

Another smart way to use data is to look for trends over time or across different locations. Sometimes a single occurrence may not tell the story, but several occurrences will reveal a pattern.

The Run Chart below shows improvement in reducing the costs of produce spoilage.
Pareto Charts are also used to visually display the data collected. The chart below summarizes data from customer complaint cards at a pizza restaurant. It makes it easy to identify the more frequent types of complaints.

Pareto Charts were explained on page 65.

If you compare your before-change and after-change data, and you find they look too much the same, then you know that your solution did not adequately solve the problem. Don’t quit! Try another change and collect data again to measure its effect. Real-world problems usually have multiple causes and call for multiple solutions!
PART 6.

WHEN SOMETHING GOES WRONG

Effective teams have a shared understanding of the team’s goals, and the team members consistently move together towards those goals. The best way to ensure that your team has this shared understanding is to make sure that you have paid attention to the basics:

Organizing your team:

✓ Did you establish Ground Rules?
✓ Have you talked about everyone’s expectations?
✓ Did you talk about the facilitator, recorder, and team member roles?
✓ Has the team included everyone in these discussions?
✓ Do you know what player styles are on the team?
✓ Have you discussed the strengths and weaknesses of the team?
✓ Did you identify which skills everyone contributes?

Focusing meetings:

✓ Does the team draft an agenda at the prior meeting?
✓ Does the team use meeting summaries?
✓ Was the meeting summary distributed promptly?
✓ Did everyone participate at meetings?
✓ What decision techniques have you used? Did everyone participate?
✓ Does everyone come prepared?
✓ Does the meeting end when it should?

Keeping projects on track:

✓ Did the team develop a project plan?
✓ Did the team use a milestone chart to spread out responsibilities and establish due dates?

Absolutely the BEST way to avoid problems is to develop an environment where team members are comfortable expressing opinions.

The BEST way to do that is to use the team organizational tools effectively.
Team Dysfunctions**

Sometimes teams unknowingly fall victim to at least some of these five team dysfunctions. These problems are not separate but are interrelated.

1. Absence of Trust  
Team members who don’t feel free to be open with one another will not feel comfortable expressing ideas and opinions.

2. Fear of Conflict  
Teams lacking trust are not capable of having an honest debate about ideas. Instead they “back off” and don’t pursue the discussion.

3. Lack of Commitment  
When team members hold back in their discussions due to a fear of conflict, then they will not fully buy in or commit to team decisions, even though they seem to agree.

4. Avoidance of Accountability  
When some team members do not fully commit, others hesitate to mention when their behaviors appear counterproductive.

5. Inattention to Results  
When team members fail to hold each other accountable for results, they put their own needs before those of the team. This usually results in lower team performance.

Adapted from *The FIVE Dysfunctions of a Team* by Patrick Lencioni (2002).
Let’s turn it around and look on the positive side!

1. If team members trust one another;

2. They engage in unfiltered conflict around ideas;

3. They commit to decisions and plans of action;

4. They hold one another accountable for delivering against those plans;

5. They focus on the achievement of collective results.

Question:
How do you know if your team suffers from any of the five dysfunctions?

Answer:
Ask your team members to answer the following 15 questions and then discuss the results.
**TEAM ASSESSMENT**

**Instructions:** Use the scale below to indicate how each statement applies to your team. It is important to evaluate the statements honestly and without overthinking your answers.

3 = Usually
2 = Sometimes
1 = Rarely

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Team members are passionate and unguarded in their discussion of issues.</td>
</tr>
<tr>
<td>2</td>
<td>Team members call out another’s deficiencies and unproductive behaviors.</td>
</tr>
<tr>
<td>3</td>
<td>Team members know what their peers are working on and how they contribute to the collective good of the team.</td>
</tr>
<tr>
<td>4</td>
<td>Team members quickly and genuinely apologize to one another when they say or do something inappropriate or possibly damaging to the team.</td>
</tr>
<tr>
<td>5</td>
<td>Team members willingly make sacrifices, such as time and effort, for the good of the team.</td>
</tr>
<tr>
<td>6</td>
<td>Team members openly admit their weaknesses and mistakes.</td>
</tr>
<tr>
<td>7</td>
<td>Team meetings are compelling and not boring.</td>
</tr>
<tr>
<td>8</td>
<td>Team members leave meetings confident that their peers are completely committed to the decisions that were agreed on, even if there was initial disagreement.</td>
</tr>
<tr>
<td>9</td>
<td>Morale is significantly affected by the failure to achieve team goals.</td>
</tr>
<tr>
<td>10</td>
<td>During team meetings, the most important—and difficult—issues are put on the table to be resolved.</td>
</tr>
<tr>
<td>11</td>
<td>Team members are deeply concerned about the prospect of letting down their peers.</td>
</tr>
<tr>
<td>12</td>
<td>Team members know about one another’s personal lives and are comfortable discussing them.</td>
</tr>
<tr>
<td>13</td>
<td>Team members end discussions with clear and specific resolutions and calls to action.</td>
</tr>
<tr>
<td>14</td>
<td>Team members challenge one another about their plans and approaches.</td>
</tr>
<tr>
<td>15</td>
<td>Team members are slow to seek credit for their own contributions, but quick to point out those of others.</td>
</tr>
</tbody>
</table>

**This assessment was developed by Patrick Lencioni (2002) and can be found in The FIVE Dysfunctions of a Team.**
Scoring: Place your scores for the preceding statements as indicated below.

<table>
<thead>
<tr>
<th>Absence of Trust</th>
<th>Fear of Conflict</th>
<th>Lack of Commitment</th>
<th>Avoidance of Accountability</th>
<th>Inattention to Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>#4:</td>
<td>#1:</td>
<td>#3:</td>
<td>#2:</td>
<td>#5:</td>
</tr>
<tr>
<td>#6:</td>
<td>#7:</td>
<td>#8:</td>
<td>#11:</td>
<td>#9:</td>
</tr>
<tr>
<td>#12:</td>
<td>#10:</td>
<td>#13:</td>
<td>#14:</td>
<td>#15:</td>
</tr>
<tr>
<td>TOTAL:</td>
<td>TOTAL:</td>
<td>TOTAL:</td>
<td>TOTAL:</td>
<td>TOTAL:</td>
</tr>
</tbody>
</table>

Results: A score of . . .

- 8 or 9 is a probable indication that this dysfunction is not a problem for your team.
- 6 or 7 indicates that the dysfunction could be a problem.
- 3 to 5 is probably an indication that the dysfunction needs to be addressed.

Now that you have an idea which of the five dysfunctions of a team seem to be a problem . . .

What do you do now?

The next section describes each dysfunction and suggests ways to overcome each one.
1. Absence of Trust

Members of teams with an absence of trust . . .

- Conceal their weaknesses and mistakes from one another.
- Hesitate to task for help or provide constructive feedback.
- Hesitate to offer help outside their own areas of responsibility.
- Jump to conclusions about the intents and aptitudes of others without attempting to clarify them.
- Fail to recognize and tap into one another’s skills and experiences.
- Waste time managing their behaviors for effect.
- Hold grudges.
- Dread meetings and find reasons to avoid spending time together.

Members of trusting teams . . .

- Admit weaknesses and mistakes.
- Ask for help.
- Accept questions and input about their areas of responsibility.
- Give one another the benefit of the doubt before arriving at a negative conclusion.
- Take risks in offering feedback and assistance.
- Appreciate and tap into one another’s skills and experiences.
- Focus time and energy on important issues, not politics.
- Offer and accept apologies without hesitation.
- Look forward to meetings and other opportunities to work as a group.

Suggestions for developing trust:

1. Get to know each other better: Take 30-60 minutes to share personal histories, such as hometown, number of siblings, hobbies, majors, hardest classes, and most fun classes. Team members begin to relate to one another better when they find common ground.

2. Discuss your Team Player profiles: Complete the Team Player Questionnaire and talk about the results. Have each team member share one thing that he or she does well and one thing that he or she may need help with.
2. Fear of Conflict

Teams that fear conflict . . .

- Have boring meetings.
- Create environments where politics and personal attacks thrive.
- Ignore controversial topics that are critical to team success.
- Fail to tap into all the opinions and perspectives of team members.
- Waste time and energy with posturing and interpersonal risk management.

Teams that engage in conflict . . .

- Have lively, interesting meetings.
- Extract and exploit the ideas of all team members.
- Solve real problems quickly.
- Minimize politics.
- Put critical topics on the table for discussion.

The first step is for the team to recognize that productive conflict is good!

Suggestions for promoting productive conflict:

1. Remind the team that avoiding conflict is natural, but it is not the way to come up with the best ideas and solutions.

2. Ask someone to play the devil’s advocate—that is, to take the opposite view and talk about its merits.
3. Lack of Commitment

A team that fails to commit . . .

- Creates ambiguity within the team about direction and priorities.
- Lets windows of opportunity close due to excessive analysis and unnecessary delay.
- Breeds lack of confidence and fear of failure.
- Revisits discussions and decisions again and again.
- Encourages second-guessing among team members.

A team that commits . . .

- Creates clarity around direction and priorities.
- Aligns the entire team around common objectives.
- Develops an ability to learn from mistakes.
- Takes advantage of opportunities before competitors do.
- Moves forward without hesitation.
- Changes direction without hesitation or guilt.

The two greatest causes of the lack of commitment are:
1. the desire for consensus, and
2. the need for certainty.

Suggestions for developing commitment:

1. Maximize clarity: At the end of each meeting, review the key decisions made during the meeting, including the actions to be taken.

2. Clarify deadlines: Tie down interim deadlines and responsibilities using a milestone chart. These are just as important as the final due date.

3. Develop a “worse-case” scenario: Sometimes teams hesitate to make decisions because they are not sure of outcomes. Talk about the worst-case scenario of the decision. This helps the team to see that even an incorrect decision is survivable.
4. Avoidance of Accountability

A team that avoids accountability . . .

- Creates resentment among team members who have different standards of performance.
- Encourages mediocrity.
- Misses deadlines and key deliverables.
- Places an undue burden on the team leader as the sole source of discipline.

A team that holds one another accountable . . .

- Ensures that poor performers feel pressure to improve.
- Identifies potential problems quickly by questioning one another's approaches without hesitation.
- Establishes respect among team members by holding them all to the same high standards.
- Avoids excessive bureaucracy around performance management and corrections.

Suggestions for developing accountability:

1. Review progress toward team goals progress: Make it a point at each meeting to review the team goals, ground rules, and expectations. It is important to keep the goals in the open so that they are hard to avoid.

2. Regularly review progress: Take time in your meetings to let all the members report on their progress. Do they need help? Will they meet the deadline for their task? Are they running into problems the team can alleviate? A little team pressure goes a long way!
5. Inattention to Results

A team that is not focused on results . . .

- Stagnates and fails to grow.
- Does not perform well.
- Misses deadlines.
- Is easily distracted.
- Is more concerned about individual goals.

A team that focuses on collective results . . .

- Enjoys success and suffers failure acutely.
- Avoids distractions.
- Meets its goals.
- Delivers on time.

Suggestions for focusing on results: .

1. *Stay focused on task:* Make sure the team uses the organizational and analysis tools that will help stay them focused (e.g., milestone chart, project plan).

2. *Celebrate meeting deadlines:* Find something the team can do together when members reach an important milestone in their project (e.g., go for pizza, watch a game, or go to a movie). Celebrating milestones promotes a trusting environment, makes members feel good about their progress, and encourages them to work towards the next goal.
PART 7: REFERENCES

________. *Fortune Magazine* (June 12, 2006). (Entire issue devoted to teams).


