

Contents

- ✓ Chapter 1: Introduction to Technical Leadership
 - ✓ 1.1 Technical Leadership Fundamentals
 - ✓ 1.2 Building Trust and Credibility
 - ✓ 1.3 Risk-taking and Creativity
 - ✓ 1.4 Ethics, Professionalism and Time Management
- ✓ Chapter 2: Putting Leadership Principles into Practice
 - ✓ 2.1 Creating a Vision
 - ✓ 2.2 Team Building and Communication
 - 2.3 Conflict Management and Resolution
 - 2.4 Making Strategic Decisions
- Chapter 3: Ethical Leadership
 - 3.1 Towards an Ethical Culture
 - 3.2 Organisational and Individual requirements
 - 3.3 An Inclusive Leader



Team Building

Quotes

- ✓ To build a strong team, you must see someone else's strength as a complement to your weakness and not a threat to your position or authority – *Christine Caine*
- ✓ The ability of a group of people to do remarkable things hinges on how well these people pull together as a team - *Simon Sinek*

Team Building

- ✓ A lot of work performed by engineers is done as part of a team or group.
- ✓ Ideally a **team** has a group of people with a full set of complementary skills required to complete a project and the team members:
 - operate with a high degree of interdependence;
 - share authority and responsibility for self-management;
 - are accountable for the collective performance;
 - work toward a common goal.
- ✓ A team becomes more than just a collection of people when a strong sense of mutual commitment creates synergy, and it has a performance that is greater than the sum of the performance of its individual members.

Team Building : *Team Leader*

Team Leader

- ✓ A team leader must be a role model:
 - communicate a clearly a reasoned vision/goal for the team;
 - display passion, drive, and a positive attitude,
 - ensure that there is equity in contribution and that there are no members of the team being disadvantaged by other dominant members.
- ✓ Clear duties and responsibilities for each member must be articulated along with how these assignments contribute to the entire effort, and be careful not to allow bias to intrude on decisions.
- ✓ Success is difficult to achieve if expectations are unclear.
- ✓ An effective leader seeks team members who are technically competent, and often more capable than the leader;
- ✓ This means that the leader must put team needs ahead of their own ego.
- ✓ The leader must engage the different talents that the team possesses.



76 Innovation and Engineering Leadership



77

Team Building : *Team Leader*

- ✓ The leader must have high integrity, and display a strong emotional awareness and understanding of others' personalities, in order to avoid team negativity and discouragement.
- ✓ Social times, even simple gatherings where coffee or snacks are available, should be planned, since these promote personal interactions and enhance team cohesiveness, loyalty, and trust. It is important that these are inclusive activities and are not held in such a way that it would exclude anyone from wanting to or being able to participate.
- ✓ Feedback to the team and the individuals is critical to stimulate professional and personal growth, facilitate progress toward the goals set, and demonstrate that the leader cares about his/her team members.
- ✓ Should the leader be a servant leader?



Why servant leadership is a powerful character trait



Team Building: *Team member*

- ✓ Team Members must:
 - treat each other fairly and remove their own insecurities and ego,
 - communicate clearly and understand others' modes of communication,
 - have the best interests of the team and organisation at heart,
 - be open to new ideas and directions,
 - listen carefully to each other's concerns and suggestions,
 - practice shared leadership.
- ✓ A team that functions in this way is effective, maximises each member's strengths, and perhaps most importantly, minimises the members' limitations and weaknesses.
- ✓ When these characteristics are not present within the team, interactions among members are often hostile, defensive, and competitive, resulting in anxiety, disengagement, and inefficiency.
 - This dysfunctional behaviour inhibits progress and effective decision-making and creates an unpleasant working environment



Coaching Session: How to build a high performing technical team

One way for the leader to describe the type of conduct desired is to indicate that the proper way for team members to interact is to **listen first, understand second, speak third.**

Team Building: Hiring or Appointing the Right Team Members

- ✓ How does a leader assemble the an effective and successful team? As an example, the leader should consider the following questions when interviewing members for the team:
 - Have they undertaken significant new challenges? If not, does this provide an opportunity for them to take on a new challenge?
 - Have they learnt how to deal with high stress levels? Importantly, have they been able to deal with other's high stress levels?
 - Are they curious and interested in learning?
- ✓ A person who has taken a big risk and failed (provided they understand the learnings from the failure) is sometimes an excellent team member relative to someone who has never failed.
- ✓ The leader should not depend on strong (outspoken or extroverted) personalities, highly charismatic members, or high-profile individuals to ensure that the team will be successful. This is a common mistake in inclusive leadership and it prevents long-term success.



A talented engineering team with diverse skills and background can develop creative technological solutions

Communication

Quotes

- ✓ *The biggest communication problem is we do not listen to understand. We listen to reply – Stephen R. Covey*
- ✓ *I had many people reporting to me and working with me. I had to learn to communicate to very different types of people with different orientation and priorities – Abigail Johnson*

Communication

- ✓ 90% of leadership success is around the ability to communicate well, frequently and adapt accordingly.
- ✓ Due to the extensive effort needed, an effective leader must have excellent open, transparent communication skills so that the leader can present information clearly and logically, ensure that the information is accurate, and be encouraging and inspiring to those receiving the message.
- ✓ Whether the communication is verbal or electronic/written, the leader must take into account the specific audience if they wish to deliver the message in a way that resonates with those receiving the message;
- ✓ Simple things like mistakes in spelling and grammar in a written communication are noticed in a professional context, and it's best to pay attention to this kind of detail
- ✓ Technical leaders must learn to communicate effectively with non-technical people. It is important to develop the art of explaining technical concepts in business language so that you create connection across the company.

Multiple Choice and Short Answer Questions

Multiple Choice

When a team is ineffective what characteristics/interactions would be present within the team (Select all that apply)?:

1. Defensive and dominant
2. Competitive,
3. Minimum progress
4. Disengagement
5. Improved working environment

Discussion Question

As team leader, you have been given an extra position to fill in order to undertake a new product development project where you need a specific skill set to complement the existing team members. You have interviewed a number of people, and although several of them have the appropriate technical background and experience, you do not feel that any of them will be collegial and productive team members.

- a. Should you compromise on the traits that you consider important or do you move forward with an offer to get the project underway?
- b. Explain the pros and cons of continuing your search for the appropriate team member versus moving forward with an offer to one of those already interviewed.
- c. If you decide to wait, how can you proceed with minimum time lost?

Multiple – Choice and Short Answer Questions

Multiple Choice

Select the ideal level of communication between team members (select one only):

1. People do not listen to each other and there are 1-2 dominant personalities that are carrying the work and direction
2. Everybody speaks up, but not all team members listen
3. Everybody accurately states their view and others listen and understand what is being said -we collaborate
4. Quite a few of the team members withhold their thoughts

Discussion Question

Record a smartphone video of a short (3 min) presentation on a technical topic of interest to you. Analyse your performance in two ways:

- a. visual only, with no sound
 - b. sound only, with no visual.
1. Does the visual only convey excitement and motivation in your work? Do you use facial expressions, body language, and gesturing to draw in the listeners?
 2. Without watching the visual presentation, but concentrating on the verbal part of the presentation, do you change voice level and pitch, or are you mostly monotonous?
 3. As you assess these two scenarios, list 3 ways in which you could alter your presentation to better motivate or stimulate interest in your work.