Chapter 1

Understanding Teams

A team is a special type of group in which people work interdependently to accomplish a shared goal. Organizations use many different types of teams to serve a variety of purposes. The use of teams to perform work has a long history, but during the past few decades, organizational teamwork has changed: It has expanded rapidly because of changes in the nature of work and the structure of organizations. The scientific study of group dynamics provides useful insights into how teams operate and how they can be improved.

Learning Objectives

- **1.1** Describe how understanding group dynamics can help people work better together.
- **1.2** Identify what factors define a group.
- **1.3** Compare groups and teams.
- **1.4** Describe why many modern organizations have shifted to a teamwork approach.
- **1.5** Explain the differences between work groups, teams, and self-managing teams.
- **1.6** Summarize how the study of group dynamics has changed over time.

Why Groups and Teams Matter

Groups are central to our lives, our work, and our society. Interaction with groups—familial, social, educational, occupational, and political—profoundly shapes our sense of who we are, what we do, and what we believe. The achievements of groups can be inspiring, such as firefighter crews battling wildfires to engineers developing the next technological breakthrough. Indeed, most great accomplishments of human progress resulted from groups of humans working together. Our participation in groups can be a powerful source of identity, belonging, meaning, and achievement.

Teamwork can represent the best of us, but it can also embody the worst. As inspiring as displays of effective teamwork may be, we often struggle to replicate similar success in our own experiences. Unfulfilling prior group interactions and projects lead people to approach group work with apprehension, frustration, and even hate (Sorensen, 1981). People also understand teamwork very differently (Rentsch et al., 1994). This makes it ineffective to bring people together, call them a team, and hope that it all works out. Yet, despite all the group projects that educators, managers, and organizations assign, relatively little time is spent on learning about the group dynamics that create and sustain effective teamwork.

Reliance on teamwork is only increasing in the workplace. Responding to society's increasingly complex challenges requires integrating disparate skills and knowledge. Teamwork is among the most heavily valued skills by employers across industries (Gray, 2024). However, the importance of understanding group dynamics extends well beyond this. It provides insights into navigating the social structures and organizations present in our everyday lives (Fine, 2012). It makes us more aware of the invisible forces that influence our behaviors and the behaviors of those around us. It also empowers us to play a more active role in shaping these forces. Understanding group dynamics teaches us more about ourselves, our workplaces, and our interactions with others.

Defining Groups

A group is more than just a collection of people. There is a difference between the people in a park, the workgroup assembling a product, and the team playing football. The definition of a group can be just as varied, with scholars categorizing groups based on their size, features, and the contexts in which they operate. **A group is two or more individuals who mutually influence each other while interacting to achieve a common goal**. When broken down into its parts, this definition helps us to understand some essential characteristics of groups.

A group consists of two or more individuals. The minimum number of members to be considered a group is surprisingly unresolved. Some argue that dyads (two people) are more ephemeral, evoke different and stronger emotions, and are simpler than groups (Moreland, 2010). Others assert that group processes, like ostracism and social loafing, still emerge in dyads (Williams, 2010). While the minimum number of members is debated, groups do not have an upper limit. Groups include people in a stadium doing "the wave," a flash mob performing a dance, or thousands of people collaborating on a Wikipedia page.

Group members mutually influence each other. As individuals interact, they shape the feelings, attitudes, behaviors, and cognitions of each other (Bell et al., 2018). It is through their actions (and inactions) that group members can foster (or hinder) social relationships, rally (or demoralize) the group, share (or withhold) their perspectives,

and reinforce (or change) the norms that govern group behaviors. Group interactions are always happening, and they are continually influencing the operation of the group. Some interactions may help the group adapt to changing circumstances, make better decisions, and manage conflict. Others can constrain action, produce poor decisions, and cause strife among members. Often, both happen in groups at the same time.

Finally, **group members interact to achieve a common goal**. Groups need to have a reason to exist. Groups like families, friends, and social organizations generally aim to enable interpersonal relationships or provide affection and belonging. Workgroups strive to achieve organizational goals, such as assembling a product or making strategic decisions. As group members interact, two psychological processes tend to occur: Social identification and social representation (Hayes, 1997). **Social identification refers to the recognition that a group exists separately from others**. It is the creation of a belief in "us versus them." Identification is both a cognitive process (classifying the world into categories) and an emotional process (viewing one's group as better than other groups). **Social representation refers to the shared values, ideas, meanings, and beliefs that group members collectively develop**. Over time, group interactions cultivate a shared understanding of the group's purpose, goals, identity, norms, and ways of collaborating. The processes of social identification and social representation processes help to produce effective communication, cooperation, and coordination in groups that allow them to achieve their goal.

While this definition may conjure a straightforward and static view of groups, the reality is more nuanced. In fact, groups are always changing. They evolve in response to earlier successes and failures. Social relationships strengthen or weaken as members express differing options and preferences. Individual motivation and commitment waxes and wanes as outside pressures interfere with group goals. Groups emerge from the ongoing interpersonal interactions between members—their group dynamics (Donnellon, 1996). At each step, **group dynamics continually create, shape, and redefine how members interact and relate to each other**. The steps taken determine the group's success.

Defining Teams

Teams are a specialized type of group where members have specific roles, work interdependently, and share responsibility for achieving a common goal. Unlike general groups, teams are characterized by their focused pursuit of specific goals. Each team member plays a unique role, contributing specialized skills and knowledge that complement those of their teammates. Finally, team members complete their tasks interdependently with each other (Forsyth, 2018; Kozlowski & Ilgen, 2006). These characteristics allow teams to address more complex challenges and perform at a higher level than can be done by an individual.

Team members have differentiated roles and often complementary skills (Katzenbach & Smith, 2015). They are assigned specific tasks and responsibilities based on their strengths and expertise. Members complement each other by filling in gaps to enhance the team's overall capabilities. For example, the success of a sports team hinges on the collaborative efforts of players fulfilling specific positions. Similarly, the collaboration between a software developer, user interface designer, project manager, and database administrator enables the team to navigate the software development requirements. Integrating differentiated roles and complementary skills creates an adaptable team capable of achieving more complex goals than groups.

Team members are interdependent, working collaboratively to complete their objectives. Saavedra et al. (1993) describe four types of interdependence.

- *Pooled tasks* relate to members working independently, contributing to a collective outcome without direct interaction, such as a research team where each member writes a separate section of a paper without help or input from each other.
- *Sequential tasks* involve contributions completed in a specific order, where each team member's output becomes the input for the next, exemplified by an assembly line where the product passes from one worker to the next.
- *Reciprocal tasks* require team members to interact in a back-and-forth manner with specific others, such as a nurse communicating patient information to a doctor, who then provides treatment instructions.
- *Intensive tasks* have the highest interdependence by involving all team members working together as a unit. Members of a sports team must continuously collaborate in real-time and adapt their actions based on the evolving situation.

At the highest levels of interdependence, team members rely on each other to complete their tasks. Just as a baseball team without a pitcher cannot play the game, a single team member who fails in their task can cause the entire team to fail in achieving its goal. Greater interdependence enables the team to benefit from members' complementary skills and knowledge, potentially outperforming groups and individuals at the same task. However, this also requires more team communication, coordination, and collaboration (Courtright et al., 2015).

We can see that *group* is a broader term than *team*. Groups range in size from two to thousands, whereas teams have a narrower range of between 3 to 12 members. A dating couple may be considered a group but not a team. Political parties and social organizations are groups but not teams. Members of an organizational work group might share information and have overlapping goals, but they are not significantly interdependent in achieving them. A team is not simply people who belong to the same group or who

are jointly functioning in the same place, such as students listening to a lecture. Team members have a heightened commitment to shared goals and mutual accountability for performance (Wageman et al., 2012). Research on groups generally is conducted in laboratory settings, whereas research on teams is typically done in field studies that focus on teams in the workplace (Kerr & Tindale, 2004). In this text, the term *group* is used when referring to research on group dynamics, especially laboratory research. The term *team* is used when talking about applications in work environments where people are interdependent. For the in-between cases, *group* and *team* are used interchangeably.

Still, evolving work practices are reshaping the traditional concept of teams. Classic definitions assert that teams have clear boundaries between members and nonmembers and have stable membership over time (Hackman, 1987). Today, it is common for individuals to navigate multiple teams simultaneously, blurring the lines between team memberships and introducing new challenges to teamwork. While this can enhance team learning, it also introduces ambiguity regarding team membership and the competing demands of concurrent projects (Margolis, 2020). Team membership is also more fluid and permeable, with individuals sometimes joining and leaving at various stages of a project (Trainer et al., 2020). While new members can bring needed expertise and new approaches to a project, membership changes challenge the team's established functioning (Mortensen & Haas, 2018). These evolving work practices challenge us to rethink traditional models of teamwork and encourage a more complex understanding of group dynamics for managers and team members to lead and engage within these more intricate team structures.

Why Organizations Use Teams

As ubiquitous as teamwork appears in contemporary organizational life, this is a relatively recent development. Since the 1900s, *scientific management* has been the dominant approach to organizing people to perform tasks, which uses managerial control to produce certainty and predictability (Taylor, 1923). It remains in use today across many industries to efficiently make standardized products and services in large quantities.

In scientific management, managers or technical experts analyze a task and divide it into interconnected small activity units that individuals then perform. Each activity is linked to another activity, and individuals work separately to complete the entire task. Imagine workers on an assembly line. The manager's role is to conform worker behaviors to the system's needs, as deviation produces quality defects and inefficiencies. This requires that managers monitor, control, and reward or punish each worker's individual performance. In other words, managers think and control while workers execute.

This traditional approach works well under certain conditions, such as call centers, assembly plants, and fast-food restaurants. It requires that the task remains consistent for some time because changing the system is complex and costly. It demands that the

process not be too complicated or easily disrupted because the workers doing routine activities are unaware of what happens in other parts of the system. It focuses on productivity and often ignores concerns about quality and customer service because these factors require a greater commitment to the job. It assumes that workers are willing to perform routine activities under controlled situations. Under these conditions, scientific management is often the best approach, and the time and expense of developing teams are unnecessary.

The world, however, has changed since Taylor outlined the principles of scientific management, bringing with it new challenges for organizations. Since the 1980s, organizations have shifted to teamwork because of changes in the characteristics of organizations and work.

Changing Organizational Characteristics

Rapid technological advancements are revolutionizing industries and reshaping organizations (Schwab, 2016). Expanding markets and global competition demand that businesses rapidly innovate to meet evolving consumer preferences. Addressing complex challenges like space exploration, cybersecurity, and climate change requires integrating knowledge spread across diverse specialists. Organizations that survive are those that can learn and adapt.

Consider Blockbuster's downfall as a poignant illustration. Blockbuster was once the most popular video rental company in the United States. In 2000, the company turned down a chance to partner with a small startup called Netflix, which was just beginning to offer DVD rentals by mail (Sandoval, 2010). Less than 10 years later, Blockbuster's relevance evaporated as streaming video rentals rose. While Blockbuster was highly efficient in distributing physical media rentals, this became obsolete as customer habits changed. Traditional management approaches and mindsets excel at efficiently creating a product—but not necessarily the right product. As organizations adapt to uncertain environments, managers no longer have the answers for directing what workers should be doing; they may not even know what tasks need to get done or how to do them.

Faced with increasing complexity, uncertainty, and ambiguity, organizations embrace teamwork as a structure that facilitates learning, adaptation, and creativity. Teams are essential when the goal is to innovate or improve the way a product is made or a service is provided; when the job is complex; when customer service and quality are important; or when rapid change is necessary. These are the conditions that create the need for teams (Helper et al., 2010). These conditions also encourage organizations to shift to flatter organizational hierarchies, a transition driven by the desire to save costs and increase flexibility by reducing layers of management. In many cases, teams now take on the responsibilities once reserved for managers. After all, if team members are the knowledge specialists and there are limited routine

tasks to oversee, what is a manager's purpose? Emerging from this transition is a shift from managing people to maintain the status quo to leading people through transformation.

The COVID-19 pandemic showed how important it is for organizations to adapt quickly. Almost overnight, many people had to start working from home. This led to a rise in hybrid work—where employees sometimes work in the office, sometimes at home, and sometimes from other locations. As a result, teams became more spread out, with people working together from different parts of the world. Rebuilding from the pandemic, organizations are also focusing on building teams that are more flexible, made up of people with different skills, and able to work independently (Esser, 2022; Maor et al., 2022).

Teamwork provides many benefits to organizations (Delarue et al., 2008). Companies that use teams are often more productive, more creative, and more flexible. They tend to produce higher-quality work, adjust faster to change, and reduce costs. Teamwork can also benefit employees. People who work in effective teams report greater job satisfaction, stronger commitment, and more trust in their coworkers. These benefits are especially important today, as employees increasingly value trust, flexibility, belonging, and mental well-being in the workplace (Howe et al., 2021).

Changing Job Characteristics

The growth of nonroutine and complex work also contributes to adopting teamwork in organizations. *Routine work* consists of repetitive tasks completed by following known procedures, such as data entry, assembly line work, and clerical work. In contrast, *nonroutine work*—such as project management, consulting, and marketing—involves more complexity, interdependence, uncertainty, and change. Technological change, offshoring, and automation have replaced routine work for decades, particularly in developed countries (Reijnders & de Vries, 2018). Today, robots (de Vries et al., 2020) and artificial intelligence (Filippi et al., 2023; Tschang & Almirall, 2021) are automating many routine aspects of jobs.

Nonroutine jobs requiring knowledge-based teamwork are growing in work settings like health care, marketing, sales, research, engineering, and design (Von Nordenflycht, 2010). Imagine designing a new product for the marketplace. Design, manufacturing, and product sales require expertise from various disciplines and support from many parts of an organization. Few individuals possess all the necessary knowledge and expertise to complete a product, but a cross-functional team approach can integrate this diverse knowledge. In addition, using team members from several departments enhances support for the new product within the organization.

Complex problems and tasks often require a broad range of expertise that no single individual is likely to possess. While one person may lack the necessary skills or knowledge, a team can collectively bring together the diverse expertise needed to address

the challenge effectively. Complexity also means that problems may be ambiguous, difficult to define, or hard to solve. In these situations, the value of teamwork lies not only in combining different areas of expertise but also in drawing from a variety of perspectives. Teamwork brings together different ways of thinking that can lead to more creative and comprehensive solutions. In response to the urgent challenges organizations now face, many are turning to *multiteam system* structures where multiple interdependent teams work together to pursue complex goals that a single team could not accomplish on its own (Zaccaro et al., 2020). While this approach can enhance problem solving, it also introduces new challenges in coordination, leadership, and collaboration (Mistry et al., 2023).

Purposes and Types of Teams

Organizations use teams in a variety of ways. Because of this variety, there are many ways to classify teams, and these classifications help explain the psychological and organizational differences among different types of teams.

How Organizations Use Teams

Teams serve a variety of functions for organizations. The day-to-day operations of organizations can be shifted to work teams that build products or provide services (e.g., factory production teams or airline crews). Design teams investigate ill-structured problems to innovate new solutions. Advisory teams gather information, provide recommendations, and deal with particular problems. For instance, a team might be created to suggest improvements in work processes. Teams can help manage coordination problems by linking disparate parts of organizations. Cross-functional budget or planning committees might have members from several departments. Finally, teams can help organizations adapt by planning for the future or managing transitions.

Sundstrom et al. (2000) identify six types of work teams based on the functions they perform:

1. Production teams, such as factory teams, manufacture or assemble products on a repetitive basis.
2. Service teams, such as maintenance crews and food services, conduct repeated transactions with customers.
3. Management teams, composed of managers, work together to plan, develop policy, or coordinate the activities of an organization.
4. Project teams, such as research and engineering teams, bring experts together to perform a specific task and then disband.

5. Action or performing teams, such as sports teams, musicians, military units, and surgical teams, engage in brief performances that are repeated under new conditions and that require specialized skills and extensive training or preparation.
6. Advisory teams are temporary ones that provide suggestions or recommendations for changing an organization.

Classifying Teams

Teams can be classified by more than just their activities; they also differ in important characteristics. *Virtual teams* have members who are spread out geographically and rely on technology for communication (Morrison-Smith & Ruiz, 2020). *Hybrid teams* combine aspects of both virtual and in-person work, with members sometimes working from different locations or on different schedules (Gratton, 2021). *Membership stability* varies, from stable teams with consistent members to dynamic ones where members frequently change (Li & van Knippenberg, 2021). *Temporary teams* join together for specific tasks and then disband, like ad hoc teams in software development (Prikladnicki et al., 2017) and health care (Ahmadpour et al., 2023). *Swift-starting action teams* consist of highly trained members who tackle demanding tasks under pressure without prior experience working together (Wildman et al., 2012).

Task consistency may vary, with some teams having predictable assignments and others facing unpredictable tasks (Tannenbaum & Salas, 2020). *Member similarity* among team members can range from shared expertise to diverse skills, affecting how teams interact and work together. One of the most important distinctions among types of teams is *empowerment*, or how much power and authority is given to the team by the organization. This shifting of power affects leadership, decision making, and how the work activities of team members are linked. Moreover, team members with control over their work experience have greater job satisfaction and organizational commitment (Seibert et al., 2011).

There are three main options for organizing people in the workplace: work groups, teams, and self-managing teams (McGrath, 1984). The differences among these options are presented in Table 1.1. *Work groups* operate within the organization's hierarchy, with supervisors leading members who perform mostly independent tasks. *Teams* are more autonomous, with leaders selected by management who coordinate interdependent tasks and make decisions through advice, voting, or consensus. *Self-managing teams* are the most independent, with members typically choosing their leaders, who facilitate rather than control operations. These teams rely on democratic decision making, and members coordinate highly interdependent work activities collaboratively.

Table 1.1 ▪ Organization of People Into Work Groups

	Work Group	Team	Self-Managing Team
Power	Part of organization's hierarchy, management controlled	Linked to organization's hierarchy, some shift of power to team	Linked to organization's hierarchy, increased power and independence
Leadership	Manager or supervisor controlled	Leader, with limited managerial power, selected by organization	Leader, the team facilitator, selected by the team
Decision making	Authoritarian or consultative	Consultative, democratic, or consensus	Democratic or consensus
Activities or tasks	Independent	Interdependent, coordinated by leader	Interdependent, coordinated by team members

Source: Adapted from McGrath, J. (1984). *Groups: Interaction and performance.* Prentice Hall.

History of Teams and Group Dynamics

Over the past century, the use of teams in organizations has grown and changed alongside shifts in management practices, technology, and the global economy. As teams became more important, researchers began studying how people work together. These studies took two different paths. **Teamwork research** focuses on how structured groups (usually in workplace settings) can be organized to improve performance, solve problems, and reach goals. This type of research often comes from business, engineering, and healthcare. In contrast, **group dynamics research** looks at the social and psychological processes that shape how people behave in all types of groups, including informal ones. It often comes from psychology, sociology, and communication studies. Both perspectives help us better understand how to build effective teams and improve group interactions.

Foundations of Teamwork

The Industrial Revolution shifted most work organizations to a hierarchical approach that used scientific management to design jobs (Taylor, 1923). This approach streamlined manufacturing jobs and introduced specialized roles for managers to optimize production efficiency. However, although scientific management improved efficiency, it also created challenges. Workers often felt less motivated, found it harder to adapt

to new situations, and struggled to achieve other important goals, such as improving quality, because of the focus on efficiency.

Scientific management began to be questioned during the 1920s and 1930s. The Hawthorne studies—a series of research projects that tested how changes in the work environment, like lighting and break times, affected worker performance—unexpectedly showed that social factors had a meaningful impact on performance (Mayo, 1933). In some cases, simply being observed made workers try harder (what social scientists now call the *Hawthorne effect*). In other cases, enforcement of group norms influenced performance (Sundstrom et al., 2000). For example, studies of a bank wiring room showed that work groups enforced production norms by hitting the arm of coworkers who worked too quickly, a practice known as *binging*. These findings revealed that group norms, even beyond managerial control, could shape performance both positively or negatively.

During the 1960s and 1970s, sociotechnical systems theory was created to analyze the interplay between what people do at work (the social system) and their tools and technologies (the technical system) (Appelbaum & Batt, 1994). A notable implementation of this theory occurred in Volvo's Swedish manufacturing plants, where assembly lines were reorganized into semiautonomous groups. These groups assembled entire sections of cars, enhancing worker autonomy and satisfaction by moving away from repetitive, singular tasks. Despite the benefits of this team-based approach, it did not widely catch on at the time.

The modern emphasis on teamwork originates from the Japanese production of high-quality, inexpensive products during the 1970s. When U.S. business experts visited Japan to see how these goals were achieved, they found that teamwork in the form of quality circles seemed to be the answer. *Quality circles* are voluntary teams of production workers and supervisors who meet to analyze problems and develop solutions to quality problems in the manufacturing process. Throughout the 1980s, companies in the United States and Europe experimented with quality circle teams (and later total quality management teams).

The focus on quality in manufacturing launched the teamwork movement, but other factors have sustained it. Teamwork expanded rapidly during the 1990s as globalization and technological advances enabled teams to collaborate across borders and cultures. In the 2000s, successful team-based Agile methodologies like Scrum and Kanban, which were used in software development, spread to other industries (Junker et al., 2023). As did lean management practices emphasizing strong teamwork to create a culture of continuous improvement. Collaboration tools continued to advance in the 2010s to support virtual teams. This enabled organizations to recruit a multinational workforce (Kirkman et al., 2016), highlighting the growing importance of diversity and inclusion within teams (Li et al., 2019). The factors shaping teamwork in the 2020s include remote and hybrid work, integrating artificial intelligence (Webber et al., 2019), and human–machine collaboration (Seeber et al., 2020). Today, 65% of organizations use at least some cross-functional teams, with an additional 31%

using teams for most of their work (Volini et al., 2019). The concept of teamwork has remained crucial for achieving business goals, fostering innovation, and enhancing employee engagement.

Foundations of Group Dynamics

Group dynamics refers to studying and applying knowledge about how people behave within groups. Cartwright and Zander (1968) formalized a definition of group dynamics as "a field of inquiry dedicated to advancing knowledge about the nature of groups, the laws of their development, and their interrelations with individuals, other groups, and larger institutions" (p. 7). Encompassing a broad range of interactions, processes, and behaviors, group dynamics has grown into an interdisciplinary area of study.

The scientific study of groups began at the turn of the 20th century with the work of Norman Triplett (1898). Triplett's research showed the effects of working alone versus working in a group. For example, he observed that bicycle racers who pedaled around a racetrack in groups were faster than those who pedaled around alone. This effect is called *social facilitation* because the presence of other people facilitates (or increases) performance.

Early studies in psychology had a similar perspective in that they investigated how groups affected individual performance or attitudes. Although this was group research, the focus was on individuals. Psychologists did not treat groups as an entity appropriate for scientific study. This changed during the 1940s because of the work of Kurt Lewin and his followers (Lewin, 1951). Lewin created the term *group dynamics* to show his interest in the group as a unit of study. For the first time, psychologists took the study of groups seriously rather than simply looking at the effects of groups on individuals. Lewin's innovations in research methods, applications, and focus still define much of the study of group dynamics today.

Lewin developed a new approach to research in psychology. He began with the belief that "there is nothing so practical as a good theory" (Lewin, 1951, p. 169). His innovation was in refining how theories in psychology should be used. He developed an approach called *action research*, where scientists develop theories about how groups operate and then use their theories in practical applications to improve the operations of groups. The process of applying a theory and evaluating its effects is then used to refine the theory and improve the operations of groups.

One of Lewin's primary concerns was how to create lasting social change. He believed that it is often easier to change a group than to change an individual. When individuals change their behavior but return to their everyday environment—such as their workplace, home, or peer group—the people around them often influence them to go back to old patterns. In contrast, when a group changes together, it tends to support and maintain the new behavior among its members. Lewin developed models of organizational change and group dynamics that continue to influence how teams and organizations approach change today.

Mainstream social psychologists returned to their focus on theory-oriented laboratory studies during the 1950s and 1960s. Their research primarily examined topics such as conformity and helping behavior, which focused on the effects that groups have on individuals rather than on group dynamics. Research on group dynamics shifted to sociologists like Robert Bales, who used the study of small groups to understand social systems. Their research used laboratory groups and led to the development of various systems for categorizing the group process, such as *interaction process analysis*, which analyzes communication and interaction patterns among group members (Bales, 1950).

During this period, organizational and humanistic psychologists studied a special type of laboratory group called *t-groups* (also called *encounter groups*). These small, unstructured groups were encouraged to engage in open and personal discussions, often over a series of days. Participation in these groups was supposed to increase self-awareness, interpersonal communication skills, and group process skills. However, their popularity decreased as concerns with ethics and transfer of training issues raised questions about their value.

By the 1990s, research on teamwork moved from social-psychology studies of small groups in laboratories to other disciplines (Stewart, 2010). Researchers from sociology, anthropology, political science, communication studies, business, engineering, innovation, computer science, and education now study aspects of group dynamics. Although psychological research remains dominated by laboratory studies of how groups operate, many other disciplines emphasize applied research and study groups in real-world settings. Group dynamic theories are becoming more sophisticated (Hackman, 2012). Rather than simple models that look at cause–effect relationships, new models focus on the dynamic conditions that help teams manage their processes (Driskell et al., 2018). Instead of looking at group behavior as the sum of individual variables, there is a focus on the emergent and dynamic properties of teams over time (Fyhn et al., 2023).

The search to find the single best approach to manage teams has been replaced by the recognition of what is termed *equifinality*—that there are many ways for a team to operate successfully. Even teams with similar resources, structure, leadership, and goals can vary in their performance (Barley & Weickum, 2017). With no singular way forward, teams need to forge their own path to success. This requires that team members collectively reflect upon and modify the group goals, approaches, interactions, and processes to manage team performance, satisfaction, commitment, and innovation (Lines et al., 2021; West, 2000). In learning about theories of group dynamics, you can gain a conceptual framework and vocabulary to aid in this process of reflexivity.

Summary

Groups are more than just collections of people. Groups are two or more individuals who mutually influence each other while interacting to achieve a common goal. Members are aware of their membership in groups (social identification) and over time develop shared

values, ideas, meanings, and beliefs (social representation). Teams are a specific type of group characterized by high interdependence, strong commitment to shared goals, and members who bring specialized and complementary skills. This allows teams to tackle increasingly challenging and complex problems that are not possible by an individual.

Organizations are shifting away from individual work performed in hierarchical work structures to team-based operations. Teamwork creates more flexible, resilient, and innovative environments. Organizations use teams to provide advice, make things or provide services, create projects, and perform specialized activities. Teams vary according to their power, their types of leadership, their decision-making processes, and the tasks they perform. These factors define the differences among traditional work groups, traditional teams, and self-managing teams.

Working in small groups was common before the Industrial Revolution, but scientific management simplified jobs and created hierarchical work systems. The Hawthorne studies of the 1930s demonstrated the importance of understanding the aspects of work related to social relations. Following World War II, researchers began to experiment with work teams. However, it was the rise of Japanese manufacturing teams during the 1980s that led to the increased use of teamwork in the United States. Paralleling this growth in the use of teams, the social sciences developed the field of group dynamics, which focuses on understanding how groups operate. Today, group dynamics is a scientific field that provides knowledge in improving the operations of teams.

Discussion Questions 1

1. How might different levels of interdependence affect how a team works and how satisfied team members feel? Can you give examples of teams with high or low interdependence and explain how that influenced their success or challenges?
2. Workplaces are changing fast because of things like artificial intelligence and hybrid work. How do you think teams might look different in the next 10 years?
3. This chapter introduced several kinds of teams (like design teams, advisory teams, and production teams). How might leadership look different in each of these teams?

Team Leadership Challenge 1

You are the manager of hundreds of workers in a car assembly plant. The plant has been traditionally organized, with the manager running the assembly line and supervising each employee individually. Each worker is proficient in carrying out a single task on the assembly line. Recently, however, workers began to be absent, gamble, and purposefully make mistakes—leaving necessary bolts loosened or placing broken glass to rattle around in doors—due to dissatisfaction with their working conditions.

You have heard a lot about the advantages of shifting to teamwork, which is supposed to improve worker morale and the quality of products. However, you have also heard that it can be challenging to create and manage teams. You are comfortable and capable as a traditional manager but think maybe you should try something new, such as teamwork.

- What are the pros and cons of reorganizing the assembly line into a team? What would this look like? How much authority or control should you maintain over the team?

This was a similar circumstance facing General Motors (GM) at their Fremont factory in the 1980s. GM eventually formed a joint venture with Toyota, called NUMMI, intending to learn about their lean and team-based approach to manufacturing. Morale and quality improved, shifting the Fremont plant from among the worst-performing car factories in the United States to one of the best-performing factories. However, the success of this approach failed to spread to other factories at GM. The plant closed in 2010 and reopened as the Tesla Factory. *This American Life* offers an engaging podcast detailing this story called NUMMI 2015 (www.thisamericanlife.org/561/nummi-2015)

Survey: Attitudes Toward Teamwork

Purpose: Understand your attitudes about the use of teams at work. Do you believe that teams are an effective way to work? Do you enjoy the social aspects of teamwork? The answers to these questions may help you decide how you want to participate in teams.

Directions: Think about the last time you worked on a team project. Use the following scale to show how much you agree with the list of statements about teamwork:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

_____ **1.** Using a team was an effective way to do the project.

_____ **2.** My team was good at resolving internal conflicts and disagreements.

_____ **3.** The project the team performed was challenging and important.

_____ **4.** I made new friends while working on the team.

_____ **5.** My team developed innovative ways of solving team problems.

_____ **6.** I really liked getting to know the other members of the team.

_____ **7.** Management provided adequate feedback to the team about its performance.

_____ **8.** Personal conflicts rarely disrupted the team's functioning.

_____ **9.** My team had clear direction and goals.

_____ **10.** Team members treated each other with respect.

_____ **11.** My team was good at implementing the plans it developed.

_____ **12.** The members of my team worked well together.

_____ **13.** The assignment my team worked on was well suited for teamwork.

_____ **14.** There was rarely unpleasantness among members of the team.

_____ **15.** I learned a lot from working on this team.

_____ **16.** Participating in the team helped develop my social skills.

_____ **17.** My team was good at regulating its own behavior.

_____ **18.** I felt supported by my teammates.

_____ **19.** My team had good leadership.

_____ **20.** The longer we worked together, the better we got along with each other.

Scoring: Add the scores for the odd-numbered questions to obtain the score for how you view the task aspects of teamwork. Add the scores for the even-numbered questions to obtain the score for how you view the social aspects of teamwork.

Discussion: What does this survey tell you about your attitudes toward the task and social aspects of teamwork? How should you deal with team members who have a negative attitude toward teamwork? What is the relationship between social and task aspects of teamwork?

Source: Adapted from Levi, D., & Slem, C. (1995). Team work in research and development organizations: The characteristics of successful teams. *International Journal of Industrial Ergonomics, 16*, 29–42.

Activity: Working in Teams

Objective: Reflect upon your previous team experiences to identify the characteristics of effective and ineffective teamwork.

Activity: Think about your most recent positive team experience, where work was completed and members finished feeling closer to each other. Note the specific behaviors, interactions, and planning that produced this outcome. Next, repeat this exercise for your most recent negative team experience. Note the specific behaviors, interactions, and planning that produced this outcome. Meet with other class members, and create a list of the things that produce positive and negative team experiences.

Analysis: Once your group creates lists of the positive and negative things about team experiences, review the items and classify them as *task* or *social aspects* of teamwork. Task issues concern the team's competition of tasks, while social issues are the social and emotional aspects of working in teams. How does this task or social analysis relate to what you like and dislike about teams? You may also want to compare this analysis with the results of the Attitudes Toward Teamwork survey.

Discussion: There are benefits and problems with working in teams. What can be done to make teams more effective and more enjoyable? What team characteristics are important for you to have a positive experience?

Chapter 2

Building Team Success

Effective teamwork involves the right mix of people, processes, and contexts to achieve outcomes. Group dynamics are influenced by various inputs, such as individual skills, knowledge, task characteristics, and organizational support, which provide a foundation for performance. Through teamwork processes—including planning, action, and interpersonal management—these inputs are converted into meaningful outputs, achieving tasks while building satisfaction. The Input-Mediator-Output-Input (IMOI) model emphasizes the cyclical nature of teamwork, where each output informs future interactions, encouraging teams to adapt and evolve. Viewing teamwork as a continuous process helps members and leaders to guide teams toward success by balancing task achievement with interpersonal and individual benefits. Teams also need balanced collaboration to avoid overload, as excessive teamwork can lead to diminished productivity.

Learning Objectives

- **2.1** Describe the systems approach to understanding teamwork.
- **2.2** Explain how team inputs—including composition, tasks, and organizational context—shape team dynamics and overall success.
- **2.3** Assess the role of teamwork processes and emergent states in enhancing or hindering team interactions and outcomes.
- **2.4** Assess different criteria for evaluating team success, including task performance, social relationships, and individual benefits.
- **2.5** Examine team effectiveness through the Input-Mediator-Output-Input model.
- **2.6** Discuss the benefits and challenges of utilizing teams in the workplace.

Foundations for Building Team Success

Why do some teams succeed while others struggle? To answer this question, it helps to think of a team as a system. A systems perspective encourages us to view teams not just as a collection of individuals, but as interconnected parts operating within a larger environment (Von Bertalanffy, 1972). From this view, team success depends on how well people, tasks, behaviors, attitudes, and contextual factors align and interact. When the right people and resources are in place and the team works well together, it is more likely to achieve positive results. Ideally, this alignment enables teams to achieve *synergy*—producing outcomes that exceed what individuals could accomplish alone.

A widely used framework for understanding these interdependent components is the Input–Mediator–Output–Input (IMOI) model (Ilgen et al., 2005; Mathieu et al., 2008). This model helps explain how teamwork unfolds over time and provides insight into factors that support team success. It recognizes that teams are not static—they change, adapt, and learn from experience. Each component of the model influences the next, creating an ongoing cycle of performance and development.

The IMOI model includes four primary components:

- ***Inputs*** refer to the relatively stable starting conditions of a team, such as individual traits, task characteristics, and contextual factors. These inputs enable or constrain the capacity for teams to operate effectively.
- ***Mediators*** include both team processes and emergent states. *Processes* are the behaviors and interactions that move the team toward its goals, such as planning, coordination, and conflict management. *Emergent states* are shared attitudes, emotions, and beliefs—like trust, morale, and confidence—that develop over time and influence future team interactions.
- ***Outputs*** are the results of teamwork, including task completion, team satisfaction, and benefits to individual members. They reflect how effectively a team has transformed its inputs into results. Outputs also feed back into the system, shaping the team's future inputs, processes, and emergent states. This feedback loop highlights the evolving nature of teamwork and explains why input appears at both the start and end of the model.

The IMOI model provides a framework for understanding how teams function and how their dynamics evolve over time. It is useful not only for evaluating team performance but also for diagnosing challenges and identifying where to intervene when things are not going well. By understanding the components of this model and how they interact, team members and leaders can become more effective in supporting team success.

The remainder of this chapter explores each component of the IMOI model in more detail. We begin by examining inputs as the building blocks that teams start with. Next, we identify the key processes and emergent states that influence how teams

function. We then consider how to define success through a team's outputs and how these outcomes shape future team dynamics. The chapter concludes with a broader discussion of the benefits and challenges of using teams in modern organizations.

Inputs: The Starting Conditions of a Team

What conditions make teams successful? Generally, three inputs support team success: having the right people with the necessary skills and attributes, structuring tasks to leverage the strengths of teamwork, and providing a supportive organizational context. Additionally, other key inputs—such as roles, goals, and norms (explored in Chapter 3) and leadership (discussed in Chapter 10)—play a significant role in shaping effective teams.

Team Composition

Team composition research examines how the mix of individual attributes, such as knowledge, skills, and personality traits, affects team success (Mathieu et al., 2014). By understanding the blend of characteristics within a team, organizations can better predict compatibility and address training needs when forming or restructuring teams. Attributes affecting teamwork are generally grouped into two categories: surface-level and deep-level characteristics (Bell et al., 2018).

Surface-level attributes are visible traits, such as age, sex, race, organizational tenure, and functional role. These traits can shape how team members perceive and interact with one another. For example, team members may draw upon stereotypes based on these attributes to make assumptions about other members, such as their competence, status, or reputation. As these assumptions impact the interactions between members, they can impede team success. (See Chapter 13 for a discussion of how diversity impacts team performance). This can also interfere with collaboration: team members who feel different from the rest of the group may withhold ideas or limit their participation (Shemla et al., 2016).

Deep-level attributes include underlying personality traits, knowledge, skills, opinions, and values. These attributes tend to have a stronger and more lasting effect on team performance than surface-level attributes (Bell et al., 2011). There are several ways in which individual attributes can impact the team (Mathieu et al., 2014). Attributes of powerful members can exert an inordinate influence on the team. For example, a leader's positive mood can spread throughout the team and enhance cooperation (Sy et al., 2005). Sometimes, the attribute of the weakest or strongest member is most important. Even one negative team member can decrease team morale and create conflict within the team (Kelly & Barsade, 2001).

The mix of specific attributes can predict its success. Team success depends on having team members with knowledge, skills, and abilities that match the task requirements—a surgical team without a surgeon is unlikely to be successful. Teams with higher average cognitive ability tend to perform better (Devine & Philips, 2001), while cross-functional teams with more variability of member backgrounds are more

likely to be creative (Love & Roper, 2009). Diverse connections within and outside the organization can help members identify resources, gather new information, and contribute specialized expertise (Ancona & Caldwell, 2009).

The composition of *personality traits* (McCrae & Costa, 1987) is one of the most studied attributes in teamwork (Bell et al., 2018). While results can be inconsistent across studies, some general predictions can be made.

- *Conscientious* members are organized, responsible, and focused on goals. They tend to regulate teamwork and cooperate effectively. Teams with higher average conscientiousness tend to perform better (Courtright et al., 2017).
- *Agreeable* individuals are trusting, warm, and cooperative. These traits promote trust, communication, and cohesion while reducing conflict (Bradley et al., 2013; Ferguson & Peterson, 2015). Student teams high on both average conscientiousness and agreeableness tend to compensate for social loafing and maintain strong performance (Schippers, 2014).
- *Extraverted* team members are more social, assertive, and talkative. Higher extraversion on a team is associated with positive social relationships (Barry & Stewart, 1997), information sharing, and creativity (Hsu et al., 2011).
- *Emotional stability* relates to an individual's ability to handle stress, maintain a positive perspective, and be resilient. Teams high in emotional stability tend to have higher performance and cohesion (Barrick et al., 1998), while those low in emotional stability can experience greater relational conflict (de Wit et al., 2013).
- *Openness to experience* relates to approaching tasks with freedom, flexibility, and creativity. While there is a positive relationship between openness to experience and team creativity, one study found that the highest team creativity emerged from teams that had at least one individual low in openness to experience (Schilpzand et al., 2011).

Counterintuitively, there is no guarantee that having many highly talented team members will lead to a high-performing team. For example, research on sports teams shows that too many high performers can lead to coordination issues and conflict, particularly in highly interdependent sports like soccer or basketball (Swaab et al., 2014). In contrast, independent tasks, like those in baseball, often benefit from adding skilled players. Selecting team members should balance task-specific skills with interpersonal and teamwork abilities.

High-performing teams need more than just expertise. They also need interpersonal, problem solving, and teamwork skills to collaborate effectively (Morgeson et al., 2005). *Interpersonal skills* are communication techniques, such as interviewing, active listening, providing feedback, and negotiating. *Problem-solving skills* improve the effectiveness of teams by providing approaches to analyzing problems and making decisions. *Teamwork skills* promote understanding and management of group processes.

Despite their importance, teamwork and interpersonal skills are often overlooked in team member selection. Organizations tend to focus on task-specific skills, even though team performance relies on teamwork and interpersonal skills. Fortunately, teams can improve these skills over time. Training programs and team-building activities can strengthen collaboration and support long-term team development (see Chapter 17 for more on team development interventions).

Task Characteristics

Understanding the nature of a team's task helps to build an effective team. Different tasks require different combinations of attitudes, skills, knowledge, and abilities. Some may call for strong interpersonal skills, while others rely more on technical expertise or problem-solving ability. Evaluating how well a task is suited for teamwork helps identify how much coordination, specialization, and support the team will need to succeed.

Wildman et al. (2012) describe several categories of tasks that teams commonly perform:

- *Managing others* involves overseeing work and requires interpersonal competencies, such as leadership and communication skills.
- *Advising others* includes consultative roles like offering expertise or facilitating change without having formal authority.
- *Human service* tasks include direct social interaction with a client or customer, such as nursing, sales, or training.
- *Negotiation* involves resolving conflicts or competing on behalf of larger entities.
- *Psychomotor action* requires skilled movements, like performing a dance, assembling a product, or using equipment during combat.
- *Defined problem solving* involves choosing the correct solution from several options, relying on reasoning and decision making.
- *Ill-defined problem solving* asks teams to create new knowledge or solutions when there is no clear answer, requiring knowledge integration, brainstorming, analysis, and project management.

These categories of tasks can be applied to identify the attitudes, knowledge, skills, and abilities needed in the composition and training of a team. For example, a surgical team's core tasks might include psychomotor action to use tools to perform the procedure, ill-defined problem solving to manage unexpected events during the procedure, and human service skills to interact with patients using empathy and clear information. While every team member might need strong interpersonal skills, only some members may require technical expertise with specialized tools or advanced problem-solving abilities.

Once a team's tasks are identified, the next step is figuring out how to coordinate and combine members' efforts. Steiner (1972) proposed four ways that individual contributions impact team performance. *Additive tasks* involve combining individual efforts. For example, if each person paints part of a house, the job gets done faster together than alone. For these tasks, performance generally improves with more members. *Conjunctive tasks* require all members to complete their parts, such as in assembly line work. Here, team performance is limited by the lowest-performing member. However, the team can support that member to improve overall performance. *Compensatory tasks* involve averaging individual contributions to produce a single solution. For instance, a team might estimate quarterly sales by averaging each member's forecast. This approach can reduce individual bias or error, leading to more accurate group judgments. Finally, *disjunctive tasks* involve the team reaching a single best solution, such as a jury's verdict. Here, overall performance depends on whether the team can recognize and adopt the best idea, usually contributed by the most capable member. Each task type brings different coordination challenges. By understanding how different tasks combine team members' efforts, teams can better plan how to structure their work and support one another effectively.

Many teams operate under *synchronous interdependence*, where team members must work closely and often simultaneously—such as responding to an emergency, launching a product, or competing in a sporting event. In these settings, coordination is critical: What one person does (or does not do) directly impacts everyone else. Well-designed tasks should align with team goals, be meaningful, and allow members to see how their contributions matter (Hackman, 2002). The most effective team tasks are often those that genuinely require interdependent effort, where collaboration is not just helpful but essential to success. Team members also need authority and responsibility over their work practices, along with regular feedback to guide improvement. When these conditions are met, teams are more likely to experience synergy, where the group achieves more than its individual members could alone. But when task demands are unclear or poorly matched to team capabilities, coordination problems, and motivation issues can reduce performance.

Organizational Context

A team's potential is enabled or constrained by the environment in which they operate. The organizational context—including leadership, structure, support, reward systems, culture, technology, and climate—significantly influences a team's ability to operate successfully (Guzzo & Dickson, 1996). For example, in hospitals, the organizational culture can influence how healthcare workers interact. These interaction norms can either support or hinder teamwork, directly affecting patient safety and outcomes (Nembhard & Edmondson, 2006). (See Chapter 14 for a discussion of organizational and team culture.)

Teams are more likely to succeed in organizations that encourage collaboration and recognize the importance of teamwork (Salas, 2015). Many health care organizations, for instance, explicitly define teamwork as a core value of their workplace culture (Rosen et al., 2018). Incentives also matter. Research shows that STEM professionals are less likely to participate in team projects if adequate rewards are not in place (Kniffin & Hanks, 2018).

Likewise, academic institutions often struggle to fully support team-based research, as promotion and tenure policies tend to focus on individual accomplishments (Leahey, 2016).

Certain organizational structures help teams perform optimally (Hackman, 1990b). Teams benefit from having clear goals, well-defined tasks, and a degree of autonomy rather than being constrained by rigid directives. Access to resources—such as compensation, time, space, and training—also help teams function effectively (Rosenfield et al., 2018). In addition, reliable information from the organization helps teams make informed decisions, coordinate with other departments, and plan for future initiatives. Teams also benefit from organizational support, including technical assistance and interpersonal support, such as coaching to improve communication, resolve conflict, or maintain focus. Regular feedback on performance, paired with incentives for improvement, further enables teams to align with organizational goals and operate effectively. (For more on performance management systems and rewarding team performance, see Chapter 16.)

Despite extensive research on teamwork, the qualities of successful teams vary widely (Cohen & Bailey, 1997). For example, self-managing production teams rely heavily on organizational support, while professional project teams benefit from high-quality leadership due to their nonroutine tasks. Even teams that share similar structures, resources, and goals have inconsistent levels of performance (Barley & Weickum, 2017). Different types of teams face different challenges, so they need to adopt alternative strategies to be effective.

Together, team composition, task characteristics, and organizational context serve as the foundational inputs that shape how teams function. But inputs alone do not determine performance. What matters next is how teams organize their work, interact with one another, and adapt over time. In the next section, we turn to the internal dynamics of teamwork by exploring key processes and emergent states that drive collaboration and effectiveness.

Mediators: How Teams Work Together

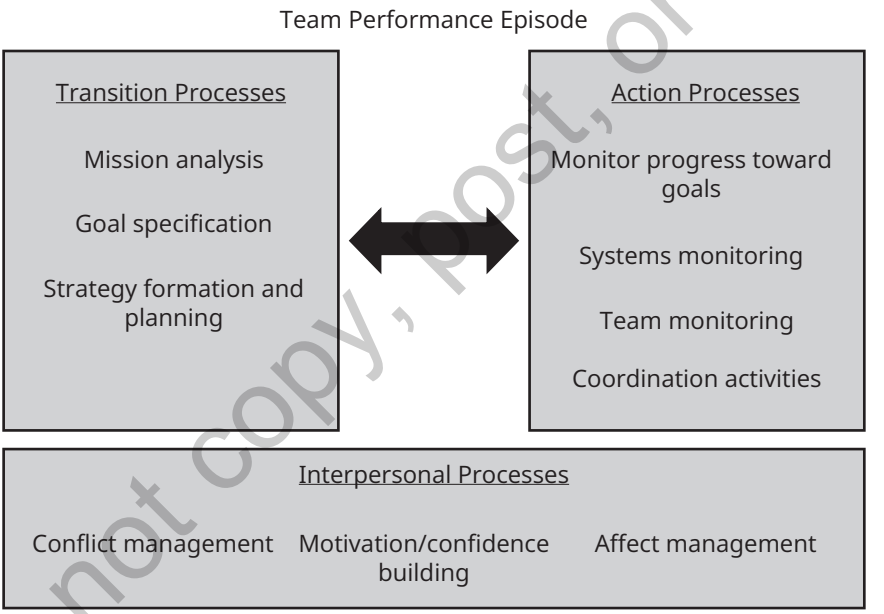
Having the right team members and a well-designed task provide a strong foundation, but these inputs alone do not guarantee success. What often makes the biggest difference is *how* the team works together. To reach their goals, teams must engage in effective processes—the ongoing interactions that shape how work gets done. These include behaviors like decision making, communication, coordination, and resolving conflict. When these processes are well-managed, teams stay organized, monitor progress, and build strong relationships that support collaboration. But when processes break down teams can rush decisions, avoid necessary disagreements, or struggle with miscommunication.

As teams engage in these processes, they also develop emergent states—shared emotions, attitudes, and beliefs that arise from ongoing interactions. These include changing levels of trust, motivation, or confidence. Emergent states play a powerful role in shaping how team members engage in future interactions. Some help reinforce healthy dynamics and adaptability, while others can create patterns that hold the team back.

Teamwork Processes

In synthesizing research on teamwork processes, Marks and colleagues (2001) identified 10 behaviors of highly effective teams. They describe teamwork as a series of ongoing *performance episodes*, where teams move back and forth between transition and action phases, while constantly addressing interpersonal processes (see Figure 2.1). In *transition phases*, teams focus on preparing for work by setting goals, assigning roles, and developing strategies. During *action phases*, team members carry out the work to make progress. Once tasks are completed, the team returns to the transition phase to reassess goals and refine their approach before the next round of action. Throughout these cycles, teams must continually manage *interpersonal processes* such as maintaining trust, resolving tensions, and keeping motivation high. This view presents teamwork as a dynamic and ongoing process that requires regular reflection, adjustment, and interpersonal engagement to stay effective.

Figure 2.1 ▪ Team Processes During a Performance Episode



Source: Adapted from Marks, M. A., Mathieu, J. E., & Zaccaro, S. J. (2001). A temporally based framework and taxonomy of team processes. *Academy of Management Review, 26*(3), 356–376.

Each teamwork episode begins with a ***transition phase***. Here, team members set aside time (e.g., meetings, after-action reviews, retreats) to collectively evaluate past activities or plan future activities to progress toward the team goal. Three team processes occur during this phase:

- *Mission analysis*. Developing a shared understanding of the team's purpose by clarifying tasks, considering stakeholder needs, and identifying necessary resources.
- *Goal specification*. Collectively identifying and prioritizing the goals required for the team mission, establishing quality expectations, and setting timelines for completion.
- *Strategy formation and planning*. Deciding how members will execute their tasks, communicate with each other, and specify contingency plans to adapt to emergent situations.

Teams then enter an ***action phase***, during which members individually conduct the activities that contribute to achieving their collective goal. Four team processes occur at this stage:

- *Monitoring progress toward goals*: Evaluating task progress with clear metrics, providing feedback about progress, and checking on the progress of others. The team determines if they need to adjust their plans (e.g., seek help or work overtime).
- *Systems monitoring*: Attending to the resources (e.g., skills, time, technology, networks, or information.) needed by the team to succeed and adapting to outside influences (e.g., leadership support, economic changes, or legal requirements) that can impact the team's success.
- *Team monitoring and backup responses*: Ensuring that workload is distributed equally, applying standards for individual performance, learning about team members' strengths and weaknesses, providing performance feedback, and helping teammates.
- *Coordination*: Ongoing communication with team members to support synchronous interdependence with each other.

Interpersonal processes occur throughout the transition and action phases, often laying the foundation for the success of transition and action processes. Teams with high levels of group cohesion and strong social relations are often the most effective teams. Three processes help to manage the social relationships between members:

- *Conflict management*: Encouraging productive debate of ideas, while respectfully working through interpersonal disagreements among team members.

- *Motivating and confidence building*: Developing feelings of competence, pride, and morale. Maintaining and rewarding high standards of performance.
- *Affect management*: Regulating teammate emotions like cohesion, frustration, and excitement.

This model of team processes highlights the ongoing cycle between planning and action phases that effective teams navigate. While it may present teamwork as straightforward, this is not always the case. In practice, teams often rush through planning, make decisions without fully exploring their options, or fail to build a shared understanding of their goals. Members may not communicate regularly or monitor one another's progress. These breakdowns can lead to reduced or misaligned effort that reduces performance.

Yet teams benefit from investing time into managing their processes. For example, military teams discussing strategy briefly before an engagement performed better and coordinated more effectively (Dalenberg et al., 2009). Likewise, teams that jointly create a team charter detailing how they will interact with each other experience higher performance (Mathieu & Rapp, 2009).

Effective teamwork processes also depend on leadership. Leaders play a key role in keeping the team focused and supporting how members work together. However, there is no simple rule for good leadership. What a team needs from its leader can vary depending on the task, the context, and the team's level of experience (see Chapter 10 for a deeper discussion of leadership approaches). The role of a team leader is to create the conditions that allow the team to manage itself. This includes setting a clear direction, fostering trust, ensuring the team has the necessary resources, and helping the group adapt as conditions change (Hackman, 2012).

Emergent States

Emergent states are the shared emotions, attitudes, and beliefs that develop within a team over time (Fyhn et al., 2023; Rapp et al., 2021). They reflect how the team is functioning at the moment but also influence how team members interact in the future. Unlike more stable traits like personality, emergent states are dynamic—they change in response to the team's ongoing experiences. This makes them especially important for teams to monitor and manage.

Emergent states are shaped by the team's inputs, processes, and outputs. Team inputs like leadership, member skills, and available resources provide a foundation. Supportive leadership and clear goals can promote a positive atmosphere, while a lack of resources or unclear roles may create stress or reduce confidence. Team processes also impact emergent states. Effective communication, constructive conflict resolution, and collaboration help build trust, cohesion, and shared understanding. In contrast, disorganization or unresolved tension can erode morale and damage relationships. Finally, team

outputs feed back into emergent states: success can increase confidence and motivation, while setbacks may reduce morale or encourage reassessment of goals and strategies.

At the same time, emergent states also influence team inputs, processes, and outcomes—creating a reciprocal relationship. Take trust as an example. When a team builds trust through positive experiences, members feel safe relying on one another, which promotes open communication and more effective coordination. This trust enhances processes like decision making and conflict resolution and contributes to stronger performance and higher satisfaction. However, trust can be fragile. A single broken promise or act of unfairness may erode it quickly, leading to poor communication, increased conflict, and disengagement. In the long run, this may even affect team composition, as dissatisfied members withdraw or leave—altering the team's inputs and further weakening its processes.

This ongoing, two-way influence forms a **feedback loop**: Emergent states are shaped by team functioning and, in turn, shape how the team functions moving forward. When positive, they can strengthen collaboration, adaptability, and success. When negative, they can become barriers to team effectiveness. Recognizing and managing this feedback loop is essential to building and maintaining healthy team dynamics.

There are three main types of emergent states: affective, motivational, and cognitive. *Affective states* include shared emotions, like cohesion and psychological safety, which foster trust and open communication. *Motivational states* reflect the team's collective drive and resilience, such as confidence, goal commitment, and engagement. *Cognitive states* represent shared knowledge, such as mental models, that help team members coordinate tasks and respond to challenges together. These three types of emergent states work together to influence team performance. They develop, adapt, and evolve through team interactions and feedback over time. Chapter 4 will explore each in greater detail and offer strategies to help teams build and sustain positive emergent states that support high performance and healthy collaboration.

Teaming Mindset

Edmondson (2012) offers another model of team process and emergent states by emphasizing the mindsets of successful teams. Unlike traditional teams with stable structures, many contemporary teams, such as those in hospitals, the military, airline crews, and power plants, operate in environments where stable membership and fixed processes are rare. In these settings, teams frequently create new knowledge and tackle complex, ambiguous problems. To navigate this uncertainty effectively, team members need to rapidly share information, make decisions, and learn from failures—often with people they have never worked with before. Edmondson calls this adaptable and flexible approach to teamwork a *teaming mindset*.

Teaming relies on four core practices: speaking up, collaborating, experimenting, and reflecting. These practices help teams adjust and learn as situations evolve.

To support them, team members should focus on four key areas: First, staying open-minded to encourage flexible thinking and active participation. Second, fostering a safe environment where everyone feels comfortable communicating openly, giving feedback, and sharing different perspectives. Third, building a learning culture where mistakes are viewed as opportunities for growth. Finally, overcoming barriers such as differences in status, location, or expertise to facilitate effective collaboration.

Outputs: Defining Team Success

Outputs are the results of a team's efforts. They reflect how well the team's inputs and processes contribute to achieving its goals. However, team members, leaders, and managers may define success in different ways (Levi & Slem, 1995). Team members often focus on how well they collaborate and support each other, paying attention to individual contributions and group dynamics. In contrast, managers and leaders usually care more about external results: metrics, deadlines, and how the team's work contributes to organizational goals. Relying on a narrow view of success can misrepresent a team's performance, highlighting the importance of a balanced approach to evaluation.

Hackman (1987) describes three primary definitions of team success, emphasizing the importance of task performance, social relationships, and individual benefits. First, a successful team meets or exceeds its performance goals. Second, it builds positive social relationships that support effective collaboration and team cohesion. Finally, team members should gain something personally from the experience, such as developing new skills, receiving recognition, or feeling a sense of belonging and purpose.

This definition of team success is illustrated by a crew of astronauts traveling to Mars. The team's primary task goal is critical: They must not only reach Mars but also safely return to Earth. Achieving this mission requires high performance, as any failure could jeopardize their lives. But task success alone is not enough. Strong interpersonal relationships are essential during months of isolation and stress. While a team might technically complete the mission without close bonds, poor social dynamics can lead to conflict, burnout, or errors—especially on the return trip or future missions. Individual benefits also matter. For astronauts, the personal meaning of participating in a historic mission, developing new skills, and advancing their careers fuels motivation. Without these rewards, even the most talented team may struggle to stay engaged and committed over time. Team success depends on more than achieving a task. It requires balancing high performance, healthy relationships, and meaningful personal growth.

Task Performance

Task performance refers to how well a team meets the expectations of project stakeholders. Managers often use the "Iron Triangle" of cost, time, and quality to determine the value a project creates for an organization (Atkinson, 1999). While these criteria are useful, focusing too narrowly on them can lead to poor business outcomes or client

dissatisfaction (Varajão et al., 2022). This is because teams under pressure to meet deadlines and stay within budget may become overly focused on short-term deliverables and daily operations—losing sight of broader goals like responding to evolving client needs, aligning with organizational strategy, or attaining the intended impact of the project. They may build something that does not provide value to clients and or their organization. Conversely, over-budget or delayed projects can likewise still be a success. The Sydney Opera House, perhaps the most iconic landmark in Australia, took three times longer to build at five times the expected cost.

Evaluating task performance is complex in modern knowledge-intensive work environments. In many organizations, teams are not producing physical products but rather ideas, insights, and services (Slyngstad et al., 2017). These tasks are often nonroutine, requiring creativity, professional judgment, and tacit knowledge—things that are difficult to measure objectively (Estrada-Torres et al., 2019). Consequently, team members, managers, stakeholders, and customers may have different definitions of what successful task performance looks like (Spreitzer et al., 1999). While task performance is undoubtedly important in evaluating team success, it is not sufficient on its own.

Developing Social Relations

Many benefits of creating a team emerge over time rather than during its first project. For this reason, organizations invest resources, such as time, training, and funding, to support teams. A successful team does not just complete tasks; it also builds strong social connections that make members want to continue working together (Slyngstad et al., 2017). This ongoing capacity for collaboration is called *team viability*—a team's ability to continue performing effectively and sustaining healthy dynamics over the long term (Bell & Marentette, 2011).

Strong social relationships are central to team viability. These bonds form through shared experiences like managing conflict, giving and receiving feedback, celebrating wins, and staying motivated together (LeDoux et al., 2012; Marks et al., 2001). As team members build emotional ties and trust, they are more likely to communicate openly, cooperate effectively, feel satisfied in their roles, and perform well together (Grossman et al., 2022). By contrast, teams struggle when they lack communication, experience interpersonal conflicts, develop cliques, or fail to support each other. Poor social relations can severely limit a team's effectiveness.

A cautionary tale of the risks of focusing solely on task performance, without fostering social relations, comes from Kidder's (1981) study of a computer system development team. Although the team completed a complex project under intense competition and time pressure, the members burned out in the process. By the end, they were satisfied with the project outcome but unwilling to work together again. While the organization gained a new system, it lost the future value of this team that could have gone on to do more great work together. This type of project burnout underscores the importance of balancing task success with sustainable social relations to build effective teams.

Benefiting the Individual

The third key aspect of team success is how participation benefits each individual team member. While teams are often formed to achieve particular goals, they also serve as spaces for professional growth, identity, and friendship. People join teams for different reasons, and these motivations affect how cohesive and productive a team becomes (Wax et al., 2017). Some individuals are drawn to the sense of belonging, emotional support, and shared identity that come from being part of a group (Baumeister & Leary, 1995; Hogg et al., 2008). Others value the opportunity to develop professional and interpersonal skills (Katzenbach & Smith, 2015) or are motivated by the team's specific goals, members, or tasks (Hogg & Turner, 1985). Some join teams primarily to advance their own careers through expanding professional networks, building their résumés, or gaining recognition.

Conflicts can arise if individual and team goals are misaligned. If team members feel like they must choose between helping the team and achieving their own goals, motivation and performance can suffer. In contrast, when individuals see their personal goals as aligned with team goals, cooperation and performance tend to improve (Crown & Rosse, 1995). Leaders can support this alignment by framing team goals in ways that connect with individual motivations (Fairhurst, 2010). For instance, if a team member values belonging, emphasizing team-building activities can enhance their engagement.

Team participation should also support career growth. Contributions to the team should be reflected in performance evaluations (Wood et al., 2023). However, many organizations still focus solely on individual achievements when evaluating employees (Gneezy, 2023). Even employees who spend most of their time collaborating are often evaluated on individual output. Being a good team player or a social facilitator may go unrecognized, while people who distinguish themselves and stand out are rewarded. Consequently, some employees may avoid joining teams working on projects with limited visibility or prestige, or where their contributions are not recognized. This misalignment between individual and team performance continues to challenge organizations today. Approaches for better aligning individual and team performance evaluations are discussed in Chapter 16.

The IMOI Model: A Framework for Team Success

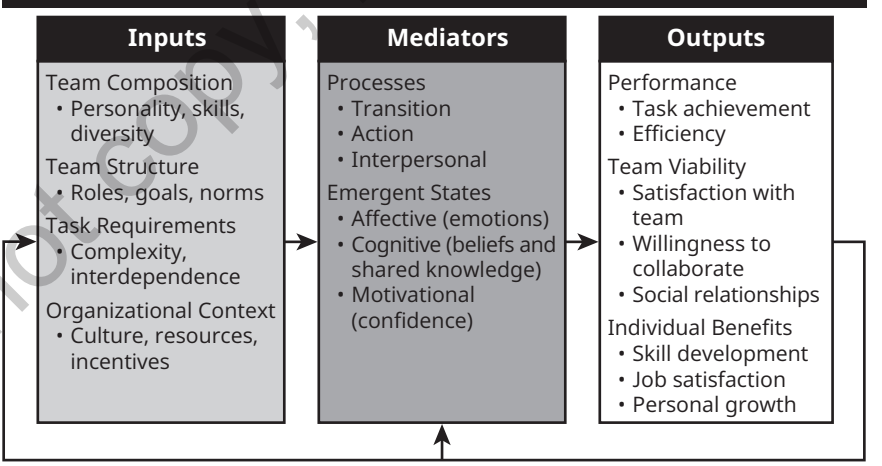
Inputs, processes, emergent states, and outputs interact over time to shape team success (see Figure 2.2). The IMOI model offers a useful framework for understanding teamwork as a continuous cycle. For example, successfully completing a challenging project can increase subsequent team expertise and confidence,

preparing the team for successful interactions during the next task. Conversely, challenges or failures also feed back into the system, prompting the need for reflection and change. Each team interaction feeds back into the system, influencing future interactions.

This cyclical nature explains why team success is never fixed. Even high-performing teams must continue learning, adapting, and responding to changing circumstances. A strong input—such as a well-composed team or supportive organizational culture—only matters if the team can translate it into effective interactions and relationships. Likewise, successful outcomes are more likely when teams engage in effective teamwork processes and continually promote effective emergent states.

By showing how outputs shape the next cycle of teamwork, the IMOI model encourages us to view teams as adaptive systems that learn, grow, and evolve over time. Team members and leaders who understand this can take a more proactive approach to teamwork, tracking what works, identifying problem patterns, and making adjustments that support both performance and social relationships. Importantly, the IMOI model expands our definition of success to include not just task completion but also outcomes like professional growth and social relationships (Cantrell et al., 2024; Mills et al., 2013). When teams are supported by inspiring tasks, clear roles, and a healthy team climate, they are more likely to build positive emergent states like trust and cohesion. These states in turn support performance and team member satisfaction (Richardson & West, 2010).

Figure 2.2 ▪ IMOI Model of Team Success



Source: Adapted from Ilgen, D. R., Hollenbeck, J. R., Johnson, M., & Jundt, D. (2005). Teams in organizations: From input-process-output models to IMOI models. *Annual Review of Psychology*, *56*, 517–543.

Building Teams Success in the Workplace

Work teams are an important way of improving organizational effectiveness (Delarue et al., 2008). Given this, it is no surprise to see a shift toward team-based approaches in health care (Rosen et al., 2018), research (Salas et al., 2018), STEM teams (Kniffin & Hanks, 2018), as well as innovation (Thayer et al., 2018). Implementing teamwork is also one of the most effective interventions for improving organizational performance (Guzzo & Dickson, 1996), improving both financial success and addressing personnel issues such as turnover and absenteeism. However, developing effective work teams is not without challenges. Organizations often encounter obstacles when moving from traditional work systems to team-based structures. Teams may be implemented in settings where traditional methods would be more efficient, or they may be overused to the point where excessive collaboration becomes counterproductive.

Benefits of Teamwork

Teams are an effective way to improve performance and job satisfaction. Large-scale studies on the use of production work teams show their effectiveness (Guzzo & Dickson, 1996). Teams improve both the efficiency and quality of organizational performance. Using teams provides the flexibility needed to operate in today's rapidly changing business world. However, teams may develop performance problems that limit their effectiveness, and the initial transition to teamwork may be a complicated process for organizations.

In addition to increasing organizational effectiveness, implementing work teams often improves job satisfaction and quality of work life (Sundstrom et al., 2000). Teams have these beneficial characteristics because they provide employees with social support and autonomy, encourage cooperation, and make jobs more exciting and challenging. Among nurses, for example, teamwork is associated with higher perceptions of adequate staffing and greater job satisfaction (Kalisch et al., 2010). Teams also have the potential to be more innovative, which is critical for advancing science, technology, engineering, and math (Thayer et al., 2018).

Problems of Teamwork

While teams offer many benefits, they can also present challenges for both organizations and employees. One common issue is *process losses*—time spent on team development and coordination instead of immediate task completion—which can lead to perceptions of inefficiency and frustration among team members (Hill, 1982; Steiner, 1972). These losses tend to increase with the size of the team, highlighting the importance of optimal team size for minimizing coordination costs (Mueller, 2012). Rather, the advantages of using a team emerge when they are thoughtfully implemented, and interdependent collaboration is necessary to complete the task (Kozlowski & Ilgen, 2006).

Effective teams typically establish norms that promote high-quality performance and possess group cohesiveness to facilitate social bonds among members. Yet, work teams may have problems with norms and cohesiveness. Teams with poor performance norms are less effective and may resist change. Conversely, while high levels of group cohesion can enhance team cooperation, they may also diminish performance orientation and impair decision making due to a desire for conformity (Nemeth & Staw, 1989). Additionally, teams can amplify errors, biases, and framings made by individuals, leading to lower performance (Hinsz et al., 2008; Sleesman et al., 2018).

Recent research has identified five critical teamwork challenges: maintaining individual accountability, managing conflict through supportive climates, clarifying roles and decision-making processes, allowing time for strategic reflection, and providing opportunities for coaching and development (Zajac et al., 2021). These findings suggest that many teams struggle due to insufficient resources, knowledge, skills, and support, highlighting organizations' need to invest in team development and support mechanisms.

Implementing work teams often creates problems, particularly in organizations with established traditional management systems resistant to change (Hackman, 1990a). Moreover, the shift to hybrid work introduces additional complexities, including challenges in maintaining collaboration and communication and deteriorating coworker relationships in the absence of regular in-person interactions (Wigert, 2023). Addressing these issues requires a supportive organizational context that fosters team growth, including adapting management practices to support team development in hybrid and remote environments.

Overusing Teams

Many managers and employees overrate the effectiveness of teamwork and overprescribe its use (Allen & Hecht, 2004). As a result, organizations often face issues from overuse (Mistry et al., 2023). One outcome of this overly optimistic view is that teams are employed for nearly every organizational problem, even when traditional approaches might be more effective. Strong beliefs about the effectiveness of teams also lead to their implementation without the necessary organizational changes needed to support teamwork. Managers implement teams, looking for benefits without considering the costs of training teams and other ensuing organizational structures (Paulus, 2002).

Another consequence of team overuse is excessive collaboration within organizations (Cross et al., 2016). Employees can spend up to 80% of their time in meetings or responding to requests, creating "*collaborative overload,*" where individuals are stretched thin across multiple teams with competing demands. This overload can lead to stress, burnout, work–life conflict, reduced performance, and increased turnover (Cross et al., 2016; Kim et al., 2023). Recognizing the detrimental impact of excessive collaboration, organizations increasingly focus on safeguarding team members' focus and productivity (Cross et al., 2022). This includes building awareness of individuals'

collaboration levels, establishing effective collaboration norms, and implementing "resets," such as canceling small recurring meetings to reassess their necessity and streamline communication practices. By addressing collaborative overload, organizations can cultivate a healthier, more sustainable teamwork environment that supports organizational goals.

Navigating these challenges requires a thoughtful approach to teamwork. Successful teamwork requires clear objectives that require collective effort, diverse skills, shared accountability, and strong organizational support (Katzenbach & Smith, 2001). Rather than treating teamwork as a one-size-fits-all solution, managers should critically evaluate whether a team-based approach is suitable for the task and ensure that all conditions for effective collaboration are in place.

Summary

Understanding team effectiveness starts with viewing teams as dynamic systems composed of interrelated components that evolve over time. The Input–Mediator–Output–Input (IMOI) model provides a framework for analyzing how team success is built through a continuous cycle of interactions. Inputs such as team member composition, task characteristics, and organizational context provide the resources that teams bring to a task. Processes, including planning, coordination, communication, and conflict management, transform these inputs into results. Through these processes, teams develop emergent states—shared emotions, attitudes, and beliefs—that evolve from team interactions and influence how effectively team members work together.

Group dynamics are impacted by surface-level attributes, like demographic characteristics, and deep-level attributes, like personality traits and skills. For example, traits such as conscientiousness, agreeableness, and emotional stability are associated with higher team performance. Additionally, understanding task characteristics and how members' roles and skills align with specific tasks can help the team operate more effectively. Teams benefit from supportive organizational contexts, which provide resources, structure, and incentives to reinforce teamwork and facilitate performance.

Outputs are the measurable results of team efforts, which include not only task performance but also positive social relationships and personal benefits for team members. Task performance measures whether the team meets its objectives, while strong social relations foster long-term collaboration and team viability. Personal benefits, such as skill development, social support, and career growth, contribute to team members' satisfaction and motivation, further promoting team effectiveness.

The IMOI model highlights how outputs feed back into the team to influence future inputs, processes, and emergent states. Outputs like a successful project or high satisfaction can strengthen team members' skills, trust, and motivation for future tasks.

Conversely, challenges or setbacks may signal areas for improvement, prompting adjustments to team dynamics. This cyclical model provides a framework for understanding teamwork as an adaptive process, where each interaction influences future team functioning and supports ongoing growth and resilience.

Though teams offer many benefits, they can also present challenges, such as process losses, coordination issues, and collaborative overload. Excessive team collaboration, for example, can lead to "collaborative overload," resulting in stress, burnout, and reduced productivity. Organizations need to evaluate whether teamwork is suitable for specific tasks and provide clear goals, adequate resources, and strong support. By critically assessing and thoughtfully implementing teamwork, organizations can foster an environment for teams to succeed.

Discussion Questions 2

1. Rank the importance you place on *task performance, building social relationships*, and *personal benefits* in team settings. Compare your rankings with those of your peers. How might differing priorities affect team functioning and dynamics?
2. Complete a personality assessment, such as through ITP Metrics (www.itpmetrics.com). Reflect on how your personality traits may influence teamwork, particularly concerning team processes like planning, monitoring, and managing interpersonal relationships. Which traits might promote or hinder these processes?
3. Discuss how inputs, mediators, and outputs interact to influence team effectiveness. Can you provide a personal example or an observation that illustrates these connections in a team setting?

Team Leadership Challenge 2

The student council at your local college has decided to launch a Campus Green Initiative, focusing on increasing recycling efforts across the campus. The primary goal is to enhance awareness about recycling, reduce waste, and engage the student body and faculty in sustainable practices. To achieve this, a team of students from various disciplines—environmental science, business, communications, and engineering—has been formed to plan and execute a week-long recycling drive. This initiative requires careful planning, coordination with campus facilities, marketing to increase participation, and establishing sustainable recycling processes.

Success depends on the team's ability to work together and address key challenges, such as engaging a diverse campus population, ensuring correct separation of recyclables, compost, and landfill items, and creating lasting impact beyond the week-long event. The team will need to clarify task types, how efforts will be coordinated, team member roles, and the organizational support required.

- Using Wildman et al. (2012)'s framework, identify and categorize the tasks needed to organize the recycling drive. Describe how each task contributes to the overall goal of the initiative, then identify the three most essential tasks and justify their importance.
- Apply Steiners (1972) framework and evaluate the pros and cons of using different integration strategies for the three identified tasks.
- Identify the required team composition of shared and unique attributes like attitudes, knowledge, skills, and personalities. Explain how different team compositions might impact teamwork processes and emergent states over time, such as the impact of a team member lacking enthusiasm for sustainability.
- What types of support and resources should the college provide to ensure recycling drives success? Consider materials, communication tools, facilities access, and any administrative approvals needed.
- Evaluate the degree to which the success of this team is dependent on the interrelationships of the task, composition, and support from the organization. How might success or failure in one area impact the subsequent team functioning in another?

Activity: Understanding Team Success

Objective: Why are some teams successful while others are unsuccessful? Use your experience with teams to answer this question.

Activity: Think about a time when you were on a successful team. Using Activity Worksheet 2.1, write a description of the team at that time. (What was it like being on the team? What was the team like? What behaviors did the team engage in?) Think about a time when you were on an unsuccessful team. Write a description of the team at that time.

Activity Worksheet 2.1

Successful and Unsuccessful Teams

Successful Team:
Unsuccessful Team:

Analysis: Compare the two descriptions of successful and unsuccessful teams. What team processes (transition, action, and interpersonal processes) may explain the differences between these two teams? Compare your answers with those of other group members. Are the characteristics similar? Develop a group answer to the following question: What are the characteristics of successful teams?

1. _____
2. _____
3. _____
4. _____

Discussion: Using your list of the characteristics of successful teams, what advice would you give a team leader about how to establish and run a team?