

# CHAPTER 13

## Teamworking

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### Key terms

team	empowerment
group	Japanese teamworking
advice team	self-managing team
quality circle	team autonomy
total quality management	external work team differentiation
just-in-time system	internal work team differentiation
action team	external work team integration
project team	team performance
cross-functional team	team viability
production team	
high-performance work system	

### Learning outcomes

When you have read this chapter, you should be able to define those key terms in your own words, and you should also be able to:

1. Understand why 'team' is a contested concept in the organizational literature.
2. List the nine dimensions of team autonomy.
3. Differentiate between four major types of teams and give an example of each.
4. Discuss the types of obstacles to effectiveness experienced by each type of team.
5. Contrast Western with Japanese concepts of teamworking.
6. List the four main elements in the ecological framework for analysing work team effectiveness.
7. Understand the continuing importance of teamworking.

## Why study teamworking?

The value of high-performing teams has long been recognized. Using a sporting analogy, it has been said that while individual talent may win games, teamwork and intelligence wins championships (Keller and Meaney, 2017):

‘Teams have become the building blocks of organizations. Recruitment ads routinely call for ‘team players’. Business schools grade their students in part on their performance in group projects. Office managers knock down walls to encourage team-building. Teams are as old as civilization, of course: even Jesus had 12 co-workers.’ (*The Economist*, 2017, p.68)

Lencioni (2002, p. vii) commented:

‘Not finance. Not strategy. Not technology. It is teamwork that remains the ultimate competitive advantage, both because it is so powerful and so rare.’

Deloitte, a professional services consultancy, surveyed 70 executives in over 130 countries and found that teamwork had reached a new high (Brown et al., 2015). Nearly half reported that they were in the process of reorganizing and intending to place greater emphasis on teams in their organization structure. What is driving this ‘stream to team’?

- *Technological innovation*: Product development through technological innovation has accelerated product changes from five or six to one or two years. Companies have begun competing against market transitions rather than competitors. To meet this challenge, companies have had to become more agile in the modern marketplace.
- *Digital communication technology*: This allows junior staff to easily coordinate their own activities themselves. They no longer need a manager in the company hierarchy to do it for them.
- *Employee expectations*: ‘Millennials’ who represent an ever-greater percentage of the workforce in Western countries have been brought up to work in groups from school and expect to do so at work.
- *Failure of hierarchy*: The US Army found that its hierarchical structure impeded its progress during the Iraq war while its opponent leaders decentralized their authority to self-organizing teams (McChrystal, 2015).

The required agility cannot be achieved by traditional ways of organizing. Rigid, hierarchical organization structures which worked in the past are no longer suitable for the twenty-first century. That is why a network of teams is replacing conventional hierarchies. These cross-disciplinary teams are being allowed to manage and coordinate between themselves.

### Teamworking at Copiapó

On the 14 October 2010, the last of the 33 Chilean miners who had been trapped for 69 days at the San José gold and copper mine in Copiapó in the Atacama Desert, 2,300 feet below the Earth’s surface (two Empire State Buildings deep) was pulled to safety with the help of an unlikely source – the United States’ National Aeronautics and Space Administration (NASA). It was a dire situation. While developing their rescue plans, the Chilean government also sought advice and information from other governments and organizations as to how to assist the trapped miners. One of the organizations that responded to the call for assistance was NASA. It quickly formed a

team consisting of two medical doctors, a psychologist and an engineer. The team spent three days at the rescue site in Chile assessing the similarities between the miners’ plight and life in space.

They gave advice to the rescue team at the mine site. This ranged from warning rescuers not to give the starving men too much food too quickly (which could prove fatal), to suggesting they wear sunglasses when surfacing after two months underground. Most importantly, the NASA team also provided the design for the innovative rescue capsule (nicknamed *Phoenix*) that was used to pull the miners to the surface and which ultimately saved





their lives. The four-person NASA team consulted with 20 of their colleagues and came up with 50 design recommendations. For example, that exterior rollers would

cushion the capsule's ride up reducing both the friction with the tunnel walls and the possibility of it getting stuck half way.

On the day, with remarkable speed – and flawless execution – miner after miner climbed into the capsule, and was hoisted through the rock and saw precious sunlight after the longest underground entrapment in history. Dr Michael Duncan, NASA's deputy chief medical officer stated, 'We were able to bring the knowledge we learned in space to the surface, and under the surface, to help people here on Earth'. The Copiapó incident involved not only very unusual team composition – these occupations, professions and cultures do not normally collaborate in this way; but also a very unusual team context – rescuing trapped miners – this is not something that is done routinely (National Aeronautics and Space Administration, 2011; Rashid et al., 2013).

### STOP AND SEARCH

YouTube for *NASA, Chilean Miner Rescue*.

## The T-word and team work design

**Team** a collection of individuals who exist to achieve a shared goal; are interdependent with respect to achieving that goal; whose membership is bounded and stable over time; and who operate within a system.

**Group** two or more people in face-to-face interaction, each aware of their group membership and interdependence as they strive to achieve common group goals.

A **team** refers to a collection of individuals who exist to achieve a shared goal; who are interdependent with respect to achieving that goal; whose membership is bounded and stable over time; and who operate within a system. The word derives from Middle English, Fresian and Norse word for a bridle and thence to a set of draught animals, for example a team of oxen, harnessed together and then, by analogy, to a number of persons involved in joint action. The term, literally refers to a relatively small number of entities that pull together to reach a common goal (Weiss and Hoegh, 2015). **Group** refers to two or more people, in face-to-face interaction, each aware of their group membership and interdependence as they strive to achieve their goals. Team thus represents a sub-category of group.

In much of the literature, the terms *group* and *team*, are used interchangeably. Management consultants frequently use the term team metaphorically, that is, they apply this label to a collection of employees to which it is imaginatively, but not literally, appropriate. Hayes (1997) noted that the idea of team must be one of the most widely used metaphors in organizational life. These same writers also use the term to describe a collection of people as what they *should* be, or what they would *prefer* them to be, rather than as they actually *are*.

Nicky Hayes saw teams as a sporting metaphor used frequently by managers and consultants. One of the large British supermarket chains used the employee job title of 'checkout *captain*'. The metaphor stresses both inclusiveness and similarity – members sharing common values and cooperating to achieve common goals while also emphasizing

### STOP AND SEARCH

YouTube for *Teams versus groups (3:11)*.

## Teams at Google

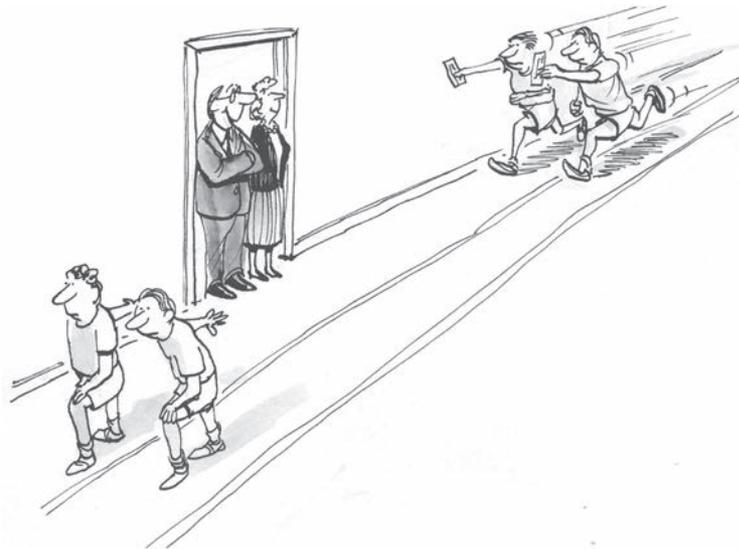
In Douglas Edwards' (2011) account of the early days of Google, he described Urs Hölzle, as a key person on the engineering side ('Saint Urs, Keeper of the Blessed Code'):

'Urs's most significant accomplishment, however, was building the team that built Google. Your greatest impact as an engineer comes through hiring someone who is as good as you or better" he exhorted everybody who would listen, 'because over the next

year, they double your productivity. There's nothing else that you can do to double your productivity. Even if you are a genius, that's extremely unlikely to happen' . . . If you have very good people it gives you a safety net', he believed. 'If there's something wrong, they self-correct. You don't have to tell them. 'Hey, pay attention to this. They feel ownership and fix it before you even knew it was broken' (p.36).

differences as various individuals play distinct, albeit equally valuable roles, and have different responsibilities. She wrote that:

'The idea of 'team' at work must be one of the most widely used metaphors in organizational life. A group of workers or managers is generally described as a 'team' in much the same way that a company or department is so often described as 'one big family'. But often, the new employee receiving these assertions quickly discovers that what was described as a 'team' is actually anything but. The mental image of cohesion, coordination and common goals which was conjured up by the metaphor of the team was entirely different from the everyday reality of working life.' (Hayes 1997, p. 27)



“I love the sense of teamwork.”

## Home viewing



In the film *Early Man* (2018, director Nick Park) a tribe of primitive Stone Age dwellers have to defend their land from Bronze Age invaders. What distinguishes a great team from a group of great players? Whether hunting or playing football, the Stoneagers support and work for one another and share a common objective – remaining in their valley. In contrast, the Bronze Age football team members, although individually skilled, are too egotistical to work together effectively, and seek personal rewards. Despite their inferior football skills but with coaching and teamwork, the Stoneagers win their valley back – a team of individual champion players can be beaten by a champion team.

## Types of team tasks

Eric Sundstrom, Kenneth De Meuse and David Futrell (1990) distinguished four types of teams – advice, action, project and production – on the basis of what each did (see Table 13.1).

Sundstrom et al.'s team typology allows you to categorize different teams in organizations; compare and contrast their processes; analyse their outputs, and suggest ways of making improvements. Advice teams provide information to management to be used in its own decision making, e.g. quality circles. Action teams execute brief performances that are repeated under new conditions, e.g. football teams. Project teams bring together employees from different departments to accomplish a specific task, e.g. new product development team. Production teams consist of individuals who share a production goal.

**Table 13.1:** Types of team tasks and their outputs.

Types and examples	Differentiation	Coordination	Specialization	Work cycles	Typical outputs
<b>ADVICE</b> Committees Review panels and boards Quality control circles Employee involvement groups Advisory councils	Low	Low	Low	Work cycles can be brief or long; one cycle can be a team life span	Decisions Selections Suggestions Proposals Recommendations
<b>ACTION</b> Sports teams Entertainment groups Expeditions Negotiating teams Surgery teams Cockpit crews Military platoons and squads	High	High	High	Work cycles brief, repeated under new conditions	Competitive events Expeditions Contracts Lawsuits Concerts Surgical operations Flights Combat missions
<b>PROJECT</b> Research groups Planning teams Architect teams Engineering teams Development teams Task forces	High	Low (for traditional units) or High (for cross-functional teams)	High	Work cycles typically differ for each new project; one cycle can be a team's life span	Plans Designs Investigations Presentations Prototypes Reports Findings
<b>PRODUCTION</b> Assembly line teams Manufacturing cells Mining teams Hospital receptions Data processing groups Maintenance crews	Low	High	High	Work cycles typically repeated or continuous process; cycles often briefer than team life span	Food Chemicals Components Assemblies Retail sales Customer service Equipment repairs

Source: Sundstrom et al. (1990, p.125).

Each team type can be further compared along five dimensions:

1. *Degree of differentiation from other units*: How similar (low differentiation) or different (high differentiation) is this team from others within the department or organization?
2. *Degree of coordination*: Is its work closely related to and intertwined with that of other work units within the organization (high coordination) or does it operate relatively independently (low coordination)?
3. *Degree of technical specialization*: Are members required to apply special, technical skills acquired through higher education or extensive training (high specialization) or do they draw upon their general experience and innate problem solving ability (low specialization)?
4. *Work cycles*: How much time does the team need to achieve its aims? Does it perform short, repetitive work cycles, or a single, long one?
5. *Typical outputs*: What does the team produce as its output?

### CRITICAL THINKING

Naquin and Tynan (2003) found that when people seek to understand team performance; they often give the team credit when it is successful, but blame its individual team members when it is not. Why do you think that teams are not held accountable for their failures?

## Advice teams

**Advice team** a team created by management to provide the latter with information for its own decision making.

**Quality circle** shop floor employees from the same department who meet for a few hours each week to discuss ways of improving their work environment.

An **advice team** is created primarily to provide a flow of information to management for use in its own decision making. Advice teams require little in the way of coordination with other work units in the company. Following a major accident or disaster, governments often set up committees of experts. The committee reviews the events that occurred and makes recommendations about improvements.

In organizations, the **quality circle** (also known as a Kaizen team) is the best known and most publicized advice team of recent times. The original concept was of a team of six to twelve employees from the shop floor of a manufacturing department, meeting regularly to discuss quality problems, investigate their causes and recommend solutions to management. In practice, a wide range of different arrangements were established under this label. Quality circles varied in terms of the number of members; were applied in service as well as manufacturing contexts; included supervisory staff; discussed non-quality issues; and some had authority to implement their suggestions. All these matters depended on how the quality circle was established by management in the particular organization.

Quality circles are a Japanese export. The first quality circle in the United States was introduced at the Lockheed Missile and Space Company in 1974 and the first British one appeared at Rolls Royce in 1978. Originally used in manufacturing, they are now used worldwide in the service industries, government agencies and the voluntary sector. Despite their differences, quality circles possess certain common features:

- Membership is voluntary, and members are drawn from a particular department.
- No financial rewards are given for team suggestions.
- Members receive training in problem solving, statistical quality control and team processes.
- Their problem-solving domain is defined by management (often, but not always quality, productivity and cost reduction).
- Meetings are held weekly, usually in company time, often with trained facilitators helping members with training issues and helping them to manage the meetings.
- The decision to install quality circles is made at the top of the organization, and the circles are created at the bottom.

**Total quality management**

a philosophy of management that is driven by customer needs and expectations and which is committed to continuous improvement.

**Just-in-time system**

managing inventory (stock) so that items are delivered when they are needed in the production process instead of being stored by the manufacturer.



circles begun to be superseded by the 'total quality movement' (Hill, 1991). Quality circles are now part of **total quality management** (TQM) and **just-in-time systems** (JIT).

Management's objectives for introducing quality circles vary greatly, for example, quality improvement, quality enhancement, employee involvement. Although an organization may claim to have introduced quality circles, even at the height of their popularity only a small proportion of the employees ever took part (Marchington, 1992). Quality circles represent one of the largest experiments in the use of advice teams to improve organizational performance during the 1980s. From the 1990s, quality

## Action teams

**Action team** a team that executes brief performances that are repeated under new conditions. Its members are technically specialized, and need to coordinate their individual contributions with each other.

The members of an **action team** are specialized in terms of their knowledge, skill and contribution to the team's objective. The 'performance' of an action team is brief, and is repeated under new conditions each time. Additionally, both the specialized inputs of the various team members and the need for individuals to coordinate with other team members are high.

If a football player sustains an injury on the field, an action team consisting of the club physiotherapists will work on him. If the injury is serious, he may be taken to hospital where another action team – a surgeon and his co-workers – operate on him. Finally, when recuperating in his private room, he may watch TV and see a Formula 1 race where an action team changes the tyres of racing cars. In all these situations, action team members have to exhibit peak performance on demand. Popular films such as the *Mission Impossible* series depict action heroes working together in action teams.

### Formula 1 tyre change

When the Grand Prix racing car flicks into the pits to collect fresh tyres, it is time for the pit crew to take their brief place in the sun under the eyes of the packed grandstands and TV cameras. A pit crew can change all four tyres of an F1 racing car in under two seconds. Pit stops are a critical time as they can make the difference between victory and defeat. The speed of the mechanics practically defeats the eye. Have you seen a tyre change on a Formula 1 car? Count the number of mechanics involved.

There can be 20 or more. There are three men at each corner of the car; one with the wheel gun; another to remove the wheel; a third to put on the replacement; and the last operates the car jack. Others are positioned around these. In fact, the final member of the team is the driver himself who has to streak down the pit lane and stop 6 to 12 inches in front of where the mechanics are positioned. Moving equipment wastes valuable tenths of a second. The tyre change is fraught with danger.



One slip up, one sticking wheel nut, one man unable to fling his arms up in the all clear signal, and the race can be lost. To achieve a consistent, high level of team performance requires military precision, movement programmes (like ballet), and practised rehearsals which go on throughout the year. At present the pit stop record is held by the Ferrari team in the 2013 Japanese Grand Prix changing Fernando Alonso's tyres in 1.95 seconds.

**STOP AND SEARCH****YouTube for *Fastest F1 Pit Stop*.**

Another example of an action team is a *crew*. This term is frequently used to refer to employees who work on aircraft, boats, spacecraft and film sets. A distinguishing feature of a crew is that it is technology-driven. That is why perhaps McDonald's refers to its restaurant employees as 'crew members'. If the technology changes, then so does the nature of the crew. A crew depends on its technology which transforms difficult, cognitive tasks into easy ones. The crew's 'tools' affect the division of labour among its members who use various techniques to coordinate their activities (Hare, 1992; Hutchins, 1990).

Ginnett (1993) reported how, on a Boeing 727 aircraft, the crew members' roles are determined by the location of their seats in the cockpit. The captain sits in the left seat from which he tests all the emergency warning devices. He is the only one who can taxi the aircraft, since the nose wheel gear steering is located on that side of the cockpit. The first officer who starts the engines and who communicates with the control tower occupies the right-hand seat. The flight engineer sits sideways facing a panel that allows him to monitor and control the various sub-systems in the aircraft. He is the only one able to reach the auxiliary power unit. In other transportation craft, the relationship of roles to equipment is different. Airplane personnel consist of those in the cockpit – flight crew (pilot, co-pilot, flight engineers) and those outside it – the cabin crew (flight attendants). Between 1959 and 1989, 70 per cent of all severe aircraft accidents were at least partly attributable to flight crew behaviour (Weiner et al., 1993). Thus, it is a more common cause than either pilot error or mechanical failure.

## Social behaviour in operating theatres



Laura Jones

Laura Jones and her colleagues (2018) studied hospital operating theatres which are inhabited by hierarchical, mixed-gender clinical teams who engage in both technical communication and social interactions. The researchers recorded all behaviour between 400 doctors, nurses and technicians during 200 surgical procedures.

In addition to professional (technical) exchanges, surgical team members were found to engage in a variety of interactions including dance (music is often played during operations). The majority of communications focused on clinicians' personal lives, current events and popular culture.

The 6,348 non-technical, social interactions observed were classified into three categories:

- *Cooperative*: affiliative behaviour and team building including chit-chat, exchanging pleasantries, bilateral joking and teaching that led to better surgical outcomes. (This represented 59 per cent of interactions.)
- *Conflictive*: team disintegrating communication including yelling, insults, being curt and disrespectful and unilateral joking. Behaviours ranged from dif-

ferences of opinion to discord and distraction which could jeopardize patient safety (3 per cent).

The remaining interactions were classed as neutral (38 per cent).

The researchers found that hierarchy, social role and the gender composition of surgical teams affected cooperative and conflict behaviours. Even though rare, conflict was distracting and detrimental to the outcomes. Generally, conflicts were more common when a team consisted of more males than females. Predominantly male surgical teams led by a man were twice as likely to experience conflict as similar teams led by a woman (51 compared to 21 per cent). In female teams there were no differences, regardless of leader.



Lead surgeons initiated most of the conflicts. 80 per cent of the conflicts were directed down the hierarchy, mostly at individuals several positions down from the initiator. Circulating nurses and scrub persons were the most frequent recipients of conflict-provoking behaviours. The results confirm the prevalence of intra-sexual competition with alpha males seeking to assert their own position and status.

Cooperation increased significantly when the lead surgeon's gender differed from that of the majority of

the other clinicians in the room. The highest percentage of cooperative behaviour was observed when the lead surgeon was a female-dominant in a male-dominant room or a male in a female-dominant room. Previous studies show that up to 80 per cent of surgical errors are the result of incorrect interactions between medical team members. The researchers suggest that greater gender diversity may increase cooperative behaviour in this and other work settings.



### STOP AND SEARCH

YouTube for *teamwork surgery*.

## Project teams

**Project team** a collection of employees from different work areas in an organization brought together to accomplish a specific task within a finite time.

A **project team** consists of individuals who have been brought together from different parts of the organization for a limited period of time to contribute towards a management-specified task. The task may be developing a product, refining a service or commissioning a new plant. Once this has been completed, the team is either disbanded or its members are given new assignments. Project teams are created when:

- Creative problem solving is required involving the application of different types of specialized knowledge.
- There is a need to closely coordinate the work on a specific project, e.g. design and development or the production and testing of a new product.

**Cross-functional team** employees from different functional departments who meet as a team to complete a particular task.

Every university has hundreds of project teams who are conducting research. Most of their members are on two- to three-year contracts which span the period of the research project. Team members are recruited on the basis of their specialist knowledge and their output consists of research reports, books and journal articles.

Within the organizational context, the best known and most common type of project team is the **cross-functional team**. This is a collection of employees who are brought together from different departments (functions) of the company to accomplish a specific task within a finite time.

## CUTTING EDGE Cross-industry project teams



Amy Edmondson  
(photo credit:  
Evgenia Eliseeva)

Amy Edmondson (2016) studied cross-industry project teams and identified four leadership practices that lead to team success. If forming groups consisting of individuals from within the same company or university class is difficult, then doing so with people who work in different companies in different industries is an even greater challenge. These team members occupy different intellectual worlds; use distinctive technical languages; possess their own behavioural norms and values; and have their own individual and professional frames of reference. It is therefore not surprising that when these individuals form a cross-industry team, they can experience a culture clash which creates antagonisms that result in emotionally-charged disagreements and conflicts.

Cross-industry teams are being increasingly used for radically innovative projects such as those involving technology and motor car companies. Managing such teams presents unique challenges. Edmondson offered advice to leaders of such teams:



- *Foster an adaptive vision:* While having a clear and unwavering goal which is normal for stable teams with well-defined outputs in these complex dynamic innovative projects, it is better for a goal to evolve. This is because at the outset it is unclear what the team is capable of. It allows members to exercise their influence over the vision. Also, it is likely that end-users' needs will change during the project. While the goal may alter, cross-industry team leaders need to explain to participants the importance of what is being attempted, framed in terms of personal, social or environmental values. They need to invite input from members from the diverse industries in developing and reshaping the project vision so as to keep all of them engaged with the project.
- *Promote psychological safety:* Creating a climate in which individuals feel able to openly disagree, offer wild ideas, and speak up without fear of retribution. Leaders do this by modelling the desired behaviours themselves – showing curiosity, acknowledging their uncertainty, highlighting their own fallibility. These are important for such teams because members may fear showing their ignorance in front of those coming from different fields. They may hold stereotypical images of these people and feel inhibited about addressing an issue. To avoid these problems, leaders need to stress that the team members' work is novel and experimental and that they expect members to take risks. This can reduce their worries about being judged to be ignorant or of making social errors. They should also foster inquisitiveness, clarify the protective legal context, and frame the team's diverse expertise and differing professional cultures as being a valuable resource.
- *Enable knowledge sharing:* A failure by team members to explain their reasoning based on their industry-specific expertise can cause misunderstanding and conflict. So too can contrasting professional goals when for example, civil engineers value reliability while software developers stress experimentation. To avoid these problems, team leaders should insist that individuals share their thought processes with others; make explicit the distinctive professional values that characterize different disciplines represented in the team; frame these differences as a source of strength and advantage for the team; encourage face-to-face interaction between members from different industries; and search for common ground, for example, by exploring



how engineers and developers might achieve experimentation and reliability simultaneously.

- *Cultivate execution-as-learning*: While traditional project management techniques work satisfactorily on projects where tasks and responsibilities are well specified and there is a blueprint to follow, they are likely to be disastrous with innovative projects lacking a blueprint. In such situations, team leaders need to adopt an execution-as-learning approach. It involves creating narrow and deliberate experiments to gain insight into what works in an unfamiliar situation, and welcoming and considering change suggestions that surface unexpectedly.

Traditionally, organizations have been divided into functional departments. These have been dubbed 'boxes', 'silos' or 'chimneys' to stress their insularity. By forming teams consisting of people from these different boxes, organizations can break down the boundaries between their functions (e.g. accounting, marketing, research, product design, human resources); improve coordination and integration; release the creative thought of their employees; and increase the speed and flexibility of their responses to customers. Cross-functional teams are established in order to combine a wide range of employee expertise to achieve a more informed and rounded outcome than would otherwise be possible.

Cross-functional teams comprise employees who traditionally work in different departments or work areas. Sometimes, such teams also include customers, suppliers and external consultants. They are supported by their organization's structures, systems and skills which enable the teams to operate successfully as a more independent unit (less bound by functional ties) towards goals which transcend the combined abilities of individual members. Advocates of cross-functional teams claim that they are beneficial to their customers, employees, and to the organization as a whole. Customers obtain more attractive and customized products and have their needs met more rapidly. Team members benefit through having more challenging and rewarding jobs with broader responsibilities; greater opportunities for gaining visibility in front of senior management; an increased understanding of the entire processes across the organization; a 'fun' working environment; and closer relationships with colleagues. The organization gains through:

- increased productivity
- reduced processing times
- improved market and customer focus
- improved coordination and integration
- reduced time needed to develop new products
- improved communications by having boundaries between functions spanned.

Cross-functional teams differ from other types of teams in three important ways:

- *Representative*: They are representative in that their individual members usually retain their position back in their 'home' functional department.
- *Temporary*: They have a finite life, even if their end is years in the future.
- *Innovative*: They are established to solve non-conventional problems and meet challenging performance standards.

The most common application of cross-functional teams has been in new product development and in research and development (R&D). However, they have also been used whenever an organization requires an input of diverse, specialist skills and knowledge. For example, in manufacturing and production, IT development or process re-engineering initiatives. Recent years have seen the evolution of the multi-national virtual (project) team. These now permeate all levels of most large organizations, often supplementing traditional, face-to-face teams.

Since team members are departmental representatives, they owe their true allegiance to their home, functional department. These members are therefore likely to experience a high degree of pressure and divided loyalties. Their temporary nature also places strains on members who have to quickly develop stable and effective working group processes. Cross-functional teams can therefore have a negative effect on their participants. Organizations and managers need to clearly define cross-functional team assignments in order to maintain order and accountability.

## CUTTING EDGE Multicultural virtual teams



Soo Jeoung Han

Soo Jeoung Han and Michael Beyerlein (2016) identified the factors that affected the processes and performance of nationally and culturally diverse project teams that worked in virtual environments. They identified eight task and socio-emotional challenges that affected team process and performance within multinational virtual teams.

### Task-related challenges

Task-related communicating	Communication problems and misunderstandings; magnified task conflict; dependence on early and frequent task-oriented communication
Coordinating	Coordination difficulties due to power, culture, and communication; issues with keeping on schedule and staying on budget; different preferences for a selection of communication media
Establishing expectations	Difficulties in norming due to various standards of acceptable behaviour and cultural norms
Knowledge sharing	Difficulties in keeping goals stable; reduced information flow due to group perceptions and cultural differences; uneven distribution of information due to differences in information salience and speed of access to information

### Socio-emotional challenges

Overcoming biases	Unhealthy racial and national stereotypes; lack of social information due to cultural differences; conflict due to in-group and out-group dynamics
Building relationships	Relationship conflict due to cultural diversity; lack of shared beliefs and experiences for developing interpersonal relationships
Developing trust	Little informal messaging or social information that can increase trust; greater reliance on cognitive rather than affective elements for trust
Intercultural learning	Intercultural misunderstandings: conflicts due to communication style differences; impaired decision quality

The task and socio-emotional processes were found to be interrelated, circular and iterative, and occurred simultaneously. Overcoming each challenge and moving to the next process is non-linear because changes in membership, small successes and failures, and outside influences, can all set the team back or move it forward in its mastery of challenges. Because of this, the authors recommend that the task and socio-emotional processes should be jointly optimized by managers.



### STOP AND SEARCH

YouTube for *Managing multicultural teams*.

## Production teams

**Production team** a stable number of individuals who share production goals and who perform specific roles which are supported by a set of incentives and sanctions.

Typically, a **production team** consists of individuals who are responsible for performing day-to-day, core operations. These may be product-orientated teams such as those assembling a computer on a factory floor; construction workers placing a bridge in position across a motorway; or teams assembling sound and light systems for a rock concert. The degree of technical specialization required of the team members varies from medium to low, depending on the nature of the duties performed. However, the required degree of coordination, both between the members of each team and between the team and other work units, is high. It is these other units that are either responsible for providing support activities such as quality control and maintenance or who provide the inputs to, or receive the outputs of that team.

Experiments in the 1970s into employee participation and democracy aimed to raise productivity by providing employees with more interesting and varied work. In contrast, team-based working innovations of the 1990s represented a greater concern with efficiency and effectiveness. They were stimulated by the need for companies to remain competitive in a fiercely aggressive global environment. The rationale is that in the race to improve service quality or reduce new product cycle times, technology only gives an organization a short-term advantage and one which can be copied anyway. It is the way that human resources are organized and developed that is more critical.

### Team member familiarity

Most major commercial airlines routinely rotate members of their flight crews. Senior pilots on large planes often fly with a different co-pilot on every trip during a month. Airlines do not stick to the same airplane crews because financially the airline gets most from its capital equipment and labour by treating each airplane, each pilot, and every other crew member as an individual unit, and then uses an algorithm to maximize their utilization. In consequence, pilots dash through the airports just like

passengers, since they have to fly two or three different aircraft, each with a different crew, in a single day.

Team familiarity refers to the amount of previous experience that members have had of working with one another. Robert Huckman and Bradley Staats (2013) studied corporate, healthcare, consulting, military and aviation teams. They found that the degree of familiarity greatly affected team performance and was a better predictor of it than either individual member or project



manager experience. They measured how often team members had previously worked together over time. In one study of an Indian software services firm, they found that when team familiarity increased by 50 per cent defects fell by 19 per cent and budget deviations by 30 per cent. How does team familiarity and unfamiliarity affect team performance?

- *Communication*: Differences between members in unfamiliar teams frequently result in poor communication causing conflict and confusion. Team familiarity obviates the need to learn to communicate with each other and this speeds up progress towards team goals.
- *Learning*: Unfamiliar teams often fail to tap the knowledge that their members possess as they are unaware of who knows what. Familiarity allows them to become acquainted with what expertise each individual has to help achieve the group task and encourages them to share it.
- *Innovation*: Since new solutions come from new combinations of existing knowledge, team members must not only share their own knowledge but also have to integrate it with that of other members. Team familiarity facilitates this knowledge integration process by increasing the chances of finding innovative solutions.

- *Change*: Teams may be asked to modify goals or change time frames due to outside circumstances which can cause stress and require flexibility. Familiar teams provide a more secure basis from which to meet such challenges.

Organizations develop capabilities that their competitors cannot replicate to gain competitive advantage and familiar teams are one source of that advantage. Since each team member's performance is dependent on that of the others, competitors cannot replicate an entire team's capabilities by hiring away just one individual member. The US National Transportation Safety Board found that 73 per cent of accident incidents occurred on a crew's first day of flying together, before individuals had a chance to learn, through experience, how best to operate as a team.

A NASA study found that fatigued but familiar crews made about half as many errors as rested but unfamiliar ones. Asked how long it would take for two crew members to work together well on a flight, an airlines operations staff member estimated five to six years. Clearly this is not good news from a passenger point of view. Next time you board an airplane, ask how many crew members have ever flown together before (Coutu, 2009).

## Team activities

Management's interest in production teams has always been in finding ways of improving employee motivation and performance. Employee participation in decision making can take the form of increasing their autonomy. Bram Steijn (2001) distinguished between *individual* autonomy for the employee who was not part of a team, for example, in the form of job enrichment (see Chapter 9) and team autonomy which was the collective autonomy for the workers *as a team* to do a task. It is the latter that is considered here. In practice individual

**High-performance work system** a form of organization that operates at levels of excellence far beyond those of comparable systems.

**Empowerment** organizational arrangements that give employees more autonomy, discretion and decision-making responsibility.

**Japanese teamworking** use of scientific management principles of minimum manning, multi-tasking, multi-machine operation, pre-defined work operations, repetitive short cycle work, powerful first line supervisors, and a conventional managerial hierarchy.

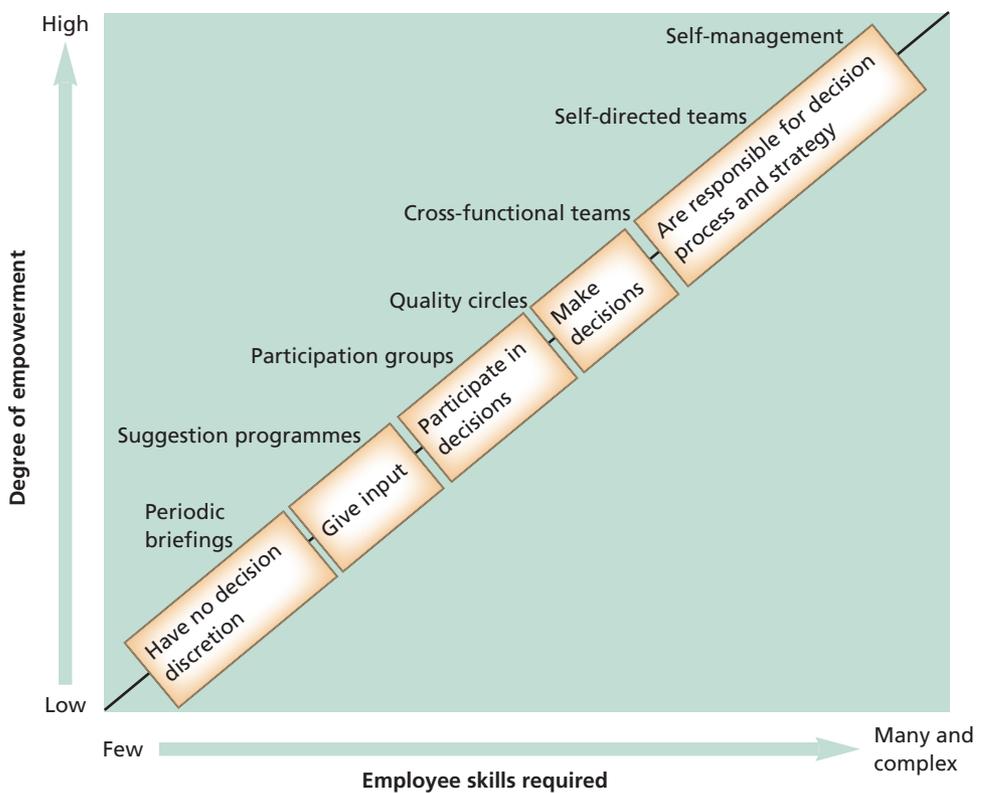
**Self-managing team** a group of individuals with diverse skills and knowledge with the collective autonomy and responsibility to plan, manage, and execute tasks interdependently to attain a common goal.

and the teamworking approaches have converged in what has come to be known as the **high-performance work system**.

There has been confusion about the use of the concept of teamworking in different countries and in different companies. Western teamworking emphasizes enhanced employee control and job satisfaction through participation and represents an example of worker **empowerment**. This refers to organizational arrangements that give employees more autonomy, discretion and decision-making responsibility. However, employee empowerment in organizations is only allowed by management if it is exercised in ways that are judged to be beneficial to the organization. Daft and Noe (2001) described a range of empowerment possibilities for individuals and teams, indicating the number and range of skills needed by the employees involved (see Figure 13.1).

Teamworking does not necessarily empower workers. How work is structured and the context in which teamworking takes place, both make a great difference. **Japanese teamworking**, for example, operates at the other end of the empowerment continuum. It differs little from Fordism with its emphasis on direct management control, repetitive tasks and labour discipline. It uses the scientific management principles of ‘minimum manning, multi-tasking, multi-machine operation, pre-defined work operations, repetitive short cycle work, powerful first line supervisors, and a conventional managerial hierarchy’ (Buchanan, 1994, p.219). Japanese work teams tend to be advice teams mistaken for production teams. They meet and function as teams ‘off line’ (outside the production context) in contrast to autonomous work teams which function as teams ‘on line’ (inside the production context).

*Japanese teamworking* is also called lean production (or *Toyotaism*) because, compared with other mass production plants, it has higher labour flexibility by using multi-skilled employees who operate different machines; fewer workers not directly involved in product manufacture; a minimum of unfinished products (work in progress); and requires very little rectification of work already carried out. In a Toyota production system, work operations are



**Figure 13.1:** A continuum of empowerment

Source: from Daft and Noe, *Organizational Behaviour*, 1E. P.218 (c) 2001 South-Western, a part of Cengage Learning, Inc. Reproduced by permission [www.cengage.com](http://www.cengage.com), p.218

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highly standardized. After three days, new workers are able to perform any particular job specified on a standard operation sheet. Each highly standardized job is combined with other, similarly standardized ones, so as to extract the maximum amount of effort from employees with minimum labour input.

## Team autonomy and self-managing teams

**Team autonomy** the extent to which a team experiences freedom, independence and discretion in decisions relating to the performance of its tasks.

A **self-managing team** consists of individuals with diverse skills and knowledge possessing the collective autonomy and responsibility to plan, manage and execute tasks interdependently to attain a common goal. The adjectives that frequently precede this type of team in the organizational literature are *autonomous*, *semi-autonomous*, *self-managing*, *self-regulating* or *self-directing*. However, there are many types of teams, for example, those in the archetypal Japanese system of lean production, which are not necessarily participative, let alone self-managing. Teams range from having no autonomy to full autonomy. **Team autonomy** refers to the extent to which a team experiences freedom, independence and discretion in decisions related to the performance of its tasks. Teams differ in terms of how much autonomy management grants them.

When encountering an example of a supposed self-managing team within a company, it is necessary to ask: who decides about what, and to what extent? Jan Gulowsen (1979), a Norwegian researcher, provided a framework which allows more specific assessments to be made about team autonomy (Table 13.2). He distinguished nine 'task areas' or dimensions

**Table 13.2:** Team task areas, levels of team input and team autonomy levels

### *Team task area / dimensions*

1. Team leader selection
2. Acceptance of a new member into the team
3. Distribution of work
4. Time flexibility
5. Acceptance of additional work
6. Representation outside the team
7. Production methods (choice of)
8. Production goals (output determination)
9. Production goals (quality determination)

### *Team input levels*

1. *None*: No team participation and total management control. Managers make all the decisions and the team implements them. Team members have no input into the decision-making process; there is no element of participation, not even in the form of suggestions or requests.
2. *Some*: The team has some input into decisions concerned with its immediate working environment. It can make suggestions and requests and has discussions with management who may adopt its ideas.
3. *Joint*: A situation of co-decision making in which a team shares decision-making power with management and plays an equal role in the taking and implementing of decisions.
4. *Autonomy*: The team is fully trusted by management and is truly autonomous. It reaches its decisions with no input from management whatsoever. Management accepts the team as a full and equal partner.

### *Team autonomy level*

Low autonomy teams	Moderate autonomy teams	High autonomy teams
Assembly line workers	Quality circles	Autonomous work groups
Supermarket checkouts teams	Semi-autonomous groups	High performance Self-directed team

**Table 13.3:** Tasks performed by self-managing teams themselves

A survey conducted of 1,456 organizations in the United States with over 100 employees, found the following:

<b>Task</b>	<b>%</b>
Set own work schedules	67
Deal directly with external customers	67
Conduct own member training	59
Setting own production quotas / performance targets	56
Deal with suppliers / vendors	44
Purchase equipment / services	43
Develop budgets	39
Do their own performance reviews on members	36
Hire co-workers	33
Fire co-workers	14

Source: Training (1996, p.69)

in a team's working which offer the potential for autonomy. Within each area, he specified four possible levels of team input. This allows different teams to be distinguished in terms of the level of autonomy that they possess.

Depending on the self-managing team, it can have autonomy to make decisions about project management, problem solving, conflict management, strategy formulation, skill development, and even performance evaluation. The results of a survey which identified the types of tasks most often performed by SMTs are shown in Table 13.3.

According to Druskat and Wheeler (2004), 79 per cent of Fortune 1000 companies and 81 per cent of Fortune 1000 manufacturing companies had self-managing teams. These teams are now a leading innovation in work structures. SMTs have many benefits. Under certain circumstances, they can:

- use individual members' skills better
- provide more scope for team innovation
- increase organizational flexibility and adaptability
- raise employees' job satisfaction morale due to empowerment
- increase employees' sense of responsibility and accountability
- increase task importance by those who have a stake in its outcome.

However, SMTs can also have negative aspects. Under other circumstances, they can:

- increase the number of meetings
- lengthen the decision-making process
- escalate conflict among team members
- reduce members' awareness of changes outside their team
- increase stress among both team members and leaders due to changes in their roles.

## CUTTING EDGE Self-managing teams



Nina Magpili

Nina Magpili and Pilar Pazos (2018) investigated the research literature to discover the factors that influenced the successful implementation of high-performing, self-managing teams. They identified three sets of factors:

Individual factors	Team factors	Organizational factors
Individual autonomy	External leadership	Corporate culture
Individual roles	Peer control	Corporate policies
Leadership	Task characteristics	National culture
Self-management skills	Team autonomy	Organizational goals
Technical skills	Team skill diversity	Organizational structure
Teamwork skills		Training
Resistance to change		Resources
Work experience		Rewards



Pilar Pazos

The most important individual level factors were members' ability to work in teams; their possession of a range of technical skills that enabled job rotation within the team; and the ability of leaders to balance the promotion of the team's autonomous state while still providing some basic guidance and structure. At the team level, shared leadership was critical with team members requiring the less conventional team skills of resilience, ability to learn from mistakes, and a risk-taking attitude. Critical organizational level factors included the corporate structure, policies, culture, reward systems and resources available.

A flat organizational structure that reduces formalization and an empowering culture that supports and facilitates autonomy provides the ideal organizational context in which SMTs can thrive. Magpili and Pazos concluded that successful implementation of SMTs required a thorough understanding of input factors and an ability to manage those factors at different levels in the organization. Implementing SMTs without consideration of these factors would almost certainly lead to failure.



### EMPLOYABILITY CHECK (interpersonal, people management and teamworking skills)

As team leader what steps would you take to convert your own traditional team into a self-managing one?

The research evidence concerning the effectiveness about SMTs is mixed and depends on which dimension is being considered. SMTs appear to have a modest impact on the performance and the attitudes of team members; a direct impact on quality; and a modest, positive impact on productivity. The vast majority of studies report improvements with respect to employee job satisfaction and their quality of working life. The effects of SMTs on staff absenteeism, safety, and health issues have been less systematically studied and the results are inconsistent (Cohen and Ledford, 1994). The main differences between traditional and self-managed teams are shown in Table 13.4.

**Table 13.4:** Traditional and self-managed teams compared

	<b>Traditional team</b> <i>Team supervisor . . .</i>	<b>Self-managing team</b> <i>Team members . . .</i>
<i>Leadership</i>	is the one, assigned leader	rotate leadership between themselves
<i>Authority</i>	has formal responsibility to make decisions	are given authority and responsibility to make their own decisions
<i>Accountability</i>	holds group members individually accountable	collectively hold each other accountable
<i>Goals</i>	sets the team's goals	agree goals by discussion
<i>Work organization</i>	determines how work is to be done	decide how work is to be done
<i>Outputs</i>	individual results achieved by people working on their own	collective results achieved by members' close collaboration
<i>Information</i>	provides required information	gather and integrate information for themselves
<i>Direction</i>	gives instructions	act upon information obtained, taking responsibility for their actions
<i>Scrutiny</i>	checks that instructions have been followed	guide their own work
<i>Performance evaluation</i>	by supervisor and senior management	by team members themselves and senior management
<i>Responsibility</i>	ensures each worker performs their specified job tasks	are cross-trained and collectively responsible for completing tasks
<i>Performance</i>	at first faster than a SMT as members do not have to learn how to work with each other	low at first as team learns how to work together and are cross-trained, then same rate as a traditional team
<i>Control</i>	uses company rules to direct workers' actions	draw upon senior management's corporate vision to guide their daily actions.
<i>Works well with</i>	time-pressured tasks requiring leader's knowledge to integrate various contributions	complex, challenging tasks requiring collaboration and a mix of interdependent skills

## Home viewing



The film *Rumours – Classic Albums DVD* (2008) chronicles the making of one of rock music's biggest selling albums by Fleetwood Mac. The film describes the internal struggles of band members who stayed together for several years. Consider which group members performed which team roles? What was the balance between team performance and team viability? How did the interpersonal issues help or hinder their work product? What was the nature of conflict and how was it resolved? What group norms guided their behaviour? (Comer and Holbrook, 2012; Hill, 2018).

## Manager-less teams

More and more organisations are choosing to get rid of layers of management, in favour of giving their teams' full autonomy. In just a few years, the concept of removing managers from their controlling and monitoring duties – and instead empowering teams to plan and manage their own day-to-day activities – has developed into the concept of self-managing teams (SMTs).

We'd expect SMTs to have no need for managers any more, meaning their role is redundant. Employees would effectively manage themselves. But is that actually happening in reality? Becoming self-managing, we have discovered, is never a simple, linear process. But to achieve a successful transition, organisations can follow a four-step implementation process that runs from *initiation* to *adoption-and-adaptation*, through to *use* and *incorporation*.

During the initiation-phase, teams have a functional leader, which implies that the power to make decisions is in the hands of their manager. An external leader tells the team what to do and how to do their tasks, and helps the inexperienced team members to acquire new skills. Managers follow a directive approach to reduce uncertainty and ambiguity among team members. In this phase, it is crucial for managers to remain functional, directive leaders by calming down members of the team and explaining what is going to happen when teams become self-managing.

In the adoption-and-adaptation-phase, managers need to transform from a directive leader to a coach. Coaching is a daily, hands-on approach that helps the employees improve their competences by slowly transferring more responsibilities to the team. Team members learn to work autonomously. During this phase, managers slowly start transferring responsibilities to team members by deciding with them who would become responsible for which tasks. Decisions are still taken by the managers, but some tasks may be devolved to individuals.

During the use-phase, the range of tasks for SMTs grows significantly. At this stage, the formal leader becomes less involved in the daily work activities of the team. They start to set their own work schedules, determine budgets, order and allocate resources and monitor service quality. The teams are already well designed and merely need help regarding unsolvable issues or disruptive events. Nevertheless, there is still need for external supervision. In this role, the manager helps team members get the necessary information to take decisions independently by connecting them with people inside and outside the organisation. During this phase, the manager is a coach who serves as a boundary spanner – supporting teams to take decisions independently but still monitoring from the outside.

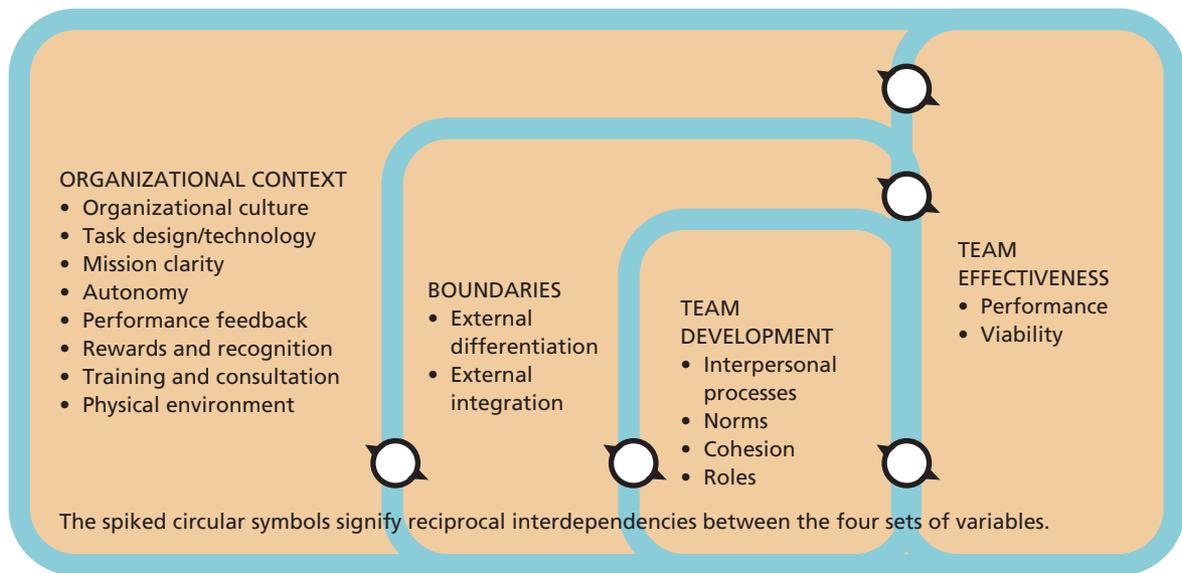
Finally, in the incorporation-phase, teams become fully self-managing. Team members take over the role of managers by becoming internal leaders – either through a rotated leadership model or a peer evaluation model. This means teams either share the leadership responsibility or rotate it between members. During this last phase, it is important that managers stop taking decisions for the teams, but support and facilitate them in taking decisions and changing directions from the outside.

So can SMTs manage themselves without the help of managers? The answer depends on what we understand a manager to be. If we believe they are a directive leader, SMTs still need such a person in the beginning of the implementation process but would have no need for them when they become self-managing. However, if we believe there are other managing styles – more supportive and coaching leadership styles in which managers help team members take their own decisions by facilitating them along the way – then SMTs will always need managers. They just need a different sort of leader at the helm.

Source: Bos-Nehles et al. (2018)

## Ecological framework for analysing work team effectiveness

Eric Sundstrom, Kenneth De Meuse and David Futrell's (1990) ecological framework for analysing work teamwork effectiveness provides a perspective which looks at teams as embedded within their organizations (see Figure 13.2). It holds that the effectiveness of any work team is facilitated or impeded by the team's own internal processes and the features of the organization within which it operates. The framework emphasizes the interactions between a team and the different aspects of its environment. The framework is intentionally vague about causation and timing. The spiked circular symbols in the figure stress that team effectiveness is *dynamically interrelated* with organizational context, boundaries and team development – being more of an ongoing process than a fixed end-state.



**Figure 13.2:** Ecological framework for analysing work team effectiveness

Source: Sundstrom et al. (1990, p. 122)

The framework also makes extensive use the concept of boundary which acts to:

- distinguish (differentiate) one team from another
- present real or symbolic barriers to the access to or transfer of information, goods or people
- serve as points of external exchange with other teams, customers, peers, competitors or other entities
- define what constitutes effectiveness for the team within its particular organization context.

The framework suggests that at any time, a team's effectiveness is the outcome of team development and the organizational context mediated by the team's boundaries. Each of these four sets of variables will be described in turn.

## Organizational context

The first major variable in Sundstrom et al.'s framework is the organizational context of the work team. This refers to those features of an organization which are external to the work team, but which are relevant to the way it operates. The context consists of eight features:

### 1. Organizational culture

Every team operates within an organization that has its own corporate culture set within a wider, national culture. How do these values and beliefs impact on team effectiveness? Certain companies have a multi-stakeholder culture (e.g. Germany) where teamworking is more likely to succeed than in a shareholder culture (e.g. USA, Britain).

### 2. Task design and technology

Every team works to complete its given task in a particular way. The way that management defines the team task and specifies the technologies it will use to achieve it will affect the arrangement of individual team roles.

### 3. Mission clarity

If a team has a clearly defined mission or purpose within the organization it can assist those teams which are closely related to or synchronized with its work. How clear is the team's mission and how clearly has it been communicated to others?

#### 4. *Autonomy*

Externally, management will determine a team's autonomy. Internally, it will depend on the role of the leader and how they delegate their authority within the team. Every effective team has to coordinate and integrate the contributions of its individual members. Which type of team leadership best achieves this?

#### 5. *Performance feedback*

Does the team receive accurate, timely feedback on its performance from dependable measurement systems?

#### 6. *Rewards and recognition*

These can range from financial rewards to oral praise. Are rewards sufficiently connected to performance in a way that contributes to team effectiveness?

#### 7. *Training and consultation*

Training and consultation in technical skills and interpersonal processes are seen as key elements in achieving team effectiveness. Cross-training in technical skills is very often a pre-requisite for job rotation which itself can be an aspect of autonomous teamworking.

#### 8. *Physical environment*

The proximity of team members to one another affects both their ability to communicate and their level of team cohesion. Whether communicating across a table during a meeting or between workstations on a factory shop floor, territories can reinforce team boundaries and encourage or inhibit exchanges. Physical environments are therefore central to group boundaries.

### Organizational context affects team performance



Trevor Young-Hyman

Trevor Young-Hyman (2017) examined the organizational context of teams and in particular, how a company's formal power structure and team work structure interacted to affect cross-functional project team performance. He studied

knowledge-intensive teams in a worker cooperative where power was dispersed and in a conventional engineering firm where it was concentrated in the hands of senior management. In contrast to earlier research, he found that when collective tasks were uncertain and complex, the value of cross-functional interactions depended on an organization's formal power structure. When power was concentrated, cross-functional interactions improved a team's productivity, but not when it was widely distributed among workers. He found that dispersed formal power decreased the productivity benefits of cross-functional interaction by:

- reducing status distinctions between team members which increased the time needed to resolve conflicts

- boosting participation in monitoring and coordination processes outside teams so that workers had more access to information and less need for cross-functional interactions
- increasing the distribution of knowledge management technology which increased workers' autonomy and reduced the value of cross-functional interactions.

His findings challenge assumptions about the benefits of frequent cross-functional member interaction in knowledge-intensive work. By focusing on the distribution of formal power, he illustrates how organizational resources and rules constrain or enable the actions not only of teams but also of their team members. Researchers have long argued that formal hierarchy is the best organizational form for modularized and standardized tasks and that decentralized organizational forms with distributed power are best for creativity and experimentation since workers are less constrained. Young-Hyman's findings suggest that the picture is not so clear.

Status hierarchy may actually encourage direct interpersonal knowledge exchange because areas of expertise are clearly defined and conflict is subdued through coercion. On the other hand, the equal status of team members in



a non-hierarchical formal power structure can stifle interpersonal knowledge exchange because of unclear roles, anticipated contentious interactions, and a lack the authority to efficiently resolve conflict. Moreover, distributed formal power encourages alternative avenues for knowledge

exchange. The key point is that the exchange required for creative work may occur through multiple avenues and different formal organizational structures facilitate different modes of knowledge exchange.

## Tenerife air disaster



At 5.01 p.m. on 27 March 1977 at Tenerife airport in the Canary Islands, two 747-100 jets began taxiing along the runways, their captains in communication with the airport's traffic controllers. Four minutes later, Pan Am 1736 and KLM 4805 collided on the tarmac when the Dutch aircraft took off without permission. It led to the death of 583 people, to this day the biggest air fatality in history. A number of contextual variables came together, interrupting the routines of the cockpit and air-traffic control crews, and generating stress. These included Dutch law (pilots' work hours); difficult manoeuvres and unpredictable weather. In this stressful setting, KLM cockpit crew interaction broke down. More stress improves team performance but reduces individual performance which is lowered by task complexity. Hence the importance of a cockpit crew members coalescing into a team with a distinctive identity, rather than falling apart and acting more like individuals.

Karl Weick (1990) stated that it was unclear whether the KLM crew experienced negative synergy defined as a form of interaction between team members which caused a failure of coordination within the team so severe that nobody knew what they were supposed to be doing. It might have been that the three individuals in the cockpit acted independently and in parallel, falling back on their most familiar and well-rehearsed response routines rather than behaving as a team. The interruption of their normal operating procedures induced a high level of arousal in the crew members which reduced their cognitive information-processing abilities and led them to ignore important cues. As a result, both the cockpit crew and the air-traffic control team made the wrong responses which resulted in the deadly crash. This was an example of the context influencing individuals and teams who responded in a way that changed the context as the events unfolded. A well-functioning, high-integrated cockpit crew might have responded to the increased stress with increased performance.



YouTube for *Tenerife air disaster*.

## Work team boundaries

The second major variable in Sundstrom et al.'s framework is the set of work team boundaries. The question 'Who's in your work team?' is a simple question to ask but as Mark Mortensen and Martine Haas (2018) explain, it is now a difficult one to answer. These authors consider the blurring of team membership boundaries that has occurred in recent times. Traditionally teams have been defined as a bounded set of individuals who work interdependently to achieve a common goal. However, as teams have changed, their boundaries have become less clear. There is no longer a clear delineation between who is and is not a team member. Today's work teams look quite different from their predecessors which were composed of stable, full-time, co-located members. They are now:

- *Fluid*: individuals move in and out of them during the course of their work
- *Overlapping*: individuals work in several different teams simultaneously
- *Dispersed*: individuals work in different geographical locations and organizational units

Collectively these factors result in individual uncertainty and collective disagreement about who is a team member. A person can consider a team's membership to be composed of named individuals on a staff list; or those who label themselves team members or are so labelled by others; or those whose interaction patterns suggest membership. Individual uncertainty about team membership may arise because an individual is not sure which criterion to use in a given situation at a given point in time. Using different criteria results in different understandings of who is or is not a team member.

Collective disagreement occurs when, even if individual team members are certain in their own minds about who is and is not a team member, they may disagree with one another. Wageman et al. (2007) found that when top executives were asked to list their team members, fewer than 10 per cent were in agreement, while in Mortensen and Hinds' (2002) study of product development teams up to 25 per cent of their membership was contested.

Mortensen and Haas (2018) recommend defining teams in terms of participation rather than membership. While 'membership' is binary (you either belong or you do not), 'participation' is continuous, and can vary in terms of degree, time, roles played and colleagues worked with. They advise viewing teams as dynamic hubs of participants rather than as clearly bounded groups of members. These hubs represent centres of activity with which individuals connect in different ways at different times as they contribute to the team goal.



### What did they find? Team boundary permeability



Rebekah Dibble and Cristina Gibson (2018) examined the research on team membership change and team boundary permeability. This refers to the ease with which workers can cross team boundaries. Many of today's teams are dynamic and permeable with workers moving quickly and easily in and out of them. For example, doctors, contract workers and consultants are now required to move seamlessly in and out of teams dealing with patient care, software development and corporate strategy implementation. Much collective work in companies takes place outside the realm of clearly bounded teams. Increasingly, units labelled 'teams' are less identifiable as such or remain intact for long. What factors did Dibble and Gibson find which facilitated or impeded the movement of people across team boundaries? **(Answers in chapter Recap).**



Cristina Gibson

While working to complete an assigned task (e.g. improving a procedure; designing a new product; winning a match), a team has to meet the needs of the larger organization within which it is embedded (external integration). At the same time, it has to secure enough independence to allow it to get on with its own work (external differentiation). These two features define every team's boundary. Boundary management refers to the process by which teams manage their interactions with other parts of their organization. How successfully a team manages its boundaries will affect its performance.

**External work team differentiation** the degree to which a work team stands out from its organizational context in terms of its membership, temporal scope and territory.

**External work team differentiation** refers to the team as a whole in relation to the rest of the organization (team-organization focus). For example, a temporary team may be assembled by management and given resources to deal with a crisis. This team thus stands out and hence *differs* from other work units within the company by virtue of containing an identifiable collection of people (membership); working in a specific place (territory); over a set period of time (temporal scope); on a unique task.

Four features define the team's boundary, distinguishing it from other teams within an organization:

- Team membership** The identity of the individuals treated as members by both the team and the organization is crucial. Who decides the composition and size of a work team?
- Team territory** A work team has to have its 'own turf' to establish its identity and manage its external relations, especially in teams whose missions demand both external integration and differentiation.
- Temporal scope** The longer a work team exists and the more time its members spend cooperating, the greater will be its temporal scope and differentiation as a distinct team.
- Team task** The task given to the team may be *additive* (accomplishment depends on the sum of all members' efforts); *conjunctive* (depends on the performance of the least talented member); or *disjunctive* (depends on the performance of the most talented member).

**Internal work team differentiation** the degree to which a team's members possess different skills and knowledge that contributes towards the achievement of the team's objective.

**Internal work team differentiation** refers to the degree to which a team's members possess different skills and knowledge that contribute towards the achievement of the team's objective. A team may have high differentiation with its members having special, perhaps unique skills such as the cockpit crew in an aircraft; or it may have low differentiation, when the knowledge and contributions of members tend to be similar as in a quality circle team.

## Differentiation within the peloton

The Tour de France cycle race was first run in 1903 and now involves about 150 top cyclists. The racers cover over 2,700 miles during their 23-day journey and the winner receives a €400,000 prize. The competitors ride together in the *peloton* – the picturesque mob of competing teams that fly like birds in formation across the French countryside every summer. Despite the focus on individual riders, the Tour is a sport structured around the teams. The 2018 Tour involved 22 teams, 176 riders from 30 countries including Team Sky, Team Sunweb and Bahrain-Merida. During each 125-mile, five-hour stage, team members fight to put their leader in a position to win. What appears to be a random mass of bicycles is really an orderly, complex web of shifting alliances, crossed with brutal competition, designed to keep or acquire the market's most valuable currency – energy.



A cycling team consists of six to nine riders, each of whom is a specialist. The *rouleurs* are fast riders who create draughts for their team's leader over flat terrain. Riding close behind a rouleur can reduce drag by 40 per cent. *Grimpeurs* are hill specialists who create a slipstream (a field of low wind resistance) for their leader as he goes up mountains, and *domestiques* are riders who carry supplies. Towards the end of the race, team members will bunch together ahead of their sprinter, shielding him from the wind for as long as possible, while leaving a space to let him break out near the finish line (Hochman, 2006).



### STOP AND SEARCH

YouTube for *Tour de France guide: peloton* (1:32).

**External work team integration** the degree to which a work team is linked with the larger organization of which it is a part.

**External work team integration** refers to the degree to which a work team is linked with the larger organization of which it is a part. It is measured in terms of how its goals and activities are coordinated and synchronized with those of other managers, peers, customers and suppliers inside and outside the company. This will depend on the type of team and its task.

## Team development

The third major variable in Sundstrom et al.'s framework concerns the internal development of the team. Four factors are relevant here – interpersonal processes, roles, norms and cohesion.

### 1. Interpersonal processes

A group of individuals passes through a series of stages before achieving effective performance at the performing stage. Tuckman's and Jensen's (1977) model describes the characteristics of each preceding stage – forming, storming and norming.

### 2. Roles

Roles in general are a defining feature of a team and the role of a leader is much studied. Are the required member roles being performed given the group's tasks and are the task and interpersonal aspects of the leadership role being fulfilled?

### 3. Norms

Are the norms and rules of behaviour which are agreed on by the team members supportive or in conflict with effective performance? Can organizational culture be used to modify team norms?

### 4. Cohesion

Team cohesion can engender mutual cooperation, generosity and helping behaviour, motivating team members to contribute fully. However, it can also stifle creative thinking as individuals seek to 'fit in' and not to 'rock the boat'. Small group size, similar attitudes, and physical proximity of workspaces have all been found to encourage cohesion. Does the level of cohesion aid or impede the team's effectiveness?

### Team performance

a measure of how well a team achieves its task, and the needs of management, customers or shareholders.

**Team viability** a measure of how well a team meets the needs and expectations of its members.

## Team effectiveness

Team effectiveness is the dependent variable in the Sundstrom et al. framework and is measured using two criteria – performance and viability. **Team performance** is externally focused and concerns meeting the needs and expectations of outsiders such as customers, company colleagues or fans. It is assessed using measures such as quantity, quality and time. Meanwhile, **team viability** is the social dimension, which is internally focused and concerns the enhancement of the team's capability to perform effectively in the future. Team viability indicators include its degree of cohesion, shared purpose and the level of team member commitment. The two are closely related since there is a possibility that a team may get a job done but self-destructs in the process.

## Google's perfect team



“On paper we have the perfect team.”

In 2012 Google became focused on building the perfect team and initiated Project Aristotle to discover why certain teams succeeded while others failed. The company studied 180 teams from all over the company. However, they were unable to find any patterns. Surprisingly, they found no evidence that the composition of a team made any difference to its performance. Abeer Dubey, a manager in Google's People Analytics division stated that 'We had lots of data, but there was nothing showing that a mix of specific personality types or skills or backgrounds made any difference. The 'who' part of the equation didn't seem to matter.' Indeed, there were two teams with nearly identical member composition with overlapping memberships that had radically different levels of effectiveness.

In the end, the researchers concluded that it was psychological safety that was critical to making a team work. This is defined as a shared belief held by members that interpersonal risk-taking is safe within the team. It is a

sense of confidence that the individual will not be embarrassed, rejected or punished for speaking up. It describes a team climate characterized by interpersonal trust and mutual respect in which people are comfortable being themselves (Edmondson, 1999, 2012).

For Project Aristotle, the data indicated that psychological safety was most critical to making a team work. They had to get people to establish psychologically safe environments. The two main behaviours that contributed to psychological safety were conversational turn-taking, that is, ensuring that team members spoke roughly the same amount during a meeting, and social sensitivity, that is, intuiting how others were feeling based on their tone of voice, their expressions and other nonverbal cues ('ostentatious listening'). These two behaviours are part of the same unwritten rules we turn to as individuals when we need to establish a bond with another person. This is as important at work as outside it (Duhigg, 2016).

### STOP AND SEARCH

TED talk (11:27).

YouTube for *How Google builds the perfect team (2:23)* and for *Amy Edmondson: Building a psychologically safe workplace*



## RECAP

1. **Understand why 'team' is a contested concept in the organizational literature.**
  - Teamworking is being increasingly adopted as a favoured form of work organization in different companies and industries around the world.
  - The different purposes and ways in which managers have introduced this innovation has meant that the term 'team' is used to describe a wide range of radically different working arrangements.
2. **List the nine dimensions of team autonomy.**
  - Gulowsen's nine dimensions of team autonomy are selection of the team leader; acceptance of new member into the team; distribution of work; time flexibility; acceptance of additional work; representation outside the team; production methods (choice of); production goals (output determination); production goals (quality determination)
3. **Differentiate between four major types of teams and give an example of each.**
  - Teams in organizations can be classified as advice (e.g. quality circles); action (e.g. surgery team); project (e.g. cross-functional team); and production (e.g. autonomous work team).
4. **Discuss the types of obstacles to effectiveness experienced by each type of team.**
  - Advice teams frequently lack authority to implement their recommendations. Action teams can fail to integrate their members' contributions sufficiently closely. Project team members can suffer 'divided loyalties' between their team and their home department. Production teams may lack autonomy for job satisfaction.
5. **Contrast Western with Japanese concepts of teamworking.**
  - The Western concept is based upon principles of empowerment and online teamworking, while the Japanese concept is based upon management principles of individual working on-line, and teams advising off-line.
6. **List the four main variables in ecological framework for analysing work team effectiveness.**
  - Team development; work team boundaries and organizational context affect team effectiveness.
7. **Understand the continuing importance of teamworking.**
  - Japanese forms of teamworking (Toyotaism) have influenced the production processes used in both manufacturing and service industries all around the world.
  - As a concept, teamworking has an appeal in a management philosophy that stresses egalitarianism, non-hierarchy and inclusiveness within organizations.

## RECAP: What did they find?

Dibble and Gibson (2018) found four factors which facilitated or impeded the movement of people across team boundaries. These were team boundedness, membership model diversity, team member receptivity and inter-team integration.

- **Team boundedness:** The extent to which members are involved in a team. It depends on the extent to which members serve for the full cycle of the project as opposed to only part of the project; have full-versus part-time assignment to the team; and are assigned to core versus peripheral positions on the team. It ranges from high to low boundedness.
- **Membership model diversity:** Refers to the degree that team members share a common view as to who is a member of their group and who is not. This is indicated by formal team rosters; identification by the team members themselves or by others; or by patterns of team member interaction. When members disagree as to who is or is not in a team, it makes it easier for new members to enter and exit the team and vice versa.
- **Team member receptivity:** Refers to the ways in which a team responds to new members who join the team. It concerns a team's preparedness to adapt to the newcomer; to use that person's unique knowledge and skills to do its work; and its willingness to accept them as a full member. When a team does these things, the newcomer experiences a commitment to the team, a feeling of attachment to it and an obligation to remain in it. These factors facilitate an individual's entry into a team but make it harder for them to exit the team.
- **Inter-team integration:** This refers to the degree to which teams in different parts of an organization are integrated with each other because of overlapping memberships. When integration is high, it facilitates movement of individuals across a team boundary. In contrast, the greater the segmentation and uniqueness of the different teams whose boundaries one is required to cross, the more movement between them will be impeded.

## Revision



1. Self-managing teams are heavily promoted in the literature. What are the costs and benefits of these to (a) the management that establishes them and (b) the individuals who are members of such teams?
2. What impact can technology have on the behaviour and performance of teams? Discuss positive and negative effects, illustrating your answer with examples.
3. 'Autonomous team is a relative term'. Discuss the concept of team autonomy explaining why similarly labelled teams may, in practice, operate very differently. Consider why management might have difficulty in increasing the autonomy that it gives to a team.
4. Highlight briefly the main differences between West European and Japanese-style teamworking. Then, using references to the literature, consider the positive and negative aspects of both systems for either shop floor workers or management.

## Research assignment



Using your library and internet, locate any relevant research and management literature on effective teamworking and devise a list of best practice 'do's' and 'don'ts', and use it to develop a list of questions. Select an organization; interview a team member, a team leader or a manager responsible for a team. Begin by determining the team's purpose, method of working, performance and the challenges that it faces. Write a brief report assessing the team against your best practice list items from the research literature.

## Springboard

Mark Mortensen and Martine Haas, (2018). 'Perspective—rethinking teams: From bounded membership groups to dynamic participation hubs', *Organization Science*, 29(2): 341–55. The authors discuss the latest thinking about the operation of groups in organizations.

Thomas O'Neill and Eduardo Salas (2018) 'Creating high performance teamwork in organizations', *Human Resource Management Review*, 28(4): 325–31. The authors review the trends in the use of teams and the challenges of achieving high performance teamwork.

Matthias Weiss and Martin Hoegl (2015) 'The history of teamwork's societal diffusion: A multi-method review', *Small Group Research*, 46(6): 589–622. The authors consider the progress of academic research on teamwork and its diffusion through society over time.

Amanda Sinclair (1992) 'The tyranny of team ideology', *Organization Studies*, 13(4): 611–26. The author criticises management's obsession with teams.

## OB cinema



*The Dish* (2000, director Rob Sitch). DVD track 8: 0:35:55–0:53:07 (18 minutes sequenced)

It is July 1969, and Apollo 11 is heading towards the moon. On earth, the Parkes Radio Telescope in New South Wales, Australia, the largest in the southern hemisphere has been designated by NASA as the primary receiving station for the moonwalk which it will broadcast to the world. Then, due to a power cut, it 'loses' Apollo 11! Parkes' director, Cliff Buxton (played by Sam Neill) and his team of scientists – Mitch (Kevin Harrington); Glenn (Tom Long); and Al (Patrick Warburton) – all have to work hard (and quickly) to solve the problem. The clip begins with the lights going out during the dance, and ends with Al saying, 'Just enough time to check the generator'.

Identify examples of each of the elements of Sundstrom et al.'s ecological framework for analysing work team effectiveness as team members deal with the crisis.

Sundstrom framework element	Example
<i>Organizational context</i>	
1. Organizational culture	
2. Task design / technology	
3. Mission clarity	
4. Autonomy	
5. Performance feedback	
6. Rewards and recognition	
7. Physical environment	
8. Training and consultation	
<i>Work team boundaries</i>	
9. External differentiation	
10. External integration	
<i>Team development</i>	
11. Interpersonal processes	
12. Norms	
13. Cohesion	
14. Roles	

## Chapter exercises



### 1. Factors affecting team performance

- Objectives**
1. Identify the various factors that influence a team's success or failure.
  2. Reflect on students' own experiences of working in a team.

- Briefing**
1. Divide into groups of 3–4.
  2. Individually, think about a team or group of which you have been a member. This could have been for a group assignment at university, a team at work or a leisure team such as a sports team, choir, or something similar. Assess how well this team functioned. Use the questionnaire below to rate your team. Think about your overall experience of it and its dynamics and performance.

#### *Team Evaluation Form*

<i>Team feature</i>		<i>Rate</i>
	Think about a team or group of which you have been a member. Assess how well this team functioned using the four-point scale (4 = <i>strongly agree</i> ; 1 = <i>strongly disagree</i> ).	1–4
Cohesion	Members were supportive of each other. Members treated each other with respect. Members collaborated with each other – worked together to solve problems, make decisions, and produce results. Members showed a professional attitude to their work with the team.	



*Team Evaluation Form*

Communication	Members communicated well with each other, making sure that all relevant issues were brought before the team. Members listened well to each other by withholding judgements until all members had spoken.
Goal orientation	Team members knew what was required of them. Team members all worked toward a common purpose.
Task planning and coordination	Team was well organized. Team managed meetings well. Team effectively distributed work among its members.
Accountability	Members took responsibility for tasks. Members met deadlines.
Leadership	Team had a leader Members were supportive of the team leader. <i>(If your team did not have a leader, leave this rating blank)</i>
Conflict resolution	Team overcame conflicts and interpersonal problems in order to accomplish goals and objectives. <i>(If your team did not have any conflict, leave this rating blank)</i>

Source: adapted from Chapman et al. (2010, p.47)

3. Score your questionnaire. All the statements are positive so the higher the number the better your team worked together (and vice versa).
4. Share your scores with your group members. Explain the type of team that you were rating and the reasons for its score focusing on items where you ticked 'Strongly disagree' or 'Strongly agree'. Mention any leadership or conflict blanks.
5. Once group members have shared their evaluations, prepare a list of do's and don'ts as a guide for team members and team leaders.

## 2. Land Rock Alliance Insurance

### Objectives

1. To evaluate the advantages and disadvantages of teamworking arrangements within an organization.
2. To identify conditions favouring the introduction of different forms of working arrangements.

### Briefing

1. Individually, read the case study concerning the two different proposed work arrangements for the processing of the insurance claims at Land Rock Alliance Insurance's offices in Edinburgh.
2. Divide into groups, nominate a spokesperson and:
  - a. Consider the advantages and disadvantages of Eleanor Brennan's teamworking arrangements for (i) the employees and (ii) the management of the company.
  - b. Consider the advantages and disadvantages of Thomas Champion's proposed work fragmentation arrangements for (i) the employees and (ii) the management of the company.
  - c. Opt for one or other of the two managers' work organization solutions or suggest a solution of your own.

- d. More generally, under what conditions in a company is (i) teamworking, and (ii) fragmented task working, likely to be most beneficial?

Group spokespersons should be ready to report their group's conclusions to the class.

## Case study

### Background

Since the 1940s, the use of asbestos in building materials and other products has led to many claims for damages as a result of personal injury or wrongful death. The procedure for those making claims is complicated and time-consuming. Insurance companies employ groups of employees trained to process the claims from each particular industry. The employees are given information on the history, use and current medical research results on the product. The processing of each individual claim application form is tedious but very important: any mistakes may affect the total amount paid to the claimant. Land Rock Alliance Insurance has successfully bid for the contract to process the claims for over 213,000 asbestosis-related chest impaired cases (ACD) and vibration white finger (VWF) victims, their partners or descendants.

### The company

Land Rock Alliance Insurance's main office is based in Sheffield, England. The company has decided to open a branch office in Edinburgh to manage the new contract. It will be dedicated to processing the asbestosis and VWF claims. The plan is to hire 60 new employees including supervisors and line managers. Senior managers at head office, however, disagree on how the work should be organized at the new office.

### Planning meeting

At the meeting to review how the work will be organized at the Edinburgh office, Eleanor Brennan, the HR director, suggested it would be more effective and efficient to create four teams of around 15 employees, with each team processing the claims according to geographical area: Scotland, Wales, Northern England and Southern England. She explained that each application form would be processed by team members, to enable each member to complete the whole processing task and to contribute to the recommendation of the final settlement. Presenting some of the advantages of teamworking, Eleanor commented, 'the synergy generated by teamworking and communication will enhance efficiency and motivate employees to actively participate in reaching a decision in optimum time'. She argued that there was a direct link between job enrichment and high performance.

However, the director of facilities, Thomas Campion, strongly disagreed. He informed the assembled management team that in his opinion, 'self-regulated teams were b\*\*\*s\*\*\*!' Besides, work teams required a much longer training period for employees. Moreover, it was his belief that increased communication impeded decision making rather than enhanced it'. Campion, continuing to dominate the meeting, outlined an alternative work arrangement for the processing of claimants' forms. The work, he said, was to be divided into three major steps:

Step 1: Scrutinize and verify biographical details, date of birth, gender.

Step 2: Scrutinize and verify employment details, start/end/job description.

Step 3: Scrutinize and verify medical history including lifestyle (such as smoker or non-smoker, or whether there was evidence of exposure to second-hand smoke).

Of the 60 new employees, 20 would be trained to complete task one, 20 to complete task two, and 20 to complete task three. Each major step in the claim process would also have a supervisor, a technical advisor and section manager. Organizing the work this way, Campion insisted, would optimize training time, and enable the easy replacement of any employee resigning from the company. Individual employees would be assigned a target to achieve each month, which would determine an annual bonus payment. Every six months, their section manager would appraise each employee based on how quickly he or she successfully processed the application forms.

Source: Bratton et al., (2007, p. 317)

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