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# Learning Collaboration from Tiki-Taka Soccer

**WOLFGANG JENEWEIN, THOMAS KOCHANEK,  
MARCUS HEIDBRINK, AND CHRISTIAN SCHIMMELPFENNIG**

Solo efforts and individual stars used to decide the fate of soccer matches. The 1970s, 1980s, and even the 1990s were dominated by legendary players such as Pelé, Franz Beckenbauer, and Diego Maradona, who, thanks to their skill and speed, found empty spaces in midfield, created the time to take the ball to the box, and then decided to pass or shoot at the goal.

Even as recently as 2005, European players were able to hold the ball for three seconds, on average, before passing; today, they can keep the ball for less than a second before being challenged. That's because soccer players today work closer than ever before. If a forward loses the ball, he will immediately challenge the opposing defenders for the ball. As a result, the space and time available to players has become smaller, forcing them to pass faster and interact more closely.

Just two World Cups ago, matches were won—and lost—by opportunistic passes and breakaway attacks that resulted in thundering goals; today, smart attacks consist of a multitude of passes, executed so quickly and by so many players that they take defenses apart. Some of the world's best teams—such as Brazil, Colombia, Germany, and Holland—have shifted from the traditional one-touch style of play to the tiki-taka style, which is characterized by short, fast passes and continuous positional changes and first used by the Spanish team.

Indeed, these teams seem to use swarm intelligence, making decisions collectively and coming up with innovative moves on the fly. That leaves less room for individual efforts and makes playing collectively important; otherwise, it would be impossible for teams to sustain their attacks against fast and complex defenses.

This new style in soccer was first experimented with by FC Barcelona manager Laureano Ruiz, who called it rondos, and between 1988 and 1996, Johan Cruyff built on it to develop the concept of futbol total, or total football. His idea was simple and brilliant: All the players in a team would attack and everyone would defend together, as a group. It was not unusual for fullbacks or center backs to be involved in attacks, or for forwards to play defensive roles up front. This often surprised opposing teams; the latter's defenders didn't expect their counterparts to try to score goals, and their forwards were shocked to be challenged by the other team's strikers.

Then Josep "Pep" Guardiola-i-Sala, the former Spanish footballer who is currently the manager of Bundesliga club Bayern Munich, further evolved the idea when he was the coach at Barcelona FC between 2008 and 2012. Feeling that the standard, tightly choreographed moves in which players had to be trained for years was not working well, Guardiola and his assistant coaches developed a style of play that took on complex defenses innovatively. It entails continuous movement and rapid passing, and requires players with good touch and maintain possession. Sports journalist Andrés Montes called this style of play tiki-taka, drawing a parallel between the sounds of quick passes and clackers, the popular two-balls-on-a-string toy.

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## ABOUT THE AUTHORS

**Wolfgang Jenewein** is a professor of business administration and director of the Center for Customer Insight at the Executive School, University of St. Gallen in Switzerland.

**Thomas Kochanek** is a research assistant at the Executive School, University of St. Gallen in Switzerland.

**Marcus Heidbrink** is a lecturer in social skills, communications, and leadership at the Executive School, University of St. Gallen in Switzerland.

**Christian Schimmelpfennig** is the director of executive education at the University of Liechtenstein's Institute of Entrepreneurship.

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The new tiki-taka style created constantly changing strategies and passing combinations, making movements difficult to predict. Defenders find it difficult to cover players, their constant passing, and some talk about how quiet everything is on the field. Players interact by passing, using each pass to communicate intuitively with a teammate, the “we” superseding the “me.” Tiki-taka-style swarm intelligence has thus become the offense’s answer to the complexity of modern defenses. As cybernetics pioneer William Ross Ashby noted in the 1950s, complexity can be countered only by complexity.

Like soccer teams, companies too find that the environment as well as the pace have both changed in recent times. They must launch new products, for instance, at shorter intervals. In the 1970s, the automobile industry introduced new models roughly every eight years; by the 1990s, the product lifecycle had fallen to three years, and, as we know, car brands now need a facelift every two years to stay in the race.

Competition has become more complex too, with companies increasingly sourcing or manufacturing globally, facing technology-based rivals trying to disrupt incumbents, and taking on emerging giants with unexpected sources of competitive advantage. In a recent KPMG survey, 70% of the respondents admitted that increased complexity was the biggest challenge they faced, and 94% agreed that the ability to manage complex issues successfully had become a key competitive factor.

Still, our work with several European corporations show that most companies fall short of understanding the dynamic, multifaceted, and interlinked demands they face. Instead of adapting rapidly to the fast-changing and complicated world, they press on with more of the same, dispensing morale-boosting slogans at town-hall meetings and exhorting staff to batten down the hatches and work harder. They have adopted a silo mentality of departmental self-interest, maintaining rigid, top-down hierarchies that act as a barrier to cooperative participation and promote a dependency on managers.

In such an environment, employees lapse into a frenzy of activity: instead of pausing to reflect as a team and find new ways of solving complex problems, they run faster and faster, stuck in a rut rather than engaging in innovation. The consequences of such strategies can be seen in the increasing incidence of burnout and sick leave. Most companies fail to understand that the increase in complexity is not just a temporary phenomenon; complexity is the only constant today. And companies have much to learn from the world’s best soccer teams in using swarm intelligence to tackle complexity.

### **The Importance of Swarm Intelligence**

Swarm intelligence, which brings to mind the image of a hive of bees working together, requires people to gather information independently, process and combine it in social interactions, and use it to solve cognitive problems, according to behavioral biologist Jens Krause. It has an advantage over other systems in that individuals get the opportunity to lead the swarm and affect what it does. Moreover, because people act collectively, they can consider more factors, come up with more solutions, and make better decisions.

Companies that want to survive in today’s fiercely competitive economy must continuously strive to stay a step ahead of rivals. They cannot do this by using only the resources of their leaders; they must harness all the collective intelligence that surrounds them. For instance, Germany’s BMW uses the wisdom of the crowd in its Co Creation laboratory, to which anyone can contribute. Among other things, BMW has invited suggestions on the future of transport, discussing more than 300 ideas including new approaches to electric vehicles, parking, and communication between vehicles.

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If companies wish to benefit from swarm intelligence, they should start with its most obvious and largest source: employees. They must try to use the collective intelligence of all their employees to improve products, services, and processes. Company wikis and other electronic platforms can be great places to exchange ideas, but swarm intelligence shouldn't be confined to digital media or cloud-based projects. In fact, executives should stop seeing swarm intelligence merely as a form of online cooperation; they must place more emphasis on managing employees to get the best out of them and use the swarm intelligence they generate to find solutions to complex strategy challenges.

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### Learning Swarm Intelligence from Tiki-Taka Soccer

Business can learn five lessons about using swarm intelligence from soccer teams using the tiki-taka style.

**1. Create a common vision.** Until a few years ago, soccer teams looked down on the vision thing, regarding it as too airy-fairy, but there is increasing openness to the concept. Coaches now get together with players at the start of every season and decide what they want to accomplish, often couching objectives in emotional terms: how they want to feel at the end of the season, what they will be proud of etc. The goal is not just winning, but playing attractive soccer that excites fans, qualifying for the Champions League, sending as many players as possible to the World Cup, making every kid in the region proud of the team... A club's mission statement is quite likely to include concepts such as pride, enthusiasm, and player development.

If you're the head of a department in a company, which is the size of a modern soccer team, surely it can't be that difficult to get your staff to develop a common vision. Studies however show that less than 10% of departmental managers develop visions that guide their staff. More often than not, they argue that the company should come up with an overarching vision and let it percolate down to the employees. It's helpful to be singing from the same hymn sheet, but having a departmental vision gives employees a sense of purpose and direction. They're also more likely to respond in the form of generating swarm intelligence.

**2. Design flexible roles.** For many decades, soccer teams used a clear line-up: goalie, defenders, midfielders, and forwards. Many teams still do, but floating formats have been common in the past five years or so, with fullbacks often launching attacks and forwards forming the first line of defense. Players also change position more often: the right wing will suddenly switch to the left, or an experienced defender may move into the midfield for a while. These variable, open-play systems enable teams to interact with one another in constantly changing ways and make it difficult for opponents to predict their moves.

By contrast, there is little openness and cooperation in the corporate world. Under the constant pressure of competition, companies look inwards rather than out, engage in self-serving actions and point the finger at others. The production and design departments will complain that the marketing and sales departments aren't selling enough of their high-quality products, and vice versa. This egocentric mentality is still present in soccer, but it's less prevalent, and no smart coach will stand for it. Corporate managers too need to realize that their rivals are other companies, not their colleagues down the corridor.

**3. Be a teacher, not a boss.** Football coaches used to be like Felix Magath and Louis van Gaal, who believe in order and obedience. They always know what must be done and how, and anything resembling a personal relationship is a hindrance. That leadership style is effective as long as you're always one step ahead of rivals, and know what's best for your team. It may be appropriate during periods of crisis, but in an increasingly competitive, fast-changing and complex environment, players must be able to think for themselves.

The best coaches today are more like expedition leaders, engaged in an educational and mutually supportive journey of exploration with their players. The exponents of this school include Pep Guardiola, Jürgen Klopp, and Thomas Tuchel, all of whom believe that team effort is all

that counts. Bayern's Guardiola is always saying how proud he is of his team's achievements; Dortmund's Jürgen Klopp has promised to support his players more than they've ever been supported; and Schalke's Jens Keller says he gets a kick out of seeing his players develop in front of his eyes.

Sadly, in the corporate world, the old guard is still alive and well. A mechanistic management style relies on the carrot-and-stick approach, and companies have been slow to realize that employees don't respond well to it. Professional soccer learned this lesson long ago, not least because many players are young. CEOs should look in the mirror, and ask themselves: "Is my style like Magath's, or like Guardiola's?"

**4. Set collective objectives.** Once, soccer players used to earn bonuses for scoring goals, but those were abandoned when managers realized that was an incentive to shoot—regardless of distance and position. Teams now set collective objectives that affect all the players, and include the maximum number of goals scored against the team; the minimum number of goals scored by the team; and how many kilometers players run during the course of a game. Moreover, bonuses are awarded to the team; players win together and lose together, so they are offered the same incentives. Some coaches, like Pep Guardiola, focus not so much on titles won or goals scored as on perfection in attacking or defensive play—learning targets that motivate and contribute to all-round performance.

Companies, by contrast, still go through the nerve-wracking ritual of performance evaluations, during which executives set goals for direct reports. The aim is to create a sense of accountability, so that people are motivated by goals and are rewarded for attaining them. This makes top management feel in control of a well-oiled machine, but there has been increasing discontent with this practice. In an increasingly complex and volatile environment, it is becoming difficult to define goals clearly and decide when they have been achieved. Employees also engage in low-balling, setting themselves unambitious targets so there is no longer any incentive to perform above and beyond the call of duty. As a result, companies operate below their potential.

Managers should have the courage to manage in a less compartmentalized manner, moving away from individual goals and embracing collective ones. Employees will identify freeloaders and motivate one another to accomplish common objectives, so executives should think past the next milestone and decide which aspects of the business they really want to manage. That way, they'll quickly achieve learning objectives and open new horizons for their people.

**5. Be a full-time leader.** Good coaches spend their time being leaders. They don't play the game on the field themselves. They devote all their energy to getting the best from their 40 or 50 players, spending all day inspiring, teaching, developing, and guiding their teams, resolving conflicts, conducting daily meetings, and speaking to dozens of people. This is the true task of leadership.

The average executive, on the other hand, spends only 20% of his or her time leading. The rest is devoted to answering email, attending to financial matters, negotiating with suppliers, or resolving customer issues. Employees' concerns come well down the list of priorities. They are the equivalent of player-coaches, who juggle both jobs simultaneously and were common in soccer 20 years ago. However, it became clear that that was not effective; a seasoned leader who focuses entirely on the team achieves better results and enjoys greater credibility.

Many top executives we talked to admitted they weren't spending enough time leading, but claimed their other responsibilities would be adversely affected if they did. Not everyone needs to be a full-time leader, but having one can reap big rewards in terms of team performance. It's a better use of the leader's time, and it pays rich dividends in terms of generating achievement and commitment.

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Companies may be bigger and more complex than soccer teams and require more guidance than do organizations where the boss has daily contact with every employee, but our findings apply to organizations of all shapes and sizes. Swarm intelligence has much to offer corporations beset by increasing complexity and intensity, and business leaders have a key role—indeed, a responsibility—to foster it.

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## SPONSOR PERSPECTIVE

Tiki-taka soccer teams gain their competitive edge by using swarm intelligence to innovate on the fly. At Google, we've found that our most successful teams take a similar approach. We call these top-performing teams "elastic teams" because of their ability to use collective intelligence to rapidly adapt themselves to changing circumstances and new challenges.

Whether at work or on the soccer field, elastic teams win by encouraging collaboration to happen naturally. To create this collaborative environment in the workplace, you have to:

### Get everybody into the game

At work there are no sidelines, so make sure your team is always looking for great ideas everywhere. Start with your own employees, but be sure to seek out new talent beyond your department and even your company. By expanding your pool of resources you'll increase your areas of expertise, identify problems earlier and delight customers with unexpected innovations. The more diverse your team is, the stronger it becomes, so make sure everyone has the tools to discover and collaborate with a wide variety of partners, no matter where they're located.

### Be ready anytime, anywhere

In tiki-taka soccer, players stay actively engaged in the game no matter where they are on the field. This creates a competitive advantage because momentum never stops. At Google we follow a similar philosophy, which we call "work the way you live." When your team members are enjoying their personal time at home, they can use a smartphone to read the news, plan a party and buy a plane ticket before they get out of bed. So, shouldn't you make it just as easy for them to get things done when they're working? Give them mobile, easy-to-use work apps, and they'll collaborate effectively wherever and whenever they need to.

### Use the right tools

What makes the tiki-taka strategy so effective is that teammates learn to react instantly to one another's moves instead of following set plays. Businesses also become more innovative and competitive when their teams use work tools that let them work together in real time. That's why Google Apps for Work literally puts everyone on the same page with shared calendars, forms, documents, spreadsheets and slides. Everyone on the entire team can edit, comment and collaborate at the same time no matter where they're located.

To see how Google Apps for Work makes collaboration easy, visit us at: [google.com/apps](http://google.com/apps)

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