THE 10 ATTRIBUTES OF SUCCESSFUL TEAMS, TEAMWORK, AND PROJECTS

What are the attributes, characteristics, and tell-tale signs of successful teams, teamwork, and projects? This is an age-old question that dates back to the beginning of time and the formation of human civilization itself. Roman infantry tactics were infamous for their well-balanced blend of flexibility and structure. However, they were often helpless at the hands of faster-moving Persian archers who could cause great harm from a distance without falling victim to Roman short swords in hand-to-hand combat. More recently, the attributes of effective teams have been a question of Western research since at least the 1950s, when the topic of empowerment, autonomy, and small-size emerged to thwart the practice of top-down autocratic control originating from Frederick Taylor's "*Principles of Scientific Management*" (*circa 1900*), which sharply focused on division-of-labor (i.e., *the ruling class "thinks" and the working class "blindly" follows their orders with their physical strength and abilities, while "rewarding them with a plum"*). Combined with concepts of brainstorming and quality improvement, these led to highly-structured groups, such as tiger teams, code inspection teams, quality circles, concurrent teams, and integrated product teams. One of the theories that grew out of the 1950s was concept of SYNERGY (i.e., *the notion that small, highly-structured teams with rigid rules could perform at higher levels than individuals acting alone—Often, called the "Ghost Inspector" in the 1980s*).

Scientists took issue with ethereal notions of synergy, brainstorming, and ghost inspectors, and revisited the field of "*teamwork*" by placing it under the microscope of true randomized experiments in the 1990s and 2000s. This so-called "*Scientific Research*" purported to refute the theory that teams were more effective than individuals acting alone in terms of productivity, output, etc. Let's not forget that scientists are also deeply-flawed humans who made many mistakes and even skewed the results in their favor. Today, teams are considered no more effective than individuals acting alone, which bodes well for Western culture and its worship of "*fierce individualism*" and the accolades that follow "*institutionalized narcissism.*" Everyone wants to be the "*Quarterback,*" who gets paid 100 times more than everyone else. Western CEOs earn more in a single day than employees make all year. It's not surprising that projects, groups, and teams experience high-levels of conflict, lack of cooperation, and poor value in the Western world. Today, teamwork is needed more than ever. Furthermore, hundreds of scientific studies have examined the attributes of good teamwork, not just gamed studies that dispelled the notion of "*ghost inspectors,*" synergy, and brainstorming. Some feel teamwork science is hopelessly mired in a quagmire of irreconcilable theories, dimensions, variables, and results. However, solid themes have been identified. Let's examine some of the core tenets of successful teams.

- **Urgent Need**. One of the most critically import attributes of teams is having an urgent need. That is, the market, customer, executive, manager, or some other key stakeholder has to have an overriding need for something. This led to the theory that "*crisis is a catalyst for change.*" In other words, if there is a compelling need, then teams are more predisposed to function well together to produce something of value. Vice versa, without a crisis, teams often experience malaise, lack of direction, and listlessness. The presence of a life-or-death situation often motivates people to set aside their differences and perform well. World War II often motivated people from vast demographic backgrounds, social classes, ethnic clans, genders, and ages to thwart a common enemy. Physicists worked together in the Manhattan project to create the atomic bomb in record time. Engineers worked together to put a person on the moon, when a national leader challenged them to do so "*before the decade comes to an end.*" Microsoft created Internet Explorer in record time and labored to "*Kill Netscape,*" when its upstart rival beat them to the punch. Even, Virginia Satir noted that some children who experience early traumatic experiences excel later in life. The bottom line is that teams must have an "*urgent*" need to set aside their differences and focus on a common purpose.

- **Clear Goals & Objectives**. Perhaps the second most important attribute of teams is having clear goals and objectives. That is, there has to be some clear, obvious, and easy-to-see direction, end-point, coordinate, or destination. It helps a great deal if the goals and objectives are measurable and easy to quantify (i.e., *fly to Dallas by 9:00 am, walk up 10 steps in 30 seconds, paint your living room white in 3 hours, write a five-page double-spaced report by noon, etc.*). A key attribute of clarity is that the goals are small, reasonable, and achievable. Furthermore, it helps if the risk of obtaining those goals is low and they are easily attainable. Management by Objectives (*MBO*) emerged in 1954. SMART goals emerged in 1981 (i.e., *Specific, Measurable, Attainable, Relevant, and Time-Bound*). This is where the science and philosophy of goal-orientation gets a little fuzzy, philosophical, and even controversial. The emergence of goal-orientation came under fire. Western firms were accused of focusing on quarter-to-quarter results (i.e., *what could be accomplished in 90 days*), whereas Far Eastern firms planned for 100 years at a time (*or more*). Some people felt that simple goals did not challenge people to excel. Therefore, the notion of "*stretch goals*" emerged (i.e., *goals should be difficult-to-attain in order to be worthy*). Others felt that creative people should be empowered to explore without a specific direction. Finally, contemporary social scientists argued that the teams themselves should be allowed to establish their own goals, objectives, and "*purpose,*" in order to be motivated to succeed (*rather than handed goals by a higher-level authoritarian figure or manager*). One thing is clear, teams need clear, attainable, and measurable goals to succeed, whether they are easy, medium, difficult, or extremely difficult (*even if the goal is to "explore, create, or discover something new"*). Missing or fuzzy goals mandated from on-high or directionless teams are not going to be motivated to accomplish anything on a timeline, especially if they are disconnected from an urgent need.

- **Respected Leader**. Another important attribute is having an extremely well-respected leader. That is, a person or group of people must be appointed to spearhead the formation, direction, and progress of the team. Great leaders have emerged throughout history to spur teams on to great performance. These have included prime ministers and presidents, senators, representatives, governors, mayors, university presidents, school principals, coaches, teachers, mentors, etc. Sometimes leaders are appointed and given formal power, while at other times leaders emerge (*especially in times of crisis*). Leaders often have clear visible attributes such as education, intelligence, skill, talent, voice, pen, and even beauty. Sometimes, people lead by example and often fall into the class of servant-leader. In any case, someone needs to identify and communicate an urgent need, vision, and goals to the team. Leaders are sometimes mistaken for "*project managers*" (i.e., *people who write project plans, track schedules, and review project progress*). This is certainly a type of leader, especially one that has hard skills. However, leadership is often embodied by softer skills such as communicating, conversing, motivating, facilitating, lightly

coordinating, herding cats, and even de-conflicting. Organizations are often dysfunctional bureaucracies that hinder progress or teams from accomplishing their goals. Sometimes, teams are separated from the organization, so they aren't influenced by political boundaries. Other times, leaders are appointed to lead a team to accomplish its goals by granting them the authority to transcend the territorial boundaries themselves. If the project is complex, resource intensive, large, or long-term, sometimes the leader has to be forceful. If the project is simple and short-term, then the leader doesn't have to be quite so forceful. In other cases, especially smaller ones, the team is allowed to self-organize and appoint their own leader, allow the most appropriate leader to emerge, or change leadership on a task-by-task basis. However, teams of all sizes—small, medium, large, or monolithic—will respond better to a clear leader with authority, power, and resources, especially if the leader is respected (i.e., *has instant credibility*). Teams will simply not perform well for a powerless leader, or certainly one they do not respect.

- **Small Size**. Yet another highly-important attribute of effective teams is their size, in terms of participants. That is, smaller teams perform better than larger ones. This often becomes a philosophical question, polemic, disputed, and even controversial (i.e., *how small is small*). Throughout history, larger armies or teams were considered better than smaller ones. Larger teams perform better in the presence of the first three attributes (i.e., *urgent need, clear goals and objectives, respected leader, etc.*). We've seen this throughout history. All one has to do is ponder the immense size of the Roman, Spanish, Portuguese, or British Empires and the global scale of their successes. However, larger teams are harder to manage, because of their immense size. They require more resources, better structure, and far more coordination. Imagine how difficult it was for a president to manage the victory of a large military force. Abraham Lincoln could not directly control the Union Army, nor could Jefferson Davis control the Confederate forces. They could establish an urgent need, clear goals, and even garner respect, but it gives rise to the old adage, "*you can lead a horse to water, but you can't make it drink*." In the end, leaders cannot force teams to perform—the teams and individuals must be willing to perform. The smaller the size, the easier it is to communicate, converse, and coordinate it. Conversely, the larger it is, the more difficult it is to manage. Pairs of people (*two*) can often accomplish great things (i.e., *missionaries, musicians, etc.*). Just some of these examples include Orville and Wilbur Wright, John Lennon and Paul McCartney, Larry Page and Sergey Brin, etc. Sometimes, these were alter egos in direct competition with one another, such as Peter and Paul, Adolph Hitler and Winston Churchill, Larry Bird and Magic Johnson, Bill Gates and Steve Jobs, etc. The technique of a Scout Sniper Team (*shooter and spotter*) emerged in the military and Pair Programming even emerged in the field of Computer Science. Others clung to "*Miller's Limit*" (i.e., *seven plus or minus two people*). U.S. Navy Seal Teams more or less follow this guideline and range from 4 to 16 members. Some projects have contained thousands and even tens of thousands of people. Others have contained a few hundred. Sometimes, leaders believe a larger team is needed to accomplish something big. Is this true? Well, more or less! The fact is, small teams can accomplish big things (*even individuals can*). Extremely small teams have created multi-billion dollar industries that employed thousands and sometimes hundreds of thousands of people. The economic spillover effects of just a few people can create ripple effects throughout the global economy that creates cottage industries employing millions of people. Remember the "*Butterfly Effect*"—a butterfly flapping its wings on one side of the Earth can cause a hurricane on the other. In larger teams, the concept of "*span of control*" emerged in the early 1930s, and was even mentioned in the Bible. That is, the notion that even the leader of a large team never interacts with more than seven to nine people at a time. Chances are, however, that more levels of indirection associated with larger teams may cause performance to suffer, especially if there's not an urgent need, clear goals, and the leader isn't respected.

- **Highly-Motivated**. A very important attribute of effective teams is whether they are highly-motivated. That is, are the teams or individual members of the teams highly-motivated to succeed? Motivation refers to the energy, amount of effort, and urgency at which a team or group is predisposed to accomplish a goal, objective, or task. This sort of goes hand-in-hand with being goal-oriented, a self-starter, responsible, mature, leading, and, of course, a sense of urgency. Give a team or an individual a clear goal and timeline, and a highly-energetic one will accomplish that task, maybe even early. There are many reasons a team or individual may be highly-motivated. There can be substantial financial and non-financial rewards, such as money, power, status, or a boost to the ego. The people on the team can have a psychological need to be recognized as having a can-do attitude. People may have superior physical attributes like strength, intelligence, skill, creativity, training, education, or some other desirable feature. In today's society, obsessive compulsive disorders are often mistaken for people with unusually high levels of motivation. Oftentimes, organizations will hire highly-motivated individuals to be executives, senior leaders, project managers, or even temporarily lead a team with an urgent purpose. Sometimes, people remain highly-motivated throughout their lives, while others may simply lose their sense of motivation or urgency. Take a team in any professional sport or athletic endeavor. To get to that level, i.e., a sports professional, one has to be the best of the best. That is, sports teams are primarily comprised of the best-of-breed athletes (i.e., *cream of the crop, crème de la crème, etc.*). However, even on sports teams, one or two individuals appear even more motivated than the rest of the team (*especially larger ones, like football or soccer teams*). There is some research to show that rewards and punishments, i.e., carrots and sticks, are NOT predictors of team or individual performance. In general, people do respond high degrees of motivation when a substantial reward is offered or a substantial punishment may ensue. However, these effects are often temporary. Sometimes, people exhibit high degrees of energy until a goal is accomplished and then their energy level wanes when the pinnacle of success is achieved. Think of an Olympian who spends all of their life trying to win a gold medal and then get arrested for something as petty as shoplifting after they finally achieve their dream. Sometimes even ordinary people who are not recognized as being very energetic can accomplish something big (i.e., *a janitor who rescues a baby from a burning building*). Oftentimes, people exhibit high levels of energy to accomplish other goals, so they can have time to work on their own. At other times, people will simply devote all of their energy to accomplishing their own goals, even it's just sleeping a lot. What's the bottom line? Form small teams of people with a track record for accomplishing near-term, measurable goals, and can get along well with others, even when they are not in-charge.

- **Hands-On Skills**. Another major attribute of effective teams is whether they are highly-skilled. That is, do the teams or individual members have the requisite, if not exceptional, management or technical skills to accomplish the goals and objectives? If you need a painting, then it helps if the team members are noted for their painting skills. If you need a business

plan, it helps if the team members are noted for their business planning skills. If you need a computer programmer, it helps if the team members are noted for their computer programming skills. As noted earlier, it helps if the team members have exceptional skills in the areas requiring their expertise. Sometimes, teams with moderate skill levels in an area can pool their resources to accomplish larger and more complex goals. Individuals within study groups often have part of the answer, but pool their component knowledge into a cohesive whole. Groups of mediocre performers may even encourage other members of the team to excel (i.e., *underperformers may only need to have their fragile egos and confidence built up a little bit with a few kind words*). In another instance, let's say a task requires an artist, engineer, and machinist. If one person can do all three tasks, you're pretty lucky. However, you can simply assemble a team of individuals in each of the required disciplines. It becomes more difficult to coordinate the actions of disparate individuals, especially if the team members are randomly assembled. It takes some time for disparate individuals to build up trust, cohesiveness, and cooperation. Sometimes, a requisite level of cooperation may not be possible (i.e., *the artist and engineer cannot get along well*). Other times, the motivation to cooperate is only temporary (i.e., *the team will suffer through one task together, but not two*). How often do musical groups achieve the pinnacle of success, only to split up and form individual musical groups? Pretty often, actually! Sometimes, one discipline may be too complex. For instance, let's say the mechanical assembly is beyond the skill of a single machinist. Therefore, a small team of mediocre machinists may exhibit the skill of single, highly-talented machinist. However, keep in-mind that larger teams have more communication paths, personalities, and other demographic differences, so assembling big ones may be counter-productive. Sometimes, a highly-skilled person likes to work alone, or simply charges too much money for their talent. In this case, cost is the major constraint, so teams are assembled from people with fewer requisite skills and talent. In certain fields, the barriers to entry are so specific, unique, or high, that teams cannot acquire the talent they need. Usually, only a handful of top universities known for their sports programs can attract the best athletes. Most of the technical engineering talent wants to work in Silicon Valley, but may refuse to work on a government project in Washington, DC. Perhaps, all of the mathematicians or physicists are specific to one part of the world. You can bring the talent here, move the work over there, or work as a virtual globally distributed team. Global automobile designers will hire the best talent on the globe at any price. However, billions or trillions of dollars hang in the balance. Your team will suffer if you hire unskilled people or concede to allow them to learn the skills on-the-job. In other words, your goals and timelines may not be achievable if skill is your constraint. What's the bottom line? Having a people with the requisite hands-on skills specific to the task is paramount to team success.

- **Demographic Similarity**. A well-known attribute of effective teams is demographic similarity. That is, does the team and its participants share the same demographic profile or characteristics? This may include all female or male sports team, maybe even the same age or age range. It may even include ethnic characteristics, such as an all Indian, Japanese, European, or American team. The U.S. has one of the most ethnically diversified cultures on the planet, which are not present in India, Japan, England, Spain, and other nations where racial homogeneity is valued, treasured, and maintained with fierce veracity. Other nations have often said this is why the American economy has been in decline, while the economies of the so-called "*Four Tigers*" have ascended so rapidly in the last five or six decades (i.e., *Hong Kong, Singapore, Korea, and Taiwan*). Until recently, Korea was the only nation in the world that experienced double-digit economic growth on an annual basis for decades. Demographic similarity (*ethnic homogeneity*) was often attributed with the economic success of the Far East, which included most if not all of the Pacific Rim nations. It could be a small team of former military personnel, officers, pilots, etc. Many firms form around alumni of their university and even academic college and year of graduation. The team may be a group of engineers from a particular state, city, and university. Even the U.S. president is usually surrounded by cabinet members with as much demographic similarity as possible. This doesn't solve all problems, but it has often been the tried and true formula to instant credibility, trust, communication quality, teamwork, cooperation, conversations, and collaboration among teams and their members. A person with a vastly different demographic characteristic can plunge the team's equilibrium into chaos. Sometimes, groups will settle for small diversification, i.e., one or two demographic differences, but three or four demographic differences is far more than team psychology can tolerate. In certain teams with a wider variety of demographic differences than the norm, people with similar demographic characteristics will fracture, bifurcate, or splinter into pairs, subgroups, and cliques. It can be two former military non-coms, officers, engineers, females, males, etc. People might factionalize by age, labor category, or educational background. Therefore, it's important to keep the teams as small and demographically similar as possible, to keep members of larger groups from splintering into warring factions. In cases of vast ethnic and demographic diversity, leaders must take proactive measures to prevent splintering into demographic subgroups. One of the most effective means is maintaining open workspaces, removal of office and cubicle walls, placement of desks in circles, and maintaining a policy of open verbal communications where everyone can hear and participate. This is because factions will often hide in closed offices to gossip and whisper about their ethnic differences, which causes distrust. Demographic similarity can also cause groupthink. That is, there is so much cohesion, trust, and agreement among teams with narrow ethnic characteristics that they fail to think out of the box. This has not only led to the decline of nations that hinge upon ethnic homogeneity, but American firms that are formed around demographic similarity as well. In other words, people with have a hard time thinking-out-of-the-box. Modern research shows that soliciting the broadest range of feedback across the international, cultural, and ethnic continuum leads to best organizational decisions. Vice versa, failure to do so can cause great economic harm ranging in the trillions of dollars lasting generations. Japanese companies have often struck a good balance of demographic diversity and similarity. They'll hire top notch international product designers to devise an innovative new architecture, then manufacture the innovation using demographically similar teams. In doing so, they yield both innovation and reliability. Some countries do the opposite, domestic designers and demographically different manufacturing teams, leading to poor design and quality. What's the bottom line? Small, demographically similar groups tend to go through Tuckman's five stages rather quickly (i.e., *forming, storming, norming, performing, and adjourning*), whereas dissimilar ones, on the other hand, tend to get stuck in the "*storming phase*" (*or just go straight to adjourning—Quitting*). However, watch out you don't trade short-term performance or even long-term cohesion for groupthink, lack of innovation, and poor quality and reliability (*which undermines long term economic performance*).

- **Gets Along Well**. Of course, getting along well is another attribute of effective teams. That is, how well do teams and their members get along with one another, like one another, cooperate, collaborate, and are reasonably happy or satisfied working together? This sort of goes hand-in-hand with demographic similarity, because people with similar physical characteristics form trust, cohesion, and communication quality faster, stronger, and even longer. However, it is possible for demographically diverse teams to get along well enough, especially if there is an urgent need, clear goals, strong leadership, etc. Small highly-skilled and motivated teams tend to get along pretty well. People will often put aside their differences if their goals are sharp, timelines are tight, and there are fewer ethnic factions. This is especially true if they share at least one or two demographic characteristics (i.e., *both female, similarly aged, same labor category, educational background, and other life experiences*). Even if there is a modicum of conflict, teams can accomplish their group's goals, before long-term dysfunction sets in, solidifies, and deep divisions form. You've heard the old adage, "*guests, like fish, begin to smell after three days*?" Well, a similar principle is in play here (i.e., *people can get a long for a short period of time, while their manners are in high gear*). However, after all of initial cordiality, ceremonies, and other indulgences are expended, deeper, longer-term differences may surface. This may deceive leaders to a certain extent, because a small diversified team may work well on one 90-day task or project, but refuse to repeat the process or simply disintegrate into dysfunction on a second or third try. Although it appears further down the list of attributes, "*getting along well*" could be the most important principle among 21st century teams. That is, it may be better to have long-term cohesion, cooperation, collaboration, conversations, trust, and communication, than short term, high-performance on a high-friction team of prima donnas with Type A personalities. A team consisting of all Alpha males and females might be good for fighter jocks, U.S. Navy Seal Teams, or NASA Shuttle Crews on a 24 to 72-hour mission to save the planet, but they probably don't work too well on longer-term projects, where complex products and services must be built. There is also some downside to getting along well too. Historically, conflict within teams was considered an attribute of innovation, and there is some element of truth to that primitive belief system from our industrial age. This also goes hand-in-hand with getting external feedback on architectures, designs, and other critical project decisions from vastly diversified groups. However, when it comes to it, long-term cohesion is necessary to create complex products and services once the creative idea has been discovered. Remember the Japanese formula for designing innovative, highly-reliable automobiles? What's the bottom line? 21st century leaders must invest a little more time forming groups that get along well, without digressing into groupthink and bad decisions.

- **Compatible Personalities**. A critical and often overlooked attribute of effective teams is personality compatibility, which is no minor pathological variation of "*gets along well*." That is, do the team members have similar or congruent personalities, or conversely, do they have widely varying, ranging, or diverse personalities? Chances are, there will be a great deal of conflict between team members with widely varying personality types. There is much research into the types, kinds, and numbers of personalities and personality types. They range from two, four, five, or sixteen on average. The two basic types are extroverts and introverts, which are also known as Type A and Type B. There are no absolutes with respect to personality, so someone could be mildly Type A (*extrovert*) or extremely Type A (*neurotic*). The same can be said of Type B introverts (*one can be mildly introverted or extremely introverted*). The worst conflict happens when two people at opposite ends of the spectrum are brought together in one place (*close quarters or close and continuing contact*). For example, bringing together an extremely shy and sensitive introvert with a hyperactive attention deficit disorder Type A with an obsessive-compulsive desire to conquer the world (*beginning with the introvert*). This happens even in the animal kingdom (i.e., *predators prey on the weak, sick, young, old, and marginalized*). People who are both Type A or Type B may or may not get along well with one another. People with Type A personalities may feed off of one another to conquer the world faster (i.e., *they use one another's strengths to get even further ahead*). A mild Type A may even complement a mild Type B. Oftentimes, there can be only one Alpha male or female, Type A personality, or chieftain on the team, so bringing two Type As together often causes conflict. There's probably a middle Type C with elements of both Type A and Type B. That is, they can be the dominant Type A in the presence of introverts and be the recessive Type B in the presence of stronger Type As. Therefore, two introverts may not necessarily get along, as one may have more Type A characteristics than the other. Therefore, it is possible for two introverts at opposite ends of the scale to behave as a Type A and Type B. Of course, there's the popular 16 personality type models consisting of four-letter acronyms, depending upon which personality you want to be when you grow up (*personality a la carte*). The challenges of personality type are often overlooked when forming teams, because personalities are often minimized, filtered, or diluted in the presence of larger teams or groups. That is, the introverts will group together, while avoiding the extroverts. Distance also mediates the effects of personality type. That is, your boss may be Type A, but you may be Type B. However, you may only see your boss who works across the street once per year during your annual performance review. Under these circumstances, the introvert may be able to tolerate the extrovert over long periods of time (*and vice versa*). However, large variations in personality type will immediately surface in smaller teams of collocated individuals in close and continuing contact, such as those in open collaborative workspaces where desks are inches apart. A neurotic Type A manager may get in early, complete all of his or her tasks quickly, and then spend the rest of the day pestering, micromanaging, badgering, harassing, shaming, and embarrassing the introverts to do likewise. However, the differences may not be productivity-related. People with neurotic domineering Type A personalities simply want to clone everyone's behavior after their own. So, Type A's could even shame introverts into coming in later, working slower, dressing like themselves, behaving similarly, and basically jettisoning their own personality characteristics in favor of the Type A's. Never underestimate the debilitative, degenerative, and counterproductive effects of widely varying personality types, especially on small, collocated teams in close and continuing contact over long periods of time. In Tuckman's model, there is a process of forming, storming, norming, and performing. That is, most teams overcome conflicts in about 30 to 90 days. This is especially true in larger or distributed groups where people with opposite personality types can avoid one another for long periods of time. However, small teams of people with opposite personality types in close and continuing contact may simply storm forever (*or until one of them chooses to leave the team*). This happens all of the time in professional sports teams consisting of two or more star players with Type A personalities. Type A players may actually win games together, but the team atmosphere will not reach a peaceful stasis point until one of them leaves (*even if it means losing*).

- **Sense of Empowerment**. Empowerment is also critically important to highly-effective teams. That is, how much autonomy, power, status, resources, maturity, experience, responsibility, and decision-making authority do teams really have? Highly-motivated and skilled teams do not need to be micromanaged. Instead, they often need to be formed and left alone to determine the best course-of-action in which to satisfy the urgent needs, goals, and objectives. It doesn't mean than strong leaders aren't necessary to ensure that autonomous teams don't stray too far beyond the boundaries established for the project. In fact, good 21st century leaders are more like shepherds (i.e., *they exist to watch the flock, gently guide them to safe pastures, ensure healthy activities are being followed, nurse sick members back to health, and shoot predators that wish to eat its members*). Strong leaders are NOT shop floor supervisors to ensure people clock in at the exact minute, fire up their machines with minimal setup time, produce the maximum number of widgets per hour, eat and take breaks at the times prescribed by union by-laws, leave when the whistle blows, and follow rigid bureaucratic rulebooks that can fill a library. Strong leaders are proxies for market needs, lead users, customers, and other key stakeholders. One of their primary jobs is to ensure a vision, artist's rendering, or model is established, and to constantly communicate that vision to the team throughout the project. It's not that team members are stupid and cannot understand the vision the first time. It's just that team members often immerse themselves in day-to-day implementation details (i.e., *they are focusing on the short term activities such as constructing small subassemblies*), whereas strong leaders are focused on the end-goal (i.e., *the broad constraints and boundaries described in the artist's rendering*). For instance, if the artist's rendering is for a "*spanning bridge*" and the teams begin ordering parts and supplies for a "*suspension bridge*," then it's clear the teams are off the beaten path. The leader should not hit people over the head with their mistakes like shop floor supervisors, rather have informal conversations and regularly scheduled staff meetings to remind the teams of the vision and ask them about their progress towards that vision. It's not sufficient anymore to hand 21st century teams a vision, but to empower the teams to establish the goals and objectives along with the vision itself. Furthermore, market needs and priorities may change along the way, so teams must also be given the authority to reprioritize an organizations fundamental goals and objectives (i.e., *redirect the teams towards even more urgent needs*). This happened in the case of Microsoft, where its lowest level employees had to remind Bill Gates that it was necessary to build Internet Explorer in order to compete with Netscape. Bill ignored his peasant army for a while, BEFORE realizing he wasn't the only visionary, in spite of the fact he'd written a book called, "*The Road Ahead*" (i.e., *his employees discovered there was another road*). What's the bottom line? Form small, highly-motivated, highly-skilled cohesive teams, empower them with resources and autonomy, and pretty much get out of their way, as long as they are headed in the general direction of the agreed-upon vision. Finally, grant teams the authority to reform the vision, if they discover an even more urgent market need.

Throughout this treatise, we've labored to identify, examine, and elucidate some of the key success factors that organizations, projects, teams, and individuals can utilize to help overcome the common pitfalls of dysfunctional teams:

- **Urgent Need** – Establish an urgent need for the collaboration.
- **Clear Goals & Objectives** – Ensure clear goals and objectives exist.
- **Respected Leader** – Appoint a well-respected leader with people skills.
- **Small Team Size** – Utilize the smallest team or group size possible.
- **Highly-Motivated** – Attract the most highly-motivated people you can.
- **Hands-On Skills** – Ensure each member has highly-relevant hands-on skills.
- **Demographic Similarity** – Try to aim for as much narrowly-focused demographic similarity as possible.
- **Gets Along Well** – Don't be afraid to strive for the smoothest climate possible even if talent has to be sacrificed.
- **Compatible Personalities** – Never ignore the debilitating effects personality incompatibility when forming or joining teams.
- **Sense of Empowerment** – Empower teams to strategize, identify their goals and requirements, and self-select solutions.

So, exactly what have we discovered in this journey down memory lane? Well, we've decided that there is "*no new secret sauce*" to team success! Everything we know about teams has already been identified. Sometimes, well-meaning researchers lose their bearings exploring hundreds of variables over decades. Scientists are humans, they are NOT robots, and they are certainly NOT infallible. Oftentimes, "*science*" is manipulated to prove a point. Practitioners oversell their notions of teamwork using phrases like synergy, brainstorming, and ghost inspectors. However, scientists merely dismiss these ideas without any serious consideration, while hiding behind a veil of true randomized experiments and esoteric measurements. More importantly, we've learned that teams must have a sense of urgency, clear goals and objectives, and strong leadership. This does not mean autocracy, micro-management, and division of labor, but the courage to form bold visionary teams to blaze a new trail. These teams should be as small as possible to accomplish big things, highly-motivated, and highly-skilled. Furthermore, they should be demographically similar, get along well, and have compatible personalities. However, leaders must ensure groupthink and poor decision making doesn't ensue due to lack of diverse external feedback. Short-term success often requires as much team diversity as possible. However, as we've seen, diverse teams are often chock full of debilitating, degenerative, and counterproductive behaviors.

Finally, good teams should be empowered and leaders must get out of their way, yet gently keep them within project boundaries. Truly 21st century teams should also be empowered to form the organization vision itself, because they are often the ones closest to the market, customer, and rapidly evolving technologies. This latter point cannot be emphasized enough. This was the major hypothesis behind Dan Pink's "*Motivation Theory*." That is, everyone should be involved in forming the team's vision. It should never be simply handed-down to teams, as has been the practice for hundreds, if not thousands of years. This may work in the short term, but "*telling people how to think, what to do, how to do it, and where to get off*" is simply nonsense in the 21st century. If we've learned anything as a species in the last 100 years, it's that people are smart, intelligent, capable of moving mountains, and understand how to move them if you take the time to ask them (*and then get out of their way to let them do it*). Yes, it is true that some people may be a little confused in the face of immense complexity, stress, and sudden change. However, don't be surprised how quickly the fog clears, people envision a better way, and can personally be the keys to highly-successful teams. Oftentimes, teams of mediocre participants can achieve high-levels of performance working together to leverage one another's strengths.

CASE STUDIES IN TEAMWORK

These case studies were chosen to illustrate the success of three teams performing ambitious tasks in record time, in an industry chock full of failed project teams. The success record for similar projects was only about 20% to 30%. However, each of these teams was able to succeed in the face of impossible odds. Much of this was directly due to the 10 attributes of successful teams, teamwork, and projects. These included urgent need, clear goals & objectives, respected leader, small team size, highly-motivated, hands-on skills, demographic similarity, gets along well, compatible personalities, and sense of empowerment.

- **Spacecraft Project**. *In this case, the government wanted to construct a large near-Earth spacecraft. It wasn't the first one, but it could have been one of their last, as the space business is being increasingly commercialized. In this case, the government had more money than they ever had in their past, and their goals were equally as lofty. Many firms with long track records of success were poised to bid on these contracts and build these spacecraft, just as they had successfully done in the past. A government contractor who hadn't built this type of spacecraft wanted in on the action and formed a small team to pursue this one-of-a-kind contract. The government had an urgent need to help restart their stalled economy with a huge infrastructure project such as this (and they needed to spend it fast and complete the spacecraft in record time, before anyone changed their minds). Furthermore, the government invested millions of dollars in establishing crystal clear goals and objectives for what they envisioned, having decades of prior experience. The new contractor identified one of their most well-respected scientists to lead the team in their proposal. His qualifications, personality, experience, and charisma were impeccable. He quickly formed a small team of some of the brightest engineers, scientists, and business developers the corporation had available to it. Most of the engineers were just a few years out of school, so their technical, hands-on skills with emerging technologies were fresh in their minds. The team members were similar in nationality, ethnicity, education, skills, motivation, and age range. In fact, all of the team members got along extremely well, they often spent their off-time together, including evenings and weekends. They were like a family to one another. Except for minor differences, their personalities were remarkably similar, they were neither Type A, nor Type B, they were more like Type C (blend of extroverts and introverts). Furthermore, the corporation gave them unlimited resources, authority, and freedom to respond to the request for proposal in whatever manner they wished. They were free to establish their own boundaries and self-govern themselves. In the end, the team won the spacecraft contract, helped successfully build it, and many went on to stellar careers.*

- **Business Process Reengineering**. *A government agency wanted to build a bold, new unprecedented system. However, they didn't have any additional resources to do so. They couldn't get rid of any existing systems, but they had to somehow squeeze blood out of a turnip and find the resources within. Furthermore, they wanted to re-engineer their existing project management offices, outsource them if possible, and force them to comply with modern IT policies as well. They called one of their existing suppliers and asked them to form a team to accomplish the task in only six months. Therefore, there was an urgent need along with crystal clear goals and objectives. The supplier appointed their brightest engineer to lead and form the team to reengineer the customer's PMOs. He formed a small team consisting of only six engineers to do so. He was only missing an IT policy compliance guru. Each of the engineers had high-levels of motivation and professional track records to prove it. A headhunter found one half-way across the globe, he was contacted, flown to the project site, and now the team had all of the state-of-the-art hands-on skills to accomplish the task. They were all from the same country, ethnicity, gender, education, industry background, etc. There was little to no demographic difference between them. Most of the team members got along well, except for some minor scuffles between the members with the largest demographic differences (i.e., senior budgeting analysts and much younger IT policy jock). However, the IT policy jock had skills dealing with project bullies and was able to quickly smooth over these minor differences and become good friends with the economist. Once again, the team was a blend of Type A and B personalities, with no one at either extreme. Furthermore, they were fully empowered to accomplish the task by whatever means necessary in spite of the government's and company's prior policies, culture, and processes. The team successfully outsourced key PMOs, reformed all of their individual IT policies, reduced their individual operating budgets to the bare minimum, completed the task on-time and on-budget, and received the highest accolades from the customer. Furthermore, the government built the new system from the savings, which proved critical in the next decade.*

- **IT Compliance Initiative**. *A government agency decided to outsource its central IT department and key IT systems. There were many large companies who had successfully built large IT systems for the government. This contract went to a highly-competent and competitively-priced medium-sized IT firm, with whom the government trusted. This firm was selected to operate the entire IT center. More importantly, this was only an experiment. Rigid, near-term performance objectives were established by the government. That is, the contractor had to hit all of the nearly impossible performance objectives in order to keep their new contract. One of these objectives was for the IT center to comply with a federal IT policies, processes, and maturity criteria. Furthermore, the new contractor needed to achieve this objective in 90 days. Short of that, the contract would not move forward, so there was a very urgent need to comply and the IT policy consisted of crystal clear and unambiguous goals and objectives. The first thing the company did was tap its brightest and most senior IT visionary to lead this team. Now, this leader was an executive, but was asked to do operational work in order to achieve ultimate corporate success. That is, put your money where your mouth is. Then, the company identified a short list of its brightest project managers from across the country and formed this new team from its top 12 corporate IT leadership performers. Being leaders, they were among the single most highly-motivated individuals in the entire corporation. They were also technically competent and had sharp hands-on-skills, since it was the norm to promote technical superstars to leadership positions. The team was similar in nationality, ethnicity, education, skill, motivation, interest, and pretty much in every other regard. From day one, they got along extremely well, and put trust in total strangers for the sake of accomplishing the objectives. No one's qualifications or abilities were challenged, questioned, or undermined. They were also a blend of Type As and Bs (Type Cs) and had elements of both introverts and extroverts, with no one at one extreme or the other. Furthermore, they were empowered with all of the resources, authority, and operating flexibility to accomplish the goal of achieving IT compliance, which they proudly did.*