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ABSTRACT

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The US Army is currently attempting to modify its forces of today in order to provide a more relevant force to Commanders in Chief. The US Army Strike Force concept provided an opportunity to develop and test new ideas in providing a more rapidly deployable force that is lethal, survivable, and has a small logistics requirement. The concept and name has changed since its inception in 1993, but the type of rapid deployment force envisioned remains an organization somewhere between the current US Army heavy and light forces. Technology is able to enhance the deployability, lethality and survivability of weapons systems, and equipment; however, harnessing technology to help teams rapidly form within a Task Force remains a challenge.

The research question for this monograph was "what is Rapid Teaming and what are critical Rapid Teaming skills for a US Army Rapid Deployment Task Force?" The concept of Rapid Teaming emerged during early Strike Force workshops and was primarily a theoretical discussion. The focus of the theoretical discussion centered on US Army lessons learned during operations in Somalia (1993) and Haiti (1994) and the need to better train rapid deployment forces in the accelerated teaming process. The Teaming process is difficult enough under normal Task Force scenarios. Rapid Teaming would require teams to quickly task organize and move through the team building stages at an accelerated pace. Initial discussion and thought about Rapid Teaming was that it would be critical to train the Strike Force (as well as the task organized units) to rapidly form and operate as a team for the Strike Force concept to be successful.

This monograph proposes that Rapid Teaming is (1) looking at a team as a system, (2) identifying leverage points where economies of scale can be achieved, and (3) applying appropriate resources, training, or effort to those leverage points in order to accelerate the stages of team development and the team lifecycle. The monograph also proposes that critical Rapid Teaming skills are: understanding systems, envisioning, project management, communicating using dialogue, trust building, and leveraging technology.

US Army Rapid Deployment Task Force Dynamics Rapid Teaming

A MONOGRAPH BY Major Tedd A. Wheeler





SCHOOL OF ADVANCED MILITARY STUDIES UNITED STATES ARMY COMMAND AND GENERAL STAFF COLLEGE FORT LEAVENWORTH, KANSAS

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CHAPTER I

INTRODUCTION

The United States National Security Strategy (NSS) states that one of the nation's critical capabilities is military overseas presence and power projection. The ability to globally project military force is paramount and provides the National Command Authority with increased options to responding to potential crisis and conflict. One of the strategic concepts of The United States National Military Strategy (NMS) focuses on power projection and the ability to rapidly respond with flexible joint force packages. These joint force packages must be tailorable to specific missions, rapidly adapt to any environment they are sent to and, if necessary, fight their way into a non-permissive theater. Fighting and winning our Nation's wars remains the US militaries primary mission. Since the designation of regional commanders in chief, the US Army has struggled with designing relevant land forces.

The US Army Strike Force concept provided an opportunity to develop and test new ideas in providing a more rapidly deployable force that is lethal, survivable, and has a smaller logistics requirement. The Strike Force concept emerged as the US Army Force XXI concept was being implemented with the 4th Infantry Division (Experimental Force) in 1993.³ The concept and name has changed since 1993, but the type of force envisioned still remains an aberration of the heavy and light forces in our structure today. Technology is able to enhance the deployability, lethality and survivability of weapons systems equipment, but harnessing it to help teams form within a Task Force and operate

remains a challenge. One of the most challenging issues for teams who are required to operate at a rapid pace is how to do more with less in a shorter period of time.

The concept of Rapid Teaming emerged as a means to describe the process of speeding up the normal teaming process, as US Army and Joint Task Forces are required to form and execute operations rapidly and under extreme uncertainty. Rapid Teaming has yet to be defined and approved by the US Army. The US Army Research Lab and US Army Research Institute are just beginning work to define and explore Rapid Teaming. At early conception there are three constructs of Rapid Teaming that allowed researchers to define the process and begin developing a conceptual model to explain it.⁴

The first construct of Rapid Teaming is Rapid Deployment of the task force. The Task Force could possibly be a standing unit such as a US Army Corps or Division or it could also be a Joint Task Force built in response to a commander in chief's requirement. The second construct of Rapid Teaming is the integration of all or portions of combat, combat support, and combat service support units. Since the inception of Strike Force, this concept has varied from a Task Force with organic units to just a Task Force Headquarters that would receive all units from external sources. The final construct of Rapid Teaming is the integration of US Inter Agency support teams. Support and Stability Operations (SASO) after action reports identify the integration and utilization of Inter Agency support is a significant challenge to Task Forces.

The first section of this research paper is a work in progress update of the US Army's initiative to provide a relevant land force to the regional commanders in chiefs that can accomplish a full range of missions from support and stability operations to decisive operations. Understanding the emerging concepts and historical patterns of US Army rapid deployment forces is critical and highlights the relevancy of Rapid Teaming and this research effort.

The second section of this research explored the concept of Teaming and why US Army doctrine is so focused on teams. This research investigated the relevancy of teams not only in the military, but also throughout private and public industry. A Teaming model that the Department of the Navy uses was used to outline a complete conceptual model.

The third section reviewed the current US Army doctrine on the teaming process and teaming skills. This review of US Army doctrine served to outline a conceptual US Army Teaming model. In order to understand the concept of Rapid Teaming, there needs to exist a baseline from which to compare it to. A conceptual teaming model does not exist. This researcher proposes a conceptual model for current US Army Teaming. US Army Field Manual 22-100, Leadership, and the proposed US Army Teaming Model was used as both criteria for evaluating Rapid Teaming and as a baseline from which changes to current doctrine were identified.

The fourth section answered the research question, "what is Rapid Teaming and what are critical Rapid Teaming skills for a US Army Rapid Deployment Task Force?" This research proposes a definition for Rapid

Teaming and critical Rapid Teaming skills. Rapid Teaming was then evaluated against the current US Army Teaming model and team building stages. Critical Rapid Teaming skills were also compared to US Army leader skills.

The final section includes research conclusions and recommendations.

The intent for the conclusions and recommendations is to submit them to the US Army Leadership Development Office at Fort Leavenworth, KS in the form of an issue paper. As the executive agent for strategic leadership, they provide a channel to the US Army Chief of Staff for new concepts that are relevant to the Army both today and in the future.

CHAPTER II

US ARMY RAPID DEPLOYMENT TASK FORCE INITIATIVE

Chapter II provides an update on the US Army's rapid deployment task force initiative and highlights the challenge and fluidity of defining and implementing a more relevant force. The concept of Rapid Teaming emerged during early Strike Force workshops and was primarily a theoretical discussion. The focus of the theoretical discussion centered on US Army lessons learned during operations in Somalia and Haiti and the need to better train rapid deployment forces in the accelerated teaming process. The Teaming process is difficult enough under normal Task Force scenarios. Rapid Teaming would require teams to quickly task organize and move through the team building stages at an accelerated pace. Initial discussion and thought about Rapid Teaming was that it would be critical to train the Strike Force and its task organized units to do Rapid Teaming well in order for the Strike Force concept to work.⁵

The Strike Force headquarters would be required to rapidly deploy and task-organize units from other standing divisions. The task organization process could occur shortly before deployment, during the deployment, or after the Strike Force headquarters had already deployed into the area of operations. Any of the three scenarios would require accelerating the normal Teaming process more than normal.

Having a clear definition of Rapid Teaming would allow Task Force

Training, Leadership, and Soldier Support to develop Training Support Packages

(TSPs) designed to help units prepare for an accelerated Teaming process.

Understanding the background and current focus of the US Army' rapid deployment task force initiative is important in that the actual type of force may change over time, but the requirement for understanding Rapid Teaming remains a constant.

In response to remaining relevant to regional commander in chiefs, The US Army began developing a concept called Strike Force in conjunction with the US Army Force XXI experimentation. Strike Force underwent several concept changes as the Army searched for a more deployable heavy force or a more lethal light force from 1993 to 1999 when a Strike Force implementation plan was drafted. During fiscal year 1999, Strike Force received funding and the 2nd Armored Calvary Regiment (ACR) stationed at Fort Polk, Louisiana was selected to transition its headquarters into the Strike Force headquarters. The 2nd Armored Calvary Regiment was selected to serve as the proof-of-principle organization to test Strike Force concepts. Strike Force would be exercised over the next four years as a test bed for new training, leadership, and soldier support concepts with an initial threshold capability of 2003.6

"The US Army Strike Force will provide a unique capability to the National Command Authority – a rapidly deployable force, capable of executing operations immediately upon arrival, with the lethality, survivability and tactical mobility to withstand the rigors of a broad range of threats and operational environments (inclusive of urban and complex terrain)." The actual force structure of Strike Force had changed several times as the concept was debated among senior US

Army General Officers and tested in high-tech simulation. The Strike Force being transformed at Fort Polk would be the initial Strike Force Headquarters. This Strike Force would draw all of its combat, combat support, and combat service support organizations from within US Forces Command (FORSCOM). The Strike Force experimentation had three objectives: meet the needs of commander in chiefs for adaptable and rapidly deployable land forces, act as a leader development lab, and be a prototype for US Army 2010 organizations.⁸

The mission sets for Strike Force included: High End Decisive Operations, Entry Operations, Peace Enforcement, Deter/Contain Crisis, Humanitarian Assistance. The initial focus of the Strike Force experimentation was on Entry Operations, Deter/Contain Crisis, and Peace Enforcement. The intent was to focus the Strike Force on the three missions that would immediately provide commanders in chiefs the forces they need. Strike Force could also perform High End Decisive Operations and Humanitarian Assistance providing they were augmented with appropriate staff and subordinate organizations. 9

The US Army Training and Doctrine Command (TRADOC) resources were focused at energizing the Strike Force effort before the end of the fiscal year. In order to focus a significant amount of resources on one project the US Army Training and Doctrine Command created Task Force Training, Leadership, and Soldier Support (TLS) at Fort Leavenworth, KS. The combined educational, research and simulation resources at the Combined Arms Center were to be focused on using Strike Force to test and implement new and emerging concepts.

The Training, Leadership, and Soldier Support Task Force's mission is to fill the need for well-trained, adaptable leaders and multi-dimensional soldiers who can operate efficiently in the complex environment of the 21st century. ¹⁰ Strike Force provided the Task Force a real life test organization on which new concepts like Rapid Teaming could be introduced, tested, and modified as the headquarters began forming.

As Army leadership changes, so do initiatives and emerging concepts.

General Eric Shinseki, the new Army Chief of Staff, cancelled the Strike Force experimentation and stopped all funding and US Training and Doctrine

Command focused effort. The 2nd Armored Calvary Regiment ceased to be the Strike Force in October 1999. They were directed to transfer all documentation of their actions and lessons learned to Task Force Training, Leadership, and Soldier Support.

General Shinseki proposed that Army Service Components should be capable of serving as a Joint Forces Land Component Command Army and an Army Forces headquarters. He stated that US Army Corps should be able to serve as Joint Forces Land Component Command Army, an Army Forces headquarters, and as a Joint Task Force headquarters. General Shinseki then proposed to fill all authorized positions in all corps by fiscal year 2003 and divisions by fiscal year 2001.

His diagram of a full spectrum force that is responsive and able to execute a full range of missions is yet to be defined, but its somewhere between the current heavy and light forces of today. General Shinseki directed to immediately

begin developing a solution at Fort Lewis, Washington with the round-out brigades from the25th Infantry Division's and the 2nd Infantry. One light brigade and the other a heavy brigade would provide the ideal situation to gradually erase the distinction between heavy and light forces. He goes on to forecast that these units are the first and other will follow.¹¹

Task Force Training, Leadership, and Soldier Support remains focused on their initiative of concentration new ideas and concepts, but their test bed is now the proposed medium brigade. 12 As this researcher delved deeper into the US Army rapid deployment concept effort, another key organization emerged. The Leadership Development Office at Fort Leavenworth, KS is the daily operating agency for all strategic leadership issues and initiatives. 13 They are also the organization responsible for the Army's Leadership Campaign Plan and key team members in Task Force Training, Leadership, and Soldier Support. From their perspective the Chief of Staff of the Army has directed a major shift in the concept development of a more relevant land force with the initial guidance he provided.

CHAPTER III

TEAMING

Field Manual 25-100, Training the Force, emphasizes the importance of individual training to support collective or team training. US Army soldiers are taught from initial entry training the importance of their team pulling together in order to successfully compete their assigned mission.

Why Teams?

With all the hype about teams in all realms of private industry, public government, military, and volunteer organizations, one would believe that Teaming is well researched and documented. Contrary to this thought, most documentation on the effects of teams on an organization only provides successful or un-successful lessons learned and fail to provide a comprehensive Teaming model. Many resources offer techniques for a particular aspect of the Teaming like checklists for building a successful team or the top ten reasons why teams fail. They fail to look at Teaming as a complex system that requires a conceptual model in order to think about the theory behind the successful uses of teams.

Change is an environmental norm and with change high levels of uncertainty cause organizations to shift their focus and organization. Teams have provided business organizations flexible building blocks, which can easily be redirected, reorganized, and quickly begin performing as required.

Teams are energized by challenges that cause them to go beyond what is possibly the accepted norm. Members become excited, as they are required to

bond together with a diverse group of people and work toward a common goal. Organizations are successful if they are able to instill a strong sense of performance ethic as opposed to building an organization of teams. Teams are merely the means in accomplishing higher performance and they don't become ends to themselves. Teams provide a safe haven for individualism while keeping the needs of the team first. Organizations, who can foster and promote individuals, proficient at leading or being part of a team, are successful in fulfilling individual and group needs. And finally, discipline is a common theme in all successful teams. Shaping a common purpose, agreeing on goals, defining processes, developing interrelated processes, and holding the team mutually accountable provides a map to success. 14

Human beings bring spirit to an organization. In order for spirit to be kindled in a team, organizations need to have an environment of open communication, a common goal, and above all trust. Trust between team members acts as a multiplier and increases energy levels. The positive aspects of individualism need to be fostered and monitored in the form of self-motivation and self-accountability. Empowerment is also essential for individuals to be creative and adaptable. Team leadership charts the course for success or failure. ¹⁵ If a team leader fails to excite and inspire the team to a common goal, the team will tend to only meet low expectations as opposed to exceeding normal expectations. Individual member skills and structure do not make a good team. People make a team and only people can bring spirit to a team.

Group decision-making is a process that is too often inexplicable flawed when disciplined processes do not exist. Brainstorming in groups is another process that can careen wildly out of control unless specific rules exist and a team leader or facilitator is guiding the process. ¹⁶ Barriers to effective Teaming are: egotism and contempt, fear of accountability, antagonism, anger and resentment, and aggression. ¹⁷ Now that the need for teams has been presented, the next step is to present a comprehensive definition and understanding of how teams work.

Team Mechanics

Teams are a group of willing and trained individuals who are: focused on a common and understood goal, interdependent, organized and equipped to work together, sharing responsibility, and empowered to implement decisions. ¹⁸ In Sandy Porkas' book, Rapid Team Deployment, she spends a significant number of pages describing team mechanics in order to establish a doctrinal definition of a team. A common definition of a team is critical particularly in this research, as the US Army tends to call various types of organizations a team. The US Army's over use of the word has diluted the teaming concept.

The stages of team development are: forming, storming, norming, performing, and if required adjourning. No matter how skilled of a team leader you may be, teams consistently begin with an air of caution. If the team is part of a standing organization, caution may only exist as new members are introduced and during reorganization. If the team is assembled for the first time, the degree of caution is higher.¹⁹ Time has a direct relationship to the five stages as some

teams move through each phase more quickly than other teams, yet they still generally follow the five phases.

The forming stage is the most critical stage as members are cautious and unsure of what to expect from the team leader and the other members. Leaders who expect instant results are often frustrated as it takes time to develop trust between the team members and themselves. A team leader can set the stage for success or failure at the initial team meeting.

The storming stage is marked by the fact that out of the forming stage, the leader has instilled a common interest in the team goal and has developed initial commitment to work together as a team. The storming stage can often be the most frustrating stage for both the leader and the team members. As trust in formed in the interrelationships and working of the team, members become more open in expressing their own ideas and often their biases. Teams are too often disbanded at this stage prematurely as leaders fail to move the team through the stage. The key point of this phase is that is a transition into the next phase.

Norming is signified as teams begin to move their focus to the work effort as opposed to individual tensions and relationships. General success is achieved in most endeavors and a feeling of continuing growth exists as the team collectively figures out how to solve problems together. In many organizations, norming is the final stage. For competing reasons, teams are not resourced beyond doing what is expected from them.

The performing stage is the highest level of team development. A team is appropriately resourced and empowered to go beyond what is normally

expected. The really good teams are able to self directed their performance and exceed established goals of the organization and often the team leader as they fervently pursue to go beyond their performance objectives.

Depending on the type of team (standing team or temporary team), a fifth stage of adjourning provides a team leader with significant challenges. When a team is consistently a winner, the tendency is not to want to break it. The situation may require that the team is disassembled and how that process is executed can have both good and bad effects on other teams within an organization. Now that the mechanics of teams has been defined, it is important to next present a theory to explore how to look at and think about the process of teaming.

Systems Thinking

A system is a set of elements that interact with each other. A system normally has a purpose and acts within a discernable boundary. "Systems thinking is a discipline for seeing wholes. It is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static "snapshots." As our society has become more and more complex, using systems thinking to explain the dynamics and workings of teams is very important. Very complex organizations are mad up of a series of sub systems. Each sub system gives the larger system flexibility to adapt and change as required. Feedback loops exist within the sub system, between sub systems, as well as between sub systems and the parent system.21

The principle of leverage in physics is hard to dispute. Leverage in organizations is not always clear when not applying the principles of systems thinking. If a team leader can't think about his team as a system and find leverage points (processes, people or possibly resources), change or effort is often ill spent.²² If a team leader looks at his team as a system and is able to discern leverage points, they are able to apply pressure or change where it has an exponential affect.²³

Integrated Pagect Team Model

The US Department of the Navy has developed a virtual distance learning resource titled the Integrated Project Team (IPT) Campus. The resource can be accessed using the Internet or the Navy will send out a compact disc with the entire Internet site on. The US Assistant Secretary of the Navy (Research, Development & Acquisition) [ASN(RDA)] Acquisition Reform Office (ARO) sponsored the resource and it was developed by the Bellwether Learning Center, a division of Dynamic Systems, Incorporated.²⁴

This virtual campus provides students a series of lecture halls to learn about the conceptual Integrated Project Team model and the theory that binds the model together. Students then take virtual field trip to explore some "best practices" applications of Integrated Project Teams. There is even a simulator that allows a team leader to take a test ride and practice applying Integrated Project Team concepts. The simulation is a military acquisition project, but the model has applicability across all types of teams.

Understanding how an Integrated Project Team works well and why is critical to the theory. The theory is based on the facts that there are no "right answers", systems' thinking is a must, and the right environment has to be created for Integrated Project Team to work.²⁵ The level of performance assumes that the competency and cross functionality of the team is appropriate. In order for the team to succeed, the right mixes of people are required with the right amount of training.

An aspect not mentioned, but absolutely critical to consider, is team personality. Is there a right mix of various types of personalities that if combined, can increase team performance? Recent research into the affects of team personalities has found that there had been mixed results in past studies because there were more than 500 different measures of personality. Current research now focuses on the big five personality traits: extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience. ²⁶ In practice with the Integrated Project Team theory there is not a right answer, but there are certain research findings trends to be considered. The major theme is to assembling the right mix of people with certain personality traits to fit the type of task they are to perform.

Appendix I, an Integrated Project Team Model, is a conceptual model.²⁷ It appears linear in depiction, but many of the key success factors and processes have feedback or looping requirements that actually make it very non-linear in practice. The model professes that there are no right answers, but there are trends in successful performance that can be used to focus a team on certain

leverage points. This research will explore four critical factors as to build the base of knowledge in chapter V for defining proposed critical Rapid Teaming skills. This research will provide only a cursory outline of the four team processes of Integrated Project Teams. This will allow the reader to compare the US Army's current Teaming model to a complete Teaming model.

Empowerment in business terms is a strategic process of building a partnership between people and the organization, fostering trust, responsibility, authority, and accountability to best serve the customer. ²⁸ Organizations often advertise that they have empowered employees by changing rules and regulations or pushing decision-making down to the lowest level possible. For empowerment to be actualized, those people at the level to make decisions have to believe that they can actually make decisions and the upper level leaders will support them. Empowerment can be a key leverage point and actually accelerate change within organizations. Empowering teams has an added benefit as the collective knowledge of a team gives an organization a tremendous resource. Teams don't eliminate leadership responsibilities, those functions still need to happen, but now a team can perform them collectively. ²⁹

Technology is prevalent in all that we do and often overwhelms users because there is more information than the human mind can process.

Technology can be a leverage point, but if integrated improperly can actually slow down the process. "Groupware" is a generally accepted information technology word that describes a wide range of group or team processes.

Technology supports teams in both internal and external communications in the

uses of electronic mail, discussion and news groups, and video teleconferencing. Used in appropriate measure technology can significantly enhance communication and real time access to knowledge databases. If used as a replacement to critical face-to-face communications, it can reduce effective communication and cause team members to spend too much time in front of their computer. 30

"Team Learning is the process of aligning and developing the capacity of a team to create the results its members truly desire." The process of alignment is the focusing of the team on a shared vision. A lot of effort is invested in the forming stage of a team as a diverse group of personalities are brought together for one purpose. For team leaders who want to jump right in and start working, before the team is aligned, they have just bypassed a critical leverage point. The Integrated Project Team model delineates two distinct types of learning: skill improvement and team development. Skill improvement focuses on team building skills, conflict management, and interpersonal skills that would help in aligning the team in the forming stage. Team development can be likened to continuous improvement. This development could be training that is identified in order to leverage a teams ability to complete a task, it could be remedial training in conflict resolution, or exposure to a new way to think about a problem that is impeding the team.

"Teams are no better than the information that they run on." Feedback loops are a necessity and there are multiple loops. Internal team feedback is necessary to keep a healthy working atmosphere and ensure that members

remained focused on a common goal. A team is producing either a product or a service so there is ultimately a consumer. External feedback from their consumer allows modifications to be made to the product or service to ensure satisfaction. The biggest impact external feedback provides is early identification of a problem so that a change in focus can be made and ultimately the team can satisfy their consumer.

The ten key success factors of the Integrated Project Team theory are critical in achieving a high degree of team effectiveness. These factors allow a team leader to focus effort, training, and guidance on specific leverage points in order to maximize efficiency. However, it is through the application of the four main processes of the Integrated Project Team theory that a team turns capabilities into results. The four Integrated Project Team main processes are: innovation, problem solving, decision-making, and implementation.³⁴

Innovation is a scary proposition to many, especially those in management positions that are often guided to play it safe and stick to the norm. Innovation can have big payoffs, but it can also have disastrous results. Significant increases in team performance can be brought about through innovation. There is a clear distinction between creativity and innovation that needs to be understood. Creativity is the development of new ideas or thoughts. Innovation involves creativity, but involves putting new ideas or thoughts into action.³⁵ Thus innovation is action oriented and properly focused on a process can leverage change.

Complex problems require innovative problem solving. It is critical to understand the problem set, yet often the high degree of uncertainty and missing facts causes a team to get stuck in the process. New teams will normally begin to solve problems in a logical problem solving process. This logical process allows the team to stay in their comfort zones because they may not completely understand the problem set, but they can work on solving the problem logically. Too often complex problems consist of multiple interrelated systems with a tangles series of feedback loops that hide the real problem. The team may logically work through solving a complex problem only to discover that they solved a problem, but it was not the problem that actually needed solved. Problem solving takes experience, intuition, and active dialogue between the team members to harness the collective brainpower.

The decision making process is very similar to the problem solving process in that there is not a template to grantee success. Each decision involves values and judgments that can only be gained through experience and practice. It is also important to remember that no one can predict the future and that all decision making is a guess on what will possibly happen given a degree of certainty. Decisions cannot always be measured by their outcomes, as complex problems don't always react logically.

The implementation process is often taken for granted and applied as the last step. The Integrated Project Team approach promotes integration at varying times throughout innovation, problem solving, and decision-making.³⁷
Implementation then becomes a conduit for feedback both internal and external

as opposed to waiting to the very end and surprising the consumer with the final product or service.

This researcher has found that there is significant Teaming research effort within the US Department of Defense. However, the US Department of the Navy and US Department of the Airforce have by far more Teaming resources and research in easily accessible form than does the Department of. Now that this research has presented a quality conceptual Teaming model, the focus now shifts to exploring the current US Army Teaming doctrine.

CHAPTER IV

CURRENT US ARMY TEAMING MODEL

Leaders at all levels rely upon teams of various types to follow and execute guidance, directives, and intent.³⁸ Field Manual 100-5, Operations, discusses the critical aspects of teamwork when discussing combined arms teams and how a combined arms team has a synergy effect in overwhelming the enemy with combat force with a focused purpose. In chapter three on Force Projection the manual discusses the rapid tailoring of forces and the importance of early and continuous teamwork.³⁹ US Army Field Manual 25-100, Training the Force, has a core theme of teams. Training as teams in peacetime as in wartime and as joint and combined teams are the first two principles of the US Army's training doctrine and highlight the importance of teaming.⁴⁰

The newly revised US Army Field Manual 22-100, Leadership dated August 31, 1999 does not define teams, but relies upon the generic definition of a team as a common understood definition. Merriam-Webster defines a team as a number of persons associated together in work or activity. Field Manual 22-100's title, Leadership, focuses the doctrine on leader considerations of teams as opposed to teaming doctrine. Field Manual 22-100 focuses on defining the process of team building and skills of good team leaders. US Army teaming doctrine does not define a conceptual teaming model, but relies upon lists of challenges and actions of team building stages, historical vignettes of successful teams, and skills of a good organizational leader.

Teaming is absolutely critical to all that the Army does yet the US Army lacks a comprehensive Teaming Model. The intent of this chapter is not to critique US Army teaming doctrine, yet it is important to note a shortfall in the current doctrine. This researcher will propose a conceptual Teaming model for current US Army Doctrine. This proposed conceptual model and the US Army's current doctrine on teaming will be used both as criteria and as a baseline from which to propose changes.

Researching for more detailed teaming doctrine results in references to programs and studies conducted for the Department of the Army by contractors. The only issue with this solution is that multiple organizations are contracting for teaming models and programs and there does not appear to be a lead Army organization to share teaming resources that have already been purchased possibly several times by different organizations. Once the government through the Department of Defense purchases a model or program, it should be made available Department of Defense wide.

Field Manual 22-100, Leadership, defines three stages in the team building process: formation, enrichment, and sustainment.⁴² Appendix II depicts the US Army Team Building Stages and categorizes actions that teams and team leaders must do in order for a team to effectively work. There is no timeline imposed upon the phases as each team varies due to the type of team, team membership, and the mission.

The Formation stage is a two-step process of reception and orientation that is significantly different in peacetime than it is in war. Reception normally

takes the form of an orientation of some sort to welcome the team member or an entire team. In this researcher's personal experience during peacetime (or non-deployed), there is a formal commander's in brief that may be conducted individually or with a group of soldiers. The intent is to welcome the soldier into the organization's team. The element of trust is first introduced during reception. During wartime or deployments, a rear detachment cell may initially conduct reception. It may be sometime until the leader welcomes the team member.

Orientation begins when the new team member is introduced to the other team members or when the new team begins interacting for the first time. The team may receive a formal orientation during reception that reviews rules, regulations, and procedures. However, actual practices and norms are not displayed until the team members begin interacting as a team. There is a linkage between the reception from the leader and the orientation as team member's trust in their leader and other team members are initially tested. The difference between peacetime and wartime orientation can be vast as the team member has to face uncertainty and the stark hazards of war.

The enrichment stage is identified when the team moves from questioning everything to trusting their leader and each other. The speed at which trust is formed is dependent upon training as a team. A team reaches the sustainment stage when there is ownership of the team and its capabilities to do what they are required to do. With each new mission a team is assigned, there is an opportunity to exceed expectation, develop junior leaders, and maintain skills required to accomplish their mission.

Teaming skills are generalized as leader skills and categorized as: interpersonal, conceptual, technical, and tactical.⁴³ Teaming skills have three different levels of application: direct or tactical, organizational, and strategic teaming skills. Appendix III, US Army Leader Skills depicts all skills by level of application. Field Manual 22-100 does not depict a comparison of the skills by level, however it is important to discern common themes regardless of category or level.

The fact that the US Army chose to depict different skill sets by levels keeps it consistent with current US Army doctrine of three levels of war: tactical (direct), operational, and strategic. The four categories: interpersonal, conceptual, technical, and tactical provide general skills categories for other US Army Training and Doctrine Command doctrine and training support packages.

The US Army does not have a conceptual Teaming model. Field Manual 22-100 is the closest doctrine that addresses team building and the teaming process. Appendix IV, a Proposed Conceptual Teaming Model depicts the current US Army Teaming process graphically. Field Manual 22-100 discusses time in respect to the teaming process, but does not distinguish its relationship to any other aspects of Teaming. Appendix IV depicts time having a direct relationship between the three phases of building teams. This researcher proposes that over time, trust and teaming skills have a direct relationship to how long it takes a team to transition from one phase to another.

This chapter attempted to outline the current US Army doctrine on Teaming using Field Manual 22-100 as the primary source or reference. The principles of trust and teaming skills are common themes throughout other doctrine as they discuss important aspects of Army teams. Proposing a conceptual model for current US Army Teaming is important as it defines the baseline to define and explore the theory or Rapid Teaming.

CHAPTER V

RAPID TEAMING

In Chapter III, the researcher attempted to describe the phenomenon of Teaming and why the concept of teams is woven throughout US Army doctrine. Chapter IV of this research outlined the current US Army doctrine on Teaming focused primarily on US Army Field Manual 22-100, Leadership. This researcher proposed that the US Army does not have consistent or holistic Teaming doctrine or program. This lack of consistent Teaming doctrine and resources provides the opportunity for new concepts like Rapid Teaming, Hyper Teaming, Just-In-Time Teaming, and many other aberrations of the Teaming process to enter into being without a baseline of reference. In this chapter, the researcher proposes a definition for Rapid Teaming, specifies some potential leverage points, and extrapolates from those leverage points proposed critical Rapid Teaming skills.

Defining Rapid Teaming requires a conceptual understanding of Teaming and the looking at a team as a system. This research provided an overview of the US Navy's solution to Teaming for all acquisition activities. The US Navy's Integrated Project Team model and their innovative use of the virtual Integrated Project Team Campus was one of the best Teaming resources discovered during this effort. Understanding what holistic Teaming doctrine or techniques should look like is important to then be able to think critically about aberrations or variations to the Teaming process.

It is important to understand that in the US Army there can be two general types of teams. The first type of team consists of standing organizations. The

task organized for a specific mission or purpose. ⁴⁴ There is also a third type of team centered on informal groups and cliques; however, this type of team will not be discussed in this research. The US Army's overuse of the title "Team" has confused the definition and generalized everything as a team. In both cases above, a standing organization or task force may call themselves a team simply because they exist without actually meeting any criteria of a team.

The criteria for a team was defined in Chapter III of this research as a group of willing and trained individuals who are: focused on a common and understood goal, interdependent, organized and equipped to work together, sharing responsibility, and empowered to implement decisions.⁴⁵ It is important to recall the descriptive definition of a team as the concept of Rapid Teaming is defined and explored.

Definition

This researcher proposes that Rapid Teaming is (1) looking at a team as a system, (2) identifying leverage points where economies of scale can be achieved, and (3) applying appropriate resources, training, or effort to those leverage points in order to accelerate the stages of team development and the team lifecycle.

In Sandy Porkas' book, *Rapid Team Deployment*, she describes a simple theme of rapid team deployment. "Build and empower a team to the degree possible for the time your willing to invest in team development." ⁴⁶ Teaming is not easy and Rapid Teaming is even harder. Rapid Teaming assumes that your

organization has already met the basic criteria of a team above and there is a defined reason to accelerate the team lifecycle. Sandy Porkas' simple theme implies that there is a cognitive decision to team or not to team.

Management or the prospective team leader has taken the time to do a cost/benefit analysis of the effort it will take to create, sustain, and wrap up a team. For the US Army their standing organizations are organized and equipped to perform a specific mission. Their assigned mission is threaded through doctrine and justifies their funding. Anytime a standing organization is required to execute a task or mission outside of their defined mission, leadership is required to assess and decide how they accomplish it. There is cognitive tension in the decision to launch a team.⁴⁷

This cognitive tension occurs at all levels of military leadership as the US Army is asked to perform missions that are out of the normal scope of their doctrinal missions. A cursory review of US Department of Defense (DoD) Joint doctrine reveals a multitude of joint boards to accomplish tasks that the military services are not normally required to execute. These joint boards were established to provide a doctrinal structure to organizations that neither exists in the current military service structure nor are they funded.

Teaming has to be assessed as a business decision. Once the decision is made to launch a team, management has a myriad of tasks to perform before the team is assembled for the first time. Rapid Teaming in the business world is all about a narrow defined problem. However, applying the principle of a narrowly defined problem in applying Rapid Teaming to he US Army is not always

possible. In military application most missions, tasks, or problems the US Army is asked to perform, cannot be narrowly defined and uncertainty is a common theme. The criteria of empowerment also has limitations in military application as political-military constraints, chains of command, and structured organizations often limit the level of empowerment possible.

Core concepts of Rapid Teaming are the theories of complexity, systems thinking, leverage points, and mutual trust. As described above, most military missions, tasks, or problems cannot be narrowly defined in scope. This phenomenon occurs because of the complexity of the environment in which the US Army exists and is asked to perform in. Defining complexity is hard to do and current research into complexity is still struggling to describe a conceptual model. But then that is the whole point of complexity. It is a hard concept to define and think about.⁴⁸ For military pragmatists who search for a prescribed doctrinal solution or a schoolbook solution, the search never ends.

Intrinsically linked to complexity is the theory of systems thinking. Senge calls systems thinking a "Shift of the Mind" as one struggles to break the paradigm of thinking. This shift of thinking requires that an observer sees beyond things and discerns interrelationship and sees patterns instead of snapshots in time.⁴⁹ Within the conceptual model of systems thinking the bottom line or focal points of action are leverage points. The concept of leverage is physically undisputable, but too often because of the complexity of the environment or the problem, those points are not discernable.⁵⁰ Looking at a

team as a system and discovering leverage points is key to defining Rapid Teaming.

The final core Rapid Teaming concept, introduced in Chapter IV, is mutual trust. From the exploration of current US Army Teaming doctrine, this researcher noted a lack of a conceptual Teaming model to graphically depict a way to think about Teaming. Appendix IV, Proposed Conceptual US Army Teaming Model presented a model that captured Teaming as presented in US Army Field Manual 22-100, Leadership. Key to this model was the concept of trust, or better defined as mutual trust to capture the emphasis that mutual trust needs to be two dimensional as opposed to one way.

Interdependence is a team criterion. The glue that binds interdependence is mutual trust. Early research into the concept of Rapid Teaming has even proposed that the term Rapid Teaming should actually be Rapid Trust.⁵¹ The concept of mutual trust must exist between team members, between the team leader and the team members, and between management and the team. Mutual trust is a relationship that builds gradually, but can be shattered in an instant and cannot be easily recovered.⁵²

US Army research into virtual teaming in a low trust-high risk environment concluded that trust between team members who are geographically separated is the initial challenge that must be overcome if the team is to succeed. This mutual trust is acted on under the management term of Partnering. ⁵³

Partnering is a business term used to describe the focused process of building mutual trust. As organizations become more decentralized and information

technology becomes the primary link between people, the concept of Partnering is used to get back to the basics of developing trust between people.

Now that a definition for Rapid Teaming has been proposed and core concepts have been outlined, the next step of this research is to focus on leverage points. The intent of this focus is to highlight points in the Teaming system where emphasis can be channeled to receive economies in results or effects. From this analysis proposed critical rapid teaming skills will then be developed.

Leverage Points

As noted earlier, once the decision is made to launch a team, management has a significant amount of effort before the team assembles for the first time. During the directing phase, management or possibly the team leader must first give the team a clear sense of direction. Providing this direction requires a high level of conceptual skill. The ability to visualize a sense of purpose (ends), launch a team (means), and then define and foster direction (ways) is critical to Rapid Teaming.⁵⁴

Project management skills are critical for a team leader and also need to be developed in team members. Once a clear vision of purpose is determined, those thoughts must be captured and conveyed to management and team members alike. Developing team charters provide a means to communicate vision of purpose up and down the management chain and then use the charter to monitor progress, refocus effort, troubleshoot resource shortages, and reward success. 55 Appendix V, Sample Rapid Team Deployment Team Charter depicts

a technique to capture a team leaders' vision of purpose and translate it into written form that has utility throughout the Teaming lifecycle.

Team action plans provide a method of project management that can be extended down to the team. Team action plans are of a direct design of the team members as they translate the team charter into action. Key to this process is ensuring the linkage between the team charter and the team action plan. The theme of both of these project management tools is the translation of high-level conceptual thinking and vision into focused written plans.

The theme of monitoring is what gets measured, is what gets done. If care is taken in the development of the team charter and team action plans, within those documents are things that must be accomplished with corresponding suspense's. Monitoring is initially a team leader responsibility, but as the team matures, self-monitoring skills can be developed and some monitoring functions can be delegated. The ability to measure success gives a team leader a conduit to celebrate and reinforce success throughout the mission. Conversely, the ability to measure failure allows a team leader to redirect effort or apply additional resources before incremental failure becomes catastrophic failure.

Effective meetings are a key leverage point and in military application extremely relevant. Military officers complain that they are required to attend too many meetings that accomplish absolutely nothing. This cry for relief can only be quenched with effective meeting management. As with the decision to launch a team, the meeting organizer must plan their meeting and meet according to

plan.⁵⁶ For each team meeting, roles and responsibilities need to be defined and understood.

Another key leverage point is team decision-making. The primary assumption behind the team decision-making process is that groups of people make better decisions than individuals working alone. Several social pressures can reduce the effectiveness of team decision making like personality factors, "groupthink", increased risk taking, organizational hierarchy, and egocentric thinking. Extremes in team decision-making also create barriers. In one case the team leader takes aggressive control of the decision-making process and stymies group input. In another case, the leader takes no control and the team decision-making process spins in an endless cycle and never reaches consensus.

Consensus is defined as general agreement. Consensus is the key element in the team decision-making process and requires a high level of facilitation skill. Teams also take time to develop the skills in reaching consensus. ⁵⁸

The use of technology is a leverage point that seems almost too simple to propose. However, the ability to selectively employ it to support the Teaming process can significantly accelerate team performance, "unstick" a team, increase their knowledge base of information for better decisions, and allow simulation of decisions without the consequences.

This researcher proposed five leverage points that offer economies of scale in results: team direction, project management (team charters, team action

plans, monitoring, and meeting management), team decision-making, mutual trust, and selective leveraging of technology. The next section of this research proposes the critical rapid teaming skills that US Army Rapid Deployment Task Forces need to possess in order to have the ability to perform Rapid Teaming. Proposed Critical Rapid Teaming Skills

- Understanding systems
- Envisioning
- Project management
- Communicating using dialogue
- Trust building
- Leveraging technology

Comparison to Current US Army Teaming Doctrine

In the process of comparing the concept of Rapid Teaming to current US Army Teaming Doctrine, this researcher discovered that at the current US Army skills set is much more insightful than my initial impression. However, US Army Field Manual 22-100, Leadership fragments the presentation of leader skills into direct, organizational, and strategic levels. The skills in the categories of: interpersonal, conceptual, technical, and tactical are then described and historical vignettes highlight examples. ⁵⁹ The primary shortfall of the manual is that a crosswalk of the skills in matrix format is not presented to allow analysis and comparison. Appendix III, US Army Leader Skills presents such a matrix and provides a tool to analyze possible changes to the skills set against a holistic framework or model.

Absent from the US Army skills set is any mention of project management. The manual discusses supervising and communicating skills, but does not propose the importance of project management skills. Project management skills provide a skills set within itself to take a project (mission) from inception to completion in a series of processes and feedback loops that facilitate success. The fragmented presentation of some, but not all pf the project management skills set becomes more of a laundry list of skills as opposed to a model with supporting skills.

Also absent from the US Army skills set is any discussion of trust building. Values such as respect, honor, and integrity are discussed under the section on leader values and are proposed as the bedrock, which attributes, skills, and actions are built on. However, trust does not transcend across into the skills set. Mutual trust is critical throughout the Teaming process, yet it is not important enough to be listed as a critical skill.

Appendix II, US Army Team Building Stages presents a good example from US Army Field Manual 22-100, Leadership of a conceptual model. This model also highlights the aspect of trust as it develops and matures through the team building stages. Conspicuously missing from the stages is a wrap up or closure stage. The model assumes that the team never concludes its mission of finishes its task. Current operations drive continuous task organized teams to execute non-doctrinal tasks that culminate in completion and closure or turnover to another team to perform that mission. Yet, our doctrine does not address that process for teams to be able to perform.

Since the US Army lacks a consistent or holistic Teaming doctrine, the comparison to a conceptual Teaming model will be made against the one this researcher proposed in Appendix IV. Time remains a constant in thinking about Teaming and Rapid Teaming except that with Rapid Teaming time gets compressed by either the situation or the time the team has to progress through the stages of team building. The direct relationship between Teaming skills and time remains relevant, but becomes more critical with the compression of time over level of expectations in team performance.

The direct relationship between trust and time also remains relevant, but can provide a more significant leverage point in relationship to Teaming skills. In high risk and with significant levels of uncertainty, rapidly building trust allows a team to overcome potential shortfalls in their skills set and speed up the progression through the team building stages.

CHAPTER VI

CONCLUSIONS

The research question asked at the beginning of this study effort was "what is Rapid Teaming and what are critical Rapid Teaming skills for a US Army Rapid Deployment Task Force?" In Chapter V, this researcher proposes that Rapid Teaming is (1) looking at a team as a system, (2) identifying leverage points where economies of scale can be achieved, and (3) applying appropriate resources, training, or effort to those leverage points in order to accelerate the stages of team development and the team lifecycle. The researcher also proposes that critical Rapid Teaming skills are: understanding systems, envisioning, project management, communicating using dialogue, trust building, and leveraging technology.

The initial focus of this research effort had been centered on the recently energized rapid deployment initiative called Strike Force. The term Rapid Teaming had been discussed in several working group sessions in attempt to address the concept challenges of rapidly deploying a standing Strike Force headquarters, rapidly task organizing units under the headquarters, and rapidly integrating a multitude of Inter-Agency organizations. This researcher had participated in one such focused group workshop and found that their had been little to no research done to date on Rapid Teaming.

As the rapid deployment task force effort took a drastic change of direction with the change of a new US Army Chief of Staff rapid deployment initiative, the concept of Rapid Teaming remained valid and still need to be researched,

analyzed, and written on. In continuous dialogue with the US Army TRADOC Task Force Training, Leadership, and Soldier Support (TLS), this researcher was also afforded the opportunity to follow and interact with their effort to conduct initial research on Rapid Teaming through The US Army Research Laboratory field office at Fort Leavenworth, Kansas.

Regardless of the type of rapid deployment task force that the US Army chooses to implement, the challenge of Rapid Teaming remains an unchanging challenge. After researching current US Army Teaming doctrine and Training, Techniques, and Procedures (TTPs), this researcher discovered a glaring lack of common and holistic Teaming doctrine or Training, Techniques, and Procedures.

Analyzing Teaming using Senge's systems thinking theory and concept of leverage points provided an opportunity to reanalyze the stages of team building and the team lifecycle process. Using this researchers personal experience with Joint and Multi-National rapid deployment operations⁶⁰ and Senge's systems theory, this research provided an opportunity to think about Teaming in a more analytical and systematic manner. The concept of leverage points provides a technique to focus effort or resources at points where economies of scales in effects and results can be achieved. From these leverage points critical Rapid Teaming skills could then be deduced and proposed.

CHAPTER VII

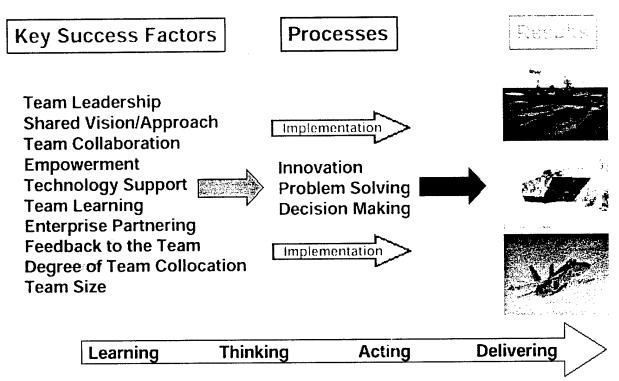
RECOMMENDATIONS

This researcher proposes four recommendations as a result of this detailed review and analysis of the US Army's Teaming doctrine and the research into the emerging concept of Rapid Teaming. The first recommendation is for the US Department of the Army to develop and institutionalize a conceptual Teaming model. As noted in Chapter V, the lack of a commonly understood and accepted Teaming model provides the opportunity for widespread misuse of the term Teaming and the emergence of multiple aberrations to the baseline model.

The second recommendation is for the US Department of Defense to develop and implement a common Teaming program available through a virtual Teaming University. The US Department of the Navy's virtual Integrated Project Team Campus should be considered as a quality example in the integration of theory, practical application, simulation, and best practices sharing. A consolidated Teaming program would significantly reduce the redundant and costly Teaming programs individual organizations purchase.

Within the Department of Defense an opportunity exists for establishing a Teaming resource database. A third recommendation would be to provide a virtual Department of Defense Teaming resource database. The final recommendation is for the US Army's Leadership Development Office to funnel the request for additional research on Teaming and the emerging concept of Rapid Teaming.

APPENDIX I INTEGRATED PROJECT TEAM MODEL



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APPENDIX II

US ARMY TEAM BUILDING STAGES

TEAMIBUILDING:STAGES					
FORMATION STAGE		A 1-2 ADERA E IMITORE I DEZATA DI AGTIONE AM			
GENERIC	Achieve belonging and acceptance Set personal & family concerns Learn about leaders and other members	Listen to and care for subordinates Design effective reception and orientation Communicate Reward positive contributions Set example			
SOEDIER	Face the uncertainty of war Cope with fear of unknown injury and death Adjust to sights and sounds of war Adjust to separation from home and family	Talk with each soldier Reassure with calm presence Communicate vital safety tips Provide stable situation Establish buddy system Assist soldiers to deal with immediate problems			
GENERIC STAGES	Trust leaders & other members Find close friends Learn who is in charge Accept the way things are done Adjust to feelings about how things ought to be done Overcome family-versus-unit conflict	Trust and encourage trust Allow growth while keeping control Identify and channel emerging leaders Establish clear lines of authority Establish individual and unit goals Train as a unit for mission Build pride through accomplishment Acquire self-evaluation/self-assessment habits Be fair and give responsibility			
SOLDIER	Survive Demonstrate competence Become a team member quickly Learn about the enemy Learn about the battlefield Avoid life-threating mistakes	Train as a unit for combat Demonstrate competence Know the soldiers Pace subordinate battlefield integration Provide stable unit climate Emphasize safety awareness for improved readiness			
SUSTAINMENT STAGE	Trust others Share ideas and feelings freely Assist other team members Sustain trust and confidence Share mission and values	Demonstrate trust Focus on teamwork, training & maintaining Respond to subordinate problems Devise more challenging training Build pride and spirit through unit sports, social & spiritual activities.			
SOLDIEFRE CRITICALE	Adjust to continuous operations Cope with casualties Adjust to enemy actions Overcome boredom Avoid rumors Control fear, anger, despair, and panic	Observe and enforce sleep discipline Sustain safety awareness Inform soldiers Know and deal with soldiers' perceptions Keep soldiers productively busy Use in-process reviews (IPRs) and after-action reviews (AARs) Act decisively in face of panic			

Figure 5-5. Team Building Stages

APPENDIX III

US ARMY LEADER SKILLS

	Interpersonal	Conceptual	Technical	Tactical
Direct	- Communicating - Supervising - Counseling	- Critical Reasoning - Creative Thinking - Ethical Reasoning	- Knowing Equipment - Operating Equipment	- Doctrine - Field Craft
		- Reflective Thinking		
Organizational	- Understanding Soldiers	- Establishing Intent	- Maintaining Critical	- Synchronization
	- Communicating	- Filtering Information	Skills	- Orchestration
	- Supervising	- Understanding	- Predicting 2d/3d Order	
		Systems	Effects	
Strategic	- Communicating	- Envisioning	- Strategic Art	
	- Using Dialogue	- Developing Frames of	- Leveraging Technology	
	- Negotiating	Reference	- Translating Political	
	- Achieving Consensus	- Dealing with	Goals into Military	
	- Building Staffs	Uncertainty and	Objectives	
		Ambiguity		

APPENDIX V

SAMPLE RAPID TEAM DEPLOYMENT TEAM CHARTER

GENERAL DIRECTION

Background. Why was the team formed? Include significant facts and assumptions bearing on the team being formed.

Mission. The who, what, when, where, and why (5 Ws).

Roadmap Choice. Define the type of master plan (road map) appropriate for this mission.

Deliverables. What outcomes does the customer or sponsor expect with suspense's? Define success in each deliverable.

Name. What will the team call itself? List sub-teams and their relationship to the team.

MEMEBRSHIP

Stakeholders. List customers to be satisfied, suppliers they depend on, team member managers and coworkers need to support it, and who can influence or veto the team's decisions?

Team Member's Roles. Who serves as the core team, what initial roles will they perform, who will interface with stakeholders, who can the team call in for temporary help?

Team Sponsor Role. What will management commit to do for the team and what functions will the sponsor perform during and between team meetings?

EMPOWERMENT

Team Duties. What activities will the team be expected to do?

Authority Level. What power does the team have? List specifically what they have control over and what they need approval for.

Resources. What budget, supplies, staff time, training, space, equipment, and facilities will the organization allocate to the team?

Reporting. What written reports, individual contacts, in progress reviews (IPRs), formal presentations will the team give to whom how often, and which will they receive from whom and when?

Rewards. How will the team be rewarded, how will team members be recognized for their contributions and what rewards will happen at which milestone?

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³⁴US Department of the Navy, *IPT Learning Campus*.

35West, 50. Team innovation.

³⁶Philip F. Helle, "Creativity: The key to breakthrough changes, how teaming can harness collective knowledge," *Hospital Material Management Quarterly* 21, no. 1 (1999): 7-12. Creativity and collective knowledge.

³⁷US Department of the Navy, *IPT Learning Campus*.

³⁸US Department of the Army, *Field Manual 22-100: Army Leadership: Be, Know, Do* (Washington, DC: Headquarter Department of the Army, 1999) 5:20-5:27. Stages of team building.

³⁹US Department of the Army, *Field Manual 100-5: Operations* (Washington, DC: Government Printing Office, 1993) 2:3 & 3:4.

⁴⁰US Department of the Army, *Field Manual 25-100: Training the Force* (Washington, DC: Government Printing Office, 1998) 1:3.

⁴¹Merriam Webster, *Merriam Webster Online* [Online dictionary] (October 28 1999, accessed October 28 1999); available from http://www.m-w.com/home.htm.

⁴²US Department of the Army, *Field Manual 22-100: Army Leadership: Be, Know, Do*, 5:18-6:29. Building teams.

43US Department of the Army, *Field Manual 22-100: Army Leadership:* Be, Know, Do, 2:25. "Know" Skills.

⁴⁴US Department of the Army, *Center for Army Leadership Homepage: Training Support Package 158-100-1170/158-I-1170 (Squad/Teams)* [Internet webpage] (November 22 1999, accessed November 22 1999); available from http://www-cgsc.army.mil/cal/letdd/TSPS/1170/APPA1170.PPT. TSP 158-100-1170 provides a briefing on Teaming at the lowest level in the US Army. This is a glimpse of basic level team training the US Army current provides. This brief defines a team and describes the basic types of teams.

⁴⁵Porkas, 4. A team is a group of willing and trained individuals who are: united around a common goal, depending on each other to achieve it, structured to work together, sharing responsibility for their tasks, and empowered to implement decisions.

⁴⁶Porkas, 17. The theme of Rapid Team Deployment (RTD) is simple: Build and empower the team to the degree possible for the time you're willing to invest in team development. Define the task and its boundaries, organize the team accordingly and give them only essential tools. RTD is all about getting a group to rise to the occasion by concentrating narrowly. Realize there's a

business equation at work. Make your calculations wisely and stay the course. Decide which team-building tools will help you achieve your purpose. Be realistic about natural growth cycles, and don't initiate a team unless the situation warrants the investment. If it doesn't, find another means to get the job done.

47Porkas, 10-11. To Team or not to Team? The cognitive tension of Team Costs: do the work yourself, ignore the issue and hope it goes away, delegate to a qualified individual, form a task force under an accountable person's control, escalate to higher management, and hire a consultant or charter a high-performance team (outsource). When you launch a team, you are committing to provide: labor, time investment, lead time, management input, management support, relationships, and obstacle resolution.

⁴⁸M. Mitchell Waldrop, *Complexity* (New York, NY: Simon & Schuster, 1992) 11-12. The relationship between complexity and chaos is described and the concept of the edge of chaos is introduced. The edge of chaos is the thin line between complexity and chaos where components of a system never quite lock in place, and yet never dissolve into turbulence.

⁴⁹Senge, 69. Systems thinking is a discipline for seeing the structures that underlie complex situations, and from discerning high from low leverage change.

⁵⁰Senge, 115. The principle of leverage is the bottom line of systems thinking. Systems thinking is the conceptual model and leverage points are places where action can be applied that creates an economy of scale in the reaction or benefits.

⁵¹Jon Fallesen, "Interview on Rapid Teaming," (Army Research Institute, 1999).

⁵²Porkas, 91. Elements of Mutual Trust are: honesty, openness, consistency, respect, and promises.

⁵³Development & Engineering Center Edgewood Research, "Virtual Teaming in a Low Trust, High Risk Environment: CASHPAC - A Success Story in the Making," (Aberdeen Proving Ground, MD: US Army Chemical and Biological Defense Command, 1998), 4. Process focus.

⁵⁴Massimo Piattelli-Palmarini, *Inevitable Illusions: How Mistakes of Reason Rule Our Minds*, trans. Piattelli-Palmarini, Massimo Botsford, Keith (New York, NY: John Wiley & Sons, Inc., 1994) 17. Cognitive illusions.

⁵⁵Tedd A Wheeler, "Development of an Automated Project Management System for Military Project Managers" (Masters of Science, Arizona State

University, 1995). Masters thesis on Automated Simultaneous Project Management. This thesis was a rewrite of the US Army Engineer Schools program of study for military engineer project management and served as a review of the current program and a proposed revision.

⁵⁶Porkas, 106. Effective meetings include: clear goals, published agenda, prepared members and speakers, full but focused participation, time control, public recording of ideas, group process management, and closure.

⁵⁷West, 28. Team decision making.

58Porkas, 105. Consensus defined.

⁵⁹US Department of the Army, *Field Manual 22-100: Army Leadership:* Be, *Know, Do,* 2:26. "Know" Skills.

60Tedd A. Wheeler, "Rapid Deployment Resume," (1999). Deployment experience: an Operations and Plans Officer and Liaison Officer to 1st Armor Division (IFOR) and 1st Infantry Division (SFOR) during Operation Joint Endeavor in Bosnia (96); a Combat Support Equipment (CSE) Company Commander under 10th Mountain Division (LID) and 36th Engineer Group during Operation Restore Hope in Somalia (93); and as a Brigade Engineer and Company Commander under 10th Mountain Division (LID) during Joint Task Force Andrew in Southern Florida (92).

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