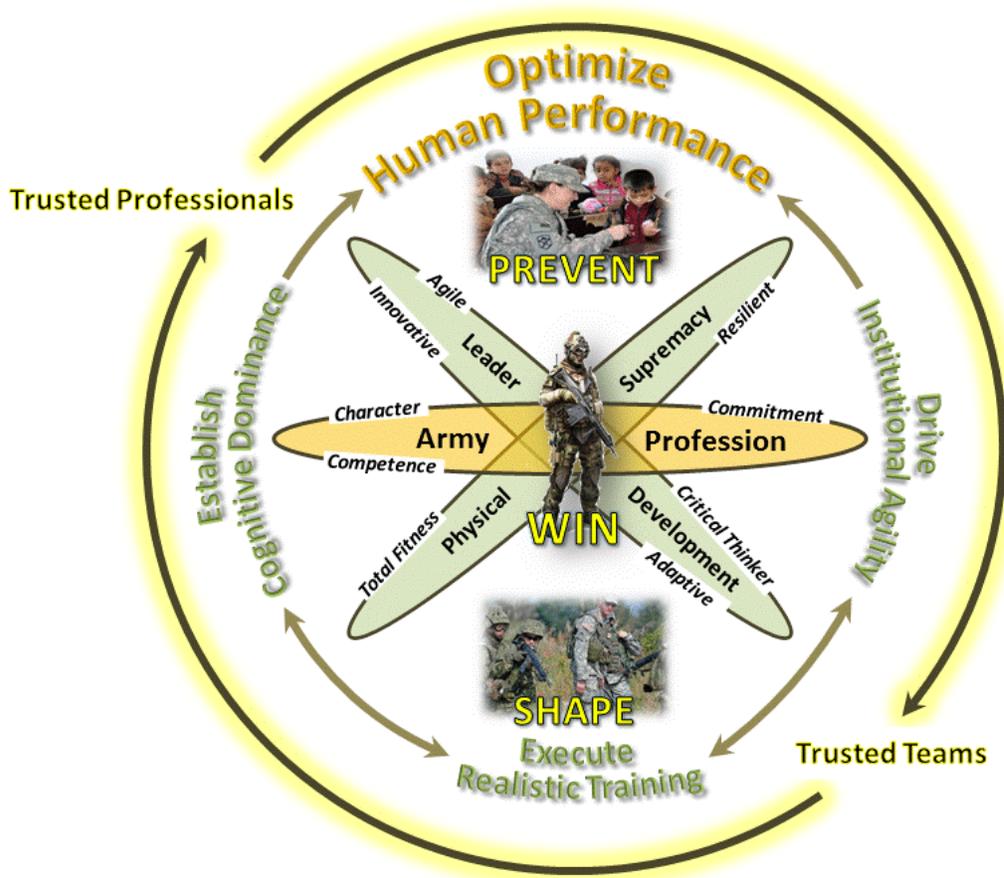


# The Human Dimension White Paper

## A Framework for Optimizing Human Performance



9 October 2014

**This page intentionally left blank**

## Foreword

*From the Commanding General  
U.S. Army Combined Arms Center*

---

Today the nation faces greater strategic uncertainty than at any time since the ending of the Cold War. Adapting in the face of this uncertainty demands a new approach. In decades past, our nation turned to its superior industrial base informed by a robust research and development capability to maintain a decisive edge over any adversary. However, in the coming environment, material solutions alone will not provide the decisive edge against the complex array of rapidly adapting threats we face. To answer the challenge of this new paradigm, the Army must invest in its most valuable resource, its people. Our challenge is to optimize the performance of every Soldier and civilian through innovation and investment in education, training, professionalism, leader development, holistic health and total fitness, talent acquisition and precision talent management of our human capital.

This white paper operationalizes the Army human dimension concepts described in the *Army Operating Concept* (TRADOC Pam 525-3-1) and the *Human Dimension Concept* (TRADOC Pam 525-3-7), and is a component of the *Force 2025 and Beyond* planning process. In developing this paper, we consulted stakeholders across the human dimension community of practice to help describe how the Army will *optimize human performance*. The Chief of Staff of the Army has directed the Army to become “*the nation’s leader in human performance optimization.*” This paper outlines a way ahead to achieve this vision.

I am confident that the framework established in this white paper will generate robust discussion. In the coming months, we will use this discussion to drive the development of a unified human dimension strategy that will become an integral part of the *Force 2025 and Beyond Integration and Synchronization plan*. The operational environment is changing and the rate of that change is accelerating. Because of this, the Army must fundamentally reevaluate and adapt its approach to the human dimension, while maintaining the cognitive, physical and social components as the underpinnings of a new framework, to ensure that we remain prepared to prevent, shape, and win in a very uncertain world.



Robert B. Brown  
Lieutenant General, U.S. Army  
Commanding

**This page intentionally left blank**

## Contents

Foreword.....	iii
The Human Dimension.....	6
Purpose .....	6
Problem.....	6
Environment .....	8
Implications for the Human Dimension .....	10
Previous Work Informing this Paper .....	10
Concept .....	13
Human Performance Optimization (Ways) .....	14
Means.....	16
Assessing the Vision.....	23
Conclusion .....	24

## The Human Dimension

*"One advantage we have, especially in times of decreasing budgets, derives from our ability to develop the right leaders - non-commissioned officers, officers, and civilians - who can think in this very complex world."*

General Raymond T. Odierno  
38<sup>th</sup> Chief of Staff of the Army

### Purpose

This white paper presents a vision for how the Army will *optimize human performance*. It establishes a framework for the Army to assess, integrate, and synchronize its training and education, science and technology, holistic health and fitness, medical and personnel policies, programs, and initiatives in support of the Army Profession. This document establishes an initial foundation for achieving *human performance optimization* as part of the Army's efforts to develop Force 2025 and Beyond (F2025B). It provides an initial framework in the form of ends, ways, and means to frame development of the elements necessary to improve the performance of Army personnel – the strength of our Army. Resources will constrain what the Army can do, and the Army will debate, develop, refine, and realize many of the elements in this document to achieve optimal Soldier, civilian, and team performance in the future. Only through our ability to *optimize human performance*, building *resilient Soldiers*, *adaptive leaders*, and *cohesive teams*, will we maintain the ability to prevent conflict, shape the international environment, and win decisively.<sup>1</sup>

### Problem

Today, the nation and the Army are at a strategic inflection point. The strategic security environment is undergoing rapid evolution where a complex and dynamic mix of cultures, a broad range of actors, and unprecedented proliferation of technology with military application create a competitive environment that challenges US interests.<sup>2</sup> These geopolitical changes are rapid, generate ambiguity, and lead to regional instability and conflict often tied to ancient grievances. It is increasingly difficult to anticipate the multiple emerging threats to US security interests and adjust the Army's organization, material resources, and facilities to cope with them. Because the Army cannot quickly optimize these components of the DOTMLPF-P to meet the wide-range of threats, the Army must focus its doctrinal, training, leadership and education, and policy components to optimize its most agile resource, its people.<sup>3</sup> By doing this, the Army will

---

<sup>1</sup>General Raymond T. Odierno, "Gen. Raymond Odierno: Prevent, Shape, Win" *TRADOC This Week*, U.S. Army Training and Doctrine Command publication, Issue 18, Vol. 1, December 15, 2011.

<sup>2</sup>Training and Doctrine Command, *Operational Environments to 2028: The Strategic Environment for Unified Land Operations*, TRADOC G2, August 2012, 27.

<sup>3</sup>DOTMLPF-P is the acronym for Doctrine, Organization, Training, Material, Leadership and Education, Personnel, Facilities, and Policy.

design a force capable of meeting adaptive threats and maintaining dominance over those threats. Regardless of the difficulty of the environment, warfare remains fundamentally a human contest of opposing wills and our Soldiers and civilians “must master the skills necessary to act, react, and adapt with speed and creativity.”<sup>4</sup>

To dominate on the battlefield of the future, the Army must not only invest in long-term technological and equipment solutions, it must also invest in its people as the most agile and adaptive Army resource. While preserving a technological edge will remain important, developing better equipment without developing better people is an insufficient strategy to retain overmatch in the face of highly adaptive adversaries. By investing in human capital, the Army will be capable of fielding a future force that maintains and exploits a decisive cognitive edge, physical supremacy, and cultural understanding over potential adversaries. Achieving this cognitive edge requires a renewed investment in education, training, ethics, leader development, talent acquisition, and talent management. Likewise, achieving physical supremacy requires investment in holistic health, injury prevention, and total fitness. Cultural understanding is instilled through regional alignment, broad cultural appreciation, professional judgment, and language proficiency. The Army of the future must produce leaders, at every level, who think broadly about the nature of the conflict in which they are engaged. They must have a nuanced appreciation of social context, and an ability to develop strategically appropriate, ethical solutions to complex and often-violent human problems. Future leaders must innovate rapidly on the battlefield. They must have a highly refined sense of cultural empathy and a social intuition for their operational environment. Finally, future leaders must be able to appreciate the wider strategic context in which their actions take place, always prepared for global scrutiny as the smallest tactical actions can be broadcast live to a global audience. To meet these demands, Army leaders from fire team to theater command must be agile and adaptive, physically strong and resilient, and appropriately educated warriors of the Army Profession, with superb critical thinking skills and broad cultural understanding.

Technology remains an essential enabler with tremendous potential in the long-term; however, few technological solutions exist in the near-term to provide leaders with a significantly enhanced physical or cognitive edge on the battlefield.<sup>5</sup> Under current fiscal conditions, the prospects of major technological solutions for individual enhancement, designed to improve human physical and cognitive abilities, are minimal before 2030.<sup>6</sup> Other material solutions, such as an improved tactical network will assist leaders in situational awareness, but

---

<sup>4</sup>*Operational Environments to 2028: The Strategic Environment for Unified Land Operations*, 4.

<sup>5</sup>The *Force 2025 and Beyond Integration and Synchronization Plan* establishes the innovation timeframe as, near-term (today to 2020), mid-term (2020-2025), and long-term (after 2025).

<sup>6</sup>*Radical Evolution: The Promise and Peril of Enhancing Our Minds, Our Bodies, and What It Means to Be Human*, by Joel Garreau describes technological solutions in experimentation stages by DARPA today. These technologies, known as “enhancements,” include elevated physical abilities, advanced cognition, and other forms of human optimization. While enhancement holds great promise in the long-term, none of the physical, cognition or optimization experiments are in the human testing stage and many are still only theoretical.

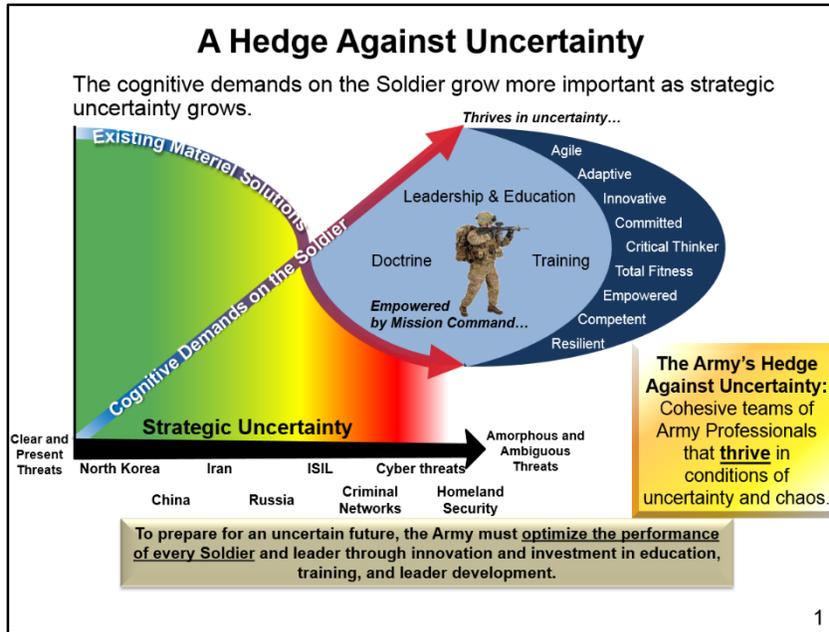


Figure 1: The Soldier - A Hedge against Uncertainty

not battlefield cognition or cultural understanding. While continued investment in long-term human enhancement technology remains crucial to ongoing Army transformation, the Army must mitigate the short-term risk of overmatch and situational ambiguity by *optimizing human performance*. As depicted in Figure 1, as strategic uncertainty grows, the environment becomes more amorphous, the threats more ambiguous, and the cognitive

and physical demands on the Soldier grow. In this environment, the Army’s ability to rely on existing materiel solutions diminishes and innovation in the more traditional disciplines of ethics, resiliency, professional and leader development, talent acquisition, talent management, training, and education serves as the Army’s hedge against uncertainty.

## Environment

In *Operational Environments to 2028: The Strategic Environment for Unified Land Operations* (August 2012) the TRADOC G2 describes the strategic environment as “ambiguous, presenting multiple layers of complexity and a multiplicity of actors challenging the Army with requirements beyond traditional warfighting skills.”<sup>7</sup> From this complex picture of the future, four emerging trends illustrate the cognitive, physical, and social demands placed upon Soldiers of the future.

**a. Megacities.** The world population of 2025 is increasingly urban, coastal, mobile, and interconnected. The United Nations estimates that within the next forty years the urban population will grow by another 2.5 billion people.<sup>8</sup> Many of these urban populations will inhabit vast, densely packed megacities, with populations in excess of ten million people, in countries already struggling to provide governance and essential services for their current populations. Vast urban slums operating outside of the control of legitimate government will lead to increases in violence and lawlessness. These slums will become sanctuaries for adversaries

<sup>7</sup>*Operational Environments to 2028: The Strategic Environment for Unified Land Operations*, 13.

<sup>8</sup>United Nations, “World’s population increasingly urban with more than half living in urban areas,” Department of Economic and Social Affairs, New York, NY, July 10, 2014. <http://www.un.org/en/development/desa/news/population/world-urbanization-prospects-2014.html>.

who seek to remain indistinguishable from the population and negate the technological overmatch of even the most sophisticated precision guided missiles. In this environment, where sustainable political outcomes may mandate the use of land power, military objectives cannot be achieved from standoff range. The Army must therefore, develop leaders who thrive in the ambiguous and chaotic conditions present in these sprawling megacities.

***b. Ubiquitous Global Surveillance.*** By 2030, the increased availability of commercially manufactured drones, portable cameras, and wireless bandwidth will make it possible to track nearly all activity in public spaces in near real time. The private use of drones, closed circuit television, and satellites will allow social media users, bloggers, and traditional media outlets to secure live feeds of any event on the globe within minutes and proliferate them immediately. The social impact of live broadcasting of tactical battlefield actions is likely to place extraordinary pressures on small unit leaders. In the future, leaders frequently will need to make highly stressful tactical decisions before a live global audience. In the past, leaders were expected to do the right thing when nobody was watching. By contrast, tomorrow's small unit leaders will be expected to do the right thing with the whole world watching. This increased scrutiny requires leaders steeped in cultural awareness, ethical decision-making, and professional judgment.

***c. Rapid Technological Innovation.*** Advances in technology such as additive manufacturing (3D printing) will allow technologically savvy adversaries to acquire inexpensive high-end weapons systems rapidly. The proliferation of these technologies will increase the probability that future forces will face sophisticated improvised weapons quickly engineered to mitigate US technological overmatch. Future non-state adversaries, unfettered by bureaucracy, will be able to exploit private sector innovation to adapt faster than more established security institutions. They will rapidly translate commercial innovations into military capability to gain asymmetric advantages in niche areas, with an increased potential to threaten US security interests. This will dramatically accelerate the speed of competitive innovation required to maintain the technological advantage over adversaries on the battlefield. Army institutions must enter future conflicts with the ability to respond to an enemy's tactics and technology at a much faster rate than in the past. Likewise, leaders must anticipate adversarial action and plan for adaptation to US overmatch.

***d. Conflict Short of Warfare.*** As US precision targeting capability improves, adaptive adversaries will seek to avoid direct, unambiguous action that will provoke a violent US response. Instead, they will seek to remain in the grey shadowland between peace and war, avoiding US strengths, while attacking US weaknesses in subtle ways. Understanding this, future adversaries will "fight stupid or fight asymmetrically" and the Army should prepare for the latter.<sup>9</sup> Subtle nuances of both international and US law will affect leader's decision-making processes as the traditional definition of an enemy combatant becomes increasingly obsolete. As

---

<sup>9</sup>LTG H.R. McMaster speech to the Command and General Staff College at Fort Leavenworth, August 14, 2014.

adversaries avoid becoming easily identifiable targets, Soldiers will increasingly have to decide *not just how but if* the employment of violence will best serve national interests.

### **Implications for the Human Dimension**

It is not enough for leaders to tolerate or even grow comfortable with the uncertainty described in the future environment. Operating in this complex environment requires agile, adaptive, and ethical leaders trained and educated to *improve and thrive* in uncertainty. These leaders must possess a natural inclination for disruptive innovation and an abiding sense of urgency both in times of crisis and times of opportunity. They must be professionals of strong character, physically supreme, and resilient to overcome the effects of the great trauma that is the experience of war. The Army must empower Soldiers not only with exquisite technology, but also with broad cultural understanding, professional judgment, critical thinking, and technical skills, so that they can adapt to unforeseen and unpredictable conditions as they emerge.

Finally, the future environment requires a new approach to how the Army builds, develops, and employs teams. Similar to the way the Army will manage individual talent, the Army must build the right teams and manage team talent to optimize group performance. Because every member of the team plays a crucial role in solution development in the highly complex future, team members must share a deep trust and confidence in each other built around a philosophy of mission command and forged in a series of tough, realistic collective training events that develop cohesion and effective team problem solving. Leaders must encourage initiative and convey clear direction and intent so units can successfully accomplish objectives, all of which must occur in a time-constrained and highly dynamic environment. To ensure future leaders can successfully employ mission command on future battlefields and at home station, the Army must identify necessary leader attributes, develop leader tools, and provide the appropriate communications technology, developing both the profession and the professional. This requires a new approach to how the Army trains leaders at all levels to gather and disseminate knowledge and experience gained on the battlefield or in tough realistic training.

### **Previous Work Informing this Paper**

*The Army Operating Concept (TRADOC Pam 525-3-1)* published in October 2014 describes how the Army will operate in an uncertain and complex future environment by maneuvering from multiple directions, presenting adversaries with multiple dilemmas, avoiding his strengths, and striking his weaknesses.<sup>10</sup> This concept recognizes the importance of highly adaptive teams of professionals who improve and thrive in uncertainty and chaos. To produce these teams the AOC establishes the requirement to “develop innovative leaders and optimize human performance” as one of the ten fundamental principles of how the Army must operate in

---

<sup>10</sup>Training and Doctrine Command, TRADOC Pam 525-3-1 *Army Operating Concept*, US Government Printing Office, Fort Eustis, VA, October 7, 2014, 15.

the future.<sup>11</sup>

***The Human Dimension Concept (TRADOC Pam 525-3-7)*** published in May 2014, describes the broad human dimension capabilities the Army requires to meet the challenges of the future operational environment, and serves as a common framework for adapting and enhancing the Army’s effort to achieve superior warfighting effectiveness.<sup>12</sup>

***The Civilian Workforce Transformation Initiative (CWT)***<sup>13</sup> The Army civilian corps makes up about 23 percent of the total Army force with more than 300,000 professionals, serving globally, in roughly 500 unique job series. Through CWT, the Army intends to produce a purpose-driven, professional, and fully competent civilian workforce. Competence, education and experience are the foundation of the way Army civilian’s will be developed, measured, and managed in the future. The mandates for CWT include hiring the right people, managing the entire workforce within career programs, meeting civilian workforce training and development goals, and providing a pathway for professionally developed civilians to meet the Army's needs of today and tomorrow.

***The Force 2025 and Beyond (F2025B) Integration and Synchronization Plan*** establishes a vision for the Army of Force 2025. It defines a key task of that vision is to “develop training, education, leader development, and talent management systems and processes that will optimize the potential of every Soldier and Civilian in the Total Army.”<sup>14</sup>

***The Operational Environments to 2028: The Strategic Environment for Unified Land Operations*** describes the key conditions and adversary strategies manifesting across the strategic environment through 2028. This includes an analysis of the human implications of these conditions on future warfighters.<sup>15</sup>

***The Army Warfighting Challenge (AWFC) Framework*** The Army Capabilities Integration Center (ARCIC) will use the AWFC framework as the organizing construct to lead future force development and integration efforts. AWFCs are enduring first order challenges described in the AOC, the solutions to which may improve the combat effectiveness of the current and future force.<sup>16</sup> This structure integrates near, mid and far-term modernization efforts for the Army. Properly implemented, the AWFC sustains collaboration across the community of practice by

---

<sup>11</sup>TRADOC Pam 525-3-1 *Army Operating Concept*, 18.

<sup>12</sup>Training and Doctrine Command, TRADOC Pam 525-3-7 *The U.S. Army Human Dimension Concept*, US Government Printing Office, Fort Eustis, VA, May 21, 2014, 1.

<sup>13</sup>Barbara G. Mroczkowski, “Civilian Workforce Transformation: Enterprise Management of the Army Civilian Corps” *Army Sustainment Magazine*, July – September 2013, 14-19.

<sup>14</sup>Training and Doctrine Command, *Force 2025 and Beyond Integration and Synchronization Plan*, US Government Printing Office, Fort Eustis, VA, 7.

<sup>15</sup>Training and Doctrine Command, *Operational Environments to 2028: The Strategic Environment for Unified Land Operations*, TRADOC G2, August 2012, 2.

<sup>16</sup>TRADOC Pam 525-3-1 *Army Operating Concept*, 29.

providing a foundation for Army concept and capability development. Of the twenty Army warfighting challenges<sup>17</sup>, the twelve listed below relate directly to human performance optimization and the remainder have significant impact on the human dimension:

AWFC 1: Develop Situational Understanding

AWFC 2: Shape the Security Environment

AWFC 3: Provide Security Force Assistance

AWFC 4: Adapt the Institutional Army

AWFC 6: Homeland Operations

AWFC 8: Enhance Training

AWFC 9: Improve Soldier, Leader, and Team Performance

AWFC 10: Develop Agile and Adaptive Leaders

AWFC 13: Conduct Wide Area Security

AWFC 14: Ensure Interoperability and Operate in the Joint, Interagency, Intergovernmental, and Multinational (JIIM) Environment

AWFC 19: Exercise Mission Command

AWFC 20: Develop Capable Formations

---

<sup>17</sup> TRADOC Pam 525-3-1 *The Army Operating Concept* outlines twenty Army Warfighting Challenges. Of these 12 are directly related to the human dimension, while the remaining 8 have significant human dimension impacts.

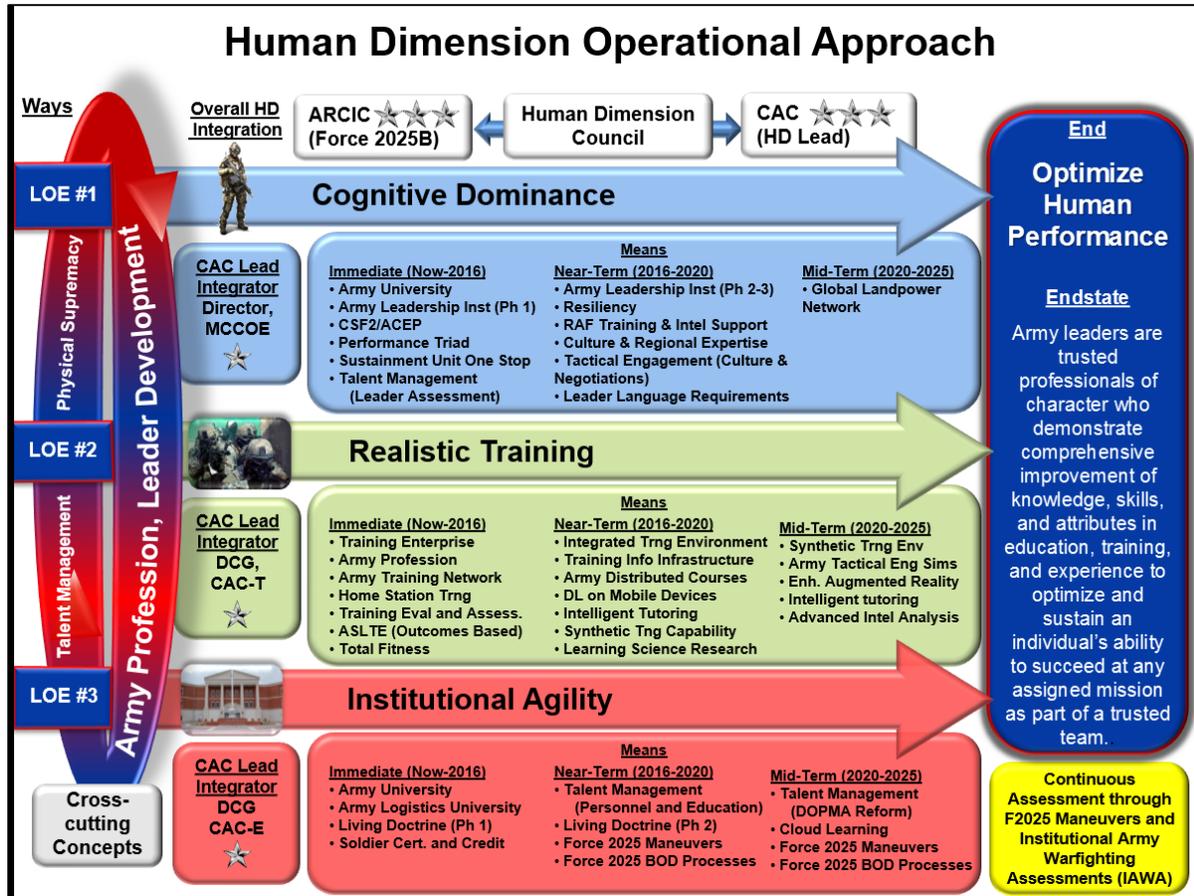


Figure 2: The Human Dimension Operational Approach

### Concept

With a shrinking force structure and growing demands on the individual Soldier, it is essential for the Army to design institutions that support the development of the very best talent and abilities in every member of the Total Army team. As depicted in *Figure 2* human performance optimization goes beyond just a focus on the cognitive, physical, and social components of the individual Soldier. Soldiers fight as part of cohesive teams and are empowered by effective institutions that train, deploy, and equip them. Successful human performance optimization must involve simultaneous and integrated efforts focused at the individual, team, and institution. These efforts include programs that accelerate learning and experience, rapidly build ethical maturity and strengthen character, provide holistic mission-specific physical fitness and resilience training, and effectively maximize talent utilization.<sup>18</sup> To describe this effort, this paper organizes the activities of human performance optimization along three broad lines of effort: *establish cognitive dominance, execute realistic training, and drive*

<sup>18</sup>Training and Doctrine Command, “Human Dimension Task Force Charts New Vision” *ARCIC Exclusive*, Army Capabilities Integration Center, January 31, 4014. <http://www.arcic.army.mil/Articles/cdld-Human-Dimension-Task-Force-Charts-New-Vision.aspx>.

*institutional agility*. These three lines of effort, oriented at the individual, team, and institution describe in broad terms the WAYS that will achieve the END of *optimized human performance*. Each of the three lines of effort cut across many of the equities and activities in the human dimension community of practice. To facilitate unity of effort, this framework assigns responsibility for integrating these activities to a lead integrator from the subordinate organizations within the Combined Arms Center.

This framework builds on the ideas in *The US Army Human Dimension Concept*, which describes the parameters of the human dimension as encompassing the cognitive, physical, and social components.<sup>19</sup> This operational approach provides a common framework to achieve human dimension outcomes across the three components. It supports the efforts of the *Human Dimension Council* by integrating Army-wide human capital programs, provides focus on the *Army Warfighting Challenges*, and nests with the *Army Operating Concept*.

**Human Performance Optimization (Ways)**

*a. Establish Cognitive Dominance.*<sup>20</sup> This paper defines cognitive dominance as a position of intellectual

advantage over a situation or adversary that fosters proactive agility over reactive adaptation, facilitating the ability to anticipate change before it occurs. This line of effort describes all of the activities related to the creation of resilient Soldiers and adaptive leaders who are comfortable adapting to novel experiences and can *improve and thrive* in uncertain and chaotic environments. While

	The “Basics” Then 1944-2001	The “Basics” Now 2014-Future
<b>Shoot</b>	<ul style="list-style-type: none"> <li>- Effectively Engage Targets</li> <li>- Accuracy and precision</li> <li>- Hit targets with iron sights</li> </ul>	<ul style="list-style-type: none"> <li>- Increasing importance of discriminate fires</li> <li>- More complex rules of engagement</li> <li>- Split-second decisions to use force or not</li> <li>- Increased use of optics/ night vision</li> </ul>
<b>Move</b>	<ul style="list-style-type: none"> <li>- Squad/Platoon Battle Drills</li> <li>- Situational awareness derived from a map</li> <li>- Company AO may include several grid squares</li> <li>- Operate in difficult terrain</li> </ul>	<ul style="list-style-type: none"> <li>- Dispersed, independent movements</li> <li>- Situational awareness derived from a COP (common operating picture)</li> <li>- Company AO may include multiple districts and villages (larger than a battalion AO in the past)</li> <li>- Operate among the people in complex societies in any terrain</li> </ul>
<b>Communicate</b>	<ul style="list-style-type: none"> <li>- FM Radio Procedures</li> <li>- Military to military</li> </ul>	<ul style="list-style-type: none"> <li>- Voice and Digital networks</li> <li>- Host nation, media, Interagency</li> <li>- Cultural awareness, negotiations, social media</li> <li>- Matching actions to words</li> <li>- Winning the battle of the narrative</li> </ul>
<b>Physical Fitness</b>	<ul style="list-style-type: none"> <li>- Basic physical conditioning (push-ups, sit-ups, 2 mile run)</li> </ul>	<ul style="list-style-type: none"> <li>- Total Fitness (physical, mental, social, resilience)</li> </ul>
<b>Discipline</b>	<ul style="list-style-type: none"> <li>- Do the right thing when no one is watching</li> </ul>	<ul style="list-style-type: none"> <li>- Do the right thing as the whole world is watching</li> </ul>

Figure 3: The Changing Basics

warfare has always been cognitively demanding, in the modern operational environment even the

<sup>19</sup>The U.S. Army Human Dimension Concept, 5.

<sup>20</sup>Michael D. Matthews, PhD. describes the term “cognitive dominance” in his book *Head Strong: How Psychology is Revolutionizing War*. Chapter 4, “Cognitive Dominance: Soldiers and Systems That Outthink the Enemy,” applies cognitive dominance to developing enhanced situational awareness in Soldiers and leaders in order to facilitate “rapid and accurate decisions under stressful conditions with limited decision-making time,” 57.

basics of warfare have evolved. Today, the growing complexity of mastering the basics coupled with the increasing requirements to interact in front of a global audience place greater demands on the individual Soldier than ever before. *Figure 3* presents a comparison of how the basic skills expected of the combat Soldier have grown over time. (CAC lead integrator for this LOE is the Director, Mission Command Center of Excellence).

***b. Execute Realistic Training.*** Soldiers do not fight as individuals; they fight as part of cohesive teams that operate based on mutual trust. The most effective way to develop this trust is through tough, ethically challenging, and rigorous training that not only fully replicates the physical stresses of combat, but the social and cultural aspects as well. This line of effort encompasses all the activities related to the creation of cohesive teams of Army professionals who have the foundation of trust upon which to build a culture that practices mission command, adapting to ambiguous situations through the decentralized execution of commander's intent.

In order to ensure we retain tough, realistic training readiness we must accept that the training paradigm and the basics of soldiering have evolved. The Army must adopt a new training paradigm that incorporates the complexity of the human dimension into training and limits rote repetition in a sterile environment. Training scenarios must integrate a series of open-ended, ambiguous problems with a range of potential solutions that challenge units to explore options and develop creative and novel approaches. To achieve this, leaders must understand and replicate the complexity of the operational environment and develop holistic and rigorous unit training management systems that prepare Soldiers for this complexity. Leaders at all levels must be able to maximize the potential of the existing training tools to support more efficient and effective training to meet the challenges of the complex and changing operational environment.<sup>21</sup> (CAC lead integrator for this LOE is the Deputy Commanding General, CAC-T)

***c. Drive Institutional Agility.*** In his article "Adapt or Die," Major General (R) David A. Fastabend describes the need for institutional agility: "In the volatile, uncertain, complex, and ambiguous environment we face for the foreseeable future, if we were to choose one advantage over our adversaries it would certainly be this: *to be superior in the art of learning and adaptation.* This is the imperative for a culture of innovation in the United States Army."<sup>22</sup> This paper defines *Institutional Agility* as the ability of the larger Army institution to anticipate changing conditions in stride, lead through innovation, develop a culture that values life-long learning, and demonstrate crucial capabilities in advance of need. Improving the capacity of Army professionals to thrive in conditions of uncertainty will require a fundamental reshaping of

---

<sup>21</sup>Combined Arms Center, "Training Management White Paper Revitalization of Home Station Training," Paper, Combined Arms Center-Training, Fort Leavenworth, KS, September 15, 2014, 7.

<sup>22</sup>David A. Fastabend and Robert H. Simpson, "Adapt or Die: The Imperative for a Culture of Innovation in the United States Army," (Research Paper, U.S. Air War College 200), [http://www.au.af.mil/au/awc/awcgate/army/culture\\_of\\_innovation.pdf](http://www.au.af.mil/au/awc/awcgate/army/culture_of_innovation.pdf) (accessed September 15, 2014), 2.

the approaches in which our institutions man, train, educate, and equip the Soldier and team.<sup>23</sup> Army institutions must adapt rapidly to meet emerging threats and new technologies. Adaptation in combat is a life or death decision often driving the adaptation time horizon to hours, minutes, and seconds. For today's institutional Army, "steeped in deliberate and rational methods designed for peacetime innovation," whose "time horizon is measured in the months, quarters, and years" institutional agility is about changing as fast as the strategic environment changes.<sup>24</sup> The institutional agility line of effort focuses on ways in which the institutional Army will address its focus in the future to include rapid curricular responsiveness at the training and education institutions, talent acquisition and precision talent management from recruitment to retirement, and innovative approaches to developing and disseminating doctrine. (CAC lead integrator for this LOE is the Deputy Commanding General, CAC-E)

## Means

This section describes the specific actions and programs, across TRADOC and the Army, supporting the development of the three lines of effort described above. These actions and programs demonstrate leading examples of the MEANS the Army will use in support of the three lines of effort. This list is illustrative, not exhaustive and does not attempt to describe every program and effort that will affect the human dimension community of practice. The MEANS listed below fall within the six broad categories of 1) Education, 2) Training, 3) Professional and Leader Development, 4) Talent Acquisition and Management, 5) Holistic Health and Fitness, and 6) Research and Experimentation.

### a. Education.

*(1) The Army University (AU).* Education forms the bedrock of the Army's investment in the future force. The current Army education system was built upon an outdated Industrial Age model that employs a trade-school approach to education, optimized to prepare students for known conditions in technical fields of military science. With the changing operational environment, future warfare will demand leaders who improve in complexity and thrive in uncertainty. This requirement demands an agile institution that provides world-class educational infrastructure, optimized to prepare leaders for the changing operational environments.<sup>25</sup> Responding to this demand, the Army establishes Army University (AU), blending the best characteristics of civilian and military educational institutions to create a premier learning environment that produces agile, adaptive, and innovative leaders for *Force 2025 and beyond*. The Army University fully integrates 86 schools within TRADOC, establishes mechanisms for

---

<sup>23</sup>This approach closely mirrors and is informed by the conclusions drawn in "Strategic Trends Programme Future Character of Conflict," study completed by the Ministry of Defence, London, United Kingdom, 2014.

<sup>24</sup>Christopher P. Gehler, "Agile Leaders, Agile Institutions: Educating Adaptive and Innovative Leaders for Today and Tomorrow" (Research Paper, U.S. Army War College 2005), <http://www.strategicstudiesinstitute.army.mil/pdffiles/pub618.pdf> (accessed September 15, 2014), 1.

<sup>25</sup>The United States Army University White Paper, "In Support of Force 2025," 16 September 2014, 4.

close collaboration for joint research with civilian universities, and promotes academic rigor through competitive admission and academic credentialing.<sup>26</sup> Enabling AU's academically rigorous courses, an improved Academic Efficiency Report will better enumerate the academic performance and potential of Army University students. In addition to instilling academic rigor, integrating all TRADOC education programs under Army University enables the AU to build a holistic approach to teaching critical thinking across the spectrum of schools. To ensure the AU maintains a world-class faculty, the Army University will work toward implementation of centralized board selection for AU military faculty as recommended in the CSA's Leader Development Task Force Study.<sup>27</sup> AU will also be responsible for maintaining the Army's education domain common operational picture (E-COP). This E-COP will provide visibility of best practices and innovative educational initiatives across the Army's Centers of Excellence, the Joint force, the interagency and our allies, and partners.

**(2) *Living Doctrine.*** Serving as the foundation for the Army profession and for the successful execution of Unified Land Operations, doctrine provides a body of basic proven principles that is clear, concise, current, and accessible to the field. Current doctrinal efforts, including Doctrine 2015, accelerate the implementation of new doctrine across the force by providing the Army with a completely revised structure of manuals. As publication of Doctrine 2015 is completed, the Army will move from written doctrine to living doctrine. This living doctrine employs interactive and multi-media learning platforms that bring doctrinal concepts to Soldiers and leaders at the point and time of need. TRADOC will customize and deliver this doctrine in the manner in which Soldiers learn best, and with the ability to immerse Soldiers into a simulation to practice doctrinal principles.

**(3) *Culture, Regional Expertise and Language Education.*** Promoting the cultural empathy and social intuition necessary on the future battlefield requires the Army to re-energize investment in education programs focused on the development of cultural and regional expertise prioritized to potential conflict areas. Among the many broad cultural and social skills required in future leaders, this paper proposes research to determine the feasibility of a requirement for all accessed officers to complete a minimum of two years of foreign language at their pre-commissioning institution and maintain a minimum language proficiency.

#### b. Training

**(1) *Training Enterprise.*** The Army will develop a unified training enterprise that establishes a common operational picture of the training resources and requirements across the Army. This unified enterprise will enable informed resourcing and prioritization decisions as well as advocacy for unit level training. This effort integrates all aspects of training support and training development into the live, virtual, constructive, and gaming environments in a coherent structure.

---

<sup>26</sup>In Support of Force 2025, 5.

<sup>27</sup>Department of the Army, 2013 *Chief of Staff of the Army Leader Development Task Force Final Report*, 33.

The goal of the unified training enterprise is to produce realistic and cognitively demanding training that best supports the training requirements of operational commanders.

**(2) *Revitalization of Home Station Training.*** Army senior leaders and the Inspector General have identified a knowledge and experience gap within the Army in terms of the ability to manage training and leverage training capabilities in order to achieve the highest levels of readiness. In order to correct these deficiencies and achieve the highest levels of readiness, the Army will revitalize unit home-station training.<sup>28</sup> The program re-emphasizes the proper planning, preparation, execution, and assessment of training and provides resources that emphasize command support, resource prioritization, and knowledge of existing training resources. As part of this revitalization effort, the Combined Arms Center in coordination with FORSCOM and the Army Service Component Commands (ASCC) will offer training seminars to unit commands as a means for the leadership to discuss and share best practices on proven methods of progressive training, integrating enablers across the warfighting functions. Furthermore, these seminars will provide the opportunity for the organizational leadership to share their vision on how to create innovative, flexible, and adaptive training environments that optimize the individual and team performance.<sup>29</sup>

**(3) *Synthetic Training Environment.*** The Synthetic Training Environment (STE) will provide commanders and Soldiers the capability to train and win in a complex environment. The STE delivers training to “the point of need” by operating on the common operating environment and interoperating seamlessly with Mission Command information systems. The STE will evolve from the current Integrated Training Environment, converging the Constructive, Virtual and Gaming training environments into a live-synthetic training environment. This environment will fully replicate the complexities of the operational environment by emphasizing the human nature of warfare, enabling Commanders with the ability to replicate robust human interactions and execute multiple iterations of training scenarios varying in the level of complexity. Robust human interactions will include the ability to replicate diverse, demanding, uncertain social context that is tailorable to differing cultural norms. Additionally, the STE will shed the cumbersome logistics tail required by the current ITE systems making it globally accessible and expeditionary in order to support the distributed nature of the future force. Simply, the STE creates an environment that provides Soldiers and leaders the ability to train, thrive, and most importantly, win in a complex operational environment.

#### c. Professional and Leader Development

**(1) *Global Landpower Network.*** Future conflict will inevitably require the Army to fight as part of a coalition bound by common interests. Setting the conditions for this partnership

---

<sup>28</sup>Combined Arms Center-Training, “Training Management White Paper: Revitalization of Home Station Training,” 1.

<sup>29</sup>Ibid., 5-6.

demands an investment in relationship building and interoperability to enable rapid integration into future coalitions. The result is a *Global Landpower Network* based on five imperatives of persistent engagement, strategic appreciation, interdependence, trust, and collaboration.<sup>30</sup> As a critical vehicle to promote both the trust and interoperability, multi-national training and exercises expose Soldiers and leaders to foreign military professionals and unified action partners who may apply different and innovative approaches to contemporary problems.<sup>31</sup>

**(2) *Mission Command.*** Consistent with the recommendations in the Army Chief of Staff's Leader Development Task Force Final Report, the Army will continue to institutionalize the mission command across the force.<sup>32</sup> The goal is the realization of a philosophy of mission command across the Army guided by six enduring principles: 1) build cohesive teams through mutual trust, 2) create a shared understanding, 3) provide a clear commander's intent, 4) exercise disciplined initiative, 5) use mission-type orders, and 6) accept prudent risk. To attain this culture of trust, Soldiers must be highly educated and certified for their assignments; fully imbued with the suite of knowledge, skills, ethics, and abilities allowing them to employ cultural empathy and social intuition in a regionally appropriate context. Likewise, the Army performance evaluation system will continue to test innovative tools like the Multi-source assessment and Feedback tool (MSAF) and Commander's 360 program that better develop and evaluate leaders on the exercise of mission command within their formations.

**(3) *The Army Leadership Institute (ALi).*** Built around the Center for Army Leadership (CAL), this institute will provide a number of tools for individual, cohort, leader, and unit human dimension development. It will include research, assessments, outreach, leader exchanges, network centers, and executive education. Over time, the Army Leadership Institute will become the Army's centerpiece for developing leaders skilled in optimizing human performance. The institute will synchronize and integrate the human dimension aspects of *Force 2025*. ALi will provide executive and continuing educational courses, seminars, and workshop opportunities. It also will enable the exchange of ideas among the Army and strategic partners. Finally, in coordination with the Mission Command Capability Development Integration Directorate (MC CDID), the institute will conduct research on various topics to support the continued development of the Army and its leaders. Similar to the E-COP, the Army Leadership Institute will maintain a leadership domain common operational picture (L-COP). This L-COP will gain visibility of leadership initiatives at all levels and proliferate those initiatives across the Army and the Joint force. ALi will share best practices and innovation across the land power domain to promote and institutionalize innovation in leadership.

**(4) *Interactive Leader Development Publication.*** In coordination with the MC CDID, the

---

<sup>30</sup>LTG Charles T. Cleveland and LTC Stuart L. Farris, "A Global Landpower Network Could Be the Ultimate Anti-Network", *Army*, August 2014, 55-57.

<sup>31</sup>Exercise Garuda Shield in Dodiklatpur, Indonesia executed 1-12 September 2014 as part of Pacific Pathways 2014 is an excellent example of the partnership and joint training envisioned by the *Global Landpower Network*.

<sup>32</sup>Department of the Army, *2013 Chief of Staff of the Army Leader Development Task Force Final Report*, 12.

Center for Army Leadership will publish a revised version of Field Manual (FM) 6-22, which includes an enhanced interactive learning platform that enables leader development activities at the individual and unit level. The FM will convey sound developmental principles that are unique to the Army and provide examples of best practices. It will establish ways to create cohesive, resilient, and agile units characterized by high levels of teamwork, trust, critical and creative thinking, and ethical decision-making. The manual will provide ways to develop individuals and units efficiently to set conditions conducive to development. A culture of development involving feedback, fundamentals of learning, and change will be a centerpiece of unit operations without sacrificing mission performance. Soldier will have access to supplemental materials with leadership examples, developmental actions, and unit program guidance in easy-to-access platforms. Interactive materials will bring the principles of leader development to life so leaders at all levels can readily apply the concepts as they engage in developing others and themselves.

(5) ***Soldier 2020.*** The Army adopts the Soldier and NCO 2020 program, and its standards-based job qualification and training requirements, as the key initiative enabling the non-commissioned officer to remain the backbone of the future force. Additionally, the Army adopts Baseline Soldier 21 to enable leaders to tailor and track development the Army's Soldiers. This will ensure Soldiers have the skills, knowledge, abilities, and other attributes needed for the future.

#### d. Talent Acquisition and Management

(1) ***Talent Acquisition.*** In the past, the Army either paid high premiums to acquire necessary talent or traded quality for quantity in a demand-focused strategy. This strategy bought service, but failed to engender commitment. Today, the pool of youth with high academic quality, military eligibility and interest in service is not sufficient to meet the needs of the military services. Currently, only 15% of youth are interested in serving, and less than three in ten are eligible to serve. Carrying on this trend, the forecasts for 2025 and beyond indicate this small population of eligible and interested youth will continue to decline. In the future, the Army's talent acquisition strategy must focus more on supply – expanding the pool of quality, motivated applicants. To support Army talent decisions there is an increasing need for research and analysis exploring the full spectrum of human capital requirements, ensuring sufficient information for sound decision-making. The Army must develop a coherent, synchronized means for defining, resourcing, and executing such research. The Army's talent acquisition success is wholly dependent on cooperative and unified efforts across a constellation of organizations and depends on the unified and effective support of all of these organizations to build the force, one person at a time, every day.

**(2) Precision Talent Management.**<sup>33</sup> The Army will transform its Industrial Age talent management processes to better align its diverse talents to requirements and capabilities. This begins with a focus on understanding individual strengths and weaknesses. This new approach includes comprehensive assessments of personal aptitude and potential combined with predictive analytics and highly customized educational programs to optimize the strengths of every Soldier and civilian in the total force. This requires the Army to collect and interpret a broad set of data on Soldier aptitude, performance, and potential. Without this information, “the services must sort people by time (year group / rank) and occupation (military specialty) rather than talent, managing them as interchangeable parts and shunting them into standardized career paths.”<sup>34</sup> Not only will precision talent management focus on the individual, it will also focus on the assignment. By accurately defining a specific set of attributes and skills necessary for placement in each assignment, and describing the associated developmental potential, Soldiers will have the ability to align their individual skills to requirements. With this data, the Army will develop internal, web-based market mechanisms that inform promotion and assignment decisions. Over the long-term, and contingent on statutory reform of the Defense Officer Personnel Management Act (DOPMA), the Army implements a fundamentally different approach to talent management and leader development.<sup>35</sup> This will include moving away from the traditional model of year-group based assignments and promotions to a model more focused on talent-based assignment. Finally, the Army will implement an improved succession management strategy that ensures appropriate tenures for critical billets, which more effectively serves to prepare leaders for future assignments. This succession management plan could include an expansion of succession planning for flag officers to include a carefully managed pool of all potential leaders who have successfully completed a senior service college.

**(3) Army Assessment System.** The Army will develop and implement rigorous leader assessment programs, which provide greatly improved self-awareness and developmental insight to Army leaders as they prepare for assignments of increasing importance. These Individual Development and Employment Assessments (IDEAs) “would delve far more deeply into each officer’s talent than any mere performance report of promotion board can.”<sup>36</sup> By gathering large

---

<sup>33</sup>The section on precision talent management is a distillation of the research done by Lieutenant Colonel (Ret) Michael J. Colarusso and Lieutenant Colonel David S. Lyle, Office of Economic and Manpower Assessment, *Senior Officer Talent Management: Fostering Institutional Adaptability*, United States Army War College Press, Carlisle Barracks, PA, February 2014.

<sup>34</sup>Office of Economic and Manpower Analysis, “Managing Officer Talent at the Speed of Change,” (Paper, Executive Summary on Proposed DOPMA Reforms), West Point, NY, September 9, 2014, 4.

<sup>35</sup>The Defense Officer Personnel Management Act (DOPMA) is a United States federal law passed in 1980 that standardized officer personnel management across the Armed Forces. DOPMA established ceilings on the number of field grade officers authorized to each service, created uniform regulations governing promotions, and codified rules regarding separation and retirement of officers. DOPMA created stable and predictable career paths, institutionalized relatively short careers compared to private industry, and mandated the military adopt an up or out personnel management strategy requiring officers who failed selection for promotion to be removed from the service. Although DOPMA accomplished many of its intended goals, some provisions prevent the Services from precision talent management.

<sup>36</sup>Managing Officer Talent at the Speed of Change, 4.

amounts of data on each leader, the system will assist Army leaders in identify their strengths and specific weaknesses that require developmental attention. Serving as the foundation of the assessment system, the Army will evaluate potential based on a standardized testing program proven to provide accurate assessments of abilities and traits.<sup>37</sup> In addition to testing, the system includes a battery of simulations, carefully designed scenarios, and interviews to assess leaders in action and elicit leader behaviors relating to key transitions across the levels of leadership. Staffed with professionally educated assessors trained in human performance measurement, the assessment system will serve as the centerpiece for development and help the Army institution to conduct Precision Talent Management.

e. Holistic Health and Fitness

**(1) *The Performance Triad.*** The Performance Triad is a health education program that provides tools to leaders to improve physical, emotional, and cognitive health through strategies that optimizes sleep, leisure-time physical activity, and general nutrition. One of the Performance Triad's goals is to establish a culture in which Soldiers and civilians view their membership in the Army Profession as a mandate to maintain a heightened state of personal wellness, which will help the Army maintain a decisive edge and achieve small unit overmatch. The program proposes that Soldiers who view themselves as Professional Soldier Athletes will invest in their own health and possess an internal mindset that drives them to optimize their physical, emotional, and cognitive wellness. The Performance Triad is part of the Army Medicine transition from a reactive healthcare system focusing on disease and injury rehabilitation to a proactive *System for Health* focused on enhanced well-being, injury prevention, and reintegration to enhance human performance optimization.

**(2) *Total Fitness.*** The US Army Physical Fitness School (USAPFS) is responsible for developing the physical readiness and functional warfighter skills of Soldiers to enhance individual and unit overmatch in a complex and ambiguous combat environment. The USAPFS focuses on the scientific foundations of exercise physiology and physical training, performance nutrition, and personal health behaviors to optimize human performance. Through the Master Fitness Training Certification (MFTC) course, USAPFS trains leaders to improve physical readiness, resilience, and cognitive dominance. USAPFS training programs are based upon the experiential knowledge of individual and unit physical warfighter demands associated with warrior tasks and battle drills, common soldier tasks, and military occupational specialties. The nexus of the USAPFS program is the Soldier's evolutionary transition from an athlete to a "tactical athlete". For TRADOC and the Army, USAPFS focuses on the physical education and conditioning of Soldiers to ensure a physical overmatch through human performance optimization.

f. Research and Experimentation: The continuing imperative for research and

---

<sup>37</sup>Senior Officer Talent Management: Fostering Institutional Adaptability, 42.

experimentation supports all other means (education, training, professional and leader development, talent acquisition and management and, holistic health and fitness). Science and technology innovation must be an integral part of every stage in the Soldier and Army civilian lifecycle.

### **Assessing the Vision**

***The Human Dimension Council.*** The Army Human Dimension Council is a three-star advisory body that provides senior-level direction for the analysis and management essential to deliver optimized human capabilities in the future force. The Council is the primary driver of change across the human dimension and provides the oversight to “synchronize and integrate personnel policies with training and education, science and technology (S&T), medical, and social science efforts to provide the Army a dynamic competitive advantage in future conflicts.”<sup>38</sup> Chaired by the ASA M&RA, CAC CG, and ARCIC CG, the council synchronizes human dimension efforts across multiple time horizons and integrates these activities with the ongoing Force 2025 transformation effort.

***Institutional Army Warfighting Assessments.*** The Army's campaign of learning to achieve the Force of 2025 will center on a series of advanced warfighting assessments and experimentation programs collectively known as the *Force 2025 Maneuvers*.<sup>39</sup> While previous transformation efforts, going back to the Louisiana Maneuvers of 1941, focused primarily on experimentation and adaptation within the operational Army, the transformation to the Army of 2025 requires a broader approach. To achieve the agility necessary to thrive in uncertainty, the institutional Army must pursue an aggressive program of testing and self-assessment known collectively as the *Institutional Army Warfighting Assessment (IAWA)*. This body of activity, supported by the Army Mission Command Battle Lab and functional battle labs across TRADOC, will include testing and validation of pilot teaching programs at TRADOC schools, innovative assessment programs, and novel approaches to talent management. The IAWA will be an integral part of the *Force 2025 Maneuvers* and will play a vital role in informing the structure and design of the future institutional Army.

***The Force 2025 and Beyond Human Dimension Capability Development Task Force.*** To operationalize the vision and mission outlined in this white paper, the Mission Command Center of Excellence has established the Human Dimension Capability Development Task Force. This task force has four near-term objectives:

(1) Transition the human dimension from a stand-alone concept and capability effort to an integrated effort across all the Warfighting Functions. This transformation enables broad analysis

---

<sup>38</sup>Training and Doctrine Command, “New Human Dimension Council will Optimize Soldier Potential,” *ARCIC Exclusive*, Army Capabilities Integration Center, May 9, 2014. <http://www.arcic.army.mil/Articles/cddl-New-Human-Dimension-Council-will-Optimize-Soldier-Potential.aspx>.

<sup>39</sup>*Force 2025 and Beyond Integration and Synchronization Plan*, 21.

of human dimension gaps and potential solutions. The desired outcome is an Army-wide human dimension implementation strategy across Warfighting Functions and Centers of Excellence.

(2) Describe and elaborate the human dimension components of the Army Warfighting Challenges (AWFC) so that the human dimension effort remains nested and integrated with the AWFC analysis as the primary vehicle to drive the Army's transition to Force 2025.

(3) Establish collaborative partnerships and coordinate the activities across the Human Dimension community of practice including an inventory and analysis of the community's research products, programs, and efforts to date.

(4) Conduct research and capture all the meta-data of existing research regarding key human dimension concepts, then identify and implement mature solutions to generate quick wins.

## **Conclusion**

Maintaining dominance in today's uncertain strategic environment demands both a technological and human edge over future threats. Developing and maintaining this human edge requires a sustained investment in the physical, cognitive and social aspects of our Soldiers and civilians with continuous innovation in training, education, leader development, and both talent acquisition and talent management. *Optimizing human performance* through building *resilient Soldiers, adaptive leaders, and cohesive teams* will drive the Army's response to the CSA's vision and fits within the broader context of Army transformation. These substantive changes contribute to maintaining the prestige and value of our Soldiers and civilians, and restore the Army's balance of education, training, and experience. Most critically, *optimizing human performance* provides the framework and vision to produce agile, adaptive, and innovative leaders for *Force 2025 and Beyond* that thrive in conditions of uncertainty and chaos so that the Army can win in a complex world.