



The Science Behind Purepost

Purepost, Inc.

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Purepost Science White Paper

The Purepost Identity

Purepost is the only cloud based software that fully-translates a military service member's experience into transferable civilian skills, job titles and descriptions. We're here to advance Veteran careers, and help companies quickly and easily bring America's best talent into their workforce. Purepost is a Public Benefit Corporation founded by Veterans and Veteran Champions.

The Purepost Purpose *Why we exist/our value-based reason for being*

To provide first-class solutions for Veterans

The Purepost Vision *What do we want to create/our picture of the future*

Every Veteran employed with purpose through a Purepost professional identity

The Purepost Mission *How we focus our efforts and fulfill our purpose*

Transforming Veterans self-worth and value for optimal fit in civilian businesses and educational organizations

The immediate problem that Purepost wants to solve

The problem for the transitioning Veterans is a Language Barrier and lack of Skills Transparency . This is a problem because no technology platform effectively and accurately articulates the value of Veteran talent for private sector organizations. Military Job titles, job duties, leadership technical, interpersonal and conceptual skills, aptitudes and performance achievements need to be described in terms that are fully understood by corporations, recruiters and hiring managers.

Manifestations of the problem

- For the transitioning Veteran, the problem expresses itself in the following ways:
 - Civilian aptitude not fully understood
 - Ineffective resume
 - Prolonged job search
 - Unemployment or underemployment
- For the Corporations looking to hire Veterans, the problem expresses itself in the following ways:
 - Companies cannot find qualified Veterans
 - Companies spend 1.7X more to hire Veterans compared to civilian hires
 - Companies often match Veterans to the wrong jobs
 - Department of Labor Vets-100: 10% Veteran hires for government contract jobs

How Purpost solves the problem

Purepost delivers the most accurate and complete translated and correlated military-to-civilian profile product in the market. Most importantly, our product's superior capability cannot be duplicated by any other company in our competitive landscape today.

Background of the problem and choice of solution methodology

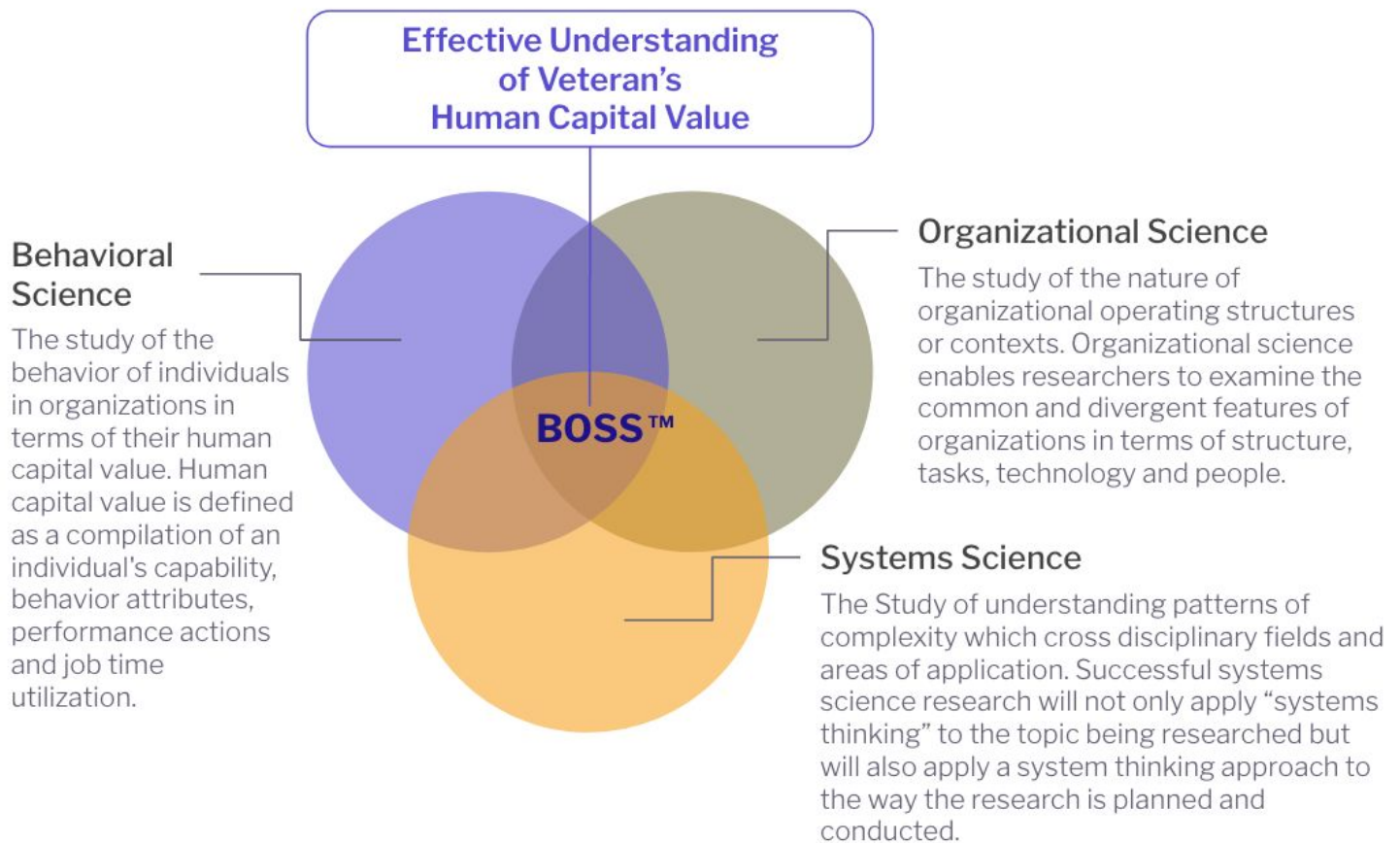
Purepost offers a superior solution because its solution methodology utilizes a unique proprietary blend of Behavioral, Organizational and System Science (BOSS) in its approach to understand and solve the problem (see Purepost's BOSS Components, Figure 1).



Each of the sciences that make up the Purepost BOSS approach is equally important. First, Systems Science brings together research into all aspects of systems with the goal of identifying, exploring, and understanding patterns of complexity at the intersection of disciplinary fields and areas of application. Successful systems research will apply systems thinking to the topic being researched, and also apply a systems thinking approach to the way the research is planned and conducted. Second, Organizational Science enables us to study and understand the nature of organizational operating structures or contexts. It allows researchers to examine the common and divergent features of organizations in terms of structure, tasks, technology and people. Third, Behavioral Science enables us to study and understand the behavior of individuals within organizations in terms of their human capital value. Purepost believes that human capital value is a compilation of an individual's capability, behavior attributes, performance actions and job time utilization.

During the initial problem identification and definition stages (Spring 2015) the learnings of our research team revealed the need for this unique blend of disciplines in order to successfully solve the problem. These early learnings were validated to discover the underlying causes of the problem, the best possible solutions, and the best way to conduct our solution prototyping process.

Figure 1, Purepost's BOSS Approach



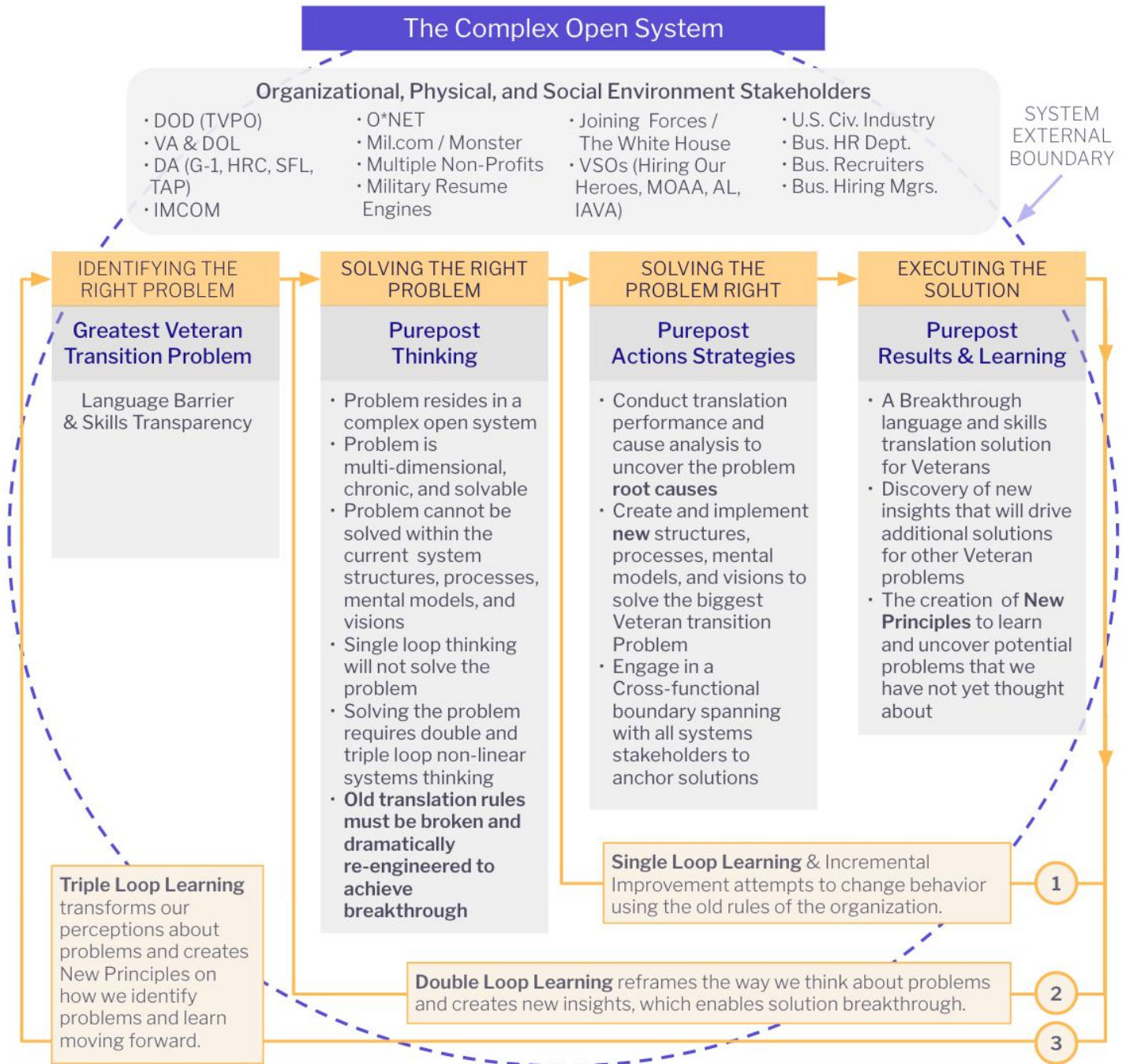
Purepost learnings from the use of Systems Science

- We first learned that while our problem was easy to define, it was embedded in an extremely complex open system environment, which was populated by numerous individual system stakeholders. These stakeholders were individually trying to solve various aspects of the problem using Sustaining Innovation. Sustaining Innovation depends on single-loop learning and is characterized by stakeholders that think that their problem resides in a simple closed system, walled off from an external environment. Sustaining Innovation refines existing organizational capabilities and focuses on incremental improvement. Sustaining Innovation

is essentially the function of altering what individuals are currently doing, improving something that is already possible in our current reality (i.e., making something better, different, or more). Finally, Sustaining Innovation uses old problem solving rules, a one-dimensional problem solving approach and often relies on existing “big data technology” capabilities.

- Through the use of systems science we were also able to look at the problem from a big picture perspective and realize early, that the Purepost solution could not simply be an extension of what others had tried. Examples include the countless military to civilian specialty code conversion tables, the military transition assistance program (TAP) occupational code (MOC) crosswalk solution provided by U.S. Department of Labor, as well as individual state agencies, or The O*NET OnLine Resource Center. In other words, our solution had to break down real language barriers and create real skill translations that could build understanding and relationships between two distinct worlds, the U.S. Military World and the U.S. Civilian World.
- Our biggest learning from the system science discipline is that we needed to harness the power of both Breakthrough Innovation and Disruptive Innovation. These types of innovation feed off of double-loop learning and triple-loop learning, which can thrive in Complex Open Systems. A Complex Open System is not walled off from environment. This type of System has external interactions that can take the form of information, energy, or material transfers into or out of the system boundary, depending on the discipline which defines the concept. Both Breakthrough and Disruptive Innovation are about reinvention or altering the arena of context. Purepost defines context as “the human environment that determines the limitations of our actions and the scope of results that our actions can produce”, (T. Goss, 1996). We chose to use a combination of these two types of innovation, because Breakthrough Innovation is intended focus on easily defined problems with complex and multidisciplinary solutions which are ideal for collaborative events like hackathons, while Disruptive Innovation deals with emerging technologies that begin as unsophisticated prototypes, which evolve and replace established technologies by meeting previously unserved needs.
- Purepost’s Complex Open System Perspective illustrates how Purepost Solved the Problem (Figure 2). The Complex Open System provides a visual understanding of how the Veteran language barrier and skill transparency is embedded in a complex open-system. It also illustrates how the key elements of the problem solving process ideally operate in this type of system. This included how double loop and triple loop learning aid in reframing how we think about problems, creating new insights, creating new principles, how to learn and get breakthrough results.

Figure 2, Purepost’s Complex Open System Perspective: How Purepost Solved the Problem



Purepost learnings from the use of Organizational Science

- Our systems science learning also transitioned into our understanding about different organizations’ operating structures within the broader systems. This was identified within both the Military and comparable Civilian Worlds. The Army is one of several large complex systems within the Department of Defense (DOD). The DOD being the mega system. Likewise, Yoplait manufacturing is one of several large complex systems within General Mills. General Mills being the mega system. In short, by using the organizational science discipline, Purepost was able to understand and document the operating structures and contextual



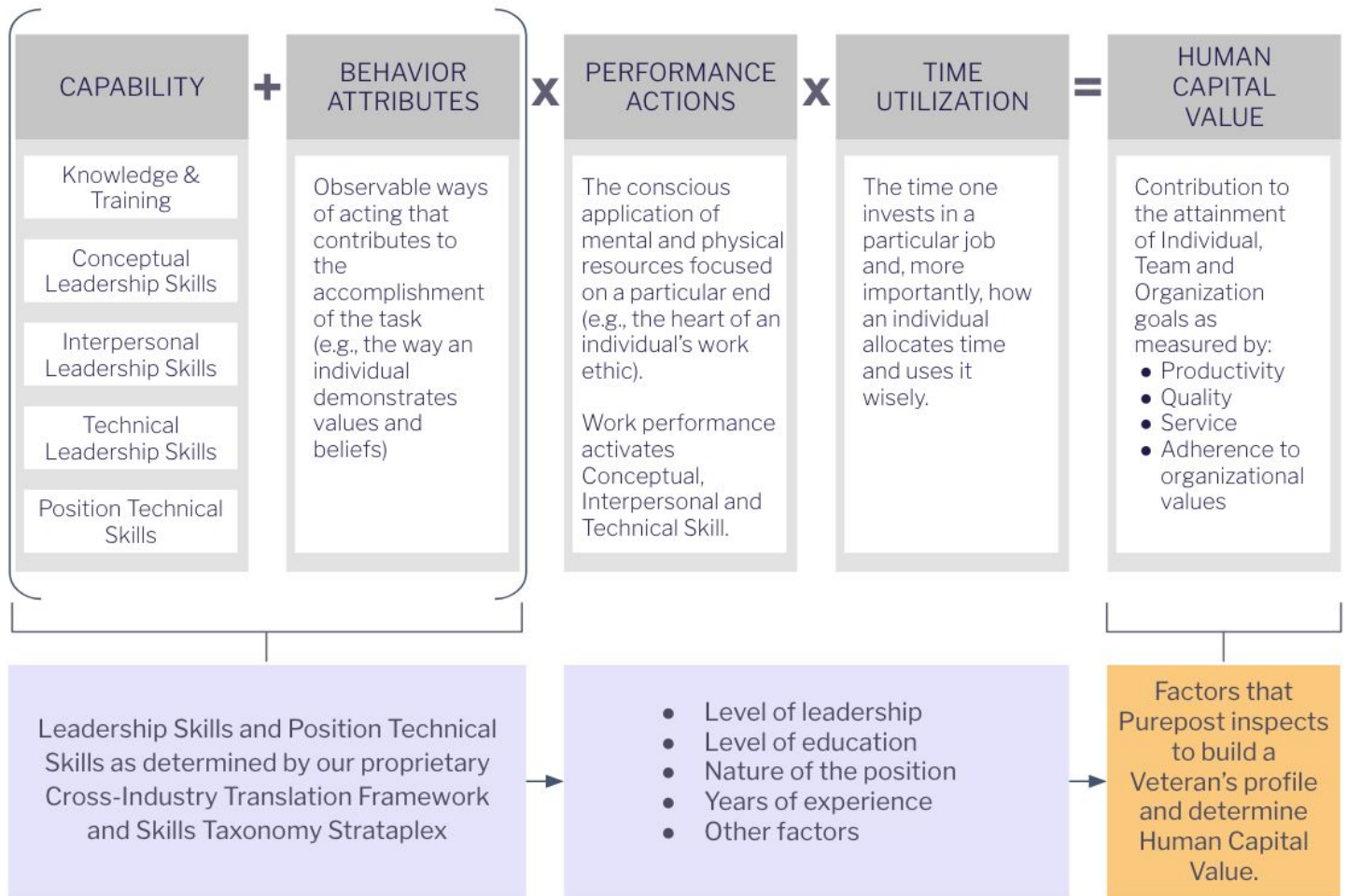
identities of both the Military and Civilian Worlds. Subsequently, this breakthrough enabled us to segment military operating structures and industry operating structures inside systems, as well as sub-operating structures inside of larger operating structures. With a solid understanding of the nature of both military and civilian operating structures, we were able to examine the common and divergent features of these organizations in terms of structure, tasks, technology and people.

- Purepost was then able to build key generalized military to civilian translation guides (templates) by military grade (rank), military position title and civilian job title that facilitated the crucial design of a detailed job specialization and skills crosswalk between military to civilian operating structures. This detailed job specialization and skills crosswalk was conducted through our proprietary crosswalk factors relating to 1) military branch, 2) assignment type and 3) rank/grade. Had Purepost not made this realization through double-loop and triple-loop learning during its iterative and collaborative prototyping process, we would not have solved this problem and succeeded in building a reliable solution that could be replicated throughout all five service branches and hundreds of military operating codes.

Purepost research and revelations from the use of Behavioral Science

- Our first few months of intensive research were focused on several areas of military operating structure and function, including military positions by military occupation code, position title, duty requirements, knowledge/skill capability and education. We simultaneously conducted a deep dive into an array of civilian job descriptions by job responsibilities, specific tasks, skills and education. During this time, Purepost came to some critical revelations.
- Our first revelation was if we were going to provide value-added skill translations, we needed to develop a Hybrid Civilian Skills Library. This Library would correlate military skills to civilian skills instantaneously and articulate them in terms that civilian recruiters and hiring managers would understand (see Purepost Hybrid Civilian Skills Library embedded in Purepost Skills Taxonomy Vector Analysis: 95% Match to Military Skills Match, Figure 5). Our Skills Library would have to accurately define each technical, interpersonal and conceptual skill by appropriate leadership level as described in Purepost's Skills Strataplex and Cross-Industry Translation Framework (see Figure 4).
- Our second revelation, Purepost needed to execute translations using a standard Formula of a Veteran's Professional Human Capital Value (VPHCV). This formula would govern all Purepost translations and enable us to deliver a concise, clearly understood and accurate civilian profile of a VPHCV. This VPHCV would showcase the Vet's economic value in the context of the civilian marketplace (see Purepost's Components and Formula of a Veteran's Professional Human Capital Value, Figure 3). Moreover, Purepost translations would eliminate once and for all the problem of language barrier and skills transparency. Our Veteran's Professional Human Capital Value formula enables Purepost to effectively translate military 1) Leadership Skills; 2) Position Technical Skills; 3) Behavioral Attributes; and 4) Performance Actions into a concise, clearly understood, and accurate civilian profile of a Veteran's Professional Human Capital Value. This profile and adjoining resume will enable veterans to get the jobs they seek and businesses the talent they need.

Figure 3 , Purepost’s Components and Formula of a Veteran’s Professional Human Capital Value



Source: *Veteran Human Capital* (Garcia, A.R. Sr., 2015) - Adapted from *Human Capital* (Davenport, T.O.,1999); *Army Leadership* (U.S. Army ADRP 6-22, C1 10 September 2012).

How the Science Works

Purepost’s Proprietary Technology Database is built to support our conceptual “Skills Strataplex and Cross-Industry Translation Framework” (see Figure 4). This construct is composed of three key elements: leadership levels (strata), skills types (plex), and the operating structures for military and civilian organizations. It shows how our Skills Taxonomy (see Figure 5) functions as the central repository and router which correlates skills and translations across military-to-civilian operating structures, leadership levels and specific jobs.

The leadership levels are conceptualized as strata, having a number of layers or levels within an organized military or civilian system. The three strata in our construct are identified from top to bottom as 1) the strategic leadership skills level, 2) the organizational skills level and 3) the direct skills level. Skills within each level are conceptualized as a plex, denoting a number of segmented complex skill types which are housed within the strata.

The Purepost Skills Strataplex is adapted from The Leadership Skill Requirements Strataplex (T.V. Mumford, et. al., 2007) and U.S. Army Leadership System (T.O, Jacobs, et. al., 1985 and updated Army Leadership Levels (U.S. Army ADRP 6-22, 2012). The three skill requirements in our construct are identified as 1) technical skills, 2) interpersonal skills and 3) conceptual skills. In line with the Three-Skill Approach (R.L. Katz, 1955), our construct is based on the premise that it is important for leaders to have all three skills at all levels, but the emphasis of those skill types

changes depending on where they are in the operating structure. The level of skill importance is signified by the size of the bar inside each leadership strata.

At each side of construct we find an organizational operating structure. On the left is a depiction of the military operating structure layered by upper, middle and lower levels. Each military level is further segmented by sub-levels and described in military terms. On the right side of our construct is a depiction of a civilian operating structure, also layered by upper, middle and lower levels. The correlation of the the two operating structures is taken from The Stratified Leadership System Model (A.R Garcia, Sr., 1996). Like the military operating structure, each civilian level is segmented by sub-level and described in equivalent civilian terms. This construct enables Purepost to perform military-to-civilian cross-industry translations which are informed by position level within the organizational based on these three distinct sub-structures and their sub-levels.

Figure 4, Purepost’s Skills Strataplex and Cross-Industry Translation Framework



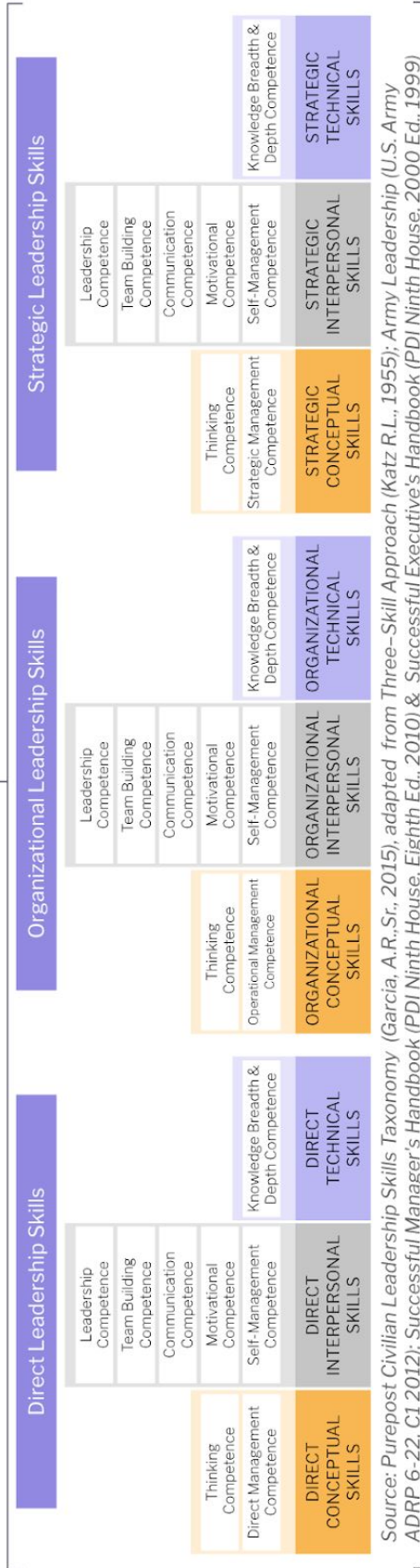
Sources: Purepost Skills Strataplex & Cross-Industry Translation Framework (Garcia, A.R. Sr., 2015) - Adapted from Army Regulation 600-100, Army Leadership (2007) (unclassified); Executive Leadership. Army Organizational Effectiveness Journal, 9 (1), 16-19 (Jacobs, T.O., Clement S., Rigby, C., & Jaques, E.,1985); Skills of an Effective Administrator. Harvard Business review, 33 (1), 33-42 (Katz, R. L., 1955); Leadership Skills for a Changing World: Solving Complex Social Problems. Leadership Quarterly, 11 (1), 11-35 (Mumford, M.D., Zaccaro, S.J., Harding, F.D., Jacobs, T.O., & Fleishman, E.A.2000); The Leadership Skills Strataplex: Leadership Skills Requirements across Organizational Levels (Mumford, T.V., Campion, M.A., Morgeson, F.P.,2007); Leadership: Theory and practice. California: Sage (Northouse, P. G. 2007).

The Purepost Hybrid Civilian Skills Library is populated with specific and detailed skills that fit the technical, interpersonal and conceptual types highlighted in the Skills Strataplex. Our Hybrid Civilian Skills Library was built by merging the best civilian skills from the leading 4 U.S. skills assessment and leadership development firms. Within those skill types, our Hybrid Skills Library is organized into categories as shown in the Purepost Leadership Skills Taxonomy (see Figure 5, Purepost Skills Taxonomy Vector Analysis: 95% Match to Military Skills). We conducted a Vector Analysis to compare our Leadership Skills Taxonomy against the military skills found in the U.S. Army’s Core Leadership Competencies and Attributes Taxonomy. This vector analysis found that skills in the Purepost Taxonomy produced a 95% match with the U.S. Army Taxonomy. This indicates that 95% of the skills which are trained and evaluated in the Army have high transferable value to the civilian sector.

Figure 5, Purepost Skills Taxonomy Vector Analysis: 95% Match to Military Skills

Purepost Skills Taxonomy Vector Analysis: 95% Match to Military Skills

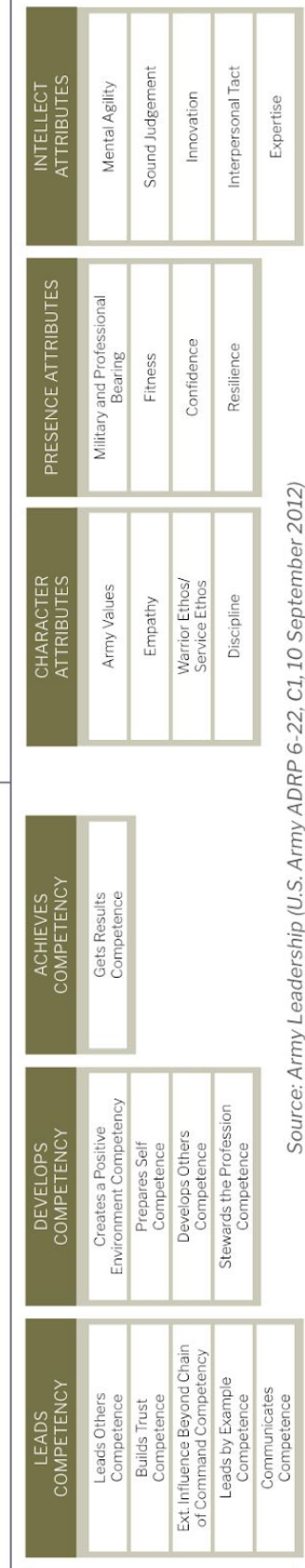
Purepost Civilian Leadership Skills Taxonomy



95% Aggregate Skills Match between the Purepost Civilian Leadership Skills Taxonomy and the US Army Core Leadership Competencies/Attributes Taxonomy



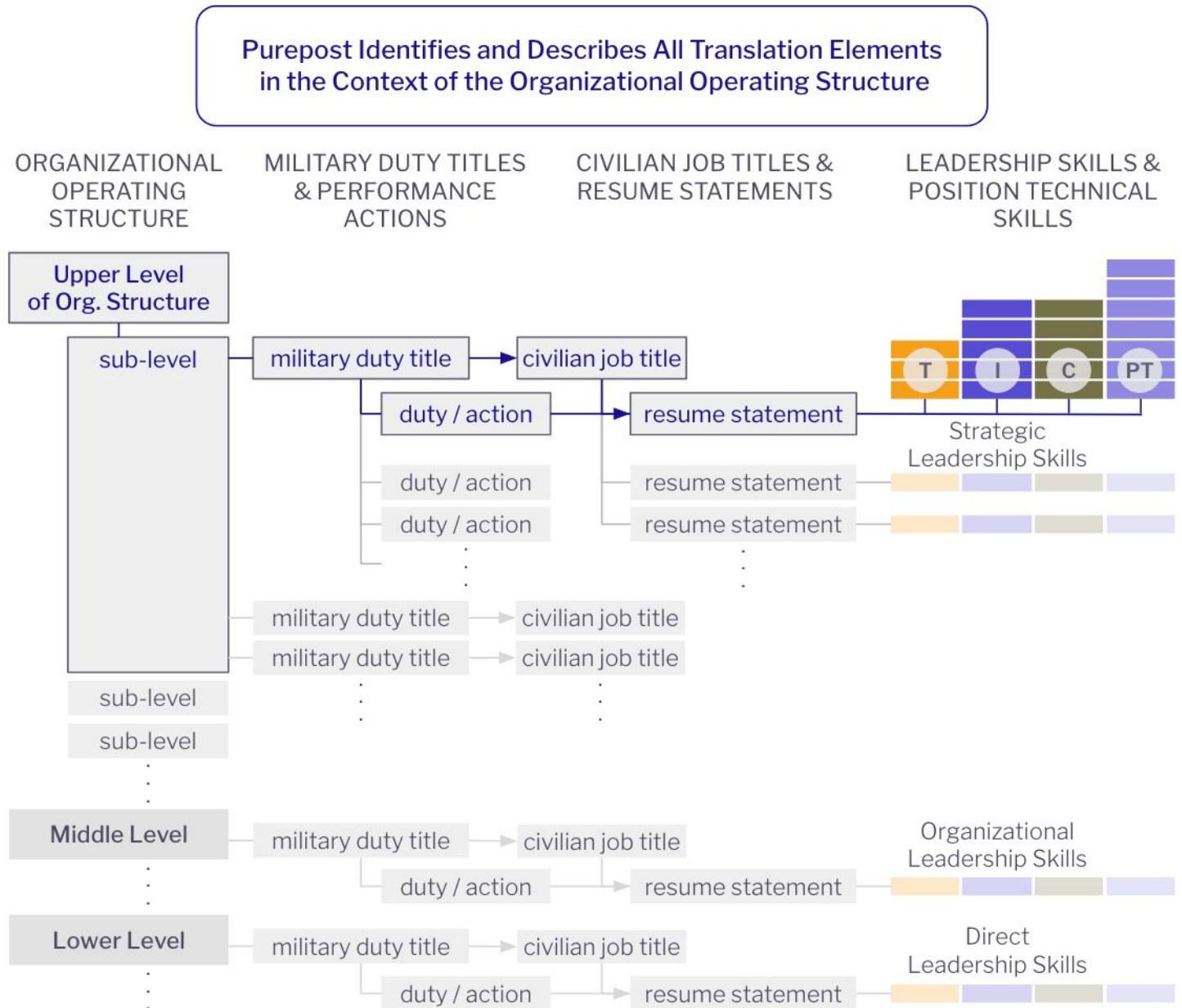
Army Taxonomy for Core Leadership Competencies & Attributes that Relate to Direct, Organizational & Strategic Leadership Levels



In addition to populating our database with leadership skills, we have also populated it with essential Technical Position Skills, which are defined as the abilities and knowledge needed to perform trade-specific tasks. They are practical, and often relate to mechanical, information technology, mathematical, or scientific tasks. Some examples include knowledge of programming languages, mechanical equipment, or tools.

In addition to translation of military position titles and position descriptions, the Purepost database enables the translation of military duties and performance actions into concise, fully understandable civilian resume statements. We then identify roughly a dozen leadership and position technical skills embedded in each civilian resume statement (see Figure 6, Purepost Detail of Skills Strataplex as Applied in Translation Database). Finally, the Purepost database enables any active duty service member or veteran to create a state of the art profile and resume in under 1 hour.

Figure 6, Purepost Detail of Skills Strataplex as Applied in Translation Database

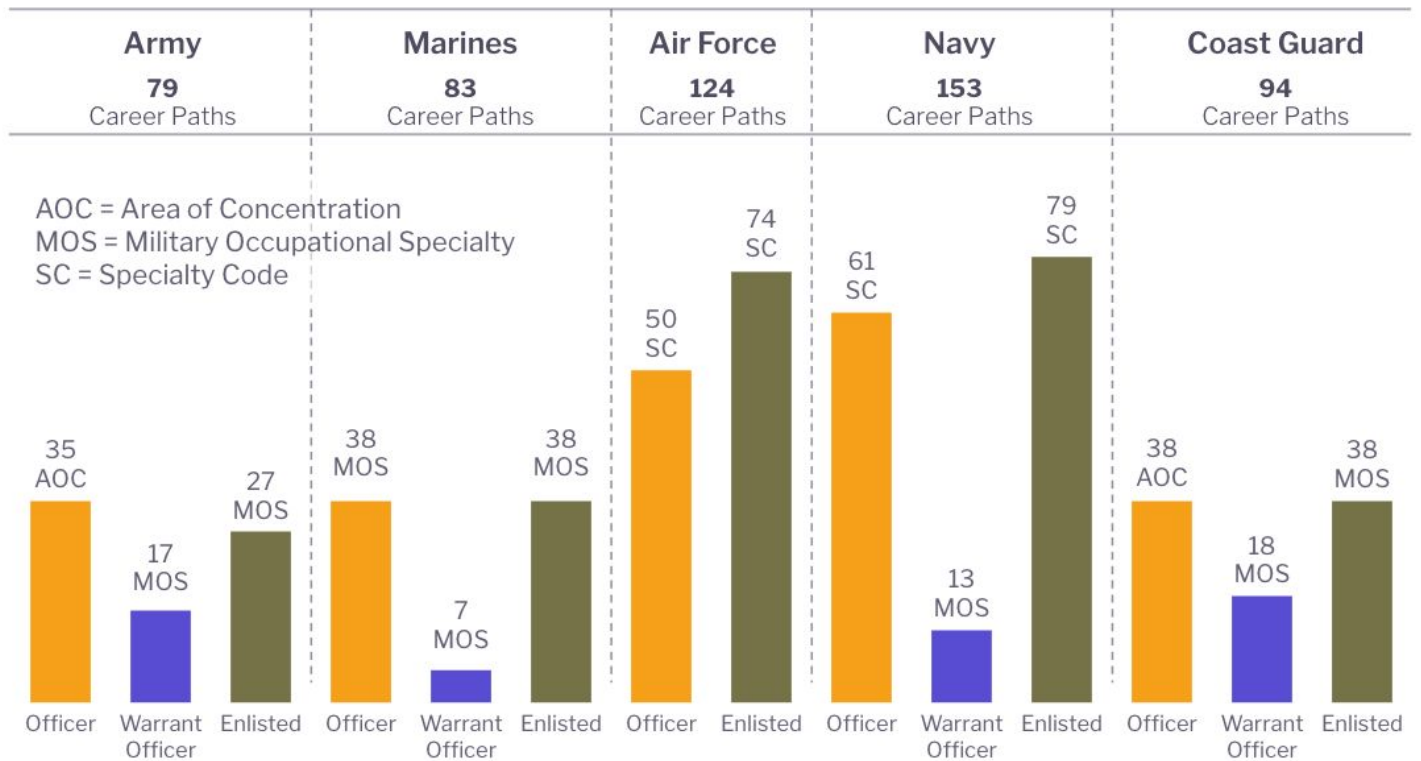


Purepost’s proprietary Hybrid Civilian Skills Library contains hundreds of Civilian Leadership Skills and Position Technical Skills. These skills are used to conduct our massive and instantaneous military-to-civilian skills matching process. Additionally, the Purepost Database has been populated with translations for all 533 Army, Navy, Marines, Air Force, and Coast Guard career paths, commonly referred to as military occupational specialty codes. Each specialty code has been supplied with a cannon of position titles, position descriptions, duty action bullets, and relevant skills. Our research team generated these descriptions from months of intensive research, sourcing from military publications and documentation. Thus far, we’ve populated the database with over 25,000 correlations of military job titles to equivalent civilian positions.

In support of those 25,000 military-to-civilian job correlations, the Purepost research team developed over 300,000 civilian resume statements, all mapped to the relevant Leadership Skills and Position Technical Skills in our Skills Library, resulting in over 2.4M skill mappings. All of which reveals private sector opportunities previously not thought accessible to transitioning veterans (see Purepost’s Five Military Services Translation Universe, Figure 7).

Figure 7, Purepost’s Five Military Services Translation Universe

533 MILITARY CAREER PATHS



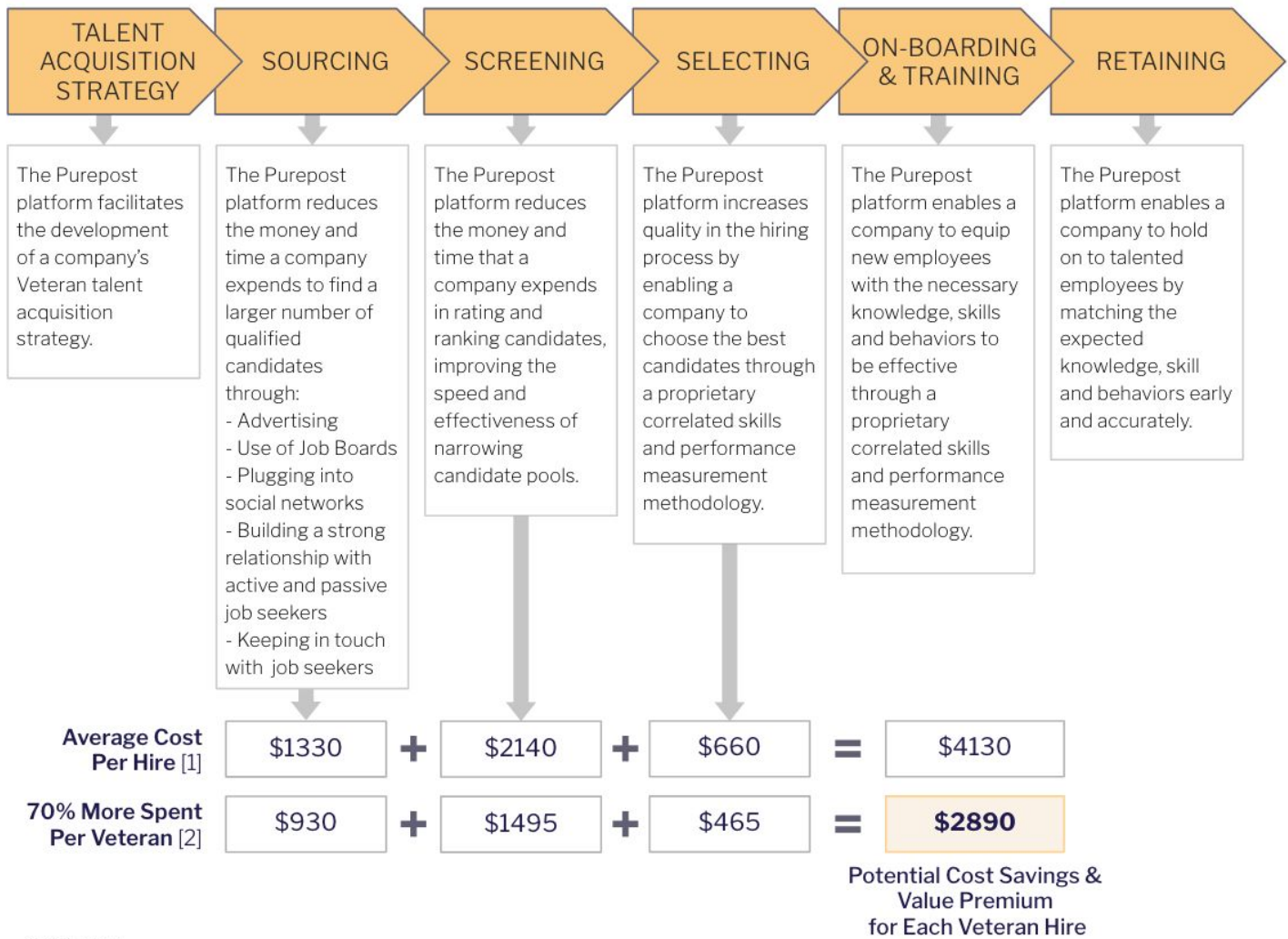
25,000

Military Correlations to
Private Sector Positions

Purepost's Impact on the Civilian Private Sector Talent Acquisition Value Chain

Finally, our analysis of industry benchmarks for veteran and civilian hiring data indicate that the Purepost will significantly reduce the costs that companies incur in critical phases of their talent acquisition value chain. Companies that use Purepost will save time and money, in addition to finding valuable talent hidden in plain view (see Figure 8, Example of a Talent Acquisition Value Chain).

Figure 8, Example of a Talent Acquisition Value Chain



[1] SHRM:

<https://www.shrm.org/about-shrm/press-room/press-releases/pages/human-capital-benchmarking-report.aspx>

[2] Military Times:

<https://bestforvets.militarytimes.com/best-employers-for-veterans/2017/>

New Enhancements on the Horizon

Our Vision from the beginning has always been to perform a real time capture, translation, correlation, ranking and presentation of veteran human capital performance in the most accurate and complete way possible. To that end, in 2020, Purepost will release breakthrough product improvements that will accomplish this key Vision component. By year end 2020, every active duty Service Member or Veteran who logs into our Purepost will be able upload their Military Performance Evaluations and Award Citations, allowing Purepost to fine-tune their translated and correlated performance, in addition to driving high-quality automated job matching and candidate referral.