

TIMELY & EFFECTIVE DECISIONS IN COMPLEX ENVIRONMENTS:

THE IMPACT OF EXCEPTIONAL INFORMATION (PART ONE)

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*"No plan of operations extends with any
certainty beyond the first encounter with the
enemy's main force."*^[1]

*-Helmuth Karl Bernhard Graf von Moltke, the Moltke the
Elder, Prussian military leader who served as the Chief
of the Prussian General Staff from 1857 to 1888.*

The above quote is a well-known truth that serves as a warning to leaders – beware of the emergence of surprising information during execution of the plan. During execution of the plan, decisions must usually be made under intense and unpredictable conditions, the quality of information can mean the difference between victory and defeat. In these critical situations, exceptional information becomes a fundamental asset for decision-makers. Exceptional information enables timely and effective decision-making because it allows decision-makers to seize emerging opportunities, enhances situational awareness, and generates creative and adaptable responses to unanticipated challenges (Fig 1 – this figure serves as the road map through this article using these three categories to organize our thoughts). This article will focus on how exceptional information positively impact decision-making, showing its role in navigating the complexities and uncertainties of modern warfare and real-world situations.

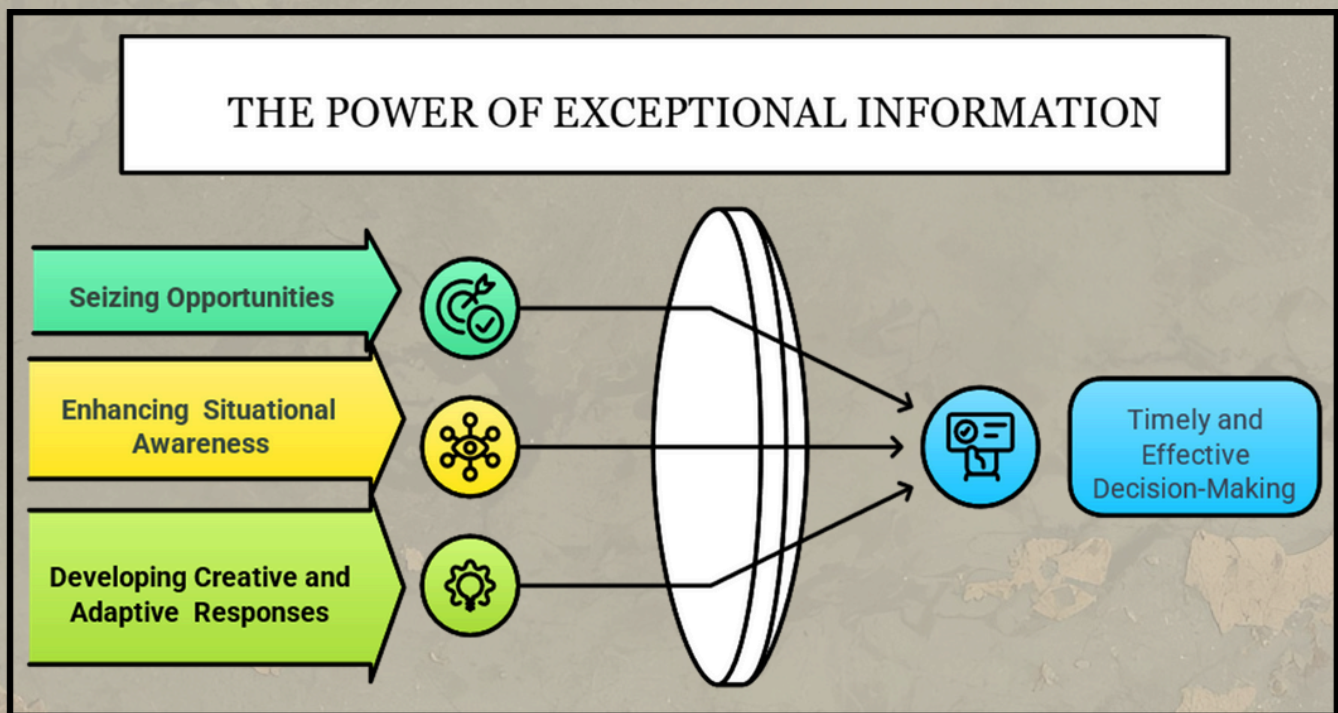


FIGURE 1. EXCEPTIONAL INFORMATION ANALYSIS (FIGURE BY AUTHORS)

[1] Daniel J. Hugues, ed., *Moltke on the Art of War: Selected the
Writing* (Novato, CA: Presidio, 1993), p. 45.
(<https://archive.org/details/moltkeonartofwar0000molt/mode/2up>.)



Exceptional information often appears as a mystery to be solved because staffs and commanders may not have visualized its emergence during the planning step of the operation process. According to FM 5-0, Planning and Orders Production (2024), This information includes data that would have answered one of the Commander's Critical Information Requirements (CCIRs) if it had been foreseen and articulated beforehand.[2] CCIRs are essential information that a commander identifies as critical for decision-making. However, CCIRs, as identified during planning, often just do not emerge. Instead, unforeseen threats and opportunities do emerge requiring rapid decision and synchronization process (RDSP) efforts. Key to understanding the vital nature of exceptional information is realizing that if staffs and commanders cannot recognize exceptional information, how would they ever know it was time to initiate RDSP? They would not. This is why effective staff members and commanders are alert for exceptional information, as it often indicates the need for an adjustment decision during mission execution. Exceptional information often emerges unexpectedly, requiring rapid attention. Then, it becomes valid as situations evolve. Exceptional information is specific and immediate information that directly affects the success of the current operation.[3] And, a third way to understand this definition is that it contains unexpected threats and opportunities that appear while trying to solve problems, demonstrating its dynamic nature in complex environments.[4] What follows are several descriptions of how vital exceptional information recognition can be for seizing opportunities, enhancing situational awareness, and developing adaptive responses.

Seizing Opportunities

Seizing Opportunities Using Battlefield Surprise:

Exceptional information allows leaders to identify opportunities that may not have been obvious during initial planning. Afterward, it becomes an advantage to take into consideration. One example is the surprising attack in the central corridor case during a live-fire exercise at the National Training Center (NTC). Dr. McConnell, (co-author of this article) had only been an S3 of an MLRS battalion for six months. Positioning a counter-fire radar was challenging, and a warrant officer identified a terrain feature, The Window, as an unpredictable opportunity. Historically, the high ground named Jack's Kitchen was the radar position (Fig 2). However, the first location mentioned offered concealment from enemy observation while maintaining sufficient functionality. This was exceptional information because Jack's Kitchen looked like an opportunity but was really a threat because the enemy forces knew that was where the exercising units always placed their radar because it was a textbook location or optimal. Selecting the unexpected/suboptimal position for the radar at the Window was also exceptional.

[2] Department of the Army. (2024). FM 5-0, Planning and Orders Production. Washington, DC: Headquarters, Department of the Army.

[3] Army University Press. (2020). Connecting the Dots: Developing Leaders Who Can Turn Threats into Opportunities. Retrieved from armyupress.army.mil.

[4] Department of Defense. (2017). Unexpected Threats and Opportunities: Insights for Military Decision-Making (AD1039564). Retrieved from <https://apps.dtic.mil/sti/tr/pdf/AD1039564.pdf>.



It was exceptional because the Window appeared to be a threat but was really an opportunity because the enemy could not foresee its use. Consequently, the radar avoided being destroyed by the enemy, enabling the defeat of an entire enemy unit of 122mm Towed Artillery (D-30), which created a decisive success.[5] Then, this initiative allowed the Infantry Brigade to attack from east to west against the enemy completely unopposed by enemy artillery. This demonstrates how a warrant officer, who had ten years of radar crew experience, turned innovation into tactical success by identifying exceptional information. Therefore, by leveraging insights gained during execution, leaders gain flexibility to adapt plans and seize opportunities as they arise, ensuring mission success.[6]

Also, exceptional information emerged in the central corridor case when the enemy introduced a new field artillery commander right before the operation. This change presented an unanticipated advantage utilized by friendly forces during the exercise. Because of this, the new commander, unfamiliar with the terrain and unaware of the radar's unconventional position in The Window, failed to identify its location. Consequently, enemy artillery units continued to fire, slow to recognize how quick counter-battery responses were occurring. In other words, within two minutes of each enemy artillery fire mission, accurate counter-fire destroyed enemy artillery assets. As a result, the new commander was unable to adjust his action in time. By the time the enemy artillery commander recognized the need to reposition firing assets, their D-30 howitzers had been entirely neutralized. It highlights how exceptional information was not only recognized but also created.

By placing the radar in an unconventional location that partially degraded its beam but concealed it from the enemy, the friendly forces turned a potential weakness into a tactical opportunity. Despite being a suboptimal solution, the deliberate choice of radar positioning allowed for completely neutralizing the enemy's artillery capabilities and reinforced the importance of adaptability in seizing opportunities. (For a more detailed account of this story, see The Surprising attack in the central corridor, FAPB).

Seizing Opportunities (Full Potential) to Maximize Surprise:

Another example of seizing opportunities utilizing exceptional information occurred during the Maryland Campaign 1862. The Union troops found the Confederate General Robert E. Lee's "Lost Order" (Special Order 191). Unexpectedly, they gained an advantage by discovering Lee's unit movements and objectives after locating the lost directives.[7] Union General McClellan used this unexpected advantage of knowing about Lee's troop movements and intentions to intercept their advance toward the North but not as effectively as he could have.

[5] McConnell, R. & Fletcher, A. (2023). Creativity the Backbone of Initiative. NCO Journal, 17 April 2023.

[6] Department of the Army. (2024). FM 5-0, Planning and Orders Production. Washington, DC: Headquarters, Department of the Army.

[7] Gallagher, G. W. (2004). Lee and His Generals in War and Memory. Baton Rouge: Louisiana State University Press



Then, it demonstrated how decision-makers could seize unexpected opportunities within complex environments. This information enabled participants to exploit gaps in adversarial planning and adapt their operational process effectively.[9] Additionally, a significant practice observed in PANAMAX 22 and incorporated into the Brazilian Command and General Staff College (ECEME) joint exercise AZUVER was using a Joint Master Scenario Event List (JMSEL or Problema Militar Simulado in Portuguese), automatically implemented by software (Fig 3). [10] This approach provided exceptional information enabling the exercise's intended outcomes, which ensured dynamic synchronization of actions and reactions. This exercise took place for eight weeks at the Brazilian Army Command and General Staff College, where students from the Army, Navy, and Air Force equivalent schools collaborated in a joint operational environment. Hence, the Brazilian military could improve the ability to generate exceptional information, improving the exercise outcomes. By injecting exceptional information into the scenario, trainers transformed fragmented insights into cohesive opportunities for the students as a training audience within the Joint Staff. (For more information on narrative cognition/story thinking that enables exceptional information recognition, see Tom Gaines, "Stories That Win Wars: The Role of Narrative in Military Planning and Innovation," From the Green Notebook, 2 December 2024).

[9] Department of the Army. (2023). PANAMAX 22 After Action Report. Retrieved from <https://api.army.mil/e2/c/downloads/2023/11/29/deb07c2a/24-795-panamax-22-oct-23-public.pdf>.
[10] <https://www.eceme.eb.mil.br/noticias-eceme-m-pt/1534-eceme-participa-do-exercicio-panamax-22>.



Author Biographies

Major Felipe Galvão Franco Honorato, Brazilian Army, is currently an instructor in the U.S. Army Command and General Staff College (CGSC), Fort Leavenworth. He holds a bachelor's degree from the Brazilian Military Academy and attended the Captain Career Course both in Brazil and in France. He has served as a platoon leader and battery fire direction officer in an armed artillery battalion. As a captain and a major, he was in a field artillery battalion in the Brazilian jungle region. He also has experience in Air Defense Artillery units and was an instructor at the Brazilian Army Command and General Staff College. Major Honorato completed the U.S. Army CGSC course in 2023-2024. Additionally, he deployed to the Democratic Republic of Congo for embassy security and participated in Joint Exercise PANAMAX 22 in the United States.

Richard A. McConnell, DM, is a retired Army Lieutenant Colonel and a professor in the Department of Army Tactics U.S. Army Command and General Staff College at Fort Leavenworth, Kansas. He served as the principal investigator for the summer 2022 creativity study dedicated to exploring ways to improve creativity among students. The creativity study research report was published in the 2023 Association for Business Simulations and Experiential Learning (ABSEL) Conference proceedings. He received his DM in organizational leadership from the University of Phoenix and has published several articles on wargaming, exceptional information, creativity, and ethics related topics.

Note: For more details on exceptional information as plot twists in narrative cognition as instructed at CGSC, see Trent Upton et. al, "From research to reality: Cultivating VUCA resistant thinking at CGSC," Military Review Online Exclusive, <https://www.armyupress.army.mil/Portals/7/military-review/Archives/English/Online-Exclusive/2024/Research-to-Reality/mcconnell-research-to-reality-UA.pdf>. For more information on narrative cognition/story thinking that enables exceptional information recognition, see Tom Gaines, "Stories That Win Wars: The Role of Narrative in Military Planning and Innovation," From the Green Notebook, 2 December 2024, <https://fromthegreennotebook.com/2024/12/02/stories-that-win-warsthe-role-of-narrative-in-military-planning-and-innovation/>. For more information on how exceptional information recognition can enable wargaming, see "Wargaming the Laboratory of planning" by McConnell et. al. <https://www.armyupress.army.mil/Journals/Military-Review/Online-Exclusive/2024-OLE/Wargaming-the-Laboratory-of-Military-Planning/>.

