

Agile and Anti-Agile in Signal Operations

Achieving balance

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The term "Agile Manifesto" has become synonymous with flexibility and adaptability in software development. However, in the structured environment of the military, many practices are inherently Anti-Agile. This article introduces the concept of the "Anti-Agile" practices emphasizing the necessity of these seemingly rigid practices within military operations and what a combined approach could impact our signal Soldiers.

While the Agile Manifesto promotes invaluable principles for rapid and iterative software development, the Army's established protocols, tactics, techniques, protocols (TTP), and standard operating procedures (SOPs) are crucial for maintaining order, accountability, and effectiveness.

The Agile Manifesto values individuals and interactions over processes and tools, working software over comprehensive documentation, customer collaboration over contract negotiation, and responding to change over following a plan. This article aims to strike a balance between Agile methodologies and essential Anti-Agile practices, particularly in signal operations. By understanding and integrating Agile and Anti-Agile practices, signal leaders can enhance their operational effectiveness and ensure the seamless integration of innovative software and hardware solutions into Army frameworks.

Individuals and Interactions Over Processes and Tools

The Agile Manifesto emphasizes the importance of individuals and interactions over processes and tools. This principle highlights that effective communication and collaboration among team members are crucial for the success of software development projects. By fostering open dialogue and intense interpersonal relationships, teams can quickly adapt to changes, address issues, and deliver high-quality software efficiently.

Anti-Agile

In signal operations, there is an essential need for well-defined processes and tools. These Anti-Agile practices ensure that operations are standardized, repeatable, and reliable.

Processes and tools are vital for maintaining consistency, especially in high-stakes environments where precision and accountability are paramount. In Army operations, rigorous processes help manage complex systems and ensure that all personnel follow established protocols, reducing the risk of errors. Tools and systems are standardized to facilitate training, maintenance, and

interoperability among various units and branches.

Working Software Over Comprehensive Documentation

The Agile Manifesto prioritizes working software over comprehensive documentation. This principle underscores the importance of delivering functional software that meets user needs, rather than spending excessive time on detailed documentation. In the fast-paced world of software development, this approach allows teams to iterate quickly, respond to feedback, and continuously improve the product.

Anti-Agile

On the other hand, the military's use of comprehensive documentation is a cornerstone of its operations. In signal operations, thorough documentation is crucial for several reasons. First, it ensures that all procedures are standardized and can be replicated accurately.

Detailed documentation also provides a clear audit trail for accountability and regulatory compliance. Comprehensive documentation helps manage the complexity of IT systems. It ensures that all personnel, regardless of their location or experience level, have access to the same information. This uniformity is critical for coordinating efforts across different units and branches, maintaining operational security, and ensuring all actions are traceable and verifiable.

Customer Collaboration Over Contract Negotiation

The Agile Manifesto values customer collaboration over contract negotiation. This principle highlights the importance of ongoing communication and cooperation with customers to ensure that the software meets their needs and can be adapted as those needs evolve. By fostering a collaborative relationship, development teams can quickly respond to feedback and make adjustments, leading to more successful outcomes.

Anti-Agile

In contrast, the military often relies heavily on strict contract negotiation. Contracts are typically detailed and rigid, specifying exact requirements, timelines, and deliverables. This ensures clarity and accountability from the outset, reducing the risk of misunderstandings and ensuring that all parties are aligned on the project's objectives.

These detailed contracts are essential for managing the complexities of military projects. They provide a structured framework that ensures all stakeholders are aligned and accountable, which is crucial for coordinating efforts across various units and maintaining operational integrity. When security and precision are

paramount, such as developing encrypted communication tools or implementing secure network infrastructure, adhering to strict contractual agreements helps maintain consistency and reliability. The clarity and structure provided by detailed contracts ensure that projects remain on track and within budget, which is critical given the high stakes and significant resources involved.

Responding to Change Over Following a Plan

The Agile Manifesto emphasizes flexibility and adaptability, allowing development teams to pivot quickly in response to new information or shifting priorities. This ensures that the final product remains relevant and valuable to the user.

Anti-Agile

The Army places a strong emphasis on following a plan. Detailed planning and execution are crucial for ensuring precision and predictability in operations. This includes logistics, communication, and contingency plans, which are essential for coordinating complex operations smoothly and efficiently.

Communication may be limited in contested environments, and having a well-defined strategy that aligns with the commander's intent is critical. Delegated command and control empower units to act independently while aligning with the mission. Adhering to a plan ensures precision and clarity, helping all team members understand their roles and responsibilities.

Harmonious Partnership

To integrate Agile practices effectively in signal operations while respecting essential Army protocols, it is important to identify areas where both can coexist harmoniously. By focusing on specific Agile frameworks and continuous improvement, we can enhance military IT operations' overall effectiveness and resilience. The following are some frameworks and ceremonies you can use.

Kanban boards: Implement Kanban boards to visualize work, manage workflow, and limit work in progress. This helps signal leaders track tasks, identify bottlenecks, and improve efficiency.

Scrum: Use Scrum frameworks for managing complex projects, with regular sprint planning, daily stand-ups, and sprint reviews to ensure continuous progress and adaptation.

Retrospectives: A retrospective is a meeting to reflect on recent work, identify areas for improvement, and implement changes. This practice encourages continuous improvement and team learning.

User Stories: Create user or system stories to capture needs and requirements of different stakeholders. This ensures that work efforts are aligned with user, system needs and mission objectives.

Agile Release Train (ART): In larger projects, use the ART approach from the Scaled Agile Frame-

work (SAFe) to coordinate multiple teams working towards a common goal, ensuring alignment and integration of efforts.

Story Pointing: Use story or task pointing to help teams understand the complexity and dependencies of tasks. By using story pointing to estimate the complexity of tasks such as setting up communication networks, coordinating logistics, or managing intelligence reports, teams can better understand the effort required and prioritize accordingly. This method encourages team discussions, ensuring a shared understanding of requirements and potential challenges, which improves coordination and teamwork. It also helps identify task dependencies and potential bottlenecks, allowing for better planning and resource allocation.

Extreme Programming (XP): Pair Soldiers to work together on systems, networks, and signal equipment. This practice enhances knowledge sharing and reduces errors, improving the quality of work while maintaining a shared context. If one person is absent, the other can continue with the shared content, reducing the risk of a single point of failure.

Continuous Integration/Continuous Deployment (CI/CD): Implement automated testing to ensure continuous integration and deployment, helping to maintain high software quality and reduce the risk of errors. Utilize Microsoft Power Apps to automate repetitive tasks in an S6 office, such as user account management and automated status reports. This can free up personnel to focus on more critical tasks and improve efficiency.

Continuous Training and Education: Promote a culture of continuous learning to ensure that teams continuously improve their skills and knowledge. Send Soldiers to classes that will increase their data literacy, upskill their technology skills, and help modernize systems at the lowest level. This includes attending training sessions, participating in workshops, and encouraging knowledge sharing among team members. Continuous learning allows teams to stay current with the latest technologies and best practices, fostering innovation and adaptability.

Conclusion

Balancing Agile and Anti-Agile traditional military practices in signal operations is essential for modern Army lethality. While Agile methodologies promote flexibility and rapid iteration, the structured protocols and SOPs of the military ensure order and reliability.

We can enhance operational efficiency and resilience by integrating Agile frameworks such as Kanban, Scrum, and Extreme Programming with everyday Army tasks. Continuous learning and education will equip Soldiers with the necessary skills to innovate and adapt, creating a harmonious partnership between Agile principles and military rigor that drives mission success.