IPPS-A Update: Delivering an Agile HR System for the Army

A modern HR and pay system for a future-ready Army

More than one million unique users have logged into the U.S. Army's Integrated Personnel and Pay System – Army (IPPS-A) since its historic launch in 2023. CACI, working with the Army as its system integrator, has continued to advance IPPS-A with various enhancements, including its more recent endeavor to transition the system's ongoing production support team from a waterfall to an Agile model.

The Challenge: Developing updates and features at the speed of need

IPPS-A Release 3 was developed using the waterfall methodology, which is characterized by a linear and sequential approach to software development. Although this approach provided structure during initial development, it limited adaptability and responsiveness to evolving requirements in production support. The Agile method, on the other hand, is a flexibility-focused model which facilitates segmenting and executing work simultaneously as well as provides the ability to quickly pivot to meet evolving priorities and requirements. Teams using Agile can ensure programs deliver value quickly and more frequently through flexibility, responsiveness, predictability, and efficiency.

Following the Army's decision to transition the program to the Agile software development model, ensuring that the move went smoothly and did not interrupt or limit the needs of the system's users was critical. With an eye toward the future adoption of a lean portfolio management approach, the Army selected a scaled agile framework as its base model. To make the transition to Agile effective and streamlined, the Army collaborated with CACI, the organization responsible for integrating and supporting the IPPS-A system.

"As a leader in secure Agile practices, CACI was excited and ready to support the Army when the decision to move to Agile was made," said Mary Pollard, vice president and division manager for CACI. "Working together, we quickly modified processes; organized, educated, and trained project team members; and prepared the necessary tools to implement an Agile approach. With the help of CACI's ASF staff, we were able to drive change quickly achieving notable results."

The Results: Stabilized predictability, rapid development, and minimized risk

The IPPS-A road to Agile was jumpstarted in less than four weeks. Experts from the Army and CACI joined forces and leveraged CACI's Agile Solution Factory (ASF) with tailored IPPS-A processes and tools to adopt a SAFe Large Solution model. What began as three Agile product teams in an incremental pilot evolved into the successful execution of six planning intervals for the Baseline Agile Release Train (ART).

Those planning intervals, delivered by 12 Agile product teams, helped IPPS-A lay a foundation and contribute valuable lessons for other Department of Defense Program Executive Office Enterprise Information Systems (PEO-EIS) programs, resulting in increased support from Army leaders for the method. Today, IPPS-A is running Agile at scale using the SAFe framework across 12 product teams with the following results:

- **Significant increase in sprint velocity:** Development teams increased story points per sprint by more than 50%, without requiring any additional resources and while avoiding either a decrease in quality or an increase in escaped defects. A steady sprint-over-sprint rise in velocity should continue as the teams continue delivering business value with functional enhancements, while tackling technical debt and improvements in testing and release processes result in multipliers over time.

- **Consistently low defects after production:** With an average of just one escaped defect per month making it to production, defects now remain consistently low thanks to the team's focus on quality and improvements in transparency and communications across teams.

- **Increase in stabilized predictability over time:** The Army is now able to reliably predict how likely development teams are to meet their sprint commitments, allowing it to estimate capacity and ongoing work more accurately.

BY THE NUMBERS

0.7%	**99.3%**	**12**	**50%**
RECIDIVISM (CODE RETURNED TO DEVELOPER)	SOFTWARE QUALITY	AGILE PRODUCT TEAMS COLLABORATING	INCREASE IN SPRINT VELOCITY

The Future: Moving to the cloud and DevSecOps

With the IPPS-A Agile software development transition proving to be a successful strategy for enhancing flexibility, responsiveness, predictability, and efficiency, the Army has improved its ability to manage personnel data and other critical HR functions in a more dynamic and user-focused manner.

In less than a year, the IPPS-A program achieved both a 50% increase in productivity and an overall increase in quality at no additional cost. It has also become more predictable in delivery, which has translated to faster value to the user, as well as allowed IPPS-A to set the standard for DOD programs. Building on this solid foundation, IPPS-A is confidently moving to the next challenge of operating the solution train by adding an additional ART to support Army Military Pay, supporting a move to the cloud, and implementing and maturing further with DevSecOps.

Timeline toward stabilized predictability

- **MONTHS 1–2:** IPPS-A team starts initial activities to prepare for transition, such as analyzing the current state, designing the organization, engaging stakeholders, evaluating existing tools, and training and educating team members.

- **MONTHS 2–3:** Leveraging CACI's ASF playbooks and accelerators tailored for IPPS-A, three pilot product teams ran five two-week sprints focusing on PI planning, scrum roles, ceremonies such as daily stand-ups, and artifacts such as product or sprint backlog. They identified pain points, laid groundwork for future teams, and iterated and improved sprints while working through bugs.

  Meanwhile, non-pilot teams trained to better understand, discuss, and prepare for the upcoming journey and to learn about the value of developing in iterative cycles, delivering functional increments, and incorporating feedback.

- **MONTHS 4–Present:** The remaining product teams joined planning and formed the first ART in IPPS-A, known as the Baseline ART. After this, IPPS-A was practicing Agile and began a continuous process of iterative development and improvement. This phase of the transformation was characterized by constant feedback, identification and removal of challenges, and optimization of processes to improve value.

  An Agile lifecycle management tool was selected and integrated in April 2024, further supporting the new operating model, improving team efficiency, and increasing transparency across the ART.