

## CASE STUDY: AGILE METHODOLOGIES IMMIGRATION AND CUSTOMS ENFORCEMENT (ICE)

### CHALLENGE

SEVP needed to fix several vulnerabilities in its 12-year-old immigration data system, the Student and Exchange Visitor Information System (SEVIS). Having a relatively short amount of time in which to close those vulnerabilities, SEVP decided to switch to an agile development model and run up to five simultaneous development teams, or sprints. While fast, this also proved to be a logistical issue as all the teams, while independent, needed to work together in order to produce a single working, tested, and robust solution.

### SOLUTION

KPS was onsite prior to the adoption of agile methodologies at SEVP and was instrumental in guiding how SEVP coordinated internally and with sister teams from the ICE Office of the Chief Information Officer (OCIO). The key unifying factor between all sprints was system, business, and technical requirements, known in agile as user stories. KPS created a project management office (PMO) to coordinate the writing, editing, and validation of all SEVIS user stories. In addition, the PMO also coordinated business-related tasks as well as setting up a team for system documentation and training, and systems interface support.

Having one team to create the user stories allowed the developers on multiple teams to have four simultaneous sprints and an additional sprint for the creation of documentation and help files. Managing the user stories made transitioning between multiple teams seamless and allowed for consistency when teams were working on separate releases or story epics (groups of similar user stories) and when working on interdependent stories.

### RESULT

The updates to SEVIS have been well received by the user community including law enforcement, schools that accept nonimmigrant students, other units within DHS, and the Department of State. SEVP has released five major updates to SEVIS and is planning several more.

Major benefits include the following:

- Having a single, centralized source for user stories and user story management – allowing for a larger number of simultaneous development teams and therefore faster development.
- Strong subject matter expertise to ensure minimal rewrites and exceptional detail thus reducing errors in code or recoding due to a misunderstanding of the requirements – this allows for greater team velocities and faster component releases.
- Key involvement in backlog grooming processes ensure that the user stories properly represent what that client requires and that the acceptance criteria align with the purpose of the user stories.
- Key involvement in testing ensures that the final results reflect the user stories' vision and modules are tested from a SME's perspective, eliminating errors that would be difficult to reproduce without expert business and process knowledge.

### ABOVE & BEYOND

KPS worked with SEVP to implement agile development in order to better evaluate the business value of application development and more rapidly deliver functionality. The KPS PMO team continues to produce, edit, and manage the user story process affording greater efficiencies between all the simultaneous development teams, faster releases, and higher customer satisfaction.

### ABOUT KNIGHT POINT

Knight Point Systems, LLC (KPS) was founded in 2005 to address the IT and infrastructure challenges facing Federal government agencies. Since that time, KPS has established itself as one of the fastest growing providers of technology and consulting services across Federal government, State and Local government, and commercial enterprises. Our staff maintain expertise spanning a wide spectrum of IT management, technology, and service solutions. We are repeatedly recognized as a "Best Place to Work" for maintaining an exceptional work environment for our employees. KPS is appraised at Capability Maturity Model Integration (CMMI) Level 2 and holds ISO 20000-1:2011 and ISO 27001:2005 certifications. Through KPS' Horizon, our customers are able to consume technology and services traditionally, cloud-enable their data centers on premises through our 'as a Service' offerings, or transition services off premises to KPS' cloud environment.

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