DXC.technology

White Paper

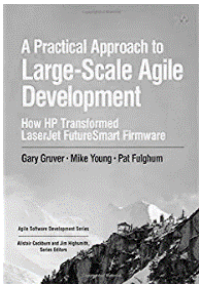
Thrive on Change

Secure Development at the Speed of Mission

April 2017

Secure Development at the Speed of Mission

We wrote the book on it!
A pioneer in the Agile and DevOps methodologies, DXC predecessor Hewlett Packard Enterprise wrote "A Practical Approach to Large-Scale Agile Development"—a candid, start-to-finish insider's look at how we succeeded with Agile in one of our most mission-critical software environments: firmware for HP LaserJet printers. We reduced development resources by 50% and costs by 70%.



To meet the realities of rapidly evolving adversaries, shrinking decision cycles and constrained IT life cycle costs, a U.S. National Security organization and DXC Technology Enterprise Services are driving innovation through delivery of standardized software services via an AWS-based platform. Our enterprise DevOps approach—comprising development, acceptance test, and production environments in both classified and unclassified enclaves—is accelerating application service providers' delivery of secure digital solutions at the speed of mission.

Our U.S. National Security client is moving from a stove-piped development environment to a centralized application and infrastructure service provider construct to support their mission systems. The program represents the client's first step on a journey to consolidate DevOps environments into a single services framework and is a true pathfinder for mission software procurements.

Our approach employs an Open Systems Architecture (OSA) modular design, with widely supported and consensus-based standards, tools and services, enabling the client to realize faster software development, testing, deployment and tiers 1-3 maintenance at reduced life cycle cost. We are applying Agile methodologies codified in DevOps and Lean development to ensure quality, performance, security, efficiencies, productivity and reusability. We also are wrapping the services into a portal that provides the client measurable, actionable insight into all program activities and developers access to all services and support. Our approach has been recognized by Gartner, as a 'Leader' in the Gartner 2014 Magic Quadrant for Integrated Software Quality Suites and in Applications Management; supporting 1M+ applications. ISG Insights also reflects us as a 'Leader" in Application Development & Maintenance (ADM) Services.

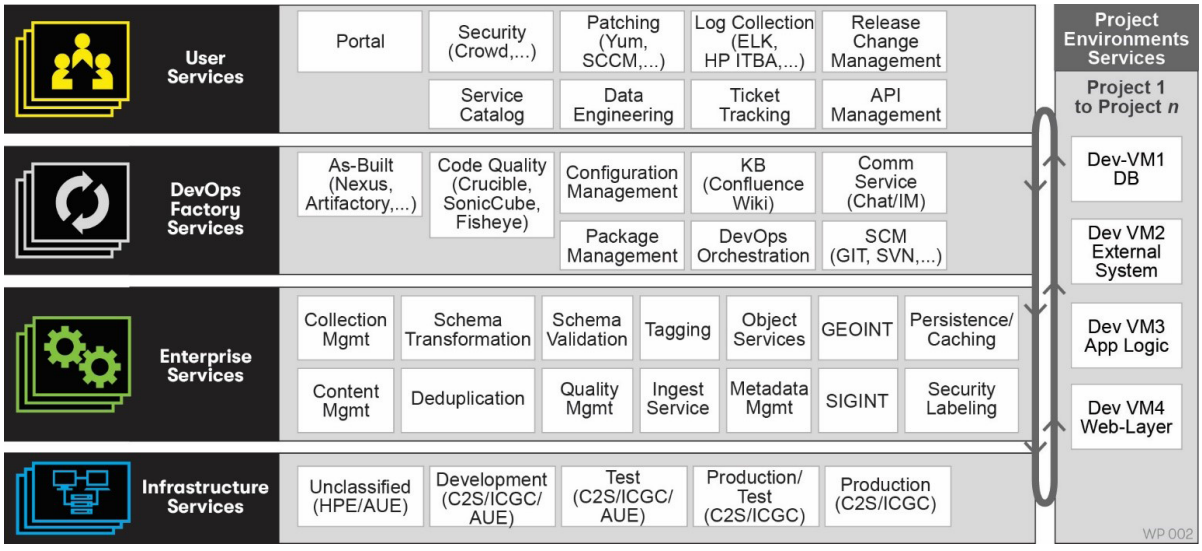
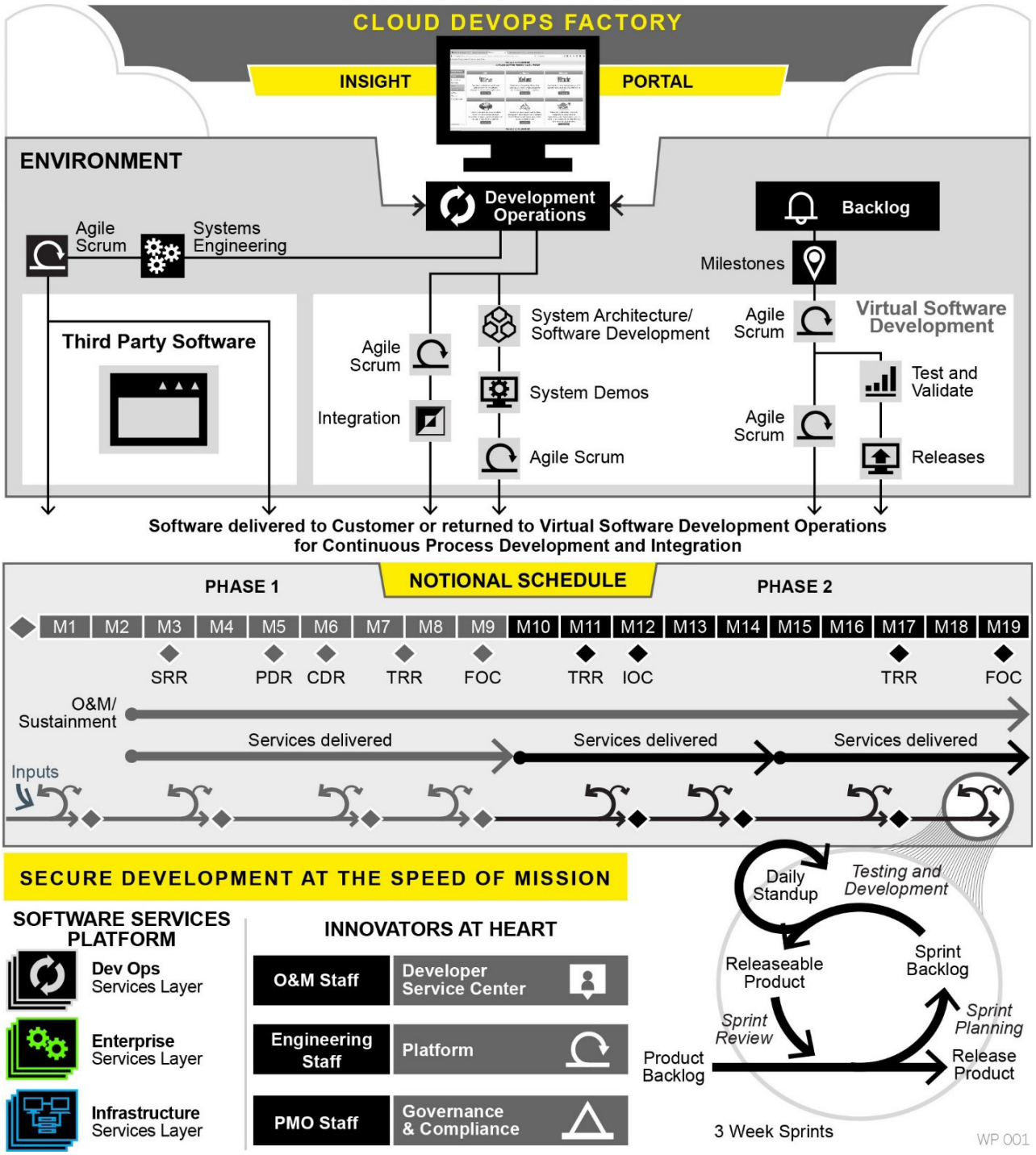


Figure 1. Our Extensible Architectural Framework

Our design principles act as the foundation for extending the enterprise capability towards systems of engagement, layering the application and isolating processes from data and functionality. By keeping the application development rooted in these principles, the framework protects the enterprise capabilities for the next technological innovations.

Figure 2: DevOps Solution

We tailored the DevOps solution pioneered in the HP FutureSmart printer division. It resulted in a decrease in overall development costs of 400%, an increase in the number of programs by 140%, and a decrease in development costs per program by 78%. Firmware resources drive innovation by a factor of 8.



"We gave you an impossible task to complete and you succeeded."

Senior Government Executive at Engineering Design Review

Commercial exemplar

A large U.S. airline wanted to streamline its operation processes and accelerate its applications delivery for airport irregular operations. They also wanted to strengthen and simplify their engagement model to enhance customer experience.

- Using DevOps, average releases per month increased by 400%. Redefining the team structure enabled continuous operations, integration, and deployment.
- We reduced deployment time of enhancements by 83%.
- The improved service quality resulted in Account Satisfaction Score of 4.57/5.

Government exemplar

For the United Kingdom's Department for Work and Pensions Program, we delivered end-to-end ownership for infrastructure delivery and support by transitioning and implementing a DevOps model.

- We invested in Agile training, introduced and continually reinforced One Team culture and behaviors, and automated processes wherever and whenever possible.
- Our DevOps methodology enabled us to change the culture and behaviors of the team and the client. We established a clear vision and defined a set of objectives. It has also demonstrated to the client that ES can be agile and perform the service of being the key collaborator with the client and other suppliers (some of our traditional competitors).
- Our vision provided innovation enablement and a new style of infrastructure to include cloud computing attributes. Combining Agile with cloud and DevOps has proven to be highly successful for UK/DWP and its customer base.

Just four months into the project, we are repeatedly exceeding customer expectations.

- We hit the ground running, assessing the current maturity level of the client's baseline processes, collaboration and automation tools based on industry best practice criteria. By identifying the current and desired end-states, we developed a road map from the base capability that scales to the long-term goal.
- We reuse existing processes, tools, code, and artifacts expediting governance and maximizing previous client investments.
- We passed the first release with no liens, delivering six mission critical services—the customer-facing service portal, development tool catalog, API manager, software vulnerability analysis tool, application audit, and collaboration forum.

Why DXC Technology Enterprise Services

1. Nimble. We deliver a tailorable continuous integration and operations approach to reduce risk. We engage stakeholders, setting attainable goals to pass through the governance gates at an increased velocity. We rapidly insert new low-cost innovations and emerging technologies into our shared services framework continually.

2. Responsive. Our concept for platform development tailors DevOps specific processes, such as automated environment provisioning, continuous integration, continuous operation, and behavior-driven development, to successfully install and configure GOTS, COTS, FOSS, GOSS, and other third party developed software.

3. Reliable. Continuous testing and end-to-end quality management ensure continuous delivery of high quality and secure solutions, using standards that enable flexible acquisition engagements (e.g., pay per iteration/point for Agile).

4. Metrics-Driven. Our Situational Awareness dashboards provide predictive and prescriptive analytics, augmenting governance processes to amplify feedback, monitor value delivery, and provide guidance for relentless improvement and continuous mission alignment.

5. Adaptive. We develop the most effective client-specific automation solution that maximizes quality and efficiency; easily deployed through code. Our expertise in API-centric integration allows us to leverage our client's existing environment and maximize the return on automation investment.

6. Cost-Effective. Our proven Agile and DevOps delivery methods enable IT delivery cost reductions up to 50-75%. We assemble the best talent, methodologies, tools, and industry assets to align with U.S. National Security mission cycles and strategies. We consistently improve service quality with fewer resources than our industry counterparts.

7. Innovative. Your mission is our mission. We leverage emerging technologies, providing the appropriate application of Lean, Agile and DevOps through transformation stages. A flexible governance framework enables client partnership to mitigate transformation risks and harness disruption for a competitive advantage.

Mary Majoros
mary.a.majoros@dxc.com T 571.283.9942