



# 2016 HPE Software Innovator Awards

Bryon T. Colaizzi, Biogen

## Honorable Mention

### Transform to a Hybrid Infrastructure

### Enable Workplace Productivity

#### Software

- HPE Application Lifecycle Management
- HPE Performance Center
- HPE AppPulse Active

Lifesaving pharmaceutical firm builds transformative DevOps agility

## High-level overview

Using HPE Software, Biogen realized the following benefits:

- Ensures proper Safety Adverse Event (AE) processing for lifesaving drugs: ~900 cases per day
  - Avoids FDA penalties (\$ billions) for missing on-time safety case processing
  - Lowers risks of reputational damage and Health Authority product authorization revocation
- Delivers greater business value, shrinks support hours by 40%
- Endurance tests up to 5,700 global concurrent, read/write SABR Total Adverse Reporting Suite (STARS) application users, ensuring application can meet load requirements over time
- Enables “shift left” DevTestOps approach: early involvement of operations and support teams in software development lifecycle (SDLC) enables agile, iterative development, tested over 135 production cycles. Value: resilience and reliability; innovation (largest hosted global safety database 24x7) with continuous delivery

- Improves application quality: early, frequent testing identifies defects to minimize downstream CapEx/OpEx expenditures
- Reduces Mean Time to Repair by 45%; Level 1 support personnel frequently able to resolve tickets without escalation, improving workforce productivity
- Enables third-party agencies to meet their safety case processing volume and revenue targets. This empowers outsourcing vendors to pass on economies of scale to Biogen, and ensures Biogen meets its legal obligations to health authorities

## Company

Biogen develops, manufactures and markets innovative therapies for patients living with serious neurological, autoimmune and rare diseases in 80 countries around the world. The company, based in Cambridge, Mass., has 7,700 employees. Claims are processed through offices in Massachusetts, North Carolina, Switzerland, Australia and Japan, staffed either by Biogen support specialists or by third-party agencies under contract.

## Contact

Bryon Colaizzi is Senior Manager, Performance Engineering & Quality Assurance at Biogen.

## Business goals

New executive leadership at Biogen has launched innovation and transformation initiatives to drive efficiency gains in people, process and technology. As part of this, Biogen has been moving from traditional manual processes to automation. Colaizzi joined Biogen in 2014 on the recommendation of HPE Platinum Partner Melillo Consulting, Inc., to create a Performance Engineering methodology and discipline at Biogen. Over four months, leveraging HPE Software, he built two performance engineering environments—one for validation and one for production—able to support 2,000 concurrent users worldwide, with performance automation regressions for 25 projects and growing. In February of 2015, he was tasked to intervene in an application launch that had run into problems.

Biogen uses a software application called SABR Total Adverse Reporting Suite (STARS) to ensure claims submitted into the medical system by customers—including clinicians, hospitals and patients—meet regulatory compliance. The application is mission-critical to ensure that drugs are prescribed correctly. Biogen is subject to hefty financial penalties from the U.S. Food and Drug Administration (FDA) if it does not meet SLAs for processing claims in a given timeframe.

Colaizzi and his team were pulled into a program that had experienced challenges in deploying a new solution. Colaizzi had not been involved with the first two STARS upgrades. Asked to assist with a third, he began by clarifying project requirements and performance expectations, such as number of application users, their geographic locations and needed response times. He then extended and leveraged the Performance Engineering framework to support the next release of STARS, which supports 5,700 concurrent global users.

## HPE Software products implemented

- HPE Application Lifecycle Management
- HPE Performance Center
- HPE AppPulse Active

## HPE Partner

Melillo Consulting has been Biogen's trusted service provider for seven years. Melillo recognized Biogen's need to build a Performance Engineering framework, and recommended both Colaizzi and HPE. It assisted with deploying the software, building the framework and educating Biogen IT staff. Biogen works closely with Karen Dicks, Melillo Vice President, Testing and Mobile Strategy.

## Additional benefits

Any Biogen project, service or delivery that comes through Biogen's IT organization now passes through Colaizzi's department for performance engineering and end users' satisfaction metric and review process. His team executes automated performance regressions that capture data against non-functional requirements. Gaps are automatically pushed to development engineering teams or third-party Software as a Service providers via dashboards for inspection and remediation. Increased visibility also informs support engineers to enable faster problem resolution. Today, Biogen has 75 projects running through the Performance Engineering framework with load generators across the globe. Discussions are underway to expand the STARS program with webcast and streaming video capabilities to empower end users with an even richer, more robust, high quality, compliant and innovative solution. It is expected that due to the implementation and use of HPE, the organizational changes and team strength from Colaizzi's organization, the organization should have no problems deploying these innovations correctly the first time.



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