Deutsche Post DHL Case Study: Enterprise Agility through DevOps

Industry:	Communications and Logistics Services Provider
Location:	Global Enterprise headquartered in Germany, with international subsidiaries
Size:	Nearly 500,000 employees in 220 countries; revenue 51 billion euros
Partners:	Implementation partner was ASERVO, technology partner was HP
Challenge:	Need to unify decentralized application development teams using multiple processes and to create centralized IT governance and visibility
Solution:	Codified set of agile processes using TeamForge to enable c collaborative application development and deployment across internal and external cloud infrastructure

"Using TeamForge, we achieved high degree of industrialization of our software maintenance"

– Kay Schober
Vice President of IT Service Control at Deutsche Post

Challenges

At Deutsche Post, rapid growth paired with a strong push into online services accelerated the business demand for new software applications. Currently, there are more than 300 active, concurrent software projects in development and maintenance going on in the MAIL division, most of them critical to the core business. Projects range from ERP integration projects like SAP, to online customer portals and innovative electronic service offerings built to generate new revenue streams. Reflective of the diversity of applications being built and maintained, also software development and delivery cycle times vary widely, from two days to six months per release. The division is also rapidly moving to a mix of private and virtual client clouds, with 65% of IT infrastructure in production and 80% in test and development being virtualized already on VMware and CITRIX technology.

More than 2,000 project members are working on those projects across cross-functional teams, spanning geographical and organizational boundaries. Project members are based mostly in Germany, but also work from other locations such as maintenance teams from Brazil, Russia or India. Trusted suppliers and general contractors also have been critical for Deutsche Post to maintain its fast growth. Professionals from over 100 distinct service providers provide essential services including development and testing, maintenance and IT operations services.

To manage growth profitably, the Deutsche Post identified the need to drive efficiencies through better governance and oversight, and by automating and standardizing application delivery.

Too much time was spent on tasks not adding apparent business value, impeding business agility. For some older applications, it was already a time-consuming task to locate the original source code or to understand the rationale for certain programming decisions. There were also huge differences in terms of process and automation maturity, across the organization. Too many processes were manual and error-prone, and lacked a common standard. For example, every service provider had their own process for releasing and shipping software, and the methods for delivery varied from web-based delivery to traditional mail of CD-ROMs. These multiple hand-offs too often resulted in inefficiencies and manual errors.

Besides driving new efficiencies, another stated goal was to accelerate innovation and shorten time to market, by streamlining collaboration and sharing software modules. The majority of the division's 300 development and maintenance projects were using their own source code and artifact repositories,

Business Challenges

- No comprehensive visibility across development and delivery processes, making it hard to compare, optimize and govern
- Inefficiencies and quality issues, due to pockets of manual, error-prone hand-offs among teams inside of Deutsche Post as well as across hundreds of distributed partner companies
- Technical debt, as sometimes production problems (stemming from poor code) realized too late
- Risk for cost and delays in time to market, due to lack of lack of business agility with disconnected business owners, development teams and users
- Lock-in to third party software partners with high switching cost, due to lack of visibility into source code and related assets like documentation

Why CollabNet

- **Codifies modern development practices:** Enables continuous integration and deployment release cycles ranging from daily to weekly to monthly, without compromising central governance and oversight
- **Provides the platform:** Single, integrated set of ALM capabilities; from planning to tracking to build, test and deploy
- **Manages risk:** Central governance and control, while empowering project teams with flexible process design
- **Institutes best practice:** Centralized, shared and searchable repository for code, document and discussions
- **Creates the community:** Wikis, discussion forums and document automatically associated to code repositories
- **Speeds production:** Automated provisioning of build, test, and deployment servers (though already in place, now integrated on one platform)
- **Integrates with preferred ALM tools:** Like Eclipse, HP Quality Center, HP Operations Orchestrator and HP Server Automation software, and Hudson
- **Open source community:** Based on open source components; corporate sponsor of Subversion; belongs one of the largest development communities worldwide
- **Choice in delivery:** Such as the preferred TeamForge hosted option

development methodologies and software tools. There was a high degree of redundancy mainly in storage locations of documentations) and lack of cohesive processes for application delivery (and tracking of software quality metrics. This approach was costly, and lacked the alignment and visibility demanded by mandates for more agility. Development and maintenance errors often only became apparent in integration, sometimes errors could just be fixed during acceptance tests or even only once the code had moved to production. At that point, it had become difficult and expensive to fix the code, building up considerable technical debt. And, too much time was spent managing the plethora of different tools itself, unnecessarily overburdening the development teams.

Deutsche Post also lacked timely visibility into source code and related documentation—and, as a result had to rely on its many software partners to provide critical information when needed. While the majority of partners are highly responsive, relying on over hundred vendors exposed the organization to unnecessary risk and created situations of vendor lock-in.

Standardizing on CollabNet Teamforge

Deutsche Post needed a solution to drive application lifecycle management (ALM), unified across development, maintenance and IT operations (DevOps). In particular, this required a lifecycle process and tool platform that would enable iterative and agile continuous integration (CI) and deployment capability. A central platform would have to manage all the aspects of resource management, source code management, and continuous integration and delivery from code to 'build and test', to actual 'release and application deployment'. In particular, deep integration with HP Quality Center (HP QC), HP Operations Orchestrator (HP OO) and HP Server Automation (HP SA) software was seen as critical, as well as the ability to seamlessly interface with Hudson, Eclipse and Subversion open-source technology.

Scalability and flexibility were also key requirements: The new platform had to scale to 1,000s or possibly 10,000 of users, be accessible securely across geographic and organizational boundaries, and be flexible enough to support of a variety of methodologies from waterfall to Agile and Scrum. And, it had to integrate seamlessly into developer's preferred working environments, including Eclipse and Visual Studio. What's more however, simply mandating and implementing a new infrastructure 'top-down' would not be enough. The company early-on realized that developer buy-in to any new platform would be imperative for the success of the initiative. So that platform had to be easy to use, and integrate seamlessly with developers' and project managers' work environments.

Deutsche Post DHL engaged on an elaborate evaluation process to identify the products that could live up to the task. In the end, only one product was considered to fit the need, CollabNet TeamForge. All other products either could not live up to the demands of scale and integration, proved to be too rigid, or did not provide the integrated set of collaboration and social coding features required. An initial pilot project lasting nine months and covering five key projects clearly demonstrated that TeamForge was up to the task, and convinced senior management to implement TeamForge as the standard ALM platform across Deutsche Post's MAIL division. Starting in 2009, Deutsche Post started to implement TeamForge over several phases, adding additional users and projects over time.

The TeamForge platform offers developer and project managers a single set of integrated capabilities, including requirements management, software version control, bug tracking, build management, release packaging and automated static source code analysis. The platform supports continuous integration, delivery and deployment release cycles ranging from daily to weekly to monthly, and helps bridge the hand-off between development and operations (DevOps).

TeamForge also drives collaboration and enables social coding, with Wikis, discussion forums and documents automatically associated to code repositories. Perhaps most important for Deutsche Post, TeamForge excels at automated provisioning of build, test, and deployment servers, locally or in the cloud. Also, TeamForge easily integrates with the organization's other software tools, including Eclipse and HP Business Technology Optimization (HP BTO, including HP QC, HP OO and HP SA). Aligned with Deutsche Post's strategy for cloud based software delivery, TeamForge runs within a hosted platform.

Quantifiable and Demonstrable Results

The ongoing integration and automation of processes from code to delivery already has been a huge success at Deutsche Post. In particular, the acceleration of continuous integration and deployment received high marks internally, across code, build, test, release and delivery. Provisioning the right servers for deployment used to take four months; now in a few mouse clicks, provisioning can be done instantaneously within TeamForge, and configured to the particular needs of that software project.

Integration with HP QC has proven to be especially productive. Code is released continuously to build and test, and results from tests are fed back automatically for tracking into TeamForge. That helps to assess the status and success of software projects, and to identify early-on opportunities for improvements. This end-to-end automation accelerates software delivery, and is expected to eventually free the company's software developer 'artists' from many of the burdens of provisioning and deploying essential IT infrastructure. As a result, it allows them to focus on what they're best at: deliver innovative, high-quality software applications.

Deutsche Post improved business agility, through consistent process integration with operations (DevOps), and by tapping into the cloud. Software stacks are selectively integrated on demand and in an elastic way by users with deployment infrastructure stacks and test harnesses, and then loaded onto a set of servers in the cloud. This is performed for any type of developer lifecycle and continuous integration and deployment strategy – ranging from release cycles of daily to monthly time tables.

Collaboration between development, maintenance and operations teams also has been simplified with TeamForge Wikis, as the standard approach to quickly and efficiently share information across projects and departments. With thousands of documents and discussions generated monthly for each project, users benefit from TeamForge's ability to securely and automatically associate every piece of information to development artifacts. This function enables them to easily search and locate vital information. Finally, TeamForge's ability to create micro-sites by projects or by business line fosters the building of development communities and assists with internal marketing.

There also were some unexpected, surprising side benefits: Deutsche Post was able to save on energy costs, by automating and standardizing processes for continuous integration, and reducing usage of unneeded computing resources.

Deutsche Post DHL's IT initiative has had a positive strategic, financial, and operational effect on the company. Using a single platform to standardize all vital processes (for development, maintenance and operations) enables collaboration, drives efficiency, and reduces cost. Also business agility improved, as applications can be delivered closer aligned and timed with the business needs, and vendors can be faster on- and off-boarded. Applications can be managed and deployed at the pace demanded by the business, from months to weeks or even days, without jeopardizing governance, visibility and oversight.

Deutsche Post performed a formal ROI analysis, and concluded that already after the first roll-out phase (about a third of total roll-out), TeamForge essentially had paid for itself. Furthermore, development defects are detected and fixed early-on, and central visibility also helps to spot and improve poor processes or underperforming software partners. Additional benefits include accountability, control, and governance that further reduce cost and help to ensure regulatory compliance. Finally, standardization enables the company to reduce expenses and institutionalize best practices, resulting in higher-quality products and more rapid development and release to production.

The TeamForge platform is now being deployed rapidly across the MAIL business department's IT organization. It currently supports nearly 500 highly active users working on more than 115 projects. By the end of 2011, the group expects to support 50% of its roughly 300 IT projects in development and maintenance and 1,500 – 2,000 active users on the platform.

> "With TeamForge, we now have a scalable ALM platform, which enabled us to deliver maintenance industrialization."
>
> – Kay Schober
> Vice President of IT Service Control
> at Deutsche Post

Realized Benefits

- Business agility, as applications can be delivered closer aligned and timed with the business needs, and vendors can be faster on- and off-boarded
- Increased efficiencies and quality, with consistent and industrialized processes and automation, now across projects, and from development into operations
- Reduced risk and improved time-to-market, through instant visibility into documentation
- Better product quality, as development defects are detected and fixed early, before they reach production
- Improved planning on change and new apps, for faster implementation and better resource usage
- Continuing to expand usage in the assessment of vendor selection through quality benchmarking, once CTF is fully rolled out
- Realized tangible, significant savings in infrastructure costs (by retiring multiple legacy systems, and eliminating need for manual tool integrations)

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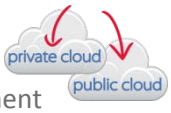
Hybrid development and deployment



Enterprises are now implementing Enterprise Cloud Development with the CollabNet platform that helps manage the shift to a hybrid development strategy.

As a result, they are achieving **productivity gains** of up to 70 percent while **reducing costs** by as much as 80 percent, all with **enterprise compliance** in order.

Learn more by downloading our free white paper at www.collab.net/ecd

The Road Ahead

Instead of hosting TeamForge locally, Deutsche Port decided to host TeamForge virtualized with T-Systems. With that, Deutsche Post is now looking at the latest release of TeamForge, version 6.1. They are especially interested in the comprehensive new role and permissions management. Site administrators will have full control about the platform itself, without however being able to view business content, like projects documents or artifacts. Deutsche Post also looks forward to the new reporting framework.

The Agile Path to Enterprise Cloud Development

Over the last decade, CollabNet successfully pioneered collaborative and distributed agile software development in the cloud for many of the world's largest organizations. Today, we've created the industry's first front end platform to facilitate the enterprise shift to hybrid cloud development and deployment.

Learn more at http://www.collab.net/solutions.

About CollabNet
CollabNet is a leading provider of Enterprise Cloud Development and Agile ALM products and services for software-driven organizations. With more than 10,000 global customers, the company provides a suite of platforms and services to address three major trends disrupting the software industry: Agile, DevOps and hybrid cloud development. Its CloudForge® development-Platform-as-a-Service (dPaaS) enables cloud development through a flexible platform that is team friendly, enterprise ready and integrated to support leading third party tools. The CollabNet TeamForge® ALM, ScrumWorks® Pro project management and SubversionEdge source code management platforms can be deployed separately or together, in the cloud or on-premise. CollabNet complements its technical offerings with industry leading consulting and training services for Agile and cloud development transformations. Many CollabNet customers improve productivity by as much as 70 percent, while reducing costs by 80 percent.

For more information, please visit (www.collab.net).

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