

LPL Financial Advisor Tools

Enterprise IT Best Practices

Independent advisors, banks, credit unions, and leading financial services companies depend on LPL's state-of-the-art tools and technology to successfully manage their organizations. So maintaining their reputation and bottom line requires that they resolve technical issues immediately.

LPL identified that its software development processes could be improved and enlisted Fairway's help to implement best practices that would:

- ensure customer satisfaction with online tools;
- prevent technical issues and avoid lost revenue;
- save money by reducing time required in all phases of development;
- improve morale by limiting weekend hours; and
- streamline ever-changing processes to create dependable, predictable procedures.

Along with Microsoft consultants, Fairway helped internal LPL resources to investigate issues and report to the President, Chief Operating Officer, and Chief Information Officer.

Refactoring



After examining the system, Fairway recommended making the legacy C++ COM authentication system threadsafe so it could handle an increased load. This simple fix greatly improved the usability of LPL's system; however, that's not where Fairway stopped. In order to prevent future downtime, Fairway went above and beyond to provide numerous recommendations for the development and QA environments and release process.

Development Environment

One simple recommendation was to maintain identical production and testing environments so these types of issues can be identified more easily. Although this at first appears obvious, large, established teams often make minor process digressions as a means to offer new tools to customers as quickly as possible. Unfortunately, these small digressions magnify over time, and Fairway provided the fresh set of eyes and inspiration LPL wanted to get its team back on track.

Release Process

LPL created a new role for Fairway to manage the release process because no robust process had ever been implemented and information about individual releases had never been tracked. Releases were verified with a manual process and components could not be removed from a release without postponing the entire release.

Fairway began by meeting with project managers and technical leads to illicit input and to document known weak points throughout the release process. Corrections were made to the process, and Fairway worked with a consultant project manager to build consensus and gain buy-in from all the stakeholders. After training project managers, tech leads, and developers on the new process, Fairway expanded the process across all of LPL in San Diego.

The new process included a single repository for internal release information using SharePoint's Wiki features. This eliminated email, provided an

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audit trail of all the changes submitted by project managers, and made changes easy to present to the approval board. In conjunction, Fairway defined the boundaries for what features could be included in a release and the information required from project managers to get their features included within a given release.

The software development lifecycle was applied to the information collected from project managers. Star Team (the software configuration management application) was also restructured to include dependency, version, and ancillary information needed to track what's in production and in each release. Recommendations on versioning and source code restructuring allowed deployed software to be verified with an automatic script rather than the existing manual process. This also meant that if developers were to determine that a component was not ready for release, they could remove it easily without having to postpone the entire release.



After three successful releases completed in a predictable amount of time, LPL understood that leadership could transform a weak, unpredictable process into a dependable, predictable procedure. Not only did LPL executives and project managers have significantly more confidence in their releases, the streamlined and documented process reduced the overall time required for release, saving money in consultant fees and improving morale by limiting overtime.

LPL's advisors can now make trades and get information more easily, and LPL executives ensure against lost revenue caused by avoidable technical problems.

Technologies & Tools

Environment

- SQL Server 2000 (TB+ of data)
- .NET 1.1
- .NET 2.0
- .NET 3.5

Languages

- C++
- COM
- COM+
- C#
- VB.NET
- ASP.NET
- ADO.NET

Code Tools

- Visual Studio Team System
- Windows Services
- Windows Communication Framework
- .NET Remoting
- Visual Studio 2005
- Wiki
- Visio
- Star team Source Control

- Test Director Defect Tracking
- SharePoint