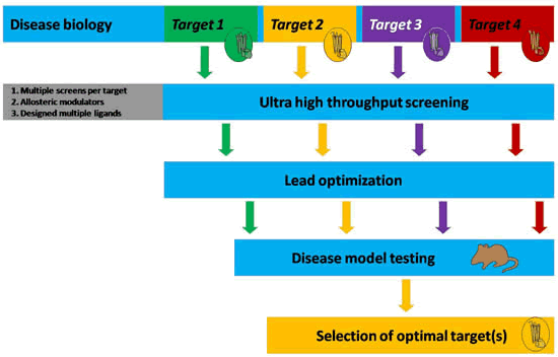
Biotech

Integration & Refactoring

Fairway's biotech startup client performs biopharmaceutical research with clinical stage pharmaceutical products using its proprietary drug discovery platform. Robots produce potential drug data by testing drug compounds and analyzing the response to varying doses of drugs, called dose response curves. These curves are then fit to normalized math models and evaluated for potential sale.

Problem

Chemists and biologists at the startup use an internal web-based application, which fits the curves of data points. The wizard allowed scientists to use their custom-built modeler, and they wanted to integrate a 3rd-party modeler. This 3rd-party application is a rich client with hooks that allow other 3rd-parties to input raw data transformation data and output the normalized data. The startup brought in Fairway to refactor existing non-modular code for generalized services and create the backend service layer to integrate the 3rd-party modeler.



Process

Within two days, Fairway's expert gained challenging new domain knowledge and began the project on-site full-time. Fairway's responsibilities included architecting, principal implementation, and unit testing. User-interface design and acceptance testing were provided by internal client resources.
After recommending a refined design, Fairway extracted and generalized a service interface from the existing application. Fairway then created two service implementations, one for the existing custom-built modeler and the other for the 3rd-party modeler. Fairway employed test-driven development heavily throughout this project by creating a test suite that included all hooks and transformations and which can be reused for future projects.

Result

Three to four months after Fairway's initial engagement, about 100 satisfied scientists were using the updated application with its additional 3rd-party modeling option. Throughout the project, Fairway maintained a good working relationship with the client. And the refactoring work and adherence to best-practices subsequently allowed the biotech company to easily add plug-ins for additional modeling options.

Technology Solutions

Environment

- Oracle
- Linux
- DEV, QA, and PROD Systems

Language

- Java

Code Tools

- Spring Framework 1.2/Hibernate 2.x
- Subversion
- Putty