

Customer emPowered Applications

Applying Customer Driven Innovation (CDI) practice to Software Based Solutions

Abstract

The convergence of three events: 1) Internet Delivery 2) On Demand Platforms 3) and Rapid On Demand Application Development (ROAD) has enabled the principle of CDI to be integrated into the entire Software Development process. This paper discusses these root enablers in the context of CDI and concludes with best practices for CDI based design.

What is CDI?

Customer Driven Innovation is the practice of directly integrating the customer voice into the product development life cycle. In other words, the customer has a fundamental role defining and prioritizing how products are created and optimized. The customer can participate at any level of the development cycle: 1) Product Requirements Phase 2) Product Development Phase 3) and Product Maintenance and Enhancement Phase.

As discussed in the best selling book, “Wisdom of the Crowds,” collective intelligence is a very powerful decision making tool. The book outlines how large and diverse groups can make better decisions than the most experienced individual member of the group. Applied to Software design, it suggests that the customer base can make better feature decisions than your most experienced product manager. While this democratization process seems blatantly obvious, to date it has been very difficult to implement due to ingrained processes that create significant barriers between the publisher and the customer. The primary barriers for software Vendors to incorporate CDI in their practice have been poor business model alignment and protracted development cycles.

Business model misalignment has its roots in the traditional structure of software licensing. To prolong a title’s license revenue capacity, software publishers must continually add features to justify upgrades that support their revenue model. This creates bloated software, where the overloaded feature set often makes the product less useful

than prior releases. These products are not evolving to solve customer problems more effectively and easily; they actually compound superfluous functionality. The constant layering of features culminates in a classic case of over serving the customers’ needs with features that reduce productivity. In some cases, the customer is even forced to upgrade to a software version that is more complex and less friendly than the one they are currently using. The result is anything but a customer driven product, and is ripe for disruption by a competitor that is more aligned to customer needs.

Historically, leading software companies have established good listening posts for integrating the customer voice into their feature prioritization. However, drawn out, “waterfall” development processes in the software industry have prevented them from being able to respond quickly to customer requests. This latency in the software delivery process, in fact, counteracts any benefits that customer input provides during the cycle. For example, software cycle times have typically spanned one to three years or more between major releases. Businesses and customers today are so fast moving that the needs will likely have evolved past the feature by the time it arrives. In short, inability to deliver against customer needs in a timely manner prevents the customer from participating in product development in a meaningful way.

Internet Delivery Changes the Game

As use of the Internet became prevalent in mainstream businesses, Software Publishers recognized a new, more iterative deployment model that enabled a break from the traditional software delivery model by delivering solutions to their customers through the Web browser.

As such, the Internet removes significant hurdles that have plagued software designers. A short list of these includes:

Internet solutions are easy to implement in a group environment

The implementation challenges of delivering groupware applications approach zero with Internet delivery. Compare deployments for products like salesforce.com™ with traditional Client-Server products like Pivotal. Also consider how quickly WebEx exploded on to the scene with Web Conferencing, while older, client-server based approaches showed very slow adoption.

Collaboration is inherent in the platform

With one big “repository in the sky,” groups can easily share and collaborate on documents and data without having to implement complex networks.

Distribution costs approach zero

Software can be distributed via the Internet rather than the time consuming, costly process of manufacturing, packaging, and fulfilling CD-based products.

With the Internet’s inherent ability to deploy functionality rapidly and on a feature-by-feature basis — and the elimination of the software on a disc distribution — the primary new business model for Enterprise applications is the subscription model. This dictates a different relationship between the Publisher and Customer in that the publisher’s success is intimately tied to the customer’s, as the customer always has the option to unsubscribe. This raises the bar in managing customer satisfaction and sets the table for continually improving products. Having the ability to listen to and incorporate customer ideas into product design will enable Software Publishers to establish a key advantage among competitors.

Functional vs. Functionality

An Internet-based subscription model that enables launching features quickly in response to customer needs has the side benefit of focusing the publisher on creating functional applications that focus on Customer Success, rather than on bloated functionality to ensure an upgrade fee. In fact, in many cases customer input can be used to eliminate ineffective or unused features to make an application more functional.

Also, by eliminating a significant portion of capital-intensive delivery options, the Internet is fostering a whole new breed of small, agile development firms focused on needs-based application innovation in ways that larger, established players can’t.

On Demand Platforms — Service Oriented Architectures

Over the past few years, there has been an explosion in the market of online, On Demand Platforms based on Service Oriented Architectures. Salesforce.com offers one of the best examples with their AppExchange platform, and most other On Demand vendors are also offering service-enabled interfaces to their platforms. From one perspective, this is the Object Oriented vision on steroids — where components of applications are readily available anywhere on the globe.

The On Demand platform model has a distinct advantage over installed software in that Internet delivery is baked in. By tapping existing services objects and online delivery, a whole new generation of developers can rapidly deliver applications that repurpose abstract capabilities of this next generation of platforms. For example, DreamFactory was able to deliver a robust teamwork automation service (Project Management, Document Management, and Team Collaboration) from concept to delivery in only three months.

The robust capabilities of the AppExchange On Demand platform, combined with the DreamFactory RQAD environment (Rapid On Demand Application Delivery) made this possible.

On one end of the spectrum, developers are taking advantage of this new paradigm to create value by building mash-ups of composite services. This has produced powerful websites that, for example,

marry mapping products with aggregated real estate data. For the most part, such solutions involve combining repurposed information from disparate sources in a single user interface.

On the other end of the spectrum are innovative firms focusing more deeply on the wide availability of on demand services to integrate functional components into comprehensive, targeted business solutions. As a leader of the this new breed of firms, DreamFactory has in just six months delivered four distinct Enterprise products in Project Management, Rich Graphical Diagramming, Time Management, and Release Management.

Rich ROAD

A new wave of development tools has entered the market to enable this next generation of applications. The qualities of these applications are a Rich User Experience, On Demand delivery, and Rapid cycle time.

Ajax has resurfaced as primarily a content/user interface-centric tool to Mash-up applications quickly and re-skin application servers with a rich GUI on the Web.

DreamFactory, by contrast, fills a void for developing Web applications that require complex functionality, desktop interoperability, high efficiency, and the integration of multiple services. A primary advantage of DreamFactory's approach is that by leveraging the client capability, there are no incremental servers required to deploy, making it a fast and powerful development environment for On Demand platforms. Another important differentiator is that DreamFactory's client side approach changes the game for traditional On Demand providers enabling custom fit applications for individual users, instead of a one-size fits all model.

CDI in action

The combination of ROAD, Internet Delivery, and On Demand Platforms enables the next generation of applications—Customer emPowered Solutions.

There are many examples of successful technology companies that have adopted (often unknowingly) CDI practices in their business. The entire OpenSource initiative is based upon Customer contributions across the development lifecycle. Some of the new products that Google is introducing, such as the new spreadsheet product,

adopt an approach of continuous improvement fueled by customer input throughout the process.

With the new possibilities for CDI to revolutionize software, DreamFactory has designed our organization from the ground up around the concept of incorporating our customer's input into the design process of our applications. This requires building a culture of relentless dedication to the customer. It starts with a Customer Success practice to ensure that customers gain the most from delivered functionality. However, ensuring customer success requires establishing multiple channels to listen to customer requirements, over and above delivered functionality – and of equal importance, an infrastructure to deliver rapidly and continually on these improvements.

One of these channels is the DreamFactory Suggestion Box. Persistent in all of our applications is a context sensitive Suggestion Box, which allows our Customers to make enhancement requests on demand. Each week our customer success organization works with the requesting customers and with our product team to flesh-out and deliver enhancement requests to the base. This process results in a product improvement cycle of weeks or even days.

Summary

“One of the most thoughtful business leaders I have come to know over the years is Nobuyuki Idei, the chairman of Sony... Idei said a change was underway in the business-technology world that would be remembered, in time, like ‘the meteor that hit the earth and killed all the dinosaurs.’”

— *“The World is Flat”, by Thomas Friedman*

The convergence of events involving On Demand services, desktop-like Web experience, and new development tools, has enabled a new type of developer and a new type of application, which is highly disruptive to traditional software models.