Guide to updating your Legacy Software

uno square

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Introduction to Updating your Legacy Application

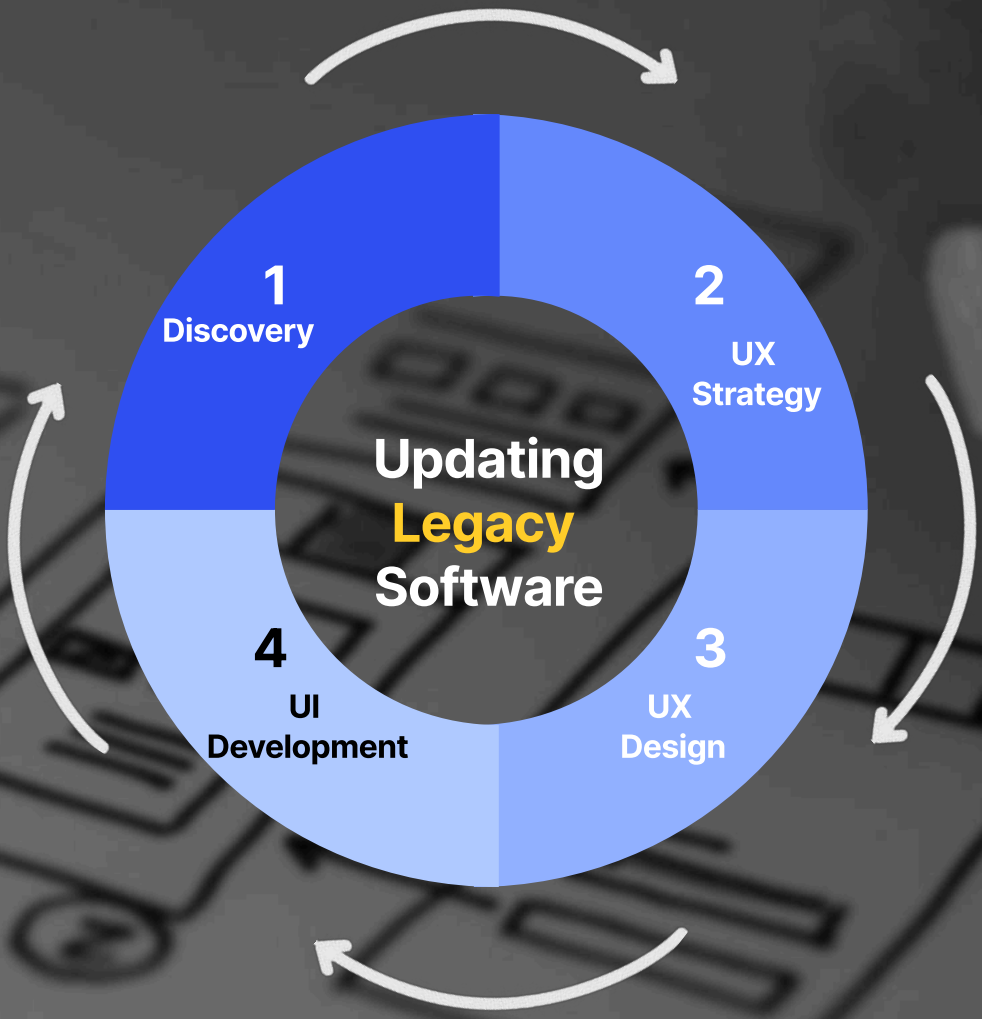
Every legacy application eventually reaches maturity. Like many companies, when this happens, you may hesitate to invest in a major update due to concerns about costs or disrupting the status quo. However, doing nothing also carries risks—such as lost revenue and reduced productivity.

Organizations that invest in a UX upgrade often find themselves better positioned to succeed, especially when the economy rebounds. Updating your UX can make the difference between staying competitive or falling behind.

Updating your legacy software's UI/UX, offers a significant return on investment (ROI). Companies that consistently focus on improving their UX/UI often see returns of $10 to $100 for every dollar invested.

18 Steps to Updating Your Legacy Application

Now is the perfect time to unlock your data and business intelligence by embarking on a journey of digital transformation.
In this guide, we'll walk you through the 18 key steps—from discovery to development—that will make this transformation a reality.



Phase 1: Discovery

Step 1: Complete a Heuristic Evaluation

The first step in optimizing your software is to evaluate its current performance. We recommend conducting a heuristic evaluation, a proven method where a small group of expert evaluators assess your software's interface against established usability principles ("heuristics"). This approach provides quick, actionable insights into usability issues, often at a fraction of the cost of other methods.

This document will guide you through the process of conducting a comprehensive heuristic evaluation. This involves selecting relevant heuristics, choosing qualified evaluators, and conducting detailed evaluations followed by insightful debriefing sessions to ensure your software is as user-friendly and effective as possible.

Step 2: Review Your Presentation Layer Technology & Code

The presentation layer includes the components responsible for implementing and displaying the user interface (UI), as well as managing user interactions.

During this phase, developers identify and resolve any issues in the existing code before moving forward with new UX development. Conducting a thorough code review is also essential at this stage. Streamlining the backend ensures that not only the current project but also future initiatives will proceed more efficiently.

Step 3: Create A Catalog Of Views

An application consists of a series of interfaces that users interact with, each serving a unique purpose and providing distinct value. Together, these interfaces work to achieve a central goal.

Before updating a legacy application, it's essential to gain a comprehensive understanding of all these interfaces. Cataloging the views in the current application creates a master list, helping UX designers focus on and define the core interfaces for the new product.

Step 4: Conduct User Interviews and Establish a User Advisory Group

Every UX project begins with understanding the end users, typically through interviews or surveys. Ask users how they interact with the current software, how well it meets their needs, any workarounds, and the time spent on key tasks. This helps identify where the software excels and where it falls short. It's also important to involve IT teams who maintain the software.

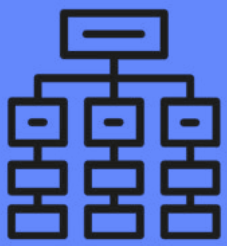
Additionally, consider forming a user advisory group. This team of subject matter experts can offer valuable feedback on user needs, the existing application, and new designs throughout the process.

Phase 2: UX Strategy

Step 5: Develop and Organize User Stories

Identifying user stories is a crucial step in the UX design process. These stories help designers empathize with users and create solutions that fit their needs.

Ask questions like: Who is the user? What is their goal when using your product? Why is a feature important? How will it help them achieve their goal? Once you've developed these stories, organize them into key work areas, user scenarios, and necessary tasks.



Step 6: Define UX Architecture

Good UX architecture creates an experience where users can focus on their tasks, not on navigating the interface. To achieve this, define optimal flows and journeys based on user stories.

Interactions should be so intuitive that they feel effortless - users should be able to touch, read, scroll, and engage seamlessly on their journey to task completion.

For complex workflows, start with a simple, functional flow and gradually add complexity in iterations.

Step 7: Define Guiding UX Strategies

In UX strategy, guiding principles serve as a framework to overcome challenges and solve problems. These can include specific approaches, such as a "mobile-first" design philosophy. When defining your project's UX strategies, aim for clarity and specificity.

At **unosquare**, we'll collaborate with you to identify these strategies and share relevant examples from our past projects.

Step 8: Identify Points Of Innovation

With your UX strategies, user stories, and architecture in place, you're ready to identify key points of innovation. These could involve new ways to solve problems, improve processes, or introduce novel user interactions.

For example, emerging technology might enable a more efficient way for users to engage with your software. Once you've pinpointed your innovation, the next step is to develop rough concepts and validate them with your target users.

Step 9: Define Your Updated UI Technology Strategy

Shaping an application's user experience requires careful discipline. In this phase, you'll define your UI technology strategy, balancing user needs, business goals, and technical capabilities.

At **unosquare**, we collaborate with clients to craft the optimal UI technology strategy using a comprehensive 14-point framework.

Points of Process

1. **Desktop**
   Web-based evergreen browsers

2. **Tablets**
   Responsive HTML/ Application or Progressive Web App

3. **Smartphones**
   Determine smartphone presence

4. **Anticipated Resolutions**
   Determine typical user resolutions

Presence Tier

5. Core UI Technology

HTML, Javascript, CSS, Angular

6. Development Pattern

MVVM/ Component

7. View Composition

Angular

8. Hybrid Container

N/A

9. UI Control Libraries

Kendo, Prime, NG, TBD

10. Fundamental Unit of Design + Code Reuse

Responsive UI panels and components

11. Build Resources

Angular CLI

12. Management of Business Logic

Server side via REST API

13. Data Exchange Format

JSON

14. Data Operations

Server side

Phase 3: UX Design

Step 10: Define the Users Core Experience

The core experience is the foundational journey that users truly value. By understanding this, you can generate ideas for an optimal user experience in your redesigned application. It also helps map how different experiences are interconnected.

With this key insight, the UX team can ensure every interaction, no matter how small, is crafted with the right context in mind.

Step 11: Create a Visual Design Concept

Based on guiding UX design principles, a design concept serves as the overarching vision that simplifies decision-making.

A visual design concept encompasses the overall design intent and all other design elements; starting from initial sketches through to the final construction. It provides clear direction for everyone on the project team.

In this phase, you'll generate multiple concepts and refine them into a final, cohesive design.

Step 12: Design Core Reusable Views

A design system consists of reusable views and components that are modular and can be utilized across multiple applications. Typically, an application will have between eight and sixteen core views.

In this phase, you'll design and develop the reusable views that form the foundation of your application's core experience.

Step 13: Develop Core Reusable Views

Once the core reusable views are designed, the next step is development. As mentioned, UI code is built on modular, reusable UI panels.

This phase typically results in a fully functional end-to-end model that leverages these reusable views.

Step 14: Develop a Fully Functional End-to-End Slice

Imagine your application as a multi-layer cake. Developers often focus on one layer at a time to perfect each component, but this approach doesn't allow users to experience a complete user story.

In this phase, you'll develop a fully functional end-to-end slice. This slice, based on the updated UX design and selected technology architecture, will deliver a small set of fully implemented working views.

Step 15: Hold User Validation Sessions

At the end of each sprint, we recommend gathering regular and continuous user feedback and validation.

For regulated products, such as those in medical, life sciences, or requiring FDA approval, it's essential to design and conduct both formative and summative studies to ensure compliance and effectiveness.

Phase 4:
UI Development

Step 16: Specify and Design Remaining Production Views

Before the production release, it's important to create specifications for the remaining views.

At **unosquare**, we develop these specifications based on a unified UX design system to ensure consistency and cohesion across the entire application.

Step 17: Develop Remaining Production Views

Based on user-validated UX designs, the team will proceed to code the remaining production views using the selected technology stack.

Step 18: Integrate UI with Backend Services

Next, you'll integrate the UI with backend services, which may involve refactoring services to ensure optimal performance.

Ready to update your Legacy Application?

Updating your legacy software is a significant undertaking that can provide your company with a competitive edge. You don't have to navigate this process alone.

unosquare is here to assist with any or all of these steps. Our experienced team of UX/UI designers, developers, and researchers will help you chart the best path forward.

Visit us **www.unosquare.com/capabilities** to learn more.

unosquare offers full-cycle digital engineering services and solutions for growing companies in regulated and data intensive industries.

We specialize in the Financial Services, Healthcare, Media & Publishing and Hi-tech industries.

As a global leader with 15+ years of experience and 1,000+ delivery professionals, we pride ourselves in combining world-class talent with market leading delivery.