FDLIC /
PASSARE

Overview

Up and Running has had the honor of working with Funeral Directors Life Insurance Company (FDLIC) on one of their initiatives, Passare.com, since early 2013.

Passare is a SaaS solution that helps funeral directors and the families they serve navigate the difficult end-of-life management planning process so that they have more time to focus on people. Year over year, they've been experiencing significant growth. We're very excited about the future, both for the product itself and our relationship.

Context

Our team works in close cooperation with Passare's product development team to design and develop new functionality. We have over 15 full-time team members who contribute to software architecture, development, systems engineering, DevOps, and quality assurance efforts. We've completed over 6,500 work items on the project thus far.

The product is a **SaaS system** that offers transformational services for families and funeral home professionals to communicate and navigate end-of-life events and next steps.

From a technical perspective, at a high level, the core application **back-end is written in Ruby using the Ruby on Rails framework** and interacts with a **PostgreSQL database** for primary data storage.

The application also mirrors searchable data into **SOLR** to provide high-performance and flexible search options to users.

Dynamic functionality for the **front-end is written in CoffeeScript and relies on jQuery** to maximize cross-browser compatibility.

Code quality is a top priority on the project, and **an extensive testing suite built upon RSpec, Capybara, and Selenium** helps identify issues before they leave development.
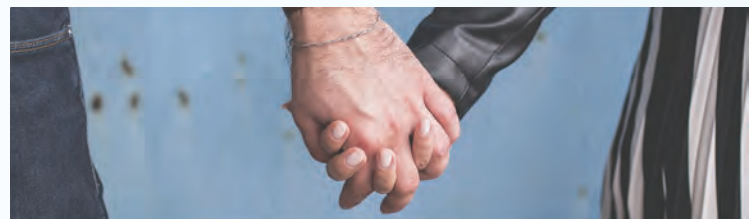
Team

The large size of the project led to a unique team structure designed to integrate easily with Passare's development team.

Due to the size of the engineering team, we have divided it into **four subteams (three development and one QA)**, each of which is led and managed by a lead developer or QA engineer.

For each sprint, our engineering team leads—one of which is the overall project lead—meet with the client's product planning team for an initial discussion on the features and changes requested for that sprint.

Significant features are then divided between the development team leads for further planning and technical design work.

Once a team lead finalizes the requirements and technical design of a feature, they work with members of their team to implement the functionality.

Team leads are responsible for reporting the status of work done by their development team back to the planning team.

Process

Efficient and consistent processes and best practices are integral to the project's success.

Passare's product team writes up business-level requirements for a feature. One of UAR's development leads then analyzes the business requirements, works with the product team to iron out questions or issues, and writes up technical requirements. Following this, several members of the development team will build out the test feature, peer reviewing the work as they go. The work then goes to a staging server for testing by the QA team. Depending on the feature, the product team may or may not preview the feature at this stage. Upon final approval from the QA team, the feature is then deployed to production.

Following industry best practices, we implement separation of business logic and display logic, DRY, Git-Flow branch management, and daily full-team stand-up meetings. We also employ automated testing, peer review all code, and document all regression test plans.

Our Work

What follows is a discussion of some of the major features we built out, and what they achieved.

Passare includes **a "Rolodex" contact manager, which is a highly-customized CRM application in effect**. This allows organizations to document contact details for other businesses and individuals with whom they have business-to-business type interactions. The feature allows for the definition of relationships between entities in the Rolodex; for example, a business contact can be entered, and entries for individual people working for that business can be entered and related back to the business. Those people can share contact details with the related business entry, or they can have their own contact details. Rolodex entries can be classified by type of business or occupation. This classification is used to drive drop-down selectors on the front-end. For example, a particular drop-down might be configured to show all contacts who are coroners. The Rolodex manager has a full-featured search and filtering system that includes the ability to save searches, similar to a search approach that you might see in something like Facebook or LinkedIn.

There are **several advanced e-commerce elements included in the system**, such as the automatic scheduling of catalog item price changes and complex pricing options. Another element is functionality that allows items in the catalog to be combined into a "Package" of items, or a bundling of services. Packages are often sold at a discount, and they can also be nested within other packages. A third element is a system for defining and calculating sales tax calculations, which can get complicated based on the geographic presence of the funeral home customer and its clients.

Exports may be made to popular accounting packages, such as Intuit's QuickBooks, Microsoft's Dynamics GP (Great Plains), and Microsoft's Navision, as well as general exports.

A **document generation system** allows for the **dynamic generation** of two popular document formats, Microsoft Word and PDF forms and documents. The system takes an input template (DOCX, PDF, and HTML are supported), dynamically fills data into it, and then produces an output file (DOCX or PDF). DOCX and HTML templates allow the document designer to insert tokens representing dynamic pieces of data, and DOCX and PDF templates allow the document designer to map tokens or fields in the template to fields of data in the application. The objective with this approach was automation to the extent it provided the best value, and then the provision of a means to really customize the approach, which was written more for software developers or systems administrators.

The application features an **extensive reporting system** that allows end users to define and run their own custom reports using **over 200 fields of stored data**. The reporting engine features a drag-and-drop interface for defining the columns of data that should appear in the report output. The design of this has been well-received since it's so easy to use and the interaction is smooth. Reports can be grouped and sorted by custom fields, and columns can be aggregated to produce report-level totals, similar to functionality you might find in something like Crystal Reports. There are many options for filtering the output of the reports, including by case origins, disposition types, assignees, and more. The reporting engine can output to PDF and CSV, and can deliver the reports either via email or to the Download Center page within the application.

Reports are run asynchronously using a queue system. Multiple worker servers execute reports as they are queued. The number of worker servers can be scaled up or down to handle changes in reporting load. That is, the system was architected at the code level and at the system level for massive scale. The reporting system relies on a separate, de-normalized database to provide very fast report generation without placing any load on the transactional database. Reports can be scheduled to run periodically. The scheduling interface was designed for easy use by a non-technical user. It's maybe even easier than scheduling a recurring calendar event in your calendar system of choice.

The application features **a chat system that allows for direct and instant communication with customers**. The chat backend runs as a microservice and uses an API to communicate with the main application. Chat messages are segregated into separate communication channels for each customer, and the chat system tracks which messages have been read.

Additional features include:

▶ Integration with other third-party applications, including Facebook and FuneralOne.

▶ A robust note-taking system. Notes may be associated with each customer in the application. This tracks which employee added each note and when, as well as which page of data the employee was viewing when they added the note. In the age of HIPAA compliancy, such logging is important.

▶ A system for filling out and generating government burial benefit forms for veterans.

▶ A system for defining obituary templates, including the ability to insert dynamic information about the client into the template.

▶ A system for tracking signed contracts and revisions to those contracts.

▶ A "case status" system for tracking the status of customer cases, in which organizations can custom-define their own statuses.

The system provides an **OAuth-based API, allowing third-party software systems to send customer data into the application**. This is done with FDLIC, for example, to really improve communication between two different systems, if not make operations seamless. A web-based management interface allows organizations to retrieve and regenerate their API credentials.

A notifications and reminders feature is included as part of the online collaboration system. It enables interaction, which can be configured in a very custom way. The notifications system is capable of notifying users when certain events occur, such as new customer records being created or updated or report generation finishing. Users can configure specifically how they want to receive each type of alert: by email, SMS (long or short message formats), or an in-application notification system. Users can also set up reminders for themselves and for other users—these reminders can be configured to trigger at any time and provide users with contextual information related to the reminder, such as customer information. Additionally, the reminders system includes a dashboard where the user can quickly see current, upcoming, dismissed, and sent reminders.

The **checklist system** allows organizations to create a custom list of tasks for their employees to perform when helping customers. This helps them ensure a consistent customer experience, and really helps ensure quality in a busy environment. For auditing, the system tracks when tasks are marked as completed and who completed them. Administrators can configure when the checklist is applicable to a customer so that it only appears in appropriate contexts.

The **case listing dashboard** provides users with a quick way to access their customer records. Think of this as your home base for working with data that's important to you regarding most of your business. The main features include: importing and exporting of customer data, customization of displayed customer data, searching and filtering of customer data, and the ability to save common searches for quick access.

In Closing

Passare / FDLIC and Up and Running have built a great product together: **it's serving a social need, and impacting everyone's bottom line positively**.

Building out the technology is a reward in and of itself, but it's quite a joy being able to help so many people at their time of need in such a direct manner.

About Up and Running

We partner with clients to solve important technical problems by building, implementing, and servicing complex software solutions for customers of any size in any industry.

Started in 1995 while founder Pete Hanson was a sophomore in high school, Up and Running Software began as a technical services firm and evolved into a developer of custom software solutions. Customer happiness and open communication have been the focus since day one, plain and simple, resulting in long-term relationships with any type of client, from non-profits to startups to the Fortune 10. Thanks to this mindset, Up and Running is fortunate to have served an impressive array of clients, including giants such as General Electric (GE), Henry Schein, Sanofi, and Hearst, as well as venture-backed startups at every phase, from formation to growth.

Its over two decades of custom software development, legacy system support, and migrations drive the engines of solutions that thousands of businesses and millions of people rely on daily. That experience has resulted in hands-on depth in most software development stacks, from the command line systems in the back office to ones that gracefully handle any screen size worldwide. A commitment to QA and process improvement drives scalable results, producing long-term software assets with high ROI. Up and Running's work passes FDA & DEA audits, rolls up global treasury data, manages nuclear assets and railroads, delivers vaccines, and enables neuroscientists and researchers.

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