

Grupo Pestana Mobile Platform

summary

Grupo Pestana, the largest Portuguese group in the tourism sector, partnered with **|create|it|** to implement a new platform to support the group's internet presence, one of their most important revenue and client attraction channels. The project presented a number of challenges, both technical and business-related, and the expectations were high, but the results were better than anticipated. In 2012 the developed websites (Pousadas.pt, Pestana.com and PestanaPriority.com) won the **European SharePoint Community Award** for the **Best SharePoint Website**, on top of an increase in online booking sales of 40%, representing 17 million euros in 2012. Over 70% of the Pousadas' website bookings come from international customers.

The next challenge? Increase the online bookings made from mobile devices taking advantage of the SharePoint platform already in place.

about |create|it|

Founded in 2001, **|create|it|** is a company that strives for excellence in every project executed. In 2011, it earned the **PME Excelência** status, awarded to the SMBs with the best financial results in the country.

A **Microsoft Gold Certified Partner** with a clear focus on Microsoft technologies, specifically SharePoint, BizTalk and Windows Azure, it was the first partner in Portugal to attain the **Gold** level in the **Content Management** and **Application Integration** competencies, and it was awarded Microsoft Portugal's **Portals & Collaboration Partner of the Year 2011** award for the Corporate Segment. It was also the first Portuguese member of the **SharePoint Interoperability Solution Architecture (SISA)** Standards Group.

All the members of the team are either **Microsoft Certified Professionals** or **Certified Project Managers** by the **International Project Manager Association (IPMA)** and a few are also **Certified Scrum Masters** by the **Scrum Alliance**. João Pedro Martins, the company's CTO, is the founder and current president of the **Portuguese Software Architecture Group (GASP)**, the chairman of the board of the **Portuguese Usability Professionals Association**, and was a **Microsoft MVP** for BizTalk Server from 2006 to 2011. Most of the team has a blog at <http://blogit.create.pt>.

For more information about the company and other projects, visit <http://www.create.pt>.

about grupo pestana

Founded in 1972, **Grupo Pestana** is the largest Portuguese group in the tourism sector, managing two hotel chains (**Pestana Hotels & Resorts** and **Pousadas de Portugal**) composed of 86 hotels and more than 9000 rooms in 13 countries. Around half of those hotels belong to each of the two brands. Each of the hotel chains has its own public Internet portal which has always been one of the main revenue and client attraction channels.

the challenge

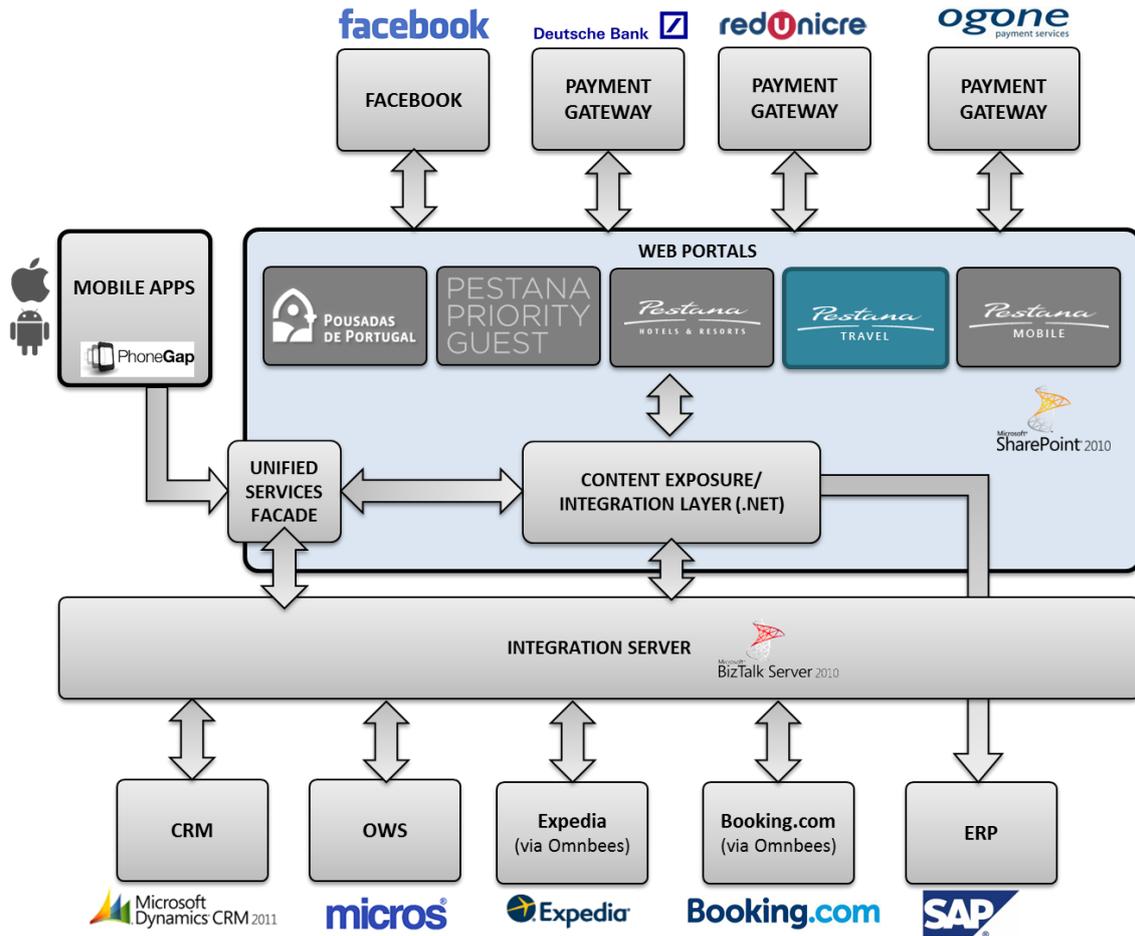
The goal of the project was to design and build two mobile sites and two mobile apps to simplify the way customers experience the **Pestana Hotels & Resorts** and **Pousadas de Portugal** portals on mobile devices. Considering the success of the previously implemented portals and their functional administration backoffices, all built on the **SharePoint** platform, the secondary goal was thus to take advantage of all features provided by SharePoint when creating the mobile presence.

Some of the challenges of project were:

- A single source code base has to support the creation of two mobile sites (Pestana Hotels & Resorts and Pousadas de Portugal), as well as two mobile apps (for iOS and Android, for each website);
- Each mobile site should use a common web services backend to consume data from the pre-existing SharePoint platform, which already provide content to the fully featured web browser websites. This new common backend should allow for a single and unified development of the mobile sites and apps;
- Each mobile site should support multiple languages;
- The Content Management and SEO Teams should continue to use the existing administration interfaces for the different **Grupo Pestana** websites, extended if required with mobile-relevant data;
- Each site should have a different design, but share a single unified source code;
- All booking processes should be integrated between the **SharePoint Server** and the [OPERA Web Suite](#) (booking platform web services) using **BizTalk Server** as an intermediary.

architecture

The following diagram illustrates the combined Mobile Apps + Web Portals architectures.



the solution

After a selection process where several alternatives were analyzed, the architectural option was to develop the mobile sites using HTML5 and JavaScript, due not only to their extensive support on mobile browsers but also to the possibility of creating mobile apps for iOS and Android with the exact same code base and with minimal effort.

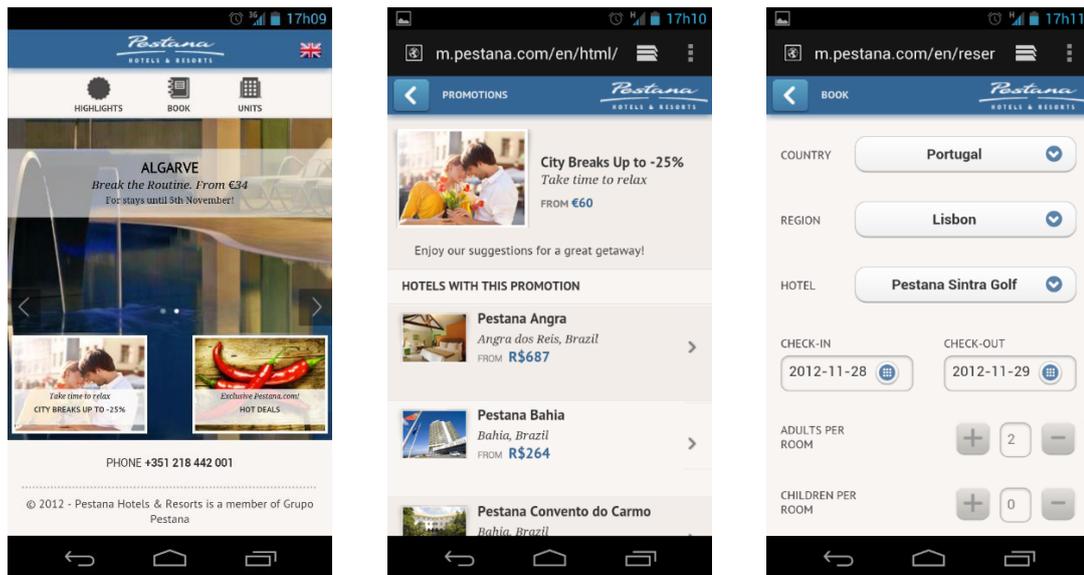
For the development of the mobile user interfaces, three JavaScript frameworks were used: jQuery Mobile, Knockout.js and Modernizr. jQuery Mobile provides simple ways to enable multiple languages, multiple control themes and to actually tie everything together. Knockout.js is used extensively in order to display **SharePoint** backend content to the user in the mobile pages. Finally, *Modernizr* enabled the sites to selectively load different cascading style sheets and images based on the mobile device's screen size.

The web code itself consumes content from the **SharePoint** backend via service calls (using REST/JSON). These calls are made to a new unified web service interface façade which was developed to unify the slightly different information structures and lists that support each of the three fully featured websites on **SharePoint**. Additionally, some new lists were required specifically to support the mobile sites, which were also exposed in the web services.

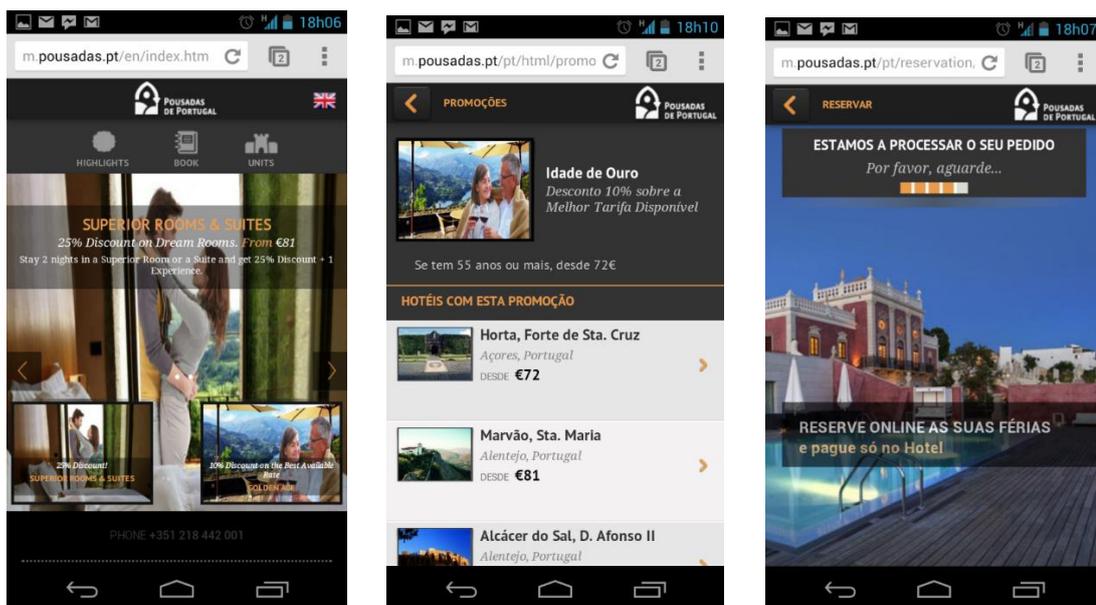
The transactional features of the mobile apps are also exposed via the unified façade, which on the backend uses **BizTalk Server** to integrate with several internal applications, including the CRM and the Reservation System.

The platform used to create mobile apps for iOS and Android from the mobile sites was **PhoneGap**. PhoneGap is a free and open source framework that allows you to create mobile apps using standardized web APIs for the different mobile platforms, using technologies like HTML, CSS and JavaScript. The main advantage of this is that a single development is required to support different mobile platforms, at a significant cost savings.

Pestana Hotels & Resorts



Pousadas de Portugal



results

It is still too early to have market data on the success of the mobile sites and apps, but some highlights can be mentioned from the customer's point of view:

- The selected approach allowed for a very high level of reuse of **SharePoint** developments and artifacts, with only some additional lists being required to support the mobile sites. Together with the usage of a unifying solution, this allowed for the sites to be created at a fraction of the cost of development using native apps.
- The content management and SEO teams at **Grupo Pestana** use a common web administration interface built on **SharePoint** Lists and Document Libraries to manage 3 fully-featured websites, 2 mobile sites, and 2 mobile apps. This in itself represents a huge productivity gain.

From a technical point of view for **|create|it|**, the greatest achievements were managing to unify all the backend developments on a single web service interface and then having a single code base to support all 4 mobile variants. All along, **SharePoint's** power and flexibility allowed us to make all the necessary adjustments with little impact.

<http://m.pestana.com>

<http://m.pousadas.pt>

about the team

This project brought together a large team, not only from **|create|it|** but also from **Bliss**, the digital agency that created all the web designs, and from **Grupo Pestana**, of course.

|create|it|'s team was composed of **Nuno Guerra** (Sponsor and CEO), **Hugo Lopes** (Project Manager and COO), **André Vala** (Solution Architect), **António Vargas** (SharePoint Development Lead), **Tiago Oliveira** (Integration Development Lead) and **André Santos** (SharePoint Consultant and mobile development specialist).