

Duro-Last delivers web solution across device types

Developing a web solution that suits customers ranging in size from one-man contracting companies reluctant to use a computer, to big construction companies with a large and demanding IT department, can be a challenge. Keeping your IT team lean and expecting your developers to handle back-end ERP systems, web applications, as well as mobile app development, sounds like an almost unrealistic challenge. Duro-Last Inc. has managed to do both with Visual LANSA.

Duro-Last is providing its 3,000 independent contractors with a web solution to manage their roofing projects, place and trace orders, view invoices, authorize payments and much more. Small contractors may use the solution from their smart phone, while the larger construction companies will have their administrative staff access the solution from their desktops. Duro-Last used Visual LANSA 14, while it was still a beta release, to provide a better customer experience across browsers and client devices of all sizes, from a single set of code.

The Challenge

Duro-Last, incorporated in 1981 and headquartered in Saginaw, Michigan in the USA, is the world's largest manufacturer of custom prefabricated thermoplastic single ply roofing systems. Duro-Last's roofing systems are installed across the USA and Canada through 3,000 certified independent contractors. Duro-Last also has sales, engineering and technical staff, who are ready to assist the contractors.

Communication between Duro-Last and its contractors is by phone, fax and email through Duro-Last's customer services center, which is manned by 35 full time staff.

Sue Gilbert, Director of Information Services at Duro-Last, explains, "Our customer service representatives spend a lot of time on the

phone, providing assistance with things that the contractor should be able to do online, such as placing of orders, tracking of shipments, managing invoices and more. Giving contractors online access to their data would save a lot of time, both for the contractor and for us."

Companies contracting for Duro-Last vary in size and computer literacy and deciding on the best format for online access was not easy. "About 20% of our contractors are small one-man shops, reluctant to have anything to do with computers. Other contractors, probably about 10%, are large construction companies with their own IT department," says Gilbert.

Duro-Last had already made a native mobile app available to its contractors, using LANSA's LongRange technology. But that app was



specifically for repair & warranty work and was only meant to be used by field staff. The new application that Gilbert had in mind would need to be suitable for both admin staff from a desktop, as well as for contractors using a mobile device on site.

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The Project

Gilbert was discussing these requirements with her LANSA contact, exactly at the time a beta version of Visual LANSA 14 became available. Applications developed with Visual LANSA 14 can run on multiple device types and sizes, and the code is cross-browser compatible. Gilbert was keen to sign up for the beta program.

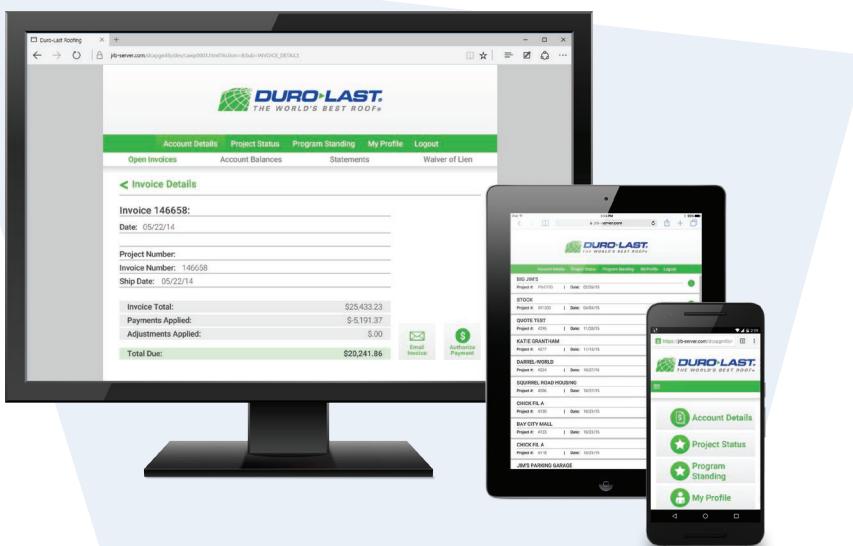
Gilbert says, "It's impossible to control what device types and browsers our contractors may want to use. To me Visual LANSA is the cream of the crop, because it gives us the ability to deliver a responsive website for desktop users and a mobile app for any device and any browser. It means we can now give both our small and large contractors the solution they want. We can do all that with one tool, one language and one set of code."

Equally important to Gilbert was how realistic it was that she could deliver and maintain the solution with her small team of two developers. One with .NET skills and one with RPG skills, both already busy with maintaining and enhancing Duro-Last's core ERP system. Visual LANSA met Gilbert's criteria in that area as well. "Getting quick results is important. With Visual LANSA, our developers do not have to use a whole range of tools and languages. They can use one single development language for both the server side logic and the user interface."

Gilbert and her team drafted the specifications for the solution. It includes four key components:

'Project Status' ties together all the tasks related to a roofing project, such as requesting technical assistance, placing orders, inquiry into shipping dates and booking the inspection of the finished roof. All tasks have a responsible person associated with it, providing workflow guidance to Duro-Last and the contractor.

'Program Standing' is related to Duro-Last's



Contractors can use the solution from desktops or mobile devices to manage roofing projects, place and trace orders, view invoices, authorize payments and participate in incentive programs.

incentive program. Points and awards can be earned based on the volume of sales and the quality of installation services (each commercial roof is inspected and scored). The app allows contractors to view their sales and award levels, points earned and used, plus much more.

'Account Details' lets contractors view invoices, authorize payments and submit waiver of lien forms, while the fourth component, 'My Profile', lets contractors maintain account details and setup the user-ids, passwords and access levels for staff.

The solution, named 'the Corporate app', will be launched at the annual contractor event.

The Solution

The Visual LANSA developed solution consists of a server component and a browser component. The dynamic Single-Page Application (SPA) is available to authorized users across device types and browsers. It is conceptually the equivalent of a client/server app, but instead of a rich-client talking to a server, it is all running dynamically in the browser. The Visual LANSA developer needs no understanding of the syntax or complexities of HTML, JavaScript and CSS languages. The server platform can be Windows, Cloud (AWS or Azure), Linux or IBM i. At Duro-Last, the solution runs on an IBM i server where it integrates with the Infor XA ERP system (previously MAPICS).

Technically there is no need to wrap the solution or to make it available in the App store. However, for mobile device users, Duro-Last wants the solution wrapped in the Visual LANSA container app. From a marketing perspective, offering a mobile responsive website doesn't have the same appeal as offering 'an App'. Also contractors may find it easier to have the app as an icon, rather than bookmarking the URL. As an added benefit, the container allows Duro-Last to wrap the solution with device security and to provide access to device features and local storage.

The Benefits

Dennis Schluckbier, developer at Duro-Last, has a Windows development background and is familiar with PHP, JavaScript and other web development languages. He personally enjoys the challenge of learning new programming languages, new features and 'getting into the code'. But he recognizes that not every developer shares that passion and also that it is unreasonable to expect that employers are keen to pay for developers continuously pursuing that passion during work hours.

"Developers who are savvy enough, but don't have any web development skills yet, may be able to cut down web development time to less than half with Visual LANSA, compared using the traditional mix of web development



Duro-Last's factory controlled custom prefabrication eliminates up to 85% of field seams, resulting in lower on-site labor costs and easier installation.

"We can give desktop users a responsive website and also wrap it with security into a mobile app."

languages," estimates Schluckbier. "Plus the quality is likely to be better, because developing good web applications comes with experience and when the tool takes care of the low level coding, there is less opportunity to get it wrong, especially for novice developers."

"The web world changes very quickly and programming languages come out with new releases and new features all the time. Not everyone has the time or the passion to keep up with that. If Visual LANSA can keep up with those web developments, then that is going to save all its customers heaps of time. It feels a little bit like giving over control to the tool, but so far Visual LANSA has been able to handle everything I wanted it to do," says Schluckbier.

Gilbert received very positive feedback on the corporate app. "The IT Manager from one of our larger contractors commented that the solution is very user friendly and that it conforms to all the standards that you expect from a solution like this. He reckons that his mobile and desktop users will pick it up very easily and can use it without the need for training."

Conclusion

"The expectation is that the solution will reduce the number of calls to our call center significantly. However, a reduction in call center traffic was not our main driver. The most important goal is to improve the customer experience," says Gilbert.

"Timing is extremely important in this industry. We can produce almost all made-to-measure orders within a few days and our standard shipment is on the fifth day. The contractor may have hired a crane and booked hotel rooms for his staff. Online order entry and online inquiry are becoming crucial for avoiding scheduling conflicts and the expensive consequences they may have for our customers."

"This is our second project with LANSA and working with your company is awesome. From what I have seen, our guys have picked it up pretty quick, and from what I have heard it's really simple to use. And most important, we like the results," concludes Gilbert. ■

Snapshot

Customer: Duro-Last is the world's largest manufacturer of custom prefabricated thermoplastic single ply roofing systems.
<http://duro-last.com>

Challenge: Provide a solution that independent contractors can use from desktops and mobile devices.

Solution: Use Visual LANSA to deliver a dynamic Single-Page Application (SPA) that is available to authorized users across all device types and browsers.

Key Benefits: Quick delivery with small IT team. The entire solution, server-side and client-side across many device types, was delivered with one tool, one language and one set of code.

Product Used: Visual LANSA