QA GRAPHICS

CASE STUDY:

A LOOK INSIDE TACO COMFORT SOLUTIONS' NEW BUILDING MANAGEMENT APP

Transforming the user experience through an improved graphical interface and symbol library

Executive Summary

This report was commissioned to study how QA Graphics worked with Taco Comfort Solutions to enhance their system graphics and user experience.

Taco worked with QA Graphics to upgrade their functional, template-based app into one that was also well-designed and intuitive.

By working on their application with QA Graphics, Taco gained:

- An application with an improved user experience that embraces Taco's brand standards
- A highly detailed graphics symbol library that depicts Taco's equipment
- Savings in time and money

About Taco Comfort Solutions

Taco Comfort Solutions is a third-generation American manufacturer of high quality and high efficiency heating, cooling, plumbing, and irrigation products.

Taco is based in Cranston, Rhode Island, but is global in scope with manufacturing facilities in Rhode Island, Massachusetts, Arkansas, Ontario, Vietnam, and Italy. Its skilled employees produce precision pumps, valves and controls, air-dirt separators, heat exchangers, tanks, domestic hot water recirculation systems, and web-based building management controls.
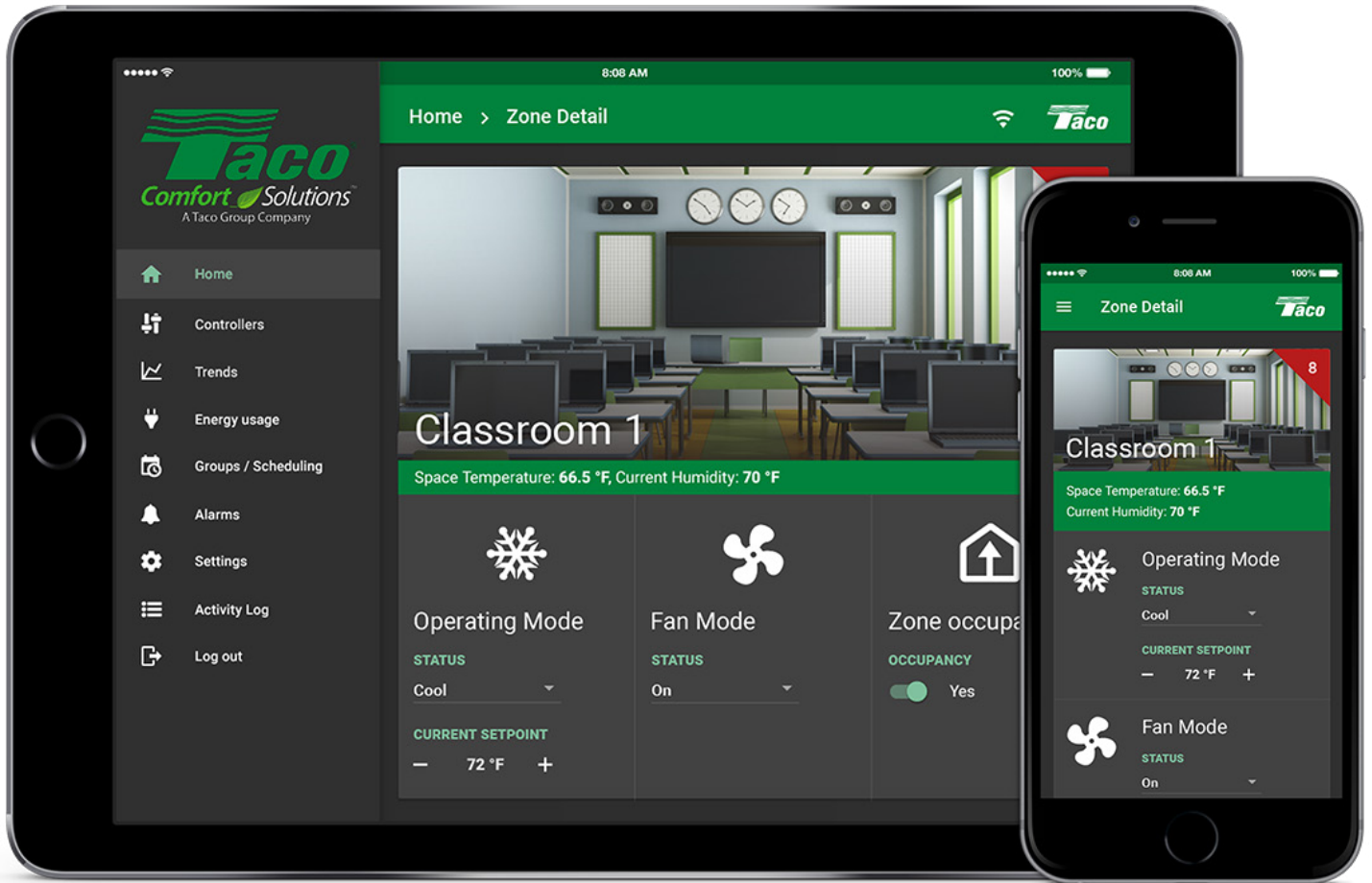
Taco is committed to reaffirming and strengthening the values that have shaped the family-owned business since 1920. This is especially important in a fast changing, increasingly global marketplace. Taco believes that the strong working partnerships and enduring commitment to product quality will enable them to remain competitive and keep Taco vital well into the future.

Challenges

Taco currently sells a building management tool called the LCI-3. This tool works well in its target market, but has only received small functional updates over the years, and no design improvements. The product's functionality was fine, but the outdated look and feel was not up to par with what Taco and their customers needed.

These QA Graphics design concepts show the updated UI for Taco's building management tool, LCI-4. Mobile and tablet designs were provided for each screen to help developers build a responsive application.

The theme did not encompass the company's brand and style. The LCI-3 tool also lacked the equipment graphics which had become expected by the market. Taco offered other options to provide standard graphics to their customers, but these standardized graphics did not give Taco's building management tool the personal touch clients wanted. Taco wanted to create a custom graphics package, but didn't have any in-house graphic design resources.

Taco's engineering department originally created the custom graphics needed for their application. However, the engineers had very little graphic design experience, and the company still felt the graphics were missing their mark. The introduction of consumer-facing products had rapidly advanced the market standards for HVAC industry graphics and interfaces.

"We knew to play at the next level we would need help," said Danato Borelli, director of engineering at Taco Comfort Solutions.

How QA Graphics Helped

Taco had seen QA Graphics' work used by other industry businesses. These projects gave Taco an idea of how QA Graphics could enhance their building control application. The company wanted to work with QA Graphics to enhance the app's user experience and create a more sophisticated symbol library.

User Experience

QA Graphics' user experience (UX) designers understand the importance of creating visually appealing interfaces that put users' needs first and incorporate a company's branding. After getting a feel for Taco's vision for the application, the designers explored the app's functionality and brainstormed design ideas.

QA Graphics created an application map to visualize the flow of the application and made suggestions on how to improve navigation or simplify a page's content. The UX designers also researched different ways to marry Taco's branding with digital design trends. These efforts made the application's design cohesive, modern,

and logical. Users could easily navigate between the different application areas, including a control view with real-time monitoring, activity logs, data trending, and more.

The application was built to work at different sizes on several different devices. QA Graphics designed two separate mock-ups per page to help Taco's developers visualize how the application would look on different screens. These page mock-ups were sized for vertical mobile devices and horizontal tablets. Once these mock-ups were approved, QA Graphics sent Taco any development specs, images, icons, color values, and font information needed to build the page within the application.

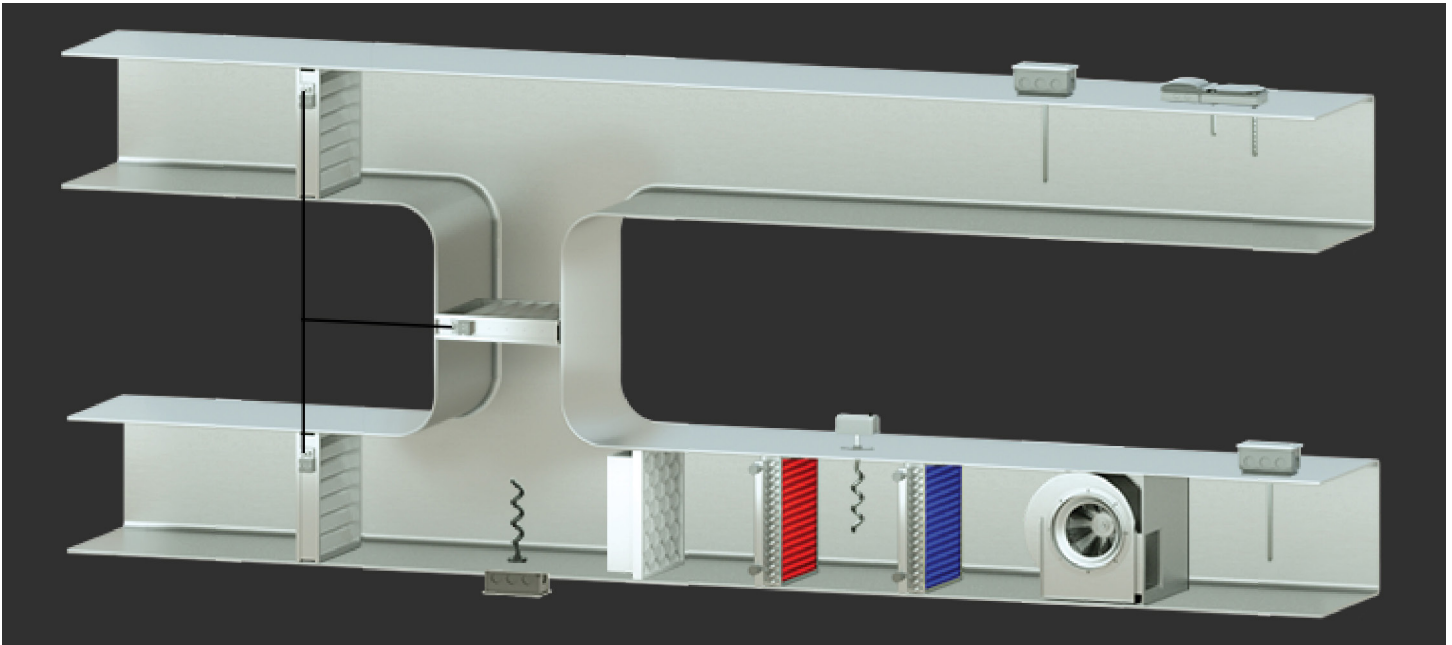The design theme and assets that QA Graphics created will be critical as Taco attempts to expand their product family across more non-traditional offerings. The controller graphical assets will provide a template for Taco to use across other platforms and create a more consistent style between their products.

> " *We were exposed to other projects that QA Graphics had done for other companies in our industry, and we knew to play at that level we would need help.*"
>
> **Danato Borelli**
> Director of engineering at Taco Comfort Solutions

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Above is an example of Taco's custom symbol library graphics created by QA Graphics. This graphic represents a typical AHU with heating/cooling coils and economizing capabilities.

Symbol Library

Taco also worked with QA Graphics' 3D designers and Building Automation System (BAS) specialists to create a custom symbol library and mechanical equipment graphics. QA Graphics' symbol library offers static and animated graphics, including unit ventilators, under floor units, tanks, rooftop units, and more.

QA Graphics' specialists are experts in the BAS graphics industry and worked with Taco to build a robust symbol library. QA Graphics created all the 3D graphics and piping needed to build the system graphics within the application. The app's library now features superior graphic representations of a user's system, including dynamic graphics, moving fans, and pumping pumps.

Customer Experience

Taco's team became more excited about the project as QA Graphics worked through the upgrade and sent updates. The company was able to see how their work could be re-imagined with a modern, updated design, while leaving their desired functionality intact. QA Graphics' designers transformed Taco's functional but visually unappealing application and into a presentation piece that Taco is proud to display. Taco now has a product that matches their customer's expectations.

When asked about the process and work of QA Graphics, Borelli said, "I think that QA Graphics has a really talented team of people who can help HVAC companies move their product designs to a much

more polished level. The team was friendly, easy to work with, and offered good value for the time and money spent."

Post Production

Taco's new product is close to its launch date, and they have all the graphical assets they need to prepare the application for release. The design process required very little work to be done on Taco's part. Their engineers were able to refocus their limited time on product functionality, allowing for an overall faster launch for LCI-4. Taco saved time and money in resources by hiring QA Graphics to work on their application.

Taco's new LCI-4 application features a modern style that embraces Taco's branding. Taco's graphics are now custom, highly detailed, and accurate representations of clients' systems. These graphics are controlled entirely through the app QA Graphics helped upgrade. LCI-4's design is better than what Taco could have created without QA Graphics' expertise, and the design process did not eat up engineering resources.

"Working with 2-3 experienced designers

at a high level was very much worth the cost of the project. There is no way that Taco could have sourced this level of HVAC design talent locally. Sales numbers will likely increase after product launch as well," said Borelli.

About QA Graphics

QA Graphics is a leader in the building automation and green building industries. The company specializes in HVAC graphic development services, system graphics, floor plan graphics, and Energy Efficiency Education Dashboards™ (EEEDs). The company also provides marketing solutions such as interactive applications, 3D design and animation, UX design, videos, and more.

Since 2006, QA Graphics has been a design resource for the building controls industry. The company has collaborated with several leading control system manufacturers and private companies to develop custom libraries. These graphics are embedded within the control manufacturing software to provide a consistent style on any BAS.

Visit www.qagraphics.com to learn more.

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