



CASE STUDY

City Furniture Mobile Transformation

This case study shows how City Furniture digitally transformed by implementing a mobile application to improve workforce productivity.

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“Our initial goals were to enhance our customers’ in-store experiences by empowering our sales associates with sufficient content on their iPad to answer any and all customer questions without disengaging to search for an answer on our traditional fixed “green screen” terminals.”

City Furniture identified a need to create a new app for sales associates in store to use, in order to be more productive and improve customer experience. The expected outcome of such a move is to see an increase in revenue per customer.

The transformation journey

The current store experience was very traditional, fragmented and time consuming. For example, customers often had to go around large showroom floors or search for specific items that they had seen online, making the transaction significantly longer.

City Furniture is the leading furniture retailer in South Florida and a 40+ year old company. It recognised that to compete in today’s market, it had to take on not just local stores, but internet giants like Amazon. To do this, it needed to modernise the experiences that it was providing to customers and sales staff. That meant adopting new technology and software development processes while taking better advantage of the value locked in its core systems.

The company chose IBM, a partner for over 30 years, to create a better experience for their customers using new technologies, like Apple’s iPad and the Swift programming language.

Teams from City Furniture and IBM collaborated to develop and deliver the app and modernize the existing IT systems. An architecture that included Application Programming Interfaces (APIs) built using the latest programming environment was put in place. This delivered the benefits of the new app while harnessing the value in the traditional systems.

The project was driven by City Furniture’s CIO (also CFO) who engaged the sales associates (i.e. the end customers), from the start of the project. This approach was supported by IBM’s own development methodology. The result was increased adoption of the application, which enabled better in-store experiences for customers and improved sales.

“A new mobile app would enhance our opportunities to provide world class service while improving Revenue per Guest, one of City Furniture’s primary KPIs.”

City Furniture now has a foundation that will allow it to build further customer aligned solutions in collaboration with partners such as IBM, while continuing to modernize its core IT, enabling City Furniture to compete better with online players and larger retailers.

This case study identified 4 important insights:

1 Digital Transformation starts with being more customer-centric. City Furniture is a medium sized traditional retail business and yet the company identified the need to change. This drove them to invest and make changes that give them the ability to strengthen their regional position and become more customer centric.

2 Lean and Agile practices are capable of helping organizations of any size. IBM’s Bluemix Garage is a consulting operation designed to accelerate application development and cloud innovation. It achieves this through design thinking and uses Lean and Agile practices to support organizations of any size. City Furniture’s experiences provide a great example of how the IBM Garage can work with a customer, in a short amount of time and collaborate closely to deliver change.

3 The best changes focus on saving both the end customer and the business money. Change in City Furniture’s case was driven by a number of requirements: to improve the customer experience and improve the productivity of sales associates. The hardware choice of Apple’s iPad was made first, however, the need for an iPad app went far further. City Furniture’s backend IT had to change and modernize, as did its development processes, in order to deliver the app. This change creates a modern foundation on which future innovation can be more rapidly delivered.

4 A holistic view of the business, rather than that of the IT organisation, lead to real impact that can fuel further innovation. City Furniture made some unconventional choices, such as appointing the CFO as CIO, because of his industry and domain knowledge of the business and what was needed to sustain its future.

The above insights reflect an important need to stop separating IT and the business but to accept that they are one. Having a business mind in charge of IT helped to bridge the divide for City Furniture. This presents an opportunity for many organisations of all sizes and maturity to reflect on their approach as they move forward.

Digital Transformation in Action: A retailer in search of modernization

City Furniture has been growing substantially as a large regional retailer. With the company

website driving 96% of revenue in-store, the store experience was critical to converting more visitors into customers, so as to improve the company’s primary business key performance indicator: “Revenue per Guest”, which is the average spend per person entering the store.

When the Chief Information Officer (CIO) role became vacant in 2012 the company chose its Chief Financial Officer, who had been with the business since 1981, to fill the post. It was decided that the company’s IT needed to modernize, as it would be critical to success

“Remaining productively engaged with customers, enhances our sales associates’ opportunities to increase closing percentages and average ticket, the product of which equals Revenue per Guest.”

moving forward and that someone with a business mind and an understanding of the company’s culture and market sector with a general overview of IT was a better choice than a traditional pure IT candidate.

A key area that stood out for modernization was the customer experience, both online and in-store. In addition, the sales associates needed to be more effective. The in-store technology was largely green screen applications and pen and paper, resulting in an in-store experience that was not optimum for either them or the customer.

A journey with many progressions requires trustworthy partners

For this digital reinvention, City Furniture turned to IBM with whom it has had a relationship since 1980. Together, the two companies created the app and began the process of modernising City Furniture’s legacy IT investments, in order to support the demands of the business going forward - to be faster to market with innovative technology solutions.

The modernization began with the creation of an app for use by sales associates in-store, but its progression is spearheading a move of the website from its current Magento environment to Salesforce’s Commerce Cloud.

Transformation Dynamics

Three notable dynamics underscored City Furniture’s mobile transformation:

1 Choice of technology and partner followed hardware selection

When the decision was taken in 2014 to create an app for sales associates to use in-store, the first consideration was the choice of hardware. For this, the company engaged the associates in the decision-making process. As associates would need to carry and hold the device for prolonged periods of time, the main criteria for the hardware became weight. Similar projects at other retailers in the area had failed due to this issue and so City Furniture did not wish to repeat the mistake. As a result, the Apple iPad was chosen.

Next, the company had to make a choice with regards to the technology that they would use to build the app. The choice was between a native app, built using Apple’s tools and preferred Objective-C language, or a hybrid app, built using technology that could be deployed beyond Apple’s iOS operating system - should the company wish to at a later date.

It was at this time that Apple announced a new programming option for building native apps on iOS - called Swift. City Furniture decided to go down this route. Swift was designed to be easier to work with than Objective-C. Later, Apple would also Open Source the language (something that IBM has embraced). With this move to open up the language to wider development support, especially from the likes of IBM, City Furniture felt re-assured that this was the right choice of technology both for this app and also the future.

City Furniture’s adoption of Swift highlights support for a programming model that offers end to end development facilities for the Apple ecosystem. Certainly the latter’s move to make Swift an open source technology has seen growing development support. Swift 4 already supports most of the functions and capabilities delivered by the Objective-C code libraries, and recent announcements indicate that Google is considering extending Swift support to the Android platform. This will lead to a wider ecosystem all of which reinforces the investment made in Swift by City Furniture.

The company knew that a key requirement of the app was for it to be able to process retail transactions. It had already spoken with IBM about its existing solution, but decided it was not appropriate. However, IBM had recently announced a partnership with Apple to deliver enterprise business apps. City Furniture and IBM engaged to work on a solution together based on this partnership.

2 Collaboration is a critical success factor

The project to build the new app for sales associates at City Furniture stores began with a workshop near Apple's headquarters in Cupertino, California. A team that included



people from City Furniture, IBM and Apple worked together to rapidly identify and design the desired solution that would be built using the newly released Apple programming language Swift.

The IBM team came from one of IBM's Garages - innovation hubs, where IBM can engage hands-on with customers to rapidly create solutions using new technologies and processes. The IBM Garage and City Furniture teams worked closely throughout the project, in what was a very collaborative effort. The two teams were bridged by a dedicated person within IBM's Global Business Services division

and a dedicated Development Project Manager within City Furniture, with oversight by City Furniture's CIO.

Once the solution moved into production, development on the IBM side shifted to three teams in India. In order to facilitate the use of a modern Agile development process, the Indian team adjusted its schedule so that daily "stand-ups" could take place with the City Furniture team in another time zone. Flexibility and collaboration are crucial pillars to scaling the Agile development process.

3 The importance of defining "minimal" in Minimal Viable Product

Typical of the current trend in software development, the creation of a Minimal Viable Product (MVP) was advocated. An MVP is the first iteration of an application that consists of the minimum functionality required to be useful and deliver value to the user. Such an approach enables a working solution to be delivered quickly, while rapid further iterations add more functionality and broader capabilities. This approach was rejected by City Furniture's CIO, who felt that it was critical for the first version of the application to deliver far more than the suggested MVP.

His concern was that if the application did not impress the sales associates immediately, then adoption might be low - something he had seen happen elsewhere. Therefore, the decision was taken to deliver a far more complete version 1.0, compared to the planned MVP. The decision was proven to be the right one, as associates embraced the new app.

While this should not bring into question the value of the popular MVP approach, perhaps it is worth considering what is the minimal functionality of an MVP. There is a lot of anecdotal evidence that lack of adoption is a major problem for IT projects and it was smart of City Furniture's CIO to push for a more feature rich initial app in order to ensure that adoption was good.

Modernizing IT's legacy

Creating the sales associate app required more than just the application that runs on the iPad. The app had to integrate with numerous existing City Furniture IT systems and many of these had been in place for a number of years. City Furniture recognized that many of these systems require modernization, replacement or retirement. This is no small undertaking and the work to do it continues to be done and is critical for the business to deliver new applications. However, these systems hold valuable data and are essential to running the business. The app project had to move forward and so the development teams built Application Programming Interfaces (API) that enabled the app to securely integrate with the existing systems. 90+ APIs have been created since. Many of these have been built using the modern Node.js programming runtime.

City Furniture has only so much IT resource and is limited by how fast it can grow its team. It had IBM's help in building the app and the underlying architecture that included APIs that wrapped existing IT systems. Given the teams domain expertise of their own systems, City Furniture's developers continue to focus

on the development of further APIs and work with legacy systems, while IBM is well placed to assist with new applications. In addition, IBM will supply managed security services to help ensure that City Furniture's IT is protected from an ever increasing number of threats.

Security was key concern

Security was a key consideration when building the sales associates app and certain functionality was included as a result. For example, the app uses geo-fencing, which means that it cannot be used outside of a physical store. City Furniture's existing payment solutions vendor let them down by failing to support new EMV (chip and pin) technology that was being introduced in the United States. This technology provides an added level of security and protection for retailers and customers.

The new IBM solution was able to address this through separate hardware that connected to the iPad and supported not only chip and pin but also Google Wallet and Apple pay. This gave City Furniture a higher level of PCI compliance and as card data is a critical concern for the company it provided additional security.

Transformational Insights: 5 key lessons

Building the sales associates app was an exercise in IT modernisation that included technology and processes. Certain key learnings can be drawn from the company's experience.

1

Senior executive support was essential for the project to get off the ground. In the case of City Furniture, it has CEO support and the CIO is also the CFO and was a key proponent for both the app and the underlying required IT change.

2

The company engaged the app's intended end users – the sales associates – from the very beginning. This began with them helping to choose the hardware and then they were involved the design and build of the app itself. This ensured that all aspects of the final solution met the needs of the user and drove adoption.

3

The idea of a Minimum Viable Product was disregarded in favour of a more traditional version 1.0 that included most of the desired functionality, rather than a subset. This decision was driven by the CIO who feared that a minimal version 1.0 product would put off associates and so damage adoption. He was proven to be correct, with a high adoption rate (50%) in the first three months from the launch of the application.

4

Integration with existing IT systems was critical as these essentially run the business. While these systems were old, and in some cases redundant, they could not be entirely modernised or replaced in time. Therefore, a modern API layer was built to abstract and secure these systems, while enabling the app to integrate with them.

5

Security was a key consideration at all levels of the app stack. From the app itself to the backend systems. This required functionality within the app, services to protect the underlying systems, and support for the latest payment technology.

ABOUT CITY FURNITURE

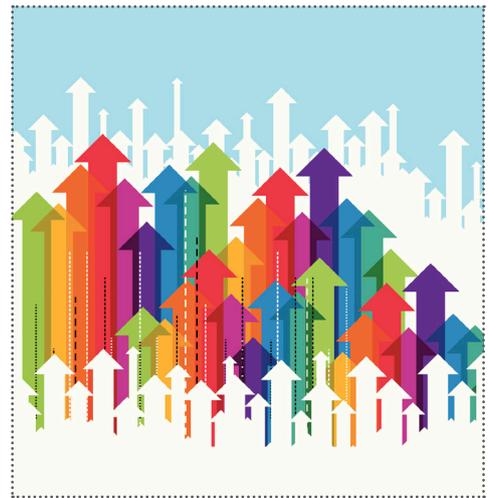
City Furniture opened its first store in Miami in 1994, but the company existed as Waterbed City since 1971. There are now multiple stores spread across Florida, generating a turnover of \$370 million. Headquartered in Tamarac (Florida) it is the number one furniture retailer in South Florida. The company has over 1400 associates, with over 400 operating in the front line of the retail business.

An outcome that delivers a business better prepared for a competitive future

The new sales associate app – Accelerating Sales Associate Performance (ASAP) - has proved highly successful for City Furniture. Adoption rates in the first 3 months were almost 50%. The average sale amount by associates using the app is 13% higher than those using the traditional green screen systems. Similarly, up-sells such as warranties (29% up) and stains protection (31% up) are all up against the previous system. All of these had specific functionality included in the app in order to push these numbers.

There are still some places where the old system beats the new; however, this is largely due to functionality missing in the app that will be added in further releases.

The process of developing it has also kicked off a modernization of the company's IT estate and introduced new faster development processes. Further new applications are being planned, including an app for customers. This app will



need to run across multiple vendor devices, but it will leverage the back-end work done by the City Furniture and IBM teams.

In today's retail environment it is no longer just the competitors in the same neighbourhood who are a challenge, but massive online retailers such as Amazon. Going forward, City Furniture feels that the work done with IBM has better prepared the company for success in the years to come.

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