TECHNOSSUS HELPS REDEFINE IN-STORE SHOPPING AND CHECKOUT EXPERIENCE

The client wanted to redefine in-store and checkout experience for customers and store employees. With the help of Technossus, the client achieved this through multifaceted application implementation.

The Challenge

Pivit sought to redefine the in-store shopping and checkout experience for both customers and store employees. Pivit brought the online shopping and engagement experience to in-store customers while providing best in-class tools to store employees and managers to create a seamless and efficient purchasing experience.

A system needed to be created, designed, developed, and validated from the ground up to accomplish a complete restructuring of the aging point of the sales systems process. Several problems needed to be solved in order to achieve this goal, including the creation of a mobile application, a web administration portal, a point of sales hardware device and application, and a cloud services foundation to support it all.

- **Mobile application**
  Pivit's customers need a way to engage with the ecosystem while on the go. In addition, stores need a way to identify customers as they enter store premises. Each customer will likely have a different phone with a different operating system that needs to work wonderfully regardless.

- **Web application**
  Pivit's administrators and operators needed a way to manage the many aspects of the Pivit ecosystem. Traditional point of sales systems required expensive and cumbersome "on-premise servers" to allow for customization. Updates needed to roll out faster, and changes needed to be made on the go. Windows application: Pivit's customers and end users need a way to easily perform day to day duties revolving around a point of sales solution. Typical point of sales systems are cumbersome, slow and unreliable. Pivit needs to be fast, easy to use and always available.

- **Cloud**
  Pivit needs to be extremely reliable and fast. There are also expectations of high levels of security when dealing with any information associated with the point of sales system.

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The Technossus Solution

To create a cross-platform application that would be fast, easy to use and reliable, Technossus used the Xamarin Forms framework. This allowed us to leverage existing high-level .NET skills to create an iPhone, Android and Windows Phone app that works and feels like a native app.

Technossus built the administration tools using a light weight, yet robust combination of ASP.NET and AngularJS. The team also created a point of sales hardware as a Windows 8.1 application.

The Technossus team created a server architecture based in and run almost entirely within the Microsoft Azure ecosystem. Services utilized in the architecture include Azure SQL, Azure Web Apps, Azure Message Queuing, Azure Table Storage and Power BI.

The Result

The mobile application allows for engagement through a loyalty platform, store discovery services as well as push notifications. The location and presence technology built into modern mobile devices allows for another way to passively engage and identify with potential customers.

The web applications allowed the operators to perform necessary functions on a multitude of platforms and locations. By creating the point of sales hardware as a Windows 8.1 application, the range of hardware appropriate for the application is much higher than other alternatives. In addition, similar to the development of the mobile application, the cost of designing and developing the point of sales application was greatly diminished through the use of existing high-level .NET skills. Consistent updates can be automatically rolled out to the entire install base using tools such as System Center Configuration Manager and InTune. This allows for a greatly decreased cost of maintenance and support as compared to other traditional point of sales systems. Leveraging a micro service architecture, the team was able to create a system that can scale to handle peak hours and traffic seamlessly while idling down to save cost during off hours.